

**ANALYSIS OF SUSTAINABLE LIVING EXPERIENCES THROUGH PRODUCT RANGE
AND HOME FURNISHING KNOWLEDGE: THE CASE OF IKEA**



MAY 2019

**ANALYSIS OF SUSTAINABLE LIVING EXPERIENCES THROUGH PRODUCT RANGE
AND HOME FURNISHING KNOWLEDGE: THE CASE OF IKEA**



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BY

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Approval of the Graduate School of Social Sciences



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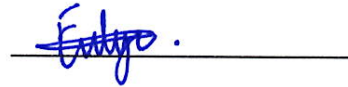
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ABSTRACT

ANALYSIS OF SUSTAINABLE LIVING EXPERIENCES THROUGH PRODUCT RANGE AND HOME FURNISHING KNOWLEDGE: THE CASE OF IKEA

Yurt, Canberk

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Through the raising awareness about the environmental problems, the concepts of sustainability have been emerging, increasingly. As being one of the practical concepts of sustainability, sustainable living concept is crucial by creating an integral context, to obtain environmentally considered lifestyles, among each unit of the society. This thesis analyses the daily life interactions of the consumers in the context of sustainable living practices, for the case of IKEA. It is aimed to evaluate the interactions of the consumers with the daily practices of knowledge based and product based sustainable living practices. In accordance with this aim, the research has been planned through gathering collective data from literature review and applying a case study to collect feedback of the consumers in a specific local market about sustainable living by using a questionnaire, in the light of the literature. By being a leading home furnishing expert company, having sensitivity about environmental issues and applying remarkable strategies about sustainability and sustainable living, IKEA has been selected for the case study. According to the questionnaire, some evaluations have been made about the issues like, environmental sensitivity, IKEA and sustainable living interaction, and individual daily life applications of sustainable living. There are some potential improvement points have been defined for awareness levels of individuals and impact areas of IKEA, about sustainable living practices. Through these outcomes, some recommendations have been made for further studies to improve sustainable living practices of individuals, communities, organizations and IKEA.

Keywords: Sustainable living, sustainability, consumer experience, IKEA

ÖZ

**ÜRÜN GAMI VE EV MEFRUŞATI BİLGİSİ DOĞRULTUSUNDA
SÜRDÜRÜLEBİLİR YAŞAM DENEYİMİ ANALİZİ: IKEA ÖRNEĞİ**

Yurt, Canberk

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Çevresel problemler hakkında artan farkındalık ile, sürdürülebilirlik kavramı giderek önem kazanmaktadır. Sürdürülebilirliğin pratik bir yansıması olan sürdürülebilir yaşam kavramı, toplumun her birimi arasında, tamamlayıcı bir bağlam yaratarak, çevreye duyarlı yaşam biçimleri oluşturması nedeniyle çok önemlidir. Bu tez, tüketicilerin IKEA örneklemindeki sürdürülebilir yaşam pratiği bağlamında günlük yaşam deneyimlerini analiz etmektedir. Bu kapsamda, tüketicilerin bilgi tabanlı ve ürün tabanlı sürdürülebilir yaşam pratikleri ile etkileşiminin incelenmesi amaçlanmıştır. Bu amaç doğrultusunda, araştırma; literatür taraması yöntemi ile kolektif bilgi toplamak, ve bu verilerin ışığında hazırlanan anket aracılığıyla, tanımlı bir lokal alandaki tüketicilerin sürdürülebilir yaşam hakkındaki geri bildirimlerini almak, üzerine kurgulanmıştır. Ev mefruşatı konusunda öncü ve uzman bir marka olması, çevresel konulardaki hassasiyeti ve sürdürülebilirlik ve sürdürülebilir yaşam konularındaki kayda değer stratejileri nedeniyle, vaka çalışması için IKEA seçilmiştir. Anket sonuçları doğrultusunda, çevresel duyarlılık, IKEA ve sürdürülebilir yaşam ilişkisi, ve sürdürülebilir yaşamın bireysel uygulamaları konuları hakkında değerlendirme yapılmıştır. Bunların ışığında, sürdürülebilir yaşam pratiği bağlamında tüketicilerin bireysel farkındalığı ve IKEA 'nın potansiyel etki alanları ile ilgili gelişime açık yönler tanımlanmıştır. Bu çıktılar doğrultusunda, bireylerin, toplulukların, organizasyonların ve IKEA'nın sürdürülebilir yaşam pratiklerini geliştirmek adına önerilerde bulunulmuştur.

Anahtar Kelimeler: Sürdürülebilirlik, sürdürülebilir yaşam, tüketici deneyimi, IKEA

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CHAPTERS

1. Introduction

1.1. Definition of the Research Subject

Sustainability and its' related concepts are becoming more important, day by day, with the raising awareness about the environmental and socio-economic disorders across the world. Through the increasing negative outcomes of the unsustainable processes, the concept of sustainability has created an integral context, for offering solutions. There are some sub-concepts of sustainability that focuses on various types of issues. Sustainable living concept - as one of these sub-concepts is the practical reflection of sustainability that focuses on reducing environmental impacts and encouraging environmentally sensitive mindset, in daily lives. This concept embraces various types of stakeholders, like consumers, organizations, enterprises, governments, etc. for creating an inclusive conceptual framework, to reach significant improvements for environmentally considered living.

Sustainable living practices are important, because of the significant contributions and beneficial outcomes for creating a better living environment. It is also beneficial by activating environmental considered behaviours and fostering conscious consumption and production chains.

However, the applications of this concept are facing with some barriers and problems. Even if, there is a raising awareness about unsustainable processes and their outcomes, the percentage of being active and responsible for fixing these up, is insufficient. Especially, in under-developed and developing countries, because of the insufficient knowledge, non-local and non-targeted contexts, non-prioritized action plans and unconsidered approaches, these practices couldn't have been applied. Also, the consumer societies' approaches and experiences about this concept is crucial to be analysed for reaching exact functioning solutions.

In the light of these reasons, sustainable living concept has been defined as the main research topic. Through this research, it is aimed to answer some questions like; 'How do all stakeholders in the system, perceive sustainability and act to be more sustainably considered?', 'What are the ways of activating and improving sustainable living practices among the societies?', 'How does the consumer society experience sustainable living practices, in daily life?', 'How can an enterprise take role on improving sustainable living practices of consumers?', 'How does the consumer society interact with the knowledge based and product based sustainable living practices?', 'How can consumer experience feedbacks help to improve sustainable living practices?'.

This research has been planned to reach insights and information about consumer interaction with the sustainable living concept. The perception and awareness levels and integrability of the sustainable living concept in the eyes of the consumers were the main considerations of the study. The natural balance among the consumer society, the enterprises, the governments, the organizations, and the natural environment is the other main objective of this research.

Through these main considerations, the research has been designed to gather data, both from literature and consumer experiences and opinions. With this collective database, the whole background of the sustainable living concept can be outlined. For applying these studies with the consideration of reaching more direct solutions, the research has been planned to narrow down, by a case study. The sustainable living concept has been analysed through focusing on a selected corporation and a consumer society in a specific area.

The perspective has been positioned by putting consumers in the centre of the research because of being the determinative stakeholders in the sustainable living concept by their behaviours, actions, decisions and choices. The solutions and improvements would have been defined for making sustainable living practices better with analysing insights and experiences of the consumers about sustainable living practices.

Some focus points such as the connection between the literature and the real life experiences, interactions, consensuses, and conflicts among the stakeholders, their roles, contributions, and potentials are the determinative elements of the structure of the study and the additional outcomes of the research.

1.2. Aims and Structure of the Study

This study has been structured to create a conceptual framework for sustainable living practices and experiences for reaching beneficial outcomes for further sustainable living studies. It was planned to gather and analyse data with both the theoretical and practical approaches by the help of this conceptual framework. Through that, the aim of the study is analysing the sustainable living interactions of each stakeholder in the system and evaluating sustainable living practices, from the knowledge based and product based solutions, according to the consumer insights.

There are two main parts of the research for analysing these two approaches. The literature review has been planned to focus on theories and ideations about the sustainable living concept. The case study has been designed for gathering insights about sustainable living practices in a specified context and analysing these insights in the light of the literature.

Both parts – also being defined as the chapters of the research, have been structured to focus on the reflections and impacts of sustainable living concept, on each stakeholder, and vice versa. The sustainable living concept has been considered with its related concepts and the interactions with them. For understanding the background and working on the possible further approaches of the sustainable living concept, the general approach of the research has determined by the perspective of a collective mind-set.

As being a multi-dimensional concept and an interactive field of study, the research about sustainable living concept had to be designed by integrating related concepts to the theory research and analyse processes. Sustainability, environmental problems, economy, sociology, consumption, and design are the other main focus points of the study because of being the major concepts that interact with sustainable living. In the light of these major concepts, the topics like, unsustainable production processes, the impacts of capitalist economy on the economy, society, and environment, consumption behaviours, design's role on sustainability and sustainable living, the environmental problems, economic, and social inequalities, etc. are the subjects that have to be integrated in the research processes. The research has been structured with a collective approach by integrating these concepts and subjects both into the literature review and case study processes.

Through this approach for applying research, the outcomes would have been widened so much and became out of focus, to make a statement or contribute to the literature of research topic. Because of having an extensive perspective, the context of the study has been narrowed down, by focusing on a specific field. For reaching that, IKEA has been selected as the case corporation because of being one of the most environmentally considered enterprise, by having functioning sustainability strategies, environmentally considered actions and home furnishing expertise that can contribute on daily sustainable living practices, through the knowledge and product based solutions. After revealing the common knowledge and general concepts about sustainable living and related concepts that interact with it, the IKEA's approach to the sustainable living concept has been planned to be analysed.

After understanding the strategies and concepts of IKEA about sustainable living, the case study, has been structured to analyse the consumer interaction to these practices of IKEA. According to the outcomes of this case study, the interaction among sustainability and sustainable living concepts, consumer society, IKEA as a selected corporation, has been planned to be analysed, in the light of the collective literature review.

In the literature review part, the main consideration is researching for the theoretical approaches in the literature by focusing on the former concepts, interactive subjects of sustainable living and their supportive contexts. Sustainability, sustainable product design and development, and consumer interactions with the sustainable living concepts have been determined as the supportive concepts, to analyse in the literature review part.

Subsequently, the IKEA's approaches to the sustainable living concept and related concepts have been planned to analysed, for narrowing down the research space, and focusing on more specific practices. Sustainability direction and strategy, sustainable product design processes and consumer interactions about sustainable living practices of IKEA have been selected as literature review subjects to support the related data of literature. The total outcomes and evaluations of this review process are planned to be used in the case study process for improving the research.

As a complementary phase, the case study has been designed to analyse the real life experiences of consumers about sustainable living processes and interactions of these experiences with IKEA case. For applying the case study, the questionnaire has been

planned to be made, as a research method. For gathering insights of the consumers about the topics that have been planned to be analysed in the literature review, the questionnaire has been structured under some similar topics. These topics are aimed to get feedbacks of consumers, both in general and in the case of IKEA.

Through the questionnaire, it is aimed to get feedback from consumers about their awareness level about sustainability and environmental problems, their impacts on the environment and sustainable living practices. In the part that focuses on sustainable living practices, has been planned as a comparable source, for discussing the consumer insights from two perspectives. First one is the evaluation of the perception level of IKEA sustainable living concepts, in the eyes of the consumers. The second one is the comparison and evaluation of the knowledge based and product based sustainable living practices.

With the evaluation of questionnaire, some recommendations have been made for improving the sustainable living practices, both for general cases and for IKEA case. These recommendations, are planned to touch upon the issues like improving the consumer experiences about sustainable living, IKEA's solutions about sustainable living processes and the interaction with the consumer society. For each topic that has been planned to be recommended, it is aimed to obtain the evaluation through the perspective of the comparative approach, through knowledge based or product based sustainable living solutions.

In conclusion, the final statements and contextual connections of the research has been planned to be taken over for roundup. The general approaches and conceptual definitions re-evaluated with integrating the outcomes of the case study. As a final phase, this collective approach states about the objectives of the research. The conclusion, contributes on the sustainable living concept and related subjects, through the compiler literature analysis, the situation analysis and the recommendations about sustainable living experiences for all stakeholders in the system.

2. The Interaction among Sustainability Concepts

2.1. The Concept of Sustainability

Sustainability as a word, comes from activity of 'sustain' which can also be defined through actions like maintain and endure (Onions, 1964). This definition of verbal expression includes a motional base of sustainability with having an essence of constancy. But this constancy has a rich essence, by the sustainability is having a continuous but also progressive substructure as a concept.

The basic approach to identify sustainability as a concept and a context as a complementary element, is related to identify conventional system applications and behaviours of the mankind. The statement of sustainability lays behind the stance across to the conventional understanding of humans, considering the all kinds of outcomes, actions and plans, through history, today and future. Sustainability is a conceptual approach for altering unsustainable systems of economic, ecological, cultural, psychological, social issues that people has been maintaining throughout the history.

With the result of being a multidirectional, cross disciplinary and collaborative concept, through the scientific evolution of sustainability, various kind of researchers from different professional fields have defined the sustainability with various approaches. The first 'sustainability' word, with the word group of 'sustainable development' in the meaning of current time, has been used in Brundtland Report (Du Pisani, 2006). In March 20, 1987 Brundtland Commission of United Nations, have defined sustainable development as a study of answering the needs of the current time without ignoring the possibility to meeting the necessities of future generations (UNGA, 1987).

After that time, the concept of sustainability has defined from different sources. From the point of view of The World Commission on Environment and Development, sustainability is the studies of obtaining change in a stable environment, in which the depletion of natural resources, the strategies of investments and technological improvements are all in

harmony and improve both current and future possible development issues to answer people's needs and expectations (UNGA, 1987). Sustainability has also been defined as a socio-ecological process designated by the tracing to reach a common ideal which is by definition inaccessible in particular conditions (Wandemberg, 2015). Also, sustainability is defined as a social study that is the combinations of law, urban planning and transportation, supply chain management, living types and considered consumerism (Madiati et al., 2018). From that perspective living sustainably has been identified by the issues like reconsidering living habits and sustainable cities with using innovations to improve new solutions and more sustainable systems in a resilient and reversible way (Fawcett et al., 2012) and adapting personal lifestyles that respect nature (Black and Cherrier, 2010).

According to the Shaker, the sustainability term should be perceived as humankind's main aim of balance of the human-ecosystem, while sustainable development defines a more holistic concept and dynamic processes that help people to reach absolute sustainability. (Shaker, 2015). Despite the rising popularity of sustainability concept, societies are able to achieve environmental sustainability in light of environmental degradation, climate change and overconsumption (The Worldwatch Institute, 2013).

According to these references, it is possible to refer, sustainability is a possible answer for reaching stability of natural structure and a systems of methodology to accomplish through the directions. Sustainability concept is a self-feeding concept that has been born from the problems that tries to answer and solve. The source of sustainability concept is the complex combination of economic, ecological and social disorders and other related outcomes. For understanding the effect areas, possible solutions and approved resolutions, the source of the sustainability concept has to be analysed.

2.1.1. The Source of Sustainability Concept

The applications, systems, organizations and understandings that is related to maintain the economic, politic and cultural contexts has been come up by their outcomes. Historically, the competition, cupidity and selfishness between nations, enterprises and individuals has caused big problems to whole world, from minor to major, all scales of ongoing orders. Through the timeline, humankind and its' the instinctive behavioural understanding, have

created a continuous changing value chain, vision and life perceptions, without thinking the possible outcomes, short-term or long-term disadvantages and irrevocably damages that affect negatively whole living and non-living presences of the world.

During the evolution, humankind, has created new knowledge variations, concepts, perceptions, norms, cultures, behaviours, habits, systems and artefacts with being regardless to the eco-system, natural systems and cycles, natural resources, cultural heritages, ethnic fundamentals, basic norms and equality of people all around the world. The acceptance of irresponsible behavioural understanding has been inclined dramatically through ages, and this perception has caused the conventional harmful attitude of humankind. The fundamental life needs, basic lifestyles and surviving with less perceptions has been altered with the perception of 'having more is being more' that has been stimulated by the people from the higher levels of society to the people from commons.

As a result of these operations, the economic strategies has been determined with more aggressive attitudes and unconcerned actions that caused catastrophic and relentless outcomes to the natural environment, social and cultural values and stability of economy. The development of technology and industry not only helped to boost modern society, but it also caused to environmental problems and global challenges. Especially, after industrial revolution, with the acceleration of creating innovations in short-terms, and the strategies of countries and enterprises that focused on triggering consumption, have created a massive damage to the environment, economy and socio-cultural heritages.

Basically, the vision of uncontrolled production and stimulated consumption strategies - like 'take, make, dispose' model (Ellen MacArthur Foundation, 2012) - have been causing deterioration and corruption of eco-system because of unplanned raw material extraction, irreverent production lines that causes pollution and non-circular lifeline of artefacts that causes landfill. From the economic side, it has been creating non-stable market and unbalanced economic growth and unplanned economic activities that answer fundamental needs. These attitudes also have been harming socio-cultural accumulation of societies because of stimulated value chains, have been reasoning unfair employment and reaching basic human rights, paradigm shift of social insight and connections because of globalisation and individualism movements.

These negative outcomes of conventional perception of production and consumption had to be set aright with alternative understanding that create a total and consistent impact on these issues. Sustainability concept and its' connected entities has been created for fixing up the conventional understandings and bad functioning systems that had dominated and constantly have been harming the world.

Actually, sustainability is a concept that had been existed all through the time, but without a prioritized conscious. The history of sustainability dates back human-dominated ecological contexts from the primary societies through the current time (Caradonna, 2014). This history is described by the increased local accomplishments of the significant societies, followed by problems that were either resolved, producing sustainability, or not, leading to decline (Wright, 2004).

Through the time, the perception of nature has been changed constantly. With the discovery of fire, and then with the agrarian movements, eating habits have been altered with related activities. The farming methodologies and varying food options have affected the approach of humankind to the nature, economic strategies, and socio-cultural bonds. As considering more recent history, with the industrial revolution, the power of determination has been taken by activities that related with the energy resources, production methods and innovations. In the mid-20th century, with the increasing use of conventional energy resources like fossil fuels, nature-harming production lines and rising over-production strategies that triggers unconscious consumption behaviours, have caused the environmental problems became global in scale (Turner, 2008). After, the rising damages of conventional systems, the awareness of the necessity of sustainability concept has been occurred. According to BBC (British Broadcasting Corporation) (2008) there is an increasing global awareness of the negative outcomes, by the human greenhouse effect.

Sustainability has focused how to make better functioning systems and operations that respects the living and non-living organisms and fundamental norms and values can alter ongoing dominant systems and attitudes that had been caused the global problems and issues. There are some key focus areas for developing strategies that answering a direct problem. The world is facing with common, big problems that widen and spread day by day. The issues like; poverty, hunger, unsecured food, unhealthy living conditions, the loss of well-being, exclusive and unequal education systems, problem of gender equality, polluted and uncontrolled water usage, sanitation problems, uncontrolled population growth,

unsustainable, expensive, unreliable energy resources, exclusive and unsustainable economic growth, unemployment, non-functioning infrastructure, inequality, barriers to have basic human rights, uninhabitable living spaces, unsustainable consumption behaviours, climate change, deterioration of eco-systems, disclusive and broken social bonds are the problems that create unsustainable systems and operations in global scale and affect each individual, directly or indirectly (United Nations Global Compact, 2018).

These unsustainable issues that are constantly spreading and giving more harm to the world, has been taken as challenges to solve under the roof of sustainability concept. These challenges have been classified into three fundamental dimensions that focuses on specific fields, as creating more consistent action plans for reaching sustainable systems. These dimensions defined as pillars or components of sustainability.

2.1.2. The Pillars of Sustainability

The United Nations World Summit 2005 report identified three pillars of sustainability: environmental - ecological, social and economic (UN, 2005). The concept of sustainability considers responsible innovation for reducing negative impact to the environment and maintains balance among ecological, economic and cultural vibrancy now and in the future (Magee, 2013). Basically, for reaching sustainability through sustainable development solutions, the fundamental three dimensions of sustainability are the pathfinders with different focus points to strategize and organize the change and the action plans.

Environmental sustainability is concerned with the environmental impact of production and consumption in order to protecting the environment from the negative impacts for future generations. Social sustainability also considers equity, security, health and well being. (UNEP/WI, 2011). Economic sustainability deal with financial models to meet people's needs and to establish human nature relationships over the long-term timescale (Baumgartner and Quaas, 2010). Actually, it defines, not only the direct economic activities that is not considering other components, but also mutually developing with ecologic concerns and social values, together.

These three pillars are mutually dependent (UN, 2005) and the interaction between them creates the value systems that enable to apply sustainable solutions. The Venn Diagram of

Sustainable Development (Figure 2.1.1.) shows the intersections and constituency of three dimensions of sustainability and connection between them (Adams, 2006). According to this diagram, the dual and the total intersections define different types of connection. The combination of social and economic sides of sustainability defines equitable development, the combination of social and environmental sides of sustainability defines bearable development, and the combination of economic and environmental sides of sustainability is named as viable development. The absolute togetherness and harmony of these three pillars create the sustainable development. The applications of these three sustainability pillars are that social, environmental and economic considerations would influence (UNEP/WI, 2011) every act, behaviour and mind-set that humankind do, have, use and display considering the sustainable development.

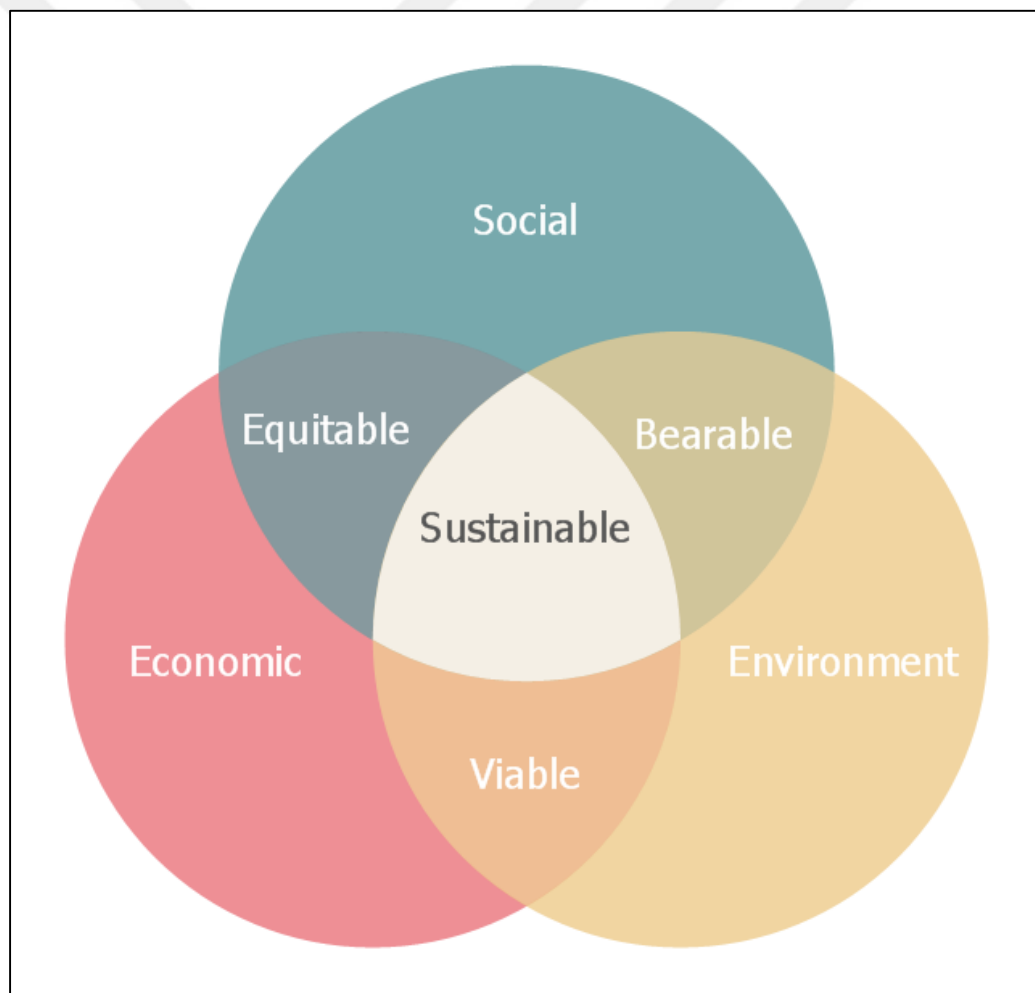


Figure 2.1.1. The Venn diagram of Sustainable Development

(Source: <https://www.conceptdraw.com/examples/sustainable-development-diagram>, Accessed July, 2019)

Adding to three pillars of sustainability concept, there are some alternative classification concepts to define dimensions of sustainability. More recently, using a systematic field model that answers to the controversies about the last ten years, the Circles of Sustainability approach (Figure 2.1.2.) identifies four domains of economic, ecological, political and cultural sustainability according to the United Nations, UNESCO and Agenda 21 (James et al., 2016). In application, some programmes as United Nations Cities Programme and Metropolis 2016 (WAMM), the domains can be altered as complementary or supportive issue, in the case of integrating culture and politics into all four dimensions, like social side of sustainability (James et al., 2016).

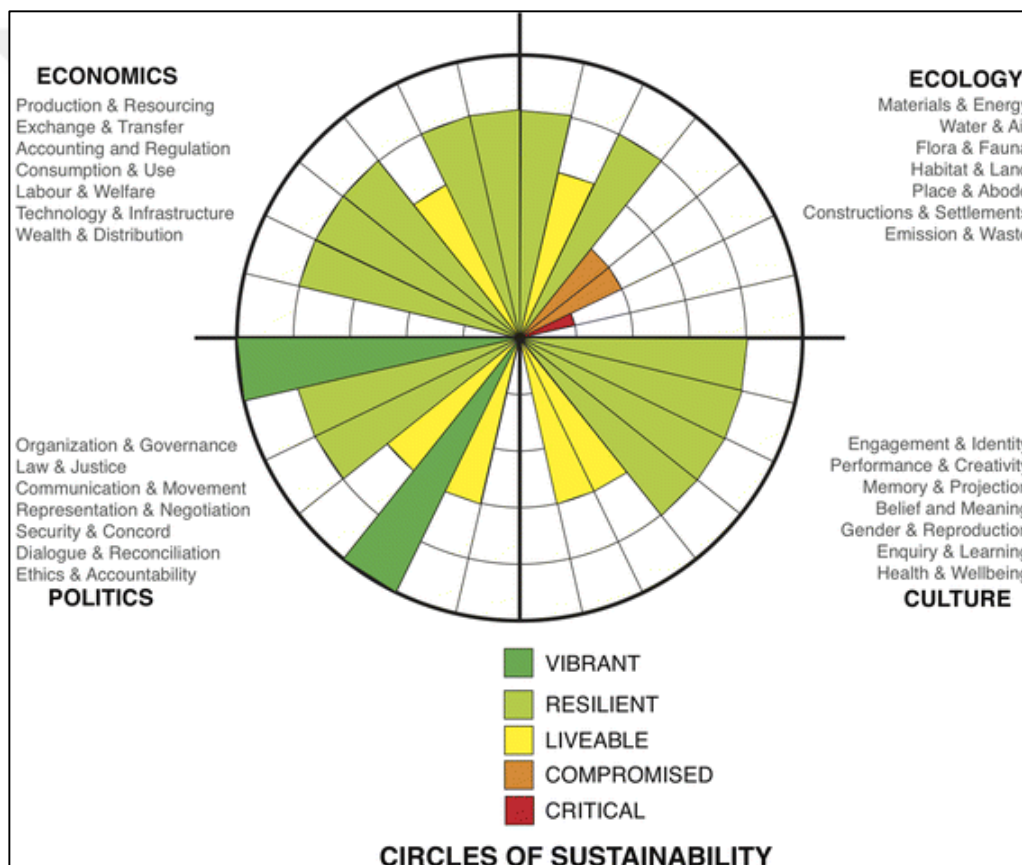


Figure 2.1.2. Circles of Sustainability (Source:https://www.researchgate.net/figure/The-circles-of-sustainability-Source-United-Nations-Global-Compact-Cities-Programme-as_fig1_317411977, Accessed July, 2019)

As an alternative model that defines sustainability, suggests humans attempt to achieve their needs via seven modalities: economy, community, occupational groups, government,

environment, culture, and physiology (Thomas, 2016). From the global to the individual human scale, each of the seven modalities can be viewed across seven hierarchical levels.

Besides these alternative approaches, the most common accepted sustainability classification is three pillars of sustainability concept. Generally, the big organizations that create and distribute strategies of sustainability, takes three pillar concept as a reference and obtain the sustainable development goals according to these. By that, these sustainable development goals become roadmaps to reach sustainability concept, completely.

2.1.3. Sustainable Development

Sustainable Development concept is a modifier element of Sustainability concept that animate the abstract positioning of sustainability issues into tangible actions. Without an absolutely defined goals of sustainable development issues, the sustainability could be perceived as a conceptual creation without solutions to the problems. That's why, sustainable development, under the pillars of sustainability concept is the exact way to define action plans, strategies and cause and effect relations.

Adding to the definitions of sustainability concept, there are also, some complementary definitions for defining sustainable development. The term 'sustainable development' first appeared in an official document signed by thirty-three African countries in 1969, under the auspices of the International Union for Conservation of Nature (IUCN, 1969). In the same year, the Environmental Protection Agency has organised a meeting in the United States whose references have had a significant impact on improving theories and practice in global policies about environment. NEPA (the National Environmental Policy Act from 1969), defined sustainable development like, economic studies that can be beneficial for today and future without giving any harm the world's natural ecosystem and resources (NEPA, 1969).

As another approach, Forum for the Future's Sustainable Wealth London project, the essence of sustainable development has been defined under five key principles, as; living quality, fairness and equity, participation, conserving natural environment and respecting ecological limits, and thought for the future and the prudent principle (Blewitt, 2018). For

supporting that, for the Learning for a Sustainable Future project the Teacher Centre defines the sustainable future in conditions of healthy environment, economic prosperity and social justice for obtaining the well-being and quality of life of current and future generations (Karola, 2017).

In the light of these definitions, for reaching 'sustainable future', there are lots of practical strategies have been created by companies and countries to apply sustainability through sustainable development methodologies. Sustainable Development Goals (SDGs) of UNDP is crucial for sustainable development in global scale because of being under the roof of United Nations, with being an inclusive and rallying guidance; so governments, municipalities, enterprises and Non-Governmental Organizations have been obtaining their sustainability positioning and sustainable development strategies according to the SDGs. The United Nation member countries and some global brands and firms like LEGO, Visa, Cummins, Qualcomm, Nike, IKEA, Discovery Channel, The North Face, Airbnb, TripAdvisor, etc., are taking responsibilities and roles to accomplish Sustainable Development Goals (Embree, 2017). These goals are guidance to help applying sustainability for all types of functioning groups across the world.

According to these SDGs, each goal is created to answer specific problem that relates with the specific dimension of sustainability. As considering, environmental sustainability, Environmental Management and Management of Human Consumption issues could be considered as two main issues. At the global scale and in the broadest sense environmental management involves the oceans, freshwater systems, land and atmosphere, but the sustainability principle can be adaptably applied to any ecosystem from a rainforest to a garden at home (Buchenrieder and Göltenboth, 2003). According to this main issue, United Nations Development Program put goals like; promoting sustainable agriculture for sustainable development, promoting sustainable use of ecosystems by taking action to combat climate change (UNDP, 2015).

Second main issue, as direct human impacts on the environment is human consumption (Michaelis and Lorek, 2004). Analysis of consumption patterns relates resource use to the environmental, social and economic impacts. The ideas of embodied resource use and resource productivity are important tools for understanding the impacts of consumption. According to this main issue, UNDP put goals like; ensuring availability and sustainable management of resources for all, ensuring access to sustainable energy, achieving food

security, etc. (UNDP, 2015). The management of these issues are crucial and beneficial to apply environmental issues of sustainable development.

Considering economic side of sustainability, the unsustainable issues of the world has been analysed from the perspective of economic outcomes and relations. From some perspectives, sustainability has been defined as putting economy in the centre of sustainable actions. For instance, according to Daly and Cobb, sustainability interfaces with economics through the social and ecological consequences of economic activity (Daly and Cobb, 1989). On one account, sustainability economics represents environmental and ecological variables as part of a multidimensional perspective. Social, cultural, health-related financial aspects have to be integrated into the analysis (Soederbaum, 2008). But, the concept of sustainability is more crucial and essential issue than the concepts of “sustained yield of welfare, resources, or profit margins” (Hasna, 2009, p.11). With the consideration of economic growth, environmental damage and resource depletion (Ruffing, 2007), the challenge for sustainability is to manage and restrain consumption while raising the standard of living without increasing resource use and environmental impacts.

From the perspective of sustainable economic development, UNDP has created sustainable development goals considering the main topics of poverty, economic development, infrastructures and consumption that directly links to the economic sustainability strategies. According to solve problems that addresses directly economics, UNDP put goals like; reducing poverty while promoting sustainable economic growth, promoting sustainable industrialization and fostering innovation (UNDP, 2015). These issues are the main concerns of economic policies and strategies to maintain sustainable development but also connected with other pillars of sustainability to reach total harmony for sustainability.

Sustainability issues are generally expressed in scientific and environmental terms, as well as in ethical terms of stewardship, but implementing change is a social challenge (Agenda 21, 1992). As considering social side of sustainability, the issues like peace, security, social justice, poverty, human relationship to nature, human settlements, human rights, labour rights, protection of the cultural heritage come up as the main focus points. Also, issues like; the relationship between human rights and human development, corporate power and environmental justice, citizen action (Blewitt, 2008), international and national law, urban

planning and transport, local and individual lifestyles and ethical consumerism, are the sub-topics of social sustainability.

For reaching more balanced and sustained social world, UNDP has gathered sustainable development goals under the topics for reaching wealth, health and wellbeing, inclusive education, gender equality, habitable living spaces, inclusive societies and institutions, equality across the world. In detail, SDGs aims to maintain social sustainability by promoting well-being, ensuring equitable quality education and promoting peaceful societies for sustainable development, and reducing inequality within and among countries by making cities safe and sustainable (UNDP, 2015).

As considering a major reference case, UNDP's Sustainable Development Goals are the critic and crucial example of the sustainable development concept. It is inevitable reality that whether it is United Nations', or any enterprises' or any countries', the sustainable development strategies are the exact roadmap to maintain sustainability through collaborative, multidisciplinary and interdisciplinary considering the combinations of the pillars of sustainability. Instead of the conventional understanding of anthropocentric activities, behaviours, strategies or mind-sets that disregard and damage the world, environment, economic and social orders; sustainability concept and its' related entities is the key to spread the eco-centric approach (Gopalkrishnan, 1999) in all scales. Putting the sustainability principles and priorities in the centre of humankind's plans and actions and maintaining sustainable development strategies as the major primary principles may led to shift the paradigm through a positive way.

2.2. Sustainability and Design

Throughout history, people have defined themselves as made of, part of, outside of and interconnected with nature (BIRD, 2008). The scope of sustainability and the sustainable development, exists with the tangible outcomes and the interactions with these outcomes and systems. The issue of the practical reflections of sustainability concepts and strategies, targets the implantation of these contexts. These implantations are linked with the production processes of the artefacts, values, services and systems. With the consideration of the sustainable production processes, the necessity of the new mind-sets is inevitable.

Shifting the perspective of perceiving production as a sustainable process, causes the changes in the fields of design, resource management, project management, raw material extraction, distribution, marketing, waste management, and the related other side concept with it. That's why, sustainability and design are intimately linked (McDonough and Braungart, 2002). The interaction between mankind and environment influences how the objects and processes of design are mediated in relation to the level of human understanding and concern for the environment (BIRD, 2008). As a superior concept, design is the crucial element of the concept of sustainability with having determinative and affective roles. Under the roof of sustainability concept, design refers to practices applied to the making of products, services, as well as business and innovation strategy — all of which inform sustainability (McDonough and Braungart, 2002).

For analysing sustainable design better, it is beneficial to consider the definition of 'design'. Etymologically, design comes from the Latin word 'designare', which means to define, to describe, or to mark out (BIRD, 2008). Through the time, design has gained lots of different literal definitions, according to the incidents, revolutions, developments. Even in current century, there are various approaches to define design that is perceived nowadays.

Design as a noun, can refer to such a plan or specification or to the created object. Also it can refer to the features of created object, such as aesthetic, functional, economic or socio-political (Cambridge University Press, 2007). According to a more formal approach, design has been described as; a specification of an object in a specific environment, using a set of primitive components and satisfying a set of requirements (Ralph and Wand, 2009). Another definition of design is planning to manufacture an object, system, component or structure that integrates with technology (Braha and Maimon, 1998).

With another alternative approach, as Herbert Simon outlined briefly in the 1960s, design can still be said to be about transforming existing situations into preferred ones (Simon, 1996). In the light of this approach, design and sustainability concepts' interaction are obvious to perceive. Considering the sustainability concept as alternative approach for developing unsustainable systems with new methodologies, sustainability and design can be perceived in the common context.

From that point, according to McLennan, sustainable design is the philosophy of designing physical objects and built environments to comply with the principles of ecological sustainability. (McLennan, 2004).

From the perspective of Joel Towers and Martine Kohler, environmental design is a framework that states the planning, production, and evaluation of objects in any scale with the resilience of natural systems. As a result of this context, the concept of sustainability presents a holistic view of the function and value of eco-systems for human needs (BIRD, 2008).

Design-related strategies are around humankind, everywhere and every time, interacting with the sustainable development and procuring the needs of tomorrow's generations (McDonough and Braungart, 2013). "By clearly extending the ethical and temporal considerations of design across generations and beyond the bounds of solely anthropocentric concerns, environmental design has a significant target to alter certain design practices" (BIRD, 2008, p.147). According to the current human behaviours about consumption and production, the conventional design and production understanding and the sustainable design concept are in a great contradictory. The wild capitalism and neo-liberal economy understandings and their consequences create a huge challenge to apply sustainable design mentality and practices among all phases of human activities. The absolute acceptance and proper application of sustainable design practices are possible with maintaining behavioural change in consuming societies and methodological change in production communities.

2.2.1. Consumption and Production Patterns of Sustainability

Consumption refers to the active meanings that people attribute to various goods and services as they are designed, circulated and used in a society. Consumption was defined negatively as conspicuous display and frivolous spending by people that express a desire for social mobility. (BIRD, 2008). Mankind consume with the mentality of 'being', more than answering needs. From another perspective, consumption and conventional design perception are being beyond popular and creating commercial culture and modernity. In this context, consumption is more likely a social phenomenon. It is no longer viewed as the passive end of production; rather it also provides active and creative means for people to

interact, express their attitudes, beliefs and values, to self and others. Mankind can evaluate things that they purchase or lend, because things have meaning to interpersonal connections (BIRD, 2008).

This currency is the outcome of the strategies of the capitalist economic approach that stimulates uncontrolled consumption which can be defined as 'over-consumption'. Especially, after Industrial Revolution, the imperialist nations, governments that support neo-liberal economy and big enterprises have been triggering the consuming culture with marketing strategies and tools like design. The aim of these strategies to produce and sell more artefacts.

