Investigating and Categorizing the Concept of Flexibility in Mobile Interior Spaces: The Case Study of Yacht Interior Spaces

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ABSTRACT

The thesis examined the two main concepts that are flexibility and mobility. These concepts might exist in various areas of the life. Hence, this survey set out to investigate the flexible design solutions in interior design of mobile spaces which are yacht spaces.

The study examined certain research objectives and try to discover whetеher flexibility is a proper solution to the limited mobile spaces in the case of being non-contextual; kinds of flexible solutions in interior yacht spaces; effects, significances and roles of flexibility as a result of the integration into interior yacht spaces; functional solutions that were achieved by the flexible systems; besides the differences and similarities of flexible solutions between various yachts.

Literature review was the technique to construct theoretical background within the context of qualitative research method. On the other hand, field study was the technique within the context of quantitative research method. There were 30 cases in the field study that has chosen from ‘‘32. International Istanbul Boat Show-Marintürk Istanbul City Port’’ in Pendik/ Istanbul.

The survey was finalized that, interior yacht spaces have numerous flexible solutions. These approaches respectively were divided into three headings according to the categorization of flexibility as modular systems, movable systems and foldable systems. In addition, all kinds of flexibility approaches have different categorie in their own.

The study revealed that, there are 23 type of flexible solutions within 27 type in interior yacht spaces. The flexible solutions affect interior of yachts at 10 beneficial points. Furthermore, the flexible approaches are effective on 8 functions in interior yacht space. Besides, study also concluded that smaller yachts have more flexible solution then the bigger yachts. The results shows that in yacht interiors there are foldable systems firstly, movable systems secondly and modular systems lesser compared to the other two systems. The flexible approaches are effective on various functions such as sitting, eating – drinking, sleeping, storage, watching TV, sunbathing and bathing.

Keywords: Interior Design / Flexible Design /Flexibility/ Mobile Space / Interior Yacht Space

ÖZ

Bu tez esneklik ve hareketlilik olmak üzere iki temel kavram çerçevesinde kurgulanmıştır. Bu iki kavram aynı zamanda yaşamın birçok alanında da kullanılmaktadır. Bu araştırma esnek çözümleri mobil mekânlarda; yat iç mekânlarını örneklem alarak inceler.

Tez, esneklik kavramının kısıtlı mobil mekanlar için uygun bir çözüm olup olmadığını; yat iç mekanlarında esnek çözümlerin çeşitlerini; esnek çözümlerin yat iç mekanlarındaki etkilerini, önemi ve rolünü; esnek çözümlerin yat iç mekanlarındaki gerekliliğini; esnek sistemler sayesinde elde edilen esnek çözümleri; ayrıca farklı boyutlardaki yat iç mekanlarında ki esnek çözümlerin benzerlik ve farklılıklarını ortaya çıkarmaya çalışarak inceler.

Nitel araştırma yöntemi kapsamında, teorik altyapıyı oluşturmak için literatür taraması tekniği kullanılmıştır. Öte yandan, alan araştırması tekniği nicel araştırma yöntemi kapsamında ele alınmıştır. Araştırma için 30 adet yat iç mekânı Pendik/ İstanbul da gerçekleşen ‘‘32. Uluslararası İstanbul Boat Show - Marintürk Istanbul City Port’’ fuarında sergilenen yatlar arasından belirlenmiştir.

Araştırma, yat iç mekânlarında birçok farklı esnek çözümün tespit edilmesi ile sonuçlanmıştır. Araştırma, esneklik kavramına özgün bir sınıflandırma önerir ve alan çalışması bu sınıflandırma çerçevesinde yürütülür. Sınıflandırma modüler sistemler, hareketli (mobil) sistemler ve katlanabilen sistemler olarak 3 başlık altında kurgulanmıştır. Ayrıca, tüm esnek yaklaşım çeşitleri kendi içlerinde farklı kategoriler barındırmaktadır.

Araştırma sonucunda, yat iç mekanlarında, sınıflandırmada önerilen 27 çeşit esnek çözümden 23'ü tespit edilmiştir. Esnek çözümler yat iç mekanlarında 10 farklı noktada ve 8 işlev üzerinde etkili olmuştur. Çalışma aynı zamanda küçük yatların büyük yatlardan daha fazla esnek çözümler içermesiyle sonuçlanmıştır. Sonuçlara göre, yat iç mekanlarında en çok katlanabilen sistemler, ikinci olarak hareket edebilen sistemler ve en az ise modüler sistemlerin kullanıldığı tespit edilmiştir. Esnek çözümler oturma, sırasıyla yeme – içme, uyuma, depolama, TV izleme, güneşlenme ve banyo yapma gibi bir takım işlevlere çözüm getirmektedir..

Anahtar Kelimeler: İç Mekân Tasarımı / Esnek Tasarım / Esneklik / Mobil Mekân / Yat İç Mekânı

TO MY FAMILY,

FOR THEIR ENDLESS SUPPORTS

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Lastly, I would like to dedicate this thesis to my family members, my father Ümit AKYALÇIN, my mother Nalan AKYALÇIN and my fiance Furkan SEZEN who encouraged and supported me through my education. I hope that dedicating this thesis to them…

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Chapter 1

INTRODUCTION

1.1 Subject Matter and Problem Statement

Human beings have to fulfil their necessity to survive and sustain their lives. Some of the acts such as breathing, eating, shelter and dressing up are obligatory needs of the human beings. Famous Psychology Professor Abraham Maslow was indicated the necessities in a pyramid that he was given the name ‘‘Maslow’s Hierarchy of Needs’’. According to this pyramid, air, food, water, shelter, clothing and sleep appear as the primary physiologic necessities. Safety, social, esteem and self-fulfillment pursue to that with respect to significant line (Cherry, 2011).

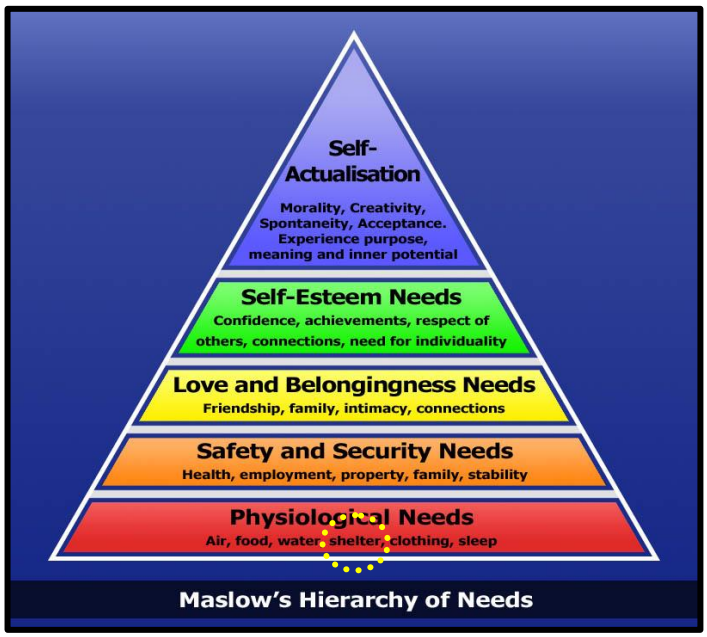


Figure 1: ‘‘Maslow’s Hierarchy of Needs’’ (Simcrest, 2013)

In ‘‘Maslow’s Hierarchy of Needs’’ pyramid, it is obviously seen that, shelter is one of the basic needs of the human being. Humans need a space to resume their lives, to feel safe and secure, to protect and to create an order for themselves. Hence, humans perpetually were being in the quest of shelter since they exist. However, as time proceeds and when the wishes changes, humans needs to alter the space. In that matter, the flexibility and mobility concepts were emerging. Although, the flexibility and mobility concept seen as innovative concepts, they heavily rely on the past. Because, humans needed to change somethings when the time, wishes and conditions are being changed. Due to this discourse, the flexibility and mobility concepts are becoming an irrevocable part of humans life.

Design flexibility is one of the required concepts, which affect both the usability of space and the human lives in limited interior spaces. Design flexibility appears with the variation and transformation of the design elements. The variation and transformation of design can facilitate life and offer more alternatives to the users. Design elements might turn into more than one situation to raise the space quality inrelation to size, form, function, structure, design or modularity so far. Flexibility concept can be implemented everywhere. However, it is an essential solution key especially for the limited interior spaces. Small offices, apartments, capsule houses in China and small houses in Japan can be given as examples of limited spaces. Besides, mobile spaces could be stated as the other remarkable example of limited spaces. The mobile spaces such as caravan, yacht or aircraft are the most significant examples of the mobile spaces.

Figure 2: An Example for capsule house in China (Nytimes, 2010)

When mobile spaces compared with a permanent settlement, it could be seen that a permanent house or a land can have possibility to expand or extend. However, a mobile space has two terms of limitation in this point of view, i) Mobile space cannot have any adjunct to its own structure since it digress its existing volume after it lefts the lodging area that is to say when it cuts the link with the current area; ii) Mobile spaces are limited areas due to its own tight space in order to ease the mobility. Thus, it could be said that the two terms of limitation could be summed up as size limitation and non-contextual character. Accordingly, mobile space could not find answer to essential necessity since they are not permanent. Therefore, design of mobile spaces needs a special emphasis that can answer variation, transformation and different types of functions or needs since it is non-contextual and tight. Therefore, during the mobile space interior design process, everything must be thought in detail, with a special design approach which might find solutions to different types of needs in different situations that could be occurred in the future.

1.2 Aim of the Study, Limitations and Research Questions

This study therefore aims to observe and analyse the flexibility concept in the limitedly mobile interior spaces as a special design approach whereas the yacht interior spaces determined as the case study area. The restricted usage area and non-contextual character of the yachts shows parallel problems with the problems stated above and this study intent to discover whether flexibility is a proper solution to the limited mobile spaces in the case of being non-contextual and understand what kind of flexible solutions in interior yacht spaces exist. Besides, it also aims to understand the effects, significances and roles of flexibility as a result of the integration into interior yacht spaces; to discover functional solutions that were achieved by the flexible systems and to discover differences and similarities of flexible solutions between various yachts.

The other aim of the study is to categorize the concept of flexibility since there is not available categorization related with this concept in the literature.

Thesis is limited to the search of concept of flexibility and its role in the field of interior design. Besides, it is also limited to a case study research that will be conducted in the yacht interiors. The field study which is the other limitation of this study was located in ‘‘32. International Istanbul Boat Show-Marintürk Istanbul City Port’’ in Pendik / Istanbul that was held on 21September 2013 - 29 September 2013.

This study is limited with yatchs interiors since there are many different types of mobile spaces, that each of them is need to be investigated seperately. Moreover, the thesis is limited with only 30 yachts that the sizes range between 8.80m – 40.40m.

This study mainly purpose to find answer of the research question below;

“Is flexibility a proper solution to the limited mobile spaces in the case of being non-contextual?” Accordingly, questions below will help to answer the main research question:

- What kind of flexible solutions are there in interior yacht spaces?
- What are the effects, significances and roles of flexibility on the integration of interior yacht spaces?
- What are the functional solutions that are achieved by the flexible systems?
- What are the differences and similarities of flexible solutions between different yatchs?

1.3 Research Methodology

Quantitative and qualitative methods were used as the main research methods. Literature review for the theoretical background was investigated with the qualitative method. The concepts of flexibility an mobility overviewed under the section of literature review. Besides, quantitative method included the field study and analysis/ evaluation of the cases. Evaluation of the cases individually were investigated by using catalogues and photos through inventory sheets that were developed in line with the literature overview. It included technical informations, layouts of the cases (yachts), photos and flexibility issues for the analysis of the cases (yachts). At the end, the results were obtained.

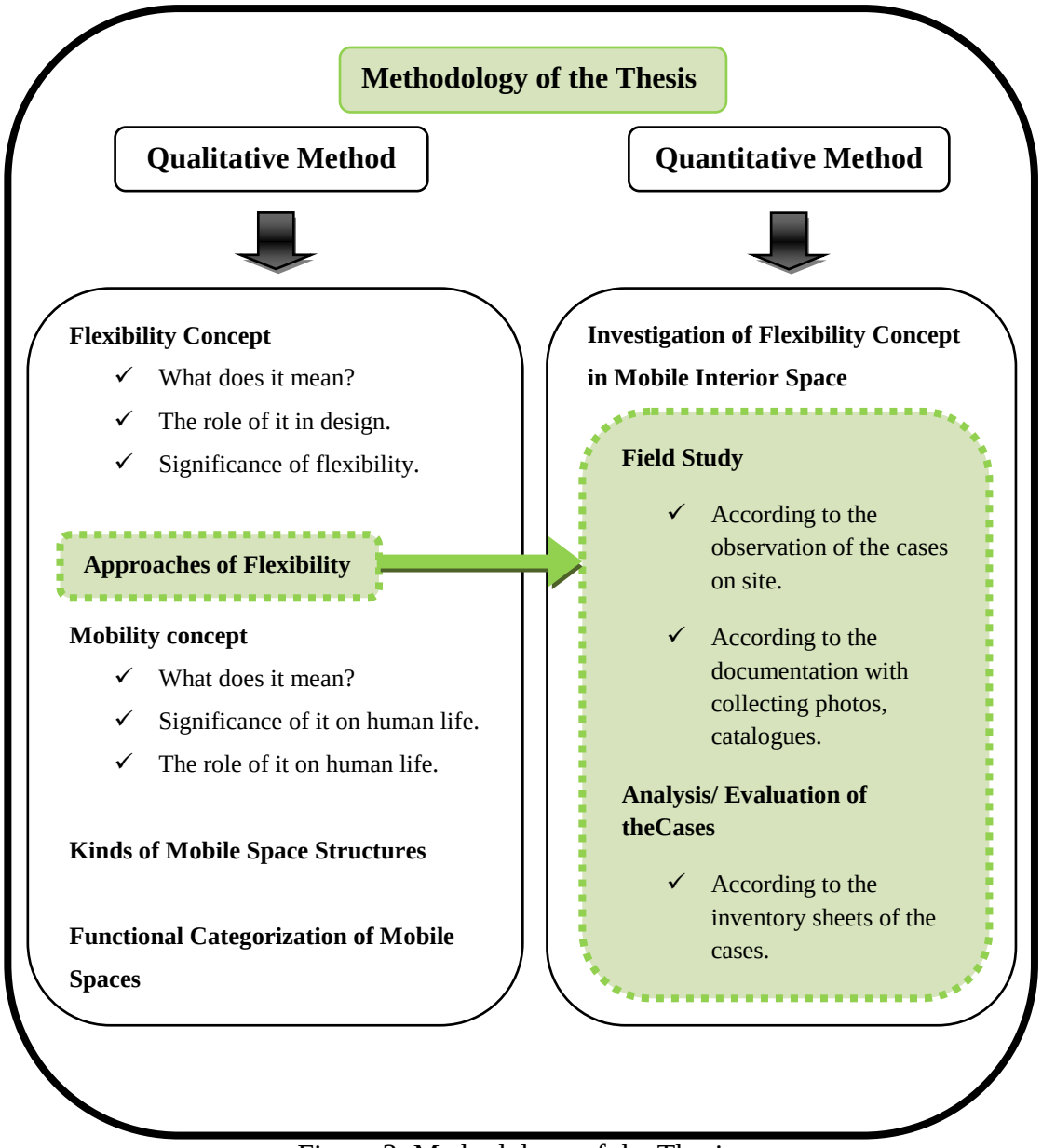


Figure 3: Methodology of the Thesis

1.4 Structure of the Thesis

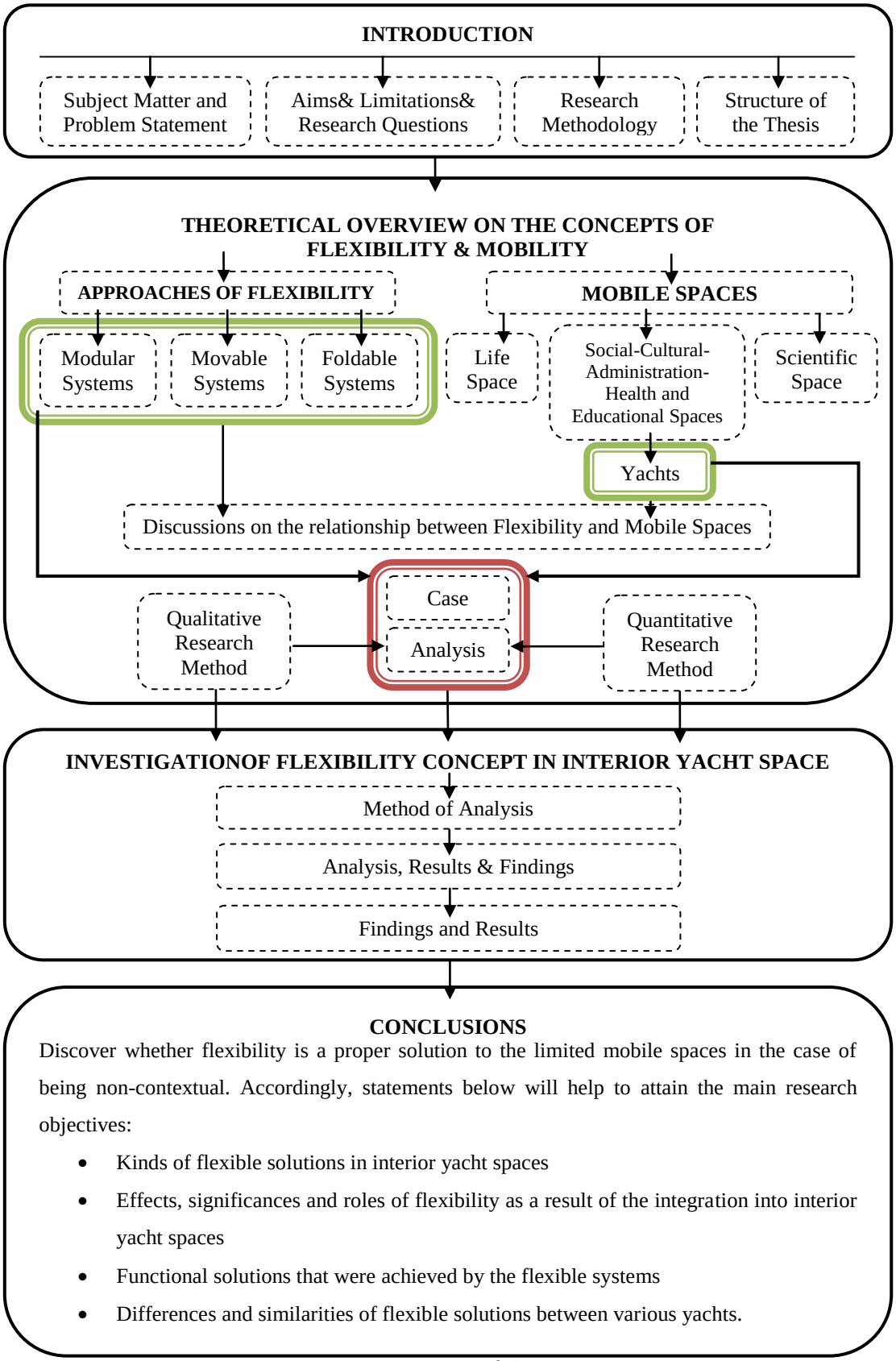


Figure 4: Structure of the Thesis

Chapter 2

THEORETICAL OVERVIEW ON THE CONCEPTS OF FLEXIBILITY &MOBILITY

The thesis was designed under two main concepts. These are flexibility and mobility. Flexibility concept might called in several vocables such as adaptability, changeability, adjustability, limberness, etc…Besides, the second concept of the study that is mobility might also referred in varied words like movability, portability, movableness, etc… Flexibility and mobility existed in multiple branches. However, in this thesis, flexibility and mobility are discoursed within the field of interior design.

2.1 Flexibility

This chapter was investigated and analysed some specific aspects related with the thesis topic such as definition of the flexibility concept, flexibility concept in interior design / architecture, significance of flexibility in interior design / architecture, approaches of flexibility.

2.1.1 Definition of the Flexibility Concept

First of all, ‘flexibility’ concept was pullulated from the word ‘flexible’. Flexible means: “Capable of bending easily without breaking’’ (University, 2014). In other words, flexible means ‘‘Able to be easily modified to respond to altered circumstances’’ or ‘‘Ready and able to change so as to adapt to different circumstances’’ (University, 2014).The concept of flexible means: “is to have the

original shape after wrap changes which has stretched, shrink and bended under the influence of an external force" (Uzun, 2006).

Oxford dictionary define the flexibility concept as ‘‘the quality of bending easily without breaking’’ (University, 2014). That is to say, flexibility means ‘‘the ability to be easily modified’’ or ‘‘Willingness to change or compromise’’ (University, 2014). According to this definition, flexibility is identified as the feature, which returns the first position due to heaving the load over an object (Uzun, 2006). The meaning of flexibility refers to the growth, development and alteration in every aspect (Arslan, 2006). Oxman described the adaptability of variable circumstances as flexibility – transition and growing up mentioned as types of flexibility (Yürekli, 1983).

Various subjects might be associated with flexibility concept such as business, computer engineering, medicine, design, etc... It is a wide concept that is applicable in a diversified field of study. There are also various areas of use in the field of architecture. However, in this chapter, the concept of flexibility is explored with a special emphasis put on interior design / architecture.

2.1.2 Flexibility Concept in Interior Design / Architecture

Throughout the architectural design process of a building, there are certain requirements that should be taken into consideration as such: activities, users' needs, scale and lighting besides various relationships between different interior spaces (Uzun, 2006). All of these criteria are parallel with the concept of flexibility. Accordingly, these factors must be adaptable and changeable with considering the needs.

Çetin (1999, p: 55) also cites Akıncıtürk (1985) described that, if both adaptability or changeability are examined as a context, they enter into the flexibility coverage. According to this, flexibility in general denotation, is the name given to a ‘‘property’’ of a solution that fulfils all the changing needs. On the other hand, in the adaptability concept, it is not certain if there is a change or not (Çetin, 1999).In the field of interior design during the design of interior space, flexibility may be defined as a concord ability that might satisfy the users developing and variable circumstance without changing the existing system of the structure plan (Altınok, 2007).

‘‘Some architectural engineers apply several means to reach flexibility in the designed space, which was used in the whole composite, detail levels and relationship between them depending on flexible structure that shapes space and the possibilities of changing it as needing to, with the furniture flexibilities and possibilities of its arrangement and transforming an additional to use some forms that allow free formations’’ (Abdulpader; Sabah; Abdullah, 2014).

According to Aghil Emamgholi, ‘‘the objective of flexibility in the architecture is to provide spaces with simply changing structures respect to changes in required performance and application. Though architectural spaces could be identified and restricted through physical elements such as floor, ceiling, and walls and so on, it should be designed in a way that changes flexibly’’ (Emamgholi, 2011).

2.1.3 Significance of Flexibility in Interior Design / Architecture

One of the intended needs in human life is flexibility. Methods of flexibility can provide a lot of benefit in terms of usability of a space. Some architectural engineers say that ‘‘the flexibility in architectural design can solve the area problems and multi-use plan. It could provide many possibilities to change the shape and size of internal space in addition to the economic and social impacts on the housing system’’ (Abdulpader; Sabah; Abdullah, 2014).

The flexibility methods have considerable role in order to add more function. It prevent lost of space and find answer to instant wishes with different solutions. Moreover, flexibility take precaution to arose difficulty or needs in the future and service more than existing person when needed. In this manner, any of the intended detail could be added to space without doing any supplement to available space or without appeal to any structural changing solutions in large scale. These types of solutions, out of providing easiness to life, create several solutions especially for the types of small spaces. ‘‘Flexibility also helps finding new architectural solutions to get the maximum benefits and functional use of small areas’’ (Abdulpader; Sabah; Abdullah, 2014).

There are a lot of small space types that were designed by using methods of flexibility in the World. Some of the spaces were looking so narrow, small and overcast at the first look. Moreover, these spaces could be functional, practical and comfortable with using the flexibility methods as if it is a large space.

2.1.4 Approaches of Flexibility

The concept of flexibility occurs as structural flexibility and design flexibility in architecture. The methods of flexibility split up into three categories such as modular systems, movable systems and foldable systems in the interior design (Farjami, 2014).

2.1.4.1 Modular Systems

One of the approaches of the flexibility is modular systems. Modular systems are types of a flexible design that comprise more than one unit. These units may be same or different from each other. Accordingly, flexible composition of the units could be achieved through adding or subtracting methods in order to create a new variation. Moreover, number, size and shape are decisive factors in there. Variations of the system can be adjusted by use of the factors. For instance, these systems can be a desk, a sitting group or a lighting element.

Çetin (1999, p: 55) also cites Akıncıtürk (1985) who stated that the meaning of flexibility in structures, through adding or subtracting the elements, might be satisfied the variation without destroying the unity. In this solution, structure is able to fulfil feature of the unfunded requirements, making any change from itself.

Modular systems and movable systems might resemble to each other. However, they have distinctive features. Modular systems can be fragmentizing in itself and enter in a different form. In this manner, they might be serving to more function; more people or they might be serving to same function in a different form. In that matter, being easier to use is the other significant aspect. In other words, modular systems can be easier to distribute and assemble. Thus, they might be affix in another place or relocate to another space.

Tribeca Shelving System might be easily change related with user needs and pleasure. There is only one function but different forms might be acquired with the cubes (Fig: 5).

