



İSTANBUL TEKNİK ÜNİVERSİTESİ  
ISTANBUL TECHNICAL UNIVERSITY

B/S/H/



B/S/H/ İŞBİRLİĞİYLE GELECEĞİN  
ÇAMAŞIR YIKAMA ÇÖZÜMLERİ  
LAUNDRY SOLUTIONS FOR FUTURE  
IN COLLABORATION WITH B/S/H/

# B/S/H/ İŞBİRLİĞİYLE GELECEĞİN ÇAMAŞIR YIKAMA ÇÖZÜMLERİ

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FUTURE IN COLLABORATION  
WITH B/S/H/



İSTANBUL TEKNİK ÜNİVERSİTESİ  
ENDÜSTRİ ÜRÜNLERİ TASARIMI BÖLÜMÜ

## B/S/H/

'BSH İşbirliğiyle Geleceğin Çamaşır Yıkama Çözümleri'  
'Laundry Solutions for Future in Collaboration with BSH'

EUT 319E Industrial Design Studio II & EUT 320E Industrial Design Studio III  
2018 - 2019 Bahar Dönemi / 2018 - 2019 Spring Semester

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# İSTANBUL TEKNİK ÜNİVERSİTESİ

## ENDÜSTRİ ÜRÜNLERİ TASARIMI BÖLÜMÜ

EUT 319E Industrial Design Studio II & EUT 320E Industrial Design Studio III

2018 - 2019 Bahar Dönemi

Yeni bir Yıkama Deneyimi için Çamaşır Makinesi Tasarımı

Bu proje İstanbul Teknik Üniversitesi, Endüstri Ürünleri Tasarımı Bölümü'nde 2018-2019 eğitim ve öğretim yılı Bahar döneminde EUT 319E Industrial Design Studio II ve EUT 320E Industrial Design Studio III dersleri kapsamında BSH Ev Aletleri San. ve Tic. A.Ş. iş birliğiyle yürütülmüştür. Toplam 29 öğrencinin dahil olduğu proje 14 hafta sürmüştür. Projede yakın gelecekteki olası yeni bir yıkama deneyiminin kurgulanması ve bu kurgunun içinde yer alacak çamaşır makinesinin tasarımı hedeflenmiştir.

19 Şubat 2019 tarihinde başlayan projenin ilk aşaması kapsamlı bir araştırma üzerine olmuştur. Öğrenciler gruplara ayrılmış ve aşağıdaki konu başlıkları hakkında detaylı inceleme yapmışlardır:

1. Mevcut ve gelecek hayat tarzları nelerdir?
2. Mevcut ve gelecek tekstil, giyim malzemeleri nelerdir (örnek: giyilebilir teknoloji)?
3. Çamaşır makinelerinde pazar araştırması
4. Akıllı ürünler ve nesnelerin interneti (IoT)
5. Farklı temizleme teknolojileri
6. Yıkama ve kurutmanın kültürel bağlamı
7. Tüketim nesnelerinin arayüzü ve etkileşimi
8. Sanayi 4.0 kapsamında AR / VR uygulamaları ve ürün tasarımı
9. Yıkama eyleminin tarihsel gelişimi

Öğrenci sunumlarıyla konuya girişin ardından, BSH'in Çerkezköy üretim tesislerine bir teknik gezi düzenlenmiştir. Bu gezi sayesinde çamaşır makinelerinin iç ve dış aksami, üretim ve montaj aşamaları hakkında detaylı bilgi edinilmiştir.

BSH firması yetkililerince üretim detayları, plastik enjeksiyon ve kalıplama gibi teknik konularda bilgi ve destek üzere Taşkıışla'da gerçekleşen teknik sunumun ardından BSH firmasından Sn. İlkbahar Topkaya öğrencilere projeden beklentileri daha detaylı olarak aktarmıştır.

Proje süreci üç adet ara jüri ve final jüriyi kapsamaktadır. Grup halindeki araştırma sunumlarından sonra öğrenciler bireysel olarak çalışmalarına devam etmişlerdir.

Bireysel çalışmanın ilk aşamasında öğrenciler olası gelecek senaryolarını değerlendirerek 2030 yılı için kullanıcı profillerini oluşturmuşlardır. Seçtikleri kullanıcı profillerini sundukları ilk ara jürinin ardından, tasarım problemlerini netleştirerek çözüm arayışlarına başlamışlardır. Biçim, malzeme, ergonomi, üretim detayları, kullanıcı arayüzleri, vb. çalışmalarla geçen ara jürilerin tamamına BSH katılımı sağlanmış ve projeler hakkında geri bildirim alınarak ilerleme fırsatı bulunmuştur.

28 Mayıs 2019 tarihinde İTÜ Endüstri Ürünleri Tasarımı Bölümü öğretim elemanları ve BSH firmasının farklı birimlerinden yetkililerinin katılımıyla gerçekleşen final değerlendirme jürisinde 20 adet proje detaylıca incelenmiştir. Geleceğe dair öngörüler, yıkama teknolojilerinde yenilikler, konut mekanlarında olası değişiklikler ışığında hazırlanan projeler 3 dakikalık video sunumlarla aktarılmıştır. Ortaya çıkan projeler arasında tambur ve kazan ilişkisinin yeniden ele alınması, çamaşır makinesi dış yüzeyinde farklı malzeme kullanımı, aynı anda yıkama ve kurutmanın daha modüler hale getirilmesi, çamaşır makinesinin hacminin azaltılmasına yönelik çalışmalar dikkat çekicidir.

Proje İTÜNOVA işbirliğinde tamamlanmıştır. Proje süresince BSH İnovasyon ve Teknoloji Yönetimi Müdürü Sn. Hasan Emrah Torun, İnovasyon ve Teknoloji Yönetimi biriminden Sn. Esra Gökçe, Çamaşır Bakımı Ürün Grubu biriminden Sn. İlkbahar Topkaya destek vermişlerdir.

Başarılı ve verimli geçen çalışmamız için BSH Ev Aletleri San. ve Tic. A.Ş. firmasına teşekkür eder, iş birliğimizin devamını dileriz.

İTÜ Proje Ekibi:

Prof. Dr. Şebnem Timur  
Öğr. Gör. Dr. L.N. Ece Arıburun Kırca  
Misafir Öğr. Gör. Seyman Çay  
Araş. Gör. Güzide Güzelbey Esengün  
Araş. Gör. Ahmet Hamurcu

BSH Ev Aletleri San. ve Tic. A.Ş Ekibi:

Hasan Emrah Torun (BSH İnovasyon ve Teknoloji Yönetimi Müdürü)  
İlkbahar Topkaya (Çamaşır Bakımı Ürün Grubu)  
Esra Gökçe (İnovasyon ve Teknoloji Yönetimi)



# İSTANBUL TEKNİK ÜNİVERSİTESİ

## ENDÜSTRİ ÜRÜNLERİ TASARIMI BÖLÜMÜ

EUT 319E Industrial Design Studio II & EUT 320E Industrial Design Studio III

2018 - 2019 Spring Semester

Washing Machine Design for a New Washing Experience

This Project has been carried out with the collaboration of Istanbul Technical University, Industrial Design Department and BSH Home Appliances Corporation in 2018-2019 Spring semester of EUT 319E Industrial Design Studio II & EUT 320E Industrial Design Studio III undergraduate studio courses. The project, which lasted for 14 weeks, included a total of 29 students, aimed at constructing a possible new washing experience in the near future and designing the washing machine to be included in this scenario.

The first phase of the project, which started on 19 February 2019, focused on extensive research. The students were divided into groups and examined in detail on the following topics:

1. Existing and Future Lifestyles
2. Existing and Future Textiles, Clothing (i.e. wearable technologies)
3. Brand Research on Washing Machines and Benchmarking
4. Smart Products, Internet of Things (IoT)
5. Different Cleaning Technologies
6. Cultural Aspects of Washing and Laundry
7. Interfaces and Interactions in Consumer Objects
8. AR and VR applications in industry 4.0 and product design
9. History and Development of Washing

Following the introduction with the student presentations, a technical trip to BSH's Çerkezköy production facilities was organized. With the help of this trip students were able to obtain detailed information about the internal and external components of washing machines, production and assembly stages.