Briefly, the terms like, planned obsolescence and perceived obsolescence define the ideation behind these strategies. Planned obsolescence, or built-in obsolescence is a policy of designing products with a limited useful life to make them obsolete in a certain period of time (Bulow, 1986). Perceived obsolescence, in other terms, obsolescence of desirability or stylistic obsolescence is about buying same or similar type of products more frequently through the designers' redesigning the styling of products in a shorter time cycle according to the decrease in the perceived desirability (Maycroft, 2009) of unfashionable items. The statements of these strategies are to stimulate long-term sales volume by minimising the time between repeat purchases – as known as, shortening the replacement cycle (Bidgoli, 2010). These strategies have been causing lots of negative impacts on environment, society and economy.

Planned obsolescence strategy can do significant harm to the society in the form of negative outcomes. It creates inequalities among the people, because of non-equal conditions in the society. Constantly replacing products, rather than making repair, creates more waste, uses more natural resources, and results in more consumer spending (Guiltinan, 2009). It is also making negative impact to personal and global economy, because of the non-cyclic routine of money. Planned obsolescence has a negative impact on the environment and directly affect in increases in demand and consumption (Guiltinan, 2009).

Besides considering quantity of unsustainable production and consumption relations, the quality of the production and consumption processes are also the crucial issue of sustainability. The conventional understanding of production is irresponsible with the

ignorance of companies about after-purchase phases. Companies that maintain the vision of conventional production and distribution, don't consider the processes of product or services, from the raw material extraction to the landfilling. This business model is called linear business model. Linear "take, make, use, dispose, pollute" – or briefly "take, make, dispose" industrial processes, and the lifestyles dependent on them, use up finite reserves to create products with a finite lifespan, which end up in landfills or in incinerators (Ellen MacArthur Foundation, 2012).

The linear economy understanding, and its' outcomes as linear production and unsustainable production, creates negative environmental footprints on the world ecosystem. The unconscious production lines that ignore eco-system; create toxic waste, uncontrolled pollution, spreading greenhouse gases, etc. These outcomes cause catastrophic consequences like; environmental pollution, global warming, acid rains, ozone depletion, groundwater contamination, air pollution, endangered species habitat destruction, soil deterioration, deforestation, dysfunctional agricultural areas, etc. (BIRD, 2008).

For answering these problems – mostly wicked problems as BIRD has defined above, there are some alternative economic models that concerns environment through applying sustainability principles. For instance, the circular economy, which is an economic system aimed at minimising waste and making the most of resources. Circular economic approach, by contrast to linear approach, considers insights from living systems. This regenerative concept is an antinomy to the traditional linear economy that functions through 'take, make, dispose' model (Ellen MacArthur Foundation, 2012). It considers that human systems should work like organisms, processing nutrients that can be fed back into the cycle hence the 'closed loop' or 'regenerative' terms usually associated with it (Ellen MacArthur Foundation, 2017).

For applying circular model, the disciplines like; sustainable design, environmental design, eco-design, circular design concepts can be applied as complementary disciplines. In a circular system, resource waste and energy usage need to be minimized in a circular system, which can be achieved through long-lasting design, maintenance, reuse, remanufacturing, and recycling (Hemingway, 2013). In the light of circular economic model and sustainable design principles, sustainability in all dimensions can be achieved, by

ensuring cleaner production, increasing eco-efficiency, decreasing ecological footprint, with the consideration of environmental ethics (BIRD, 2008).

Consequently, for altering conventional production-consumption relation with a sustainably considered model, the mind-set of linear production and distribution must be changed with the circular economic systems with the consideration of the environmental ethics. For minimizing, ecological impact both qualitatively and quantitatively, and create a new production-consumption system the sustainable design principles can help people (BIRD, 2008).

2.2.2. Sustainable Design and Development

In the light of the environmental design definitions, sustainable design, can be briefly defined as, the design processes that interact with environment, have an environmentally sensitive perspective and consider natural resources as elements of the design. These processes are functioning through the supports of some various principles from various perspectives, as guidance.

According to McLennan (2004), there are six principles of sustainable design, which are; learning from natural systems (Biomimicry Principle), respect for energy & natural resources (Conservation Principle), respect for people (Human Vitality Principle), respect for place (Ecosystem Principle), respect for future (“Seven Generations” Principle), systems thinking (Holistic Principle).

From the perspective of Van der Ryn and Cowan’s work (1997), Principles of Ecological Design, there are five basic goals have been defined to reach sustainable outcomes during the design processes. These five basic goals, which can be used as checklist, are; solutions grow from place, ecological accounting informs design, design with nature, everyone can design and make nature visible.

As an alternative approach, Todd and Todd have defined their own sustainable design principles. According to these principles, there are some indispensable rules to activate sustainable design. The living world and the environmental space is the key reference for design processes. Biological equity is inevitable issue for design. By that, design is the

follower of the laws of life, by not being opposed to them. Also, design processes must be bio-regionalist. Renewable energy resources are musts for design practices. Besides, instead of being harmful to the nature, design must be co-evolutionary and should heal the planet. Design processes should be managed through integration of living systems and design should follow the ecology as a sacred presence (Todd and Todd, 1994).

In 1992, McDonough and Braungart have written The Hannover Principles as known as Bill of Rights for planet, for Expo 2000, The World's Fair;

- 1- *Insist on rights of humanity and nature to co-exist in a healthy, supportive, diverse and sustainable condition.*
- 2- *Recognize interdependence. The elements of human design interact with and depend upon the natural world, with broad and diverse implications at every scale. Expand design considerations to recognizing even distant effects.*
- 3- *Respect relationships between spirit and matter. Consider all aspects of human settlement including community, dwelling, industry and trade in terms of existing and evolving connections between spiritual and material consciousness.*
- 4- *Accept responsibility for the consequences of design decisions upon human well-being, the viability of natural systems and their right to co-exist.*
- 5- *Create safe objects of long-term value. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creation of products, processes or standards.*
- 6- *Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems, in which there is no waste.*
- 7- *Rely on natural energy flows. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.*
- 8- *Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not as an inconvenience to be evaded or controlled.*
- 9- *Seek constant improvement by the sharing of knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers and users to link long term sustainable considerations with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.*

(McDonough and Braungart, 1992, p.6).

A year later these principles have been summarized by the World Congress of the International Union of Architects (UIA) at the American Institute of Architects' (AIA), Expo

93 in Chicago. UIA and AIA members are committed to "Declaration of Interdependence for a Sustainable Future". The declaration has been constructed with these three items;

- 1- *A sustainable society restores, preserves, and enhances nature and culture for the benefit of all life, present and future; a diverse and healthy environment is intrinsically valuable and essential to a healthy society; today's society is seriously degrading the environment and is not sustainable.*
- 2- *We are ecologically interdependent with the whole natural environment; we are socially, culturally, and economically interdependent with all of humanity; sustainability, in the context of this interdependence, requires partnership, equity, and balance among all parties.*
- 3- *Buildings and the built environment play a major role in the human impact on the natural environment and on the quality of life; sustainable design integrates consideration of resource and energy efficiency, healthy buildings and materials, ecologically and socially sensitive land-use, and an aesthetic sensitivity that inspires, affirms, and ennobles; sustainable design can significantly reduce adverse human impacts on the natural environment while simultaneously improving quality of life and economic well-being.*

(UIA and AIA, 1993, p.1).

These examples are the collective and rallying approaches to define principles of sustainable design. Each ideation can reflect the main objective of the sustainable design through practices an influence designers and manufacturers to activate their sustainability sense. In the light of these principles, there are some alternative design concepts have been evaluated, according to reach practical outcomes of sustainable design processes and circular economy models.

Environmentally Sustainable Design Concepts

According to sustainable design concept and sustainable design principles, there are various types of approaches to apply sustainable design as practically. These concepts were constructed on the similar basis and aims to reach more sustainably considered production, consumption relations that activate regenerative vision for fixing up the dysfunctional ecological, social and economic processes.

The one of the basic approaches in environmentally sustainable design concept is eco-design. Eco-design refers to role designers played in facilitating eco-efficient, cleaner production (BIRD, 2008). With the concept of eco-design, green awareness, overpopulation, industrialization and an increased environmental population have led to the questioning of

consumer values (Lacoste et al., 2011). Throughout from the 1990s, with the rising awareness of eco-design, many guides were developed to help expand the process of designing products and environments to include consideration of ecological impacts during the whole lifecycle of product (BIRD, 2008). In the light of eco-design, it is necessary, to search for new building solutions that are environmentally friendly and lead to a reduction in the consumption of materials and energy (McAloone and Bey, 2009). Design for environment - the ideation of eco-design, was to be given equal weighting alongside all the other concurrent issues like; cost minimization, ease of manufacture, durability, usability, safety, marketability, etc. (BIRD, 2008).

Another sustainable design approach is circular design. This approach is the outcomes of the circular economy concept that focuses on whole life cycles and cyclic order of materials. "Circular design, i.e. improvements in materials selection and product design (standardisation/modularisation of components, purer materials flows, and design for easier disassembly), lie at the heart of a circular economy." (Ellen MacArthur Foundation, 2012, p.9). It is focused on the environmental friendly production processes and life cycles with the challenge of closing the loop. Circular Design is about, widening focus from the product to material cycles, production processes and qualifications, and also the specifications like, use and reuse.

For accomplishing sustainable systems, there is an alternative concept that offers solutions for the problems through the knowledge that obtained from nature. These knowledge and insights of the issue is being used for imitating the source of this knowledge for creating better environment. Biomimicry is defined by Benyus, as an alternative science that works on nature's models and then mimics or takes inspiration from these designs, systems and processes to answer human needs (Benyus, 1997). Also, Vincent defined this concept as; the imitation of the models, systems, and elements of nature for the purpose of solving complex human problems (Vincent, 2006). Biomimicry is the methodology that learn from the nature, to offer better solutions to the problems of the environment. Biomimicry is the method of reaching nature and creating alternative designs for fixing up the bad conditions. It is a biophilic approach that respects to the nature.

Following that, the concept of 'Cradle to Cradle' is another alternative approach for sustainable design processes that constructed with the fundamentals of biomimicry. McDonough and Braungart have defined Cradle to Cradle like; a biomimetic approach to

the design of products and systems that models human industry on nature's processes viewing materials as nutrients circulating in healthy, safe metabolisms. Cradle to Cradle suggests that industry must protect and enrich ecosystems and nature's biological metabolism while also maintaining a safe, productive technical metabolism for the high-quality use and circulation of organic and technical nutrients (McDonough and Braungart, 2002).

This concept is constructed on the ideation of Life-Cycle Assessment which is a critical technique that designers use for all the stages of a product's life (USEPA, 2010), through eliminating Cradle to Grave concept to create Cradle to Cradle concept as a more regenerative design approach. In the cradle to cradle design model, all materials used in industrial or commercial processes classified in two categories; technical or biological nutrients (Figure 2.2.1.):

1. *Technical nutrients are restricted to non-toxic, non-harmful synthetic resources that have no negative impacts on the natural ecosystem; they can be used in constant cycles as the same product without mislaying their specifications. In this approach these resources can be used again and again instead of being downcycled into less qualified products or completely becoming waste.*
2. *Biological Nutrients are organic resources that, once used and then, can be thrown away of in natural spaces and decompose into the soil, with becoming food for small organisms without giving any harm the natural ecosystem. This is rely on the ecology of the space; for instance, organic resource from one area or landmass may be harmful to the ecosystem of another area or landmass.*

(McDonough and Braungart, 2002).

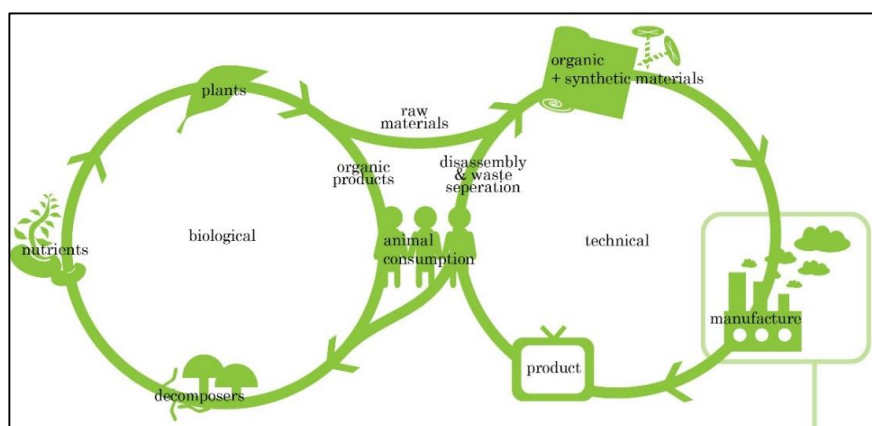


Figure 2.2.1. Cradle to Cradle Categories

(Source: <https://whatisnewinecomaterials.wordpress.com/2014/07/06/cradle-to-cradle/>, Accessed July, 2019)

In order to, downcycling technique which is the recycling of waste where the recycled material is of lower quality and functionality than the original material (Pires, 2018), Cradle to Cradle design concept internalize the ideation of upcycling design that because of creating solutions for sustainable system by considering the management of waste and energy saving issues.

According to these sustainable design methodologies, there are various possibilities to activate sustainability, save the environment and maintain the natural harmony of the ecosystem.

Social and Economic Sustainable Design

Sustainable design concept has not been constructed just on the mentality of environmentally concern. Sustainable design concept exists and functions, with the combination of all three aspects. These three terms are usually defined as triple bottom line (Elkington, 1999). Environmental design is internally linked to the ethical and philosophical zeitgeist (Worster, 1996). The ethics context of design concept points the society factor. Design reflects society in all its facets and forms. Designers take positions on the mental states, including anxiety, indifference and euphoria, problems and desires of social groups (Papanek, 1972). Also, designers don't act autonomously in design processes, but as part of a society, subject to its influences. Designers, create a discourse through their designs. Designed artefacts are social communications (BIRD, 2008). The interactions of these works with consumers, create a communication, shared value and new contexts.

Design can be perceived in two possibilities from the perspective of social. On the one hand, designer works to create new desires and they increase consumption. On the other hand, design's statement is beyond consumer demand, so design can also be understood as a planned process that responds to social questions and injustices with logic, reason and clarity (BIRD, 2008). These two possible approaches can define the direction of designing activity and the specifications of the designed outcome.

Besides, the process of design has always been relying on value-laden decision processes, which means, each designer needs to constantly revisit and address the ways in which personal ideologies and characteristics are compatible with prevailing social circumstances, whether they are artistically, financially, or socio-politically motivated. The interaction of

designers and societies define statement of the integration of the social considerations into sustainable design processes. Socially considered designs synchronously consider of the contexts, in which they are created to the reality that the majority of design processes overlook the needs and expectations of underdeveloped societies. Through this perspective, social sustainable design creates some new kinds of opportunities that can make change in economic activities, referring to sustainability concept. In this sense social sustainability refers to investments in fostering the resilience of people, by enhancing their know-how and know-who (BIRD, 2008).

Many people and organizations make decisions by economics (Elkington, 1999) and economics is crucial aspect that people consider the cost of any design before their environmental impacts (Weston et. al, 2011). Through the circularity, the closed loop nature of product take-back by producers represents a fundamental shift from linear economy to circular economy. For instance, applying leasing method is the basic way of maintaining return of the product to the manufacturer. By selling the use of the product, rather than the product itself, allows integrated strategies for sustainable production and consumption. By retaining ownership of the product or service, enterprises have encourage to invest in more efficient and durable products (BIRD, 2018). This creates a great opportunity for economic activities and environment.

The term sustainable design is also known as eco-design or environmental design. Adding to Papanek's definitions about social design, social quality, social economy and ecological quality (Papanek, 1972), sustainable design combines these areas of design concern in one term. Sustainable design includes the triple bottom line elements, which are people, planet and profit, as referring to the social, ecological and economic sides of sustainability (Elkington, 2018).

Fields of Sustainable Design

Nowadays, ecosystems are seen as non-linear and dynamic. Pickett and White (1986) defined this systematics under the theory of 'patch dynamics' which sees ecosystems as spatially heterogeneous flow structures. Sustainable design, in this context is a deeply cross-disciplinary activity, engaging in research, public policy and outreach in addition to design solutions at the scale of landscapes, water sheds, infrastructure, and human settlements.

Sustainable design is mostly a general reaction to global environmental crises, the rapid growth of economic activity and human population, depletion of natural resources, damage to ecosystems, and loss of biodiversity (Shu-Yang et. al, 2004). According to these ideations, multi and cross disciplinary type of design systems are suitable for sustainable design for accomplishing various type of challenges and spreading the sustainability through all the impact areas that design fields can touch.

As considering urban planning, sustainable design of cities requires to focus on to activate low carbon footprint level, better air quality, sustainable and renewable alternative energy resource use, and a honest relationship with the natural environment. Efficient sustainable land use planning helps improve the welfare of people and their communities, shaping their urban areas and neighbourhoods into healthier, more usable spaces.

As another sustainable design field, sustainable architecture refers to the practice of designing buildings which create living environments that work to minimize the human use of resources. According to Barnett and Browning (1995), sustainable architecture is a result of consuming responsibly, to reducing the waste in which, buildings interact in stable conditions with nature and cyclic processes, balancing the needs and expectations of people, with considering capacity of the nature, and maintain the relationship within the borders of it. The United Nations defines the five principles of sustainable architecture, as;

1. *Healthful interior environment.*
2. *Resource efficiency.*
3. *Ecologically benign materials.*
4. *Environmental form.*
5. *Good design.*

(UNEP/IETC, 2003).

Sustainable architects design with sustainable living in mind (Holm, 2006). According to this perspective, sustainable living practices can be designed through the sustainable architecture processes. These all principles can be interpreted to adapt to be used in sustainable interior design practices.

Sustainable product design is the process of creating sustainable solutions for unsustainable problems and circumstances, through products that offers environmental, social and economic benefits while conserving the common health and environment

through the whole life cycle, from the raw material extraction to the dispose phase (McDonough and Braungart, 2002).

According to Frank-Martin and Peattie (2009), sustainable product has six characteristics. A sustainable product satisfies customers through meeting their needs. A sustainable product focuses both on ecological and social significance. Sustainable product is life-cycle oriented and constantly environmental-friendly during its entire life. Either, they provide measurable improvements in socio-ecological product performance. Sustainable products should also be continuously improved regarding social and environmental variation.

In the light of these examples, each sustainable design field, like; sustainable urban planning, sustainable landscape design, sustainable architectural design, sustainable product design, sustainable service design, sustainable engineering, sustainable fashion design, sustainable graphic design, etc. have some specific roles to maintain sustainability through the living environment.

The Inter-professional Council on Environmental Design (ICED), developed a vision statement in an attempt to foster a team approach to sustainable design. ICED states that the morals, education systems and practices about professions linked with design discipline, will be oriented to form a sustainable future. To accomplish this vision, ICED members take part in design processes through multidisciplinary partnerships (National Park Service, 1993).

2.2.3. The Role of Design in Sustainability

In consideration of the problems that the world is struggling - through the unconsidered depletion of natural resources, designers have some crucial roles by creating solutions to these problems and offering innovative and sustainable products that can help to reduce resource use and waste.

Sustainable design concepts consider the full life cycle of products and measure the objectified consequences of processes building components (BIRD, 2008). These considerations create self-feeding concept that enables the control mechanism that

functions naturally. Through sustainable design concepts, conventional understanding of production is able to be changed.

In recognition of sustainable design principles, the outcomes as artefacts that concerns sustainable efficiency, the focus of current sustainability research and policy also includes sustainable consumption. This refers not just to inform customers about the qualitative ecological impacts related with products on offer, in order to foster 'buying green', but also stimulating consumers to consume less. (BIRD, 2008). Through sustainable design consumer behaviours can be managed and steered.

Sustainability is less scientifically determinable state than the state of possibility of being involved in forming the future. Therefore, the aim sustainable design is to avoid designing through close off alternative futures, what is Fry has mentioned as 'defuturing' (Fry, 1999). Sustainable design is able to create designs which is Manzini called 'error-friendly design' that be able to redesigned for other futures concept (Manzini and Jegou, 2003).

From the perspective of design and considering sustainable design concepts, there is continuous development, change and innovation through sustainability (BIRD, 2008). The natural characteristics of design in general, adapt the motion of sustainability and make great contributions to maintain it by creating continuous solutions for and from the concept of sustainability.

2.3. Sustainable Living Concept

The importance of the sustainability is changed, through the progress of the environmental perception across the world and among all people. The outcomes of this progress caused to create new concepts and movements that supports sustainable issues. Through the timeline, how people live, habits, behaviours have been changed because of the technological, political, social, economic and environmental factors. Recent history has shown lots of changes because in globalised world everything interacts with everything easily and everything has significant effects on others (Crowd DNA, 2018).

Besides, the enterprises and commercial organizations, sustainability perception has affected societies and each member of them for becoming more active to contribute to the

non-sustainable situations. Because of the outcomes of the global warming, the deforestation, diminishing resources, unhealthy food production, pollution in all dimension, inequity in reaching natural resources across the world, devastation on social and cultural values, etc. have affected some people to feel responsible about it and have created awareness on some people to change their activities. These motivations make these people to act more responsible about the environmental, economic and social issues and with the help of these awakening sustainable living concept had started to be created.

Fundamentally, the concept of sustainable living can be summarized as the application of sustainability concept to everyday life activities, preferences and future plans. Sustainable living describes a lifestyle that ventures to reduce an individual's or society's use of the Earth's natural resources, and personal resources (Ainoa, 2009). Its practitioners are ambitious to reduce their carbon footprint by altering their ways of transportation, energy consumption, and/or diet (Winter, 2007). Sustainable living activists are willing to manage their lives in ways that are directly linked with sustainability, as naturally in harmony, and regarding to the biological interaction with the ecosystem.

Sustainable living concept's history is directly linked to the raising awareness to the sustainability and dates back to the middle of the 20th century. In 1953, 'Living the Good Life' by Helen and Scott Nearing have marked the starting point of the contemporary sustainable living movement. The publication has helped to raise 'back-to-the-land' movement (Nearing and Nearing, 1953) in the late 1960s and early 1970s. In 1962, the publication of *Silent Spring* had a powerful impact on the environmental movement. *Silent Spring* became a rallying point for the new social movement in the 1960s (Hynes, 1992). Meadows and colleagues wrote the international bestseller *The Limits to Growth*, which reported on a study of long-term global trends in population, economics and the environment in 1972. This report has focused on the finite supply of the resources according to economics and increasing human population (Meadows, et al., 1972).

1973 is the year that E. F. Schumacher published essays on shifting towards sustainable living through the supportive use of technology in his book 'Small is Beautiful' (Schumacher, 1973). The United Nations organized conferences on sustainability to preserve the natural resources of the world, which is an encouraging source material to support sustainable lifestyles in communities and homes (UNDESA, 2007).

These works about sustainable living, the global and local situational and behavioural changes, the politics, global warming, economic activities etc. have all been leading to change constantly of sustainability perception of people. These factors have been defining the structures of sustainability concept and from that perspective, sustainable living approaches of the people. The constant changing sustainable living concepts create various sustainable lifestyles that focus on significant concerns and specific topics.

2.3.1. Sustainable Lifestyles and Changing Behaviours

By the time, the raising popularity and the acceptance of the sustainable living practices, has created diversity. Because of interaction with various kind of communities, social groups and each individual from different parts of society have put their own characteristic interpretations and have added new values into the concept of sustainable living. Still, each different participator has been perceived the sustainable living conception, puts his/her own insight to the informative and applicative processes. With the technological, political, economic, social, cultural, environmental shifting and developments, these different perspectives changes constantly. Also, the interactions between sustainable living and other academic fields and professions, have created new values and inter-disciplinary knowledge. All these outcomes and changes that related to them, has created different approaches to the sustainable living issue. These are defined as the sustainable lifestyles. In a shorter timeline, into these lifestyles, sustainable living trends occur.

Sustainable lifestyles concept is defined by Westminster Centre for Sustainable Development as, "to meet basic needs, provide a better quality of life, minimise the use of natural resources and emissions of waste and pollutants over the lifecycle, and do not jeopardise the needs of future generations" (CSD, 2004, p.48). Sustainable lifestyles are the reflections of each society through specific cultural, natural, economic and social heritages (Mont, 2007). Sustainable lifestyles are being structured constantly by each choice that is made and each decision that is given by each person in the society. Sustainability in lifestyles is a broader concept and includes many related activities. Lifestyles are based on consumption and production processes and are directly related with people's behaviours (Mont, 2007).

For understanding sustainable lifestyles and sustainable living interpretations, it is beneficial to look unsustainable lifestyles, habits and behaviours that are being made. Unsustainable lifestyles are based on overproduction and overconsumption; acting insensitive and uncontrolled by putting too much pressure on natural resources and imposing negative environmental, economic, social and health impacts (UNEP/WI, 2011).

After industrial revolution, humanity has created a significant totalitarian lifestyles based on consumption. Through the timeline, this consumption model has become more and more uncontrolled. Uncontrolled consumption has been harming the environment, the cultural heritage and economic balances along this timescale. Because of the fast consumption behaviours, this situation has been defined as 'take-make-dispose' model. Consumption levels of the humanity have increased six-fold since the 1960s (Lorek and Spangenberg, 2001). Food and drink, housing, mobility and tourism are responsible for a large part of the pressures and impacts as the outcomes of consumption patterns in the EU. Greenhouse gas emissions from each of these consumption sections are equal or bigger than the 2050 EU target for all of these patterns together (ETC/SCP, 2009).

The SPREAD Sustainable Lifestyles 2050 project has focused on detecting the today's facts about unsustainable behaviours of people and planning to solve the consequences of these behaviours, in the future. This project has been established by the European Commission, European Research Area and Seventh Framework Programme of European Union and funded under the Socio-economic Sciences & Humanities (UNEP/WI, 2011). The analysis of these project has been reported in the Sustainable Lifestyles baseline report. The SPREAD project has chosen to examine in detail the four key lifestyle impact areas of "consuming (food, household and leisure consumer products), living (the built environment and homes), moving (individual mobility and transport), and health and society (health, well-being, ageing, and equity)" (UNEP/WI, 2011, p.11). For analysing deeply, the sustainable living practices, it is beneficial to scope on each key lifestyle impact areas.

Consumption

Through the timeline, especially, by industrial revolutions, mankind has been constantly increasing the volume of the production in each area. By the time, with uncontrolled raising population, with the development of technology, with easier access to knowledge, because of the globalised world, with the triggering stimulation of designed human needs and expectations, the range of production has widened. These processes have created the

conventional consumption perception. This consumption model refers to consume constantly without thinking the background of the production processes of products or services, or afterlife when it is completed its' duty.

After growth of population, overconsumption of natural resources has become a crucial problem. There is a pattern like a dependency to unsustainable consumerism (Clinebell, 1998). Against this unsustainable consumerism, there is a raising concept of sustainable consumerism. The key to sustainable consumption from this perspective relies on sensitive and environmentally aware consumers who decide how to act, based on their deep values (Ottman, 2003). These consumers, named 'environmentally conscious consumers' (Ottman, 2003) or 'green consumers' (Elkington, 1990), are individuals willing to use some of their time and money to reflect their sensitivity for the environment. For others, sustainable consumption is broader and contains rethinking the social and cultural function of material consumption and abundance (Schumacher, 1974). An alternative point of view beget consumption decreasing and reframing the normative framework based on opulence of material and wealth to an 'anti-consumerist ethic' (Press and Arnould, 2009).

Environmental consciousness on consumption undermines the conventional model of consumers and individualization of responsibility (Press and Arnould, 2009). Sustainable consumers, or in other terms, green consumers are against to purchase products that give harm to the environment (Moisander and Pesonen, 2002). With considering fair trade, consumers reject products from socially irresponsible firms (Toulouse, 2006). In political consumption, consumers do not prefer products that are not in their ideology (Micheletti, 2003). As an anti-globalized perspective, counteractive consumers boycott organizations that impact society, negatively (Klein, 2004).

According to these key lifestyle impact areas, as considering 'consumption', conventional behaviours of people has analysed and possible solutions have been created to improve the sustainable lifestyle practices through the SPREAD project. The SPREAD project has detected problems about consuming, like food and drink consumption; in particular meat and dairy - long distance transportation of goods; particularly import of non-seasonal and exotic foods, use of chemicals more in food production and growing consumption level of processed food etc. (UNEP/WI, 2011).

For replying these unsustainable processes, some promising sustainable lifestyle practices are being developed. Increasing awareness for sustainability issues, especially among many European citizens is one of the most important fact (UNEP/WI, 2011). Especially, there is a significant raise of awareness among young people aged 18 to 25, in particular, believe that their generation is consuming too much and want more information on how they can reduce negative impacts on environment, economy and society, through their consumption (OECD, 2008).

Also, among some parts of the society, emergence of collaborative consumption trends like, sharing, lending trading, swapping are gaining importance. Growing availability and demand for eco-efficient or organic/ecological products and foods are another rising trend, in the group of consumers that are sensitive and more conscious about their individual environmental impacts and environmental footprints. The raising tendency for urban farming movements toward consumption reduction (e.g. meat consumption) is another crucial social change; especially among the consumers that are enthusiastic and dedicated to be more active and responsible for contributing to change (UNEP/WI, 2011).

Living

In the view of 'living' element as a lifestyle impact area, there are some challenging issues that stand in front of the sustainable lifestyles. Increasing individual living spaces also increases consumption of energy and water (Crowd DNA, 2018).

For achieving more sustainable lifestyles, some challenges are being applied by consumers that are concerned about the daily life environmental impacts. Smart storage solutions and blended living areas in common space, are the examples to move toward minimalism (Crowd DNA, 2018). Sustainable living, are challenging towards more sustainable outcomes and practices about where and how people live (UNEP/WI, 2011).

Moving

Considering the 'moving' perspective of unsustainable living trends, there are lots of challenging issues for improving sustainability across individual and societal moving. Especially, in the western societies, traffic and air quality are the top issues that has to be in consideration. While that's definitely prevailing for cities worldwide, new forms of transportation are also emerging in people's lives, to move in more sustainable ways (Crowd DNA, 2018).

Increasing numbers of passenger cars, oil dependency, increasing mobility needs related to urban structures, cheaper air fares and rising air travel are some of the harmful behaviours about moving that are standing in front of the sustainable living practices. For bettering up this issues, some sustainable lifestyles and trends have being developed with the supports of both individuals as a consumer, and the policies of innovative and environmentally considered enterprises and governments (UNEP/WI, 2011).

Health and Society

From the perspective of health and society, there are crucial issues both for individual and communal health, social order and equity. Rising health issues, like increasing levels of obesity (WHO, 2011) and heart disease associated with poor unhealthy food products are threatening health conditions for humanity (UNEP/WI, 2011).

Adding to that, high or rising social inequity causes global problems like; environmental impacts are considerably higher in high income groups than in lower income groups per unit. There is a clear social gradient in eating habits, with more wealthy people being more likely to have healthier diets (UK Food Standards Agency, 2007). Growing awareness on healthy lifestyles increasingly successful efforts to integrate health and equity considerations into policymaking and society problems (UNEP/WI, 2011). Technology has changed the way, people interact with environment, for certain. The well-being of a person is the most regarding issue because, its' outcomes effect life quality of his/herself directly.. New sustainable business models have aroused that enabling people to live and consume consciously within the city. (Crowd DNA, 2018).

As looking the broader perspective of current lifestyles, it is easily recognisable that, peoples as individuals and societies have lots of phases to eliminate to reach more sustainable systems (UNEP/WI, 2011). The current situation is the result of two misinterpretations upon which current economic system rests. The first is the belief in unlimited natural resources and natural sinks that can tolerate environmental pollution. The second is the belief in fictitious and continuous economic growth (Daly, 1977).

There are some challenges and development process that individuals and organizations have been operating, to reach more sustainable lives. As organizational structures, governments and businesses are considering shifts toward more sustainable business

models and the green economy as part of these models (WBCSD 2010). Primary focused areas for investment include renewable energy, low-carbon transport, energy-efficient buildings, clean technologies, improved waste management, improved provision of fresh water, sustainable agriculture and forest management, and sustainable fisheries. Leading businesses have started to re-align their business models to leverage the potential opportunities of a pollution-limited and less resource destitute world. "Sustainable business models aim to minimise social and environmental impacts, optimise efficiencies and develop new markets for sustainable products and services in response to the emerging global megatrends of climate change, resource depletion, combined with the need to alleviate poverty and improve health and well-being." (UNEP/WI, 2011, p. 21).

Sustainable living movements from the individual perspective is the reflection of the enlightening from the practices of sustainable living processes and the awareness of the beneficial outcomes of them in daily lives. "Sustainable lifestyles are ways of living that allow people to meet their personal needs and aspirations, while allowing current and future generations to do the same. Meeting individual needs and desires within the limits of available resources is collective challenge" (UNEP/WI, 2011, p.22). This means, among other things, minimizing natural resource extraction and emissions of waste and pollutants while ensuring equity and equality on access to education, health and other services.

In living environment there are lots of factors that affect daily lives and decisions that change how people sustain their routines. Understanding these factors helps to improve sustainable lifestyle solutions that pointing human motivations and barriers at the individual and society-wide levels. The situational factors like; infrastructure, culture, social networks, geography, institutional framework, accessibility to capital, information, technology, social learning, and behavioural factors like; experiences, norms, beliefs, attitudes, habits, values, identity, knowledge, leadership, perceptions, altruism, awareness, self-efficacy are influencing human behaviour. These shifting human behaviours in large induce for environmental change (DEFRA, 2011).

For instance; the issues like global warming, globalisation, growing city population and fast improving technology have affected how people live and behave in their daily lives and future plans. For example, as considering city population growth, bigger amount of people (30 percent of the global population lived in cities in 1950; 53 percent today; an estimated 66 percent by 2050) are all increasingly moving into cities (Crowd DNA, 2018). As it is

mentioned in the “How People Live” report of IKEA, this growth of population forces to change how people live in cities, how they consume, how they socialize and get alone in urbanised cities that have 21 million populations, how they act against the global and social problems, how people perceive the daily incidents, their concerns, their way of looking, etc. (Inter IKEA Systems, 2018).

From the view of Oskamp, for applying sustainable living practices, there are some key directions to accomplish behavioural change. These behavioural changes define various approaches to create unique sustainable lifestyles by focusing and concentrating on one or group of them. There are suggested six possibilities which are listed briefly like; voluntary simplicity, various, specific, concrete actions, providing clear behavioural norms, focusing technological advances toward pro-environmental goals, organized group activity, a war against the common enemy (Oskamp, 2000).

Voluntary simplicity as an overall committed lifestyle is a movement which has been aimed at sustainable living patterns as ‘living lightly on the earth’ (Elgin, 1993). A variety of specific, concrete actions can be effective in reducing resource use by each individual like changing lightings with LEDs or purchasing more energy-efficient car. Providing clear behavioural norms can be a guidance to people and organizations to take pro-environmental actions. Particularly important examples are relevant laws and regulations, such as auto smog checks and fuel-efficiency standards for vehicles. It is inevitable for sustainability to move people in a pro-environmental direction (Olson, 1995), by focusing technological developments toward pro-environmental goals and accentuating the great amount of increased efficiency (Oskamp, 2000).

“Use of carefully organized group activity can help reduce or prevent environmental damage. In such efforts, the mass media are very important allies, because the polluters are very often governments or powerful corporations that can ignore individual complaints. Yet, at the same time, the media's constant theme of consumerism needs to be rejected”

(Oskamp, 2000, p.385).

The achievement of sustainable living visions and practices should be perceived as a superordinate goal (Sherif et al., 1961) that all nations and peoples can unite for a war against the common enemy of an uninhabitable world (Oskamp, 2000).

As a leading reference for defining sustainable lifestyles, the three pillars of sustainability that is identified in the UN World Summit 2005 report, are beneficial. They are environmental/ecological sustainability, economic sustainability and social sustainability. Each of them is directly linked to lifestyles and provides useful references to turn them into more sustainable (UNEP/WI, 2011).

Environmental or ecological sustainability is concerned with the environmental impact of production and consumption. Because of the various processes like, increasing levels of carbon and other emissions and levels of water and air pollution; land use, deforestation and biodiversity have been aroused. Saving the ecological world from the negative impacts of people's ongoing harmful behaviours is the right thinking to protect the livelihoods of current and future generations. Social sustainability concentrates on equity and security, diversity and social cohesion, health and well-being. Social side of sustainable development is crucial by the challenges of ensuring equity of access to social fundamentals. Economic sustainability points resource efficiency as well as viable financial models and targets to satisfy people's today needs and expectations, to guarantee the same for future generations and to establish, human-nature relationships over the long term and inherently uncertain future (Baumgartner & Quaas, 2010). These three aspects of sustainability are mutually connected to work together. This challenge is to be active towards sustainable living concept where progress is mutually utilitarian (UN, 2005).

The sustainable lifestyle implications of these three sustainability pillars would influence everything that people do, have, use and display. According to these pillars, much behaviour contributes to more sustainable ways of living. These include insulating homes, reducing individual consumption through product maintenance and repair, choosing eco-friendly products and reducing the impact of travel by preferring for less carbon intensive travelling types, such as trains. Based on sustainable behaviours, the Department for Environment Food and Rural Affairs (DEFRA) has reported behavioural analysis from the view of UNEP, comparing current unsustainable behaviours and sustainable behaviours to fix them up. (UNEP/WI, 2011).

For instance, about improving living space as an eco-home, methods like; building insulation for energy saving; upgrading heating and boiling systems; fitting and using water saving devices with, upgrading to low flush toilet, fitting water efficient shower head and water taps, fixing dripping taps; generating own energy by installing renewable like wind

energy, solar energy for generating electricity and heating water and air source heat pumps can be integrated to each individuals' daily lives as behavioural changes for sustainable living. For using energy and water wisely, managing temperature and washing & drying laundry using minimum energy and water with line drying laundry, using exact amount of detergent, and switching to the green energy tariff are the leading examples (DEFRA, 2011).

Extending the lifecycle of things to minimize waste is one of the most beneficial method against the unsustainable consumption. Maintaining and repairing, instead of replacing with the new one, giving new life to discarded items like furniture and making the most of local recycling services are the key behaviours to extend the lifecycle of things. Keeping electrical goods longer, repairing goods, furniture and clothes, reusing organizations or services, giving clothes to the charity shops, disposing safely batteries and paints, recycling textiles and clothes are some of the examples to reach longer lifecycles of things (DEFRA, 2011).

Cooking and managing a sustainable & healthier diet is a crucial step for maintaining healthy life for reaching sustainable living. By choosing foods grown in season, in country of origin, increasing proportion of vegetables, fruit, and grains in diet and eating a balanced diet, growing own food, cooking sustainable & healthier food by composting food waste, planning meals ahead, storing food, sustainable healthy lifestyle can be reached (DEFRA, 2011).

Also, choosing eco-products and services are one of the critical steps to apply sustainable living. Using labelling to choose most energy and water efficient products; choosing fairly traded; eco-labelled and independently certified food, clothing, etc. like, sustainable fish such as MSC fish, sustainable wood such as FSC (Forest Stewardship Council) wood, low impact clothes, recycled products, choosing without excessive packaging; borrowing, hiring or sourcing second-hand or recycled like, borrowing or hiring electrical goods, choosing second hand furniture, choosing second hand clothing, using local hire, share and swap movements for tools etc.; buying ethically when travelling are helpful key actions to apply ecological concerning attitudes (DEFRA, 2011).

Another crucial behavioural change can be travelling sustainably. It can be achieved by, for instance, making the most of cycling, walking, public transport and car sharing for short journeys; taking advantage of lower emission models available while buying or replacing a

vehicle, choosing the alternatives instead of travelling (e.g. video conferencing and driving more efficiently with combining trips), and using eco-driving techniques. Using and future-proofing outdoor spaces is also beneficial to be more productive and for supporting healthy life. Gardening for biodiversity and environment, creating an environment for wildlife, using rainwater, home composting garden waste, using peat free compost, enjoying the outdoors and using local public green spaces are ways to activate these behavioural changes (DEFRA, 2011).