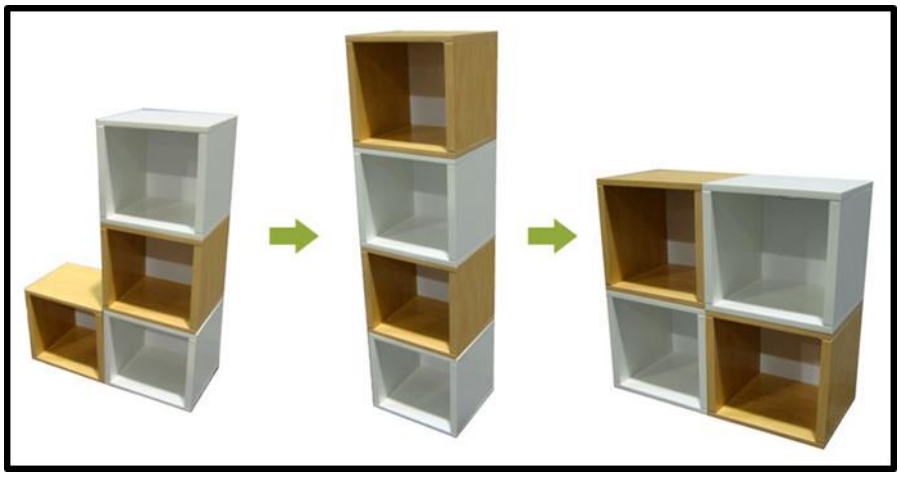


Figure 5: Tribeca Shelving System (Jimmy, 2009)

Modular Furniture Design is a multifunctional design that users might design several formats using these modules such as a sofa, a table, a coffee table or a bookshelf. There are number of same module, which are made from wood that is used for different function in different forms. When the module is used single it might be a coffee table. On the other hand, if the modules are used more than one it can be transformed into a bookcase (Fig: 6).

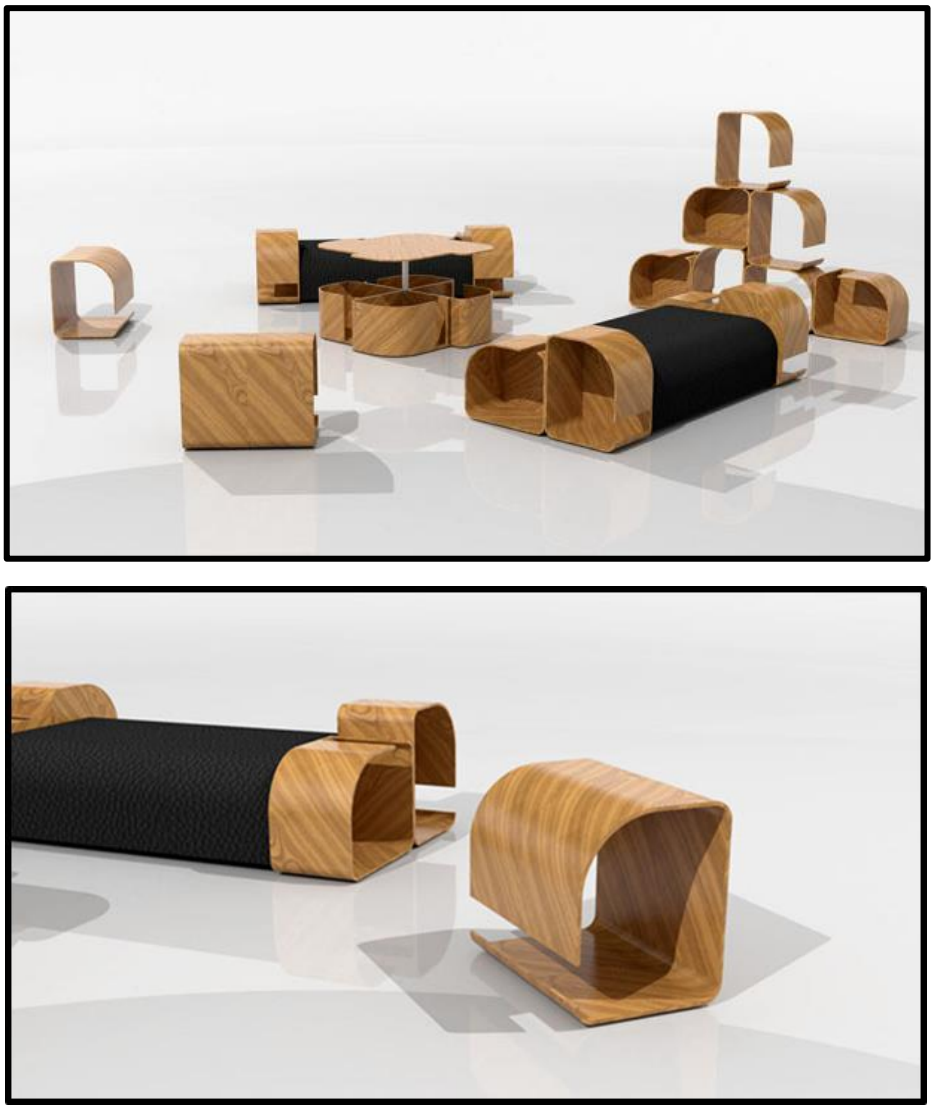


Figure 6: Modular Furniture Design (Griz, 2014)

Modular Sofa System (Fig: 7) is formed from some different dimensional cubes and two dividing elements. Cubes can be used as sitting unit together in different forms related to user wishes. Furthermore, the movable dividing elements supply privacy for them. At the same time, users repose to there if they need.

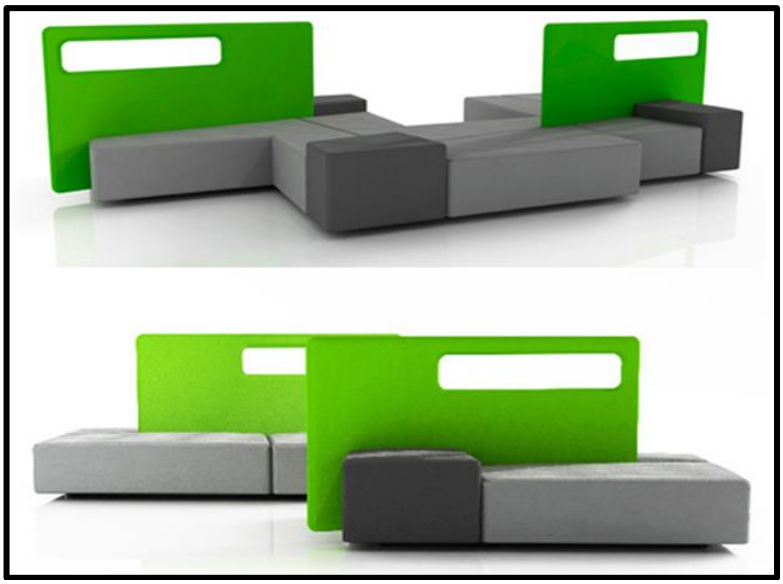


Figure 7: Modular Sofa System Adapts via Movable Space Dividers (Dornob, 2014)

The modular bedroom is designed for children. Thereby, children might change furniture's' location and they might be used in a different form (Fig: 8).

Figure 8: Innovative Children's Bedroom Furniture Options Modular Designs (Nallau Interior Design, 2013)

Modular Slot Sofa is a dynamic module of furniture. The sofa system reveals new value and offers functionality by changing the sofa, coffee table, and seat. It uses the structural gaps found between the pillows of the sofa by turning them into tracks for

which the table can slide in and out. When splined, the table behave such as a console. When liberated, it behaves as a coffee table. The confidently available sofa pillows always find and hold their optimal location either atop the table for a seat or nether for a coffee table (Fig: 9) (Design Rulz, 2012).

Figure 9: Modular Slot Sofa – A Dynamic Piece of Furniture Perfect for Small Spaces (Design Rulz, 2012)

Modular interior design is occurred from modular furnitures and movable dividing elements. The using is depending on to the users. While it looks like a box, it can be transformed to four living area such as saloon, bedroom, office and dining room (Fig: 10).

Figure 10: Modular Interior Designs with Space-Saving Partitions (Dornob, 2014)

2.1.4.2 Movable Systems

Another approach of flexibility is movable systems. Movable systems occurred with one or more than one unit. These units also may be same or different from each other. Movable systems are generated simply changes with the factors of number, size and shape. It may be identified and restricted the space by using physical elements. Movable systems can change their location. They can work vertical or horizontal. These systems have ability to move up – down, right – left or on its own axis. Movable systems can be deactivated or activated according to user needs. For instance, these systems can be furniture, a dividing element or a lighting system.

Movable systems also have characteristic features to be distinguished from modular systems. Movable systems cannot be easier distribute and assemble. There are locomotive structures in these kinds of systems. Thus, the systems might be using flexibly without damage to structure. As David Epstein emphasized that ‘‘Movable – make sure the furniture is lightweight so that it can easily be moved. For large pieces, consider furniture with wheels’’ (Epstein, 2014).

There is an ultramodern movable kitchen design which is belonging to Motorola and Electrolux ICON brands. It provides space saving. The kitchen design is consisted from six parts. It can be opened horizontal in the same axis and all the functions could be used by this way (Fig: 11).

Figure 11: Ultramodern - Movable Kitchen Design
(Architecture and Home Design, 2013)

Moveable sliding walls are an excellent way of organising a space but at the same time conservation liberty and flexibility (Fig: 12) (Ei2 Interiors, 2014).

Figure 12: Movable Walls (Ei2 Interiors, 2014)

Movable Partition is a dividing element and in the same time a shelf system. It divides the area into two parts as a meditation area and a study area. The partition is movingverticalon the rail system which is associated with ceiling (Fig: 13).

Figure 13: Original Ideas Movable Partition (Hit - Decor, 2010)

‘‘Walls and partitions are a great solution for the design of living and working. Life situations require in many cases a great deal of creativity in the design and application flexibility’’ (Ofdesign, 2013). Movable Partition System harbour two function inside such as TV unit and library. In the same time, it is a dividing element which creates two different spaces as a bedroom and sitting area. It has a pivotable system inside and provides watching TV in both bedroom and sitting area (Fig: 14).

Figure 14: Movable Partition System (Ofdesign, 2013)

Flexible Wood Seats occurred from a lot of pieces. The trick is making it more flexible and adaptable hence it can alter based on requirements over time. This is a simple wooden outdoor bench. On the other hand, it could be a desk or multi-person work table (Fig: 15)(Dornob, 2014).

Figure 15: Turning Tables _ Flexible Wood Seats Flip into Work Surfaces (Dornob, 2014)

Japanese designer Yuko Shibata designed separate working and living areas in this Tokyo apartment by loading two mobile walls. The project features one division that slides out over the dining table to create a meeting space on one way and library on the other. Another bookcase pivots round to reveal a bedroom at the end of the day (Fig: 16)(Etherington, 2010).

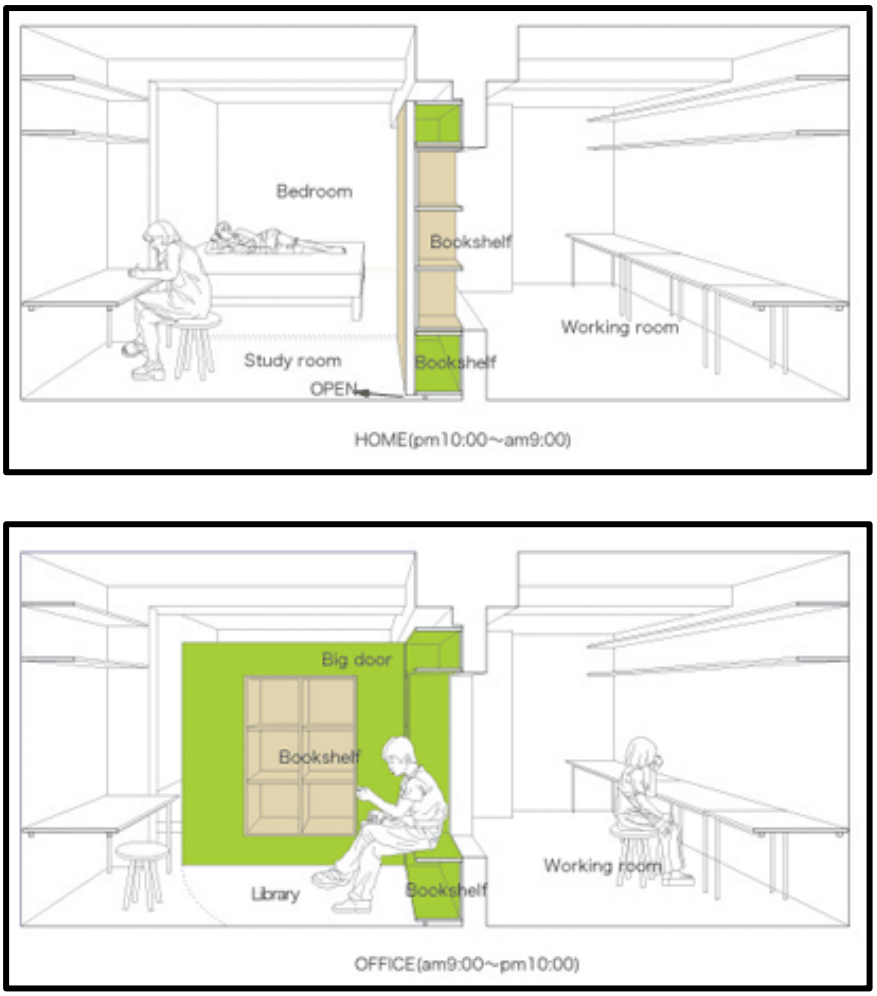


Figure 16: Tokyo apartment by installing two mobile walls (Etherington, 2010)

2.1.4.3 Foldable Systems

Foldable systems are the other approach of flexibility. These systems are comprised from only one unit. To convert a new variation or a form, arrangement and transforming methods may be used. In other words, the systems may grow up or emerged with opening, may shrinkor disappeared with closing. David Epstein mentions that ‘‘Stackable – There are times when you might want to remove the furniture completely from the space. If this is the case, make sure the furniture is stackable as well as movable’’ (Epstein, 2014). Moreover, Aghil Emamgholi says that ‘‘everything in the nature experiences change, evolution, and movement. Movement also includes expansion and shrinkage of body forms. Expanding

structures or simply opening- closing structures same as other artefact manufactured by human being are inspired by the nature'' (Emamgholi, 2011).For instance, these systems can be a desk, a sitting group, a chair, a bed, a dividing element.

Amelia Roblin clarified the Goci Foldable Kitchen as ''Small studio apartments and shoebox bachelor pads might be able to use a little something like this collapsible culinary closet. Some older flats may have you sacrificing space for a less than functional kitchen, making this adaptable product quite the opportunity. The layout of these facilities is completely modular, allowing one the possibility of a larger system with more components, or a smaller one to keep things simple and compact'' (Fig: 17) (Roblin, 2011).

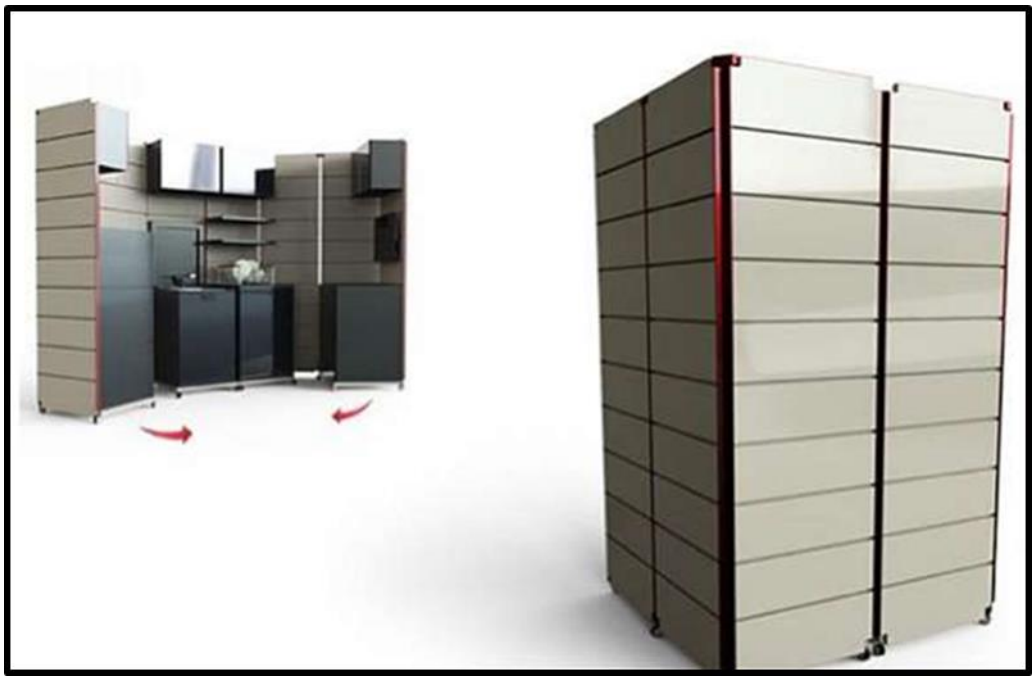


Figure 17: The Goci Foldable Kitchen Acts as a Culinary Closet (Roblin, 2011)

The Kenchikukaguis foldable mobile furniture set that involves of a guest room, a kitchen and a work space. Each part can be stowed away into a tidy box on wheels and easily stored. The work space includes a desk, a shelf, storage space, a chair, an outlet tap, and LED light. In addition, the guest room includes a collapsible bed, a small table and lighting fixture. Besides, kitchen is comprised of a sink, a stowaway table, drawers, a recipe holder, and an induction cooktop (Fig: 18) (Jebiga, 2014).

Figure 18: Kenchikukagu Foldable Rooms by architect Toshihiko Suzuki (Jebiga, 2014)

The wooden design is a multi-functional product for gardens. It can be used in two different forms: Picnic table can be folded in order to create a garden bench (Fig: 19).

Figure 19: Foldable Picnic Table Turns into a Garden Bench (Rachel, 2013)

Kid's Room is a kind of suitable example for flexibility concept. The child beds can be folded and the cabinet might be closed. Thereby, remained area might be evaluated for other purposes (Fig: 20).

Figure 20: Cool Flexible Space Saving Interior Design for Kid's Room (Gromova, 2014)

These kinds of systems might be used for both indoor and outdoor. It might provide to divide a space for indoor, create an opening for outdoor. The panels are moved folding horizontal by force of a rail system on ground and ceiling (Fig: 21).

Figure 21: Folding and sliding systems: maximum flexibility (Premmier, 2014).

The Flux Chair is invented by Douwe Jacobs, who is a graduation student in Industrial Design Engineering, as a graduation project. The material is plastic by means of this it can be folded easily and can be used as a chair (Fig: 22).

Figure 22: The Flux Chair by Flux (Dave, 2009)

Accordingly, below scheme summarizes the main characteristics of three main approaches of flexibility: modular system, moveable system and foldable system.

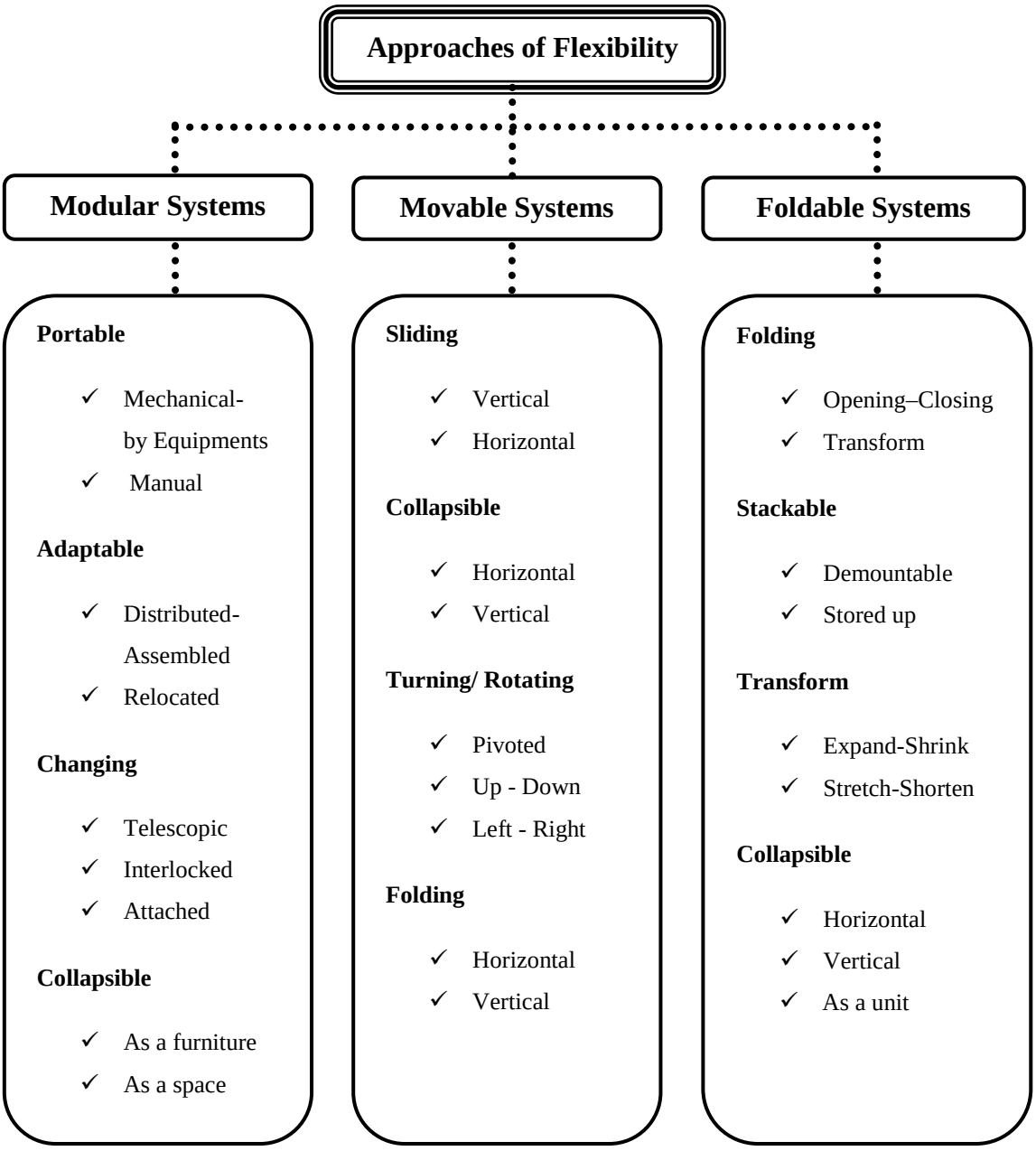


Figure 23: Approaches of Flexibility (prepared by author)

2.2 Mobility

This chapter was investigated and analysed one of the specific aspects related with the thesis topic which are definition of the mobility concept, significance of mobility concept on human life, mobility concept in architecture, methods of mobile spaces and types of mobile spaces.

2.2.1 Definition of the Mobility Concept

The second main concept of this thesis is mobility. First of all, 'mobility' concept was pullulated from the word 'mobile'. Mobile means ''Able to move or be moved freely or easily'' (University, 2014). In other words, mobile means ''Indicating feelings with fluid and expressive movements'' or ''Accommodated in a vehicle so as to travel around and serve various places'' or ''Equipped and prepared to move quickly to any place it is needed'' (University, 2014).

Oxford dictionary define the mobility concept as: ''the ability to move or be moved freely and easily'' (University, 2014).That is to say, mobility means ''the ability to move between different levels in society or employment'' (University, 2014). Mobility means: "...to pass from a position to another position, from a place to another place or from a time to another time". This mobility could be observed in different forms like an individual movement, population movement or the movement of everything that has ability to move (Arslan, 2006).

Various subjects might be associated with mobility concept such as communication, engineering, design, science, education, etc... It is a wide concept that is applicable in a diversified field of study. There is also various area of use in the field of architecture. Mobile space might be one of them. In this chapter, the concept of

mobility is explored with a special emphasis put on architecture and design. Mobility concept in this study is examined thoroughly with a special emphasis put on yacht space as a case study area.

2.2.2 Significance of Mobility Concept on Human Life

Nature is a living system that order and disorder live in together. Nature is an organism that gross and pieces work together and interactive. If the movement is terminating, life might stop too (Ünal, 2013).In the case of universal extent, nature is already an architectural structure. Till within the smallest building block every tree, leaf, alive, rock; shortly everything has a structural order in its own constitution. In other words, nature is an alive sample of an organic architecture (Gürtekin , 2011).

Human beings constantly are in need to harbour in order to settle to difficult life conditions from old age until now. They were obliged to change their location frequently because of some requirements such as climate, shelter, site conditions, hunting and conservation. Due to this reason, improvement of a system was obvious for them to act easily and also to ensure change of location with easy and quick assemble. When there is a consideration of that period's circumstances, ''tent'' had been seen as the most appropriate and most efficient sheltering structure (Fig: 24). In addition to this, comfort factor was a substantial aspect in the creation of this kind of system. Throughout the time, they were passed to permanent settlement by the comprehension of factors such as soil and climate. Though, advantages of stable architecture were grasped by this means (Karaoğlu , 2014).

Figure 24: An example for tent that was used to shelter in old ages (Wikipedia, 2015)

Additionally, in this kind of societies, there were not any foundations that attribute the structure to ground or any other stabilizer techniques of structure. Shelters could be constituted with existing natural materials. Besides, they could be used with basic applications that were not obstructed to be movable, slight or demountable. Under the help of these features, they act as the inspirations to lots of contemporary structures in the present day (Hacıalibeyoğlu, 2005).

Mobile residence concept has been arose when people need to replace their houses due to the shortage of technical possibilities in some cases; as a result of the culture of nomadism in the case of being unstable or in some cases need for movable, portable, mobile houses in order to fulfil the various needs of people (Tuncel, 2007).