After the technical presentation held in Taşkıışla by BSH officials in order to provide information and support on technical issues such as production details, plastic injection and molding, Mrs. İlkbahar Topkaya (official from BSH Product Group Laundry Care - Roadmap & Innovation) conveyed the expectations from the project to the students in more detail.

The project process consists of three midterm and final juries. After the group presentations, students continued to work individually.

In the first phase of the individual study, students created user profiles for the year 2030 by evaluating possible future scenarios.

After the first pre-jury presenting their chosen user profiles, they started to search for solutions by clarifying their design problems. BSH participated in all of the pre-juries through the studies and provided the opportunity to progress by getting feedback about the projects. Studies upon form analysis, material searches, ergonomics, production details, user interfaces, and so on continued during pre-juries.

On 28 May 2019, 20 projects were examined in detail in the final evaluation jury with the participation of İTU Industrial Design Department faculty members and officials from different departments of BSH company. The projects prepared under the predictions of the future, innovations in washing technologies and possible changes in residential spaces were conveyed in 3-minute video presentations. Among the final projects, re-consideration of the drum and boiler relationship, the use of different materials on the outer surface of the washing machine, making the washing and drying more modular at the same time, the efforts to reduce the volume of the washing machine is quite remarkable.

The project was completed in cooperation with İTÜNOVA. During the Project BSH Innovation & Technology Management Senior Manager Mr. Hasan Emrah Torun, Mrs. Esra Gökçe from the same department, and Mrs. İlkbahar Topkaya from Product Group Laundry Care - Roadmap & Innovation had given continuous support.

We thank to BSH Home Appliances Corporation for our successful and productive cooperation and wish many future endeavors.

İTU Project Team:

Prof. Dr. Şebnem Timur  
Instr. Dr. L.N. Ece Arıburun Kırca  
Visiting Instr. Seyman Çay  
Res. Assist. Güzide Güzelbey Esengün  
Res. Assist. Ahmet Hamurcu

BSH Home Appliances Industry and Trade Inc. Team:

Hasan Emrah Torun (Senior Manager Innovation & Technology Management)  
İlkbahar Topkaya (Product Group Laundry Care - Roadmap & Innovation)  
Esra Gökçe (Innovation & Technology Management)



fu design concept

In my research, I saw that mechanization would increase in 2030 with the effect of Industry 4.0. As a result, I put forward the idea of furniture that people would use in their homes away from mechanization. Thanks to Fu's design, I enabled the houses to give a modern look and establish a relationship with the user.

*Yaptığım araştırmalarda 2030 yılında Endüstri 4.0 etkisiyle makineleşmenin çoğalacağını gördüm. Bunun sonucunda insanların evlerinde makineleşmeden uzakta kullanacağı bir mobilya fikrini ortaya koydum. Fu'nun tasarımı ile evlere modern bir görünüm vermesini ve kullanıcıyla ilişki kurmasını sağladım.*

USER SCENARIO



General feet approach in furnitures

An idea to create a furniture which is can be placed anywhere in the house.

**The Lid**  
Wooden part  
See through glass  
Display 7,9 inc  
Power button  
Automatically opens the lid

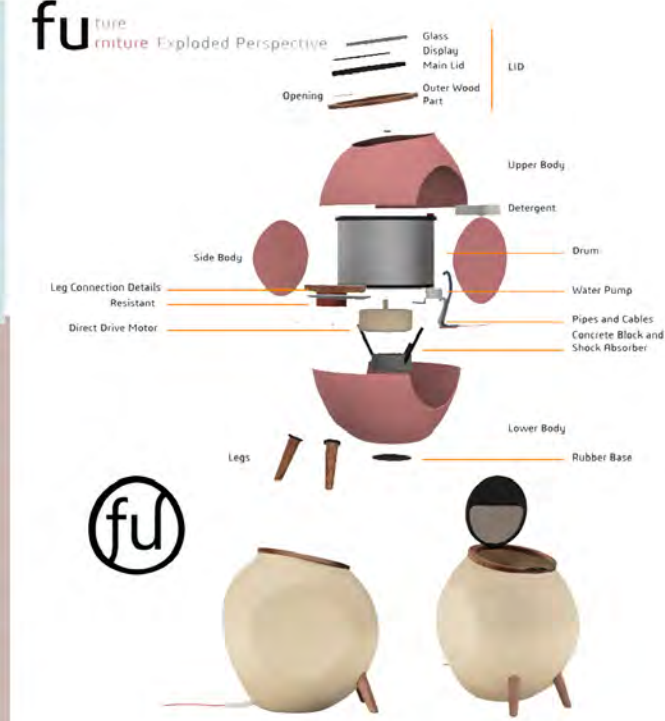
**Sound Problem**  
At the cutting-edge of laundry appliance design, Washi creates and manufactures world-leading washing machines and washer dryers. The latest pioneering laundry model to be designed at Washi City is the world's most silent washing machine. Operating at a barely audible 39dB sound level, this model is the quietest washing machine lavable.

**Materials**  
Stainless Steel (Drum)  
ABS (Inner parts)  
Metal Sheet (Body)  
Wooden (Legs and Outer Lid)

37 lt    5 kg    Washing Capacity

Legs

Connection details



DISPLAY FEATURES





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## Round It! Console design concept

ROUND IT! CONSOLE is designed for middle class people who lives alone in an apartment. With my design your laundry box will be your washer!

*ROUND IT! CONSOLE orta gelirli ve apartmanlarda tek başına yaşayan insanlar için tasarlandı. Tasarımım, kirlı sepetinizi çamaşır makinasına dönüştürüyor!*



### round it! console

concept

*your laundry box will be your washer!*

- small dimensions
- 4 kg
- suitable for single living person
- eliminates the need of laundry box and its potential space
- less steps in laundry process

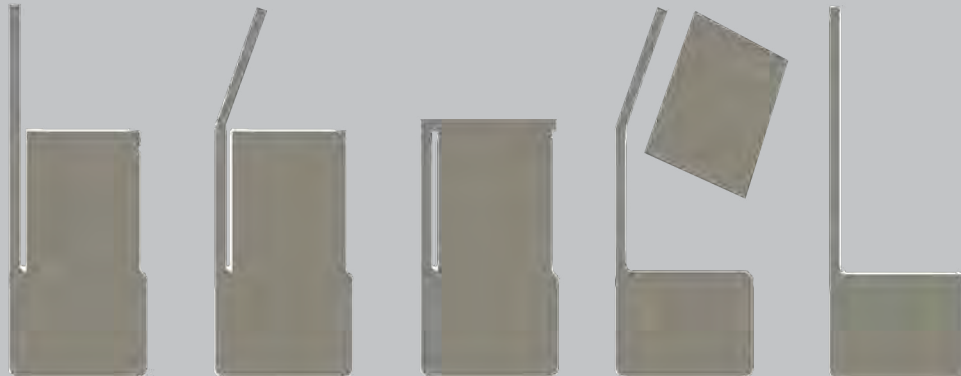
**console itself: where the system in**  
 -top cover can be moved towards up and down for easy access

**moveable drum:laundry box**  
 -the console will spin it when placed on  
 -drum can be considered as laundry box since it is removable

where laundry box will be placed in:  
 engine connection



## USER SCENARIO



## DISPLAY FEATURES



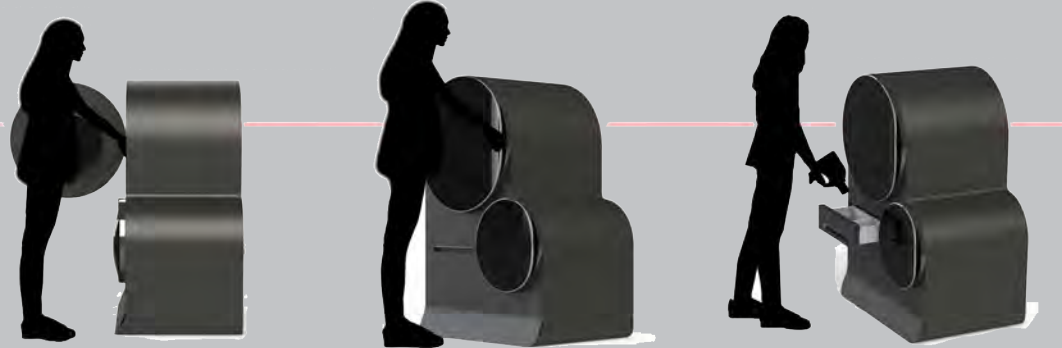


## Furry design concept

The research I did showed that in the year of 2030 pets will be seen as fur babies, pet ownership rates will be increased and pets will be seen more as persons. Based on the research Furry is designed to serve two users, the pet and the owner.