After applying these methods, it is beneficial to spread these practices among other people and communities. Sharing skills and knowledge as being a part of social communities provides, collective development. For instance, car sharing and using car clubs, installing community micro generation, swapping skills, finding and using local shops, working with community to grow food are some methods to reach communal interaction. Also, volunteering with a local or national group, volunteering for local conservation project, joining an environmental conservation group, getting involved in local decisions, taking part in local planning process practices are the way to be more activist about sustainable living, spreading and gathering knowledge and contribution to larger group of people about sustainable lifestyles practices (DEFRA, 2011).

In the light of key behaviours and sub behaviours that DEFRA defined, and with the expanding possibilities of sustainable living activities, the sustainable lifestyles are getting in various forms and concepts. Each individual has own interpretative approach to the sustainable living concept and these alterations create lots of various sustainable lifestyles.

2.3.2. Sustainable Living through Products and Knowledge from the Perspective of Consumer Behaviours

If the main objective of sustainable living concept is considered, Westminster Centre for Sustainable Development's sustainable living definition (CSD, 2004), points to focus on some significant issues. From the definition, it is obvious to take consumption issue as a leading topic, because of being the crucial element of obtaining sustainable living concept. The consumption issue has a significant position in sustainable living concept with the contexts like, anti-consumerism, over consumption, green consumerism, eco-centric

consumerism, greenwashing, etc. These consumption issues are linked with sustainable living practices and the interaction between two concepts create the sustainable lifestyles.

In the light of sustainability concept, there are various ideations to define 'R's of sustainability and its' sub-concepts like sustainable living. The fundamental 3 'R's of sustainability are reducing, reusing and recycling. Reducing is to reduce resource use as a primary phase and considering to apply this phase to manufacture, transport, and dispose of products, processes. Reuse is functioning artefacts more than once in their original form instead of disposing them, each time. Reusing helps to extend lifeline of resources with also using less new raw materials. Recycling is converting waste materials into new production lines, as raw materials by processing them with physical and chemical interventions. Although recycling uses energy, it helps to prohibit using new resources and to prevent old materials get wasted (Beaty, 2013).

For supporting and detailing this concept, more 'R's of sustainability, like refuse, repurpose, refurbish, reduction, rejection, replant, respect, replenish, rethink, repair, reinvent, recover, restore, etc. All these elements of sustainability, are interacted to the responsible consumer behaviours and its' outcomes according to the sustainable living.

From the perspective of conventional consuming perception, people are dedicated to apply, the cycle of work and spend. In our contemporary, global world, people are stimulated by authorities to spend more, own more, consume more and dispose more. With the strategies of linear economy as 'take, make, dispose' model like perceived obsolescence and planned obsolescence which is a policy of planning or designing a product with an artificially limited useful lifetime to become obsolete after a certain short period of time (Bulow, 1986), pushes people to consume constantly the same kind of products, with a shorter replacement timeline and inefficient lifecycle.

These understandings cause harmful outcomes to the environment, economic growth, social order. Ecological impacts are not generally considered in buying decisions in first place, but finding the cheapest price does (Simon-Brown, 2000). Because of these irresponsible behaviours and habits, the natural world and eco-system is being affected bad. Adding to that, high level of consumption within a society creates social injustice and class inequality. Being a part of a consumer society is inconvenient for the working people that have insufficient income (Simon-Brown, 2000).

Answering to these policies and strategies, modelling sustainable behaviours through responsible consumerism is an alternative approach to reaching sustainable economic system. This approach would be achieved by, commercial enterprises' paradigm shifting, collective movements towards irresponsible consumption by Non-Governmental Organizations or Governmental Organizations as non-profit organisations and individual awareness, contributions and efforts that interact with both of them. As an alternative economic strategy, sustainable product and service businesses are both beneficial for enterprises and consumers. Advertising and marketing can be deciphered through educational materials which enable consumers to discriminate between expectations and needs for obtaining sustainable behaviours (Simon-Brown, 2000).

As a collective movement, creating social connections and acting towards conventional understanding is more efficient to taking responding benefits. Bryant and Goodman (2004) suggest mark out a form of 'anti-consumption consumption' that gathers and collaborates consumers in alternate sets of social connections and enables new possibilities for political action (Hobson, 2006). For that, co-operation and communal practices create new cultural bonds and value chains.

Comparing with the interaction of individual consumers - who are perceived as customers by businesses, and commercial enterprises, the interaction between individual consumers and NGOs or GOs are more organic and cross feeding because of ethical norms and social connections (Hobson, 2006). As a result of being away from economic beneficial relations, individual demands and activities and communal movements may be more linked with each other and expected to be more influencer to each other (Bryant, Goodman, 2004). Whereas, because of the strategies of branding, businesses are powerful to stimulate their action plans to the individual consumers. This opportunity, also can be applied for stimulating responsible consumerism or green consumerism. This may cause to increase the consumption of green labelled or sustainably concerned products instead of conventional type of products.

For Gopalkrishnan (1999), environmental sustainability for business is not a scale of sustainability of the environment, but the sustainability of businesses causes environmental pressures. On the other hand, under the cover of green consuming goods, some businesses may apply greenwashing manipulation to promote the perception that an organization's

products, aims or policies can be shown as environmentally friendly (Kahle, Gurel-Atay, 2014) for gaining more profit. Even, the consumption direction changes through green labelled from harmful consuming goods and services, it is still risky to create over consumption of green labelled consuming goods and services.

Corporations try to create pressure to feel consumers to buy more products and services, even they are green labelled or environmental friendly. Under the mask of anthropocentric approach, businesses offer products which are claimed as the necessity for consumers (Gopalkrishnan, 1999) to apply sustainable lifestyles or being a consumer who is sensitive about environmental issues. For disabling businesses' triggering manipulation for pushing consumer to purchase more ecocentric approaches can be replaced into anthropocentric approaches. In the contrary of anthropocentric approaches, ecocentric approaches accept the importance of all living forms and object to the use value accorded to nature in other ecological perspectives (Eckersley, 1992). The basic premise driving the ecocentric philosophy is that the value of the nonhuman world is independent of its utility to the human world, as the nonhuman world is valuable for its own goodness (Naess, 1992). This ecocentric consumer approach points the anti-consumption methods that linked with sustainability.

According to these consumption practices, for applying sustainable lifestyles, in the first phase it is necessity to consider 'refuse', 'reuse', 'repurpose', 'reproduce' elements of sustainability across the 'rethink' or 'reduce'. It is more crucial and beneficial to prioritize anti-consumption activities instead of activating green consumption. (Black and Cherrier, 2010). For disabling over consumption or over green consumption, Seegebarth (2016), have formed a roadmap named 'Sustainability Rooted Anti Consumption' (SRAC) model with the goal of sustainable development. Sustainability Rooted Anti Consumption can be applied through three steps; voluntary simplicity in living, collaborative simplicity and boycotting against to overconsumption with product possession, impulsive buying and spending and indebtedness to reach psychological well-being (Seegebarth, 2016). From this kind point of view, refusing to purchase products and services can be the alternative way to reach well-being. Also, if it is being looked from the income and budget impossibilities, alternative solutions are needed for applying sustainable lifestyle practices.

For creating a sustainable lifestyle concept in alternative ways, the shared knowledge of sustainable living practices is the answer. As another natural result of applying 'refuse',

'reduce' elements of sustainability and anti-consumption perspectives to sustainable living practices, sustainable living knowledge is the way of creating solutions. Instead of purchasing products or services to activate sustainable living practices, maintaining sustainable living through knowledge is exact solution both for spreading these practices and concepts through each individual in the societies (Simon-Brown, 2000), obtaining social equality in a significant section and being in a harmony with the essence of the sustainable living concept.

For instance, for sorting waste or collecting them for taking them to recycling process, it is not necessary to purchase waste sorting bins or bags. Using current containers, or upgrading old containers by repurposing to be waste sorting bins is sufficient to integrate this sustainable living practice into consumers' lives. As another example, for growing indoors, consumers do not need to purchase new pots or watering cans. It can be applied by using or refurbishing old packages, buckets, tomato sauce cans, mugs or various kind of containers.

Even if, the sustainable living through knowledge concept is beneficial to obtain anti consumption and responsible consumer behaviours, in some issues, there is a necessity for purchasing some products or services to provide significant sustainable living activities. With the raising level of technology and innovations, some new solutions to make more sustainable activities have been developed. While, some innovations are creating more efficient and environmental, economic and social concerning developments, some of them are offering brand new systems that contributes to the sustainable living concept with new solutions that creates positive impact on each pillars of sustainability.

For instance, if it is considered to reduce energy consumption, LED technology is a revolutionary innovation that has been spread among various fields of use and has been created huge impact for reducing energy consumption and offering alternative solutions to the lighting need. Besides, there are also other possible solutions to apply sustainable living practices through knowledge, like using electricity or heating system efficiently and in a considered way. But from total perspective, necessity of adapting new technologies into consumers' lives is the inevitable part of sustainable living concept.

Also, using water saving taps are efficient way of applying sustainable living as it is considered reducing water use. It is crucial to purchase water saving taps or upgrade water

systems to reach as possible as the most efficient way of water use. For example, if it is aimed to growing indoors by the most efficient way, refurbishing old containers may not be enough, if the hydroponics and growing light kind of technologies are considered.

Thorpe (2010) has evaluated the role of design in sustainable consumption in two groups as eco-design and design for behaviour change, for defining the connection between designed products and their interaction with sustainable living practices. Eco-design may sometimes link consumers to downstream outcomes of products (e.g., by using recognizable recycled material), few eco-design approaches link consumers to upstream social and environmental outcomes of making products. Design for behavioural change is an approach that reflects with choice editing policies. On one end, it is the same as informed choice, where a product displays environmental information thus better enabling a consumer to act upon it. On the other end of the spectrum, a design solution may actually use technical controls or spatial organization to steer consumer behaviour (Thorpe, 2010).

Also, Lilley, Lofthouse and Bhamra suggest the design system that offers, the products that are designed by considering use phase and whole lifecycle impacts, are inspires, informs and leads consumer behaviours. By that, consumer behaviours can provide feedback as key references to create more useful, realistic design processes and product outcomes. (Bhamra et al., 2005).

Liedtke, Buhl and Amelie offer alternative mind set for creating design processes that is to be applied for sustainable product systems with user-centred perspective, instead of focusing on artefacts. As the result of that, sustainable design processes of products and services requires the integration of production-orientated (efficiency and consistency) and consumption-orientated (sufficiency) strategies, as combined. The design objective is not to design sustainable products but rather to design systems that manage to embolden sustainable lifestyles (Liedtke et al., 2013).

As these mind set and the sustainable living practices are considered, both designed products for obtaining sustainable lifestyles and both the knowledge that they have been created are beneficial and supplement. Rather than the perception of sustainable living applications just through knowledge or just through product functioning, the combination of both of them is more beneficial and complementary. For reaching complete offer of sustainable living, the harmony of knowledge and product functioning is crucial.

2.3.3. Spreading Sustainable Living Practices

Even if, the sustainable living concept is being applied by sustainable living supporting products, sustainable living knowledge or the combination of both of it, it is crucial to sustain its' practices and spread its' outcomes among larger scales. There is a lack of clarity about perceiving what 'sustainable lifestyles' are and how they be able to operate to activate pro-environmental behaviour and sustainable patterns of consumption at the individual level, at the societal scale or how sustainable lifestyles might interact with the wider issues of social, economic and environmental change (Evans and Abrahamse, 2009). If sustainable living concept in minor scale is considered as a personal activity, it is beneficial to contribute on creating more sustainable habitus. But, also, sustainable living has a communal side that consists bigger scale outcomes. These bigger scale outcomes are just possible with the integration of group of people, the social identity, common motivation about sustaining environmental, economic and social issues and combination of all.

Evans and Abrahamse (2009), define this approach as 'motivating pro-environmental behaviours'. But there is a tension between individual lifestyles and behaviours, and social practices and norms that may cause non-connectedness and non-relatedness. (Bourdieu, 1977). For instance, a view of consumption as deeply integrated with social relations and norms, thus making individual behavioural change toward sustainability a matter of facilitating change in individual attitude (Jackson, 2005).

From the perspectives of Carrigan, Moraes and Leek, small organizations, as SMEs (Small and Medium Enterprises) and CSR (Corporate Social Responsibility) firms can embolden societal change toward more sustainable types of living. By making individual behavioural change toward sustainability, causes a matter of facilitating change in individual behaviour, as well as in social norms and relations between organizations and consumers, through the outcomes of upstream and downstream interventions (Carrigan, Moraes and Leek, 2011).

As a different approach, governments and organizations can be more effective in dealing with public behaviour incoherencies if outlined to include community networks as well as individual behavioural change (Thøgersen and Crompton, 2009).

From any kind of approach for connecting individual and social practices about sustainable living, the various kind of methodologies can be applied. Even upstream sustainable living movement, or sustainable living inspiration through downstream there are shared culture that creates rich knowledge. The UN’s SPREAD project has defined a roadmap to widen sustainable living practices through all scale of the community, from individual to social groups. SPREAD project has focused on two important ways to enable large-scale transitions to sustainable lifestyles current promising practices. First one is understanding and supporting individual behaviour change and second one is creating enabling environments and infrastructure that stimulate and support more sustainable ways of living. (UNEP/WI, 2011).

Influencing behaviours depend on understanding diversity, context dependency and enabling change. Behaviour changes depend on understanding people and the diversity of lifestyles and reach to sustainable lifestyle possibilities. For that, there are some steps to be applied. First, understanding diversity by providing a broad range of solutions and options by going beyond the “one size fits all” understanding and analyse behaviour changes across age population segments with varying levels of knowledge, awareness, and interests with taking the reference of DEFRA’s evidence based public segmentation model (Figure 2.3.1.).

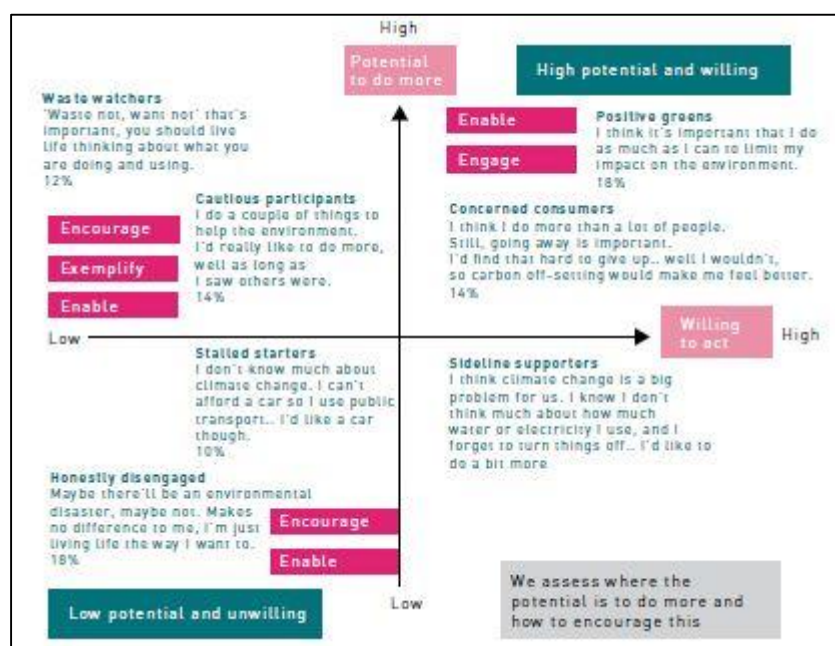


Figure 2.3.1. DEFRA’s Evidence Based Public Segmentation Model (Source: DEFRA, Sustainable Lifestyles Framework, 2011, Accessed July, 2019)

Second step, creating change toward sustainable lifestyles, can be achieved by making it easier, cheaper, and more enjoyable to make sustainable predilection with developing proper infrastructure and focusing specific solutions in the framework of enabling institutions. Then, as a third step, involving systemic and holistic approaches through multi-stakeholder is beneficial to participate with the end-user. This is needed to enable the development of instrument packages that are suitable to influence diverse stakeholders and target groups of consumers (UNEP/WI, 2011).

After influencing behaviours, enabling environments with the consideration of infrastructure, innovation, cooperation, participation, economy, research and policy. First of all, infrastructure is crucial to creating base point of sustainable living strategy of physical environment. Sustainable neighbourhoods, communities and cities are arising through co-creation and participation. Buildings, public space and urban infrastructure are important to enable sustainable lifestyles, e.g. through increased energy efficiency, reduced car use and more social and community activities (UNEP/WI, 2011). Also, visions and scenarios for sustainable lifestyles, are beneficial to determining strategies for future of cities or living spaces.

Innovations take a big role in enabling environments because both social and technical ones are important drivers for change. Technical innovation brings about opportunities for sustainable lifestyles. Social innovation can trigger, motivate and sustain lifestyle changes that share knowledge and experiences. Social entrepreneurs and designers are important change makers for developing sustainable lifestyles (UNEP/WI, 2011). Also, strategically implementing among enterprises can create an environment that supports large-scale development by connecting relevant stakeholders and groups.

Economy is another determinative element of creating sustainability among groups. Economic strategies have to block the wrong belief in continuous economic growth without limit and the belief in unlimited natural resources and natural sinks capable of absorbing environmental pollution. Many actors in society now accept the need to redefine the current economic paradigm with considering the environment, quality of life and well-being and to balance growth, profits and consumption (UNEP/WI, 2011). Research on the sociology of consumption indicates the need for changes towards more sustainable

lifestyles; from a focus on individuals, to a focus on changing entire lifestyles (Breukers et al. 2009).

Verplanken and Wood (2006) define “downstream” interventions that provide informational inputs at points when habits are defenceless to change. However, the everyday lifestyles of individuals can restrict the effectiveness of downstream interventions that do not address the performance scales and socio-structural factors that maintain habits.

As an alternative approach, McKinlay (1993) suggests “upstream” environmental interventions designed to prevent undesired outcomes. Upstream interventions take place before habit performance, and break down old environmental signals and establish new ones. In the case described later, small retail store owners can act as the catalysts for applying upstream interventions that “target social norms and contextual supports for the desired action” (Verplanken and Wood, 2006, p. 91).

Policy and governance can be effective game changers by setting the framework conditions for business and societal innovation. The emergence of integrated and cross-sectorial strategies to policy making aims to overcome policy silos to address social equity, health, infrastructure as important elements for fostering sustainability. All these elements and their sub-elements define the roadmap how to inspire and stimulate behaviours and enable sustainable lifestyles among individual and social groups (UNEP/WI, 2011).

“Current consumption levels and lifestyle patterns require prompt and coherent action across stakeholder groups and sectors at the micro to macro scale. Most promising change processes and innovation that supports sustainable lifestyles involves a deeper understanding of lifestyle impacts, human behaviour and environments that foster change”

(UNEP/WI, 2011, p.16).

“To influence modern consumer culture, a final and very important dimension of future work is to identify opportunities to shape non-material aspirations for people by engaging the media, trend-setters, celebrities and businesses that are experienced with steering consumer culture that have an interest in supporting and shaping a post-modern sustainability culture.”

(UNEP/WI, 2011, p.14).

Whatever the movement is upstream or downstream, changing consumer behaviours into more sustainable context, cognitive awareness and acceptance of necessity of sustainability is inevitable processes to apply sustainable living practices. Obtaining sustainable living practices through the combination of knowledge and the necessity products will offer alternative solutions for different perception of sustainable living. These practices that creates various kind of lifestyles according to each individuals' life routines, daily behaviours, desires, needs and dreams, also enables applicable sustainable living practices. As the result of all of these, spreading sustainable lifestyles will also sustain social, economic and ecological values and contributes on cultural values by interpreting responsibly on conventional values and mind-sets.

2.4. Sustainability Direction of IKEA

The way people live in today's society has a big impact on people and planet. Climate change is no longer a distant threat but a visible reality and a direct consequence of the way people live. Unsustainable consumption leads to resource scarcity as well as air, water and land pollution. According to IKEA Direction report, inequality is increasing with a widening gap between the wealthiest in society and the rest (Inter IKEA Systems B.V., 2018).

These issues lead organisations to take action for challenge with them. As being one of the biggest companies in the world, IKEA is one of these organizations that sustainability arrow is pointing at. INGKA Holding B.V. as a creator organization of IKEA brand takes the responsibility that they have on. Jesper Brodin, CEO of the INGKA Holding B.V. says; "We are committed to having a positive impact on people and the planet." (INGKA Holding B.V., 2018, p.7).

IKEA has created a master strategy for integrating and managing all the business plans for the future, considering sustainability issues. This master strategy, as a main directory for all IKEA organisations, is called Three Roads Forward. Three Roads Forward is structured by three main topics, which are; making IKEA affordable for people who cannot afford IKEA today; reach and interact with many more of the people, where they are; create a positive impact for the people, society and the planet (Inter IKEA Systems B.V., 2018).

As being one of the major problems for all humanity, sustainability issue is a crucial topic for institutions, companies and facilities. These organisations have to accept responsibility for sustainability because of their impacts on the systematic order. All of them experience the changes on earth from various perspectives. They encounter with ecological impacts like waste problems, raw material extraction, energy production and usage. All of these organisations face with economic changes because major issues like the uncontrolled population growth, lack of resources, non-circular economic activities and governmental policies. Also, the cultural side of these happenings are crucial for organisations, because of the problems about sustaining values, human rights, globalization problems, etc. (INGKA Holding B.V., 2018).

All these topics are driven by sustainability concerns but the third topic is about taking actions for improving sustainability in all organisations and participations of IKEA. Creating a positive impact for people, society and the planet is pointing the IKEA Sustainability strategy, People and Planet Positive (Inter IKEA Systems B.V., 2018). People and Planet Positive Strategy is a strategy with ambitious goals to transform the IKEA value chain and life at home for the many people.

IKEA has decided what to do by this point of view. It has been planned to engage with consumers in new ways, offering smart and relevant solutions enabling them to live and act sustainably, to set clear goals to reduce total climate footprint in all organisations, to engage with consumers and partners for accelerating the transformation from linear to the circular economy, to develop the IKEA business model based on the new circular economy, to develop solutions and provide knowledge that enables people to live a healthy and sustainable life at home. About energy issue, IKEA plans to increase efforts in renewable energy together with the partners and the stakeholders. Also in product development level, through Sustainability Strategy, IKEA aims to design products with sustainable materials and built-in durability so that they can be repurposed, repaired, reused, resold or recycled (Inter IKEA Systems B.V., 2018).

All of these plans are the strategies of IKEA to work against the problems about sustainability. It is a multi-channel action plan for achieving absolute improvement about sustainability. For applying it the terms and goals are defined by the People and Planet Positive Strategy.

2.4.1. People and Planet Positive Strategy

IKEA vision, which is creating better everyday life for the many people, is the starting point for positioning the sustainability direction and conception of IKEA. For achieving the vision IKEA takes actions for providing beautiful, high-quality home furnishings, at a price affordable for the many people. But in their point of view, it is not enough to achieve the IKEA vision.

“To achieve our vision, we must contribute to improving the everyday life for people at every stage of our value chain. That is why we work to enable millions of people to live more sustainable and healthy lives, use resources efficiently, and provide fair working conditions and respect human rights, while advocating for positive change in society.”

(INGKA Holding B.V., 2018, p.8).

This approach has been creating the People and Planet Positive strategy. IKEA Group (INGKA Holding B.V. and its controlled entities) creates action plans for achieving the goals of People and Planet Positive Strategy (PPP), with the 11 including organizations and stakeholders all around the world. As the Sustainability Strategy, IKEA believes that PPP Strategy is the key strategy to perceive that sustainability is good for people, the planet, and IKEA business (Inter IKEA Systems B.V., 2018). It has contributed to more growth, greater trust, and lower costs and minimized risk exposure. With those outcomes, IKEA is focused on working sustainably with the PPP Strategy.

For evaluating this strategy, IKEA has developed it as in three main parts; Healthy and Sustainable Living, Energy and Resources, People and Communities. Healthy and Sustainable Living is developing the vision of creating better everyday life for many people by adding healthy and sustainable value on it. For accomplishing this part, IKEA Group takes actions on topics like, products that enable healthy and sustainable living, sustainability in production processes, healthy and sustainable food, services for circular economy, inspiring customers and co-workers for more sustainable livings (Inter IKEA Group, 2018).

About Energy and Resources, IKEA takes actions about investing on renewable green energy, like solar and wind, improving energy efficiency in all organizations in IKEA Group, establishing and developing more sustainable stores and shopping centres, reducing carbon

emissions, encouraging and enabling more sustainable travelling and visiting ways both for consumers and IKEA organizations, eliminating waste and becoming circular by managing the lifecycles of products and foods, being more responsible on sourcing and procurement, improving the quality of waters and reducing water usage, etc. (Inter IKEA Group, 2018).

About People and Communities, IKEA focuses on improving co-workers working conditions, health and well-being issues, respecting diversity of people and sustaining equality, growing talents and developing co-worker competence, improving the conditions of working and living of workers in the supply chain, improving the connection between IKEA and social communities like NGOs and public cooperation, building partnerships with social entrepreneurs and Good Cause Campaigns like, Let's Play for Change, IWitness, and Brighter Lives for Refugees (Inter IKEA Group, 2018).

For sustaining and developing the positive impact on people and planet through PPP strategy, IKEA contributes to the Sustainable Development Goals of UN (United Nations Global Compact, 2018) - which are in the same way of thinking with Healthy and Sustainable Living, Energy and Resources and People and Communities topics - for supporting their ambition to achieve a better world for all. For each Sustainable Development Goal, IKEA has action plans for improving and contributing to it.

For working for the Goal No.1 – challenging against poverty, IKEA is contributing with IKEA Foundation campaigns and providing better conditions for IKEA co-workers and the all stakeholders in the value chain. The number of people living in extreme poverty around the world has sharply declined over the past three decades, but in 2010 it still included roughly 400 million children, or one -third of those living in such abysmal conditions, according to a new World Bank analysis released today that for the first time gives an in-depth profile of the poorest people in the world (Olinto, 2013).

As the second goal, For Zero Hunger Goal, IKEA aims to support to end hunger in the world by achieving food security and improved nutrition and promoting sustainable agriculture. For accomplishing these, IKEA offers more sustainable and healthier food products for both customers and co-workers, minimizes food waste in all operations and provides solutions for customers to cut their food waste. For Goal No.3 - Good Health and Well-being, IKEA promotes and enables the healthy and sustainable living for our customers and co-workers with sustainable home furnishing knowledge and sustainable living product range. Also,

IKEA is so sensitive about to create safe and healthy workplace for co-workers. Because, co-workers are so important statement for IKEA's Sustainable Development Goals, because there are 149.000 IKEA co-workers all around the world, without the number of co-workers in the supply and value chain (Inter IKEA Group, 2018).

For No.4, ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all IKEA gives importance to educational development, human rights, justice in employment and personal progress processes. IKEA has got important global awards about gender equality in employment and during the work phases. Also IKEA is one of the most sensitive and active firm about LGBT+, with launching the IKEA Group Standard on Equality and the IKEA Group LGBT+ Plan. Also, IKEA Foundation provides better educational and entertaining solutions with Good Cause Campaigns like Let's Play for Change, IWitness, and Brighter Lives for Refugees campaigns (Inter IKEA Group, 2018).

For Goal No.5 - Gender Equality, IKEA does more things besides giving job opportunity good working conditions for IKEA co-workers. IKEA widens its perspective about gender issue by partnering with social enterprises that employ artisans – mostly women – and empowering them to develop sustainable incomes. Newly, IKEA has co-operated with ateliers like Indigenous Fashion Incubator in Canada and with De Kringwinkel Ateljee in Belgium for launching ÅTERSTÄLLA collection that are all structured with women (Inter IKEA Group, 2018).

With a view to support Goal No.6 – Clean Water and Sanitation, IKEA plans to support fair and sustainable water consumption with to paths. One of them is inspiring co-workers to become water stewards for working to improve water management in IKEA stores, shopping centres, distribution centres and offices. Inter IKEA Group is working in partnership with WWF to become good water stewards. This includes an education program for around 400 co-workers at management level (Inter IKEA Group, 2018).

According to Stuart Orr who is practice leader of Freshwater unit of WWF, the importance of the corporations are more important than before, in an increasingly water-stressed environment, and leading corporations, like IKEA, can have some big positive impact by working with WWF to support water stewardship for obtaining safe sustainable water resources for people and nature in river basins across the earth (Inter IKEA Group, 2018). IKEA is working towards using harvested, reused or recycled water wherever possible,

prioritizing sites in current and future water stressed areas, using best available techniques and technologies. Second path is inspiring customers to improve their behaviours about water usage. IKEA aims to inspire and enable customers to save water at home by home furnishing knowledge and water saving product range like taps (Inter IKEA Group, 2018).

For the Goal No.7 – the issues about Affordable and Clean Energy, IKEA commits itself for ensuring access to affordable, reliable, sustainable and modern energy for all. They are planning to accomplish these with some various methods. One of them is investing in renewable energy and energy efficiency. IKEA wants to play their part in tackling climate change by reducing greenhouse gas emissions and becoming more energy-efficient – generating more renewable energy than IKEA uses and purchases renewable electricity. IKEA wants to make the stores more energy efficient (Figure 2.4.1.). Also, the factories and production lines are planned to be more energy efficient.



Figure 2.4.1. Solar panels that generates electricity for use in an IKEA store.

(Source:<http://www.sunwindenergy.com/photovoltaics/ikea-to-harness-solar-energy-using-abb-smart-inverters>, Accessed July, 2019)

IKEA also, wants to create more energy efficient and alternative way of goods delivery and human transportation system both for customers, stakeholder and co-workers. Adding to these, IKEA wants to take its' customers into this movement with sustainable living knowledge in home furnishing and especially make residential solar affordable and

accessible for the many people by developing solar cell product range all over the world (Inter IKEA Group, 2018).

For the Goal No.8, Decent Work and Economic Growth, like it is mentioned above, IKEA is creating a great place to work for co-workers, moreover, IKEA wants to include refugees in their workforce and partner with social enterprises to create opportunities for marginalized groups in society. About refugee issue, with Refugee Inclusion Program, IKEA removes the barriers in front of the employment struggles of refugees has come from various countries. Also, for taking the attention on the bad situations of war-damaged people, IKEA designed and applied the 25m² Syrian Home that shows the impacts of war on civil life (Figure 2.4.2.). IKEA also aims to improving standards in supply chain through IWAY, IKEA's supplier code of conduct. IKEA sees all suppliers as its' own co-workers with this perspective, wants to improve their standards (Inter IKEA Group, 2018).



Figure 2.4.2. 25m² Syrian Home replication in IKEA Slependsen, Norway.

(Source: <https://www.designboom.com/design/ikea-syrian-home-replica-norwegian-red-cross-11-08-2016/>, Accessed July, 2019)

As the ninth goal of UN's SDGs; Industry, Innovation and Infrastructure topics are some other important issues, by supporting other goals. As it is mentioned above, Inter IKEA Group wants to concentrate on the issue of Renewable Energy Sourcing and Energy Management. The budget is centred on the investments about improving energy efficiency and renewable energy sourcing issues, as investing on alternative and sustainable energy sourcing methods like solar and wind energy. Another crucial issue for IKEA is Healthy and Sustainable Food. IKEA is planning to create better food chain with considering the lack of food resources and uncontrolled population growth across the world. For this issue, IKEA wants to find alternative ways of create more sustainable and fair food policy. They want to

keep working on the concepts like urban farming, air fryers that reducing oil in frying process, plant based- future proteins, sustainable food education for IKEA customers and co-workers, etc. (Inter IKEA Group, 2018).

For the Goal No.10, the issues about Reducing Inequalities, IKEA is focused to obtain for promoting a fair and equal society and respecting human rights and ensuring children's rights across our value chain, from the perspective of the activities that made with NGOs and global institutions. The Goal No.11 - Sustainable Cities and Communities, are crucial for IKEA because, IKEA is addicted to contributing on making cities and human settlements inclusive, safe, resilient and sustainable. IKEA wants to create an impact on these goal by achieving more resource efficient for every individual by eliminating product and food waste and becoming circular. IKEA wants to encourage people to consume less and reduce their impact. Also, it is aimed to encourage customers to live more sustainable lives, through IKEA products and sustainable living knowledge. From this perspective, IKEA wants to obtain consumer activities by saving energy, cutting waste, accessing cleaner air, saving water and generating renewable energy (Inter IKEA Group, 2018).

In addition, IKEA wants to take responsibility to create more sustainable local communities issue by contributing to fair and inclusive communities in the neighbourhoods around our stores and shopping centres. By this, IKEA wants to develop a consistent approach to partnering and engaging with communities and customers wherever they work and engage as many people as possible in our efforts to contribute to thriving communities. Moreover, IKEA is encouraging sustainable ways of getting to our stores and promoting electric vehicles. Both from the perspective of customer and IKEA, IKEA wants to reduce environmental impact of all of us by zero-electric delivery systems, car charging units, motivating the customers for visiting the store by vehicle sharing or bicycle usage for transportation (Inter IKEA Group, 2018).

For the Goal No.12 - Responsible Consumption and Production, IKEA briefly concentrates on ensuring sustainable consumption and production patterns. By integrating everyone to this ideal, IKEA focuses on offering products that enable sustainable living, and inspiring our co-workers and customers to live more sustainable lives at home. The IKEA vision is to create a better everyday life for the many people. And IKEA believes that lives are truly better when they are healthy and sustainable (Inter IKEA Systems B.V., 2018).

Plus, IKEA achieves eliminating waste and converting to a circular economy. For accomplishing this aim, IKEA works for reducing waste and managing it and also recycling (mostly upcycling) and extending products' lifespans by repairing them. In the resourcing level, IKEA strives for offering products that are produced using materials, such as cotton and wood, from more sustainable sources (Figure 2.4.3.). Adding to all of these, IKEA aims to source the goods and services that help to run business from sustainable sources; like exploring ways to work with circular procurement models to save materials, increasing the share of renewable, recyclable or recycled materials in our non-home furnishing range, working with suppliers to ensure compliance with our supplier code of conduct, IWAY, developing a sustainable approach for food, including standards on animal welfare (Inter IKEA Group, 2018).



Figure 2.4.3. Sustainable cotton procurement of IKEA as a member of Better Cotton Initiative. (Source: <https://www.fairtrade.org.uk/Media-Centre/News/October-2017/36-major-brands-pledge-to-achieve-sustainable-cotton-by-2025>, Accessed July, 2019)

Adding to those topics, through the Goal No.13, which is taking urgent actions to combat climate change and its impacts, IKEA has been applying their investment policies on renewable and alternative energy sourcing. IKEA aims to sustain their investments on solar and wind energy for making all of the IKEA operations more energy efficient and self-sustaining in each processes, like energy consumption in stores, during logistics and manufacturing processes. Since 2009, IKEA has invested 300 million euro for solar energy and has implemented 750.000 modules across 22 countries. Also, IKEA has invested 1.4 billion euro on wind turbines and has established 29 wind farms across 12 countries. From

this point of view, IKEA aims to increase these investments on renewable energy and reduce their carbon footprint, by that their negative impact on natural environment. Also, as it is mentioned above, IKEA wants to inform and inspire IKEA consumers about energy efficiency and using alternative renewable energy resources by its home decoration knowledge and products that support sustainable living (Inter IKEA Group, 2018).

For the Goal No.14, to conserve and sustainably use the oceans, seas and marine resources for sustainable development, IKEA follows the regulations and standardizations of global norms about sustainable sea life and by that serves ASC (Aquaculture Stewardship Council) or MSC (Marine Stewardship Council) certified fish and seafood at IKEA Food.

As coming to the Goal No.15, the policies of IKEA about Life on Land issue are obvious. Briefly, IKEA's approach to the natural life on earth is summarized as; to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt, reverse land degradation and halt biodiversity loss. For achieving these goals, IKEA aims to source the goods and services that help to run our business from sustainable sources, as it is mentioned above, the Goal No.12. Also, supporting the production processes, IKEA wants to build and operate more sustainable stores and buildings like it has been accomplished with BREEAM excellence certified leading sustainable IKEA stores in Kaarst and Greenwich (Inter IKEA Group, 2018).

For the Goal No.16 which is mostly about, economic and social sides of sustainability and focuses on peace, justice and strong institutions, IKEA is concentrated on respecting and supporting human rights, through the IKEA's vision, creating a better everyday life for the people and communities that IKEA come into contact with and ensuring an ethical approach to the IKEA way of doing business, through IKEA Code of Conduct (Inter IKEA Group, 2018).

For the last Goal No.17, which is related with all the goals above for embracing them for cooperation and interaction of all organizations that running for the same goal, it is aimed to strengthen the means of implementation and revitalize the global partnership for sustainable development. By partnering with others to extend IKEA's impact beyond business, and taking a stand on the issues that IKEA believe in; IKEA works with some stakeholders like World Economic Forum, World Business Council for Sustainable Development (WBCSD) and the Ellen MacArthur Foundation (CE100), and join with peers in

coalitions such as We Mean Business, RE100, EV100 and CE8, in global scale. Also, IKEA has make some more connections, interactions and coalitions with, global and local stakeholders - co-workers, customers, NGOs and partners, governments, peers, etc. (Inter IKEA Group, 2018).

In the light of these, UN's SDGs and IKEA's People and Planet Positive Strategy have been interacting to achieve the common aims. IKEA and UN Sustainability goals are superposed on each other. IKEA Sustainability Strategy has been applied through these vision and has being improved by these perspective. For the future, IKEA is planning to make more for people all around the world, society and cultural heritage and planet and its' all resources (Inter IKEA Systems B.V., 2018). All the plans in the master strategy - Three Roads Forward – integrates sustainability terms in their operations and processes.

With the leading of People & Planet Positive strategy, IKEA aims to reach more sustainable conditions both for business, people and planet.

2.5. Sustainable Product Design and Development Processes of IKEA

As mentioned above, IKEA People and Planet Positive Strategy is determinative for IKEA's all actions and strategies of the sustainability concept. According to many IKEA concepts and sustainability, IKEA has developed its own product design and development strategy that reflects IKEA's identity and way of thinking. The outcomes of the IKEA vision, IKEA business idea, IKEA Brand Direction, raw material extraction and production processes, distribution and logistics concepts, product life-cycles, home furnishing knowledge and customer experiences data lead IKEA to create its' own design principles.

'To create a better everyday life for many people' is the vision of IKEA and it is summarizing the IKEA's way of thinking and acting briefly. Considering the business idea of IKEA, which is 'to offer a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them' is the key reference to perceive how to apply the vision by the IKEA product range (Inter IKEA Systems, 2014). This idea provides the root of the IKEA's design principles, which is called Democratic Design.

2.5.1. IKEA Democratic Design

IKEA Democratic Design is the reflection of IKEA's ideal of creating better everyday life for many people and it is rooted in a tradition of functionalism and humanism (Inter IKEA Systems B.V., 2017). This concept leans on the idea of creating more humanistic, more fun, simpler, smarter and better looking products, as the background of these products, design processes and meaningful experiences for providing great everyday lives to many people. Through the establishment of IKEA, all innovative improvements, conceptual developments, service designs and new way of business thinking serve this vision. All these improvements and innovations are the key factors to find the 'good design' definition and all of them have created the concept of Democratic Design together in balance (Inter IKEA Systems B.V., 2017).