‘‘There's nothing new about mobile architecture. Nowadays there are still plenty of nomadic communities who take their dwellings with them. Mongolian yurts, Bedouin tents and American trailers are among the numerous examples. Many demountable buildings that are produced commercially today are already widely used in a number of fields – in commerce, industry, military, education, health care, housing, where they fulfil their individual roles’’ (Acharya , 2013).

Mobile house concept resumes their being despite passed from nomad life to stationary order. Initially, movable structures fulfilled harbouring needs; later, they turned into unstable structures such as holiday houses, caravans, vessel houses, holiday tents and yachts. These kind of small and mobile structures have some properties that are triggering practicality and imaginativeness (Altan, 2007).

2.2.3 Mobility Concept in Architecture / Interior Design

Space; is an utilisable gap defined by human beings or happened naturally either formed on, above or under the ground (Güngör, 2005).

To identify the concept of space; the term should be investigated in wide comprehension and with lots of various perspectives. In the field of architecture, different opinions were appeared relevant with architecture throughout the history. These opinions showed inconsistency in parallel with socio-economic and cultural speciality of the age; in parallel with distinct tendency in general idea and art. First theorists, for instance Vitruvius, was defined the concept of space based on architectural foundation; as a complement that established from the items of intent suitability (function), beauty (shape, aesthetics) and righteousness (structure) (Tuncel, 2007)

Another theoretician of Architecture Francis D. K. Ching was described the ‘‘space’’ as:

> ‘‘Through the volume of space we not only move; we see forms, hear sounds, feel gentle breezes and the warmth of the sun, and smell the fragrances of flowers in bloom. Space inherits the sensual and aesthetic characteristics of the elements in its field. Space is not a material substance like stone and wood. It is inherently formless and diffuse. Universal space has no defining borders. Once an element is placed in its field, however, a visual relationship is established. As other elements are introduced into the field, multiple relationships are established between the space and the elements, as well as among the elements themselves. Space is formed by our perception of these relationships’’ (Ching, 2012).

Mobile spaces are parts of the concept of space that can be relocated. In general definition, mobile structures are type of structure that can be portable with a vehicle or a structure that can be movable on its own. ‘‘Relocation according to specific needs is the basic idea behind mobile structures all over the world. These mobile structures allow us to compare and understand the effects of different local environments on society and how these produce specific requisites among the people who live in them’’ (Acharya , 2013). Caravans, motor-caravans, containers, yachts, temporal calamity dwellings and even aircraft might be mentioned under this description. Mobile structures might be used for holiday purposes; at disaster zones as temporary shelters; temporary shelters at construction sites or at factory regions (Ünal, 2013).

As Acharya mentioned that:

> “I’m for portable houses and nomadic furniture. Anything you can’t fold up and take with you is a blight on the environment, and an insult to one’s liberty.” Andrei Codrescu here describes mobile structure as a structure that reflects physical movement, structure that alters location within a duration range (Codrescu 2002; Acharya , 2013).

“Mobility” intends to structures that can physically change location from one point to another. In that manner, Kronenburg defines mobile structures as a structure that “rolls floats or flies” (2011; Acharya , 2013).

Mobile space could be classified in such different ways as minimum scale such as life space, social and cultural space, space that is used for scientific purpose or space that is used for investigation and survey. For instance, the mobile life space in minimum scale are camper van, houseboat, tent, vessels and yachts, cabins of the ship and compartments of train with bed. On the other hand, mobile theatres, mobile

TV studios and alive broadcast vehicles, mobile schools, mobile libraries can be given as an example of social and cultural spaces, etc… Finally, space vehicles, submarines can be examples of spaces that are used for scientific purpose or space that is used for investigation and survey (Altan, 2007).

2.2.4 Kinds of Mobile Space Structures

Mobile space methods can be categorized under three headings. These concepts are discussed in the following such as portable structure, relocated structure and ravel-hangout structure.

2.2.4.1 Portable Structure

In these types, structure transported from one place to another as a whole. Some of them, carried to intended place with suffer or push under favour of elements (wheels, etc.) which are included on their own structures. These kind of mobile structures' pieces do not depart from the structure that assists the movement altogether in unity. Sometimes, they either manipulated with an aid of external force or sometimes with their own force (motor force). Caravans, yachts, aircrafts might be entered in this group (Tuncel, 2007).

Figure 25: Colim Caravan Concept: A Cool Combination of a Car and a Caravan Camper by designer Christian Susana (Tuvie, 2015)

2.2.4.2 Relocated Structure

In these types, mobile spaces are carried in the act of sections. They are assembled according to the conditions of the place. Almost all of the pieces can be carried as a whole, however in some situation; also the structure could be carried in pieces and reconstructed. Ultimate property of this type of structure that discrete it from the others is its property that is permitting to constitute greater areas (Tuncel, 2007).

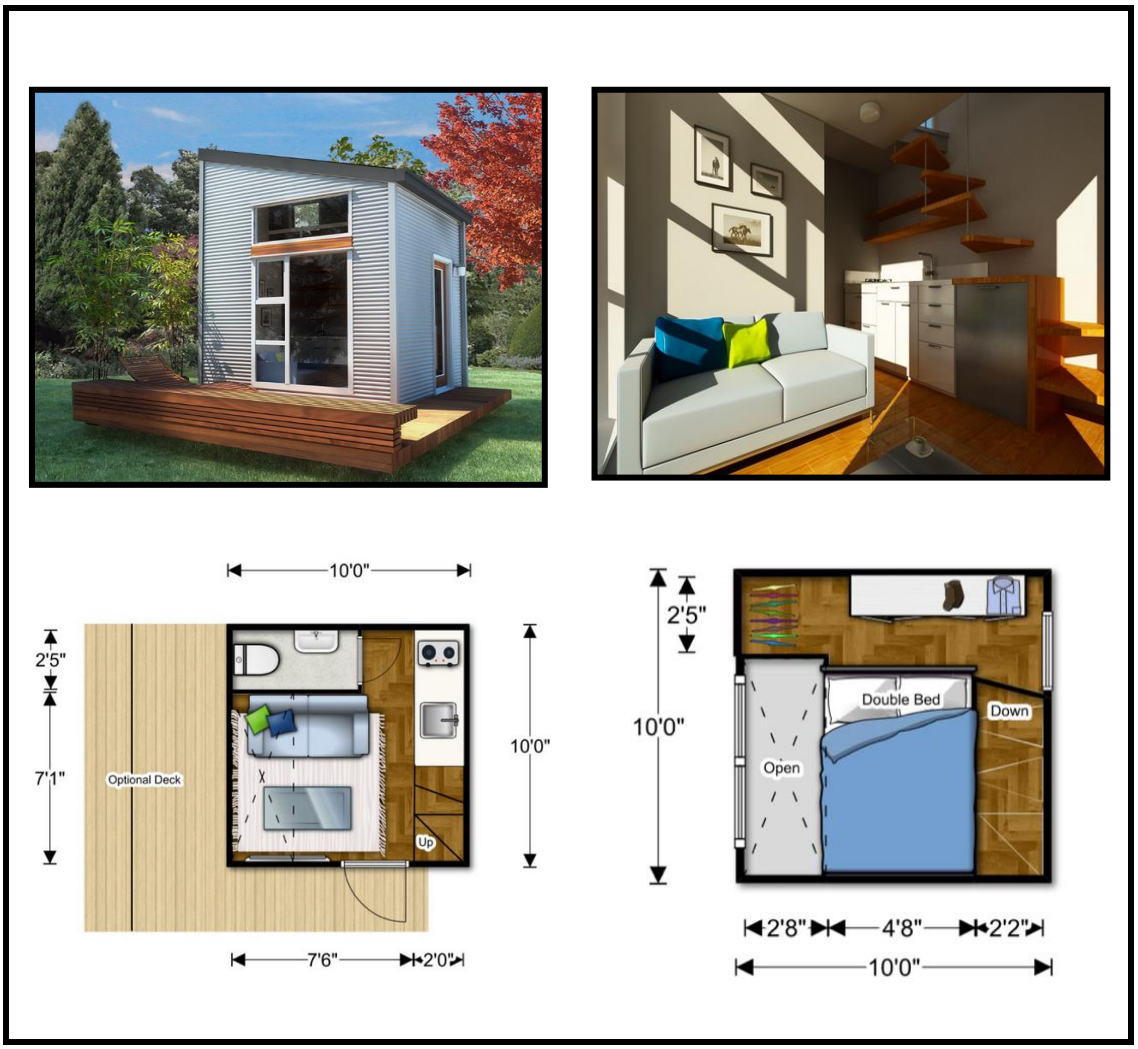


Figure 26: Tiny Micro Home can be easily assembled on site, designed by Vancouver – based company NOMAD in British Columbia, Canada (Idesignarch, 2015)

2.2.4.3 Ravel – Hangout Structure

These mobile structures are carried piece by piece to install onsite. They are much flexible with regards to greatness. They are consisted of independent pieces from each other in order to shape according to the necessity. Generally, all of the pieces are transported together but not integrated. Ultimate property that discrete it from the other type of structures, is its probability to encounter problem of complexity (Tuncel, 2007).

Figure 27: Straw Bale Cafe designed by Hewitt Studios (Archdaily, 2015)

2.2.5 Functional Categorization of Mobile Spaces

Mobile space types can be categorized under three headings. These concepts are discussed in the following such as life spaces, social – cultural – administration – health - educational spaces and spaces that are using for scientific purposes.

2.2.5.1 Life Spaces

Mobile dwelling concept has been comprised by people needing mobile houses due to various reasons, which force them to change place easily (Tuncel, 2007).

Portable dwelling concept sustains their being in spite of passing from nomad life to a settled order. In the beginning, mobile structures were served for sheltering requirements. Afterwards, they were transformed to non-restricted movement structures such as holiday houses, caravans, vessel houses, holiday tents and yachts. This kind of small and movable structures are carried some specialities that trigger practicality and creativity (Ünal, 2013).

Life spaces have several instances such as caravans, temporary disaster zone dwellings, containers, afloat houses, tents, yachts and vessels, state rooms, aircrafts and train compartments (Ünal, 2013). Hence, within these kinds, there are some examples below;

- **Caravans**

Caravans are mobile life spaces that are suitable to standard measures of motor vehicle, besides it is able to answer vital functions in minimum dimensions. It has some fixed equipments such as bed, kitchen, shower, wc and sitting unit. In general, it is a holiday vehicle for someone who chooses to lodge at any place; an alternative continuous life space; have various dimensions and models nowadays; the width and

height dimensions of caravans are constant but length dimensions are changeable (Altan, 2007). Besides, it could be seen in two types as pulling type and motor caravan (Ünal, 2013).

Figure 28: Caravan Exterior View (CARAVAN LEISURE, 2008)

Figure 29: Caravan Interior View (CARAVAN LEISURE, 2008)

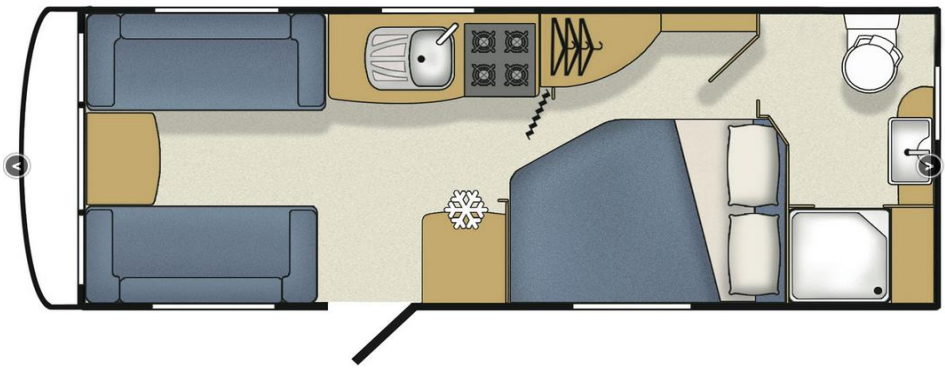


Figure 30: Plan of the Caravan (Caravan Leisure, 2008)

- **Containers**

Containers are collapsible boxes that are produced for transportation and used in international shipping nowadays. Generally, the size of the boxes might be maximum the width 245 cm * height 300 cm * length 240-290 cm. Containers are manufactured in standard sizes by reason of easy stackability (Hacıalibeyoğlu, 2005).

They mostly used as a shelter, construction site unit, wc, storage …so far. Moreover, containers are used as an immediate harbouring unit due to natural disasters. These kinds of containers are varied in the course of time (Ünal, 2013).

Container units can be converted into architectural product as singular or plural units can come together as a relocate structure (Hacıalibeyoğlu, 2005).

Figure 31: Exterior View of a Container House (Homedsgn, 2011)

Figure 32: Interior View of a Container House (Homedsgn, 2011)

Figure 33: Configuration Step of the Container House (Homedsgn, 2011)

Figure 34: Container City, designed by Nicholas Lacey, in London (Evans, 2012)

- **Tents**

Tent, was a shelter type to nomad life style that has extensive usage area. Nowadays, tents are still in utility however, they showed differences according to previous examples with regards to structure method and material (Balkaza, 2008). Tents are known oldest mobile structures with various types such as triangle tent, dome tent or tunnel tent (Ünal, 2013).

Tent which is used as a shelter in natural life; is a portable shelter that occurred from felt, leather, bristle weaving, thick percale or plastic materials and linked to pole (Altan, 2007).

Figure 35: Exterior View of the Camping Tent (Camptents, 2015)

Figure 36: Exterior View of the Camping Tent (Camptents, 2015)

Figure 37: A Camping Site (Wikipedia, 2015)

- **Yachts and Vessels**

Yacht design denominated as a vessel design, which is one of the subsections of transportation vehicle design area. Vessel design includes all kinds of vehicle design that can sail on the sea. In other words, yacht design means personal vessel designing that may people used for pleasure (Özkuşaksız, 2007). In addition to this, Altan (2007) also cites Richardson (2004) who stated that yachts and vessels are water vehicles that are used for the purpose of holiday, trip and sport. Moreover, the number of passengers cannot exceed twelve and they include cabin, shower, wc and kitchen. They are luxury holiday and trip space that their manufacture, annual obligatory maintenance and harbour rents are quite expensive.

Yachts and vessels that are frequently using for sport or trip, are split up into three categories: Motor boats that are dispatched with motor, sailing boats that are used with energy and sailing boats that might use both motor and wind energy (Ünal, 2013).

Motor boats are also called power boats or motor yachts, which are produced for more speed, also are designed to have excessive strong motors and stem structure

that can move fastest on the sea. In general, they have limited interior space since the body structure motor selection and weights affect their speed. As it was previously mentioned, there is not any certain difference between normal yacht (motor boat) and super yacht. However, generally it is said that super yacht is greater than 25 meter as length, upon a specific luxury standard and have design sensibility besides well workmanship. The discrimination between super yacht and yacht is executed over perceived quality. Super yachts have longer destination and larger interior space consequently their grand lengths (Özkuşaksız, 2007).

Figure 38: Motor Yacht Exterior View (Princess, 2013)

Figure 39: Motor Yacht Interior View (Princess, 2013)

Another kind of yacht is sailing boats that might use both with motor and wind energy, which is also called sailing yachts. There are three kinds of yacht: First one is manufactured exactly on the purpose of travel; another one is manufactured on the purpose of both travel and races which is slighter, more developed and with sport equipment. This kind of yacht called as cruiser or racer and finally, third one is manufactured exactly with the intention of race. Sailing boats in the range of 9 – 12 meter are most encountered yachts. They have ‘‘auxiliary engine’’. In the past, it was used in the entrance and exit of the harbour or on the windless weather. Though at the present time, it is a powerful machine that is enabled to long motor journey. Various company and shipyards are offered to promenade as duplicate productions which models that have 35 – 40 meter length (Denizce, 2002).

Figure 40: Sailing Boat Exterior View (Jeanneau, 2015)

Figure 41: Sailing Boat Interior View (Jeanneau, 2015)

2.2.5.2 Social – Cultural – Administration – Health and Educational Spaces

Social – cultural – administration – health and educational spaces; are a kind of spaces that executed specific activities such as school, library, cinema, theatre, exhibition and concert. Frequently, mobile social – cultural – administration – health and educational spaces become available in the interior spaces of buses or articulated lorry's where there are implemented supplement functions as opening and closing on the walls or ceilings according to needs (Ünal, 2013).

Social – cultural – administration – health and educational spaces have varied examples such as mobile theatres, mobile cinemas, mobile libraries, mobile schools, mobile TV studios, mobile circus, mobile hospitals, mobile bank branch offices, mobile collecting vehicles (cash desks), mobile health vehicles, mobile groceries (market), mobile live transmission vehicles, mobile police stations and mobile hotels (Altan, 2007). Hence, within this kinds, there are some examples at below;

- **Mobile Libraries**

Mobile libraries are designed distinctively to be able to implement the functions of book transportation and lending to residential area associated with bulky vehicles like bus, articulated lorry and minibus (Ünal, 2013).

Figure 42: Exterior and Interior View of a Mobile Library (Sussex, 2014; Theguardian, 2012)

- **Mobile TV Studios**

Television broadcasting is not limited with studios in nowadays. It is required to be in everywhere at any moment (Altan, 2007).

Figure below illustrates a mobile television studio which is designed and implemented in Vienna; is a full equipped mobile container. The height of the container can be adjustable. Besides, all the side covers can be open in order to constitute the scene. Movable lighting equipments are carried by the hydraulic elevator systematic ceiling. Mobile studio scene, which can be easily carried on top of the articulated lorry, can be used on concerts, discussion - news programs and live broadcasts (Altan, 2007).

Figure 43: Mobile TV Studio in setup process (Frame, 2003)


Figure 44: Mobile TV Studio during the broadcast (Frame, 2003)

- **Mobile Circuses**

In the mobile circuses, all of the components are mobile such as tents, scene, lighting and sound systems, audience chairs or kiosk. Whole components come together in a short time and can be easily travel from one city to another (Ünal, 2013).

The life spaces of the circus team, in the same time, are movable vehicles like fully-equipped caravans and containers that they travel from one city to another. In addition to these, also joint tenancy of kitchen, laundry, shower and wc can be movable. Wide range of alternatives can be chosen for transportation such as train, lorry or articulated lorry. Hence, several travelling cages are used for animal in specific proportions (Altan, 2007).

Figure 45: Exterior View of a Circus (Wikipedia, 2014)

Figure 46: Exterior View of a Circus (Nauroth , 2007)

Figure 47: Interior View of a Circus (Gopixpic, 2013)

- **Mobile Health Vehicles**

Mobile health vehicles; are a kind of vehicles that take away several medical service as general health controls, vaccination campaign, child and woman medical screening to community. This type of health vehicles are comprised of two main parts interested in patient acceptance and medical examination as exemplified in the figure below (Altan, 2007).

Figure 48: Mobile Health Vehicle (Altan, 2007)

Figure 49: Plan of the Mobile Health Vehicle (Altan, 2007)

2.2.5.3 Spaces used for scientific purpose

Mobile spaces that currently are used for scientific purpose; developed due to using to explorations and surveys. For this kind of different mobile spaces, intended for utilization purpose, space vehicles, submarines, survey ships can be given as examples. Both in examples of space vehicles and submarines, technical equipment are the emphasis on the other hand life areas come down into minimum. Another mutual case in either two examples, oxygen is limited with reserves that are vital necessity. In addition to this, survey and duty programs are occurred depends on these reserves. This kind of vehicles that are used in scientific survey and exploration also can be used for military purpose (Altan, 2007).

Spaces that are using for scientific purpose has certain instances such as space vehicles, submarines and survey ships (Ünal, 2013). Hence, within this kinds, there are some examples at below;

- **Space Vehicles**

Space vehicle is a vehicle that designed to work on outer space except world's surface and atmosphere (Ünal, 2013).

Figure 50: Exterior View of a Space Vehicle (Wikipedia, 2015)

Figure 51: Exterior View of a Space Vehicle (Dailymail, 2013)

Figure 52: Interior View of a Space Vehicle (Dailymail, 2013)

- **Submarines**

Submarine is a scientific survey and war vessel that movable both on the top and under of the sea. Also submarines, exactly like as space vehicles, have limited life areas (Altan, 2007).

Figure 53: Exterior View of a Submarine (Xpda, 2003)

Figure 54: Interior View of a Submarine (Telegraph, 2012)

- **Survey Ships**

Survey ships are confidential ships that are equipped with upper deck sensor, all manner of illustration equipment, acoustic sensor, technologies of distant sensation and all other subsidiary devices. They have several abilities such as surveying, recording, archiving and simultaneous sharing through satellite (Ünal, 2013).

Figure 55: Exterior View of a Survey Ship (Maritime, 2007)

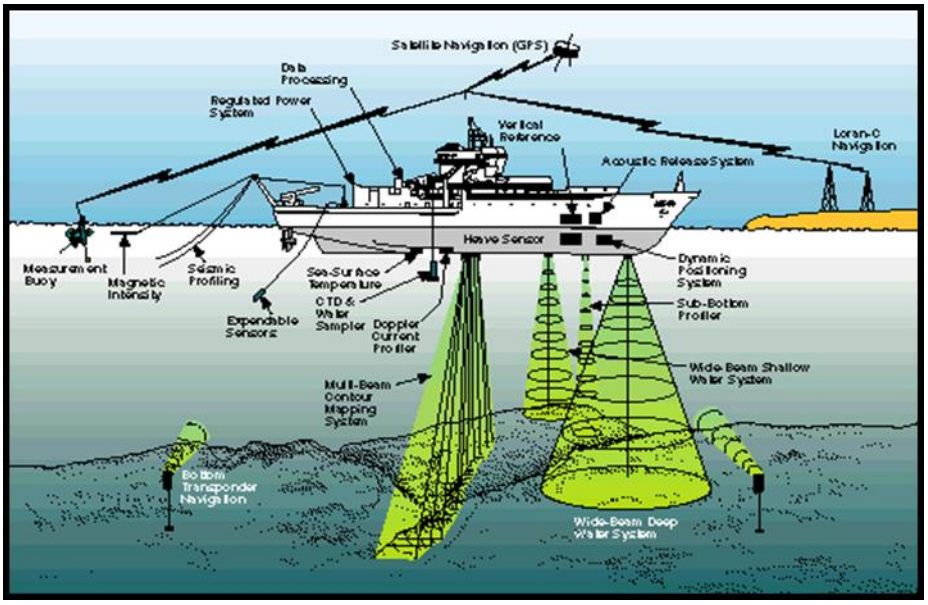


Figure 56: Sketch that Clarify the Survey Ship (Fas, 1999)

Figure 57: Interior View of a Survey Ship (Noaanews, 2009)

Figure 58: Interior View of a Survey Ship (Noaanews, 2009)

2.2.5.4 Functional Categorization of Mobile Spaces

Table 1: Functional Categorization of Mobile Spaces (prepared by author)

2.2.6 Mobile Spaces Based on Their Mobility

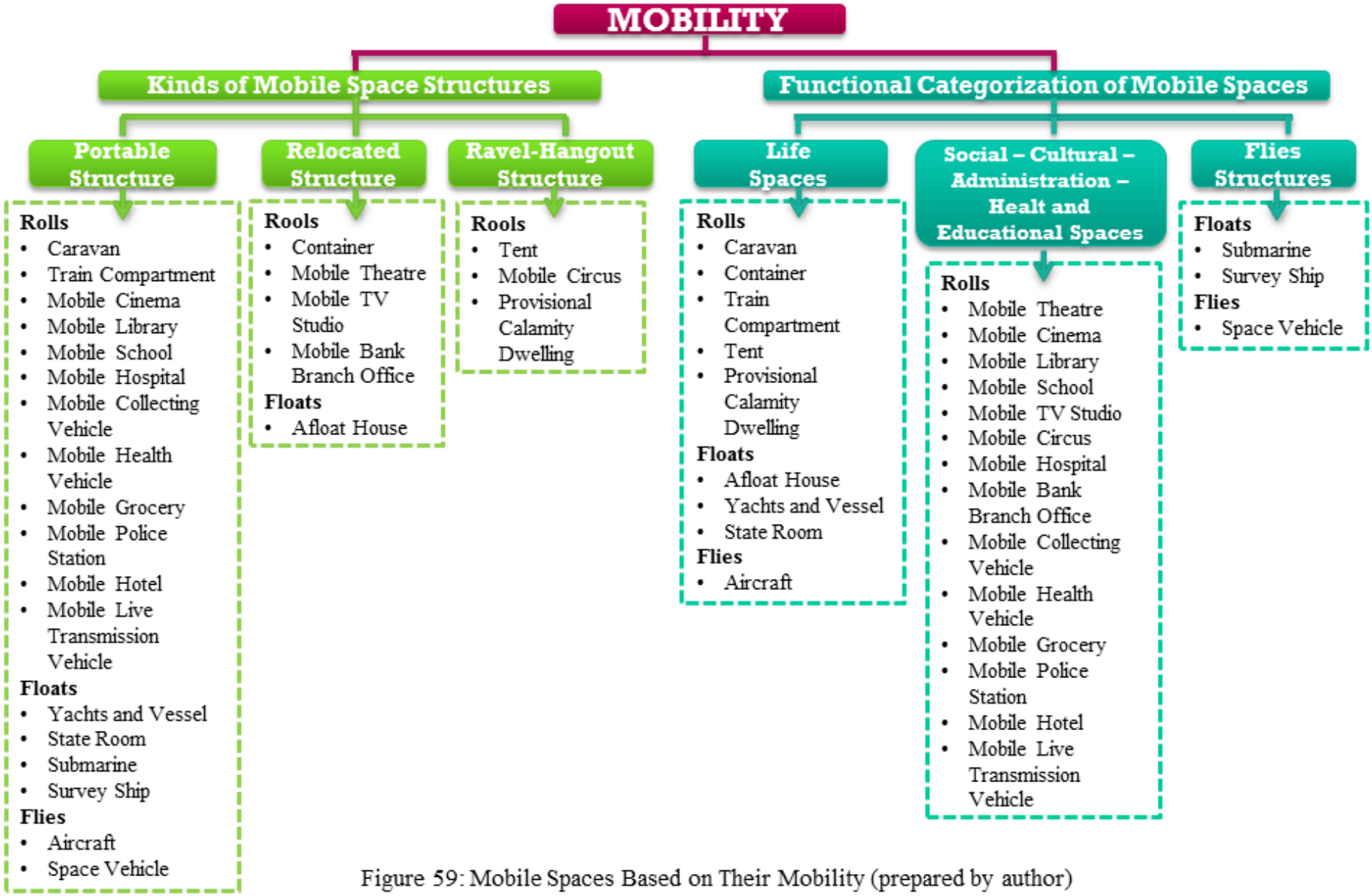


Figure 59: Mobile Spaces Based on Their Mobility (prepared by author)

2.3 Discussion: Relationship between Mobility and Flexibility

Mobile structures are restricted spaces according to their movability. Some of the mobile structures which have connection with land have possibility of change in order to expand such as caravans, tents or containers. On the other hand, some of them have not any possibility to expand due to their non-contextual character such as aircrafts, space vehicles; or as yachts, survey ships or submarines. Thus, in mobile structures every single area possesses significance in terms of functionality primarily.