2030 yılı için araştırma yaptığımda forecastlerde evcil hayvan sahibi insan sayısının artması beklendiğini, evcil hayvanların daha çok insan olarak algılanacağını ve sahipleri tarafından bebek olarak görüleceklerini gördüm. Furry'yi evcil hayvan ve sahibi olacak şekilde iki kullanıcıya hitap edecek bir ürün olarak tasarladım.

### USER SCENARIO 1



**FURRY**  
A Washing Experience For You And Your Pet  
COLORED ORTHOGRAPHICS  
Scale 1/25



### USER RESEARCH



#### PROBLEMS



Pet owners have fur left inside drum, at door rubber and seal after washing cycles. They are concerned about the detergent residue left on toys

#### HABITS



Pet owners wash extra items which are; toys, collars, water and food bowls, pet clothes

### FORECAST



Increase in electric use and purchase of electrical accessories for pets and personalification



Growth of pet accessory market, people seeing their pets as more and more as a baby /family

### CONCEPT

A washing machine with a separate drum and detergent box, for washing pet clothes, beddings and toys, for pet owners of 2030.

### USER SCENARIO 2





## S-Wash design concept

My design concept is co-living. As my researches, number of people who share same house is changing between 4 to 10. One of the important problems in the co living house about the washing machine is maintenance of washing machine. I focused on this problem.

*Tasarım konseptim birlikte yaşamak. Araştırmamda, aynı evi paylaşan insan sayısı 4 ile 10 arasında değişiyor. Birlikte yaşayan kişiler için, evde çamaşır makinesi ile ilgili önemli sorunlardan biri de çamaşır makinesinin bakımı. Bu soruna odaklandım.*



## USER SCENARIO



### S-WASH / User Scenario (Maintenance)



Technician can repair S-WASH easily due to detachable side parts and front part.



Small parts in handles split main body with a little pressure.



With this component, S-WASH can be made mobilizable. Side part can be left from the wall. Additionally, under the machine can be cleaned easily due to parts that are high from ground.



S-WASH can also be controlled via the phone application. User can create own programs and color. This allows the machine to be customized by many people.



### BOSCH / S-WASH



Technical Details  
Capacity cotton(washing): 7.0 kg  
Capacity cotton(drying): 4.0 kg  
Drum volume: 58 l  
Net weight: 70 kg

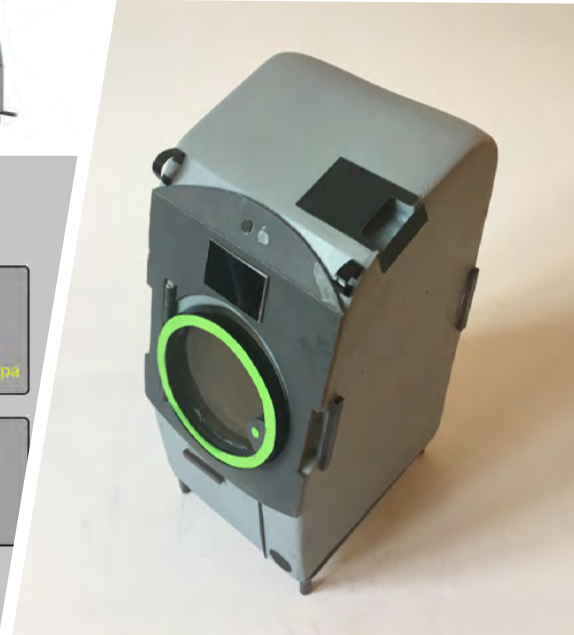
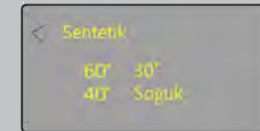
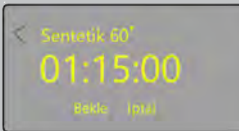
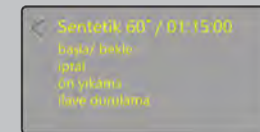
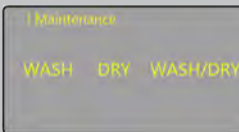
Specifications  
Easy maintenance  
Detergent box



Display card fault, filter clog, pump clog, pipe faults, problems about drum are easily fixed by user or technician.



## DISPLAY FEATURES





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## SENS design concept

I have found that people have to pile up their laundry just because they have to sort them by color, textile or usage. So I designed SENS for people that live in 2030 will not experience existing problems. SENS provides to users more than one compartment to pile up their laundry as they like.

Araştırmalarımda kullanıcıların renk, tekstil ve kullanımına göre kıyafetleri ayırdıklarını ve bu yüzden kıyafetlerini yıkamak için biriktirdiklerini gördüm. Bu yüzden 2030'da yaşayacak kullanıcılar için SENS'i tasarladım. SENS kullanıcıları kıyafetlerini biriktirmek için birden çok bölüm sunmakta.



## SENS



### FEATURES

Drum : 8 KG  
Each of the compartments : 8 KG

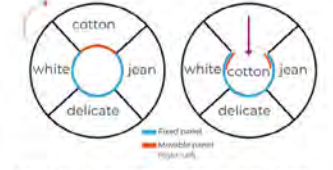
SENS has 4 laundry compartments.

Each of the laundry compartments lead to a middle compartment.

User can decide on each of the compartments' washing program. Also he/she can edit the programs and create new favorite ones.

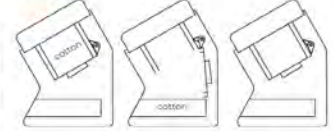
### WORKING PRINCIPLE

#### PHASE 1



Laundry compartments roll around the middle part. When its turn to come, panels opened and laundry is poured out into the middle compartment with the help of the gravity.

#### PHASE 2



After washing process is done, drum and vessel is acted together and opened. Cleaned clothes spill into the drawer area. Then, they closed with the help of the joint piece and sealed for the next wash.

### HANDLE DETAILS



SENS middle compartment can be opened if user need a quick wash. This compartment is connected to the drum directly.

### NO MORE WAITING FOR LAUNDRY CHORE

- TIME SAVING** User can set different program for each compartment and SENS do the rest of the job.
- SPACE SAVING** User can cumulate his/her laundry directly to the compartments of SENS.
- EFFICIENT** Autodose Manageable with an App

## USER SCENARIO

### STEP 1



### STEP 2



### STEP 3



### STEP 4



### STEP 5



### STEP 6







design concept

It reacts to your voice and it's main light turns on. It has a gesture like a living thing. When you load the laundries, it wakes up and open it's eyes for show the interface.

Sesine tepki veriyor ve ana ışığı yanıyor. Canlı bir şey gibi bir hareketi var. Çamaşırları yüklediğinizde, uyanır ve arayüzü göstermek için gözlerini açar.



WHAT DOES IT DO ?

- **FIRST GUIDE :** FOR BEGINNER USER LIKE OUR PERSONA-ALEX ROBINSON.
- **MACHINE LEARNING :** IT REZOGNIZE YOU AND YOUR CLOTHES.
- **AI : BIG DATA :** IT RECOMMENDS YOU THE SUITABLE PROGRAM BY THE INFORMATION FROM BIG DATA.



MACHINE LEARNING

It learns the user and his/her laundry period. It sends you warning to you.