Through the timeline, IKEA has established the idea of Home Furnishing expertise and has created the Life at Home concept, which is one of the identical elements of IKEA. IKEA's service design perception, the way of serving its concept and meeting with customers by the product range and the home furnishing knowledge. The flat pack concept of IKEA has created the unique and identical distribution and logistics system that also determines the IKEA design mentality completely.

Working with local resources and social entrepreneurs has affected the way of approaching to the mass production of products that have local roots. Also, collaborating with various kind of suppliers, both for manufacturing and raw material procurement, has directed the designers and product developers to work with these stakeholders on the production floor (Inter IKEA Systems, 2014). These outcomes have offered new chances to innovate more uniquely. Also, unique approach of innovating through the material innovation, through the form research, through the user experiences, through the co-design practices etc. has lead IKEA to extract various types of product innovation outcomes (Inter IKEA Systems B.V., 2017).

All of these improvements draw the outline of the IKEA Democratic Design as an identical design perception of 'good design' for IKEA. IKEA defines Democratic Design as a method that brings good design to the majority of people by offering well-designed home furnishing solutions, with great form and function, high level of quality, built with a high concentration on sustainability and a reasonable price (Inter IKEA Systems B.V., 2017).

For understanding and applying Democratic Design briefly, IKEA has defined five principles both for evaluating the current product range, and developing it according to them. Categorizing five principles of Democratic Design - which are form, function, quality, sustainability and low price - are the outcomes of the idea of applying these democratic design principles for each product in every single step from creation to its ending (Figure 2.5.1.). Marcus Engman, the former Head of Design at IKEA, defines each principle like;

“We want the form to contribute to making everyday life a little bit more joyful and beautiful. Function means that the product meets all the needs of everyday life. Quality means that our products last over time. And the low price makes the product accessible to all the many people. Lastly, sustainability is about much more than just the choice of material or something is manufactured. We want to take long term responsibility all the way from how we source the material, to the people who are producing it, and all the way on the customer. We want to help people make sustainable choices that influence our future in a good way. Our goal is to create maximum value at minimum cost. And that involves a lot of hard work. We achieve low prices through material innovation, clever engineering, design, packaging and distribution. Many companies compete only with a low price. We want to create low price with a meaning.”

(Inter IKEA Systems B.V., 2017, p.21).

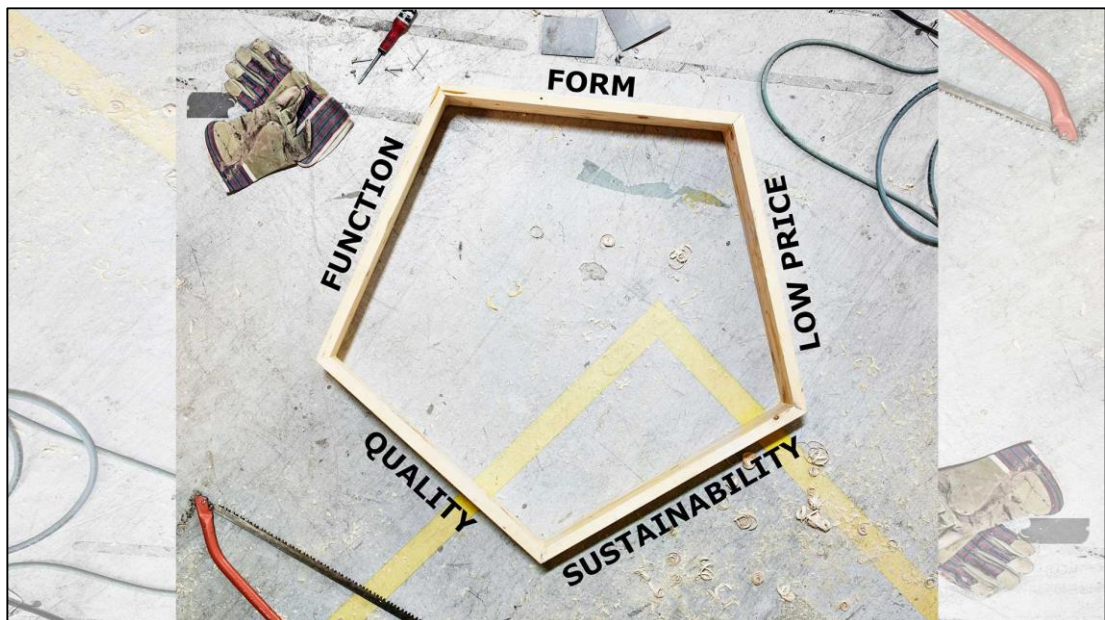


Figure 2.5.1. Five Principles of Democratic Design

(Source: <https://www.architecturaldigest.in/content/12-things-learnt-loved-ikeas-democratic-design-days/>, Accessed July, 2019)

In the beginning phase of the product, determining needs, defining aims and goals and understanding consumers' needs, wills and insights and after developing design brief, according to these consideration, the design process is ready to be started. During the design processes designer or product developer can approach to the point and establish the creative direction from different perspectives. In IKEA of Sweden, design processes are not about just drawing beautiful furniture and deciding to produce because of its good looking form. From the raw material extraction, to the feed backs of the consumers each step can lead the design process itself. The IKEA direction is to work with a circular business in all aspects: from how to develop products, source materials, develop our supply chain, set up logistics, to how and where meet our customers (Inter IKEA Systems B.V., 2017). This is the concept of IKEA Circular Design which is rooted back in the same values with Democratic Design.

Mainly, in each product lifecycle, each product has a different design story that refers to Democratic Design principles. In these stories different type of Democratic Design principle steers the whole design process and determines the products' destiny mostly in a significant step in that product's lifeline. For instance, in some cases, material selection and procurement steps that made in a sustainable way, can defines the design language, product form, its' durability, and maybe these processes add product some extra functions or second life, in a long lasting period.

As an example, the KUNGSBACKA kitchen fronts are made from recycled PET bottles (Figure 2.5.2.). A team, which is structured by the collaboration of IKEA and Form Us with Love design office, had designed this family, by the consideration of getting raw material from wastes. With the help of that IKEA can contribute on recycling processes of PET bottles, by recycling approximately 1000 PET bottles for each kitchen (Inter IKEA Systems B.V., 2017).

After raw material extraction and procurement, finding right manufacturer and finding the right production method is one another process that democratic design way of thinking can contribute. The product developer can find local producers which are also mastered on that kind of production and product ranges - from closer countries to distribution centres. It would decrease the logistics costs and also creates employment in various countries which is related to the economic and social sides of sustainability. Also it provides more qualitative products that have been produced in experienced production lines.



Figure 2.5.2. KUNGSBACKA kitchen front door family from recycled PET bottles.

(Source: <https://highlights.ikea.com/2017/circular-economy/>, Accessed July, 2019)

For instance, TILLTALANDE was launched in the IKEA stores as a new textile family, which is made by women who are refugees (Figure 2.5.3.). It includes hand embroidered cushions, floor cushions and rugs that were created by 47 Syrian and 50 Jordanian women (Inter IKEA Group, 2018). IKEA considers the social entrepreneurship and cultural sustainability by these kinds of projects that are also creating new job opportunities to local artisans.



Figure 2.5.3. TILLTALANDE social entrepreneurship collection.

(Source: <https://www.ikea.com/gb/en/this-is-ikea/people-planet/people-communities/social-entrepreneurs/>, Accessed July, 2019)

From the perspective of low price principle, a product can be designed, considering the distribution costs. So, the main motivation to the designer of that product is taking distribution costs down and decreasing products final price as a must, in his/her design process. After that, designer or product developer can innovate a different approach to the product which can be making smaller packages and saving some money on each palettes by putting more single product on it; or, by the material selection, products weight can be reduced, so the logistics costs can be decreased because of the decreasing tonnage on this products transportation. As mentioned above, this product can be produced by local producers which in more sustainable way. In the end, considering low price principle leads the process and the product have more quality and sustainability values (Inter IKEA Group, 2018).

It is also beneficial to inspire consumers to use more sustainable methods for transporting their furniture (Figure 2.5.4.). By using alternative transportation alternatives, the consumers also can reduce their transportation costs and environmental impacts (INGKA Holding B.V., 2018).



Figure 2.5.4. Bicycle transportation of IKEA flat packs. (Source: INGKA Holding Sustainability Summary Report 2017, Accessed July, 2019)

After, transportation of products to the IKEA stores, the meeting products with the customer is one of the significant motivation and consideration to the product developer.

These moments are crucial to tell the story of the product to the customers. Because, without reaching customer in a right way and without showing all of the specifications and functions about product, whole process becomes worthless. Considering the products reflection on consumer can lead IKEA product developers to develop the product or analyse the interaction between customer and the product to define its' necessities. For instance, without analysing the needs and desires of the consumer in a correct way, the whole idea of product range can be meaningless and waste of time (Inter IKEA Systems B.V., 2017).

Understanding the customers' point of view at the meeting moment with the product, can tell IKEA designers what can be done on form, function, quality, sustainability and low price levels. A functional product with a beautiful form and durable material can be out of interest because of the price level is not enough low (Inter IKEA Systems B.V., 2017). For instance, a sustainably produced, functional product with a low price can be not promising and not trustable because of its quality. That's why the first interaction with customer is crucial to understand these.

After the meeting with the customer, the real connection between customer - who is consumer from that moment - and product is the phase of analysing the true interaction. The topics like usability, functioning well and efficient, being in a harmony in the daily life spaces, being in a harmony with the natural environment even it is not being used etc. can show the real performance of the product. These feedbacks are very important and valuable for the designer or developer, and it can be the most reliable way of detecting good and bad specifications about the product (Inter IKEA Systems B.V., 2017). These data can contribute on the further design processes for considering the five democratic design principles with the consumer insights, or the upgrading that significant product for next production lines.

One of the most crucial point is, beyond the contribution to the product design processes with its' feedbacks, customer experiences and insights' impact on improving home furnishing knowledge (life at home knowledge). The information about how people live and how people interact with the daily goods is the opportunity to define how to improve these routines, experiences, needs, desires, actions in a point of view of Democratic Design (Inter IKEA Systems B.V., 2017). For example, designing a product, with the consideration about its raw material extraction, material selection, production methods etc. in a sustainable way is not enough for IKEA's Democratic Design challenge. IKEA wants to create more

sustainable life at home, by the usage of the product and interacting different sustainable living products with the knowledge of sustainable living beyond just designing and producing products in a sustainable way.

“We want to shake the world up by showing that it is possible to create products where both quality and the function exceed people’s expectations. That is possible to create products where sustainability is not only about taking responsibility for the entire production chain, but also helping people to live more sustainable lives. That is possible to create products that show a form that stuns you and makes you happy. That it is possible to create products that have such a low price that as many people as possible can afford to buy them. We believe it is possible to include all these five dimensions and we call it IKEA Democratic Design.”

(Inter IKEA Systems B.V., 2017, p. 16).

That is how IKEA defines the motivation to work with five dimensions of Democratic Design in The Democratic Design Manifesto.

As a further challenge, IKEA wants to expand the idea of Democratic Design and its’ mind-set all over the IKEA business practices. The ideation and conception of Democratic Design can lead IKEA to interact with customers, stakeholders and all other people in the connection area by applying principles and way of working of Democratic Design as a unique way of design thinking innovation. Marcus Engman defines the bigger challenge like;

“We want to look at the bigger picture, rather than just making product. Our challenge in the future isn’t to sell more products to the same people. It’s to create a better everyday life for everyone, not just in the Western world. We know that needs far exceed our small contributions. To reach all of these people we might need to try a totally new business model. Perhaps owning things isn’t the best and the most sustainable way to organise your life and home. Imagine if the idea of Democratic Design could reach out beyond IKEA. Imagine if these five principles could be translated into other areas like, governments, schools and other companies. Then we all could contribute to creating a better everyday life for everybody. Together.”

(Inter IKEA Systems B.V., 2017, p.24-25).

From now on, IKEA Democratic Design is the key methodology for applying IKEA concepts and values to the all phases of product design processes, IKEA home furnishing expertise, IKEA life at home knowledge, etc. As a major concept and the source of Democratic Design Principles, Circular Design Principles of IKEA is the useful approach mostly defining the

sustainable product lifecycle concept of IKEA. Circular design is the core part of IKEA Circular Business Strategy for applying closed loop system and improving sustainable range management and supply chain (IKEA of Sweden, 2018). In total, Circular IKEA is the way of shifting the production and consumption paradigm from linear to the cyclic.

2.5.2. Circular IKEA Concept

For defining what circular design concept is, it is inevitable to look to the circular business concept and circularity. As a primary principle for applying the circular design principles, it is crucial to shift the paradigm of current common methods like raw material extraction, production, distribution and waste management. Without defining the terms of how to manage the total processes and the life cycles of the products or services, it is senseless to apply the principles of circular design.

The circular economy is a new way of looking at the relationships among markets, customers and natural resources. It moves away from the traditional “take-make-dispose” economic model to one that is regenerative by design. The main aim is to create a system that allows long life, optimal reuse, refurbishment, re-manufacturing and recycling, in the production processes. It’s a shift in mind-set and business practices that will disrupt industries and business models, significantly reshape customer demand (Rutqvist and Lacy, 2015).

As looking beyond the conventional take-make-waste extractive industrial model, a circular economy aims to rename growth, concentrating on positive society-wide beneficial outcomes. It entails gradually decoupling economic activity from the level of consumption of finite resources, and designing waste out of the production system. Underpinned through a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on basic three principles: design out waste and pollution, keep products and materials in use, and regenerate natural systems (Ellen MacArthur Foundation, 2012).

Shifting to a circular economy does not only amount to adjustments aimed at reducing the negative impacts of the linear economy. Rather, it represents a systemic change which creates long-term resilience, activates business and economic opportunities, and supports

corporations for environmental and societal benefits. Circular Design is a crucial method for activating and sustaining Circular Economy strategies in each phase of its processes. Circular design concept, i.e. improvements in materials selection and product design which contains issues like, standardisation/modularisation of components, purer materials flows, and design for easier disassembly, etc., that is centre of the circular economy. (Ellen MacArthur Foundation, 2012).

There are five different circular economy approaches that focuses on different perspectives of the circularity concept (Figure 2.5.5.). First one is Circular Supplies. The Circular Supplies model is mostly relevant for companies dealing with scarce commodities, in which scarce resources are alternated with completely renewable, recyclable or biodegradable resources (Gerholdt, 2015). It is more likely to reuse the resourcing and to remanufacture with using recycled materials. This is the method of closing the loops. Closing the loop is one possible methodology among many in a circular economy. It is when waste is reused into new resources in order to materials to make artefacts. A corporation can have an internal circular system where the waste has been created in its own production process or end of life products is reused. There is also a possibility to close loops in a bigger context, reusing any waste created in society (Ellen MacArthur Foundation, 2012).

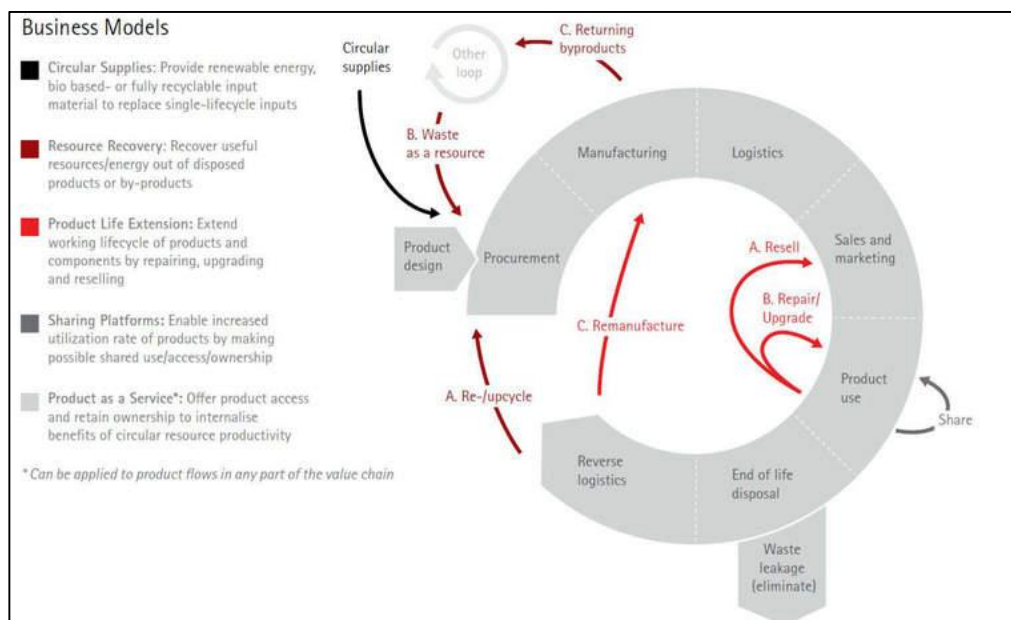


Figure 2.5.5. Five Circular Economy Approaches

(Source: <https://www.greenbiz.com/article/5-business-models-put-circular-economy-work>, Accessed July, 2019)

Second one is Resource Recovery. The Resource Recovery business model supports technological innovations and capabilities to recover and reuse resources that eliminates material missing and increases economic value. For instance, there are some methods like, closed loop recycling, industrial symbiosis and Cradle-to-Cradle designs, whereby waste materials are re-processed into new resources (Gerholdt, 2015).

Third one is Product Life Extension. The Product Life Extension model is beneficial by helping companies to extend the lifecycle of their products and entities to ensure they are economically useful. Material that otherwise would be wasted is maintained or even improved, such as through remanufacturing, repairing, upgrading or re-marketing. By extending the lifespan of the product for as long as possible, companies can keep material out of the landfill and discover new sources of revenue. (Gerholdt, 2015).

The fourth one is Sharing Platforms. The Sharing Platform model is centred on the sharing of products and entities that have a low ownership or use frequency. Companies that activate this model can maximize the use of the products they sell, boost productivity and value creation (Gerholdt, 2015).

The last one is about offering Product as a Service. Through the Product as a Service model, customers use products by leasing or pay-for-use arrangement, in contrast to the conventional buy-to-own mentality. This model is beneficial for companies that have high operational costs and ability to manage maintenance of that service and recapture residual value at the end of life (Gerholdt, 2015).

IKEA, as one of the leading sustainable company in global scale, has taking big steps for transforming its' business into circular in each scale and processes of their organisations. For applying the circular business principles, IKEA is dedicated to improve its' operations from the raw material extraction to recycling or repurposing phases. It is not about upgrading and making more concerning resourcing and production processes, it is also about reaching users with more responsibly and evaluating the opportunities of the circular economy. It is about creating a value chain and applying this value chain into each scale of this circular business. IKEA Circular Design will affect the business in all phases: from how to develop products and services, extract the raw material, improve the IKEA supply chain, to how and where meet IKEA customers. This will enable IKEA to extend the life of products

and materials. Being circular is both a responsibility and a good business opportunity (Inter IKEA Systems B.V., 2018).

According to IKEA Sustainability Strategy, IKEA is planning to be 100% circular and climate positive for 2030 in all operations in all phases (Inter IKEA Systems B.V., 2018). IKEA aims to reducing the climate footprint by on average 70% per product and reducing the emissions from the IKEA value chain in definite terms while growing the IKEA business. With the goals like, using just renewable and recycled materials by 2030, discarding virgin fossil plastic from products by 2030 and using materials from more sustainable sources such as 100% wood by 2020 and obtaining 100% sustainable cotton (IKEA People and Planet Positive, 2018). For reaching these goals, in all operations IKEA has planned to concentrate on four dimensions, and work with them collaboratively. They are; meeting the customers in new ways, designing all products for circularity, creating a circular supply chain and taking the lead and building the partnerships (IKEA People and Planet Positive, 2018).

In global scale consumers are becoming more conscious and sensitive about the environmental impact of their choices and actions. From reusable coffee cups to refillable water bottles, the divergence from a 'throw away culture' is gaining momentum. Consumers are searching for more value in what they buy. According to the 'How People Live' report, people are still willing to renew their home often, but are frustrated by having too much stuff and less space (Inter IKEA Systems B.V., 2018).

Following these behavioural changes, steers IKEA to improve their methods and change their perspective to reach and meet consumers. IKEA started to focus on opportunities and people's needs in relation to the problems facing consumers around the world, such as how people acquire things, how people care for and restore value in the things that be loved, and how people pass on the things people no longer want (Inter IKEA Systems B.V., 2018). For reaching these, IKEA integrates social enterprises and NGOs into the value chain and development processes for improving the impact. Also it will conduce to inspire people to make positive changes in their lifestyles and to consume in more sustainable ways by sharing knowledge, ideas, solutions and involving people (IKEA People and Planet Positive, 2018).

By the help of Circular Design principles, IKEA aims to activate circular business model and circular production, instead of linear business model. For this goal, IKEA is improving the

raw material extraction mentality; the vision of material procurement is shifting into recycled materials or renewable materials. IKEA will enable materials and products to last longer, and use more renewable and recycled materials. According to the 'Creating a Circular IKEA' report, All materials that IKEA use, will be renewable and recycled by 2030, and all products will be circular (Inter IKEA Systems B.V., 2018). Designing products with circular design principles will led IKEA to apply circular business steps and closing to loop and zero waste strategy. The way of maintaining the closed loop or circular business model is integrating the 4 steps that are reuse, refurbish, remanufacture and recycle for eliminate the possibility of landfill or incineration (IKEA of Sweden, 2018).

For creating and maintaining circular supply chain, IKEA focuses on each operation about material and product procurement and transportation processes. World Health Organisation announced in 2010 that, transportation is the fastest growing contributor to climate change, comprising 23% of energy-related carbon dioxide emissions (IPCC, 2014). For production processes, IKEA manages and will improve the distribution of raw material. Resources are limited, so, IKEA is searching for smarter ways to use them. Working with circularity is crucial to finding new and innovative ways to work with renewable and recycled materials. Already today, 60% of IKEA range is based on renewable materials. It is crucial to sustaining renewable and recycled material loop and circular supply chain is the key for it (Inter IKEA Systems B.V., 2018).

Also for the distribution of products from manufacturers to the stores and from stores to the customers IKEA is planning to improve the methods to be more sustainable and circular. Product transport accounts for 4% of the greenhouse gas emissions generated by the total IKEA business. Inter IKEA has developed a programme, by concentrating on reducing the number of shipments, replacing fossil fuels with alternatives and rethinking, to integrate innovation into the transport supply chain (Inter IKEA Group, 2017). Also there are projects as it is mentioned in 'Creating a Circular IKEA' report, like investing in electric vehicles that works with electricity that comes from sustainable resources for reducing carbon footprint levels of cross-country distributions and urban transportation of products. (Inter IKEA Systems B.V., 2018).

After these steps, it is crucial to expand this perspective to many because for IKEA, circularity is about taking the lead and collaborate with other stakeholders. It is about inviting consumers to be part of the solution and helping them to live more sustainably. It is

also about partnering up and participating in government and industry platforms, co-creation communities, and co-operating with other companies (Inter IKEA Systems B.V., 2018). People are searching for ideas to live better quality lives while making a positive difference for people and the planet but often they don't know how to light the fire (People & Planet Positive, 2018). By these steps, each individual that are keen on living sustainably or easy to convinced to live more sustainably, NGOs, institutions, global organizations have been included to apply circular movement and improve it in larger scale.

Four steps that shape the idea of circular business of IKEA is also the core mind-set of improving and steering home furnishing knowledge and sustainable living concept of IKEA. For establishing the new point of views in the sustainable living knowledge of IKEA, the circular design principles and the outcome products of that processes, the collaborative workshops and consumer insights, new sustainable living ideas and methods will be the most effective outcomes. It is beneficial to interact these processes with the perception of Circular Design.

IKEA Circular Design Concept

Circular design is a regenerative approach to the product design. It is about offering consumers solutions which have not been produced by virgin raw materials, and has been designed for minimizing impact on climate and the planet (IKEA of Sweden, 2018). By that, Circular Design concept is one of the most crucial step to activate circular economy. Because, sustainable products which are designed and produced with the circular design principles, are the tangible and able to show the profits instantly. Circular design will make IKEA product range more sustainable, stimulate circular behaviours and help people to live more sustainable lives at homes. It allows to put a high value on the time, energy and resources it takes to make a product by prolonging the life of its parts and materials and never letting products end up in landfill (IKEA of Sweden, 2018). It also supports the sustainable supply chain because of the renewable and recyclable material selection. Circular Design gathers the circular business requirements and help to accomplish most of the challenges in the operations.

For applying circular design, there are 4 mandatory principles and 5 additional principles (in total 9 principles) to guide to design for circularity. The four Circular Design mandatoriness are; designing for an expected lifespan, designing for the use of renewable or recycled materials, designing for recycling, designing for production. The five additional principles

are; designing for standardization and compatibility, designing for adaptability and upgradability, designing for care and repair, designing for disassembly and reassembly, designing for an emotional connection (IKEA of Sweden, 2017). For accomplishing the future challenges and applying IKEA way of sustainable product design and development processes, these circular design concept has been matched with the IKEA Democratic Design concept (IKEA of Sweden, 2018). Each Circular Design Principle is related to dimensions of Democratic Design and these interactions led IKEA designers to design better sustainable products.

In the first principle, designing for an expected lifespan it is briefly defined like, product durability, condition and material matches its' functional and stylistic lifetime. Each product has unique requirements for its' own lifetime. Each product is structured on the common sense, and consumer behaviours, like how they live and how they shop. This principle brings along some kind of considerations to think by designers like; whether the product is useful and fits for consumer's life, whether it can be used as second handed or be rented or be leased out, whether it is accommodating with new technologies, new trends, new technologies etc. These considerations help to design product for an expected lifespan (IKEA of Sweden, 2017). After defining lifespan, this principle guides designer to choose suitable technologies, production techniques and material selections. This circular design principle supports the Quality dimension of Democratic Design (IKEA of Sweden, 2018).

Ensuring the right choice of materials from the beginning is the following step that named designing for use of renewable or recycled materials as the second mandatory principle. After defining lifespan, this principle guides designer to choose suitable technologies, production techniques and material selections (IKEA of Sweden, 2017). In this step, designer decides the material qualifications according to lifetime and frequency of use. For a short lifetime, this principle can be used for selecting materials that are easy to be recycled. For a long lifetime, selected materials should last longer, and they can be maintained, repaired, and preferably be recycled at the end. At this phase, designer concerns about material features, bill of material, building capacity, surface treatment and etc. This circular design principle interacts with the Low Price dimension of Democratic Design (IKEA of Sweden, 2018). It is also supports the Sustainability dimension by the consideration of closing the loop.

After choosing the most suitable, renewable or recycled material for product, in the designing for recycling principle, designer considers how different parts of the product will be integrated in the recycling process. It is crucial to define that materials recycling policies, routines and legislations, ease to detach parts of the product, identifying the reusable parts, whether there are hazardous components in it etc. This principle is directly connected with Sustainability dimension of Democratic Design. Designing for recycling is one of the most supportive feature for a product to be sustainable. Because, IKEA sees that products are material banks for the future (IKEA of Sweden, 2018).

Ensuring the material selection and defining its' afterlife future, fourth mandatory circular design principle, designing for production, is applied for determining the issues like product durability, condition and material interaction with its' functional and stylistic lifespan. It is crucial to defining production processes in detail for optimising requirements for producing the product and improving it. The suppliers and product engineers involve into this process for reducing costs and saving water, energy, material, chemicals and waste. As consideration, designers and product developers inquire the packaging materials and production details, the chemicals of product, reducing the number of steps in production and cut down the costs of product in production line by improving design features. This principle interacts with Low Price dimension of Democratic Design (IKEA of Sweden, 2018). On the other hand, it is referring to the Sustainability dimension because of considering to reduce raw material and production resources.

The fifth principle, designing for standardization and compatibility, is beneficial for enabling interchangeability also between brands, better production and re-manufacturing. All over the world, the local legislations and technical requirements differ. By using standardized fittings, it is aimed to reduce the number of spare parts needed and limiting the amount of waste in this area of business. This principle is supportive for reusing, renting or leasing out the products. It is also referring to the refurbishing and re-manufacturing the product at a later time for maintaining circularity in the business. This principle is connected with the Function dimension of Democratic Design (IKEA of Sweden, 2018).

The sixth principle is about helping consumers to fulfil their needs throughout life by the products that have been designed for adaptability and upgradability. In order to having rigid and stable functioning features, products can adapt to the consumer needs and wants that changes through time. Product that fits with that principle is easy to upgrade and

renovate. This principle also refers to Function dimension of Democratic Design (IKEA of Sweden, 2018).

The seventh principle helps consumers by answering their needs with the specifications like, easy maintenance, repair and long term enjoyment by the product that has been designed for care and repair. This principle is about improving the quality of the product by maintaining spare parts more durable and upgrading their functioning by solving the former problems. With this principle, designers improve the ease to assemble and disassemble the product for taking care and repair practically. This principle is connected with the Quality dimension of Democratic Design. It is also connected to the Sustainability dimension, because of helping to close the loop (IKEA of Sweden, 2017).

Designing for disassembly and reassembly is the eighth principle of circular design for considering and solving problems about the issues like moving, repairing, upgrading and re-manufacturing. It is beneficial to improve the processes of disassembly and reassembly, because, beyond easing to use the product, it is also about the securing its quality even it is assembling more than one time and supporting the phases like repairing, recycling and re-manufacturing for maintaining circular business. This principle is related to Quality dimension of Democratic Design and supports the Sustainability dimension (IKEA of Sweden, 2018).

The last principle of circular design that is called designing for an emotional connection, is about encouraging consumers to have an emotional connection with the product, through design details and functions that trigger to live more sustainable life at home. Together with great functionality, an emotional connection is the reason for people to maintain, repair, care for, and not throw away a product.

“Combining the circular design principles with a functionality that supports sustainable and healthy living, is called designing for ‘functional sustainability’. It enables savings of money, time, energy, and resources by helping to consumer grow their own food, clean their air, save the water, and more.”

(IKEA of Sweden, 2018, p.30).

Creating emotional connection, encourages consumers to giving product another life, or refurbishing, repairing it rather than throwing it away. This principle is mostly related with the Form dimension of Democratic Design, but it also refers to the Sustainability.

With the methodology of Circular Design and Democratic Design Strategy, IKEA sustainable product design methods have been defined in a brief way. The interaction between these to design methodologies creates the design direction of IKEA that stimulates to creating more than product range. It is about creating sustainable value chain, maintaining circular business and sustainability opportunities, developing sustainable service design strategy of IKEA, improving the supply chain, improving product range to be more sustainable, interacting with consumers to create more sustainable life knowledge at home and inspiring them to live more sustainably and conscious.

2.6. Sustainable Living Concept of IKEA

The active shifting of the modern world we live in and changing habits of the contemporary people defines the how to live, how to behave and how to change the positioning. These constant changes have determinative roles on how organisations adapt the planet, society and people. Each organisation whether it is profit or non-profit, has to consider how to get in harmony with constantly changing habits, trends and lifestyles (Crowd DNA, 2018). These improvements are pointing that people are changing to be more sustainably concerned. Day by day, people will be more conscious about being more sensitive about the problems of environmental desolation, economic inequalities and social corruptions. Even if the challenges may seem overwhelming, there are positive trends to struggle with them (Inter IKEA Systems B.V., 2018). People are more aware than ever of their impact and are becoming increasingly sensitive to the role that consumption plays in relation to their own well-being and the planet. According to the “How People Live” report, today, people are looking for ways to be inspired and to combine their wish for a good life with doing the right thing for the planet. Therefore, sustainable living must be desirable, easy, accessible, comfortable, and affordable – the most natural choice (Inter IKEA Systems B.V., 2018).

Sustainable Living concept, as a growing trend is a good business opportunity and at the same time is the way of enabling more people to live better everyday lives within the limits of the planet. It is the reflection of the IKEA vision, creating a better everyday life for the many people. (Inter IKEA Systems B.V., 2018).

IKEA believes that better homes creates a better everyday life. So, offering product range as more sustainable and supporting with the unique home furnishing knowledge will inspire and motivate people to apply sustainable living concept to their lives. Adding to the sustainable living, IKEA concerns about the healthy living and integrates this concept into the sustainable living concept. That's why the strategies of the sustainable living include the healthy and safe living issues. The whole sustainable living concept offer has been structured by four topics; reducing energy, reducing water use, reducing waste, recycling and living a healthier life.

Even people are aware of their impact on environment and more concerned about their harm on nature, they are not naturally motivated to be more sustainable, make more sustainable choices and live more sustainably. Therefore, IKEA develop strategies to make it easy to motivate people to act this way (Inter IKEA Systems B.V., 2018). Healthy & sustainable living includes both better products and better homes. From a range perspective, it contains both solutions that help people save energy and water, reduce waste and promote a healthy lifestyle, as well as products developed with IKEA circular design principles, and products helping us to drive positive social change. And all of this together with information and communication that enables positive behavioural changes. It is better to put IKEA products in a context that inspires people to make change in their lifestyles and to consume in more sustainable ways. Also it is beneficial to share ideas and solutions for new, innovative ways of living: in smaller spaces, for being more conscious and less wasteful, and for prolonging the life of things (Inter IKEA Systems B.V., 2018).

In the light of these perspective, IKEA has approach to the sustainable living and meet consumers with two channels. One of them is sustainable, circular and environmental friendly products that supports sustainable living. Second one is, IKEA's unique home furnishing knowledge about sustainable living solutions. For supporting, strengthening and widening product range and home furnishing knowledge combination, IKEA interacts with the local and global organisations like NGOs or associations for sharing the total sustainable living offer. These ingredients create the IKEA Healthy & Sustainable Living concept.

2.6.1. Consumer Insights for Strategizing Sustainable Living Concept

In the light of Ingvar Kamprad's Testament of a Furniture Dealer, IKEA has defined the business idea which fulfils the IKEA vision as; "We shall offer a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them." (Kamprad, 1976, p. 2). It gives references to the idea of; IKEA product range is one of the essentials of IKEA offer and creates the concept of; IKEA product range is IKEA identity (Kamprad, 1976).

The product range objective has to encompass the total home environment, i.e. to offer furnishings and fittings for every part of the home whether indoors or outdoors. The range must always be limited to avoid any adverse effect on the overall price picture. The main effort must always be concentrated on the essential products in each function. IKEA products have to be significant to be perceived as 'typically IKEA'. It must be hard-wearing and easy to live with. It must reflect an easier, more natural and unconstrained way of life. It must express form, and be colourful and cheerful, with a youthful accent that appeals to the young at heart of all ages. The many people usually have limited financial resources. The first rule is to maintain an extremely low level of prices to the product range. But they must be low prices with a meaning. IKEA does not compromise either functionality or technical quality of products (Kamprad, 1976). Ingvar's this statement refers to the sustainability dimension of democratic product design of IKEA;

"Throw-away products are not IKEA. Whatever the consumer purchases shall give long-term enjoyment. That is why IKEA products must be functional and well-made. But quality must never be an end in itself: it must be adjusted to the consumer's needs. Quality must always be adapted to the consumer's interests in the long-term."

(Inter IKEA Systems B.V., 2013, p.4-5).

IKEA states the way of working as creating home furnishing products and smart solutions based on true insights about the many people's life at home. People's way of living in various situations, with different cultures and living conditions, is IKEA's source of knowledge and inspiration (Inter IKEA Systems B.V., 2016). IKEA wants to influence and knowledge of life at home to enable IKEA customers to change their lifestyles. Over the years, a lot of research has been done across the IKEA business into how people live in different markets, such as the IKEA Life at Home report. And a tool is being developed to

consolidate this knowledge. By learning more, it is the way to create the products, services and inspiration to create sustainable and healthy living part of the daily lives (Inter IKEA Systems B.V., 2018). It is being used some methodologies and strategies for the process of creating product range that speaks to the consumer needs and expectations.

For that, IKEA works for understanding how people live and how people want to live. IKEA works to understand people's needs and the problems facing consumers around the world – from how to acquire things, to how to retain and restore value in the things that be loved and get rid of things that no longer be wanted, exploring opportunities to address these problems (Inter IKEA Systems B.V., 2018). As being a furniture dealer, IKEA mostly focuses on life at home. For analysing the current habits, behaviours, feelings and desires of the people IKEA works with Life at Home report. For a bigger scale, for perceiving the global environment and changes, IKEA works with some intelligence analysis for creating the WoWLi (the World We Live in) report.

World We Live in is the collective report with the feature of gathering the information from STEEP report as a macro level intelligence report, How People Live and How People Shop as micro level intelligence reports and IKEA Performance Through the Eyes of the Consumer intelligence report as a minor scale of analysis. STEEP report is being constructed by providing an analysis of external factors: Social, Technological, Economic, Environmental and Political (STEEP) and the way they shape the mind-set of the many people (Inter IKEA Systems B.V., 2017).

This report shows that world is changing in a global scale. For instance, in the 2017 report it is mentioned that; the economic power is moving from Europe and USA to the East Asia, middle class in developing countries are becoming wealthier; 600 cities will represent more than 65% of Gross Domestic Product; cities are becoming disadvantaged with higher housing prices, air and other pollution, crime, higher levels of inequality, on the contrary cities are becoming more advantaged with higher wages, more job opportunities, wider range of cultural amenities, more variety of service/goods. More, most of the people believe that systems of institutions are failed. 75% of consumers believe that companies can both improve their profits and create positive changes in communities where they operate (Inter IKEA Systems B.V., 2017). Also, it is stated that technology changes how people live their lives, like using smartphones are increasing dramatically. These data led IKEA to strategize how to construct the outlines of the product range. For the smartphone

case, IKEA has been developing solutions for charging smartphone, with the everyday products at home, like work lamp (Figure 2.6.1.).



Figure 2.6.1. HEKTAR work lamp charges smartphones with wireless technology.

(Source: <https://www.ikea.com/us/en/catalog/products/40323437/>, Accessed July, 2019)

How People Live analysis as more focused, micro intelligence report, gives insight into the behaviours and trends that drive how the many people live, wherever they are. It provides a starting point for future IKEA innovation and development for the range. This research is focused on understanding how people interact with the situations in their lives, like jobs and educations, culture and environment, social networks, higher expenses, congestion and pollution, personal safety concerns, etc. (Inter IKEA Systems B.V., 2017). It is about how people perceive home, how they interact with other people and outer environment. It is about analysing people's daily and long term behaviours with the changes in time.

How People Shop is another micro scale intelligence report that outlines the current and new shopping experience needs from consumers as well how retailers answer to this. It provides a starting point for future IKEA innovation and development for better meeting the customer. For instance, this research shows, in the future consumers will expect retailers to be more convenient and more engaged. Technology is creating a new base point for convenience. Consumers are expecting more speed and efficiency in their shopping experience. In this conditions, companies will have to speed up deliveries, offer a recommendation based on personal preferences, offer low and transparent prices (Inter IKEA Systems B.V., 2017).

Adding to that, consumers increasingly search for ways to change and develop themselves through experiences while shopping. Retailers will also have to help consumers to make and create more things by their creative product range and knowledge, customize their products or creating more customizable products, work for sustainability for gaining confidence of consumers to their brand identity (Inter IKEA Systems B.V., 2017). These data give references to develop the product range and services for direct needs and expectations of people.

For specializing the information that gathered from macro and micro insights, IKEA Performance through the Eyes of the Consumer intelligence report gives an overview on IKEA performance from a consumer perspective. It provides an outside-in perspective on the IKEA brand positioning today, highlighting the brand's strengths and opportunities. 2017 Intelligence Report shows that, IKEA has a strong brand positioning but the gap with competition is narrowing down. IKEA has a big potential in multichannel sales methods like e-commerce. IKEA is improving on trust with durability and sustainability issues (Inter IKEA Systems B.V., 2017).