Karaoğlu was described the ‘‘mobile space’’ and ‘‘flexibility concept’’ as:

> ‘‘In mobile spaces, efficient use of every single bit of space is important. Accordingly, it is significant to use every point effectively and decisions taken upon storing facilities besides providing multi-functionality are the priority within the design process of them.’’

Approaches of flexibility, that is modular systems, movable systems and foldable systems provide advantages to mobile spaces in certain areas such as more function, more space saving or higher number of users. An object that can answer to more than one function; can be used it in various forms; appear on request or disappear when there is not a need; answer different kind of user expectations; changeable to be able to use in different spaces or can shrink or expand could be stated as some of the substantial specialities for different kinds of mobile spaces.

Aforementioned flexible solutions could be stated as beneficial in terms of the space utilization and saving.

Within the scope of this thesis, the concept of flexibility is associated with yacht spaces as a mobile space that travels on the sea. Particularly, the detailed

investigation of flexibility was carried out under within the conditions of having no opportunity to expand or grow. In the following chapter, which is investigation of flexibility concept in interior yacht space, a number of facts were put forward that is concerned with the flexibility concept in interior yacht spaces. The facts are as the following;

- Kinds of flexible solutions in interior yacht spaces
- Effects, significances and roles of flexibility as a result of the integration into interior yacht spaces
- Functional solutions that were achieved by the flexible systems
- Differences and similarities of flexible solutions between various yachts

Chapter 3

INVESTIGATION OF FLEXIBILITY CONCEPT IN INTERIOR YACHT SPACES

The aim of this chapter is to investigate the approaches of flexibility how were be fictionalised in yacht space that is one of the proper instances of a limited mobile space.

This chapter is consisted of three parts. The first part is the method of analysis; second part, presents the results of data collection that were achieved in line with the framework developed as a result of the literature survey; and the last part, reveals the answers of the research questions. Accordingly, kinds of flexible solutions in interior yacht spaces, effects, significances and roles of flexibility as a result of the integration into interior yacht spaces, functional solutions that were achieved by the flexible systems, differences and similarities of flexible solutions between various yachts are the main points of discussion.

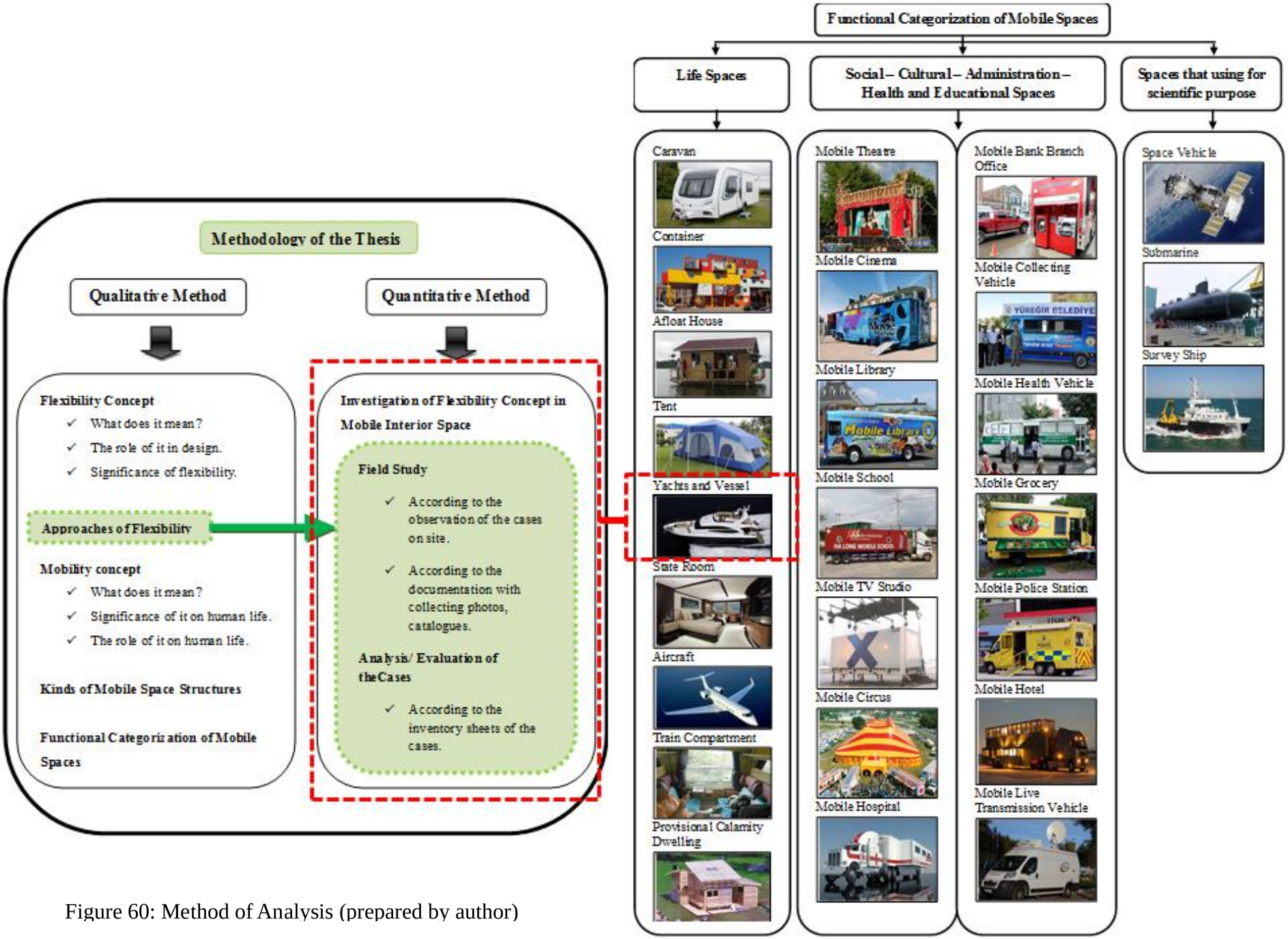


Figure 60: Method of Analysis (prepared by author)

3.1 Method of Analysis

The yachts interior space organization was investigated based on the concept of flexibility. Therefore, case study was determined as the analysis method. In order to research the flexibility concept and obtain the data for yachts, the beneficial technique of data collection is determined as the visit to a yacht fair, observation and documentation through inventory sheets during the site visit.

Visiting the Fair was the first step of data collection. Name of the fair / show, was 32. International Istanbul Boat Show that was held on 21 September 2013 - 29 September 2013. The place of the show was Marintürk Istanbul City Port[1] (Illustration 1). This fair was selected particularly due the score given to it among this type of international fairs. Besides, availability of higher amount and variety of yachts in different brands and models which would give opportunity to make a broad investigation was the other reason behind the determination. The early show area was 150.000m². The number of participatory firms was approximately 300 and the number of exhibited brands was 650. Approximately, 380 yachts were exhibited in the fair. There were four kinds of exhibited yacht such as super yachts, motor yachts, sailing boats and catamarans. The lengths of the yachts vary between 3m - 60m or bigger.

[1] NTSR International Fair and Congress Organizations was the organizer of the boat show.

Illustration 1: Map of Fair Aria (Illustration by author, map image obtained from Google Maps Website)

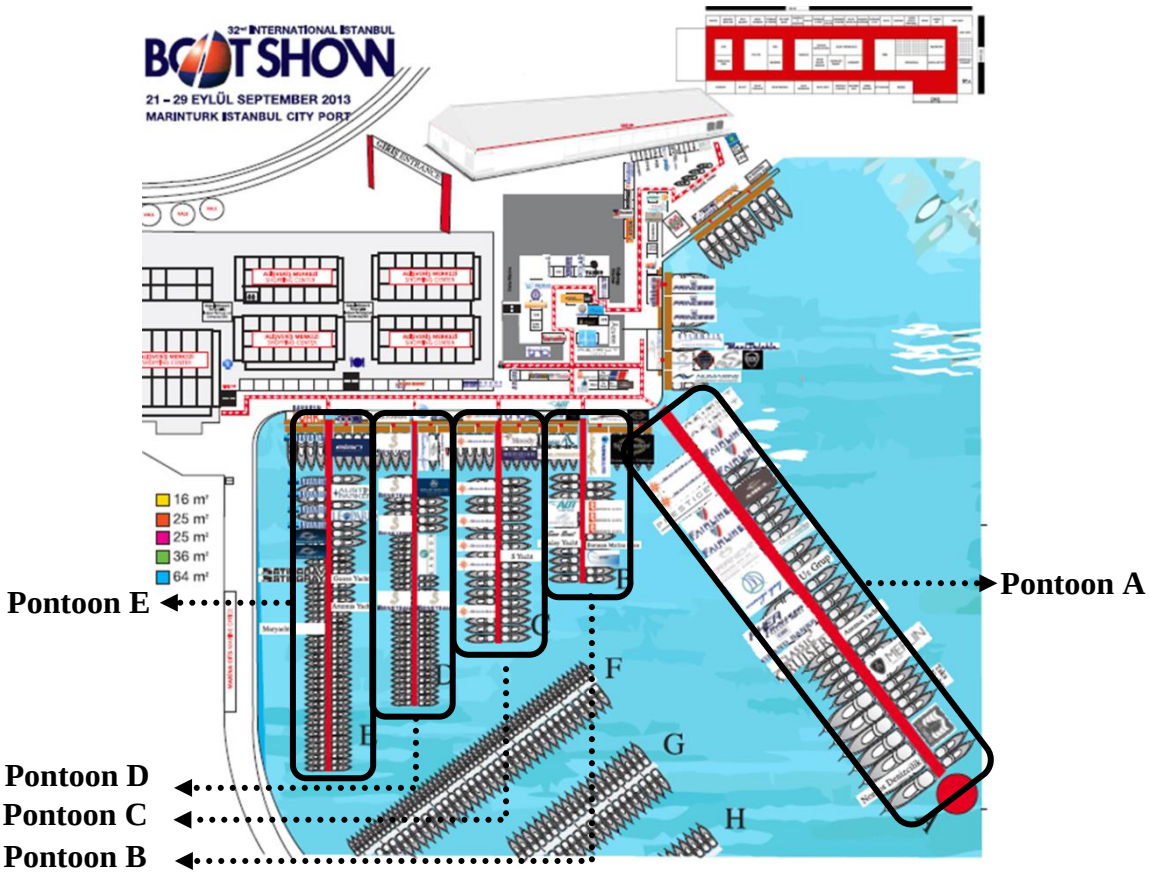


Illustration 2: Layout of the Boat Show fair area. (Illustration by author, layout image obtained from Boat Show official web site), (Organization, 2011)

Second technique of data collection is observation. 4 different categories of yachts were observed in the Boat Show such as super yacht, motor yacht, sailing boat and catamaran. Thirty (30) yachts were selected within more than three hundred eighty (380) yachts, which were exhibited on Pontoon A, Pontoon B, Pontoon C, Pontoon D and Pontoon E (Illustration 2). They are selected from motor yachts, sailing boats and super yachts categories which lengths vary between 8.80m – 40.40m. Catamarans were eliminated due to the first observations since the observed cases had not any flexible approaches inside. Taking photographs was the technique of observation and documentation. Photographs were taken according the above mentioned facts. Flexible solutions were photographed more than one in order to demonstrate the alteration of the objects. This technique also helped to investigate the effects, significances and roles of flexibility when it is integrated to the interior yacht spaces.

Table 2: Schema of the Yachts (prepared by author)

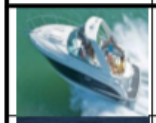
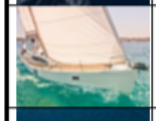
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Monterey 295 SCR	Monterey	ADT Marine Group	America	Motor Boat	8,8 m & 2,8 m	2	1+1
	Austin Parker 42 Open	Austin Parker	Solo Deniz Yatçılık LTD. ŞTİ.	Italy	Motor Boat	12,5 m & 3,96 m	2	2+1
	Bavaria Virtess 420 Fly	Bavaria Yachts	Gena Tuizm Yatçılık LTD. ŞTİ.	Germany	Motor Boat	13,6 m & 4,21 m	2 + 1	3+1
	Bavaria Vision 46	Bavaria Yachts	Gena Tuizm Yatçılık LTD. ŞTİ.	Germany	Sailing Boat	14,27 m & 4,35 m	2	3+1
	Elan Impression 494	Elan	Solo Deniz Yatçılık Ltd. Şti.	Slovenia	Sailing Boat	14,85 m & 4,68 m	2	4+1
	Azimut 48	Azimut	Sirena Marine	Italy	Motor Boat	14,9 m & 4,5 m	2 + 1	3+1
	Atlantis 48 (Angel)	Azimut / Benetti Group	Concept Marine (Konsept Deniz Yatırımları ve Enerji Sistemleri A.Ş.)	Italy	Motor Boat	15,96 m & 4,42 m	2	2+1
	Princess 52 (Güle Güle)	Princess Yachts	Alfabeta Marine Group	England	Motor Boat	16,66 m & 4,75 m	2 + 1	3+1
	Oceanis 55 New	Beneteau	Tezmarin Turizm ve Ticaret A.Ş.	France	Sailing Boat	16,78 m & 4,96 m	2	3+1
	Hanse 575 (Willeam)	Trio	Trio Deniz Araçları LTD. ŞTİ.	Germany	Sailing Boat	17,15 m & 5,2 m	2	3 + 1

Table 3: Schema of the Yachts (prepared by author)

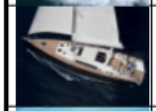
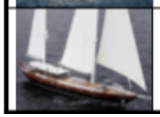
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Sense 55	Beneteau	Tezmarin Turizm ve Ticaret A.Ş.	France	Sailing Boat	17,2 m & 4,97 m	2	3+1
	Jeanneau 57	Jeanneau	Top Leisure Yat Şatış ve Servis AŞ.	France	Sailing Boat	17,78 m & 5 m	2	3+1
	Prestige 550s	Prestige	Karina Yatçılık	France	Motor Boat	17,92 m & 4,79 m	2 + 1	3+1
	Oceanis 58	Beneteau	Tezmarin Turizm ve Ticaret A.Ş.	France	Sailing Boat	18,24 m & 4,99 m	2	3+1
	Atlantis 58 (Sweet Escape)	Azimut / Benetti Group	Concept Marine (Konsept Deniz Yatırımları ve Enerji Sistemleri A.Ş.)	Italy	Motor Boat	18,9 m & 4,85 m	2	3+1
	Azimut 64	Azimut	Sirena Marine	Italy	Motor Yacht (Super Yacht)	20,15 m & 5,06 m	2 + 1	3+1
	Manhattan 63	Sunseeker	Sunseeker London LTD. Türkiye İrtibat Bürosu	England	Motor Yacht (Super Yacht)	21,07 m & 5,13 m	2 + 1	4+1
	MCY 70	Monte Carlo Yachts	Tezmarin Turizm ve Ticaret A.Ş.	Italy	Motor Yacht (Super Yacht)	21,3 m & 5,42 m	2 + 1	4+1
	MCY 76	Monte Carlo Yachts	Tezmarin Turizm ve Ticaret A.Ş.	Italy	Motor Yacht (Super Yacht)	23,05 m & 5,65 m	3 + 1	4+1
	Anemos 78	Huzur Yacht	Huzur Yacht	Turkey	Motor Yacht (Super Yacht)	24 m & 6,2 m	2 + 1	4+2

Table 4: Schema of the Yachts (prepared by author)

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT &WIDTH	STOREY NUMBER	CABIN NUMBER
	Princess 82 (Flying Foxtrot)	Princess Yachts	Alfabeta Marine Group	England	Motor Yacht (Super Yacht)	25,5 m & 5,74 m	2 + 1	4+2
	Aquatheraphy	Nomos Yachts	Nomos Denizcilik	Turkey	Motor Yacht (Super Yacht)	26,6 m & 6,29 m	2 + 1	4+2
	Ilios	Su Marine	Su Marine Yat San. Ve Tic. LTD. ŞTİ.	Turkey	Sailing Yacht (Super Yacht)	27,3 m & 5,8 m	2	4+1
	Darwin	Su Marine	Su Marine Yat San. Ve Tic. LTD. ŞTİ.	Turkey	Motor Yacht (Super Yacht)	28,5 m & 6,4 m	3	6+1
	Merlin 100	Merlin Yachts	Karataş Yacht Design LTD.	Turkey	Sailing Yacht (Super Yacht)	30,45 m & 7,56 m	2+1	4+1
	Numarine 102 RPH	Numarine	Numarine Yachts	Turkey	Motor Yacht (Super Yacht)	31,08m & 7,10 m	2+1	4+1
	Mengi Yay (Reniapol)	Mengi Yay	Mengi Yay Yachts	Turkey	Motor Yacht (Super Yacht)	32 m & 7,05 m	2+1	5+2
	Sunseeker 115 Sport	Sunseeker	Sunseeker London	London	Motor Yacht (Super Yacht)	34,5 m & 7,39 m	2+1	5+2
	Mengi Yay (Kıvırcık)	Mengi Yay	Mengi Yay Yachts	Turkey	Motor Yacht (Super Yacht)	37,49 m & 7,30 m	2+1	5+2
	Vay	Su Marine	Su Marine Yat San. Ve Tic. LTD. ŞTİ.	Turkey	Sailing Yacht (Super Yacht)	40,4 m & 8 m	2	5+1

Collecting documents is the third technique of the data collection. In this part, brochures and catalogues of the yachts were collected.

The last technique of the data collection is inventory sheets. Inventory sheets were prepared for each research case. They included technical information (name of the yacht, brand, responsible firm, country, type, length & width, storey number and cabin number), layouts of the yachts, and photos besides the flexibility analysis of the yachts. The section of flexibility analysis was divided into four parts in line with literature review. As it was mentioned in the previous chapter, approaches of flexibility are grouped under three headings such as: “modular systems”, “movable systems” and “foldable systems”. Besides there is also an additional part which was named as ‘other flexible systems (see Table 5).

Table 5: Inventory Sheet Example (prepared by author)

Preliminary Inventory Sheet

Cs_{13}

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Prestige 550s	Prestige	Karina Yatçılık	France	Motor Boat	17,92 m & 4,79 m	2 + 1	3+1

PLANs & ELEVATION

Elevation

Flydeck

Deck

Lower Deck

PHOTOs

Elevation

Flydeck

Deck

Lower Deck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• Portable		• Sliding	
✓ Mechanical - by Equipments		✓ Up - Down	×
✓ Manual		✓ Left - Right	×
• Adaptable		• Collapsible	
✓ Distribute - Assemble		✓ Horizontal	×
✓ Relocate		✓ Vertical	
• Changing		• Turning	
✓ Telescopic		✓ Pivoted	
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• Collapsible		• Folding	
✓ As a furniture		✓ Horizontal	×
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• Folding		
✓ Opening – Closing	×	
✓ Transform	×	
• Stackable		
✓ Demountable		
✓ Stored up		
• Transform		
✓ Expand - Shrink	×	
✓ Stretch - Shorten		
• Collapsible		
✓ Horizontal	×	
✓ Vertical	×	
✓ As a unit		

No Any Finding.

Modular systems are the first approach of the flexibility concept which has four subtitles such as *portable, adaptable, changeable* and *collapsible* and analysed via inventories. Accordingly, *portable solutions* were categorized into two parts as mechanical-by equipments and manual. The other subtitle that is *adaptable* is categorized as distributed- assembled and relocated. *Changeable* is another subtitle which is categorized such as telescopic, interlocked, and attached whereas the last subtitle is *collapsible* that is categorized as furniture and space.

Second approach is ***movable systems***. That system has also four subtitles. These are *sliding, collapsible, turning* and *folding*. The first subtitle which is *sliding* is categorized according to the direction of movement as vertical and horizontal. *Collapsible* is the second subtitle that is categorized into horizontal and vertical. Another subtitle is *turning / rotating* that is categorized like pivoted, up – down and left – right. Finally, *folding* is the last subtitle that is categorized such as horizontal and vertical.

Foldable systems are the third approach of the flexibility concept in this survey. It has four subtitles that are *fold stackable, transformed* and *collapsible*. *Fold* is categorized as opening–closing and transforming. The second subtitle which is *stackable* is categorized like demountable and stored up. Besides, *transformed* subtitle is categorized as expand-shrink and stretch-shorten. At last, *collapsible* is the fourth subtitle that is categorized as horizontal, vertical, and as a collapsed unit.

Other Flexible Systems is an open ended investigation in order to determine other probable flexibility facts that might be find in yacht interior spaces which was not stated in the literature.

3.2 Analysis, Results & Findings

The results were evaluated by means of two methods qua; detail solutions were explained along with samples and then general findings are stated.

3.2.1 Examining the Substantial Flexible Systems on Yachts Spaces

All flexible systems (modular, movable, foldable) were investigated on the existing yacht interior spaces via inventories. Inventory sheets involved criteria of flexible systems, name and dimensions of the yachts.

3.2.1.1 Modular Systems at Yacht Interior Spaces

Modular systems are the first approach of the flexibility concept. It has four methods such as portable, adaptable, changeable and collapsible. In this section, these methods and their solutions on the existing yacht interiors are discussed through examples from cases.

- **Portable**

The first types of modular systems are portable solutions which could be categorized as mechanical - by equipments systems and manual systems. Portable systems are solutions that can be carried from one location to another according to the user needs. Mechanical solutions appear by the help of various equipments such as rail or tyre to carry / move the product. Or it could be a manual solution. In here, mechanical – by equipments part has 4 finding. On the other hand, manual part has 14 finding.

- **Mechanical - by Equipments**

Mechanical portable systems – by equipments can be observed as flexible sitting units on yacht interiors such as Bavaria Vitress 420 Fly (Fig: 61) and Oceanis 55 New (Fig: 62). There is a rail system under the sitting units thus it can move. In this

way, the sitting elements might be used side by side or individually depending on the requirements. Due to these reasons, these kinds of solutions can provide convenience for utilization.

Figure 61: Bavaria Vitress 420 Fly (photos by author)

Figure 62: Oceanis 55 New (photos by author)

Another example for mechanical – by equipments systems, there are flexible center tables on yacht interiors such as Sunseeker 115 Sport (Fig: 63). There are some wheels under the center tables so it can be portable. For this reason, the center tables might be used side by side and turned into bigger table or individually to a tee table depending on the necessity. These kinds of systems provide convenience of usage and bring multifunctionality.

Figure 63: Sunseeker 115 Sport (photos from Sunseeker Official Website)

- **Manual**

There are some stools on yacht interiors such as Bavaria Vitress 420 Fly (Fig: 64) that could be given as manual examples of portable systems. These stools could be carried by human force and used in everywhere on yacht such as around dining table. Thus, stools might be used whenever needed or might be hiden depending on the requirements. Because of this reason, these kinds of solutions could provide space saving on restricted yacht interiors.

Figure 64: Bavaria Vitress 420 Fly (photos by author)

On the other hand, center tables are other flexible solutions on yacht interiors such as Mengi Yay Reniapol (Fig: 65). These center tables could be carried by human force. Hereby, the center tables might be used together to be a major table or separately to be a tea table depends on necessity. Due to these reasons, these kinds of systems can supply convenience to utilization.

Figure 65: Mengi Yay Reniapol (photos from Mengi Yay Official Website)

There are some elements that could be used multi functional on yacht interiors as Oceanis 58 (Fig: 66). It could be portable along with human force. These elements could be used as a stool for dining table without wooden part or as a service table with the wooden part. In this way, these kinds of solutions can supply multiple functions for yacht interiors.

Figure 66: Oceanis 58 (photos by author)

Furthermore, there are dining tables on yacht interiors which could extend. There is a piece of a table that could be attached on the table to extend it or could be removed to turn it to its original shape and size. These kinds of systems help to increase the user number when it is required (Fig: 67).

Figure 67: Azimut 64 (photos by author)

- **Adaptable**

The second type of modular systems are adaptable systems which could be categorized as distribute – assemble systems and relocate systems. Adaptable systems are one of the most useful systems that support uniformity in design. Application of the system might occur along with two different methods. In the first method that is distribute – assemble systems, all of the pieces of the product can be demountable and mountable again on the intended place. In second method which is relocate, the product as an entire piece can be transferred or can be replaced when it is required. No findings of distribute – assemble were investigated in yacht interiors during the case study yet 6 examples of relocate solutions were investigated.