AI : BIG DATA

CHOOSE THE "SUGGEST A PROGRAM" OPTION

BARCODE READER

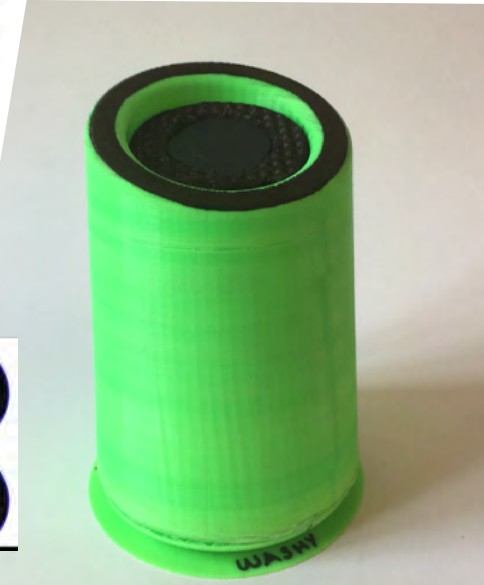
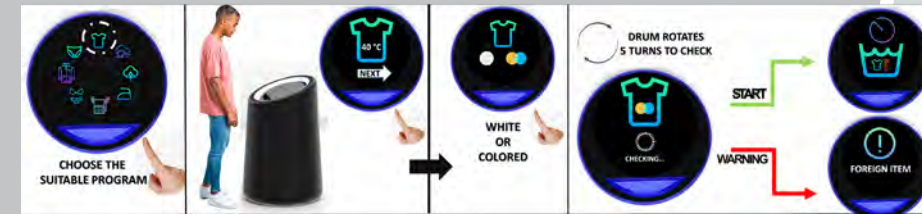
IT RECOMMENDS YOU THE SUITABLE PROGRAM FOR YOUR NEW CLOTHES BY USING THE BIG DATA. After reading the label of your new garment, put it in the machine and close the lid. It gives you advice by accessing the transactions that previous users used for that outfit.



USER SCENARIO



DISPLAY FEATURES





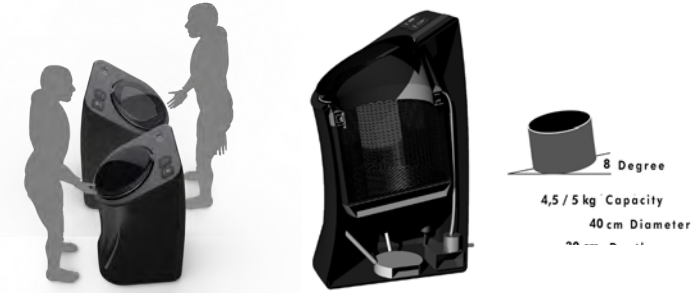
Co design concept

In my research for 2030, I have found that with the advancement of technology, people will become lonely among these machines and feel lack of communication. I realized that communication is stronger when mutually reinforcing, so I gave Co a form that approaches the user.

2030 için yaptığım araştırmalarda teknolojinin gelişmesiyle insanların makineler arasında yalnızlaşacağı ve iletişim eksikliği çekeceğini tespit ettim. İletişimin karşılıklı olduğu zaman güçlendiğini fark edip Co'ya kullanıcıya yaklaşan bir form verdim.



I wanted to include the user in the work of the Co since I think impact and feedback play an important role in communication. The user who starts the washing process by swiping, leading Co to complete the action with Co's fluid colors and starts washing.



Chromium detail indicates where to open and interact with the lid. Extended opening caved-in handle greates easy access to both right handed and left handed users.

USER SCENARIO



DISPLAY FEATURES





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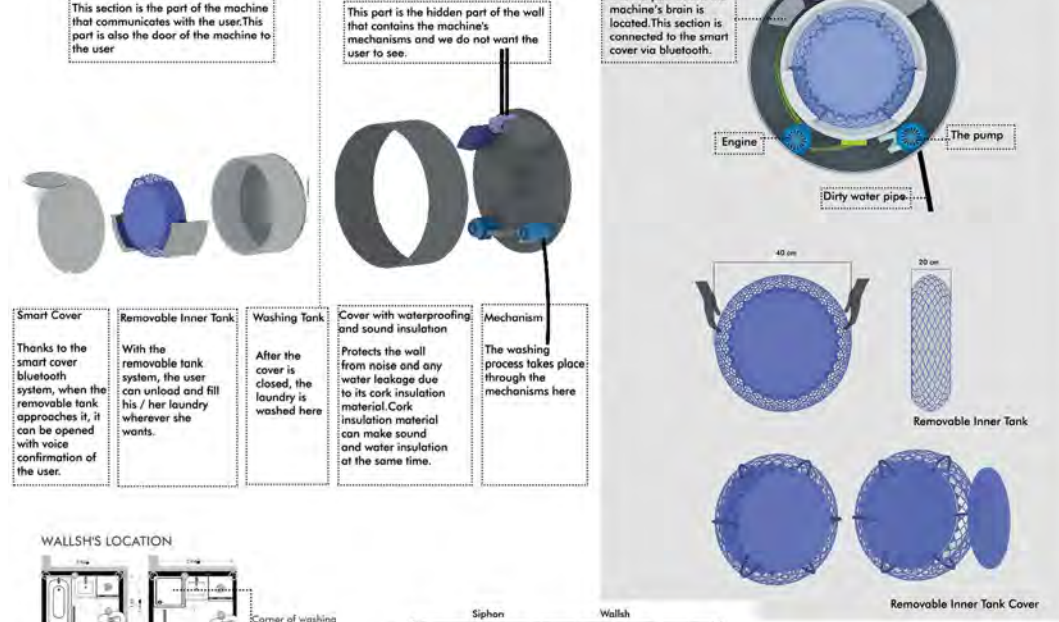
## Wallsh design concept

Wallsh is designed with inspiration from embedded capsules. Wallsh is a health friendly design with a high position from the ground and a removable inner chamber. It also saves space thanks to it's wall-embedded structure.

Wallsh, gömülü kapsüllerden ilham alınarak tasarlanmıştır. Wallsh, yerden yüksek bir konuma ve çıkarılabilir bir iç odaya sahip sağlık dostu bir tasarımıdır. Ayrıca duvara gömülü yapısı sayesinde yerden tasarruf sağlar.



## WALLSH MECHANISM



## TYPE 2

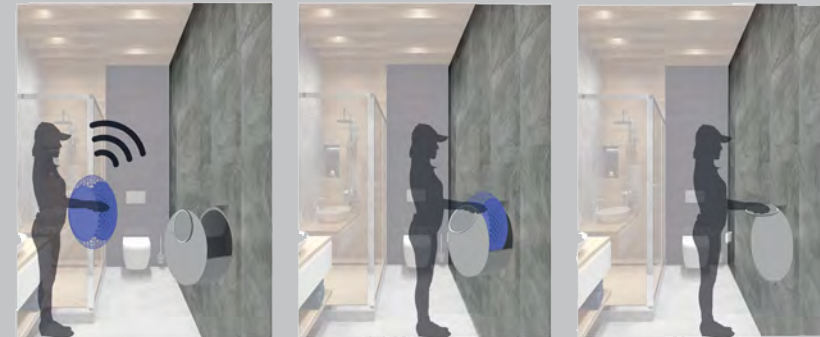
If Wallsh's location is not prepared and placed on the wall when designing and construction.



## DISPLAY FEATURES



## USER SCENARIO





## design concept based on user

### problems

Trigger off by moves that making during laundry routine

Laundry supplies are all over the place



### Future Foresight



Water resources are being depleted  
Gen Z is confronting the same coming-of-age situations that millennials, Gen X, and baby boomers once went through.

### persona

Name: Songül Hasanoğlu  
Age:63  
Retired teacher  
Has 2 children

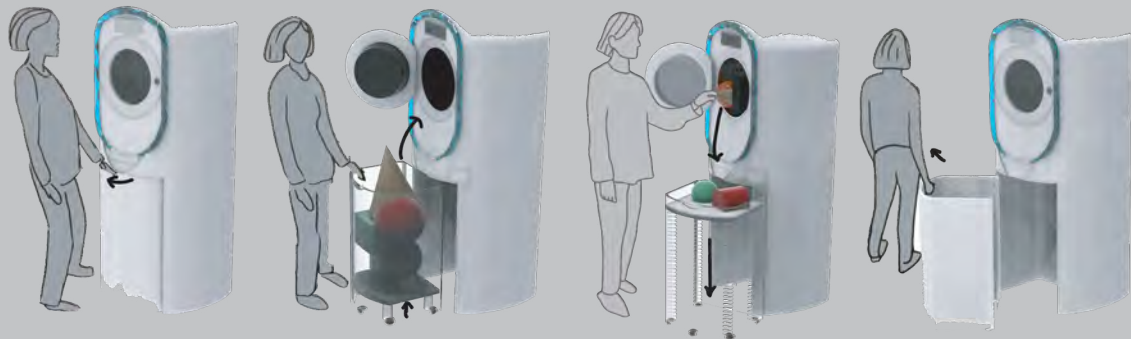
**She likes to keep her house tidy**  
She likes growing plants  
She eats organic food  
**She has hernia at her waist and back**  
She is starting to has difficulty in sight and hearing  
**She has environmental knowledge**  
She does laundry once in a day  
She is living in a environmental building that recycling used water to clean water

## Non-bend design concept

Ageing and environmental issues are problems that we cant escape from. Non-bend brings solution to body pains which triggered by laundry routine habits and creates awareness for recycling water.