Also this report has focused on IKEA's three roads forward. For instance, for creating more affordable IKEA and for reaching and interacting more people, IKEA has been improved but not as fast as competitors; besides about creating a positive impact on people, planet and society as considered as a sustainability perception of IKEA is improving (Inter IKEA Systems B.V., 2017). These focused data directly about IKEA is primary inspiration and reference to plan the product range. The outcomes will lead IKEA to define strategies of product range and development.

Life at home report is another example for understanding people's needs and dreams by analysing daily lives, habits, feelings and expectations. Life at home is structured by mix of methodologies as qualitative and quantitative researches to dig deeper to analyse people's life. For instance, while creating Life at Home Report 2017, social media feedbacks, 36 in-home interviews, collaboration with 18 people living in unusual or creative locations, interviews with experts, chats in online communities in 7 countries with 650 people and surveys with 21.419 people in 22 countries methods has been applied (IKEA Group, 2017). These methods have been evaluated in four dimensions which are; things, relationships, space and place. Relationships, which define interaction between people that are living

together and space, which defines the physical conditions that living in (home), are the most important dimensions of life at home. Things that people have and space as the outer environment of living area or neighbourhood are following dimensions of life at home (IKEA Group, 2017).

It has been discovered five common tensions between the interplay of the four dimensions. These tensions are the outcomes of the different point of views of people. In summary, people are more likely to prioritise things than being more likely minimalist. According to the results of the research, people are challenging to negotiate around personal spaces and things in a shared home. People quest for mental presence within the home and are trying to posit the pursuit of the balance around technology at home. People are searching for a home which is one step ahead of people's lives (IKEA Group, 2017). These outcomes are in constant motion. In a global world, trends, lifestyles, innovations are changing very fast. So this research is being done every year to be more related to the reality.

For instance, the outcomes of the Life at Home Report 2018 differ from the 2017 report. People are getting more open minded and flexible to define the borders of the home definition. Home concept is getting more emotional connection and is becoming more fluctuant (IKEA Group, 2018).

The boundaries are blurring between what people do at home and what people do beyond four walls. The feeling of home is no longer limited at residential homes. Understanding the five emotional needs in this bigger context makes it easier for to find the feeling of home, no matter where or how people live. Security is about feeling safe and grounded wherever you are. Belonging is about feeling part of group of people who accept you for who you are, and in places that reflect selfness. Ownership is about having a sense of control over the space and place that live in. Comfort is about feeling content and at ease in your surroundings. It's not just about having a comfortable sofa or bed. Privacy is about feeling in control of where and how you can disconnect and reflect.

According to the research, daily routines are changing as people take traditional home activities into other spaces and places, and bring more of the outside in. With home activities shifting between locations, it's clear that neighbourhoods and communities play an increasingly important role in homemaking experiences. In some instances, home

activities can help people with more possibilities to obtain a better life at home than the spaces live in.

“In fact, 64% of people say that they would rather live in a small home in a great location compared to a big home in a less ideal location. Diverse social networks, enriching experiences and connecting to people in communities all help people feel like belong. 44% of people, who feel relaxed, content and joyful in their homes, also believe that community is an extension of home. 47% of people seek experiences outside the home that will help to grow as a person.”

(IKEA Group, 2018, p.12).

All these data that have been collected is the essence to understand the lives at homes and creating a better life at home for everyone. This is the way of perceive the people’s daily lives, shifting paradigms, constant changes, needs and expectations, and through this perspective creating the product and service range that interact with reality of consumer. It is about being transparent, reliable, and honest and logic strategy to creating a strategy for developing the product range. The things that have been reflected through Life at Home researches will help IKEA develop products, show furnishing solutions, and design home experiences that take closer to IKEA vision. (IKEA Group, 2018).

For instance, from the perspective of sustainable living products, as it is considered, the improvement about having more ambitious to connect people in the communities may lead IKEA to invest on products or services. These products or services may inspire people or communities to grow their own food on community gardens, may ease their workload, and may inform how to grow vegetable, etc. (Figure 2.6.2.). With that, IKEA product range or services can interact, create emotional bonds, with people by considering their needs and expectations.



Figure 2.6.2. IKEA Growroom, an experimental system for gardening.

(Source: <https://www.designboom.com/design/ikea-space10-the-growroom-flat-pack-spherical-garden-02-20-2017/>, Accessed July, 2019)

2.6.2. IKEA Product Range for Sustainable Living

In the light of these researches, IKEA evaluate the circumstances for deciding how to answer needs, dreams and desires of consumers with the product design processes. These studies detect the design briefs and variety of product range of IKEA. Through these guides, IKEA creates the strategies and plans the processes of the products' design, development and production. It defines all processes from raw material extraction, to the consuming, even further, closing the loop. As applying these strategies to all product design processes, IKEA creates sustainable living product range with this guideline and develop it with this perspective.

Each year IKEA updates its sustainability strategy report, People & Planet Positive and analyses the performance of the finishing year with the Inter IKEA Sustainability Summary report. These reports are the reference for how to improve the processes of sustainable raw material extraction, sustainable production, sustainable distribution, democratic design, sustainable living product range, etc. (Inter IKEA Systems B.V., 2018). According to the Inter IKEA Sustainability Summary Report FY'17, IKEA has analysed the current situation of how people perceive sustainable living, how they think about sustainable living as a new trend and how IKEA deals with it.

“People are already searching for solutions that enable them to live healthier and more sustainable lives, and to conserve resources by prolonging the life of the things they own. At the same time, the world around us is changing. Population growth and urbanisation mean more people are living in smaller spaces with limited access to nature.” (Inter IKEA Systems B.V., 2018, p.11). It means, people are becoming more and more aware of the necessity of sustainable consumption and sustainable living day by day.

According to this, IKEA develops the sustainable product range for varying and raising needs of sustainable living. Many IKEA products are also specifically designed to help people to live healthier and more sustainable lives at their home. There are more than 500 IKEA products with specialized health or sustainability functions. These products focus on improving water and energy reduction, generating renewable energy, waste management and living healthier lives. (Inter IKEA Systems B.V., 2018). This categorization has been structured for referring the sustainable living dimensions of IKEA; reducing water use, reducing energy use, recycling and sorting the waste and healthy living. Each category is related to its' sustainable living dimension for supporting the sustainable life at home knowledge by the product range.

Like all IKEA product design processes, IKEA Democratic Design processes are being applied to the sustainable living products' design processes (Inter IKEA Systems B.V., 2018). All five dimensions define the requirements of the sustainable living products. At first as referring to the most linked dimension, sustainability; a sustainable living product has to be made in ways that are good for people and the planet, and which can enable people to live more sustainable lives at home (Inter IKEA Systems B.V., 2018).

A sustainable living product has to be qualitative, for reducing consumption and prevent throw away mentality to achieve long lasting and durable lifecycles of products. Also, it is good to have an aesthetic form that makes emotional connection with consumer. If the product has a beautiful form, consumers feel better and become more enthusiastic for using it. Sustainable living product has to be functional, for answering the needs and offering an effective solution for sustainable living problems. And, a sustainable living product must have a low price with a meaning for reaching more people to use it and encourage them to live their lives more sustainably (Inter IKEA Systems B.V., 2018).

The IKEA healthy and sustainable product range which is designed according to the five dimensions of Democratic Design, enables customers to save energy, generate renewable energy, save water, reduce and sort waste, access clean air, grow their own food, reach sustainable food, live more active and healthy life, etc. (Inter IKEA Systems B.V., 2018).

In daily lives, energy consumption is one of the biggest part of people's environmental footprint. With technological development, the importance of the energy mostly, electricity has been raised. Each day, gadgets are spreading in daily lives whatever people do. Because of that, IKEA has been focusing on energy saving issue for reducing consumers' impact on environment. LED bulbs use up to 85% less energy than traditional incandescent bulbs, and last for up to 20 years. But transformational change will only happen if solutions like LED lighting are accessible to the many people. That's why, for instance, IKEA LED RYET light bulbs are available for low prices (Figure 2.6.3.). "Just in a year, IKEA consumers purchased over 91 million LED bulbs. And by only offering LED lighting in the IKEA product range, in one year IKEA consumers were able to reduce their energy consumption around the globe by 3.3 billion kWh." (Inter IKEA Systems B.V., 2018, p.12).



Figure 2.6.3. Energy saving RYET LED bulbs. (Source:<https://www.ikea.com/gb/en/this-is-ikea/people-planet/sustainable-life-at-home/saving-energy/>, Accessed July, 2019)

In the light of IKEA LED innovations, IKEA has developed the smart lighting range with the TRADFRI and FLOALT families. Smart lightings are useful with controlling them from smartphones or remote controls. It leads people for adjusting the lighting level, switching on and off for the need of use and controlling from distance for the case of forgetting them on. In total it provides more energy efficiency for maintaining sustainable life at home. IKEA LED technology has been integrated for different functions, for supporting sustainable living practices, like STORJORM bathroom mirror with LED lighting around it. It allows people for

switching on mirrors LED instead of general lighting of bathroom and gives more functional lighting while doing personal care activities while saving energy. All home appliances that IKEA sells, even it is IKEA branded or not, have the most efficient energy efficiency level (Inter IKEA Systems B.V., 2018). Also, the range of batteries are helping consumers to reduce their environmental harm in their daily lives. LADDA batteries are developed to be rechargeable for 1500 times. It means when comparing with the conventional alkaline batteries, it gives 0,06% harm to the environment (Inter IKEA Systems B.V., 2018).

As consumers, even if the energy consumption is reduced, it is still harmful for environment, if energy resources are being produced by fossil fuels or unsustainable methods and resources. For that IKEA has been developing a product range called Home Solar for generating personal energy with alternative and renewable methods and resources. IKEA has focused on solar energy production at home that allows people to generate their needed energy with solar panels (Figure 2.6.4.). It is being tried in 5 markets in global, but with reducing prices and improving the efficiency of the solar batteries, it will spread across the all IKEA markets in the world. (Inter IKEA Systems B.V., 2018).



Figure 2.6.4. Home Solar product range that generates electricity for daily uses of the homes. (Source:<https://www.pocket-lint.com/smart-home/news/141798-ikea-will-now-let-you-store-your-solar-energy-so-none-of-it-goes-to-waste>, Accessed July, 2019)

Sorting household waste for recycling means materials like plastic, paper and metal can be turned from waste into a resource. In modern daily lives and casual living conditions, it is hard to complete the cycle of recycling, but as a consumer, it is available to sorting wastes according their materials, and preparing them for recycling process. It creates huge impact

on completing recycling processes by that repurposing wastes as raw materials for production processes, preventing the landfill and incineration processes, supporting economic side of sustainability by contributing recycling businesses, etc. Products like VARIERA bins make waste sorting easy (Figure 2.6.5.). They're easy to carry, lock in odours and can be customised to fit any space (Inter IKEA Systems B.V., 2018). With the odourless specification of VARIERA, it is possible composting organic wastes and making organic fertilizers for plants in homes (Inter IKEA Systems B.V., 2015).



Figure 2.6.5. VARIERA odourless waste sorting bins, both for organic and inorganic wastes. (Source: <https://www.ikea.com/gb/en/products/kitchen-products/kitchen-organisers-shelves/variera-waste-sorting-bin-black-art-10204624/>, Accessed July, 2019)

There are some other product families which are stackable and modular that guide people how to organise their inorganic waste and other throw away things. But especially for reducing waste, IKEA mostly focuses on the issue of food waste. 25% of all food is thrown away across the world. IKEA food containers are safety and healthy way of storing left-overs (Figure 2.6.6.). It allows consumer not to throw away left-over foods and also save money. Also these containers are suitable for oven and microwave oven use and eating from it because no BPA chemicals added (Inter IKEA Systems B.V., 2015).



Figure 2.6.6. IKEA 365+ food containers for storing safely and reducing food waste. (Source: <https://www.ikea.com/gb/en/collections/ikea-365-food-storage/>, Accessed July, 2019)

Considering one of the biggest issues of the world, IKEA focuses on reducing the water use both in the operations and in the daily lives of the consumer. Many IKEA taps combine pressure compensating aerators and cold-start functions, which save water and energy (Inter IKEA Systems B.V., 2018). IKEA taps can actually help to reduce water use by up to 40% (Inter IKEA Systems B.V., 2015) (Figure 2.6.7.).



Figure 2.6.7. MISTELN water nozzle that helps to reduce water use. (Source: <https://ikea.today/slow-flow-changing-habits-not-enough/>, Accessed July, 2019)

Water-efficient dishwashers, use less water than hand washing, saving time and money. Innovations in water efficiency will become increasingly important in a water-scarce world (Inter IKEA Systems B.V., 2018). IKEA is going to expand its water saving consideration along the whole product range and services. (Inter IKEA Systems B.V., 2018).

Healthy living is raising trend and necessity in the modern world. Human health is getting threatened by the bad air, water quality, motionless lifestyles and fast developing technology. IKEA aims to improve healthy lifestyles among product ranges and solutions. For instance, IKEA is looking into many solutions for improving air quality, such as material innovations and green plants. Accessing clean air is being more crucial day by day. For solving the bad air quality, IKEA aims to discard conventional energy resources and replace them with alternative and renewable energy resources that gives no or less harm to the air in all of its operations (Inter IKEA Systems B.V., 2018).

From that perspective, IKEA wants to encourage consumers to contribute this aim and improve their health in their everyday lives. For reaching clean air, IKEA mostly focuses on plant growing. Indoor or outdoor gardening, permaculture trends are getting important. As more and more people around the world are migrating to cities, they are moving further and further away from where food is produced. At the same time people everywhere are living a more sustainable and healthier life at home, using fewer resources and eating healthier and more sustainable food (Inter IKEA Systems B.V., 2016).

IKEA serve solutions to people to grow their own vegetables and herbs both for accessing clean air and eating healthy food that is grown and cooked by themselves. There are lots of different products that supports growing plants at home, like plants, seeds, plant pots, watering cans, soils and fertilizers, hanging pots that save space, shelving units and cabinets for helping planting processes, gardening sets and tools, etc.

For instance, IKEA has developed the hydroponics range VAXER and KRYDDA families for growing herbs and vegetables (Figure 2.6.8.). It is an alternative method for growing indoors that uses water instead of soil. It is functional all year round by growing light even the weather conditions are not suitable for growing (Inter IKEA Systems B.V., 2015).



Figure 2.6.8. VAXER and KRYDDA, Hydroponic indoor plant growing.

(Source: <https://www.dezeen.com/2016/05/03/ikea-indoor-gardening-hydroponic-kit-krydda-vaxer/>, Accessed July, 2019)

After growing own herbs and vegetables, IKEA wants to inspire and inform people to change their cooking methods. IKEA demonstrates cooking methods like steaming, boiling or baking, instead of frying or oily roasting. For that IKEA presents healthy cooking equipment like STABIL boiling and steaming inserts (Figure 2.6.9.), and pressure cookers.



Figure 2.6.9. STABIL boiling insert.

(Source: <https://www.ikea.com/us/en/catalog/products/50152345/>, Accessed July, 2019)

Adding to inspiring people to grow their own food and cook healthy, IKEA food range is also help people to improve their healthy eating habits. "Food is at the heart of everyday life, and 660 million people experienced the IKEA Food offer 2017. IKEA Food aims to create a healthier and more sustainable food offer that's both delicious and affordable, and encourages a positive relationship with food." (Inter IKEA Systems B.V., 2018, p.13). For instance, IKEA's coffee, tea and cocoa products are being harvested from sustainable resources. "Rainforest Alliance and Fairtrade tea have been included in to UTZ. The cocoa in IKEA branded chocolate bars and IKEA coffee named PÅTÅR is both UTZ certified and organic according to EU standards." (Inter IKEA Systems B.V., 2018, p.23).

Also IKEA wants to inspire people to be more active with product range and solutions. In a modern world, people work in the offices by sitting in front of the computer screens for hours without moving. This situation causes some health problems - mostly orthopaedics. IKEA develops product range for solving this kind of problems. For instance, SKARSTA desk is ergonomic by its' adjustable height. Changing positions between sitting and standing helps user move his/her body so user both feel and work better.

Also, as a child sensitive brand, IKEA takes considerations about children's health, happiness and growing with the insight of sustainability. It is aimed to be succeeded with integrating into play and toy ranges. Playing is vital to children development, and for a better everyday life at home. IKEA is investigating what encourages play in both children and adults across different markets. It found that play is used across cultures as a method to sustain a healthy life, and it triggers creativity and happiness. These outcomes can support IKEA in their ambition to inspire and enable more playful everyday lives.

In the light of sustainable living concept of IKEA, the products that supporting more sustainable life at home is being structured and developed. These products, help people to act more responsible for the environment, live more qualitative and healthy lives. For improving and interacting with the sustainable living products, IKEA has been developing the home furnishing knowledge for sustainable living.

2.6.3. Home Furnishing Knowledge for Sustainable Living

As a home furnishing expert brand, IKEA, has created strong connections between home furnishing solutions and sustainable living concept. First, IKEA's product range and their functional interaction between them offer some benefits for consumers for sustainable living. After that, with the reference from product range, IKEA's home furnishing knowledge about sustainable living practices creates the sustainable living concept of IKEA. Sustainable living concept of IKEA is the way of getting the most benefit from the sustainable living products, use them properly and create more value; even they are not IKEA products. "Knowledge about sustainable living, combined with home furnishing expertise, creates relevant, functional and inspiring solutions that empower environmentally friendly living for the many." (Inter IKEA Systems B.V., 2016, p.38).

For supporting the sustainable living products with the IKEA home furnishing knowledge, it is considered to think activities at home and its' functional areas, in the light of four dimensions of IKEA sustainable living concept. Each functional area hosts specific house activities that are related to the sustainable living concept. These categorization helps IKEA and people share sustainable living knowledge even the using products are not IKEA products while reducing water and energy use, managing waste, recycling and living healthier life. In the end, total outcome is the solution to apply more sustainable life at home that answers to the people's needs, desires and activities.

"Sustainable living perception of IKEA isn't just about using sustainable living products, but also applying the knowledge which is concerned about sustaining our environmental conditions. This perception is more like focusing on solutions more than products itself. Functional, attractive and affordable solutions inspire, engage and enable people to make smarter choices for sustainable living."

(Inter IKEA Systems B.V., 2016, p.3).

As a one of the main activities of the home, for cooking there are some sustainable living solutions has been defined. The selection of the nutritional foods is crucial for healthy living. Using man-powered kitchen utensils save energy, like mixers that works by channelling hand energy for making mixtures and whisking. Induction hobs transfer energy directly to the pots and pans, by that only small amount of energy and heat is wasted (Inter

IKEA Systems B.V., 2015). Using lids for pots, using inserts, cooking in the large scales and saving them as portions in containers or food bags helps to save energy.

Food lasts longer when dried or prepared and stored in tight fitting jars, bottles or boxes. Measuring ensures the right amounts are used for cooking and reduces food waste. Rinsing dishes and vegetables under a running tap wastes a lot of water. This can be reduced by rinsing dishes in a bowl or sink that is half-filled with water (Inter IKEA Systems B.V., 2016). "Compared to doing the dishes by hand, by using dishwasher, water consumption is reduced by 85% and the energy by 58%." (Inter IKEA Systems B.V., 2011, p.18). For sorting waste, kitchen cabinet integrated solutions can be used for organising them and a paper bag in an open bin helps air circulate and dries organic waste. Placing freezers and refrigerators far from the hobs and ovens saves energy (Inter IKEA Systems B.V., 2016).

For recycling, different solutions can be applied. For organising different materials in large scales and in wider timeline, waste sorting boxes can be used. Waste sorting bags can be used at the entrance of the home, so it is easier to putting them to the recycling bins while leaving home. Repurpose is an alternative way to taking care of wastes. Papers, PET bottles or tins can be used as a resource for crafting at home, even for activities with children. (Inter IKEA Systems B.V., 2015). It also supports active and healthy life at home. Damaged furniture can be repaired with maintenance equipment by painting, polishing, etc. (Inter IKEA Systems B.V., 2016).

While doing personal care in daily lives, lots of energy and water are being used. With reducing the shower time, airing semi-clean clothes instead of washing them constantly, big amount of water and energy can be saved. While showering, collecting the grey-water into a watering can or a container can be used for watering the plants (Inter IKEA Systems B.V., 2016). With the help of drying racks, lots of water and energy can be saved instead of using tumble driers. Using LED integrated lightings while doing activities helps to reduce energy use (Inter IKEA Systems B.V., 2015).

Taking help from textiles is the efficient way for reducing energy that is being used for heating up or cooling down the house. Layered curtains help to adjust heat by blocking out or allowing the hot and cold weather into the house. Cellular blind curtains with the honeycomb structure traps air, provides an efficient window insulation, and offer great thermal protection. (Inter IKEA Systems B.V., 2015). Using warm quilts and thinner quilts in

suitable weather conditions helps to adjusting the right temperature and saves energy. (Inter IKEA Systems B.V., 2016).

Growing the herbs and vegetables is a great step for maintaining the healthy lifestyle. It helps to eat nutrient foods and access to clean air with more oxygen. For growing more herbs and plants in a small space, the vertical garden solutions, pot racks, hanging pots can be used. Self-watering pots are useful by watering the plant even consumer forgets to water the plant. Growing indoors are also inspiring and educative for the children to teaching them sustainable and healthy living habits by experiencing. (Inter IKEA Systems B.V., 2015).

Socializing is mostly done in common areas of the home, mostly in living room. While doing different types of activities at home, using functional LED lightings for each activity and taking sunlight inside as much as possible are efficient ways to reduce energy use. Unplugging the sockets of electric and electronic gadgets or don't putting on standby them saves lots of energy. (Inter IKEA Systems B.V., 2015).

There are lots of examples and methods for maintaining and expanding sustainable living across the home. As home furnishing specialist brand, IKEA has a great opportunity to lead by example for expanding sustainable living knowledge, inspiring and helping people to live more sustainable lives at home. IKEA uses lots of different channels to meet consumers for sharing IKEA sustainable living concept, sustainable living products and solutions. IKEA stores, websites, workshops, IKEA publications, collaborative projects are some of the channels that IKEA meets consumers to interact with them about sustainable living concept, product range and solutions. Day by day, IKEA widens its perspective to reach consumers with different ways (Inter IKEA Systems B.V., 2018).

In any case, IKEA presents its sustainable living concept through the togetherness of product range and sustainable living knowledge. IKEA sustainable living offer is more powerful with combining sustainable living products with the home furnishing knowledge for creating efficient solutions.

Creating IKEA sustainable living offer through product range and knowledge is effective if it is related to consumer habits, needs, dreams and activities. For improving the processes of creating sustainable solutions, IKEA has been doing some co-create projects and

sustainable living workshops with NGOs, institutions and global organizations for understanding consumers and looking from their perspectives.

2.6.4. Sustainable Living Workshops and Researches of IKEA

“With billions of visitors to IKEA stores and IKEA.com, together we have a huge opportunity to lead by example. Across the global IKEA business there is a lot of knowledge about life at home. This enables us to offer the knowledge, ideas and affordable solutions that make healthy and sustainable living desirable. And by working together with partners across the IKEA business, we will enable and inspire people to become part of a sharing and circular economy.”

(Inter IKEA Systems B.V., 2018, p.11).

Through direction of this insight, IKEA works for reaching consumers to understand their needs, and expectations, interacting with them, creating solutions for more sustainable life at home and protecting the connection with the consumer constantly. For that, IKEA has created some consumer interactive workshops and projects. Some of them are long term experience based projects, some of them are shorter and specific projects but for both the consumer is at the heart of the research, in common. The main idea behind the collaborative workshops and longer term projects is scoping down to the daily lives of consumers, understanding their circumstances, plans and possibilities for future, offering relevant solutions, gathering feedbacks of experiences, following up the whole process and making action plans for further researches and works.

Between 2014 and 2017, IKEA sustainable living projects have given 3,184 customers and 3,697 co-workers around the world the chance to try products that supports healthier and more sustainable living, along with inspiration to make small changes for better living. While the projects directly engage a relatively small group, the inspiration has spread many more people through the shared stories and experiences of participants. The projects give insights into the reality of living healthier and more sustainable lives in different contexts, enabling IKEA to better engage people in the future, wherever they live (INGKA Holding B.V., 2018).

One of these projects is called Live LAGOM. It is a collaborative 3 years project that involves IKEA customers and co-workers. With the help of Live LAGOM project, participants explore

the challenges and benefits of a more sustainable life at home. It gives IKEA customers and co-workers the chance to test IKEA products that help save energy and water, reduce waste and promote a healthy lifestyle. The project leaders create the concept of this project around the idea of 'sustainable living isn't about compromising' (INGKA Holding B.V., 2018). This project inspires people how to make sustainable living easier, more affordable and attractive in a reasonable way. That's why the project's name, LAGOM, has been chosen because of this idea. In Swedish, Lagom means just the right amount - not too much, and not too little. The source phrase of this word is "Lagom är bäst" - the right amount is best (Inter IKEA Systems B.V., 2016).

For helping people live more sustainably, IKEA aims to get under the skin of life at home and understand what works in practice (Inter IKEA Systems B.V., 2016). Through this vision, IKEA Live LAGOM project leaders had designed the project in eight steps; recruitment, store workshop, questionnaire, home visits, choosing products, ongoing support, feedback, continual engagement. First, participants had been invited from the database of IKEA Family membership and have been involved to the process. After recruitment, participants have attended a kick-off workshop, that is about the processes of the project, basic sustainable life at home tips and ideas. After workshop, a questionnaire about how participants live daily and what stops them to live sustainably has been applied (Inter IKEA Systems B.V., 2016).

For contributing to find out and dig deeper what are the needs and expectations of participants', home visits have been done. After home visits, participants have taken the IKEA sustainable living products and have started to experience them. Participants have shared their progress and stories through blogs, social media and videos. They have completed a yearly questionnaire to find out how their attitudes have changed. After completing the processes, participants are being kept in touch for sharing their experiences and feedbacks for improving the further researches. (Inter IKEA Systems B.V., 2016).

After a year of project, two main outcomes have occurred. The first outcome is about accomplishing to encourage people to integrate sustainable living into their lives. Over 92% of participants agree that the project has helped them to overcome barriers to living sustainably (Inter IKEA Systems B.V., 2016).

“IKEA’s Live LAGOM project is enabling participants to make positive changes to their lives. This is because it provides the know-how, encouragement, and products they need. We call this a Lifestyle Support System. Lifestyle Support System is an organisational entity that uses its influence on both its workforce and customers to provide individuals and households with crucial support (i.e. products and services) and guidance to help improve their quality of life while living less carbon-intense lifestyles.”

(Inter IKEA Systems B.V., 2016, p.11, 12).

Second outcome is about spreading reflections of the sustainable living and becoming a community. Participants have been sharing ideas, successes and challenges about sustainable living experiences with each other on social media and at events. Together they’ve developed a feeling of community and a common social identity. They’ve started to name themselves as “LAGOMERS” (Figure 2.6.10.). “This social identity allows people to identify with a new, desirable community. And it brings them together to encourage one another to do more and become more sustainability considered.” (Inter IKEA Systems B.V., 2016, p.20).



Figure 2.6.10. Ana, one of the LAGOMERS. (Source: <https://www.ikea.com/gb/en/ideas/live-lagom-living-lagom-with-ana-1364483392443/>, Accessed July, 2019)

With Live LAGOM project, IKEA gives chance consumers to test products in their own homes and give feedbacks so that IKEA can incorporate consumer insights into the design of new products and services. (Inter IKEA Systems B.V., 2016). There are some similar projects have been applied by IKEA around the world. For instance, Sustainable Living for Everyone is an ongoing project in the Switzerland, France, UK, Sweden, Czech Republic,

Hungary, Slovakia and Belgium that focuses on the improvements of participants about sustainable living and improving the processes of sustainability in whole Inter IKEA organizations. (Inter IKEA Systems B.V., 2016).

Other than these long term projects, there are alternative ways to reach people for interacting them about sustainable living. For instance, IKEA Retail US and Canada organizations launched a smartphone app where users get points by sharing their daily sustainability actions. Customers and co-workers were rewarded with products that enable sustainable living as prizes by accomplishing actions addressing carbon emissions, energy, water and waste. IKEA Retail France launched the IKEA Kid's adventure app, to help children learn more about sustainability and bring fun to their shopping experience (INGKA Holding B.V., 2018).

Adding to that, in 2017, many IKEA organizations and 187 stores ran IKEA FAMILY Mega Events, giving opportunities for customers to take role in sustainable living activities. For instance, IKEA Retail US organized 'Sustainable Living Your Way' Mega Events at 42 stores on Earth Day, with workshops about cycling to making natural cleaning products and test driving electric cars. IKEA Retail Spain organized Healthy Living Mega Events at all stores and hosted local growers and producers to set up stalls to sell their healthy, organic food products. IKEA Retail France set up Mega Events in all stores during March 2017. Participants recycled textiles for supporting more sustainable lifestyles. (INGKA Holding B.V., 2018). All these events and workshops, have affected the approach of the participants to the topic of sustainability and have made positive impact on their sustainable behaviours.

IKEA sustainable living product range, IKEA sustainable living knowledge and the consumer insights about sustainable living are the leading roles for establishing IKEA sustainable living concept. Through the products and the home furnishing ideas, IKEA offers the complete solutions for improving sustainable living experiences. In the light of user experiences, IKEA develops its product range for sustainable living and arrange the range for the real life needs and expectations. Also, again with this feedbacks, IKEA adds extra solutions to the sustainable home furnishing knowledge. That creates the total sustainable living offer of IKEA.

3. Case Study: Analysis of IKEA Sustainable Living Concept

3.1. Definition of Study

In the light of this knowledge, the case study has been conducted to signify sustainable living concept, analyse consumer behaviours about sustainable living practices, and identify the interaction between them. According to that direction, an online questionnaire has been applied to collect insights about sustainable living concept. For gathering insights through the questionnaire, participants have been selected randomly, in a restricted local market area. The questionnaire has been edited around the sustainable living concept of a significant corporation. The purpose of selecting a corporation as a case for the questionnaire is narrowing down the research topic and reaching more precise insights. By that, this study has been applied to understand the reflections of sustainable living concept of a corporation on consumers and gathering feedbacks about practical dimensions.

3.1.1. Aims of the Research

As the main objective of this study, the sustainability, sustainable living and consumer interaction with these concepts, have been aimed to research. In consideration of these concepts and IKEA's approach to them, some research methods are beneficial to analyse consumer experiences and insights. The topics that have been mentioned in the literature review, outline the general concept of sustainable living practices in real life and how consumers perceive it, also in the case of IKEA. However, while considering the exact reflections and solid characteristics of sustainable living practices through the data that gathered from literature review, the consumer insights about these practices and experiences are crucial to understand general perception and awareness level.

The discussion about the roles of products and knowledge in sustainable living concepts, is so much abstract, by considering the literature. The interaction among consumer,

producer, product and sustainable living knowledge is beneficial to understand how this system works, how important are these elements, the interaction between them, the positive and negative connections, etc. In order to find out that, the questionnaire has been designed to gather tangible outcomes from consumers, and real-life needs and desires in sustainable living context. With the outcomes, that have been gathered from this questionnaire, the balance, and harmony between sustainable living products and sustainable living knowledge planned to be obtained. Understanding consumer behaviours by the answers of this particular questionnaire, especially about how they shop and how they live is the base point of this research. As a result of that, the further product ranges and home furnishing ideas may be designed and developed to meet direct insights of consumers.

Through the direct insights of the consumers, that have been derived from the open-ended questions, the expectations of each individual about widening and improving sustainable living practices planned to be detected to create a database. Some product alternatives and different type of consumer solutions for helping to live more sustainable life at home, may enrich the database. This database can be the reference and inspiration for IKEA about improving sustainable living product ranges and home furnishing knowledge to live more sustainable lives at home.

Also, the general opinions of the people in a specific local area, about environmental issues and, individual and social responsibilities about the environment are beneficial to understand, for detecting potentials. Through gathering data about consumer interaction with the environmental problems, IKEA's positioning about sustainability and sustainable living concepts, make more sense. With understanding these outcomes, the reflection of IKEA's sustainability and sustainable living concepts from these specific group of consumer perspective and daily life application of these concepts can be analysed by the real-life context.

Through these analyses, IKEA's sustainability and sustainable living strategies planned to be evaluated to improve them for triggering more environmentally considered daily lives of these consumer group. According to the sensitivity and awareness levels about sustainability issues among the consumer society, which can be gathered from the questionnaire, the action plans or improvement studies for better sustainable living practices can be designed.

Adding to these, through these general insights about the specific consumer in a local area, the sustainability strategies of the governments and the interaction of IKEA with these strategies and the potential improvement areas can be discovered. According to the potential gaps in sustainable living issues, there can be cooperative studies among governments, IKEA and consumers to improve sustainable living practices among society.

As a result, it is aimed to reach some possible solutions according to the conclusions of the questionnaire. The solutions about improving sustainable living practices for the case of IKEA may be the base point as draft action plans for the further studies of IKEA for improving sustainable living, especially for similar types of markets and consumer societies.

3.1.2. Justification of the Selected Corporation

IKEA has been selected as a corporation for the case study, as being a worldwide functioning furniture dealer. Behind this choice, there are some reasons that make IKEA stands out. First, IKEA is an innovative brand that, improves the way of operating all the processes in the businesses, constantly. Additionally, because of being an experienced company, IKEA has a significant impact on individuals and organizations, by designing worldwide trends, creating movements and value chains, alternating for conventional processes, solving problems and improving solutions for better daily lives, all across the world. Through the positioning strategy, as a home furnishing expert, IKEA touches all the functions at home by answering different needs and desires of people from various cultures and social groups.

IKEA defines its brand position through offering better daily life concept for the much more people, from different parts of the society (Inter IKEA Systems, 2014). The whole concept of IKEA is built upon this democratic vision, also as a motto. Ingvar Kamprad has defined this vision, first, in the 'Testament of a Furniture Dealer' and has explained the details of the IKEA's specifications. In this book, he has also mentioned about sustainability approach of IKEA, with some touchpoints. It is stated that "Wasting resources is a mortal sin at IKEA." (Kamprad, 1976, p.9). He was so much concerned about using resources in unconscious ways. Also, in the part that defines the features of the product range - as he considered it

as IKEA's identity, he underlined the importance of the durability of products through the words; "Throw-away products are not IKEA." (Kamprad, 1976, p.4).

Considering the time that these statements have been made, which is 1976, there was no common awareness about environmental problems, resource deficiencies, unsustainable production and consumption processes or problems that is caused by global warming, etc. Ingvar Kamprad has defined these concepts, mostly from the perspective of the economic sustainability of IKEA.

Through the rising awareness about environmental, social and economic problems and unsustainable processes among some considered brands, governments, and social groups, IKEA has developed its' business idea, with the consideration of sustainability concept. IKEA, published this new business strategy document, IKEA Brand Direction. According to this new guideline, IKEA defined three checkpoints as named 'Three Roads Forward'. These three roads are; to make IKEA reachable for people who are not able to reach IKEA now, to interact with many more of the many people, create a contribution for people, society and the planet (Inter IKEA Systems, 2017).

In each road, IKEA has defined action plans, considering the sustainability issues. Especially, in the third part, IKEA has been creating solutions and developing strategies, considering all three dimensions of sustainability; economic, social, environmental. For that, IKEA has created a specific strategy for operating all the actions about sustainability, which is People & Planet Positive Strategy. Under these strategy, IKEA develops action plans to achieve better systems of environmentally considered raw material extraction, efficient distribution, meeting consumers better, creating relevant home furnishing solutions, job opportunities, social responsibility projects, rights and equality all across the world, full lifecycle of products, designing for the majority, organic and environmental friendly food production, etc., in the consideration of all dimensions of sustainability (Inter IKEA Systems, 2017).

After obtaining business operations that are in bigger scale through People & Planet Positive strategy, IKEA has been applying more concepts to activate sustainability in all processes of the business. For instance, in the purpose of maintaining circularity, IKEA has developed Circular IKEA concept. Through this concept, IKEA standardizes and controls the processes of circular production, from raw material extraction to recycling or repurposing

processes. With Circular IKEA concept, IKEA works with environmental friendly procurement and production processes. Through these processes, IKEA has also defined the Guide to Design for Circularity to help to maintain the standard production for circular products (IKEA of Sweden, 2018).

As a supporting concept, IKEA also created the Democratic Design. According to this concept, IKEA products are being designed with considering the five principles; form, function, quality, low price, and sustainability. Through democratic design, IKEA wants to bring good design to the majority, by offering well-designed home furnishing solutions, with great form and function, high quality, built with considering reasonable price and sustainability (IKEA of Sweden, 2016). Through Democratic Design, IKEA aims to inspire and help people to live more sustainable lives at home. The products that have been designed by the principles of Democratic Design are references to create the sustainable living concept of IKEA, by their features and contributions on the home furnishing knowledge.

For supporting the sustainable living concept, IKEA is working with some alternative methods and strategies. For instance, each year, IKEA is running 'Life at Home' studies, all across the world, to understand daily habits, living situations, shopping behaviours, needs and expectations of consumers (IKEA Group, 2017). According to the outcomes of these researches, IKEA reports the situation analysis of consumer daily lives and develop the home furnishing solutions, in the light of those reports. Sustainable living is one of the topics in that researches as a development issue. According to the consumer insights, IKEA improves the sustainable living home furnishing solutions and alternative product that will support sustainable life at home for meeting with the consumers' expectations. Also, for understanding and developing sustainable living among consumers, IKEA has been organising workshops with consumers and co-workers, Live Lagom, Co-Create Relevant Solutions, Sustainable Living for Everyone, etc.

By virtue of positioning and strategies about sustainable living, IKEA has been chosen for the case study. As being one of the biggest home furnishing brands, both in the selected local market and across the world, the insights of the participants about IKEA in the questionnaire are more reliable and beneficial, when comparing with a randomly selected brand. Also, considering the perception and awareness level of IKEA's sustainability concept, among consumers in the selected local area, is promising for the research result.

3.2. Research Methods

According to the aims of the study, a questionnaire has been applied for reaching insights of consumers about sustainability and sustainable living concepts. In order to understand the perception of consumers, this particular questionnaire has been conducted around to the topics like individual environmental impact, IKEA's sustainability and sustainable living concepts. By the questionnaire, it is aimed to gather insights about consumers' interactions with IKEA's sustainable living product range and home furnishing solutions. In the light of the outcomes of this research, IKEA sustainable living concept's real-life application is being analysed through the insights of users' awareness, experiences, and perceptions.

3.2.1. Questionnaire

A questionnaire has been used as a direct feedback source for gathering the data about consumers' perception about IKEA Sustainability, IKEA sustainable living concept, and consumers' personal sustainable living activities. This questionnaire which is named "IKEA and Environmentally Sensitive Life" has been structured in 7 parts and 32 open and closed-ended questions, in total. These parts in order are; 1- Welcome to Questionnaire, 2- IKEA-Environment Interaction, 3- Environmentally Sensitive Life, 4- IKEA and Energy Consumption, 5- IKEA and Water Saving, 6- IKEA and Waste Management, 7- IKEA and Healthy Life.

The questions and the answers are both directly connected to the global sustainable living concepts, consumers' general perception about sustainable lifestyles, IKEA's sustainable living product range and knowledge and consumers' interaction with them. This variety of questions provide references not just for IKEA's sustainable living practices, but also the global sustainable living knowledge.