- **Relocate**

For instance, there are some sitting units on yacht interiors such as Bavaria Vitress 420 Fly (Fig: 68), Oceanis 55 New (Fig: 69) and Elan Impression 494 (Fig: 70) that could be given as the examples of relocate systems. These sitting elements could be used by changing their place according to needs. Because of this reason, these kinds of solutions could provide space saving and multifunctional usage on yacht interiors.

Figure 68: Bavaria Vitress 420 Fly (photos by author)

Figure 69: Oceanis 55 New (photos by author)

Figure 70: Elan Impression 494 (photos by author)

- **Changeable**

Another type of modular systems is changeable systems which could be categorized as telescopic systems, interlocked systems and attached systems. Changeable systems are solutions that can be transformed to another form. There are three methods for this such as telescopic system where all of the pieces can be interpenetrated;

interlocked where the pieces can be locked one into other or attached solution can be seen where in this system the pieces can be incorporated into another piece. Telescopic solutions were not investigated as a result of the survey however, 4 interlocked solutions and 8 attached solutions were achieved.

- **Interlocked**

As examples of interlocked systems, there are some units which could be used both as a sitting group and a table on yacht interiors such as Oceanis 58 (Fig: 71), Manhattan 63 (Fig: 72), Mengi Yay Kıvırcık (Fig: 73). These units could be interpenetrated one over other and / or side by side. When all the pieces are used togerher it might be a major table; when they are used individually it might be a sitting unit or table depends on necessity. Due to these reasons, these kinds of systems can supply multifunctionality on limited yacht interior spaces.

Figure 71: Oceanis 58 (photos by author)

Figure 72: Manhattan 63
(photos from Sunseeker Official Website)

Figure 73: Mengi Yay Kıvırcık
(photos from Mengi Yay Official Website)

- **Attached**

For instance to attached systems, there are some units which could be used both a sitting group and a table on yacht interiors such as Azimut 64 (Fig: 74), Mengi Yay Kıvırcık (Fig: 75) and Mengi Yay Reniapol (Fig: 76). These units might be incorporated into each other qua over and over or side by side. When all the pieces are added to each other it might be a major table; when they are used individually it might be a small scaled table depends on requirements. Due to these reasons, these kinds of solutions can supply multifunctionality and it might be gived service to more people on limited yacht interior spaces.

Figure 74: Azimut 64 (photos by author)

Figure 75: Mengi Yay Kıvırcık (photos from Mengi Yay Official Website)

Figure 76: Mengi Yay Reniapol (photos from Mengi Yay Official Website)

❖ **Collapsible**

Collapsible modular systems could be categorized ‘As a furniture’ and ‘As a space’. However, available yacht interior spaces have not any collapsible solutions

Below scheme summarizes modular solutions of flexible systems at yatchs interior spaces.

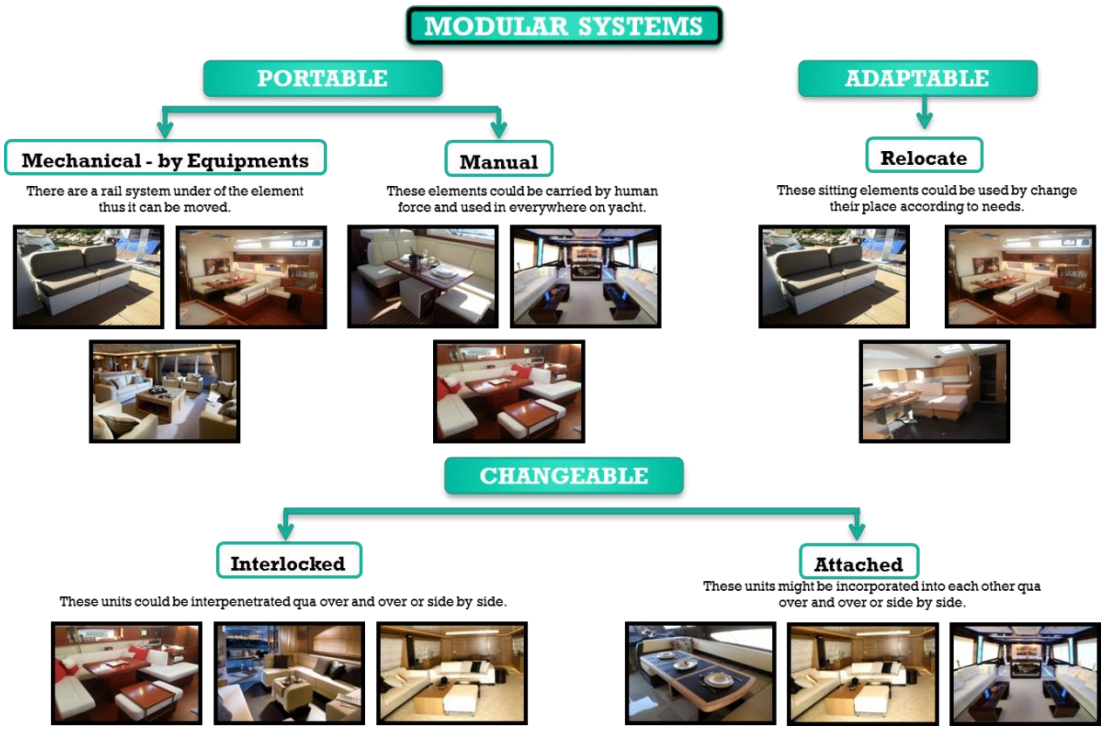


Figure 77: Schema of the modular solutions of flexible systems (prepared by author)

Furthermore, below charts presents the results of modular flexible systems at yatch interior spaces as a result of the investigation.

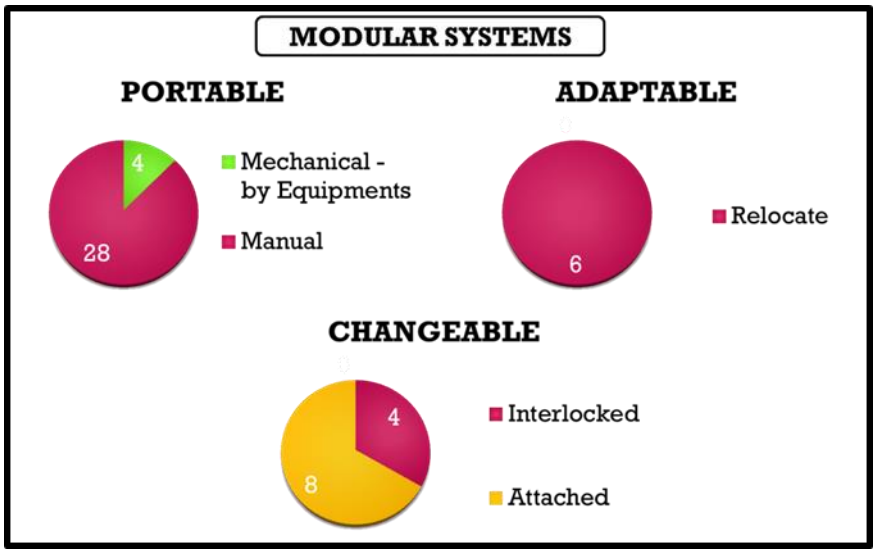


Figure 78: Results of modular flexible systems (prepared by author)

3.2.1.2 Movable Systems at Yacht Interior Spaces

Movable systems are the second approach of the flexibility concept in this survey. It has four subtitles such as sliding, collapsible, turning & rotating and folding. In this section, these subtitles and their categories were discussed with their examples on existing yacht interiors.

- **Sliding**

In movable systems, the first type is sliding solutions which could be categorized such as vertical solutions and horizontal solutions. Sliding systems might be moved along with the method of glide hereby they could be changed their location. Vertical systems as a first type of sliding solutions might be moved up to down or down to up according to position. On the other hand, another type of sliding solutions is horizontal systems that might be moved left to right or right to left in accordance with their position. 24 findings for vertical systems, 28 findings for horizontal systems were investigated in yacht interiors during the case study.

- **Vertical**

For example to vertical systems, there are some tables which could be used as a dining table or a guest bed on yacht interiors like in Hanse 575 Willeam (Fig: 79). These tables have mechanism and it could be boosted up to down to make a bed for quest or could be boosted down to up to make a table for dining depends on necessity. For that matter, these kinds of systems can provide multifunctionality and easy usage on limited yacht interior spaces.

Figure 79: Hanse 575 Willeam (photos by author)

Coffee tables could be another example for vertical systems on yacht interiors as in Monte Carlo Yacht 76 (Fig: 80). There are a system under the tables thus it could be pushed up to down to make a coffee table or it could be pushed agained to make a table for various purpose depends on necessity. Due to these reasons, these kinds of solutions can supply convenience and flexibility to usage.

Figure 80: Monte Carlo Yacht 76 (photos by author)

On the other hand, it has been achieved as a result of the analysis that almost every yacht has flexible TV unity on main deck or open deck such as in Anemos 78 (Fig: 81). This system could be moved by a grid where the unit assembled to it and move up to down or down to up. Hereby, the TV unity might be used when the yacht is fixed or; it can be hided in cabinet when the yacht is en route depending on the necessity. Thus, these kinds of systems could provide security on yacht interiors.

Figure 81: Anemos 78 (photos by author)

- **Horizontal**

Some yachts have flexible bed systems as in Azimut 48 (Fig: 82). These bed systems could be moved with a mechanism on the horizontal direction. It could be seen and arranged in various sizes or positions as single or double according to requirement. So, these kinds of solutions could provide multifunctional usage besides space saving on yacht interiors.

Figure 82: Azimut 48 (photos by author)

Another example for horizontal systems is storage areas on yacht interiors like in Jeanneau 57 (Fig: 83). There are some drawers under the beds or some other furniture like sitting elements that it could be used with a rail system horizontally. By this way, the area can be used both as a sleeping area and a storage space. Due to these reasons, these kinds of systems can supply multifunctional usage and space saving for a restricted yacht interior space.

Figure 83: Jeanneau 57 (photos by author)

Flexible sunbathing bed could be another example for horizontal systems on yacht interiors as in Monterey 295 SCR (Fig: 84). The heading of the sunbathing bed can be moved with the help of a mechanism. Normally it can be used as a sunbathing bed, however, when the heading are pulled to outside, the internal space can be used like a sitting unit especially for dining. Hence, these kinds of solutions can ensure multifunctional usage on yachts.

Figure 84: Monterey 295 SCR (photos by author)

❖ **Collapsible**

The second type of movable systems is collapsible solutions in available yacht interiors. These solutions could be categorized such as horizontal systems and vertical systems. Collapsible systems might be utilized shaped like opening and closing. Horizontal systems could be moved like opening and closing horizontally pursuant to utiliser needs. Other solution which is vertical system also might be moved like opening and closing vertically according to user requirements. 14 findings for horizontal systems and 6 finding for vertical systems were investigated in yacht interiors during the survey.

o **Horizontal**

Multifunctional board could be an example to horizontal systems as in Darwin Su Marine (Fig: 85). There is a board in main cabin which is seem as a painting however, on the back side it has a TV. This board have a system and it could be opening - closing horizontally when the user wants to watched the TV. These kinds of systems can provide multifunctionality, space saving and easy usage on yacht interior spaces.

Figure 85: Darwin Su Marine (photos by author)

- **Vertical**

There are flexible staircases on yacht interiors that could be opening - closing vertically like up and down as in Hanse 575 Willeam (Fig: 86). There is a space under the staircase and it is used as a storage area to keep some equipment related with yacht. Thus, these kinds of solutions can ensure multifunctional usage and space saving on yacht interior spaces.

Figure 86: Hanse 575 Willeam (photos by author)

- **Turning / Rotating**

Another type of the movable systems is turning / rotating solutions in this survey which could be categorized such as pivoted, up – down and left right. Turning / Rotating solutions are systems that might be change the direction according to

circumstance. First of all, pivoted systems could be whirl around in accordance with utilizer requirements. The second system that is up – down could be rotate vertically pursuant to user needs. On the other hand, third system which is left to right could be rotate horizontally in compliance with necessities. 26 pivoted solutions, 1 up – down solutions and 9 left – right solutions were achieved in this section.

- **Pivoted**

For instance, flexible lighting systems could be an example to pivoted solutions like in Bavaria Vision 46 (Fig: 87). Lighting elements could be moved by whirl around. Users could turn it according to their desired aspects. Due to these reason, these kinds of systems can supply flexible usage on yachts interiors.

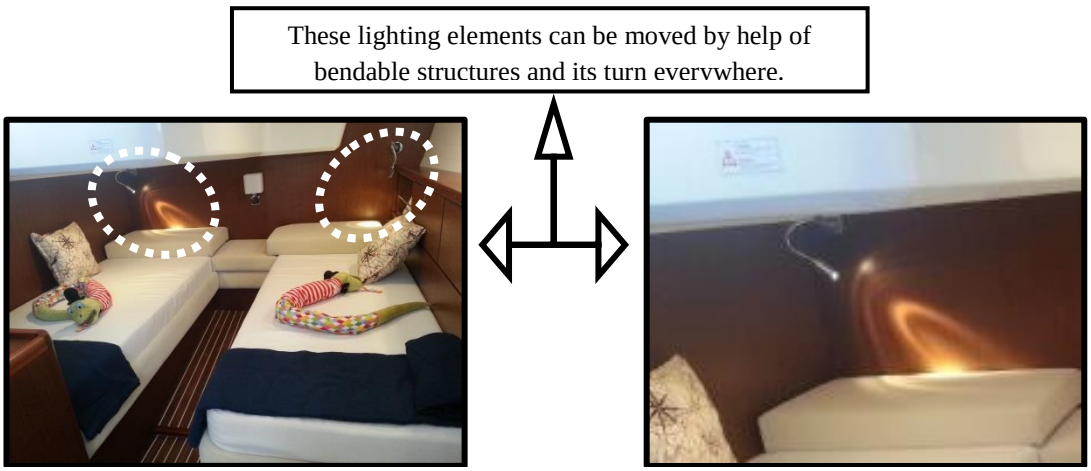


Figure 87: Bavaria Vision 46 (photos by author)

- **Up – Down**

For example to up – down systems, flexible table design could be an instance as in Monte Carlo Yachts 76 (Fig: 88). To enlarge the table, there are two pieces under the table. When users want to expand the table, they can turn the pieces from two sides horizontally and then vertically to bring the pieces on the same level with table.

Thus, these kinds of solutions can help to serve higher number of users at yachts interiors.

Figure 88: Monte Carlo Yachts 76 (photos by author)

- **Left – Right**

As in the previous section, the flexible table design could be an example as well as for left – right systems. When users want to expand the table, first they can turn the pieces from two sides qua horizontal and then vertical to bring the pieces on the same level with table. In this way, these kinds of systems can increase the number of users on the yachts interiors space (Fig: 89).

Figure 89: Monte Carlo Yachts 76 (photos by author)

Moreover, there are some sitting units in cabins such as in Ilios Su Marine (Fig: 90). They possibly are used as a make up table. These sitting units could be moved

horizontally with the aid of human force. Users could be turned it pursuant to their requirements. These kinds of solutions can supply flexible usage and space saving on yachts interiors.

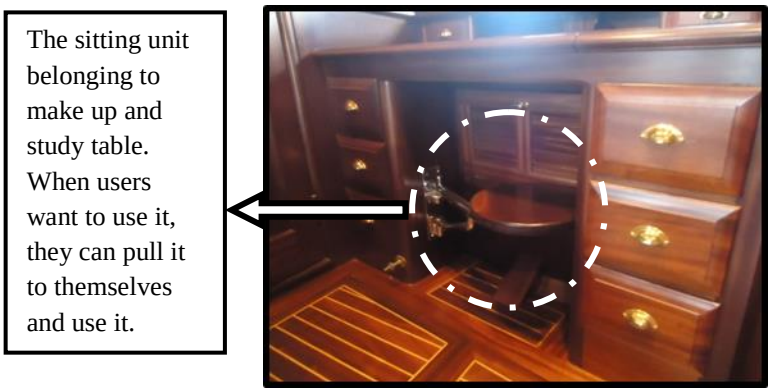


Figure 90: Ilios Su Marine (photos by author)

Flexible table design could be another instance for left – right systems as in Princess 52 Güle Güle (Fig: 91). These tables could be used for various purposes such as a coffee table at the middle or it can be turned to one side and the wooden part opened to be a bed for guests. Users could turn it horizontally by human force pursuant to their requirements. These kinds of systems provide multifunctional usage on yachts interiors spaces.

Figure 91: Princess 52 Güle Güle (photos by author)

And the last but not the least, flexible shower system is the other example for left – right systems like in Azimut 64 (Fig: 92). In a lot of yacht, the bathroom cabins are very small and everthing are located very close to each other. In order to solve this problem, the bathroom ground is shower ground at the same time. The shower doors could be opened to use the bathroom area or close in order to use the shower. These kinds of solutions can provide multifunctional usage and for space saving at limited yachts interiors.

Figure 92: Azimut 64 (photos by author)

- **Folding**

The last type of movable systems is folding solutions in this investigation that could be categorized as horizontal systems and vertical systems. Folding solutions are systems that can be twisted or can be bended toward requirements. Firstly, horizontal systems might be folded left to right or right to left in accordance with their position. Secondly, vertical systems might be folded up to down or down to up according to position. 5 finding for horizontal systems and 1 finding for vertical systems were investigated in yacht interiors during the case study.

- **Horizontal**

As an example of horizontal systems, there are some flexible panels on the yacht interiors as in Oceanis 58 (Fig: 93). It could be moved by folding horizontally by the help of rail systems. They were used to enclose some storage areas or showers. These kinds of systems can ensure space saving and with this method the panels do not prevent other spaces.

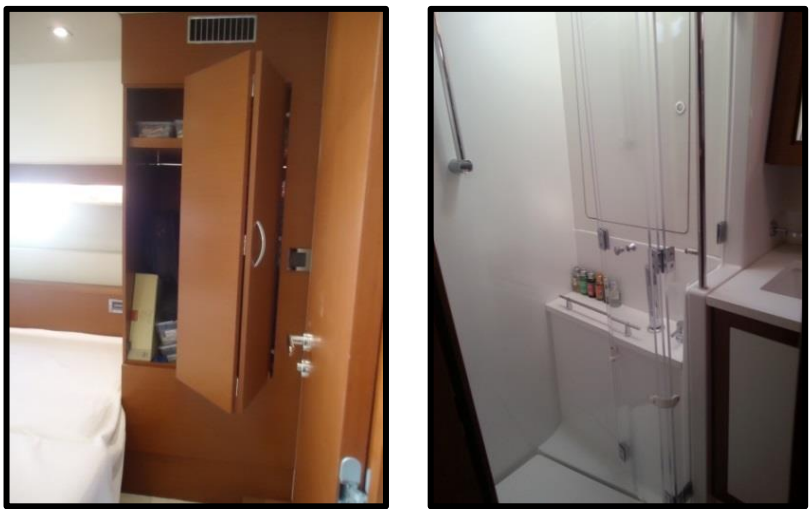


Figure 93: Oceanis 58 (photos by author)

- **Vertical**

As in the previous section, there are some flexible panels on the yacht interiors as an example of vertical systems such as in Anemos 78 (Fig: 94). However it is moved by folding vertically by the help of rail systems. They were used to close some storage spaces. These kinds of solutions can supply space saving and with this system the panels do not hinder another spaces.

Figure 94: Anemos 78 (photos by author)

Below scheme summarizes movable solutions of flexible systems at yatchs interior spaces.

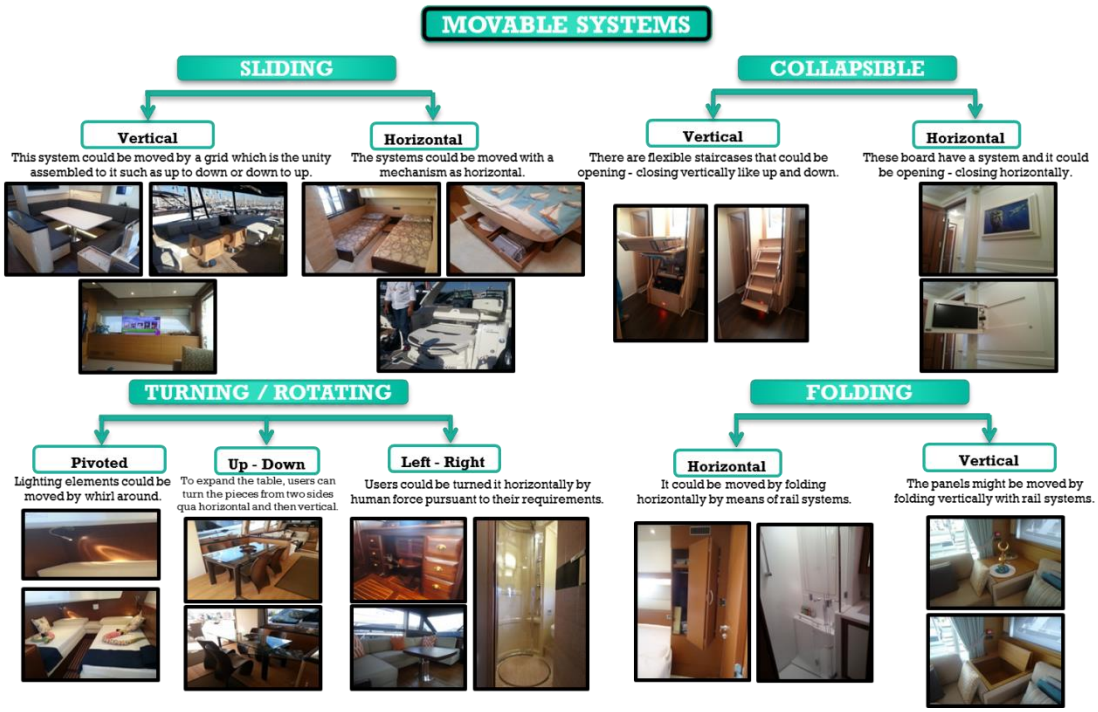


Figure 95: Schema of the movable solutions of flexible systems (prepared by author)

Furthermore below charts presents the results of movable flexible systems at yatch interior spaces as a result of the investigation.

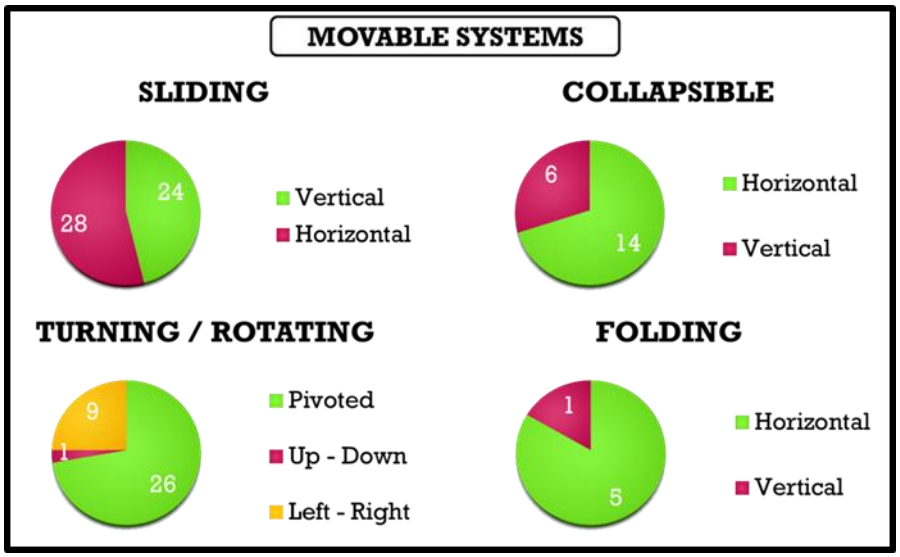


Figure 96: Results of movable flexible systems (prepared by author)

3.2.1.3 Foldable Systems at Yacht Interior Spaces

Foldable systems are the major finding of the research as an approach of the flexibility concept. It has four subtitles such as fold, stackable, transformed and collapsible. In this section, these subtitles and their categories are discussed through the examples on existing yacht interiors.

- **Fold**

The first kind of foldable systems are fold solutions that might be categorized such as opening – closing and transform. Fold systems are solutions which can change their form through bending. Application of the system occurs along with two different methods. Opening – closing systems are the first method that is collapsible solutions in order to respond the user needs. On the other hand, transform systems are the second solutions which could turn into another form to respond varied requirements.

28 findings for opening – closing systems, 21 findings for transform systems were investigated in the yacht interiors during the case study.

- **Opening – Closing**

As an example of opening – closing systems, case study revealed that at almost every yacht there is a flexible table system such as in Austin Parker 42 (Fig: 97). The table could be folded horizontally with the method of opening and closing to be used for different needs such as a coffee table when it is closed or a dining table when it is open. These kinds of systems can supply multifunctional usage on the limited yacht interior spaces.

Figure 97: Austin Parker 42 (photos by author)

Another example for opening – closing systems, flexible beds in cabins was investigated like in Monterey 295 SCR (Fig: 98). There is a panel which is a part of the bed; the lenght of the bed increases when it is opened. When it closed, the panel used as a piece of sitting unit. Hereby, these kinds of solutions can supply multifunctional usage on the limited yacht interior spaces.

Figure 98: Monterey 295 SCR (photos by author)

Last but not the least; flexible bed in cabins might be another example such as in Atlantis 58 Sweet Escape (Fig: 99). It could be opened and closeded by folding. This solution creates a new space when it is required. These kinds of solutions are practical systems on the restricted yacht interior spaces to answer different needs.