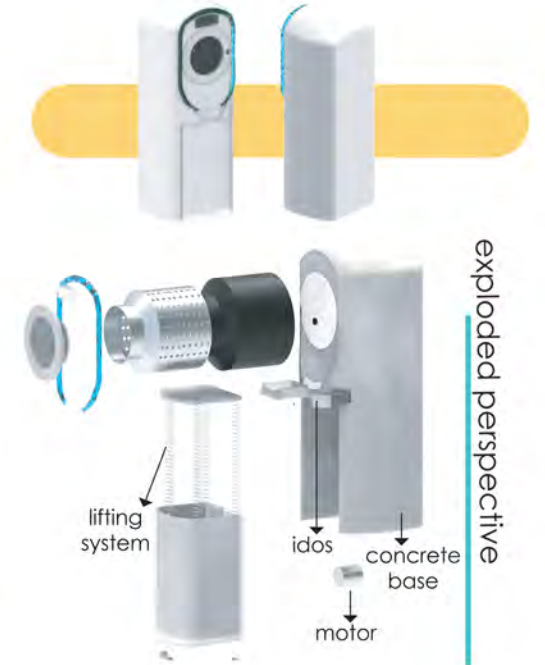
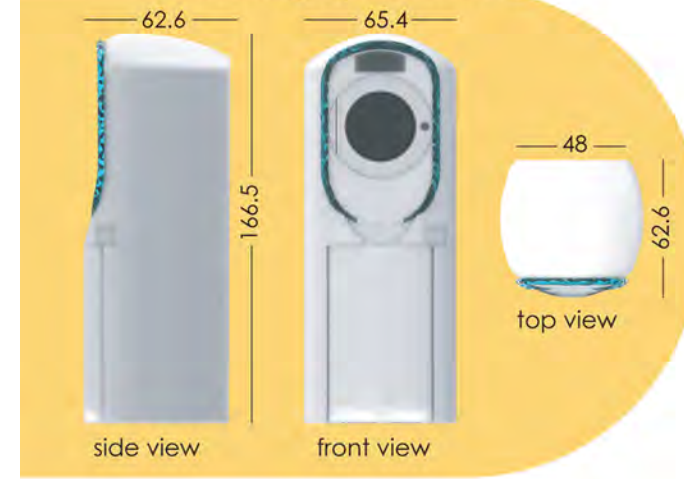
*Yaşlanma ve çevre sorunları, kaçamayacağımız sorunlardır. Non-bend, çamaşır rutin alışkanlıklarının tetiklediği vücut ağrılarına çözüm getirir ve suyun geri dönüşümü için farkındalık yaratır.*

## USER SCENARIO



## non-bend

### orthographic views



## DISPLAY FEATURES





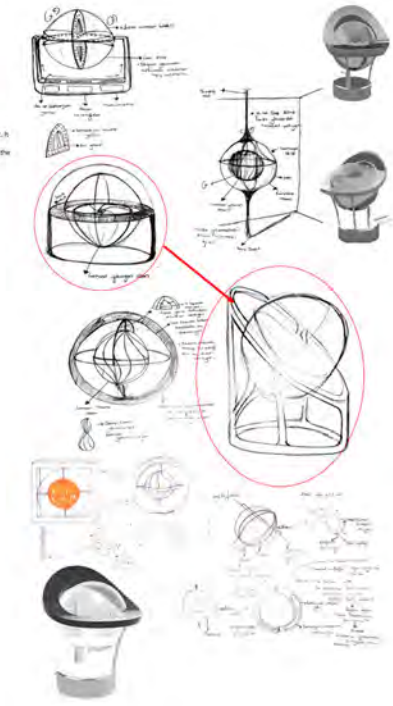
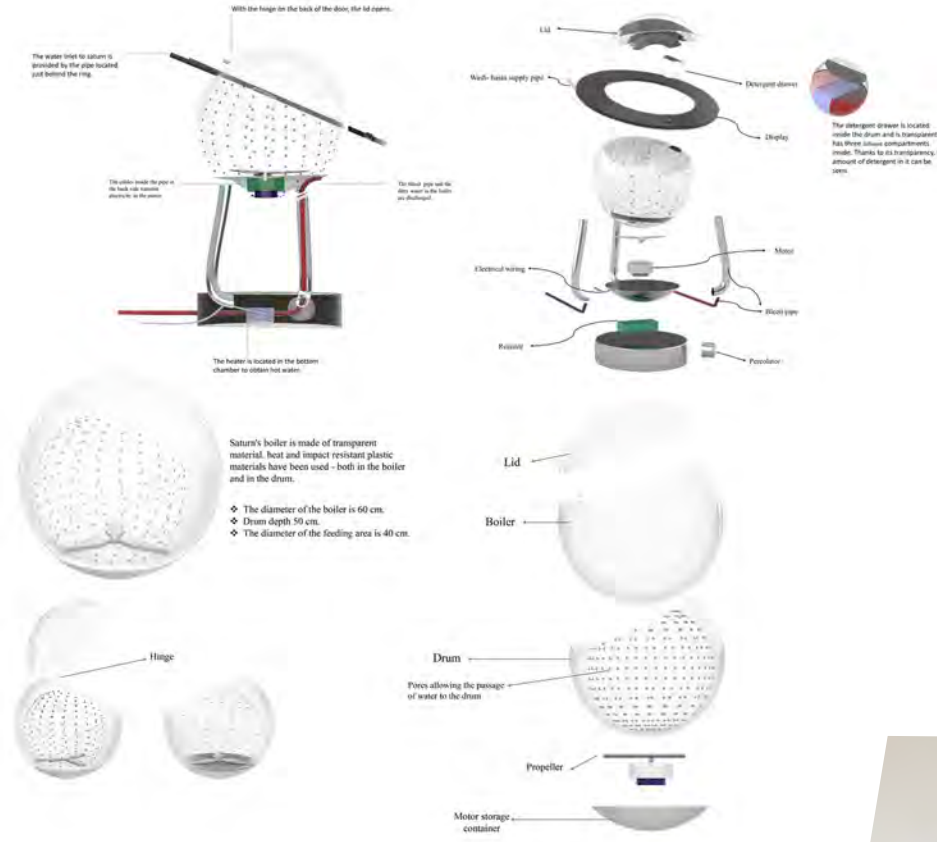
SATURN holds traces of the future. Unlike existing machines, saturn is too far away from being trapped in a box. It shows the user how to wash the laundry with all its transparency.

### SATURN design concept

Saturn is designed for users who care about hygiene. With the motto "We believe that we see with our eyes", the product is aimed to show the user everything. Depending on the changing living conditions and technology, it has a transparent sphere and drum in the form of a sphere completely away from the idea of being a box. This will allow the user to observe how the laundry is washed.

*Satürn, hijyene önem veren kullanıcılar için tasarlandı. "Gözümüzle gördüğümüze inanırız" mottosuyla, ürün kullanıcıya her şeyi göstermek hedefleniyor. Değişen yaşam şartları ve teknolojiye bağlı olarak kutu olma fikrinden tamamen uzak küre şeklinde şeffaf kazan ve tambura sahip. Böylece kullanıcı çamaşırlarının nasıl yıkandığını gözlemlemiş olacak.*

### USER SCENARIO



**Imperiums design concept**

Imperiums form was build by getting inspired from the futurism movement glorifies the speed, violence, and the working class. Blurring repetition and the use of line of force are the techniques of Futurism.