This questionnaire has been given to the randomly selected 450 participants. The questionnaire has been shared through the web channels, and the answers have been gathered as voluntarism approach. Most of the participants have taken part in the questionnaire, online. However, 100 of the questionnaire have been applied as 'face to face' interviews with participants, for observing their reactions, interpretations and

commentary answers. The most of the participants were from İzmir. Also, there were people from other cities in Turkey that have taken part in this research. With the result of being applied in a restricted area, the locally relevant sustainable living habits have been gathered and analysed. Understanding the local habits and their differences from the global sustainable living habits have helped to obtain positioning sustainable living concept in peoples' daily lives.

These 450 participants were the combination of 15-65+ years old, graduated from primary school degree to postgraduate degree, men and women. According to the answers, the questionnaire has been fit to the ideation of sustainable living which is for everyone from all ages and from varied socio-cultural level from society. The aim of obtaining the range of age, gender, and education that wide, is to gather all kind of insights that can relate with all parts of the society.

Age

The randomly joined participators are not directly as same as Turkey's current demographics, but it is close enough to associate with it (0-14 age range is discarded, because of considering their non-awareness and not enough maturity) (Table 3.2.1.). 25-34 years age group is the largest amount of the participants. According to the open-ended questions, 25-34 years age group have written more thoughts and insights than the other range groups. According to that, it is available to evaluate the age relation with the perceiving the sustainable living concept as an important issue. Additionally, with considering the age, it is possible to determine the 25-34 age group as the major target group for sustainable living practices. With the enhancement of the age, the participation rate decreases. There can be some potential for improving sustainable living knowledge for older age groups.

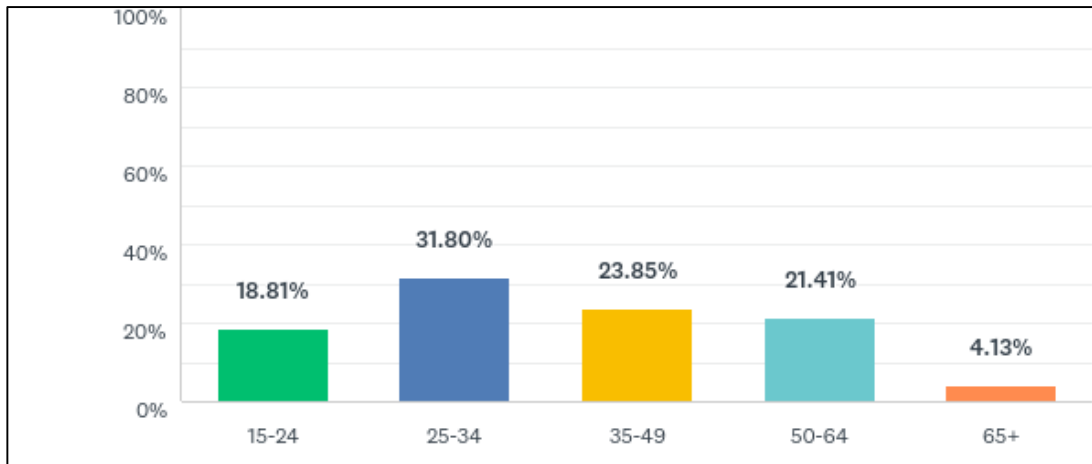


Table 3.2.1. Age

Gender

57,98 % of the participants were females, while 42,02% of the participants were males (Table 3.2.2.). Through the analysing open-ended questions, females are more aware, sensitive and active or enthusiastic about sustainable living practices. Based on the answers of these open-ended questions, the sustainable living knowledge of females are deeper than males' qualitatively. The possible reason for this situation is that the women are spending more time and effort at home through housework than men in Turkey generally, even if they work. If the gender profile is considered, for further researches and projects, the larger target group would be women, instead of men.

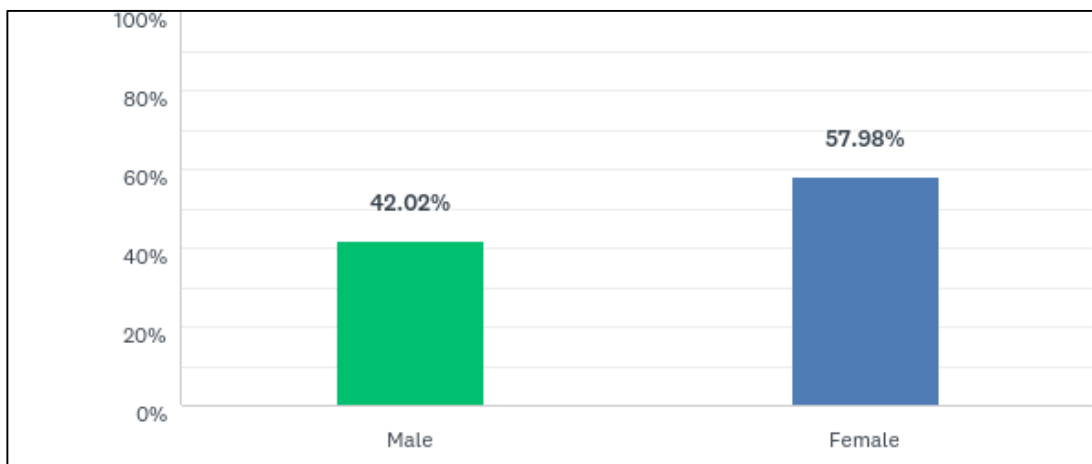


Table 3.2.2. Gender

Educational Status

The participants are classified into four sections according to their educational status as primary school, high school, undergraduate degree, graduate-postgraduate degree (Table 3.2.3.). More than half of the participants had undergraduate degree (58,47%). It is much more than the current demographics of Turkey. With this outcome, it is possible to state that the sensitivity about the environment and the perception of the necessity of environmentally friendly living is formed mostly after the undergraduate degree. By considering the answers of the graduate-postgraduate degree participants, and interpretations that gathered from open-ended questions, show that the sustainable living practices, the acceptance of its importance and the practical applications of sustainable living into daily lives are directly related with the educational development. As a result, it is obvious that there is a potential gap in the positioning of sustainable living in the lower educational groups.

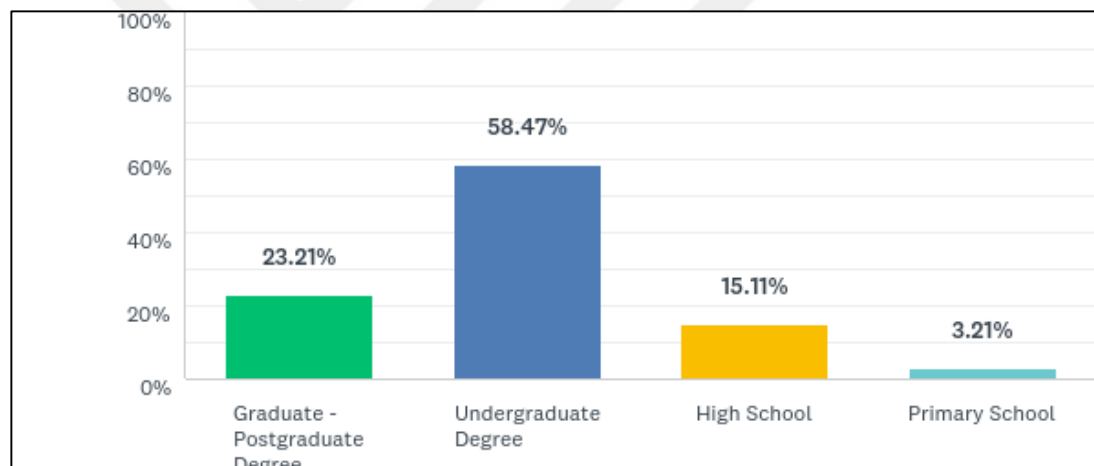


Table 3.2.3. Educational Status of the Participants

These fitting insights, provide exact statements and realistic approaches for future sustainable living studies. The outcomes of these three questions and the insights of them, provide references to analyse participants' approach to the environment, sustainability perception of them and their perception about IKEA's sustainability approach and IKEA's sustainable living concept positioning, according to demographics.

IKEA – Environment Interaction

In the 'IKEA-Environment Interaction' section of the questionnaire, there are five questions to outline the perception and knowledge of the participants about the IKEA's sustainability positioning and environmentally friendliness. In general, IKEA has a positive impression on

people about environmental issues. But, in detailed issues of sustainability, IKEA has some potentials.

More than half of the participants perceive IKEA as a sustainable and environmentally considered brand (Table 3.2.4.). The rate of the people that feel negative about IKEA's environmental friendliness is very small. But, the rate of the people who are unsure about IKEA's environmental friendliness (36.29%) cannot be ignored. This insight shows the potential of IKEA, just as informing people about its' environmental friendly specifications. It is crucial and beneficial for IKEA, to connect with the consumers, by triggering sustainable living practices. Improving the generality of the peoples' perception about the sustainability positioning of IKEA is the basis to construct the people's impression about IKEA sustainable living interaction.

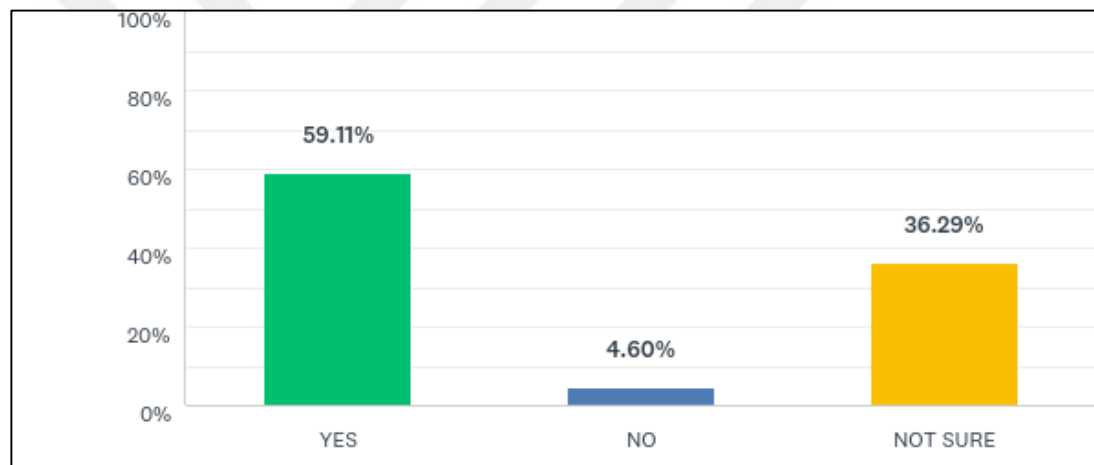


Table 3.2.4. Do you think, IKEA is an environmentally considered brand?

With the following answers, the potential gap in informing people about IKEA's sustainability positioning has been supported. There are more participants, who aren't sure about explanations of IKEA products' environmental impacts than people that know these positive impacts, clearly (Table 3.2.5.).

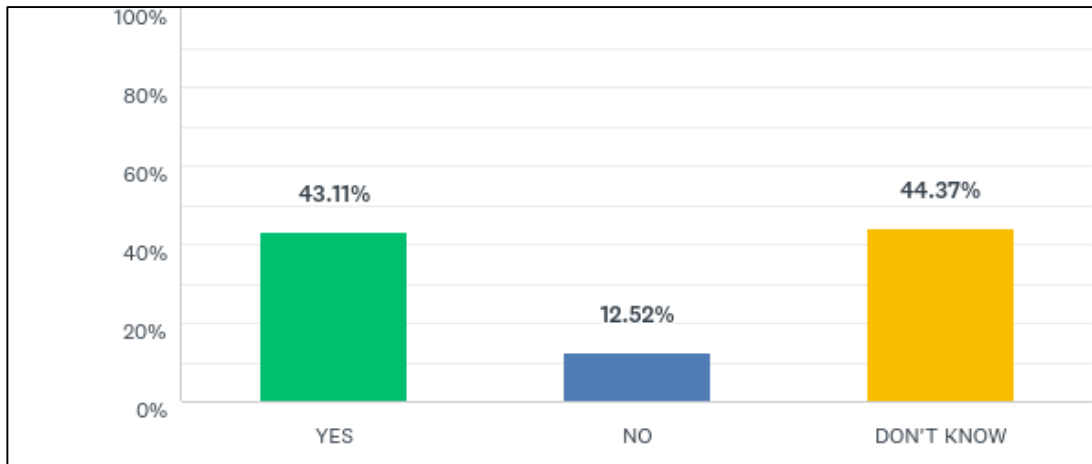


Table 3.2.5. Have the environmental impacts of IKEA products been explained clearly?

According to this result, the informational messages of this concept are insufficient for people to make them know IKEA's sustainability positioning. Also, 39,05% of participations don't know the IKEA's approach to sustainable and environmentally friendly production processes. This is another example of the potential about concept expression of IKEA. Besides, more than half of the participations think that IKEA is using renewable and natural resources in production processes (Table 3.2.6.).

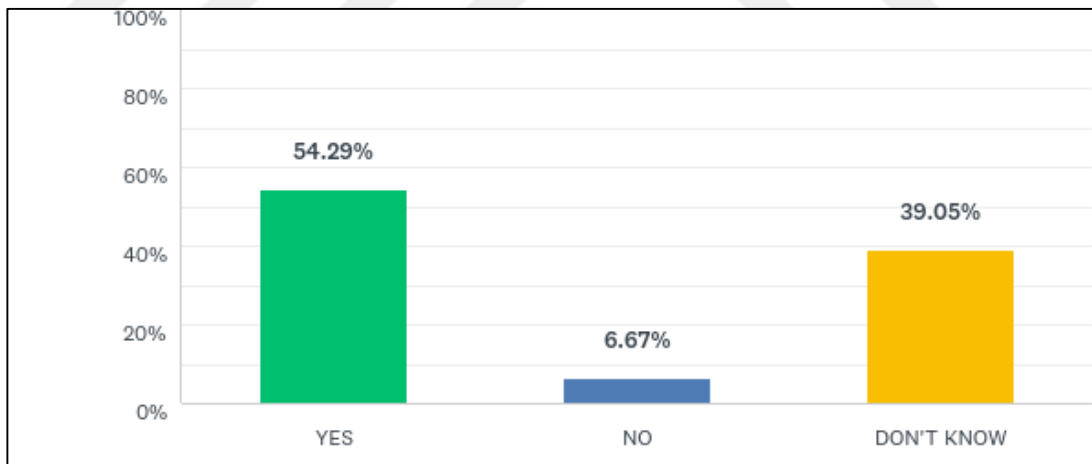


Table 3.2.6. Do you think that IKEA is using the natural and recyclable resources in production processes?

On the other hand, almost half of the participants know nothing about IKEA's willingness and ambition about using renewable and alternative energy sources. Nevertheless, 45,95% of participants believe that IKEA has a responsible approach to using alternative and renewable energy resources (Table 3.2.7.).

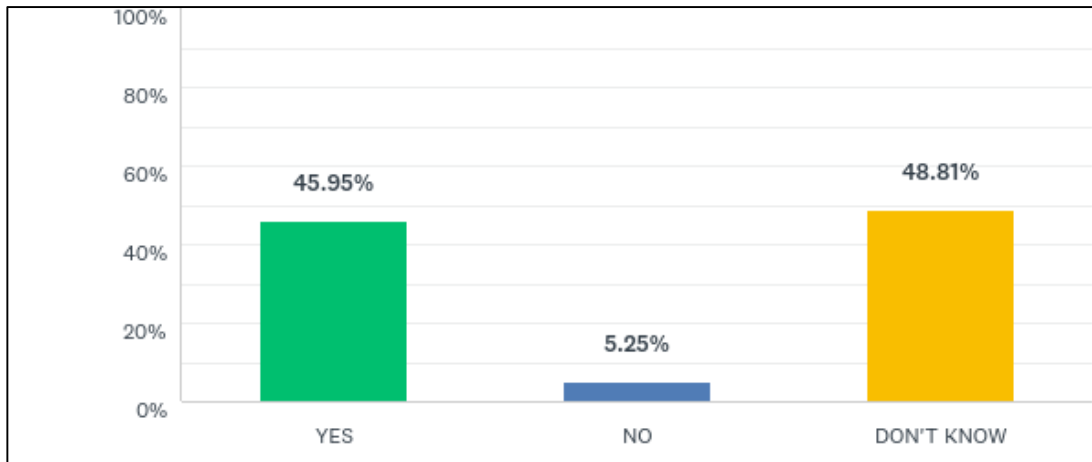


Table 3.2.7. Do you think that IKEA is ambitious and sensitive about using renewable alternative energy resources?

Similar to other questions, almost half of the participants think that IKEA is a sensitive brand about sustainable living issues, like energy and water reduction and waste management. At the same time, merely the other half of the participants don't have enough knowledge about IKEA's approach to these issues (Table 3.2.8.).

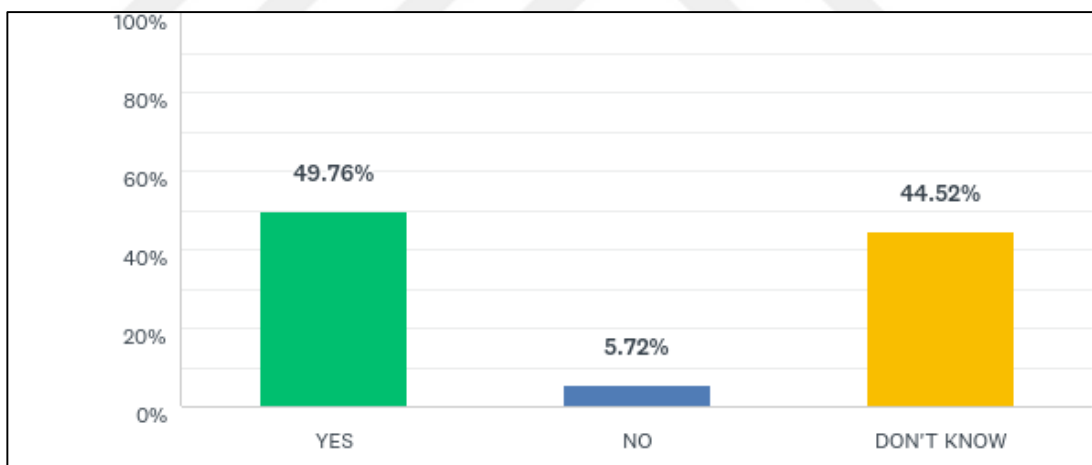


Table 3.2.8. Do you think that IKEA is a sensitive brand about issues like energy and water reduction, waste management, etc.?

Through these five questions and answers about IKEA's interaction with the environment, the common result is that IKEA has an insufficient perception about sustainability and environmental concerning issues in participants' minds. Although there is an informational gap about IKEA's sustainability concept in peoples' mind, there is also a positive impression of IKEA. According to the insights and observations that have been gathered during some

face to face questionnaires, people have positive feelings or intuitions as IKEA has an environmental friendly approach.

Environmentally Sensitive Life

In this section of the questionnaire, it was aimed to understand participants' personal approaches to environmental issues basically. The main objective of this part was to gather general insight into the statement of sustainability and sustainable living practices and define the potential direction.

The first question was about peoples' self-criticism about their environmental impacts. The question is searching if participants think that they give harm to the environment or not. Even, there are clearly visible, lots of environmental problems, like global warming, air pollution, deforestation, etc. The majority of the participants (44,85%) believe that they don't give any harm to the environment in their daily lives. Only 40,53% of the participants accept their negative individual impacts (Table 3.2.9.).

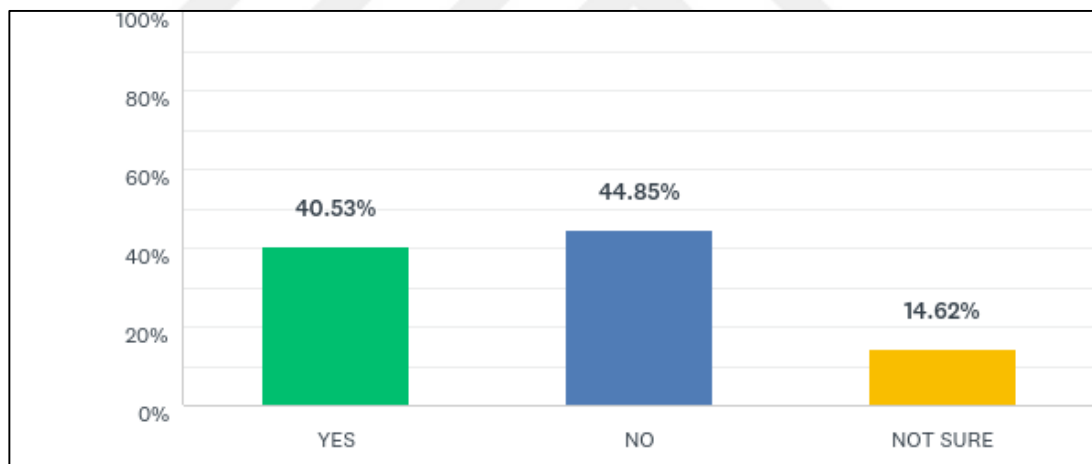


Table 3.2.9. Do you think that you are giving any harm to the environment in your daily life?

This result shows that the ignorant participants as consumers are great challenges both for NGOs, for governments, for IKEA and other enterprises, and for all organizations. By ignoring individual impacts on environment, a bigger part of the consumer society excludes itself from the solution processes. According to this result, it is obvious that just with the efforts of a smaller group of conscious consumers, it is difficult to obtain sustainable processes as widely accepted, functional and efficient. With the reality of, the conventional and unsustainable behaviours of consumers are much more dominant than responsible behaviours, regenerative solutions for fixing unsustainable outcomes will be in a minor

scale and insufficient. For creating a regenerative change for fixing these wicked problems in consumer scale, the consciousness of individual environmental impact has to awaken among these major ignorant group.

By the following question, it is aimed to understand the willingness level of participants regarding their negative impact on the environment in their daily lives and if they want to make any changes to reduce their individual impacts. According to the answers, a large amount of aware participants (84,01%) wanted to reduce their impact and they accepted to be a part of the solution. But, 15,99% of participants don't want to do anything to reduce their negative impacts on the environment (Table 3.2.10.). This data shows that there is a concrete negative mentality about being aware of the personal damages but even so not giving any effort to fix it. It is also another challenge for the stakeholders to maintain sustainability among these people.

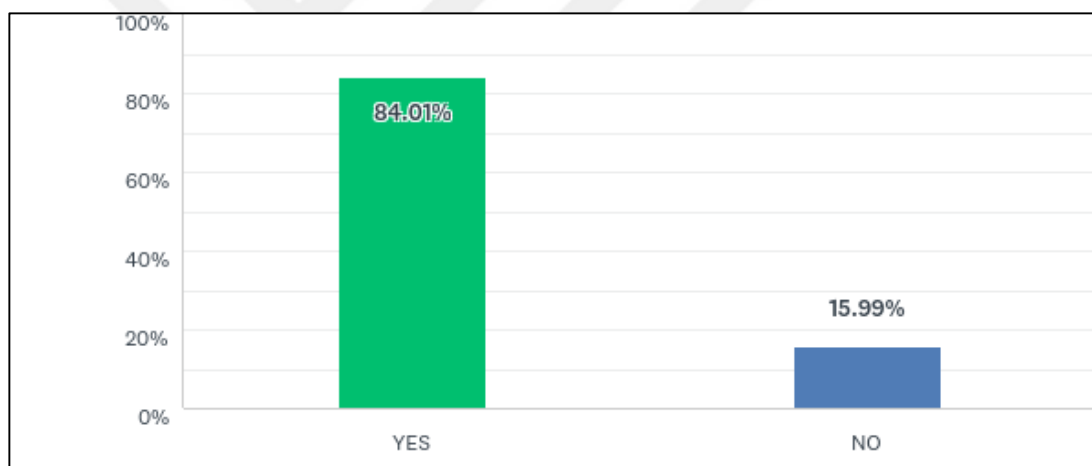


Table 3.2.10. If your answer is yes, do you have any will to reduce your environmental impact in your daily life?

In addition, there are some other challenges through maintaining sustainable living practices among society. According to the answers of participants who are willing to reduce their impact on the environment, there are some limitations and barriers to apply it. In 11th question, it is aimed to understand the density of some main reasons that prevent to reduce the environmental impact (Table 3.2.11). Based on the answers, the second biggest part of these participants (26,28%) believes that there are no limitations and they can control or reduce their environmental impact in their daily lives. Through this insight, it is possible to say that, the more than the one-fourth of the participants are aware of their environmental impact, and beyond that, they take actions for reducing it.

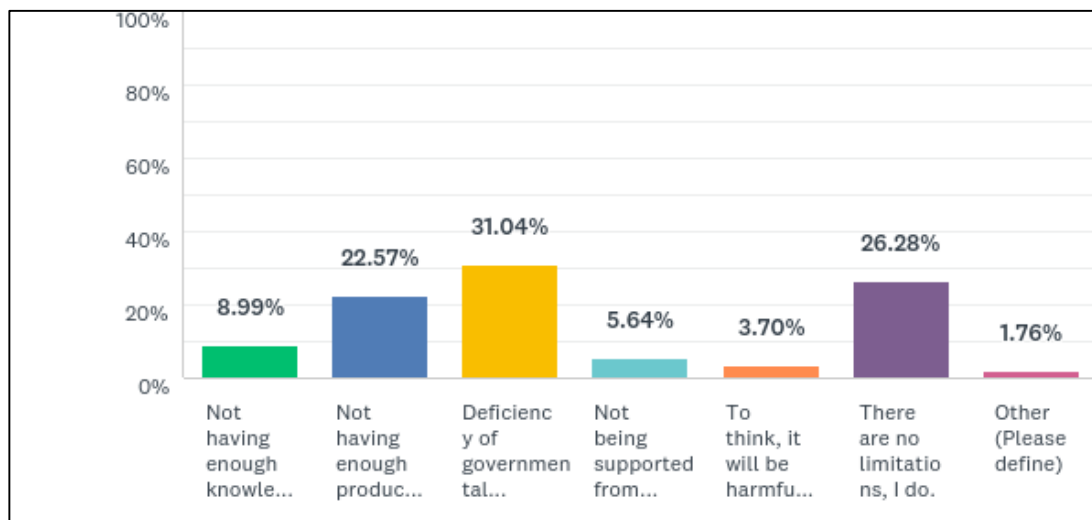


Table 3.2.11. If you cannot implement your will for reducing your environmental impact, what are the limitations?

The most of the participants (31,04%) think that the main obstacle that stands in front of the application of sustainable living practices is the deficiency of governmental policies. People feel there are lack of regulations, laws, and policies to reduce environmental impact and maintain sustainable living practices. The ideation behind this is approach is parallel to the idea of the solution may be successful if there are some deterrent rules and legal regulations. They think that; unless there are some strict sanctions, the unsustainable behaviours will continue. The biggest part of the participants wait for the ‘top to bottom’ movement instead of ‘bottom to top’.

Also, there are some approaches to define the limitations, through personal and social deficiencies. Some minor groups of these participants state the reasons such as ‘not being supported from social connections’, ‘to think that, it will be harmful to their personal budget’, ‘lack of motivation’ and ‘the difficulty of renouncing from the comfort zone.’, etc.

The third biggest part of the participants (22,57%) believe that the reason behind the limitations for reducing the impact on the environment is about not having enough equipment, product or system for implementation. One-fourth of these participants think that the exact method to apply sustainable practices and to reduce environmental impact is possible by using products or systems that support the sustainable living practices. Whereas, another group of people has focused on the lack of knowledge which can be useful and practical, to how to reduce the personal impact on the environment. This group

believes that they can reduce their environmental impact through sustainable living knowledge and practices. But, by comparing with the group that feels the lack of products and equipment, the participants that support sustainable living knowledge are smaller. So it is possible to get that obtaining the sense of trust through products and systems is easier and more acceptable than obtaining through the sustainable living knowledge, among the participant groups.

By the following question, it is aimed to gather insights about the interaction between contributing positively to the environment individually and sustainable living products and knowledge of IKEA. Just as the results about the sustainability perception of IKEA in the eyes of the participants, these results are also close to them. More than half of the participants think that they can contribute to the environment positively by using IKEA product range and ideas in their daily lives as individuals (Table 3.2.12.). Nevertheless, more than one-third of the participants aren't sure of their ideas about the interaction between IKEA and sustainable living practices. These results show that there are also some other potential points such as informing consumers about IKEA sustainable living concept and sustainable living products and making them connect these two concepts.

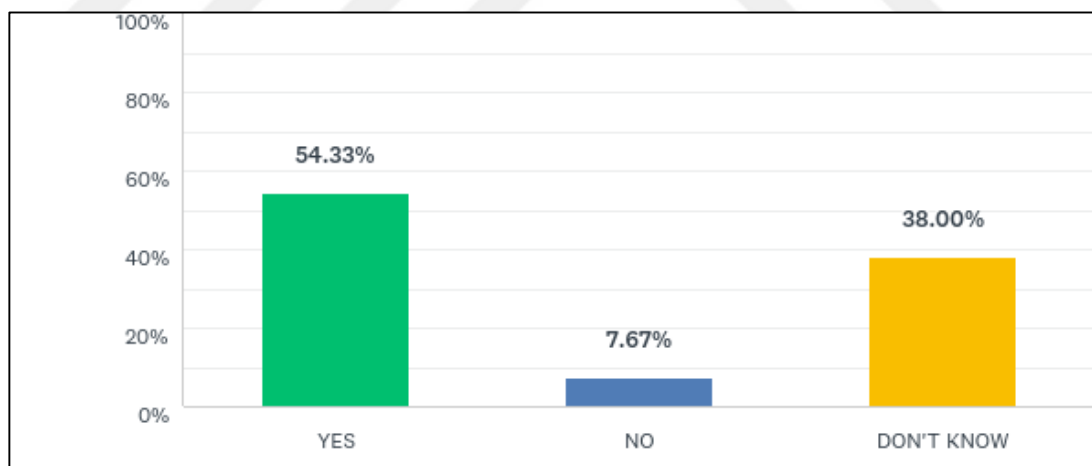


Table 3.2.12. Do you think that you can contribute to the environment positively by using IKEA product range and ideas in your daily life?

By following sections, it is aimed to understand people's insights about IKEA's sustainable living products and knowledge, through activity to activity and function to function. These sections have been grouped under four subtitles, according to the four elements of the sustainable living concept of IKEA – reduce energy use, reduce water use, waste management, and recycling, live a healthier life. The main objective of considering these

four elements as one by one is understanding consumer tendencies detailed, and analysing the interaction through consumers' perceptions about IKEA sustainable living practices, with considering various activities in their daily lives.

IKEA and Energy Consumption

The first following section is about energy-efficient products and sustainable living practices through reducing energy use. The first question is asked for understanding the awareness level of participants about energy saving IKEA products. 57,37% of participants have an idea or know about how they can reduce energy consumption, by using IKEA's LED lightings, smart lighting systems, and dimmer controlled energy solutions. Even, the participants that don't know are the smaller group (42,63%), there is a communicational potential to inform consumers about energy saving solutions of IKEA (Table 3.2.13.).

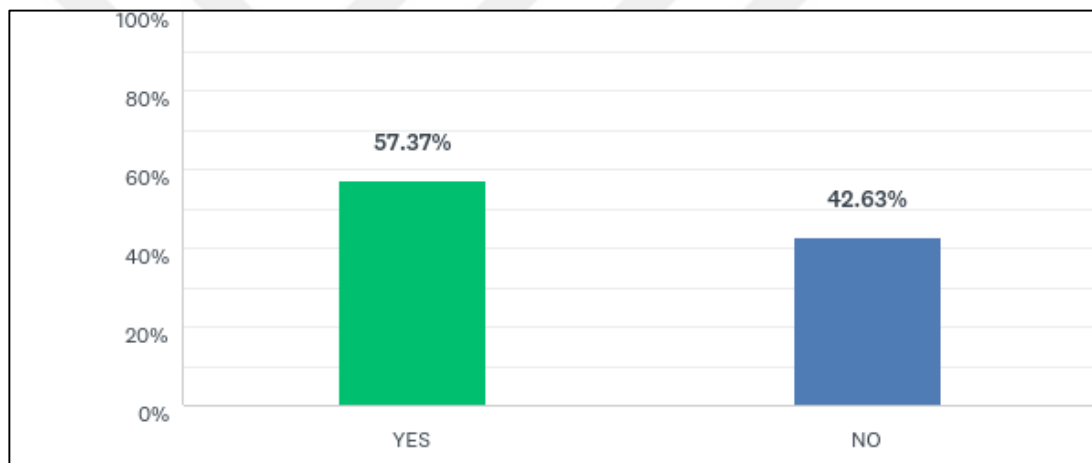


Table 3.2.13. Do you know that you can save energy highly by using IKEA's LED lightings, smart lighting systems and dimmer controlled energy solutions?

The second question is to analyse the interaction between consumers and IKEA sustainable living solutions through home furnishing knowledge. This question provides information about, whether participants can get ideas for reducing energy use in their daily lives by home furnishing solutions and products that are being presented in IKEA stores. According to the answers, IKEA stores can offer some ideas for reducing energy use and give ideas to consumers more than communicating product specifications. 63,27% of consumers can get inspiration about reducing energy consumption through the home furnishing solutions like functional curtain use for maximizing lighting, efficient home appliances use, etc. This rate shows a better view, but even so, there are still potential points to develop these presentations (Table 3.2.14.).

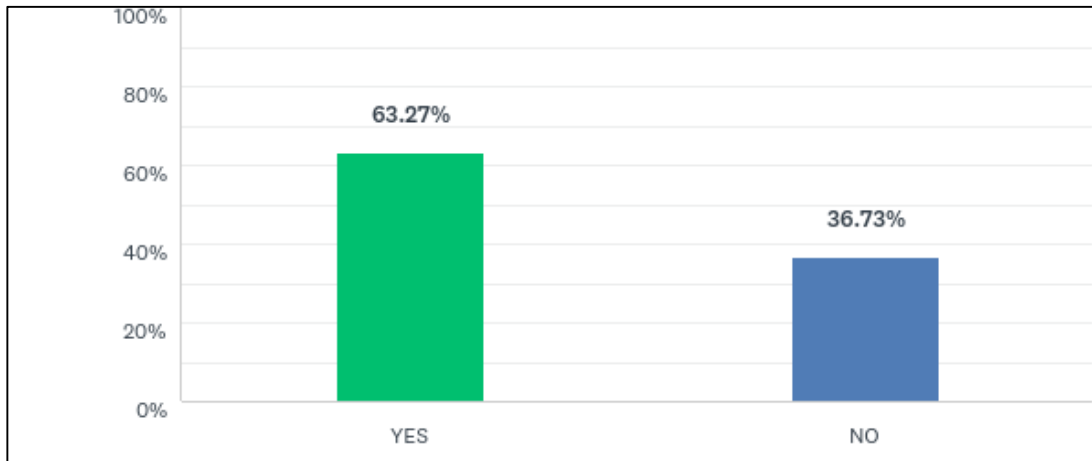


Table 3.2.14. Do you get ideas about reducing energy at your home from the lighting products and solutions that are being presented in IKEA stores? (E.g. reducing energy consumption by using more sunlight).

The following question is searching for the density of people that are willing to implement energy-saving solutions that they have seen in IKEA stores, in their own daily lives. According to the answers, a big amount of participants (85,12%) is motivated to implement energy-saving solutions that they have inspired from the displays and visual mediums in IKEA stores (Table 3.2.15.).

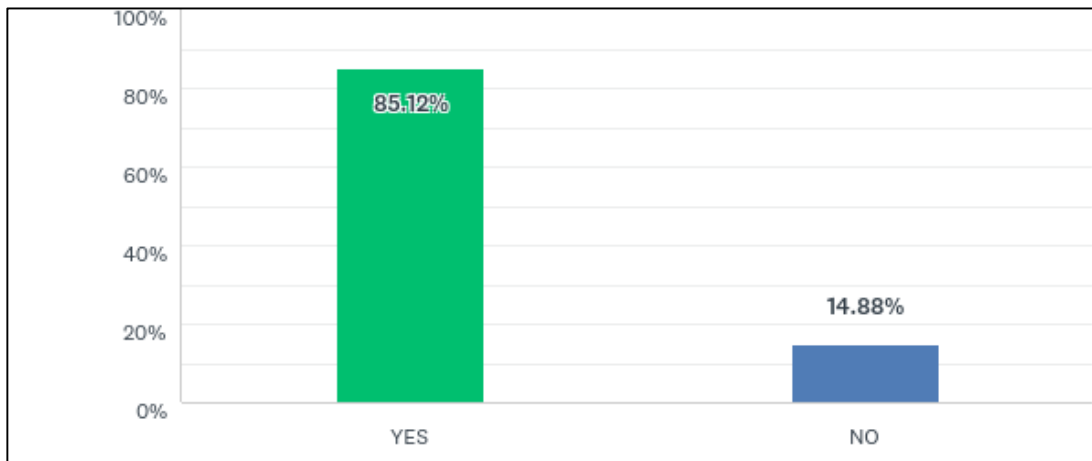


Table 3.2.15. Do you have any will to implement the energy-saving products and ideas in your own daily life that you have seen in IKEA stores?

This rate is much more than the rate of people who believe that they give harm to the environment. Considering the rational difference between these two questions, it is obvious to say that, there is a conflict. In the light of these consequences, there are some

possibilities to explain this conflict. In the case of giving harm to the environment, the energy saving issue is much more crucial for people, while the other environmental issues may be insignificant to them.

It is possible to say that people evaluate energy saving issue from the perspective of economics, rather than the ecologic consequences. With considering the economics perspective, it is possible to state that the bigger group of the people are more sensitive and motivated about implementing energy saving solutions that they have inspired by IKEA stores.

As another perspective, the brand identity of IKEA may inspire and trigger people to activate their environmental sensitivity and create the will to reduce energy use through the products and solutions in the store. People may be stimulated to buy energy-saving products or get inspired by sustainable living solutions and get motivated to implement in their daily lives with innovative product range and practical home furnishing solutions of IKEA.

In the light of these basic energy saving approaches, the daily energy saving solutions that participants had already been implementing or have willing to implement, have been gathered by an open-ended question. By that, the most popular answers are about alternative energy resources. The biggest group of the participants has focused on using energy produced from alternative and renewable energy resources or generating their own energy from the alternative methods. The most common alternative resource that participants have mentioned is solar power. Most of the participants that have shared their insights are reconciled on solar power energy solutions. According to the answers, solar power can be used for heating, electricity, energy storing, etc. After that, wind power is the second common alternative and renewable energy resource that participants want to integrate into their daily lives. Some of the participants want to construct personal home-size wind turbines for generating energy to consume in their living spaces. Alternatively, there are some other alternative energy resources that participants want to use, like, alternative automotive fuels as fuel-cell technology, hybrid, biogas, natural gas, the energy that generated from trashes, etc.

Some of the participants have focused on heating solutions to reduce energy use. Through the methods like applying home insulation, using double glazed windows, using heat saving

curtain systems, participants want to activate energy-efficient heating or cooling systems for their living spaces. Also, they have some sustainable living ideas for maintaining energy efficiency across the home. Participants aimed to reach more energy-saving solutions for maintaining sustainable living practices by using daylight mostly, LED lightings, sensor lighting systems, thermostats, permeable curtains. IKEA may mostly focus on solar power technology, extend the solar powered product range and improve and widen the solar panels worldwide for offering more efficient solutions for people who want to generate their own energy to improve energy efficient sustainable living solutions

IKEA and Water Saving

The second section is about reducing water use and interaction with IKEA water efficient products and solutions. Even, the energy efficiency products and solutions have been known by participants, the water-saving products and solutions of IKEA is not known enough. 58,81% of the participants don't know that they can save water with IKEA's kitchen and bathroom taps (Table 3.2.16.).