Figure 99: Atlantis 58 Sweet Escape (photos by author)

- **Transform**

There are some flexible table systems like in Oceanis 58 (Fig: 100) as an example of transform systems. The pieces of the table could be folded vertically. It might be used as a bar unit when it is closed since there is a freezer for drinks under the cap. On the other hand, when the pieces are opened it might be used as a dining table. Thus, these kinds of solutions can supply multifunctional usage on yacht interiors.

Figure 100: Oceanis 58 (photos by author)

Another example of transform systems that was investigated during the case study is flexible sunbathing bed such as in Atlantis 48 Angel (Fig: 101). The cap of the bed is foldable; when the cap is tilted, the unit is used as a sunbathing bed; when the cap is removed, it turns into a sitting unit. These kinds of systems can also supply multifunctional usage on the limited yacht interior spaces.

Figure 101: Atlantis 48 Angel (photos by author)

False bottom is another example for transform systems such as in Darwin Su Marine (Fig: 102). In the close situation, it might be used as a worktop whereas in the open position, it could be used as a passage to the lower deck where there are the cabins located. These kinds of solutions can be used to hide the private space in the yacht interiors.

Figure 102: Darwin Su Marine (photos by author)

❖ **Stackable**

The second foldable systems type is stackable systems. These solutions could be categorized as demountable systems and stored up systems. Stackable systems are solutions that can be saveable or, in another word, hidable when usage may not be required. The first method for this demountable solution is that when all the pieces could be shattered and they can be come together depending on the usage. In addition, the second method which is storedup system helps to keep it as a nonvisible place until it is required. As a result of the analysis, 3 demountable solutions and 14 storedup solutions were achieved.

o **Demountable**

As an example of demountable systems, there are some sitting elements on yacht interior spaces such as in Sense 55 (Fig: 103). Genarally, the sitting unit is non-visible, however in order to create more space when it is needed non-visible part could be opened and provide more space. By this way, these kinds of systems can supply space saving and are appropriate solutions at restricted yacht interior spaces.

Figure 103: Sense 55 (photos by author)

The other example of demountable systems, some multifunctional elements was investigated on yacht interior spaces such as in Jeanneau 57 (Fig: 104). As it can be seen at figure 104, there is an element that is a part of the sitting unit and it could be removed and can be mounted again for a different usage such as smaller table. These kinds of solutions can supply space saving; appropriate for limited spaces and also can supply multifunctional usage on the limited yacht interior spaces.

Figure 104: Jeanneau 57 (photos by author)

- **Storedup**

As an example of storedup systems, some stools were investigated especially around the tables on the yacht interior spaces such as in Atlantis 48 Angel (Fig: 105) and Aqua Theraphy (Fig: 106). In such systems all of these elements could be hided and utilized afterwards when it is required. Accordingly, these kinds of systems provide

space saving open up empty areas for ease of circulation and other uses at restricted interiors.

Figure 105: Atlantis 48 Angel (photos by author)

Figure 106: Aqua Theraphy (photos by author)

- **Collapsible**

Collapsible solutions are the third kind of foldable systems that was investigated in this research. Foldable systems might be categorized such as horizontal systems, vertical systems and ‘as a unit’ systems. Horizontal solutions could be opening and closing horizontally pursuant to user requirements; vertical systems also might be opening and closing vertically according to user needs. In addition, it could be found ‘as a unit’ that could be opening and closing as an entire piece. There are 19 findings for horizontal systems, 25 finding for vertical systems and 7 finding for ‘as a unit’ systems.

- **Horizontal**

As a result of the case study it has been investigated that almost every yacht have flexible table on yacht interior spaces as horizontal solution such as in Austin Parker 42 (Fig: 107). These systems could be opened horizontally and could be folded again. These kinds of solutions can provide multifunctional utilization on the limited yacht interiors spaces.

Figure 107: Austin Parker 42 (photos by author)

- **Vertical**

Flexible staircase might be an example for yacht interiors as in Elan 494 Solo (Fig: 108). It could be opened and closed by folding vertically. It can supply an empty space for comfortable usage to the users via moving it up. These kinds of systems can be appropriate to the space and can supply practical solutions on restricted yacht interior spaces.

Figure 108: Elan 494 Solo (photos by author)

There is a bed system in cabins that could be an example of this system at yacht interiors such as in Jeanneau 57 (Fig: 109). These systems could be opened and closed by folding it vertically. The bed might be used as a sleeping area and as a storage area. Hence, these kinds of solutions ensure multifunctional usage and provide space saving on the restricted yacht interior spaces.

Figure 109: Jeanneau 57 (photos by author)

- **'As a unit'**

Some furnitures were investigated as an example for yacht interiors as in Merlin 100 (Fig: 110) and Azimut 48 (Fig: 111). These are foldable chair and table. It could be opened and closed by folding as a unit. These kinds of systems can be appropriate to

the space; can supply space saving and also can be supply multifunctional usage on limited yacht interior spaces.

Figure 110: Merlin 100 (photos from Merlin Yachts official website)

Figure 111: Azimut 48 (photos by author)

❖ **Transformed**

The last kind of foldable systems is transformed solutions in this survey that could be categorized as expand – shrink solutions and stretch – shorten solutions. Transformed systems might be transume as dimensional in accordance with necessities. Expand – shrink solutions have 22 finding, on the other hand, strech – shorten solutions have one finding in this section.

- **Expand – Shrink**

As an example of expand – shrink systems, sitting unit were investigated as the cases for yacht interiors like in Monterey 295 SCR (Fig: 112). It could be opened via folding and the usage area can be expanded. Thus, it turns to a bed from the sitting element. These kinds of solutions can supply space saving and also can offer multifunctional usage.

Figure 112: Monterey 295 SCR (photos by author)

Another example for expand – shrink systems, there are flexible tables that might be an example for yacht interiors such as in Prencess 52 (Fig: 113) and Vay (Fig: 114). It might be opened with folding and the utilization space can be expanded. These kinds of systems provide multifunctional usage.

Figure 113: Prencess 52 (photos by author)

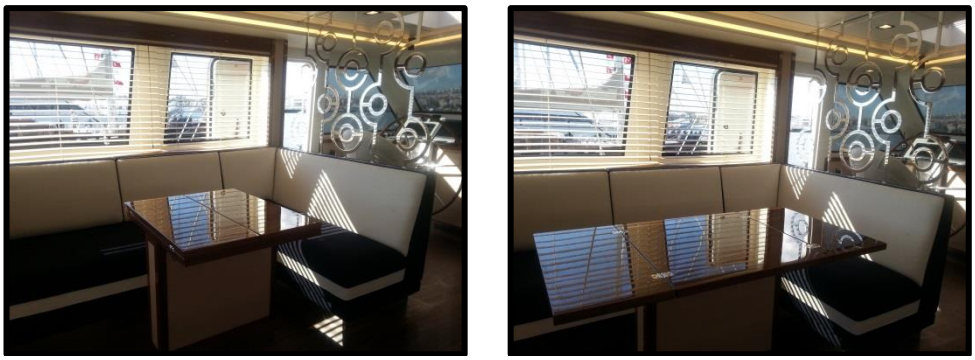


Figure 114: Vay (photos by author)

- **Strech – Shorten**

For instance to strech - shorten systems, flexible sunbed solution might be an example for yacht interiors like in Austin Parker 42 (Fig: 115). It could be folded to be used as a seat or opened to be used as a sunbed. These kinds of solutions can be appropriate to the space and provide multifunctional usage especially on limited yacht interior spaces.

Figure 115: Austin Parker 42 (photos by author)

Below scheme summarizes foldable solutions of flexible systems at yatchs interior spaces.

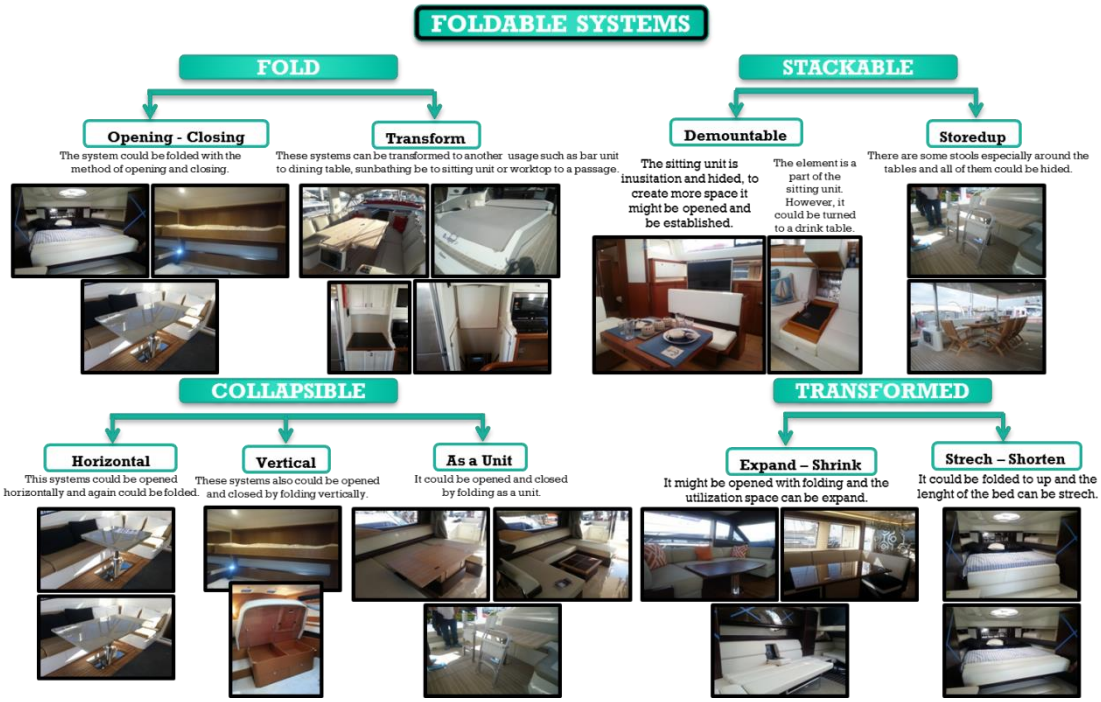


Figure 116: Schema of the foldable solutions of flexible systems (prepared by author)

Furthermore below charts presents the results of foldable flexible systems at yatch interior spaces as a result of the investigation.

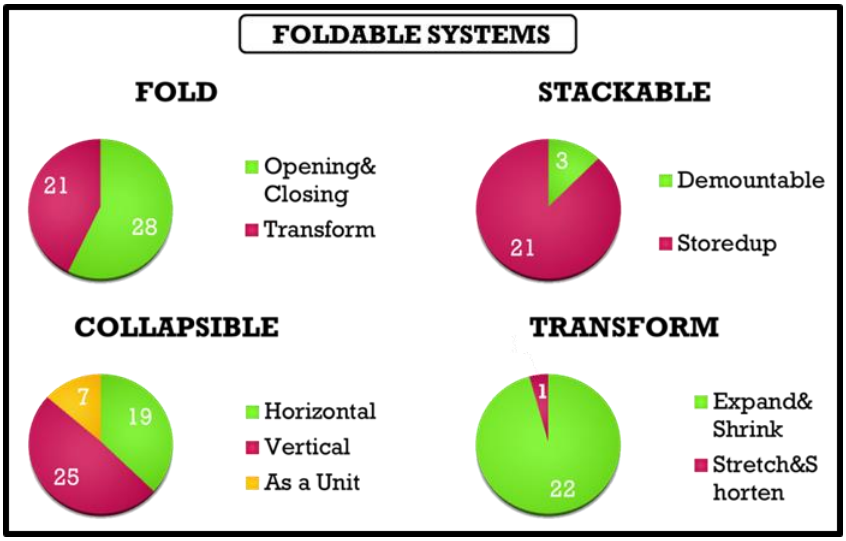


Figure 117: Results of foldable flexible systems (prepared by author)

3.2.2 Findings and Results

As a result of the analysis and discussion on the substantial systems, this part states general findings in three ways: i) according to flexible systems; ii) according to the size of the cases and iii) according to functions. Table 6 at the following represents the detailed results of the investigation.

Table 6: Results of the Analysis of Cases (prepared by author)

CASES TABLE			Monterey 295 SCR	Austin Parker 42 Open	Bavaria Virtess 420 Fly	Bavaria Vision 46	Elan Impression 494	Azimut 48	Atlantis 48 (Angel)	Princess 52 (Gile Gile)	Oceanis 55 Neu	Hanse 575(Willeam)	Sense 55	Jeanneau 57	Prestige 550s	Oceanis 58	Atlantis 58 (Guest Escape)	Azimut 64	Manhattan 63	M CY 70	M CY 76	Ancenos 78	Princess 82 (Flying Foxtrot)	Aquadhraphy	Ilios	Darwin	Merlin 100	Numarine 102 RPH	Mengi Yay (Reniapol)	Sunseeker 115 Sport	Mengi Yay (Kivanak)	Yay	Total Flexible Findings Due to Flexible Systems
Modular Systems	Portable	Mechanical - by Equipments			■						■					■														■			36 Finding
		Manual			■		■			■						■		■	■	■	■			■		■		■	■		■	■	
	Adaptable	Distribute - Assemble																															
		Relocate			■		■			■	■									■						■							
	Changeable	Telescopic																															
		Interlocked														■			■												■	■	
		Attached																■			■			■				■	■	■	■	■	
	Collapsible	As a furniture																															
		As a space																															
Movable Systems	Sliding	Vertical			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	■	■	■			114 Finding
		Horizontal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■		■	
	Collapsible	Horizontal	■	■	■	■								■	■		■	■		■	■		■			■			■			■	
		Vertical			■		■					■					■						■				■						
	Turning / Rotating	Pivoted		■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■		■	■	■	■	■	■	■		■	■	
		Up - Down																			■												
		Left - Right			■			■		■	■						■	■							■	■			■				
	Folding	Horizontal						■						■	■	■														■			
		Vertical																				■											
Foldable Systems	Fold	Opening – Closing	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	■	■	140 Finding
		Transform	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	■			■	■	■						■	
	Stackable	Demountable											■	■		■																	
		Stored up	■			■	■		■		■			■			■		■	■	■	■		■			■				■		
	Collapsible	Horizontal		■	■	■		■	■	■			■	■	■	■	■		■	■	■		■		■	■				■		■	
		Vertical	■	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	■	■			■	■	■	
		As a unit						■	■									■				■		■			■				■		
	Transform	Expand - Shrink	■		■	■	■	■	■	■	■		■	■	■	■	■		■	■	■		■	■	■	■				■		■	
		Stretch - Shorten	■																														
Total Flexible Findings Due to Yachts Dimensions			155 Flexible Findings for Motor & Sailing Boats Size (8,80 m – 18,90)															136 Flexible Findings for Super Yachts Size (20,15 m – 40,40)															

i) According to Flexible systems;

The results put forward that in yacht interiors there are foldable systems (140 findings) firstly, movable systems (114 findings) secondly and modular systems (36 findings) lesser compared to the other two systems.

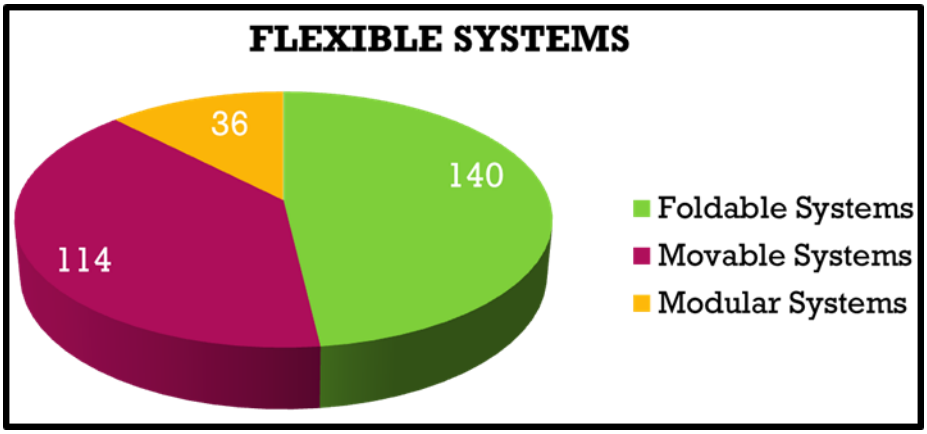


Figure 118: Results according to flexible systems (prepared by author)

ii) According to sizes;

The results show that there are more flexible solutions in motor & sailing boats (155 findings) compared to the super yachts (136 findings).

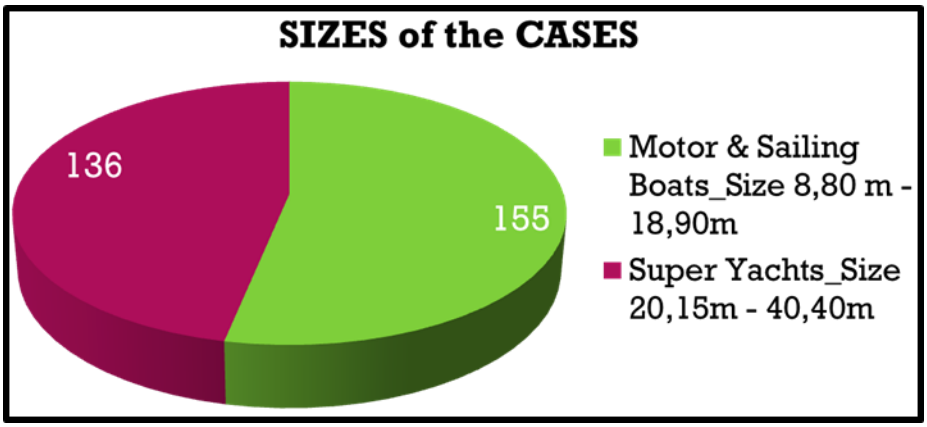


Figure 119: Results according to sizes (prepared by author)

Furthermore, the detailed investigation revealed that movable and foldable systems are existed in smaller yatches whereas modular systems can be seen at bigger yatchs. (Fig: 120)

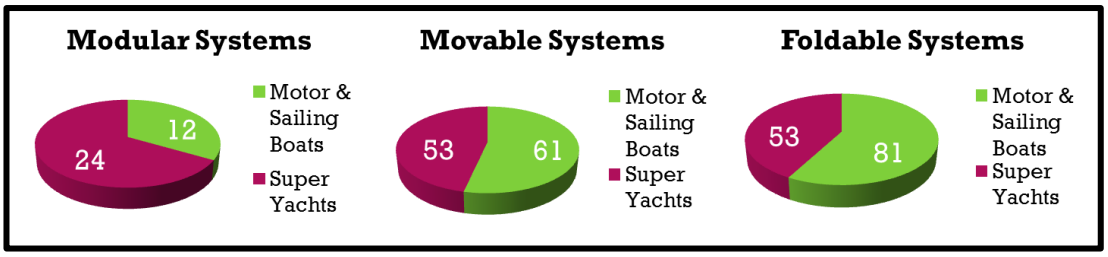


Figure 120: Results of substantial flexible solutions at different sizes of yachts (prepared by author)

Additionally, foldable systems that have been found out as the highest system (140 solutions) of flexibility have four subtitles that are *fold, stackable, transformed* and *collapsible*. As a result of the survey, it has been achieved that flexible solution with the foldable systems primarily achieved with the method of opening and closing (28 findings) of fold solutions; secondly with vertical collapsible solution (25 findings); thirdly with expand & shrink (22 findings) of transformed system besides transforming subtitle of fold system with the equal amount of findings; fourth with horizontal collapsible solution (19 findings) and stackable stored up solution (14 findings) were investigated higher than demountable stackable and collapsible unit solution that were investigated at rare cases.

Figure 121: Atlantis 58 Sweet Escape (photos by author)

Figure 122: Monterey 295 SCR (photos by author)

Figure 123: Austin Parker 42 (photos by author)

Figure 124: Atlantis 48 Angel (photos by author)

After foldable systems, second widely used solutions were attained on movable systems. Second highest systems (114 solutions) were investigated under flexibility solutions by movable systems. It could easily be seen from the findings that foldable systems and movable systems' results are similar to each other. That system has four subtitles. These are *sliding*, *collapsible*, *turning* and *folding*. As a result of the

analysis it has been investigated that movable flexible solutions highly attained by sliding solutions (52 findings); secondly with turning / rotating solutions (36 findings) where the pivoted system is the main method of solution; thirdly with collapsible solutions (20 findings) and rarely with folding solutions (6 findings).

Figure 125: Hanse 575 Willeam (photos by author)

Figure 126: Azimut 48 (photos by author)

Figure 127: Hanse 575 Willeam (photos by author)

At last, minimum findings were obtained from modular systems. There are least solutions (36 findings) that are lower compared to the foldable and movable solutions. Modular systems have four subtitles that are *portable*, *adaptable*, *changeable* and *collapsible*. Portable solution was investigated as the primary method of modular systems (18 findings) where the manual solutions used mainly; changeable solution is the second one where interlocked and attached methods have been investigated (12 findings); adaptable modular systems was investigated rarely (6 findings) whereas collapsible modular systems were not investigated at all.

Figure 128: Bavaria Vitress 420 Fly (photos by author)

Figure 129: MCY70 (photos by author)

Figure 130: Oceanis 55 New (photos by author)

Figure 131: Vay (photos by author)

Figure 132: Azimut 64 (photos by author)

Below charts presents the results of flexible systems at yatch interior spaces as a result of the investigation.

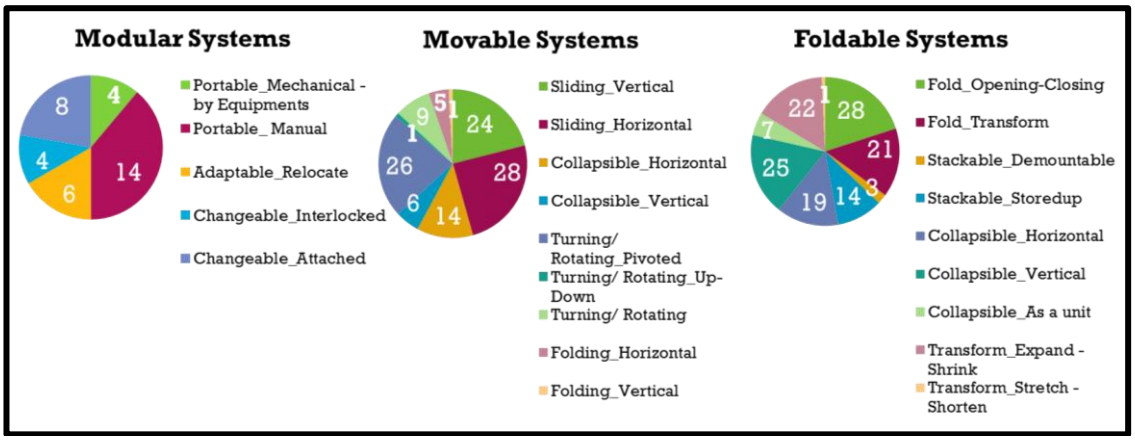


Figure 133: Results of flexible systems (prepared by author)

iii) According to Functions;

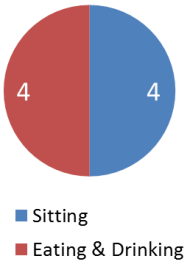
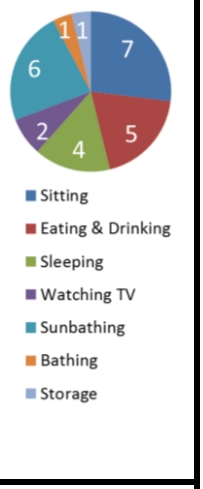
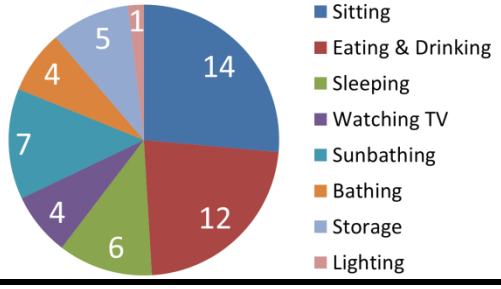
It has been investigated that the flexible approaches are effective on various functions such as sitting, eating – drinking, sleeping, storage, watching TV, sunbathing and bathing.

The investigation put forward that *modular flexible systems* used for sitting and eating – drinking; *movable flexible systems* used for eating – drinking, watching TV,

sleeping, storage, sitting, sunbathing, lighting and bathing whereas *foldable flexible systems* used for eating – drinking, sitting, sleeping, sunbathing, and storage.

Below tables presents flexible systems based on functions as a result of investigation of yatch interior spaces.