*Imperiums'un formu Futurizm akımından etkilenecek, hızı, şiddeti ve işçi sınıfını yüceltir. Yinelemenin ve hız çizgilerinin buğulanması Futurizmin teknikleri arasındadır.*



**USER SCENARIO**



How the Hydro-power Hybrid of the Machine Works



There are mini fans inside the paddle which turn as the water flows inside the machine. That is how machine produces part of its energy itself.



Imperium

**S**mart  
mall  
ustainable



Top



Right



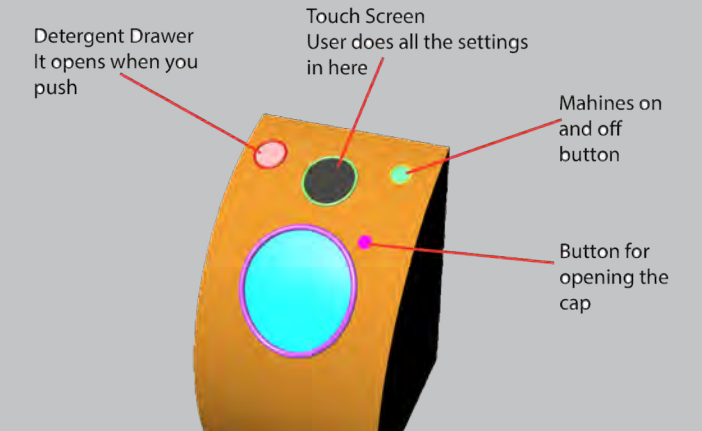
Front



Perspective

Imperium is a hybrid machin that produces part of its energy itself with hydropower.

**DISPLAY FEATURES**



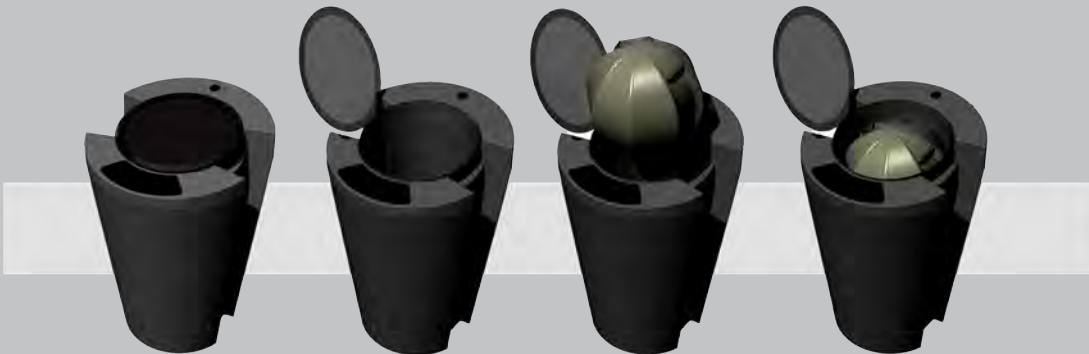


## design concept

In my user research and survey results, I analyzed that washine machines are used by women mostly. I predict that the perception of housework is a woman's duty is completely destroyed in 2030s. So, the range of household appliances' users will be increased. That's why I designed a machine that can be customized according to the different users' usage. It is a personal laundry experience with customizable drums and programmes.

*Yaptığım kullanıcı araştırmaları sonucu, çamaşır makinelerinin kullanıcı kitlesinin çoğunlukla kadınlar olduğunu ve aynı evi paylaştığı tüm bireyler adına yıkama görevini kadının üstlendiğini gözlemledim. 2030lu yıllarda, ev işleri kadının görevidir algısının yıkılmasıyla, ev işlerinde bireyselleşmeye gidildiğini öngörerek, birden fazla kullanıcıya hitap eden, kişiselleştirilebilir bir çamaşır makinesi tasarladım. Tasarımım, kişiye özel tamburlar ve programlarla özelleşmiş bir çamaşır yıkama deneyimi sunuyor.*

## USER SCENARIO



## DETAILS



## CUSTOMIZABLE LAUNDRY EXPERIENCE

personal washing drums for each user:

**DETERGENT ALTERNATIVES MATERIAL**  
mixing far infrared radiations (FIR) & anions technology with natural grade silicone.

The high der from the laundry ball turns water into high alkaline (PH 9-9.5) which works just like surfactant (detergent) to dissolve dust and oil from fabrics, while creating an antibacterial and odor-removal effect.

The laundry ball is proven to release far infrared radiations that help break water into water molecules for a deeper cleaning effect.



**PLASTIC MATERIAL FOR MAIN BODY OF DRUM**

**THE SPIKY SURFACE**

The spiky surface design collides with fabrics during the wash to help remove dirt as if you were washing by hand.

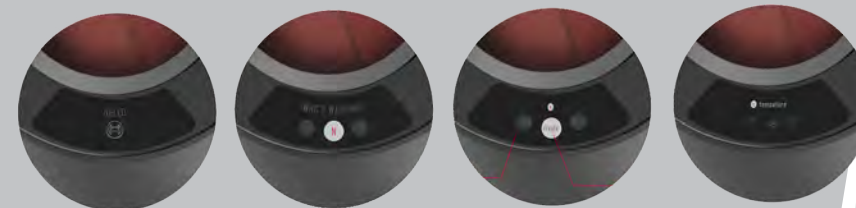
The drum is placed inside the outer tub. The perforated surface provides water inlet from the outer tub to the drum.



in the future all technological devices can be customized.



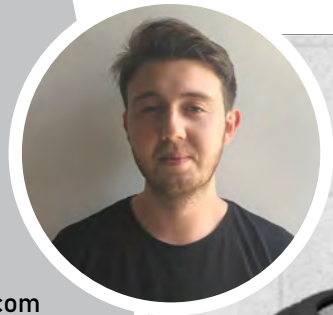
## DISPLAY FEATURES



co design concept

My aim was to speed up the washing machine process by making it easier and more organized with support.

Amacım, çamaşır makinesi işlemlerini destekleyerek daha kolay ve daha organize hale getirerek hızlandırmaktır.



SPEED

EASY TO USE

ORGANIZED

SUPPORTER



DISPLAY FEATURES







### t-Bubble design concept

A time-saving and ergonomic product was designed for the 2030s, when users would be more conscious and could spend less time on housework. T-Bubble, which can carry out different washings with 2, 4 and 6 kg capacity at the same time, also provides ease of carrying to users with its height and basket usage.

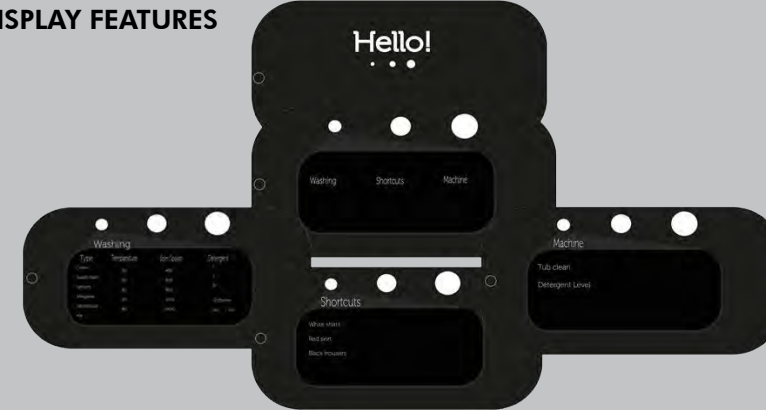
*Kullanıcıların daha bilinçli olacakları ve ev işlerine daha az zaman ayırabilecekleri 2030 yılları için, zaman kazandıracak ve ergonomik bir ürün tasarladım. 2, 4 ve 6 kg kapasiteli farklı yıkamaları aynı anda yapabilen t-Bubble, ayrıca yüksekliği ve sepet kullanımıyla kullanıcılara taşımada kolaylık sağlıyor.*



### USER SCENARIO



### DISPLAY FEATURES





co design concept

The water inlet of washing machine is connected to hot water. Waste water is used in the toilet for water saving.