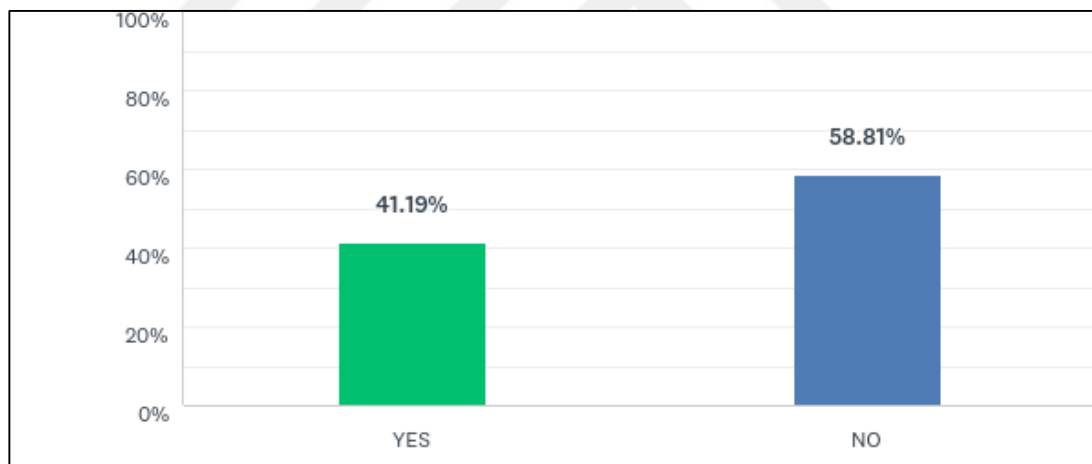


Table 3.2.16. Do you know that you can save water with IKEA's kitchen and bathroom taps?

Additionally, the 51,58% of participants can't get ideas about reducing water use at their home with the products and solutions that are being presented in IKEA stores (Table 3.2.17.). By that, there are some possible scenarios to explain these potential gaps in water saving solutions and products of IKEA. One of the explanation is about consuming behaviours and how people shop. Water saving products are mostly considered to buy in planned buying processes of consumers. Energy saving products are also being considered to buy in unplanned, stimulated shopping experiences. The water saving products (e.g. kitchen/bathroom taps) are more expensive and longer-term necessity comparing with the

energy saving products, (e.g. LED bulbs). That's why people ignore to get ideas or specifications through water saving products or solutions. It is also possible that, because of the commercial return of these two product ranges, water saving products may be stood in the shade.

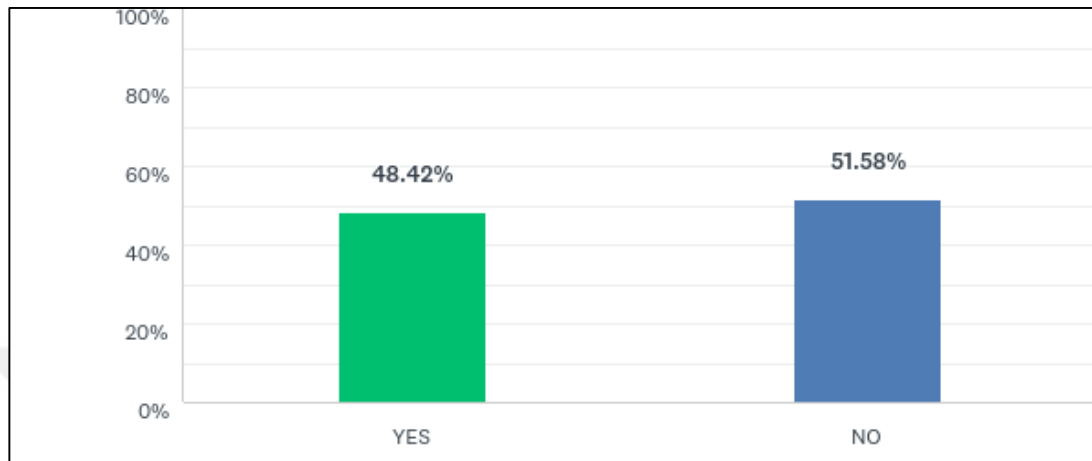


Table 3.2.17. Do you get ideas about reducing water use at your home with the products and solutions that are being presented in IKEA stores? (e.g. Watering your plants by collecting rainwater).

Although the knowledge about water saving products and solutions are deficient, the willingness to reduce water use is sufficient. Through the answers, it is clearly being seen that 82,04% of participants have enough will to wash their clothes less and save water by airing them (Table 3.2.18.).

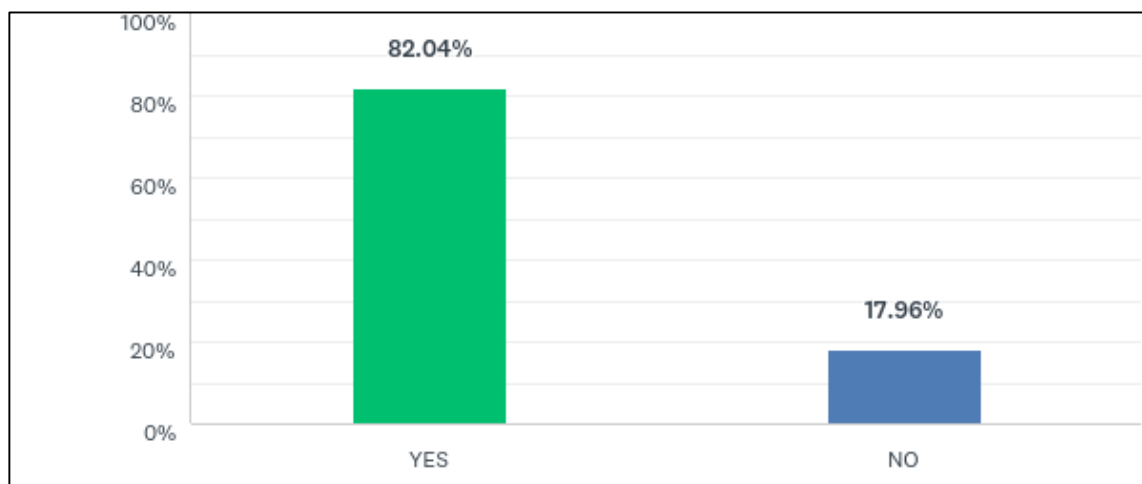


Table 3.2.18. Do you have any will to wash your clothes less and save water by airing them?

In the light of this example and previous insights, there is a possibility to state that people are mostly focused on gathering and applying home furnishing ideas and solution to maintain sustainable living.

With the following question, this insight has been supported. The energy saving issue, 84,36% of participants are willing to implement the water saving ideas or product solutions in their own daily lives that have been displayed in IKEA stores. According to the willingness rates and current knowledge level about water saving issue question, there is a potential to inform consumers about IKEA water saving solutions (Table 3.2.19.).

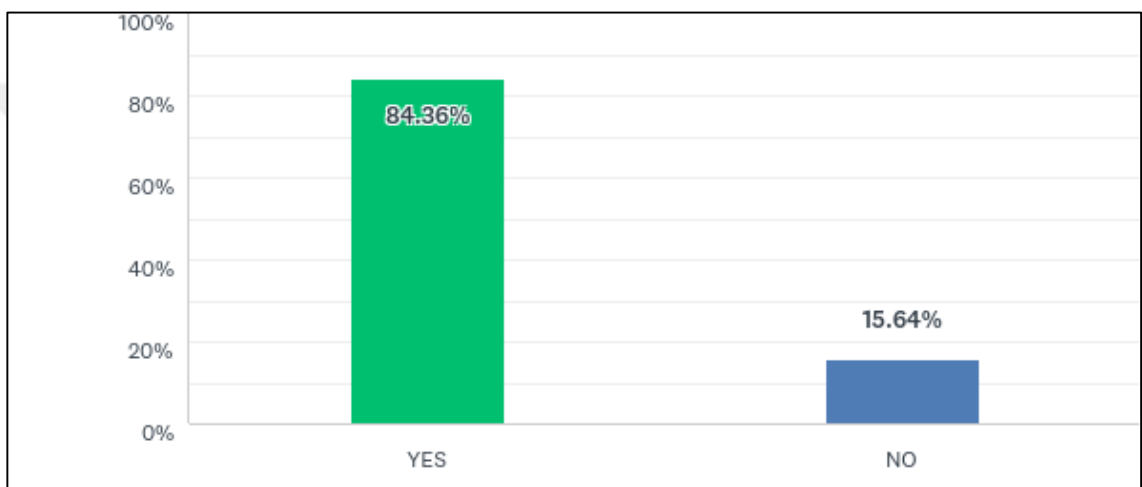


Table 3.2.19. Do you have any will to implement the water saving products and ideas in your own daily life that you have seen in IKEA stores?

The daily water saving solutions have been gathered by an open-ended question that participants had already been implementing or have willing to implement. According to the answers, one of the most common solutions is reusing the rest of the water that has been used for washing vegetables, showering, etc. for watering the flowers and plants in the house or in the garden. Also, the water which is being wasted e.g. during water heating processes, in washing machines and also grey waters can be used for other purposes.

The other most common idea to save water is using mostly dishwasher for washing dishes, instead of washing them by hand. Adding to them, there are some more common ideas like, doing maintenance of the taps in routine, reducing shower times, using drip irrigation technic for watering the gardens, collecting rainwater to repurpose, reducing the water level in flusher reservoirs, etc. According to all these insights, for improving the reduction of

water use, IKEA may boost the water saving home furnishing ideas like collecting rainwater, efficient plant watering, maintenance of the taps, etc. across the all IKEA mediums, for inspiring consumers more and directing sustainable living habits. Also, it will be beneficial to highlight water saving taps' specification for informing consumers with true insights.

IKEA and Waste Management

The following section of the questionnaire is about waste management issue and IKEA interaction. This section analyses the insights of the participants about IKEA's concept of reducing and managing waste, recycling, repurposing, reusing, etc. through various activities at home. According to the answers, participants are more aware of the waste management solutions of IKEA, but also, there is some insufficient knowledge about some activities.

The more than two third of the participants (70,10%) are aware that they can create organised solutions for recycling by sorting their packaging wastes with IKEA waste sorting containers (Table 3.2.20.). This rate shows that there are some significant efforts to inform consumers about waste sorting functions. Also, another reason can be the uniqueness of the IKEA about waste management products in the primary market area and among local market competitors.

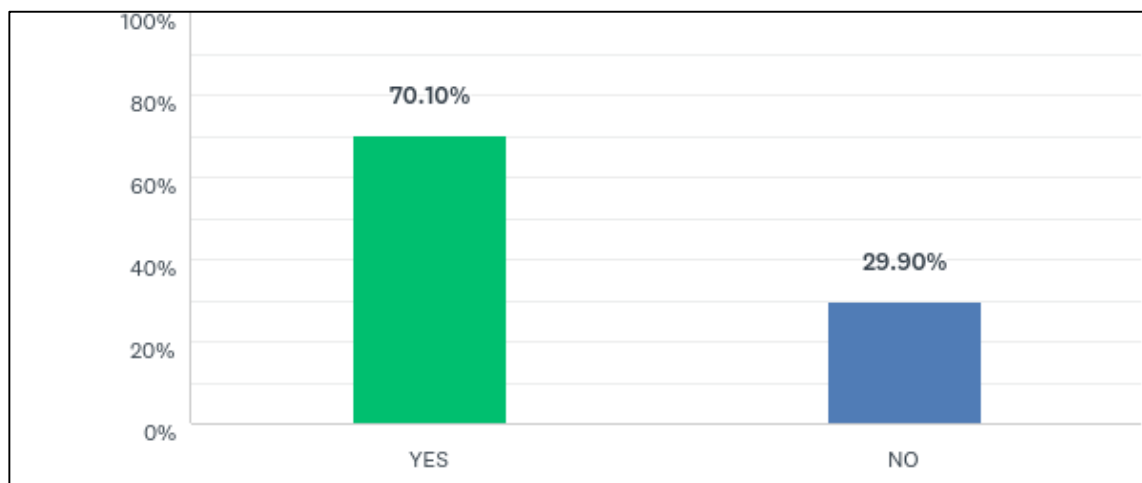


Table 3.2.20. Do you know that you can create organised solutions for recycling by sorting your packaging wastes with IKEA waste sorting containers?

Furthermore, 72,34% of the participants know that they can store their foods for longer time in a healthy condition with IKEA food containers (Table 3.2.21.). It is possible to state

that IKEA communicate the product and solutions clearly and powerful, so that the consumers have awareness about reducing food waste through containing food solutions. Also, this situation may be the outcome of general awareness and being a routine solution to this issue in the consumer society. However, it is obvious that the perception of the 'IKEA offers waste sorting and healthy food storing solutions and products' is strong among the consumers in the local market.

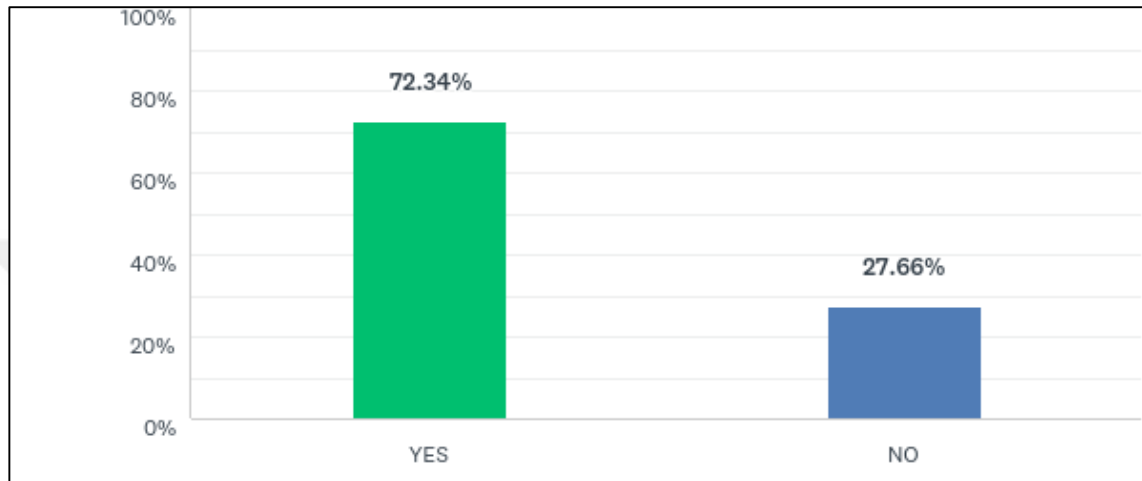


Table 3.2.21. Do you know that you can store your foods for longer time in a healthy condition with IKEA food containers?

Nevertheless, there are some potential points about reducing waste and controlling consumption issues of IKEA sustainable living concept. For instance, most of the participants 52,22% don't have any idea about, it is possible to extend the lifetime of their products, by using IKEA maintenance products (Table 3.2.22.). Although there are some product families that IKEA gives 5 to 25 years of guarantee to consumers, there are also some other products that can help consumers to extend furniture's lifetime and saving their quality and functions by using them. Even though, the existence of the products that preserving furniture, such as wood polish, stick-on floor protectors and the existence of the products that gives the second lifetime as repurposing (refurbishing), like glazing paints, furniture wheels, hardware sets, etc., the awareness level of them is too low.

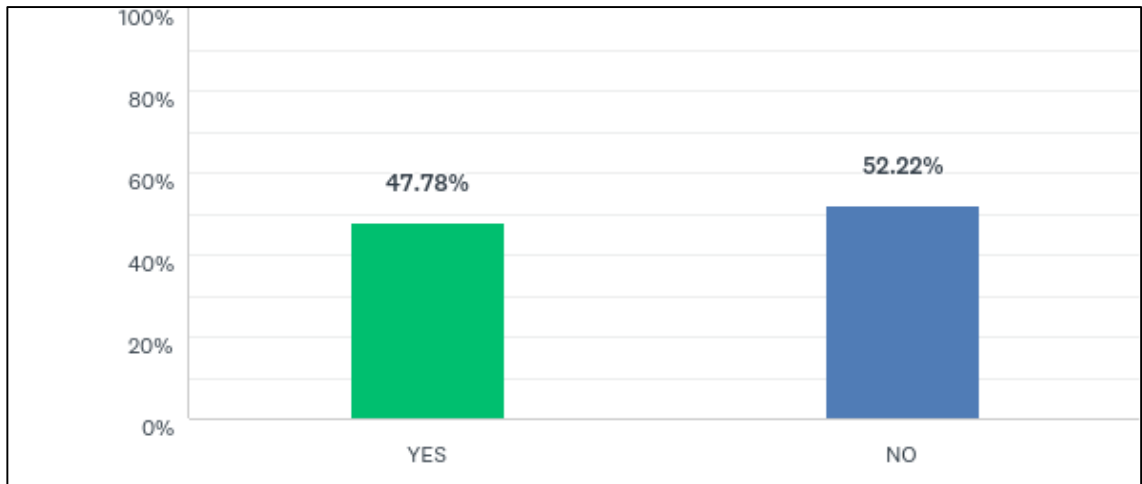


Table 3.2.22. Do you know you can extend your furniture's lifetime by using IKEA maintenance products?

Another potential point of waste management issues of IKEA sustainable living concept is about informing consumers and inspiring them through home furnishing ideas. The most of the participants (51,94%) can't get any ideas about managing wastes and recycling at home with the products and solutions that are being presented in IKEA stores (Table 3.2.23.). According to the reactions of the participants, for instance, 'creating fertilizer for your plants by composting organic wastes' idea is so unfamiliar to them. Although the rates of the participants believe that they can get ideas about waste management and they don't get inspired at all, the reality of the potential gap about this issue is valid.

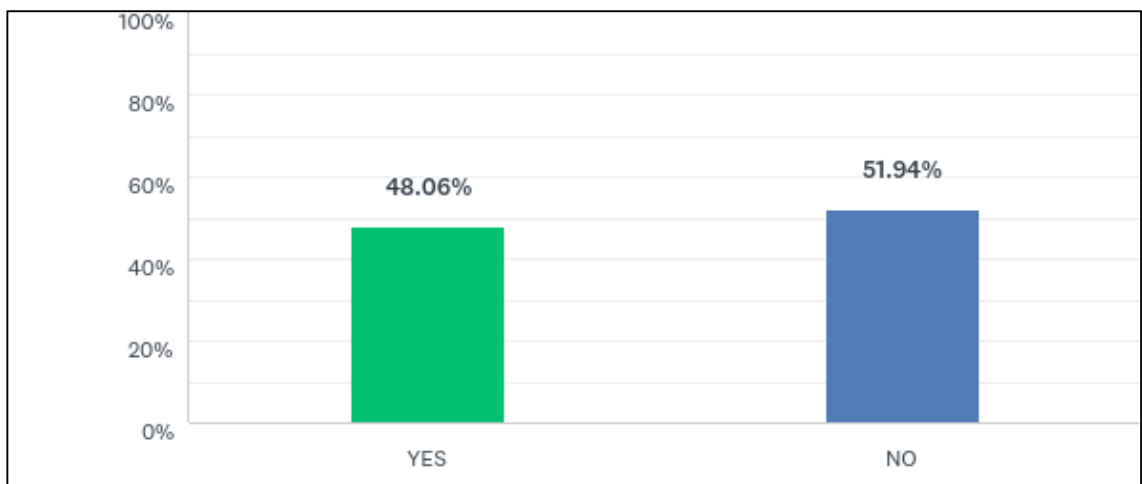


Table 3.2.23. Do you get ideas about managing your wastes and recycling at your home with the products and solutions that is being presented in IKEA stores? (e.g. Creating fertilizer for your plants by composting your organic wastes).

Despite, there are some potential points to be improved about waste management solutions, the consumer motivation and willingness to be inspired and to be led, is a useful advantage for IKEA. The big amount of participants (83,37%) have will to implement the waste organizing and reducing products and ideas in their own daily lives that they have seen in IKEA stores (Table 3.2.24.). The level of the motivation about integrating waste management solutions in consumers' daily lives is a big opportunity for IKEA to create commercial strategies and invest on the sustainable living product range that helps waste management, reducing individual carbon footprints, repurposing old furniture, etc.

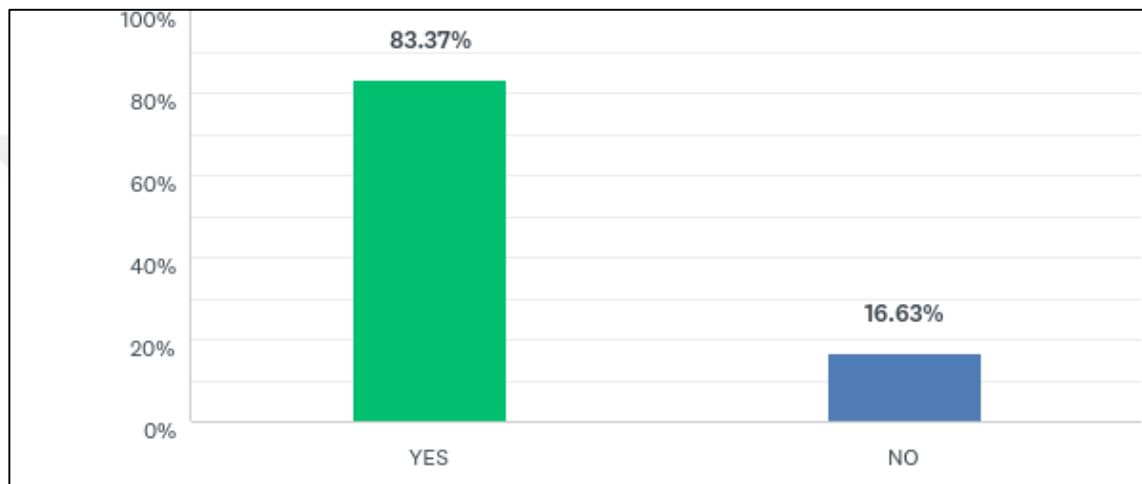


Table 3.2.24. Do you have any will to implement the waste organizing and reducing products and ideas in your own daily life that you have seen in IKEA stores?

Adding to that, there are some consumer' insights about waste management solutions, that they do or willing to do in their daily lives, according to the open-ended question. The biggest common insight about these issues is about waste sorting and creating functional and beneficial systems for recycling. Most of the participants want to maintain waste sorting processes and recycling processes, but the main obstacle is the deficiency of governmental policies. They believe that even conscious sorting is being done by individuals, it is an unavailing effort without governments' waste management policies and efficient processes of waste collecting and recycling.

There are also some another alternative approaches from participants about the waste management issues such as composting the remnants of the vegetables, fruits, tea and coffee and animal faeces or eggshells for creating fertilizers, sharing leftovers with street animals, using fabric bags instead of disposable plastic bags for shopping, making vinegars

from fruit residuals, generating electricity through trashes, etc. Even, there are some ideas for waste management issue, the main insight shows that there are some potentials to informing consumers about managing their wastes. As a result of all, it is obvious that the biggest part of the participants states that they want to get ideas about how to do waste management in their daily lives.

IKEA and Healthy Life

In the last section of the questionnaire, IKEA – healthy and active living interaction has been questioned. With the results of these section’s questions, the insights about, how people perceive IKEA’s position about issues like healthy and active living, healthy cooking, indoor or outdoor gardening, etc. have been gathered.

The first question is aimed to understand the general impression of IKEA, about healthy and active living, in the eyes of the consumers. According to the opinions of the participants, the most of the consumers (84,06%) think that IKEA provides solutions to help consumers to create more active and healthier life in their daily lives (Table 3.2.25.). This outcome shows that IKEA has a positive impression among the consumers. Also, the offers and solutions about healthy and active living that is given by IKEA are clearly understood by consumers.

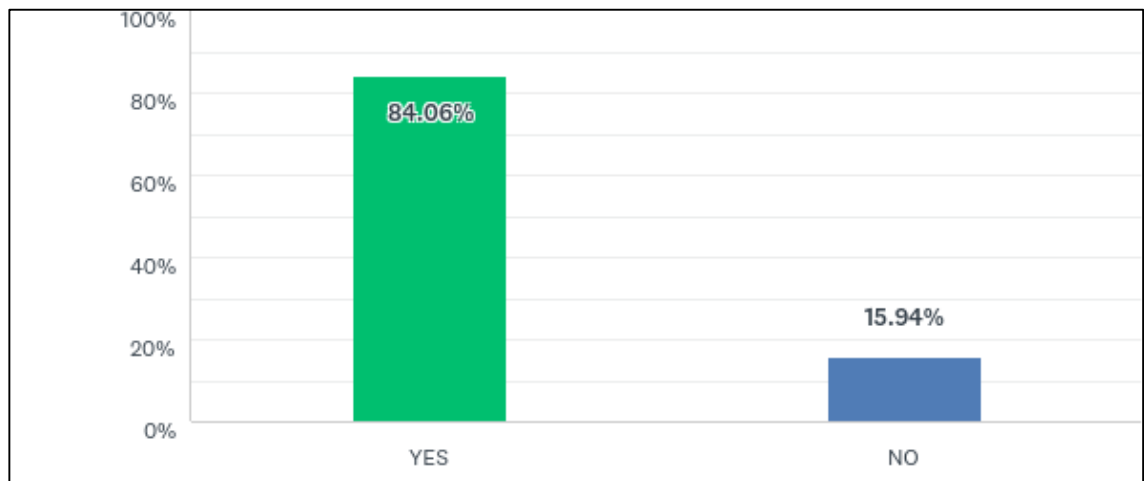


Table 3.2.25. Does IKEA provide solutions to help you create a more active and healthier life at home?

The second question of this section has been asked for understanding whether participants know that they can cook healthy foods by using IKEA healthy cooking systems like steam

cookers. According to the answer, most of the people (68,84%) are aware of IKEA healthy cooking solutions (Table 3.2.26.). Even, the product range that helps people to cook healthier foods is not wide enough, the awareness level of consumers about these solutions is high. There are some possibilities for explaining this situation. One of them is about market opportunities. By considering the competitors in the market, there had been a clear gap about alternative healthy cooking apparatus like boiling of steamer inserts that IKEA has pioneered in the market, first. That's why the recognition level of these IKEA products are high. On the other hand, because of the high popularity of the cuisine culture in the local market may cause bigger knowledge about these cooking solutions. One way or another, it is obvious that the positioning of IKEA about healthy cooking solutions is positive.

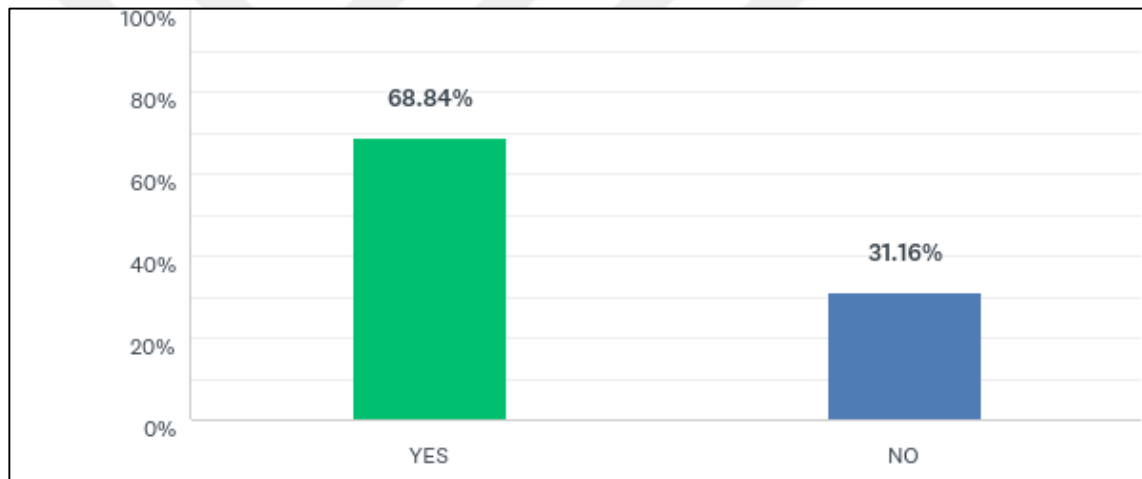


Table 3.2.26. Do you know that you can prepare healthier foods by using IKEA healthy cooking products (e.g. steam cooking products etc.)?

However, with the consideration of the gardening and organic planting issues, the high awareness level about healthy living interaction of IKEA is being decreased. According to the outcomes of the following question, 53,89% of the participants think that IKEA offers ideas about planting and gardening at home with the products and solutions that are being presented in IKEA stores. For instance, 46,11% of the consumers couldn't get inspirations and solutions about indoor or outdoor gardening activities, like planting their own vegetables and harvesting them as their healthy food (Table 3.2.27.). Even the local market consumer behaviours and habits are tended to the concepts like, organic gardening, hobby

gardening, permaculture, balcony agriculture, etc., the awareness level of consumers about IKEA sustainable gardening solutions is not enough.

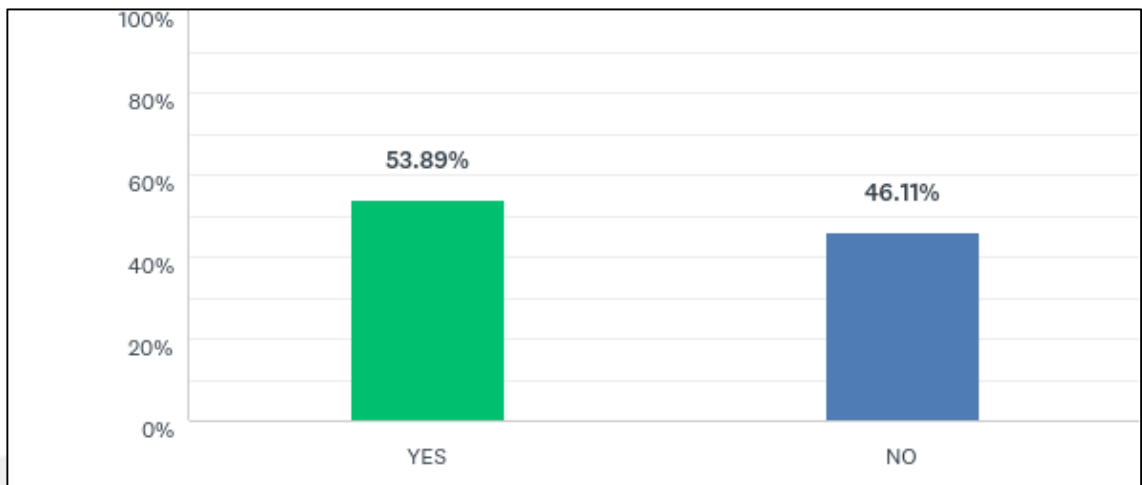


Table 3.2.27. Do you get ideas about planting and gardening at your home with the products and solutions that are being presented in IKEA stores? (e.g. Planting your own food in your kitchen or balcony).

With the consideration of the alternative gardening solutions, like hydroponics that is being offered in some other countries that IKEA exists, the connection between IKEA and indoor and outdoor gardening may be stronger in the eyes of the consumers. With the existence of the just conventional type of gardening products or systems and non-existence of the innovative solutions like hydroponics, the positioning of the IKEA's healthy gardening solutions may not be visible and outstanding enough in the market.

Nevertheless, the general impression of IKEA's healthy and active living concept creates a positive tendency among the consumers. According to the results of the following question, the most of the participants (83,36%) is willing to implement healthy life supporting products and ideas in their daily lives that they have seen in IKEA stores (Table 3.2.28.). This result shows that IKEA has a strong impact on consumers, by attracting consumers to get ideas and solutions about healthy and active life and implement them in their lives, even it is a home furnishing brand in the first place.

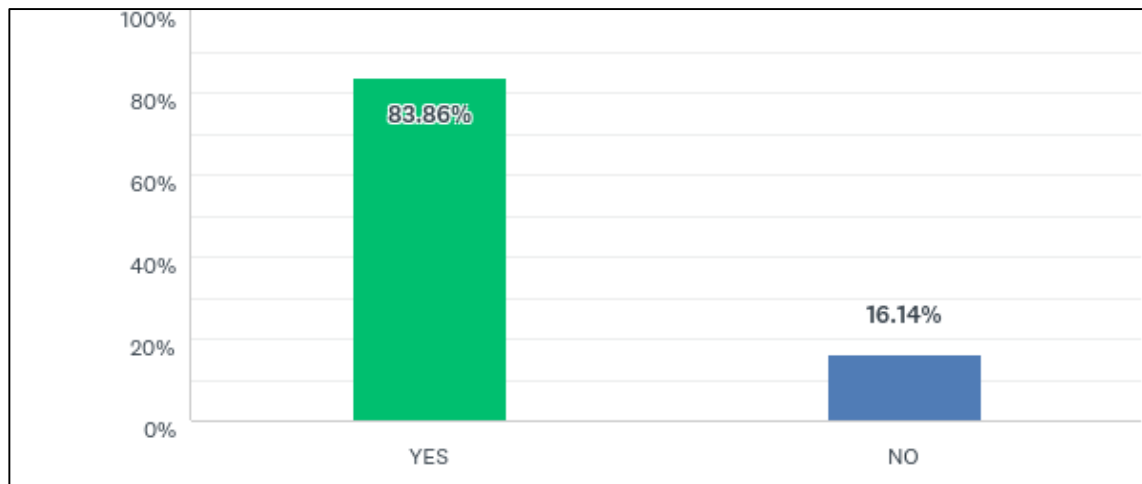


Table 3.2.28. Do you have any will to implement healthy life supporting products and ideas in your own daily life that you have seen in IKEA stores?

As considering this outcome, there is another insight that cannot be ignored. The raising awareness and tendency for living healthier and being more active is one of the most popular global trends. That's why, there are lots of approaches in different fields like gardening, sports, yoga, alternative diets, etc., to maintain a healthy and active life. As a result of this, there are lots of insights have been gathered from participants about what are the active and healthy life solutions that they implement or willing to implement in their daily lives.

The various outcomes are mostly the common ideas of the participants. That means consumer insights are supporting each other. For activating healthier and more active life at home, some of the insights are using air purifiers, using ergonomic furniture, doing sports, growing own food, using fewer chemicals, applying healthier diets, reducing chemicals in cleaning processes, etc. Some of them have been repeated constantly from consumers. For instance, most of the participants are doing or willing to do sports, just as bicycling, walking, etc. There is also another consensus about integrating more ergonomic furniture, among the participants. Consumers are willing to use orthopaedic mattresses, ergonomic office chairs and desks, ergonomic pillows and sheets and more.

Another common insight is about indoor and outdoor gardening. People want to activate gardening activities for reaching a healthier life that is nested with the nature that provides healthy harvests and creates natural fresh air. Also, for living in a fresher environment, the most of the participants wants to integrate air purifiers and moisturizers, air their clothes

for healthier use and live in more green spaces. Furthermore, participants state that they want to change their nutrition habits with healthier diets, eat organic foods, and cook with healthier methods.

According to these insights, there are some possible solutions to help people to live more active and healthier lives at home through the alternative sustainable living product range and sustainable living knowledge that supports living through that way.

3.2.2 Discussion

Adding to these insights from the questionnaire, the cross evaluation study has been applied through some questions, to understand, how people perceive IKEA sustainable living concept. Through this evaluation, one of the main considerations is analysing participants' approach to the IKEA's sustainable living concept in the perspective of product or knowledge-based sustainable living practices. This study has been done because of understanding whether participants perceive IKEA's sustainable living concept as a combination of products and knowledge, or not.

Some questions have been scored according to their references about sustainable living through product or through knowledge approaches by analysing answers of each individual. For that, some questions in the Parts 4,5,6,7 have been cross evaluated. The score table has been formed according to the specifications of the questions about whether they refer to sustainable living through products or sustainable living through knowledge (Table 3.2.29.).

In Part 7 – IKEA and Healthy Life, the question 29 which examines the awareness level of the IKEA healthy cooking products has been considered as a reference for understanding participant's perception about IKEA sustainable living concept through a product range that helps people live healthier lives. The question 30 which examines the awareness level about the home gardening ideas that are presented in the IKEA stores has been considered as a reference for understanding participant's perception about knowledge-based sustainable living concept of IKEA.

Awareness Level of IKEA Sustainable Living Concept	Energy	Water	Waste	Healthy	TOTAL
Idea about IKEA Sustainable Living Concept	44,92%	28,92%	40,53%	47,07%	40,36%
IKEA Sustainable Living Just Through Products	11,84%	12,76%	24,61%	23,69%	18,23%
IKEA Sustainable Living Just Through Home Furnishing Knowledge	16,30%	19,38%	7,69%	7,69%	12,76%
No Idea about IKEA Sustainable Living Concept	26,94%	38,94%	27,17%	21,55%	28,65%

Table 3.2.29. Cross evaluation analysis results

According to this example, if the participant has answered positive both for question 29 and 30, the perception of consumer is analysed as 'having an idea about the healthy living approach of IKEA sustainable living concept both by products and by knowledge'. If the participant answered for the question 29 as positive and question 30 as negative, the approach of the consumer to the IKEA sustainable living concept is analysed as 'having an idea about the healthy living approach of IKEA sustainable living concept, just by products that support sustainable living'. If the participant answered for the question 29 as negative and question 30 as positive, the approach of the consumer to the IKEA sustainable living concept is analysed as 'having an idea about the healthy living approach of IKEA sustainable living concept, just by sustainable living knowledge'. If the participant has answered both for question 29 and 30 negative, the perception of consumer is analysed as 'having no idea about the healthy living approach of IKEA sustainable living concept, neither by products, nor by knowledge'.

This analyse method also has been applied to the other three parts of the questionnaire. After evaluating each part as the four dimensions of IKEA sustainable living concept, the general statement about the perception of sustainable living concept has been analysed. The total outcome has been gathered for evaluating the general approach of participants to the sustainable living concept, whether from knowledge or from products.

As the first part of this evaluation, Part 4 has been analysed to understand the product – knowledge interaction about energy saving dimension of IKEA sustainable living concept. According to the results, the most of participants (44,92%) has some idea about energy saving solutions of IKEA sustainable living concept both by products that help and enable energy saving and by sustainable living knowledge that help to reduce individual energy use. This result shows that IKEA has a good transfusion on consumers about energy saving issue.

26,94% of the participants don't have any idea about energy saving solutions of IKEA sustainable living practices neither with product range nor with knowledge. This result shows that there is still a potential about the level of being informed and aware about how to reduce energy use in the daily lives of each individual.

In addition, 11,84% of participants, have some ideas about energy saving solutions of IKEA by products that related to energy saving. They don't have any idea about energy saving

solutions of IKEA that have been created by IKEA sustainable living knowledge. On the contrary, 16,30% of the participants have some ideas about energy dimension, just by the IKEA sustainable living knowledge that helps to create practical solutions for reducing energy consumption. According to this outcome, even there is a small difference between knowledge-based energy saving solutions and product based energy saving solutions, the IKEA sustainable living knowledge is stronger than the perception of product solutions in the eyes of the consumers. By that, there are some potential points for improving the awareness level of IKEA energy saving products like LED lighting and dimmer systems that help to reduce energy consumption.

Following to that, reducing water use dimension of IKEA sustainable living concept has been evaluated just as the same. But the results about reducing water use dimension of sustainable living practices, differentiate, comparing with the energy saving dimension. On the contrary, the percentage of people that have no idea about sustainable living solutions through knowledge of product is the bigger part in case of water saving issue. 38,94% of participants don't have any idea about water reduction solutions of IKEA, while just 28,92% of them have some idea about these. It is possible to say that there are some potentials about this issue.