Table 7: Result of functions based on flexible systems (prepared by author)

APPROACHES OF FLEXIBILITY			FUNCTIONS	AMOUNT
Modular Systems	**Portable**	**Mechanical - by Equipments**	Sitting, Eating – Drinking	
		Manual	Sitting, Eating – Drinking	
	Adaptable	**Distribute - Assemble**	---	
		Relocate	Sitting	
	Changeable	**Telescopic**	---	
		Interlocked	Sitting, Eating – Drinking	
		Attached	Eating – Drinking	
	Collapsible	**As a furniture**	---	
		As a space	---	
Movable Systems	**Sliding**	**Vertical**	Eating – Drinking, Watching TV, Sitting	
		Horizontal	Sleeping, Storage, Sitting, Sunbathing, Bathing	
	Collapsible	**Horizontal**	Watching TV	
		Vertical	Storage	
	Turning / Rotating	**Pivoted**	Lighting	
		Up - Down	Eating – Drinking	
		Left - Right	Eating – Drinking, Sitting, Sleeping, Bathing	
	Folding	**Horizontal**	Storage, Bathing	
		Vertical	Storage	
Foldable Systems	**Fold**	**Opening – Closing**	Eating – Drinking, Sitting, Sleeping, Watching TV, Sunbathing	
		Transform	Eating – Drinking, Sitting, Sunbathing, Bathing	
	Stackable	**Demountable**	Sitting	
		Stored up	Sitting	
	Collapsible	**Horizontal**	Eating – Drinking, Sunbathing	
		Vertical	Sleeping, Storage, Sitting, Watching TV	
		As a unit	Eating – Drinking, Sitting, Sunbathing	
	Transform	**Expand - Shrink**	Eating – Drinking, Sleeping, Sunbathing	
		Stretch - Shorten	Sitting, Sleeping, Sunbathing	
INVESTIGATED FUNCTIONS			Sitting, Eating – Drinking, Sleeping, Storage Watching TV, Sunbathing, Bathing, Lighting	
AMOUNT				

Chapter 4

CONCLUSION

This thesis was conducted to survey the solutions based on the flexibility concept at restricted mobile spaces that are yachts from a boat show. With several dimensions thirty motor & sailing boats and super yachts were handled in this survey to observe the differences according to sizes. This research has been demonstrated that yachts have large spectrum of flexible solutions that utilized in interior yacht spaces.

The research has concluded that flexibility is a proper solution to the limited mobile spaces in the case of being non-contextual. Accordingly, study has been investigated 23 types of flexible solutions within 27 types in the interior yacht spaces. Results put forward that flexible solutions affect interior of yachts at 10 conducive points and they are effective on 8 functions in interior yatch space.

Within the scope of the survey, it has been determined that small yachts have more flexible solution than the bigger yachts. The results showed that there are more flexible solutions in motor & sailing boats (155 findings) compared to the super yachts (136 findings). Foldable (81 finding) and movable systems (61 finding) were created more in motor & sailing boats. However, modular systems (24 finding) were created more in super yachts.

This research also proposed a unique and new categorization of the concept of flexibility that has been used thoroughly in the research. Hence, the cases were investigated in line with the proposed categorization and the results revealed under four parts such as modular systems, movable systems, foldable systems and other flexibility systems. As a result of the investigation foldable systems (140 findings) found to be the primary solutions; movable systems (114 findings) has the second and modular systems (36 findings) lesser compared to the other two systems. Moreover, no other system has been investigated in addition to the proposed categorization after field study.

The flexible solutions affect interior of yachts with varied conducive points. These systems can provide convenience to utilization; supply more function; ensure space saving; provide practical solutions, used to screen the private space, ensure flexible usage, provide security and supply easy usage on yacht interior spaces. In addition to this, these solutions can increase the user number and give service to more people. To sum up, yachts might have restricted interior space, in spite of this, these flexible solutions could provide more sufficient space.

Furthermore, research also investigated the role and significance of flexible solutions in various sizes of yatchs. Accordingly, it has been determined that there are more flexible solutions in smaller yatchs compared to the bigger yatchs however there are more diversity of flexible solutions in bigger yatchs than smaller yatchs. (Smaller yatchs which are motor & sailing boats, have 20 kind of flexible solutions however; bigger yatchs which are super yachts have 21 kind of flexible solutions).

Below charts presents the results of flexible systems at motor & sailing boats interior spaces.

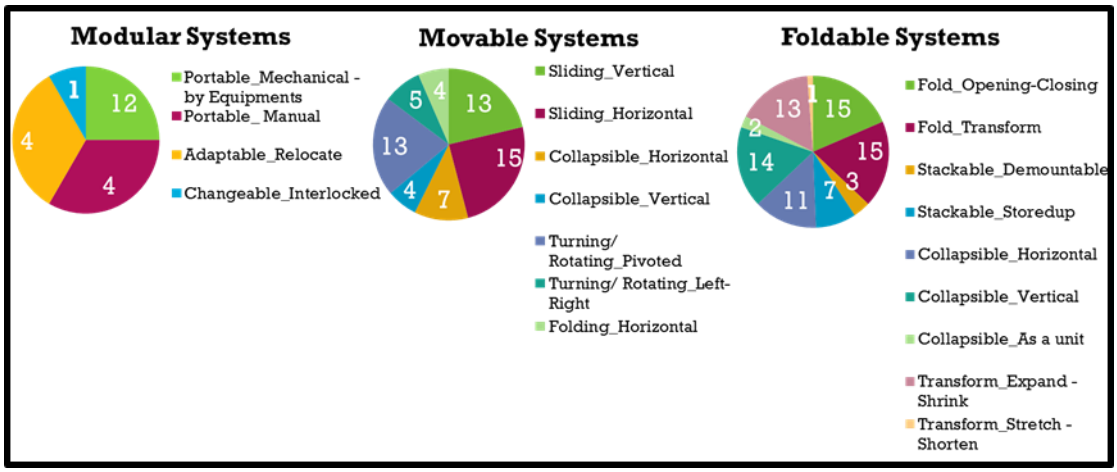


Figure 134: Results of flexible systems at motor & sailing boats interior spaces (prepared by author)

Below charts presents the results of flexible systems at super yatch interior spaces.

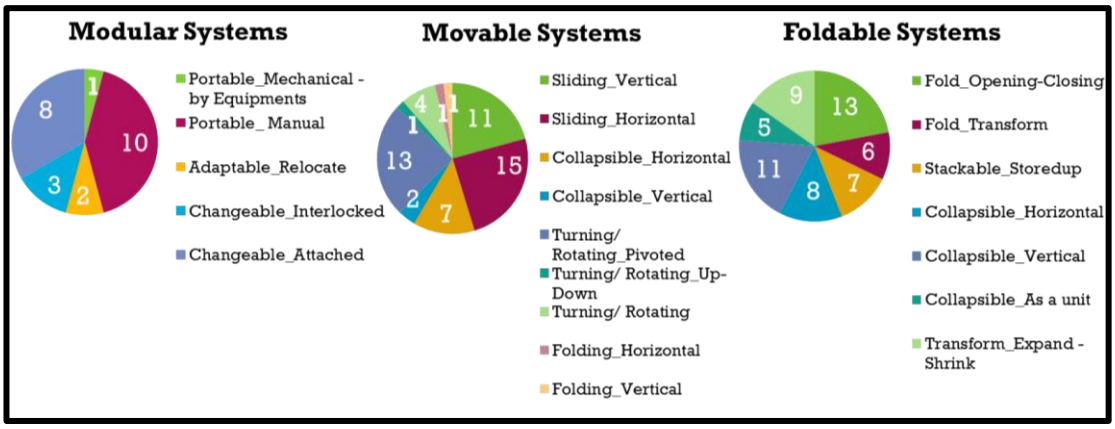


Figure 135: Results of flexible systems at super yatch interior spaces (prepared by author)

On the other hand, the detailed investigation of different cases concluded with flexible approaches that are effective on various functions such as sitting, eating – drinking, sleeping, storage, watching TV, sunbathing, lighting and bathing.

This survey was carried out at yatch interior spaces, however, the proposed categorization of flexibility could also be used to investigate flexibility concept on the other 25 categories of mobile space that are grouped as life space; social – cultural – administration – health and educational space; spaces that using for scientific purpose.

In the further studies, the flexible solutions could be investigated on the other mobile space to see the differences and similarities. Moreover, these solutions might be examined on stabile spaces such as small offices, small houses or any other restricted utilization areas. Else, the flexible solutions could be investigated on the public areas if there existing or not.

This survey might also be used by the various researches and design students who study related with the concept of flexibility or mobility concept.

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APPENDIX

Appendix A: Description Preliminary Inventory Sheets

Preliminary Inventory Sheet — Cs_1

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER

PLANs & ELEVATION	PHOTOs	FINDING FLEXIBLE ISSUEs	
Elevation	Elevation	**Modular Systems**	**Movable Systems**
		• Portable	• Sliding
		✓ Mechanical - by Equipments	✓ Vertical
		✓ Manual	✓ Horizontal
		• Adaptable	• Collapsible
		✓ Distribute- Assemble	✓ Horizontal
Flydeck	Flydeck	✓ Relocate	✓ Vertical
		• Changeable	• Turning & Rotating
		✓ Telescopic	✓ Pivoted
		✓ Interlocked	✓ Up - Down
		✓ Attached	✓ Left - Right
		• Collapsible	• Folding
		✓ As a furniture	✓ Horizontal
		✓ As a space	✓ Vertical
Deck	Deck	**Foldable Systems**	**Other Flexible Systems**
		• Fold	
		Opening – Closing	
		Transform	
		• Stackable	
		Demountable	
		Stored up	
Lower Deck	Lower Deck	• Transform	
		Expand - Shrink	
		Stretch - Shorten	
		• Collapsible	
		Horizontal	
		Vertical	
		As a unit	

Examples of Inventory Sheet belonging to Research Study

Inventory sheets at the following represent the detailed informations of the yachts.

These yachts are like below;

Cs $_1$: Monterey 295 SCR

Cs $_2$: Austin Parker 42 Open

Cs $_3$: Bavaria Virtess 420 Fly

Cs $_4$: Bavaria Vision 46

Cs $_5$: Elan Impression 494

Cs $_6$: Azimut 48

Cs $_7$: Atlantis 48 (Angel)

Cs $_8$: Princess 52 (Güle Güle)

Cs $_{9}$: Oceanis 55 New

Cs $_{10}$: Hanse 575 (Willeam)

Cs $_{11}$: Sense 55

Cs $_{12}$: Jeanneau 57

Cs $_{13}$: Prestige 550s

Cs $_{14}$: Oceanis 58

Cs $_{15}$: Atlantis 58 (Sweet Escape)

Cs $_{16}$: Azimut 64

Cs $_{17}$: Manhattan 63

Cs $_{18}$: MCY 70

Cs $_{19}$: MCY 76

Cs $_{20}$: Anemos 78

Cs $_{21}$: Princess 82 (Flying Foxtrot)

Cs $_{22}$: Aquatheraphy

Cs $_{23}$: Ilios

Cs $_{24}$: Darwin

Cs $_{25}$: Merlin 100

Cs $_{26}$: Numarine 102 RPH

Cs $_{27}$: Mengi Yay Reniapol

Cs $_{28}$: Sunseeker 115 Sport

Cs $_{29}$: Mengi Yay Kıvırcık

Cs $_{30:}$ Vay

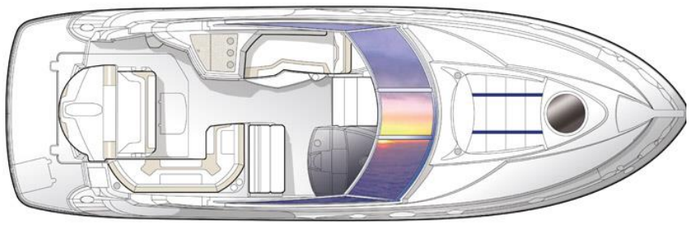
Preliminary Inventory Sheet

Cs_1

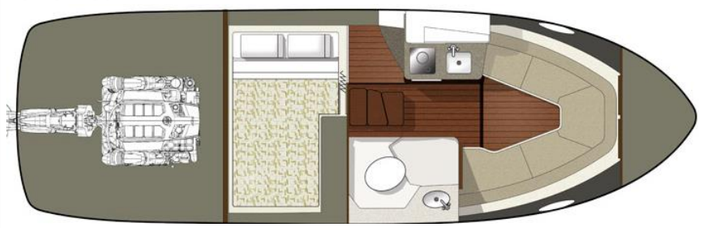
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Monterey 295 SCR	Monterey	ADT Marine Group	America	Motor Boat	8,8 m & 2,8 m	2	1+1

PLANs& ELEVATION

Deck



LowerDeck



PHOTOs

Elevation

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten	*	
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

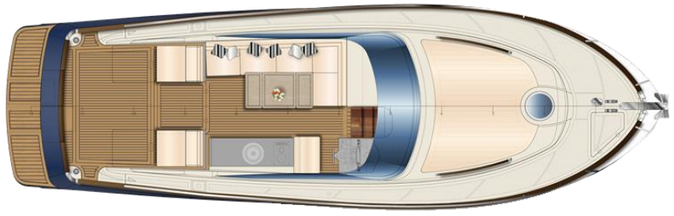
Cs_2

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Austin Parker 42 Open	Austin Parker	Solo Deniz Yatçılık LTD. ŞTİ.	Italy	Motor Boat	12,5 m & 3,96 m	2	2+1

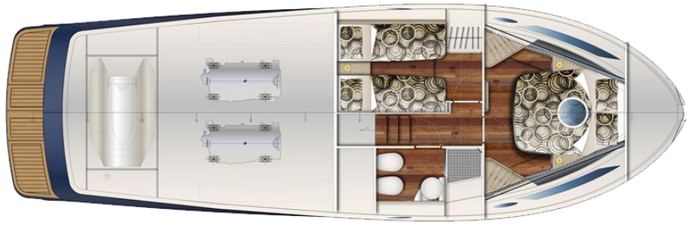
PLANs& ELEVATION

Elevation

Deck



LowerDeck



PHOTOs

Elevation

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink		
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

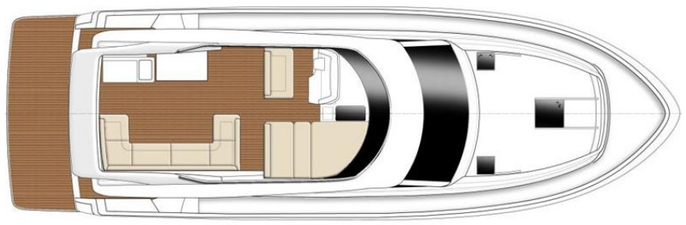
Cs_3

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Bavaria Virtess 420 Fly	BavariaYachts	Gena Tuizm Yatçılık LTD. ŞTİ.	Germany	Motor Boat	13,6 m & 4,21 m	2 + 1	3+1

PLANs& ELEVATION

Elevation

Flydeck



Deck

LowerDeck

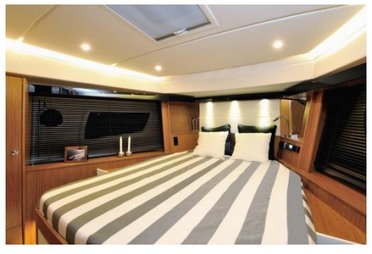
PHOTOs

Elevation

Flydeck

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments	*	✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate	*	✓ Vertical	*
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit		

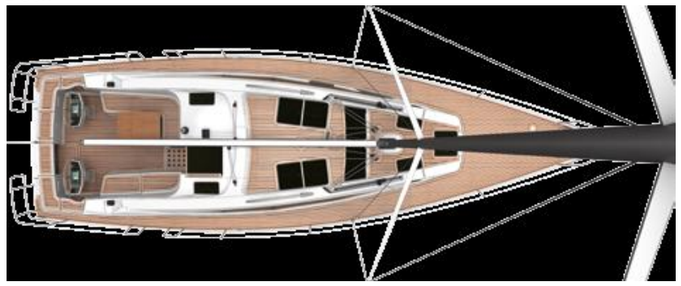
Preliminary Inventory Sheet

Cs_4

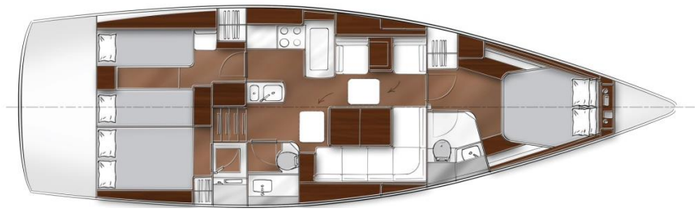
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Bavaria Vision 46	Bavaria Yachts	Gena Tuizm Yatçılık LTD. ŞTİ.	Germany	Sailing Boat	14,27 m & 4,35 m	2	3+1

PLANs& ELEVATION

Deck



LowerDeck

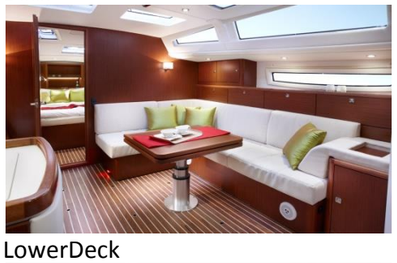


PHOTOs

Elevation

Flydeck

Deck



LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

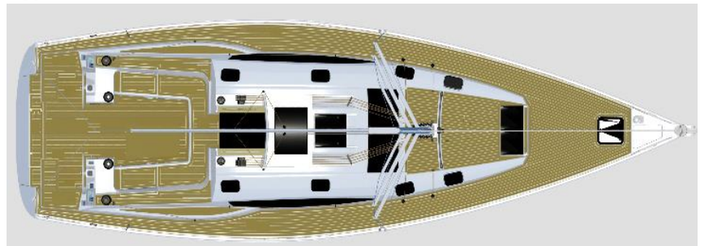
Preliminary Inventory Sheet

Cs_5

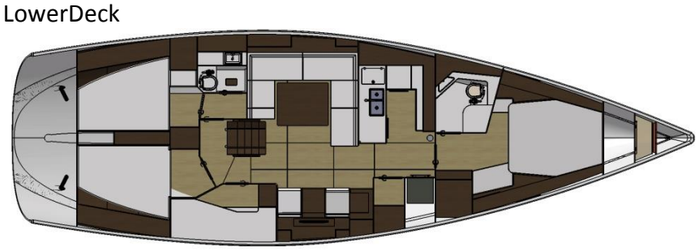
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Elan Impression 494	Elan	Solo Deniz Yatçılık Ltd. Şti.	Slovenia	Sailing Boat	14,85 m & 4,68 m	2	4+1

PLANs& ELEVATION

Deck



LowerDeck

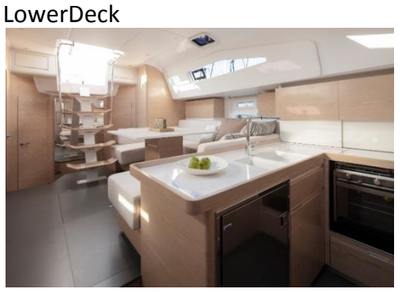


PHOTOs

Elevation

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate	*	✓ Vertical	*
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs_6

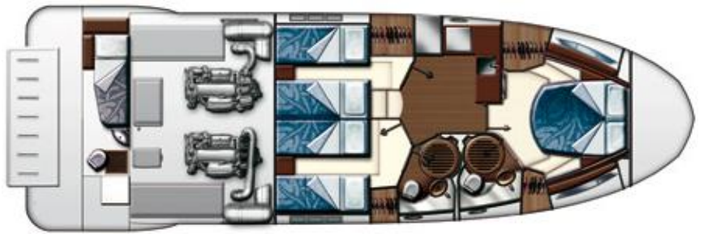
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Azimut 48	Azimut	Sirena Marine	Italy	Motor Boat	14,9 m & 4,5 m	2 + 1	3+1

PLANs& ELEVATION

Flydeck

Deck

Lower Deck



PHOTOs

Elevation

Flydeck

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	*
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical		
✓ As a unit	*	

Preliminary Inventory Sheet

Cs_7

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Atlantis 48 (Angel)	Azimut / Benetti Group	Concept Marine (Konsept Deniz Yatırımları ve Enerji Sistemleri A.Ş.)	Italy	Motor Boat	15,96 m & 4,42 m	2	2+1

PLANs& ELEVATION

Deck

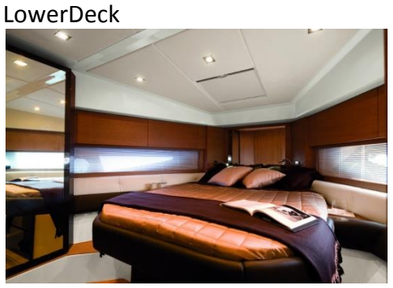
LowerDeck

PHOTOs

Elevation

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit	*	

Preliminary Inventory Sheet

Cs_8

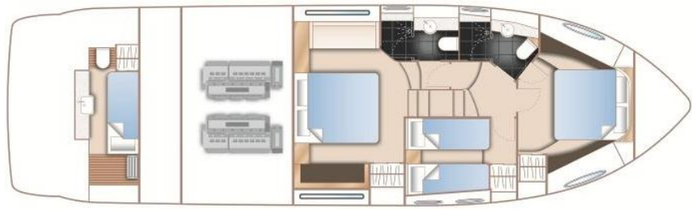
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Princess 52 (Güle Güle)	Princess Yachts	Alfabeta Marine Group	England	Motor Boat	16,66 m & 4,75 m	2 + 1	3+1

PLANs& ELEVATION

Flydeck

Deck

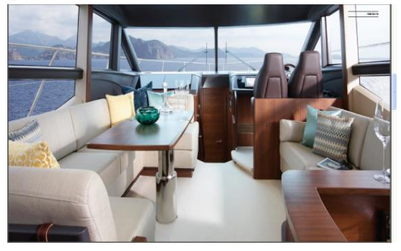
LowerDeck



PHOTOs

Elevation

Deck



LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate	*	✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

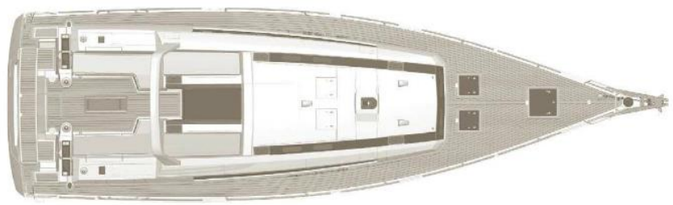
Cs9

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Oceanis 55 New	Beneteau	Tezmarin Turizm ve Ticaret A.Ş.	France	Sailing Boat	16,78 m & 4,96 m	2	3+1

PLANs& ELEVATION

Elevation

Deck



Lower Deck

PHOTOs

Elevation

Deck

Lower Deck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments	*	✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate	*	✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit		

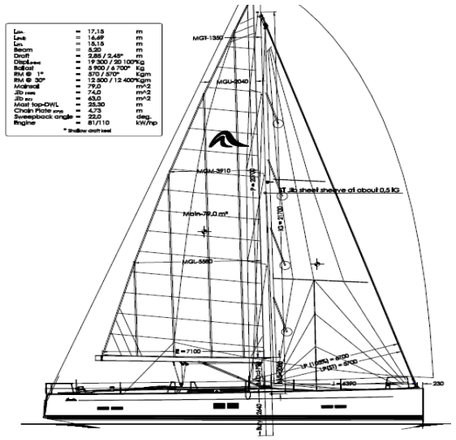
Preliminary Inventory Sheet

Cs10

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Hanse 575 (Willeam)	Trio	Trio Deniz Araçları LTD. ŞTİ.	Germany	Sailing Boat	17,15 m & 5,2 m	2	3 + 1

PLANs& ELEVATION

Elevation



Deck

LowerDeck

PHOTOs

Elevation

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	*
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink		
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs11

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Sense 55	Beneteau	Tezmarin Turizm ve Ticaret A.Ş.	France	Sailing Boat	17,2 m & 4,97 m	2	3+1

PLANs& ELEVATION

Elevation

Deck

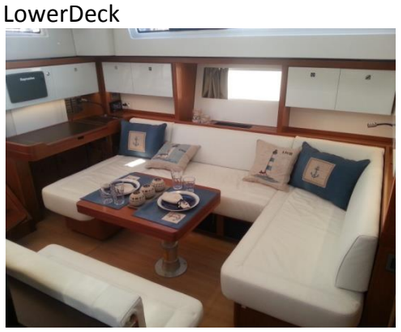
LowerDeck

PHOTOs

Elevation

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable	*	
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs12

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Jeanneau 57	Jeanneau	Top Leisure Yat Şatış ve Servis AŞ.	France	Sailing Boat	17,78 m & 5 m	2	3+1

PLANs& ELEVATION

Elevation

Deck

LowerDeck

PHOTOs

Elevation

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	*
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable	*	
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

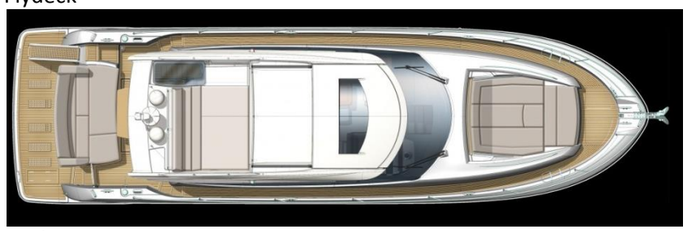
Cs13

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Prestige 550s	Prestige	Karina Yatçılık	France	Motor Boat	17,92 m & 4,79 m	2 + 1	3+1

PLANs& ELEVATION

Elevation

Flydeck



Deck

LowerDeck

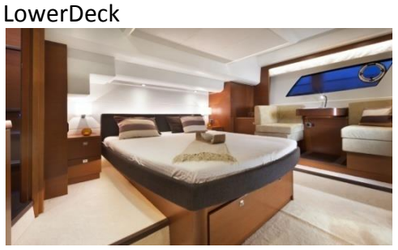
PHOTOs

Elevation

Flydeck

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	*
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs14

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Oceanis 58	Beneteau	Tezmarin Turizm ve Ticaret A.Ş.	France	Sailing Boat	18,24 m & 4,99 m	2	3+1

PLANs& ELEVATION

Elevation

Deck

LowerDeck

PHOTOs

Elevation

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments	*	✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked	*	✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	*
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable	*	
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs15

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Atlantis 58 (Sweet Escape)	Azimut / Benetti Group	Concept Marine (Konsept Deniz Yatırımları ve Enerji Sistemleri A.Ş.)	Italy	Motor Boat	18,9 m & 4,85 m	2	3+1