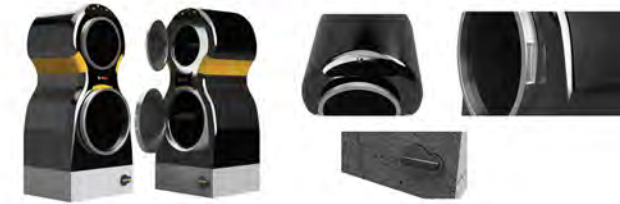
Çamaşır makinesinin su girişi, sıcak suya bağlanmıştır. Tuvalet suyunda atık su kullanılmaktadır.



USER SCENARIO



STEP TWO: Choose the machine. 3 kg or 5 kg



The standard human length is considered to be between 170 cm and 180cm.



DISPLAY FEATURES

- 3 kg Machine Programs:** Sensitive, Baby Care, Intensive Dry, Gentle Dry, Fluff Clean, Allergy Plus, PowerWash 60', SuperQuick 15'
- 5 kg Machine Programs:** Cottons Eco, Synthetic, Easy Care, Mix, Delicate/Silk, Intensive Dry, Refresh, Rinse/Spin, Wool





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## BLOom design concept

Bloom is designed to provide laundry needs of the future. In this way bLOom offers some novelties for 2030's users. To understand those novelties, bLOom takes care of some keywords which are based on future and today's research: time and energy saving, user friendly, in accordance to human factors, provides a good style due to future trends.

*Bloom, geleceğin çamaşır yıkama ihtiyaçlarını karşılamak için tasarlanmıştır. Bu şekilde bLOom, 2030'ların kullanıcılarına bazı yenilikler sunuyor. Bu yenilikleri anlamak için, bLOom geleceğe ve bugünün araştırmasına dayanan bazı anahtar kelimelere özen gösterir: zaman ve enerji tasarrufu, kullanıcı dostu, insan faktörlerine uygun olarak, gelecekteki eğilimler nedeniyle iyi bir stil sağlar.*



## DISPLAY FEATURES



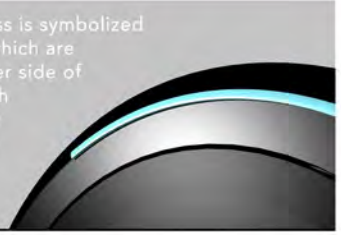
bloom

provides a good style  
due to future trends



The idea of outer concrete comes up from the expression of the inner one, which prevents the vibrations of the machine. Concrete surface covers make the user believe that bLOom is always going to be strong and stable. Besides, the concrete would give the house a wind of nature.

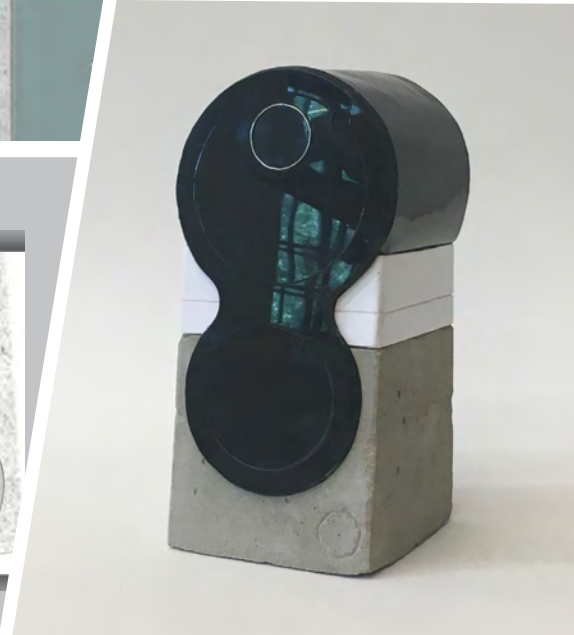
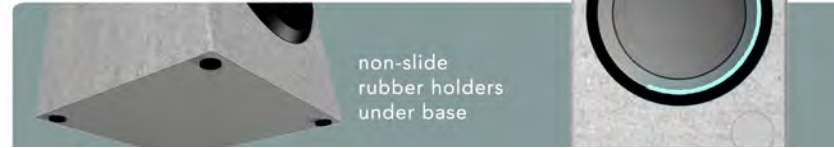
Washing process is symbolized by LED lights which are located on outer side of drum caps. With respect to time that is left, the LED lines represent loading icon



Backside of bLOom is covered by a metal surface which has a special pattern to keep surface rigid and also allows the water circuits to come and go.



non-slide  
rubber holders  
under base





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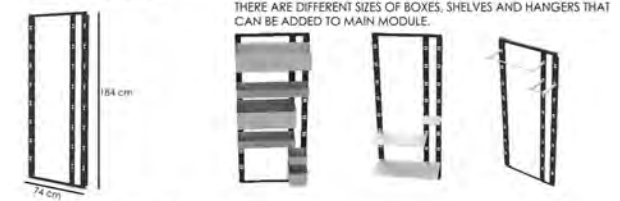
### Layer design concept

At research stage, I found houses that has no rooms but only areas. Starting from these researches, my concept is creating a clothing area which includes the washing machine too.

*Tasarım sürecimde evlerin odalardansa sadece alanların olduğunu buldum. Bu araştırmalarım ışığında çamaşır makinasını da içinde barındıran bir giysi alanı tasarladım.*



### LAYER MODULES



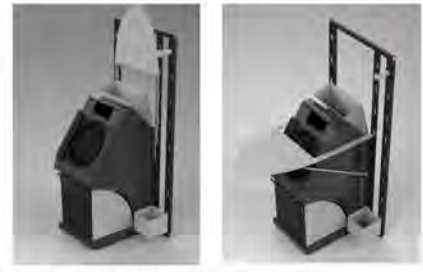
MAIN MODULE COMPRISES OF METAL PROFILES AND HOLES ON THEM.

THERE ARE DIFFERENT SIZES OF BOXES, SHELVES AND HANGERS THAT CAN BE ADDED TO MAIN MODULE.



PLASTIC BODIES METAL PARTS AT BEHIND PROVIDE HANGING ON TO THE MAIN MODULE. ALSO THEY ARE ASSIGNED FOR BEING SUPPORT TO THE PLASTIC PARTS.

IRONING LAYER PROVIDES A COMPACT, EASIER IRONING PROCESS.



ALL PARTS ARE ADDED ON TO THE MAIN MODULE.

CLEAN AND READY TO IRON CLOTHES CAN BE COLLECTED IN THE BOX ON THE MACHINE. HE CAN ALSO HANG HIS CLOTHES CLOSER TO HIM. AFTER IRONING,



### BOSCH LAYER

LAYER WASHING MACHINE HAS A SIMPLE, ERGONOMIC AND USEFUL DESIGN FOR MAKING THE PROCESS EASIER FOR YOU.



DIRTY CLOTHES CAN BE COLLECTED INTO THE BOX WHICH IS LOCATED AT THE BOTTOM.

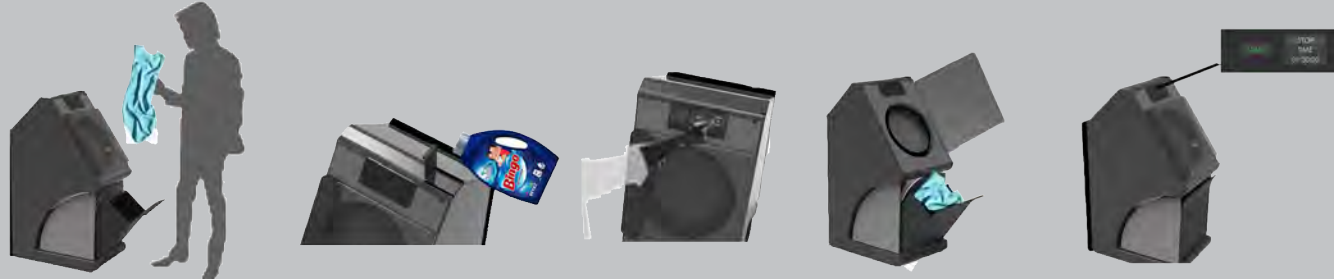
IT HAS BOTH WASHING AND DRYING FEATURES WITH THE CAPACITY OF 5.5 KG.



THE DRUM IS INCLINED FROM THE GROUND BY THE ANGLE OF 35°.