Although the awareness level of people about water saving is low, there are some common points of reducing water use issue and reducing energy use issue. According to that, the density of people that have ideas from IKEA sustainable living knowledge (19,38%) is more than the people that have ideas about water saving issues through the product range (12,76%). This result shows that water saving ideas are more effective on people than the product range for informing them about sustainable living and water saving solutions.

From this perspective, also Part 6 - IKEA and Waste Management has been analysed. According to the results, the perceptions of the participants about waste management dimension of sustainable living are similar to energy saving issue. The impact of the products that support waste management solutions are more effective than IKEA waste management knowledge. In the light of the participant insights, 40,53% of participants are aware of IKEA's approach, by both product solutions and sustainable living knowledge, the issues like waste management, waste sorting, reducing waste, refurbishing, etc.

Opposing to that, 27,17% of people have no idea that IKEA's solutions for waste management issues in the sustainable living concept. These people that don't have any idea about waste management are the potential target group for the IKEA to reach them to inform about waste management by products and home furnishing ideas.

There are a group of people (32,30% of participants) that perceive IKEA's waste management solutions through products or just through home furnishing knowledge. But inside this group of people (32,30% of all participants), almost three fourth (76,19%) of them are aware of waste management approach of IKEA by IKEA product range that helps to managing waste comparing to the minor group of people (23,81%) that aware of waste management solutions through home furnishing knowledge. These results show that waste management products are much more crucial in the eyes of the consumers comparing to sustainable living knowledge.

As the last dimension of IKEA sustainable living concept, IKEA and Healthy Life has also been evaluated, considering the product and knowledge interaction of consumers. Healthy Living is the most known dimension of IKEA sustainable living concept. Almost half of the participants, 47,07% of them are aware of IKEA's healthier life at home knowledge and products that support this dimension. Opposing this group of people, 21,55% of participants have heard of neither products nor ideas about healthier life at home solutions. Even, it seems that almost one-fifth of the people is oblivious about healthier life at home solutions of IKEA, it is also a potential to reach and interact with that people socially.

The percentage of people that are aware of healthier life at home concept by the ideas is the 7,69% of the participants. Besides, 23,69% of the participants are aware of this concept by products that help to maintain a healthier life at home. Similarly, the products that support healthier life at home are more effective on consumers than healthy living ideas for the waste management concept.

There are some other results from this cross evaluation study, as it is looked from the broader perspective. In general, the perceptions of the participants about IKEA sustainable living concept are promising. From the total perspective, considering the activities and solutions of IKEA, 40,36% of participants are aware of the sustainable living concept by related products and home furnishing ideas. With considering the groups of participants that are aware of these concepts, by product range or just by home furnishing knowledge, the general

percentage of participants that have some or sufficient knowledge about the sustainable living concept is 71,35%. This result shows that IKEA has a positive and significant impact on consumers about sustainable living practices.

The perceptions of participants about IKEA sustainable living dimensions are also positive, except water saving solutions. The percentage of participants that have no idea about water saving solutions of IKEA is bigger than the participants that know completely. It is obvious that IKEA has the potential to meet customers by the products like taps and showers, and home furnishing ideas that help to reduce water use. Also, it can be stated that, IKEA's positioning about water saving solutions is not sufficient and enough in the eyes of the consumers.

Opposing to water saving dimension, the awareness level of 'healthier life at home' is quite high. The percentage of people that have some sufficient idea about IKEA's healthy living solutions is 78,45%. Even, by considering the group of people that know both products and knowledge about healthy living (47,07%), it is still the most known dimension of IKEA sustainable living concepts. The energy saving and waste management dimensions are also highly known by participants.

Another result that can be reached from this cross evaluation study is about the comparison of the product and knowledge densities of sustainable living dimensions. Focusing on the answers of each individual's that refer to just sustainable living concept by knowledge or just by product range, provides the specifications of each dimension. According to these results, some dimensions are more effective with the home furnishing knowledge, some of them are with the related product range, but there is not so much difference between them.

In the light of these insights, the energy saving and water saving dimensions are mostly perceived as sustainable living practices through home furnishing knowledge, in the eyes of the participants. Considering the energy saving issue, the total percentage of people that have some idea through knowledge is 61,22%. Besides the percentage of people that perceive energy saving solutions through product range is 56,76%. As considering water saving dimension, the home furnishing knowledge that helps reducing water use is more effective on consumers. According to the total evaluation, while 48,30% of participants perceive water saving solutions of IKEA through home furnishing knowledge, 41,68% of them are aware of this dimension by the related product features.

Besides, while energy and water saving dimensions are mostly perceived by home furnishing knowledge, waste management and healthy living dimensions are mostly perceived by the product range that supports the sustainable living concept. According to the results, considering the waste management dimension, 65,14% of the participants perceive the waste sorting and reducing solutions through the related product range. However, the smaller group of participants (48,22%) perceive waste management solutions through some ideas and home furnishing knowledge. Also, in the case of healthier life at home, 70,76% of the participants are aware of the IKEA's approach to the healthy living dimension through supporting products, while 54,76% of the participants perceive this dimension through IKEA home furnishing expertise.

By considering these results, through the perspectives of knowledge and product range, there can be some possible outcomes about consumer shopping behaviours and consumer perceptions. IKEA sustainable living concept has been established upon the home furnishing knowledge and supporting products that related to sustainable living practices. From this perspective, for each dimension of IKEA sustainable living concept, the combination and harmony of the products and knowledge create the total sustainable living offer. But, according to the activities in these four dimensions, the importance and dominance of the knowledge and product may differ. These differences point out the focusing direction in each dimension, from the perspective of consumers.

As a brief outcome, consumers perceive IKEA energy and water saving solutions, a bit more through home furnishing solutions. However, also they perceive IKEA's waste management and healthy living solutions, mostly through the related product range. These two different outcomes in the same concept is the reflection of consumer behaviours. The reason behind this distinction can be explained by various alternatives.

For instance, water saving solutions in the kitchen or in the bathroom are mostly connected with the performances and features of the taps. On the contrary, consumers' perceptions about water saving solutions, are conflicting with this perspective. According to a possibility, the market competitors are equal to or better than IKEA about water saving taps. That's why, the positioning of IKEA about water saving dimension, hasn't been built upon the product range in the eyes of the consumers. According to these insights, instead of obtaining this dimension mostly through products, IKEA has offered home furnishing solutions to inspire

consumers to reduce water use like; airing clothes for extending washing cycles, collecting rainwater in the balconies and cold water that is pouring down while waiting to gets hot in the shower - for watering plants, rinsing dishes in a container filled with water instead of under the running water, etc. But, because of the difference between product steered or knowledge steered consumer tendencies is close enough, it is clear that the water saving products also have some impact on consumers.

From a different point of view, the awareness of consumers about water saving products is not enough because of the potential gaps in IKEA's range presentations and product communications. As participants have answered for Question 17, which examines the awareness level about water saving taps, the level of awareness to these products are low (58,81% of participants don't know). Supporting to that result, with the answers of Question 5, which examines the recognisability of IKEA products' environmental impacts, 56,89% of the consumers don't think that the environmental impacts of IKEA products have been explained clearly. That's why, it can be stated that more participants don't have sufficient information about the features of water saving products.

As an alternative approach, because of being long term shopping item and being more expensive than accessories, water saving taps can be positioned in the second row in the eyes of the consumers. Purchasing taps are mostly related to needs and part of the planned shopping processes. Also because of their lifetime is much longer than accessories, the circulation of them are not so much fast. That's why, according to these shopping behaviour insights, these type of products like water saving taps may not be known by consumers.

There is a similar situation for energy saving dimension. According to the results of the cross evaluation, in the eyes of the consumers, home furnishing knowledge is a bit more effective than related products for obtaining energy-saving dimension of the sustainable living concept of IKEA. Comparing with the water saving dimension, energy saving is the second best-known dimension of IKEA sustainable living concept after healthy living. Also, the difference between energy saving perception by product range and by home furnishing knowledge is closer than water saving issue. Even so, this difference is caused by similar reasons for water saving issue's reasons.

The products of IKEA that help to reduce energy use are LED bulbs, integrated lighting systems, dimmer lighting systems, smart lighting systems, energy saving white goods like

washing machines, refrigerators, steam cookers, etc. These products have positive impacts on energy saving issue, but it is needed to evaluate these products among market competitors, local consumer behaviours and daily habits.

First of all, IKEA hasn't known as electrical goods, white goods or kitchen appliances seller/producer company. The range of these types of products is not wide enough to compete with other brands in the market. That's why, IKEA doesn't have a strong impression on consumers, by these types of electrical white goods. Also, like taps, white goods are more linked to the long term needs and planned shopping processes.

IKEA's LED bulbs, integrated lighting systems, dimmer lighting systems, smart lighting systems ranges are quite wide by offering different types of solutions for various functions and consumer needs. According to Question 13; which seeks for the awareness level of energy saving products, the participant insights show that the awareness level of these type of products (57,37%) is positive. Even the awareness level is positive, especially, the smart lighting and integrated lighting systems could be seen as expensive solutions by consumers. Because of these consumer behaviours and daily habits, these type of products may not be perceived as a sustainable living solutions exactly.

According to the insights of the participants, instead of these products that help to reduce energy use, the home furnishing ideas of IKEA help consumers a bit more to energy saving solutions. As a reference, the answers of participants to the Question 14 show that 63,27% of people get inspired by products and home furnishing ideas that help to reduce energy. With considering Question 13, the increased awareness level is the outcome of the home furnishing knowledge of IKEA.

Besides, the waste management dimension of IKEA is mostly perceived through related product range by participants. Consumers get ideas and solutions about waste management issue by the products that help to manage and reduce waste, repurpose, extend the lifetime by maintenance, etc. Comparing with the percentage of waste management solutions through home furnishing knowledge, the related product range is the dominant element for obtaining IKEA waste management concept.

In the first place, according to the answers for the Question 11, after 'deficiency of governmental policies', the second most common limitation to reduce personal

environmental impact is 'not having enough products and systems for implementation'. This outcome shows that supporting products for obtaining sustainable life at home is crucial, in the eyes of the consumers. Even, the results of the water and energy saving dimensions are not parallel to this outcome, the results of waste management and healthy living are the strong ingredients to increase the importance of the product range to obtain sustainable life at home. The answers to the Questions 22 and 23 are supporting this insight for the waste management issue. 70,10% of the participants think that they can create organised solutions for recycling by sorting their packaging wastes with IKEA waste sorting containers. And, 72,34% of them think that they can store their foods for longer time in a healthy condition with IKEA food containers.

These results show that the impact of waste management products on consumers is positive. Besides, home furnishing solutions to support waste management is not effective on the consumer as products, because, these home furnishing ideas are directly linked to the supporting products. For instance, to integrate waste sorting as a habit in daily lives, IKEA offers, organised functional solutions through home furnishing ideas. IKEA places waste sorting bins, in closed storage like shoe cabinet, just by the entrance of the home, to remind users to put their sorted waste to the public bins. Even, there is a home furnishing solution to help for managing waste, the centre of this solution is waste sorting bins. That's why, the related products are perceived as a trigger for obtaining waste management, more than home furnishing knowledge.

Healthy living dimension is also mostly perceived through related product range and its' solutions, by consumers, like waste management dimension. According to the results, as the most known dimension, healthy living solutions of IKEA has a significant impact on consumers, and this awareness level of healthy living is mostly linked through product solutions.

Actually, according to the answers to the open-ended question 32, the insights of participants about active and healthy life solutions that they implement or willing to implement in their daily life are more linked with the sports activities and sports goods. Secondly, participants meet on the common issues like ergonomic furniture, home gardening and new products like air purifiers, for obtaining healthy living dimension. These insights also point out the product solutions for developing to live a healthier life at home. As another example, according to

the answers of the participants to Question 29, 68,84% of them know that they can prepare healthier foods by using IKEA healthy cooking products.

As a similar outcome to the waste management dimension, IKEA's home furnishing solutions for activating healthy living are mostly connected with the product range. For instance, according to a sustainable living home furnishing solution of IKEA to obtain a healthy living, it is possible to cook more than one food, in one pot at the same time using inserts. This reduces the use of energy and water and makes washing up easier. Even, this solution seems to be a solid home furnishing idea, it is still functional through cooking inserts that can fit up with pots. This home furnishing solution is supporting the related product and makes it the key ingredient, in the eyes of the consumer. In the light of these insights, even, there are some potential fields, that IKEA can develop alternative products for answering consumer demands about healthy living. However, IKEA still has a positive impact on consumers about healthy living solutions that mostly linked through the product range.

3.3. Analysis of the Results

Through the answers of the participants, some outcomes have been gathered from the questionnaire. According to these outcomes, which are the exact reflections of consumer insights, some evaluations have been made. Each question has contributed to the result as a base data, about understanding the common perception about the sustainable living concept and awareness levels of the participants.

By the analysis of the answers to these questions, some feedbacks have been collected about topics like; sustainable living practices of consumers, the sensitivity of consumers about environmental issues, consumer perception about IKEA sustainable living approach, the strengths and the weaknesses of the IKEA sustainable living concept, consumer approach about integrating IKEA sustainable living solutions in their daily lives, etc. Adding to these issues, as a major element, the interaction between the consumer and the sustainable living concept has been analysed by the consideration of the IKEA product range and home furnishing knowledge of IKEA. Through the insights, the impacts and the contributions of the product range and the home furnishing solutions to the IKEA sustainable living concept, have been evaluated for understanding consumer behaviours and tendencies in daily life practices.

First of all, it is possible to say that, the awareness and sensitivity levels of people about sustainability issues are insufficient. According to the results – especially the answers to question 9, there is an inevitable degree of ignorance about environmental issues. Because of the ignorance of the individual negative environmental impact of people, maintaining the sustainable solutions is hard enough. The unconcerned behaviours, attitudes, decisions, and actions of people about the environment are the main reasons that stand in front of developing sustainable systems. Most of the participants that have joined to the questionnaire, defend themselves as they don't give any harm to the environment. By these type of unconcerned mind-sets, and because of that, cannot applying sustainable processes, the sustainable living practices are also hard to maintain.

However, the level of the awareness and sensitivity about sustainability issues is promising among the 25-34 age range. The questionnaire has been sent to the people randomly, by considering the balance between the age groups. Although, according to the data of Question 1, the biggest age group (31,80%) is belong to the 25-34 age range. This result shows that the sensitivity level about the environmental issues of younger generations is higher than the other age groups. In addition, according to the individual responses, the participants that belong to the 25-34 age range are much more aware than the other age ranges. The young generation participants think that they are harming the environment in their daily lives. This outcome shows that the further studies and strategies for improving sustainability and sustainable living among society, can be designed by defining younger generations (15-34 age range) as actively target group.

However, even the sensitivity level of younger generations is higher, the total insights show that there is a big potential to activate the necessity of sustainable considerations among society. For that, more basic studies and strategies like informing people about their daily impacts, can be applied to the older generations (34-65+ age range) of the society. This kind of basic studies of sustainability and sustainable living can be designed to raise awareness about these issues among those older age groups.

Adding to the unconcerned approach to the environmental issues, there is also a significant level of unawareness by the natural outcome of insufficient knowledge. According to the participants' insights, sustainable issues are not widespread among society and not perceived as urgent issues. By the answers, it is obvious that there is an informational gap about

sustainability, especially about the IKEA's sustainability and sustainable living concepts. Especially the answers of question 5, it is obvious to understand that, IKEA's environmental sensitivity is not known enough from the perspective of consumers. Because of these informational gaps of IKEA, it is beneficial to improve these processes.

Besides, IKEA's potential to activate sustainable living tendencies of consumers and to improve the sustainable living knowledge among the consumer societies is so big. Because there is a high level of brand trust of IKEA among consumers. According to the answers of question 9 and 12, IKEA's strength of influencing people about environmental issues is distinguishable.

Even, the major group of the participants believes that they don't give any harm to the environment. There is a common belief and trust about IKEA's solutions to improving environmental processes. The bigger group of participants think that, they can contribute to the environment positively by using IKEA product range and ideas in their daily lives. This result shows that if right and effective strategies are being applied by IKEA, the tendencies and awareness levels of consumers about environmental issues can be improved. By taking this improvement about environmental issues as a reference, the sustainable living practices and solutions can be generalized and improved among the consumer societies.

While improving these concepts among consumers, IKEA has some strong tools to support its' environmental sensitivity and sustainable living concepts. As considering the vision, business idea, corporate identity, strategies, and mandatories of IKEA as fundamental cornerstones of IKEA's concept, product range and home furnishing knowledge are supplementary and complementary elements of it, for meeting with the consumers in IKEA way. Like other concepts of IKEA, the sustainable living concept is also built upon its' wide variety of product range and home furnishing solutions that improves quality of living, while answering needs and desires of consumers, in the consideration of environmental, economic and social sustainability of the world we live in.

Also, beyond answering needs and desires of consumers, IKEA has the power of inspiring and informing people about new challenges and tendencies that they weren't aware of before, in their daily lives, by the products range and home furnishing expertise. While improving sustainable living practices of consumers, the incidence of these two elements, may vary, due to different consumer societies.

According to the answers of the participants, to Question 11, the need for products and knowledge for reducing personal environmental impact is visible. But, when these two elements are compared, the deficiency of products that help to reduce environmental impact is 2,5 times more crucial than the deficiency of knowledge to improve those processes, in the eyes of the consumers. By these insights, there is two possible situation analysis about the interaction of product range and knowledge with sustainable consumer behaviours.

One of them refers that, the current awareness level of consumers about the knowledge that helps to reduce personal environmental impact is much better than the awareness of the products. That's why the request for a product to maintain sustainable solutions to the environmental problems, is higher than the request for knowledge. But, if it is considered under the IKEA case, the general awareness level of knowledge about sustainable living practices, is lesser than the awareness level of the product range.

That's why, as a second alternative situation analysis, the importance and effectiveness level of solutions through product range is more prevailing, as compared with the impact of knowledge. Consumers that participated to the questionnaire in a specific local area, believe that they can contribute on environmental issues, reduce their personal impacts on the environment and live more sustainable lives mostly by the help of supportive product solutions.

This product centred solution approach is also, supported by the answers of the participants to the open-ended questions, which are, 16,21,27,32. Most of the participants, that have shared their insights about, sustainable living solutions that they implement or willing to implement in their daily lives, are mostly focused on the solutions through the product specifications and features, rather than the solutions through home furnishing ideas.

Also, according to these answers, there are possible solutions for IKEA by improving the product range that is related to all four dimensions of sustainable living processes.

For instance, by the feedbacks about energy saving issue in sustainable living, consumers are willing to decrease their energy consumption, by mostly focusing on similar product solutions, like solar powered devices, solar panels and wind turbines for generating own energy and energy saving devices for reducing energy use. About water saving issue, from

the product range perspective, consumers want to apply solutions or improve their contributions, by having more efficient water saving devices and gadgets to gather water that wasted, for a purpose.

For the case of waste management, consumers are mostly focused on product solutions, which help to sort packaging waste for recycling and help to store wasted oils and batteries safely. According to the insights about, healthy living dimension, consumers are mostly agreed on the product solutions, like sports goods and gadgets, more ergonomic furniture, alternative households like air purifiers, products that help to activate healthier diets, etc.

Through these insights, IKEA can improve product range and offer new and innovative home furnishing solutions by these product specifications to the consumers, for activating more sustainable daily lives. By answering consumers' insights about their needs to improve their sustainable living processes, IKEA can spread sustainable living concept among consumer society and contribute to the sustainable value chain.

3.4. Recommendations for Further Studies

According to the results of this research, and analysis of the outcomes of it, there are some suggestions to improve sustainable living processes of the consumers, in their daily lives. These suggestions are possible solutions for both IKEA's offer for the sustainable living concept and individual sustainable living practices. As references, the specific local consumer insights have been used as references to create solutions for improving sustainable living practices. Because of having different scales and impact areas, there are some distinctions between global and local solutions. Through the outcomes of this research, there are some recommendations for global and local practices. These recommendations are created by considering the knowledge based, product based and the combinational approaches.

Considering the deficiency about awareness level of consumers about sustainable living practices - both general and for the case of IKEA, there are possible solutions to improve these processes. As a first base, there is a necessity of informing consumers about their harm to the environment, to create a fundamental base for informing consumers about sustainable living practices. Without obtaining awareness about negative environmental impacts of each individual, it is not possible to construct a solid knowledge and obtain

behavioural change about sustainable living practices. For accomplishing that part, there are some duties of governments, NGOs, educational institutions and corporations as stakeholders that are involved in these processes.

As a leading corporation, IKEA is able to contribute to these studies about informing the consumers about environmental issues and unsustainable processes of humankind, through the methods such as workshops, advertorial studies, public relation applications, long or short term courses, cooperative studies with universities, primary schools and high schools, campaigns with local and global NGOs like WWF and TEMA, etc. These studies make sense on consumer society and leads to significant changes among these societies such as changing consumer behaviours with the high awareness level of IKEA brand as a home furnishing expert.

As a basic example for public relation study, IKEA can organize a briefing point for informing people about the environmental impact of humankind by real-life demonstrations or exhibition stands in fairs that are related to sustainable living for informing people about sustainable living ideas that they can apply in their daily lives and IKEA products that support sustainable living practices. For instance, as a local study, IKEA can take part in Ekoloji Izmir Fair, to show sustainable living solutions of IKEA, mostly about the home gardening solutions, which is a potential improvement point for IKEA, according to the results of the questionnaire. By these studies, IKEA can contribute to the general awareness of people about their impact on the environment and increase the knowledge level of sustainable living solutions. Consumers can be a part of this behavioural change and being considered and conscious about environmental issues. As a result of that, IKEA can improve its brand loyalty and trust and also provide sales increases with the products that support sustainable living.

IKEA can be a part of educational processes at schools by taking role in environmental studies such as by being a sponsor corporation as another approach. Some sustainable living labs and environmental awareness classes can be constructed at primary and high schools by the sponsorship of IKEA. Additionally, it is beneficial to inform students both by the worldwide approaches of sustainability and IKEA sustainability approach by the support of educators from IKEA. These type of applications are also fit up with the business approach of IKEA which is each child is important for IKEA, because of being potential customers in the future. By assuring these experiences in those students' mind, IKEA helps to raise more environmentally considered individuals as a part of society, in the future who links sustainable issues with

IKEA directly. As a result of that, each stakeholder takes positive benefits from these collaborations.

Additionally, IKEA can organize workshops for improving their sustainable living concept, according to the outcomes of the questionnaire that points out the insufficient knowledge about the sustainable living practices. By workshops, IKEA can collect insights, comments, data or suggestions for improving sustainable living processes both by product range and home furnishing solutions perspectives. These workshops can be organized with various kind of participators from different profiles, for gathering various outcomes.

IKEA can organize these workshops under topics like environmental sensitivity or sustainable living practices with consumers. Through these type of workshops, IKEA can gather data about real-life experiences of consumers about sustainable living practices and get feedback about IKEA's approach to these processes in the eyes of the participators as consumers. These type of insights may help IKEA to improve their solutions about sustainable living. IKEA could miss some experiences and habits of the consumers therefore it would not offer suitable solutions for that particular local market. With these insights of consumers, IKEA can develop its' products range, improve its' home furnishing ideas, or adapt solutions to the local market expectations.

For instance, according to the questionnaire, because of being a common interested sustainable living activity among the local participants, a workshop can be organized about the waste sorting issue. For creating deeper awareness and sensitivity among participants, they can be informed about downstream interventions for recycling processes, and get involved to create some solutions for these processes. By that, IKEA can meet directly the real-life expectations of consumers and motivate them to be more active. From another point of view, this kind of studies may help to increase the level of IKEA brand reliability among consumer societies.

Adding to those examples, IKEA can organize some workshops about topics such as sustainability, sustainable living practices and user experiences about sustainable living processes, etc., with the participation of college students who are studying disciplines like, design, economy, business, engineering, and science. These student workshops can contribute directly to the sustainable living related product design, service design or consumer interaction design processes of IKEA. The perspectives of students from different

disciplines can provide some different point of views and offer alternative solutions for unsustainable processes and problems that are being faced in sustainable living practices. Even the outcomes of these workshops won't be tangible, the contributions and the new mind-sets of the studies during these workshops will be useful for further studies.

Another method for meeting people that IKEA is using even right now is IKEA stores and other IKEA mediums. As being a direct meeting point for the consumers, IKEA stores are also great opportunities to tell about IKEA concept to consumers, beyond being just furniture and accessories shops. People face with various kind of concepts that IKEA has embraced and has built their way of doing business upon in IKEA stores. There are some concepts which are being communicating through the IKEA stores that have some significant features that create the exact IKEA offer, like, being a home furnishing expert, being one of the pioneer corporations which considering the local market expectations, having sensitivity about children, being tightly attached to the Swedish roots, unique sustainability and sustainable living concepts and practices, etc.

IKEA places these concepts all around the store to inform consumers both direct and indirect communication methods. These communications can be applied through two different approaches. Two dimensional and three dimensional mediums of IKEA are being planned to reach consumers to inform them about those kinds of concepts. By that, IKEA aims to improve their brand loyalty, concept awareness, and consumer connection.

As an alternative approach, IKEA can open mini concept stores in the city centres, to demonstrate sustainable living solutions and meet consumers through alternative channels. For instance, IKEA would open a gardening and healthy living concept store in Seferihisar, because of being a significant region for organic agricultural activities, to display healthy living product range and home furnishing knowledge.

According to the results of the fifth question of the questionnaire, there are some potential improvement points to transfer IKEA sustainability concept better to the consumers. IKEA range presentation technics, the applications and displays of the home furnishing solutions, the concept communications are the most effective methods and tools of IKEA for improving these potentials. That's why, by integrating more sustainability and sustainable living practices into IKEA store mediums, consumer addiction and knowledge can be improved.

In addition to these contributions, some campaigns and discounts can be organized among the sustainable living product range according to the related theme of that period of the year. For instance, for supporting local activities around Izmir region, during the time of making pickles and tomato paste, there can be some discounts or offers to the jars with rubber gasket lids which are supported by distinguished and inspiring range presentation and communication that informs about that activity.

With this kind of approach, IKEA can raise its' awareness about environmental sensitivity that refers to the sustainable living practices and inspire and inform people to act more sustainably by applying these kinds of activities at home. There are some other examples that can be applied through the related activities at home, across the whole year. Activities such as home gardening at balconies in spring, outdoor living in summer, food storing for winter in summer and fall, using warmer quilts in winter can be the periodic activity themes of IKEA offer.

There are also some potentials to improve the sustainable living concept, through developing the product range. According to the insights of the participants, the development of the product range will make some more significant differences, rather than the differences that were obtained through home furnishing ideas because of being a more effective method. With the help of the participants' insights as consumer feedbacks, the global and local trends that affect each individual's daily life, new production and design strategies of IKEA, regulations, and standardizations; IKEA can touch the consumers' lives by answering their needs, and expectations.

According to the questionnaire, IKEA can focus on some specific type of new products to answer consumers' expectations. For each four dimensions of IKEA sustainable living concept, there are some product suggestions by participants. For the case of energy saving issue, most of the participants agree on solar power technology. There can be more practical and functional devices which run with solar power in the IKEA product range. Additionally, consumers want to generate their own energy at home by using solar panels and wind turbines. For the case of Izmir, where the sunny day ratio is very high, the solar panels are exact answer for energy generation needs of local people. That's why; IKEA can integrate these energy generation methods more, into product design and development processes, from a more localized perspective.

In the case of water saving dimension, participants want to meet products that help to gather wasted water, like rainwater and water that runs while showering. As improving waste management solutions, there can be more effective solutions to improve waste sorting, oil, and battery storing processes, by new products. Participants are willing to meet products like, sports goods and gadgets, more ergonomic furniture, alternative households like air purifiers, products that help to activate healthier diets for healthy living dimension. For Izmir case, IKEA can consider to develop organic food range in IKEA Food department, to support emerging trends like organic and healthy diets. IKEA can use these insights for defining the target product types that are going to be involved in sustainable product design and development processes.

More than being direct sources for design studies, consumer feedbacks are also beneficial for analysing current product range. By using these feedbacks, IKEA is able to detect the potential improvement points, weaknesses, and mistakes, to develop products. Also, it is beneficial to check out the strengths of the product range to preserve current specifications and even, to improve them. The insights that have been mentioned above can be used in the evaluation process of the current IKEA product range in order to determine if it is supporting sustainable living well or not. For instance, IKEA can re-evaluate the home gardening products and re-design or develop the current product range in the consideration of consumer feedbacks.

While integrating results as consumer feedbacks, also, IKEA can evaluate the interaction among the Democratic Design, Design for Circularity principles and consumers. Through the integration of this data, these design principles of IKEA can be managed from the consumer point of view.

As a result of these kinds of collective studies IKEA can improve the sustainable outcomes of design practices from two perspectives. First one is about reaching outcomes that meet real-life expectations of consumers about sustainable living practices. By answering direct feedback of consumers, IKEA can create a better sustainable living product range which is usable and preferable among consumer society.

The second one is about obtaining the contextual togetherness through designing products sustainably for supporting sustainable living. As one of the crucial elements of these two design concepts of IKEA (Democratic Design and Design for Circularity) sustainability and all

with three pillars of it can be used for reaching more specified products for sustainable living. The sustainable living product range can be designed through the consideration of issues like; production methods, raw material selection, and extraction processes, recyclability, reusability, creating new job opportunities, etc., from the sustainability perspective. In the end, consumers can make more sustainable buying decisions and applications, in their daily lives.

For supporting the solutions of sustainable living products, there can be some complementary services for helping consumers to integrate these products into their daily lives and gain habits to live more sustainably. For accomplishing that, a smartphone application can be designed that can be used by consumers as a library and communication centre. Through this kind of application, consumers can get information about product specifications and features. Additionally, the application can offer some integrated solutions that improve the function of that particular product, by using supportive products or methods. Adding to that, consumers can be informed with the home furnishing ideas of IKEA, which are placed in the application. As a result of that, consumers can get whole knowledge about sustainable living practices, both by related product solutions and integrated home furnishing ideas. IKEA can cooperate with some local organizations to encourage people to live more sustainably. For instance, IKEA can make a project with Bisim, Izmir, to motivate people to use bicycles, in city transportation, with an application that activates these memberships and offers some advantages for IKEA shopping experience.

In addition to these features for creating a sustainable living community, there can be an online forum which all the members can meet and talk to each other. Members can share their own ideas, experiences, questions, and recommendations with each other through this online forum section in this application. This kind of solutions can support sharing community, and help to spread sustainable living movement among the society. Furthermore, all these knowledge that has been gathered from members and IKEA's library can be stored in the application as a database to be reached and get informed by them.

Consequently, IKEA can offer new and alternative solutions and methods to the consumers with the help of consumer experiences and expectations by these type of approaches. IKEA can create more adaptive product range, which can meet consumers and their needs with integrating the feedbacks of consumers into all these types of processes. Also, IKEA can

spread sustainable living concept among the consumer society and raise the awareness about sustainability issues. As a result of those, IKEA can help to reach a more environmentally sensitive consumer culture. By that, IKEA and consumers can create a sustainable living environment that pleases all the stakeholders in it.



4. Conclusion

This study has been constructed to analyse the consumer experiences of sustainable living practices, for evaluating the real life reflections, to detect potential improvement points and offer some solutions. For reaching these aims, the study has been formed through the gathering s from literature and has been structured as two dimensional approaches, which are the methods of product based and knowledge based sustainable living practices.

The structure has been constructed as two main parts. These parts have been structured as a literature review and a case study. The literature review is the key reference section of the research, which is formed by the knowledge about sustainable living and related concepts. Sustainability, sustainable product design, and development processes, the consumer experiences about sustainable living practices has been integrated into the literature review topics for creating relations and obtaining the context as a whole concept.

As being a selected corporation for the case study section of the research, the literature on the IKEA has also been integrated to the literature research processes through the comparable knowledge that is in harmony with the general literature topics to create a database for evaluating the outcomes of the research. With being a collective database, the literature review has been structured for focusing on the consumers' interaction with knowledge steered and product steered sustainable living practices through the knowledge from literature and IKEA documentations.

In the light of this knowledge, the case study has been designed for reaching the practical reflections of the concepts that have been mentioned in the literature review. A questionnaire has been structured in the consideration of consumer perceptions and experiences about sustainability and sustainable living practices to gather data about these practical reflections. The questionnaire has been applied to randomly selected participants in the specific local market area. It has been structured in some parts that aimed to reach participants' insights about various topics such as IKEA's interaction with the environment, personal environmental impacts, IKEA's sustainable living solutions – both from the

perspective of knowledge based and product based, etc. The findings have been reached based on the answers of the participants. Through the answers of the participants there are some important highlights:

- 1- There are some positive impressions, however insufficient knowledge among the participants, about IKEA's interaction with the environment by the renewable energy, natural resource selection, and reduction policies in all processes of its organizations.
- 2- The most of the participants believe that they don't have any negative impact on the environment. However, the minor percentage of the participants that have some belief about their negative impact on the environment have also some will to fix their negative impact up. Also, the larger part of the participants believes that they can get help from IKEA's solutions for reducing their negative impact on the environment.
- 3- There are some various approaches from participants for different dimensions in the following parts of the questionnaire that focus on IKEA's four sustainable living dimensions. The most of the participants are aware of the energy saving, waste managing, and healthy life supporter products and knowledge solutions of IKEA. On the contrary, water saving solutions don't have a sufficient level of awareness among the participants as being compared with the other dimensions.
- 4- Additionally, it has been reached that participants perceive these dimensions from variable perspectives. The most of the participants perceive the water and energy saving practices of IKEA through the knowledge based solutions, additionally they perceive waste management and healthy living practices by the support of product based solutions. Even if their directions differ among four dimensions, participants are willing to apply these solutions in their daily lives to improve sustainable living practices and reduce their environmental impact.

By considering these results, an analysis study has been conducted with comparing and considering the answers from different parts of the questionnaire to reach detailed outcomes. This analysis has been made from the perspective of the consumers with the consideration of IKEA's sustainable living concept. By that, it is aimed to reach outcomes that fit in both the real life expectations of consumer society and IKEA's approach to the sustainable living concept. Through this analysis, the open-ended questions have been re-

evaluated to reach direct feedback as a reference data to improve sustainable living knowledge and the product range of the IKEA.

As a complementary study, some recommendations have been made for further studies, as possible solutions to improve sustainable living practices for all stakeholders in these processes. These recommendations have been made in consideration of the IKEA case, however, there are some common solutions for unattached studies. For answering the needs of the all stakeholders and the non-living presences in the system, there are some alternative solutions offered by various perspectives, such as educational, practical, co-operational, governmental, etc. These recommendations have been offered as references, mind-sets and creative directions for further studies to improve sustainable living practices.

This study is a reference study to analyse insights and information about the evaluation of the consumer – sustainable living concept interaction, in currency, to inspire future studies. Thus, IKEA's perspective has been lead to outline the framework of the research to define a direction with the case corporation. As a conclusion, the data about the real life experiences, needs, and expectations of consumers and collective knowledge of literature about sustainable living practices have been evaluated to strategize further studies, by the help of perspectives of knowledge based and product based solutions. This data has been integrated as a reference knowledge for improving these processes for creating more environmentally considered and more sustainable systems through the case of IKEA.

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APPENDIX

Questionnaire

IKEA and Environmentally Sensitive Life	
Questions	Answer Choices
1. Age	15-24
	25-34
	35-49
	50-64
	65+
2. Gender	Male
	Female
3. Educational Status	Graduate - Postgraduate Degree
	Undergraduate Degree
	High School
	Primary School
4. Do you think IKEA is an environmentally considered brand?	Yes
	No
	Not Sure
5. Do the environmental impacts of IKEA products has been explained clearly?	Yes
	No
	Don't Know
6. Do you think that, IKEA is using the natural and recyclable resources in production processes?	Yes
	No
	Don't Know
7. Do you think that IKEA is ambitious and sensitive about using renewable alternative energy resources?	Yes
	No
	Don't Know
8. Do you think that, IKEA is a sensitive brand about issues like energy and water reduction, waste management, etc.?	Yes
	No
	Don't Know

IKEA and Environmentally Sensitive Life (cont.)	
Questions	Answer Choices
9. Do you think that you are giving any harm to the environment in your daily life?	Yes
	No
	Not Sure
10. If your answer is yes, do you have any will to reduce your environmental impact in your daily life?	Yes
	No
11. If you cannot implement your will for reducing your environmental impact, what are the limitations?	Not having enough knowledge for how to reduce your impact
	Not having enough products and systems for implementation
	Deficiency of governmental policies
	Not being supported from your social connections
	To think, it will be harmful to your budget
	There are no limitations, I do.
	Other (Please define)
12. Do you think that you can contribute to the environment positively by using IKEA product range and ideas in your daily life?	Yes
	No
	Don't Know
13. Do you know that you can save energy highly by using IKEA's LED lightings, smart lighting systems and dimmer controlled energy solutions?	Yes
	No
14. Do you get ideas about reducing energy at your home from the lighting products and solutions that are being presented in IKEA stores? (E.g. Reducing energy consumption by using more sun light).	Yes
	No
15. Do you have any will to implement the energy saving products and ideas in your own daily life that you have seen in IKEA stores?	Yes
	No
16. What are the energy saving and energy production solutions that you implement or willing to implement in your daily life?	Open Ended
17. Do you know that you can save water with IKEA's kitchen and bathroom taps?	Yes
	No
18. Do you have any will to wash your clothes less and save water by airing them?	Yes
	No

IKEA and Environmentally Sensitive Life (cont.)	
Questions	Answer Choices
19. Do you get ideas about reducing water use at your home with the products and solutions that is being presented in IKEA stores? (E.g. Watering your plants by collecting rain water).	Yes
	No
20. Do you have any will to implement the water saving products and ideas in your own daily life that you have seen in IKEA stores?	Yes
	No
21. What are the water saving solutions that you implement or willing to implement in your daily life?	Open Ended
22. Do you know that you can create organised solutions for recycling by sorting your packaging wastes with IKEA waste sorting containers?	Yes
	No
23. Do you know that you can store your foods for more long time in a healthy condition with IKEA food containers?	Yes
	No
24. Do you know you can extend your furniture's lifetime by using IKEA maintenance products?	Yes
	No
25. Do you get ideas about managing your wastes and recycling at your home with the products and solutions that is being presented in IKEA stores? (E.g. Creating fertilizer for your plants by composting your organic wastes).	Yes
	No
26. Do you have any will to implement the waste organizing and reducing products and ideas in your own daily life that you have seen in IKEA stores?	Yes
	No
27. What are the waste management solutions that you implement or willing to implement in your daily life?	Open Ended
28. Does IKEA provide solutions to help you create more active and healthier life at home?	Yes
	No
29. Do you know that you can prepare healthier foods by using IKEA healthy cooking products (e.g. steam cooking products etc.)?	Yes
	No
30. Do you get ideas about planting and gardening at your home with the products and solutions that is being presented in IKEA stores? (E.g. Planting your own food in your kitchen or balcony).	Yes
	No

IKEA and Environmentally Sensitive Life (cont.)	
Questions	Answer Choices
31. Do you have any will to implement healthy life supporting products and ideas in your own daily life that you have seen in IKEA stores?	Yes
	No
32. What are the active and healthy life solutions that you implement or willing to implement in your daily life? (E.g. Air cleaners, sports equipment, more ergonomic furniture, socializing products etc.).	Open Ended