PLANs& ELEVATION

Deck

LowerDeck

PHOTOs

Elevation

Deck

LowerDeck

Main Cabin

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	*
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

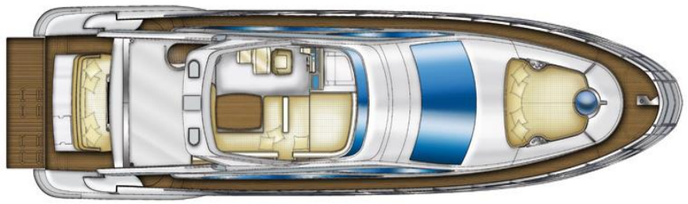
Preliminary Inventory Sheet

Cs16

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Azimut 64	Azimut	Sirena Marine	Italy	Motor Yacht (Super Yacht)	20,15 m & 5,06 m	2 + 1	3+1

PLANs& ELEVATION

Flydeck



Deck

LowerDeck

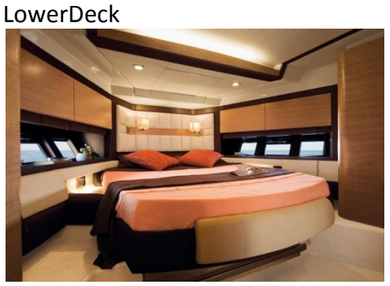
PHOTOs

Elevation

Flydeck

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached	*	✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform		
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink		
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit	*	

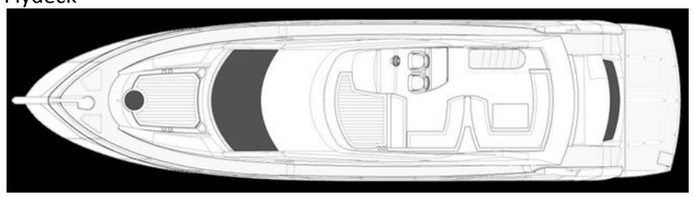
Preliminary Inventory Sheet

Cs17

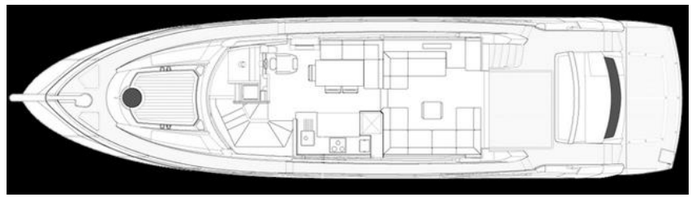
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Manhattan 63	Sunseeker	Sunseeker London LTD. Türkiye İrtibat Bürosu	England	Motor Yacht (Super Yacht)	21,07 m & 5,13 m	2 + 1	4+1

PLANs& ELEVATION

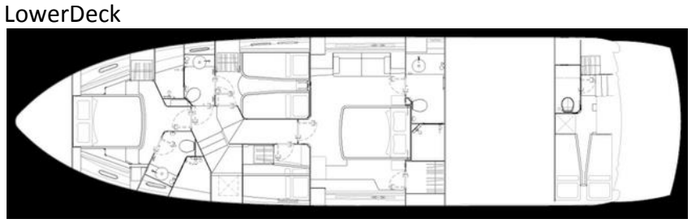
Flydeck



Deck



LowerDeck



PHOTOs

Elevation

Flydeck

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked	*	✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform		
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

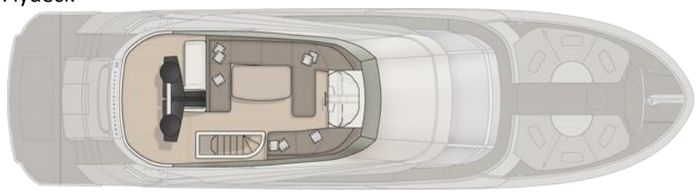
Preliminary Inventory Sheet

Cs18

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	MCY 70	Monte Carlo Yachts	Tezmarin Turizm ve Ticaret A.Ş.	Italy	Motor Yacht (Super Yacht)	21,3 m & 5,42 m	2 + 1	4+1

PLANs& ELEVATION

Flydeck



Deck

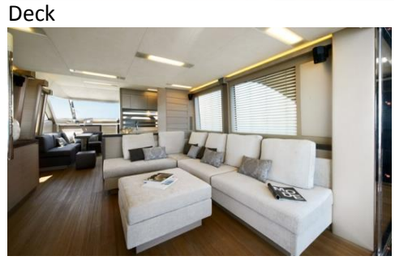
LowerDeck

PHOTOs

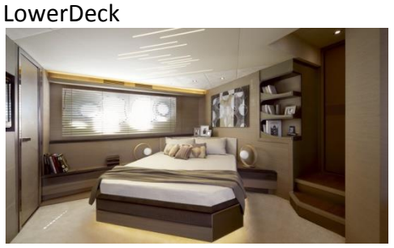
Elevation

Flydeck

Deck



LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate	*	✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

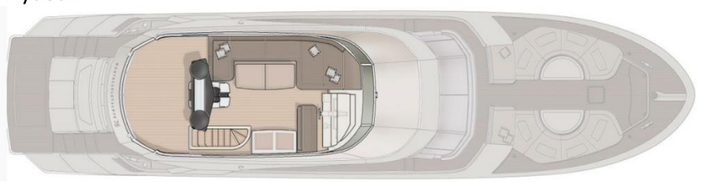
Preliminary Inventory Sheet

Cs19

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	MCY 76	Monte Carlo Yachts	Tezmarin Turizm ve Ticaret A.Ş.	Italy	Motor Yacht (Super Yacht)	23,05 m & 5,65 m	2 + 1	4+1

PLANs& ELEVATION

Flydeck



Deck

LowerDeck

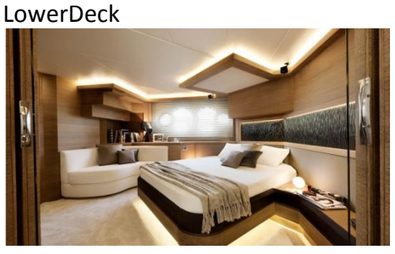
PHOTOs

Elevation

Flydeck

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	*
✓ Attached	*	✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs20

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Anemos 78	Huzur Yacht	Huzur Yacht	Turkey	Motor Yacht (Super Yacht)	24 m & 6,2 m	2 + 1	4+2

PLANs& ELEVATION

Drawings are not available in the examined documents.

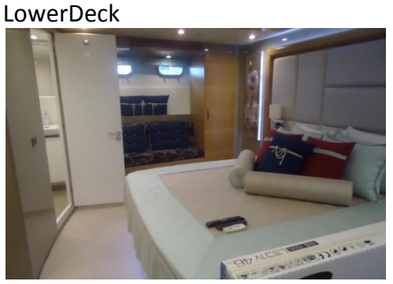
PHOTOs

Elevation

Flydeck

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	*

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform		
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink		
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit	*	

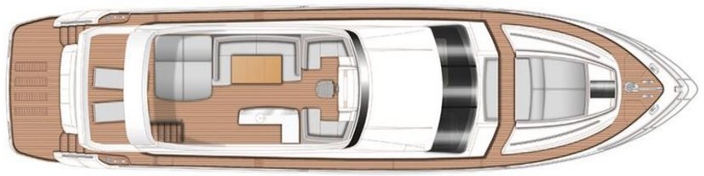
Preliminary Inventory Sheet

Cs21

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Princess 82 (Flying Foxtrot)	Princess Yachts	Alfabeta Marine Group	England	Motor Yacht (Super Yacht)	25,5 m & 5,74 m	2 + 1	4+2

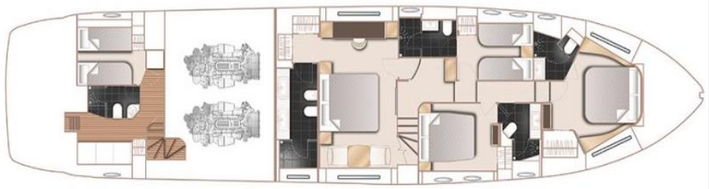
PLANs& ELEVATION

Flydeck



Deck

LowerDeck



PHOTOs

Elevation

Flydeck

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	*
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform		
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical		
✓ As a unit		

Preliminary Inventory Sheet

Cs_{22}

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Aquatheraphy	Nomos Yachts	Nomos Denizcilik	Turkey	Motor Yacht (Super Yacht)	26,6 m & 6,29 m	2 + 1	4+2

PLANs& ELEVATION

Drawings are not available in the examined documents.

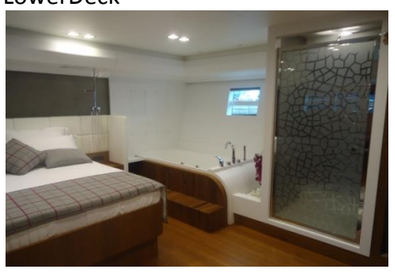
PHOTOs

Elevation

Flydeck

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached	*	✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical		
✓ As a unit	*	

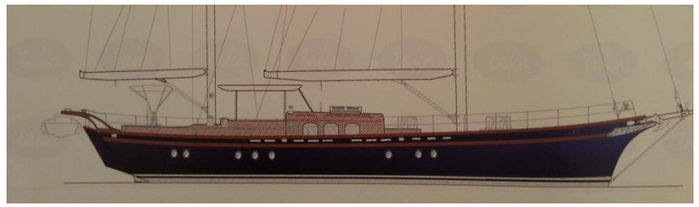
Preliminary Inventory Sheet

Cs23

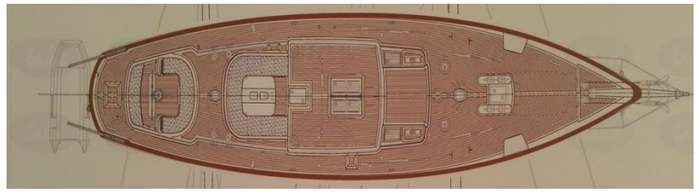
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Ilios	Su Marine	Su Marine Yat San. Ve Tic. LTD. ŞTİ.	Turkey	Sailing Yacht (Super Yacht)	27,3 m & 5,8 m	2	4+1

PLANs& ELEVATION

Elevation



Deck



LowerDeck

PHOTOs

Elevation

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	
✓ Manual		✓ Horizontal	
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

Preliminary Inventory Sheet

Cs24

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Darwin	Su Marine	Su Marine Yat San. ve Tic. LTD. ŞTİ.	Turkey	Motor Yacht (Super Yacht)	28,5 m & 6,4 m	2+1	6+1

PLANs& ELEVATION

Elevation

Flydeck

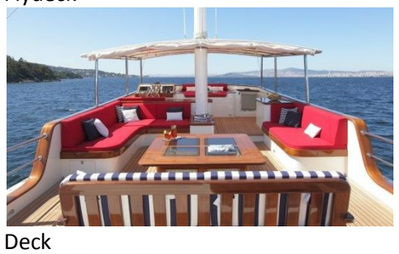
Deck

LowerDeck

PHOTOs

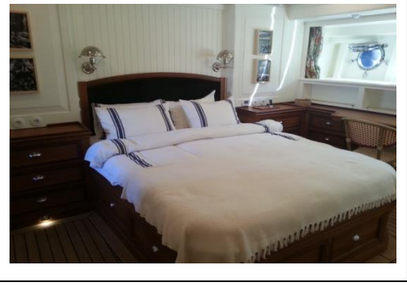
Elevation

Flydeck



Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate	*	✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	*
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		

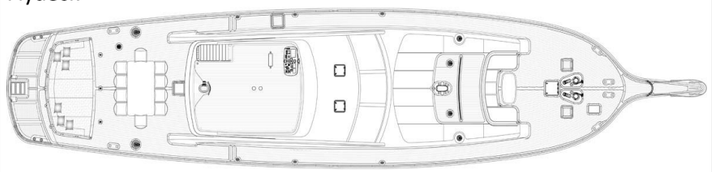
Preliminary Inventory Sheet

Cs25

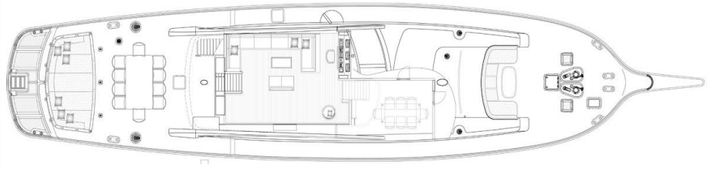
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Merlin 100	Merlin Yachts	Karataş Yacht Design LTD.	Turkey	Sailing Yacht (Super Yacht)	30,45 m & 7,56 m	2+1	4+1

PLANs& ELEVATION

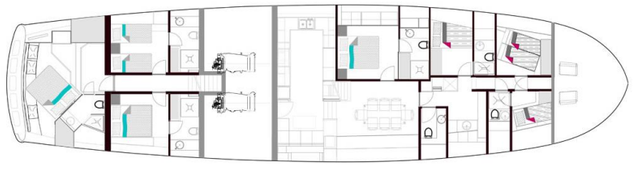
Flydeck



Deck



LowerDeck

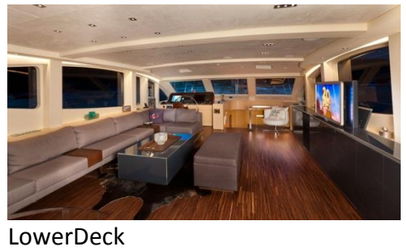


PHOTOs

Elevation

Flydeck

Deck



LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual		✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	*
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached		✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform		
• **Stackable**		
✓ Demountable		
✓ Stored up	*	
• **Transform**		
✓ Expand - Shrink		
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical	*	
✓ As a unit	*	

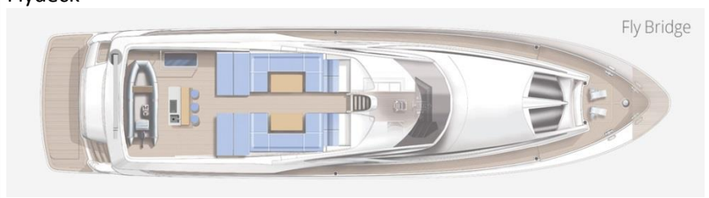
Preliminary Inventory Sheet

Cs$_{26}$

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Numarine 102 RPH	Numarine	Numarine Yachts	Turkey	Motor Yacht (Super Yacht)	31,08m & 7,10 m	2+1	4+1

PLANs& ELEVATION

Flydeck



Deck

LowerDeck

PHOTOs

Elevation

FlyDeck

Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	*
✓ Manual	*	✓ Horizontal	*
• **Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked		✓ Up - Down	
✓ Attached	*	✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing		
✓ Transform		
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink		
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal		
✓ Vertical		
✓ As a unit		

Preliminary Inventory Sheet

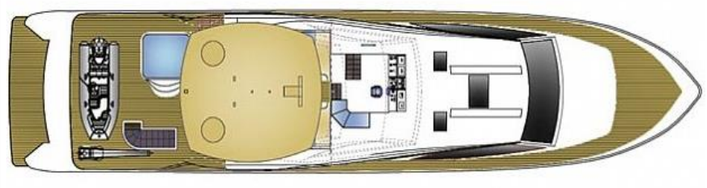
Cs27

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Mengi Yay Reniapol	Mengi Yay	Mengi Yay Yachts	Turkey	Motor Yacht (Super Yacht)	32 m & 7,05 m	2+1	5+2

PLANs& ELEVATION

Elevation

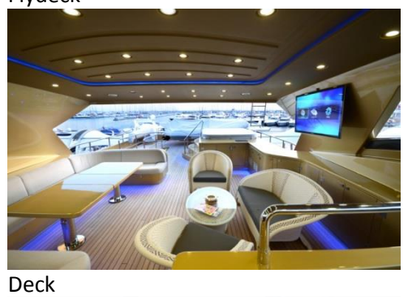
Flydeck



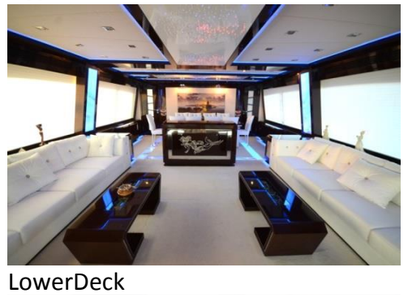
PHOTOs

Elevation

Flydeck



Deck



LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems

• **Portable**	
✓ Mechanical - by Equipments	
✓ Manual	*
• **Adaptable**	
✓ Distribute- Assemble	
✓ Relocate	
• **Changeable**	
✓ Telescopic	
✓ Interlocked	
✓ Attached	*
• **Collapsible**	
✓ As a furniture	
✓ As a space	

Movable Systems

• **Sliding**	
✓ Vertical	*
✓ Horizontal	*
• **Collapsible**	
✓ Horizontal	*
✓ Vertical	
• **Turning & Rotating**	
✓ Pivoted	*
✓ Up - Down	
✓ Left - Right	*
• **Folding**	
✓ Horizontal	
✓ Vertical	

Foldable Systems

• **Fold**	
✓ Opening – Closing	
✓ Transform	
• **Stackable**	
✓ Demountable	
✓ Stored up	
• **Transform**	
✓ Expand - Shrink	
✓ Stretch - Shorten	
• **Collapsible**	
✓ Horizontal	
✓ Vertical	
✓ As a unit	

Other Flexible Systems

No Any Finding.

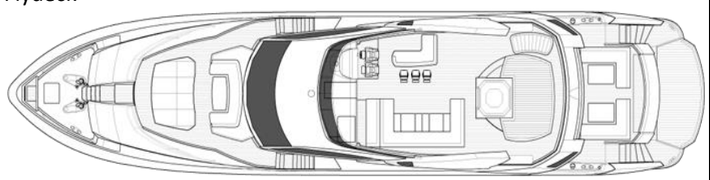
Preliminary Inventory Sheet

Cs28

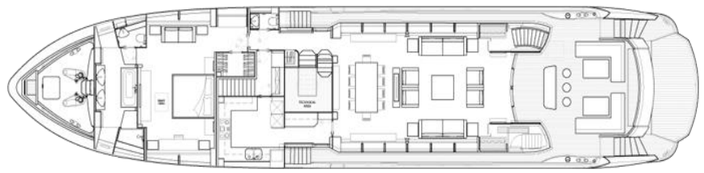
PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Sunseeker 115 Sport	Sunseeker	Sunseeker London	London	Motor Yacht (Super Yacht)	34,5 m & 7,39 m	2+1	5+2

PLANs& ELEVATION

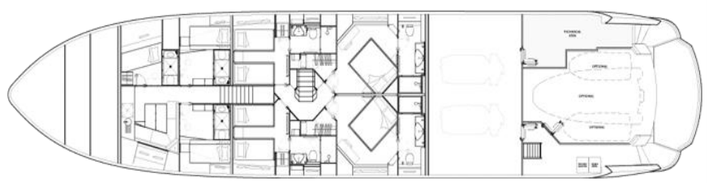
Flydeck



Deck



Lower Deck



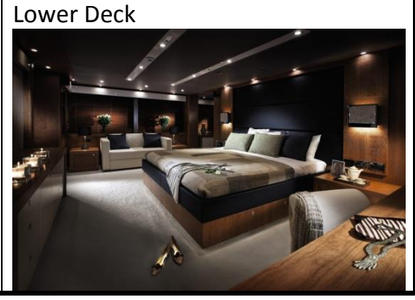
PHOTOs

Elevation

FlyDeck

Deck

Lower Deck



FINDING FLEXIBLE ISSUEs

Modular Systems

• **Portable**	
✓ Mechanical - by Equipments	*
✓ Manual	
• **Adaptable**	
✓ Distribute- Assemble	
✓ Relocate	
• **Changeable**	
✓ Telescopic	
✓ Interlocked	
✓ Attached	*
• **Collapsible**	
✓ As a furniture	
✓ As a space	

Movable Systems

• **Sliding**	
✓ Vertical	*
✓ Horizontal	*
• **Collapsible**	
✓ Horizontal	
✓ Vertical	
• **Turning & Rotating**	
✓ Pivoted	
✓ Up - Down	
✓ Left - Right	
• **Folding**	
✓ Horizontal	*
✓ Vertical	

Foldable Systems

• **Fold**	
✓ Opening – Closing	*
✓ Transform	
• **Stackable**	
✓ Demountable	
✓ Stored up	
• **Transform**	
✓ Expand - Shrink	*
✓ Stretch - Shorten	
• **Collapsible**	
✓ Horizontal	*
✓ Vertical	*
✓ As a unit	

Other Flexible Systems

No Any Finding.

Preliminary Inventory Sheet

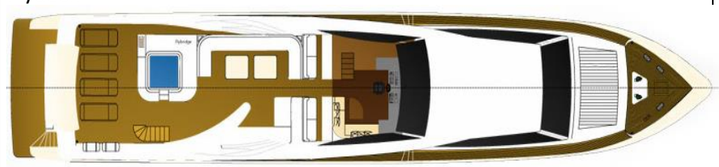
Cs29

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Mengi Yay Kıvırcık	Mengi Yay	Mengi Yay Yachts	Turkey	Motor Yacht (Super Yacht)	37,49 m & 7,30 m	2+1	5+2

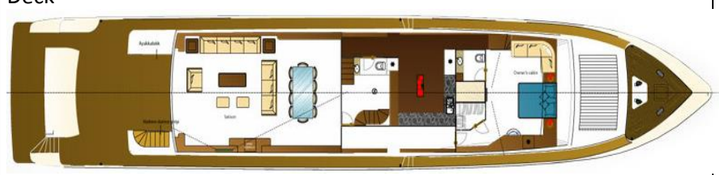
PLANs& ELEVATION

Elevation

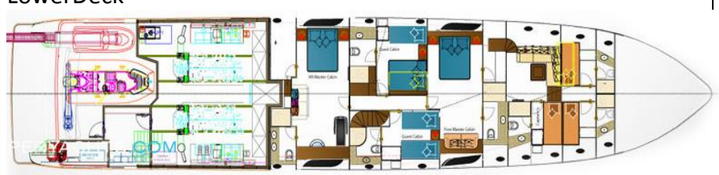
Flydeck



Deck



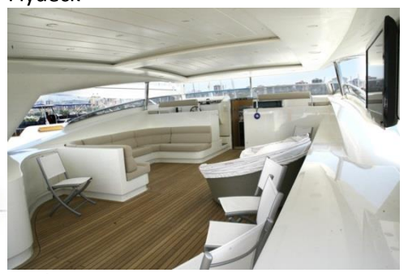
LowerDeck



PHOTOs

Elevation

Flydeck



Deck

LowerDeck

FINDING FLEXIBLE ISSUEs

Modular Systems

• **Portable**	
✓ Mechanical - by Equipments	
✓ Manual	*
• **Adaptable**	
✓ Distribute- Assemble	
✓ Relocate	
• **Changeable**	
✓ Telescopic	
✓ Interlocked	*
✓ Attached	*
• **Collapsible**	
✓ As a furniture	
✓ As a space	

Movable Systems

• **Sliding**	
✓ Vertical	
✓ Horizontal	
• **Collapsible**	
✓ Horizontal	
✓ Vertical	
• **Turning & Rotating**	
✓ Pivoted	*
✓ Up - Down	
✓ Left - Right	
• **Folding**	
✓ Horizontal	
✓ Vertical	

Foldable Systems

• **Fold**	
✓ Opening – Closing	*
✓ Transform	
• **Stackable**	
✓ Demountable	
✓ Stored up	*
• **Transform**	
✓ Expand - Shrink	
✓ Stretch - Shorten	
• **Collapsible**	
✓ Horizontal	
✓ Vertical	*
✓ As a unit	*

Other Flexible Systems

No Any Finding.

Preliminary Inventory Sheet

Cs30

PHOTO	NAME OF THE YACHT	BRAND	RESPONSIBLE FIRM	COUNTRY	TYPE	LENGHT & WIDTH	STOREY NUMBER	CABIN NUMBER
	Vay	Su Marine	Su Marine Yat San. Ve Tic. LTD. ŞTİ.	Turkey	Sailing Yacht (Super Yacht)	40,4 m & 8 m	2	5+1

PLANs& ELEVATION

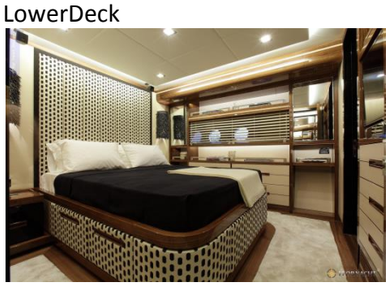
Drawings are not available in the examined documents.

PHOTOs

Elevation

Deck

LowerDeck



FINDING FLEXIBLE ISSUEs

Modular Systems		Movable Systems	
• **Portable**		• **Sliding**	
✓ Mechanical - by Equipments		✓ Vertical	
✓ Manual	*	✓ Horizontal	*
•**Adaptable**		• **Collapsible**	
✓ Distribute- Assemble		✓ Horizontal	*
✓ Relocate		✓ Vertical	
• **Changeable**		• **Turning & Rotating**	
✓ Telescopic		✓ Pivoted	*
✓ Interlocked	*	✓ Up - Down	
✓ Attached	*	✓ Left - Right	
• **Collapsible**		• **Folding**	
✓ As a furniture		✓ Horizontal	
✓ As a space		✓ Vertical	

Foldable Systems		Other Flexible Systems
• **Fold**		No Any Finding.
✓ Opening – Closing	*	
✓ Transform	*	
• **Stackable**		
✓ Demountable		
✓ Stored up		
• **Transform**		
✓ Expand - Shrink	*	
✓ Stretch - Shorten		
• **Collapsible**		
✓ Horizontal	*	
✓ Vertical	*	
✓ As a unit		