### USER SCENARIO



### DISPLAY FEATURES





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## ReLight design concept

ReLight has become a place without a washing machine in the bathroom. It tries to establish a close relationship with the user and encourages it to recycling and save energy. This energy was saved and this saving was returned as a feedback to user through the lighting element in the product. The product recognizes the washing time and activates the lighting element with app.

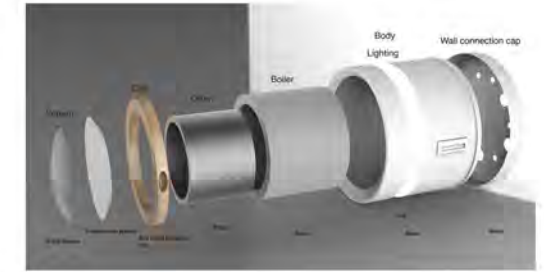
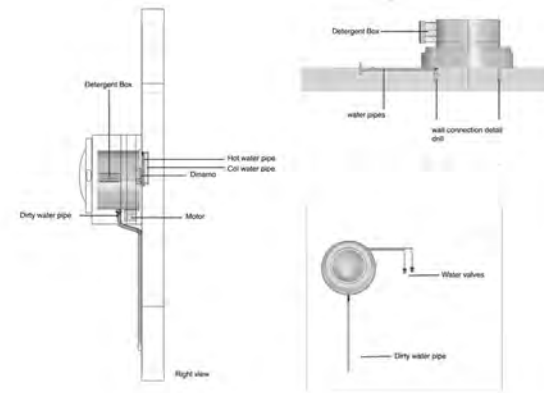
*ReLight, banyoda çamaşır makinesi olmayan bir yer haline geldi. Kullanıcı ile yakın bir ilişki kurmaya çalışır ve onu geri dönüşüm ve enerji tasarrufu yapmaya teşvik eder. Bu enerji tasarrufu sağlanır ve bu tasarruf, üründeki aydınlatma elemanı aracılığıyla kullanıcıya geri bildirilir. Ürün yıkama zamanını tanır ve aydınlatma elemanını uygulama ile etkinleştirir*



## USER SCENARIO



## Laundry For Future



## DISPLAY FEATURES



## design concept

The world is going more and more individual year after year. And gender roles of societies are changing. In my 30's, persons living together like in families, will care their individuality more and since gender equality is widened, everybody will be doing their own works, which means different laundry cleaning habits at the same time for a single washing machine. My machine is simply designed to serve the purpose of all kind of user in a user friendly way.

*Dünya, yıldan yıla daha da bireyselleşiyor ve toplumda cinsiyet rolleri değişiyor. Benim 30'larımda, ailelerdeki gibi bir arada yaşam süren kişiler, bireyselliklerini daha da önemseyecekler ve cinsiyet eşitliği de sağlanmış olduğundan herkes kendi işini yapacak. Bu da tek bir çamaşır makinesi için aynı anda farklı çamaşır yıkama alışkanlıkları anlamına geliyor. Benim makinem kullanıcı dostu olacak şekilde basitçe her tip kullanıcının ihtiyaçlarını karşılamak için tasarlandı.*



EXPLODED AND SECTIONAL VIEW



## USER SCENARIO



## DISPLAY FEATURES



FABRİKA GEZİSİ  
FACTORY VISIT



# ÇALIŞTAYLAR WORKSHOPS



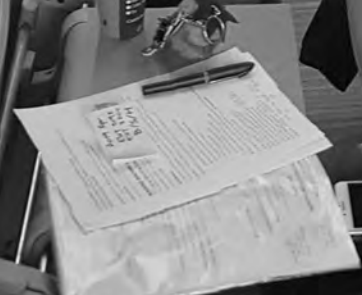
Region T-MEA-CIS

B/S/H/

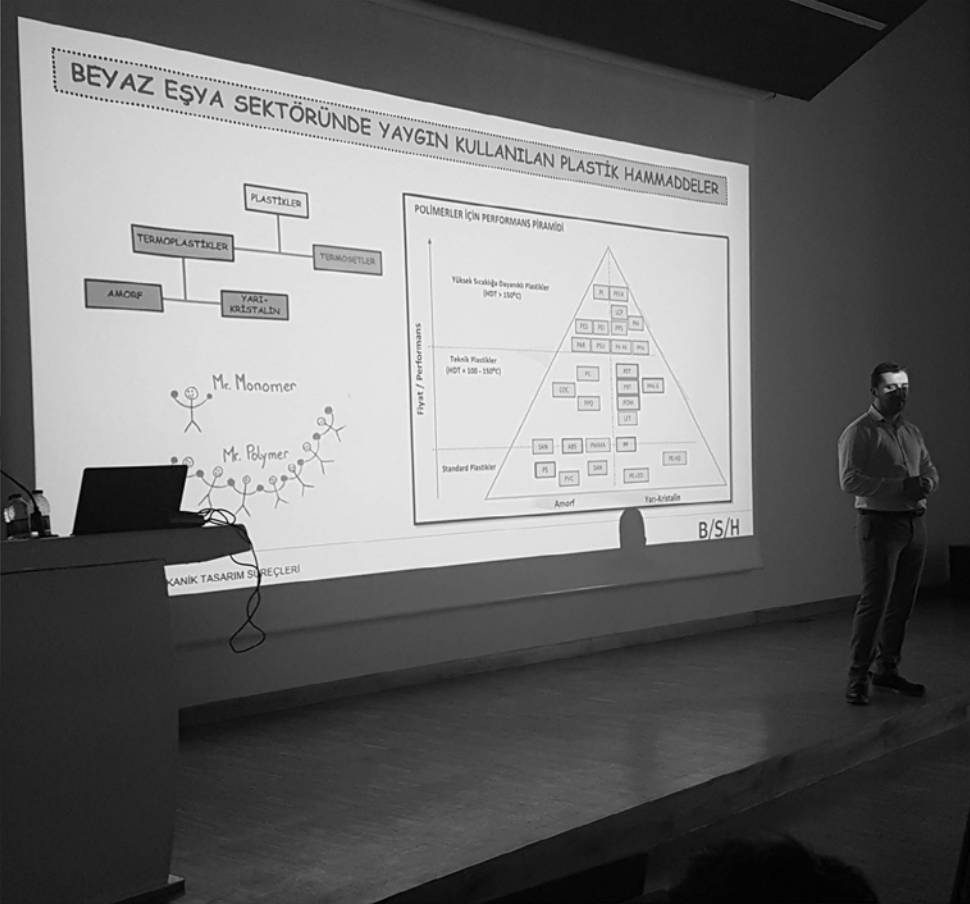
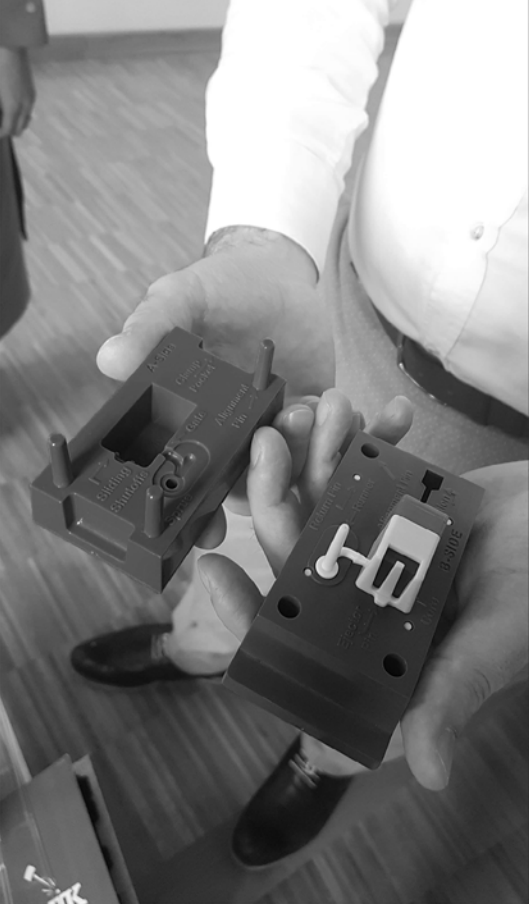
- A strong joint company with 4 main offices
- The biggest Production Site of BSH
- The operational center of the new BSH India

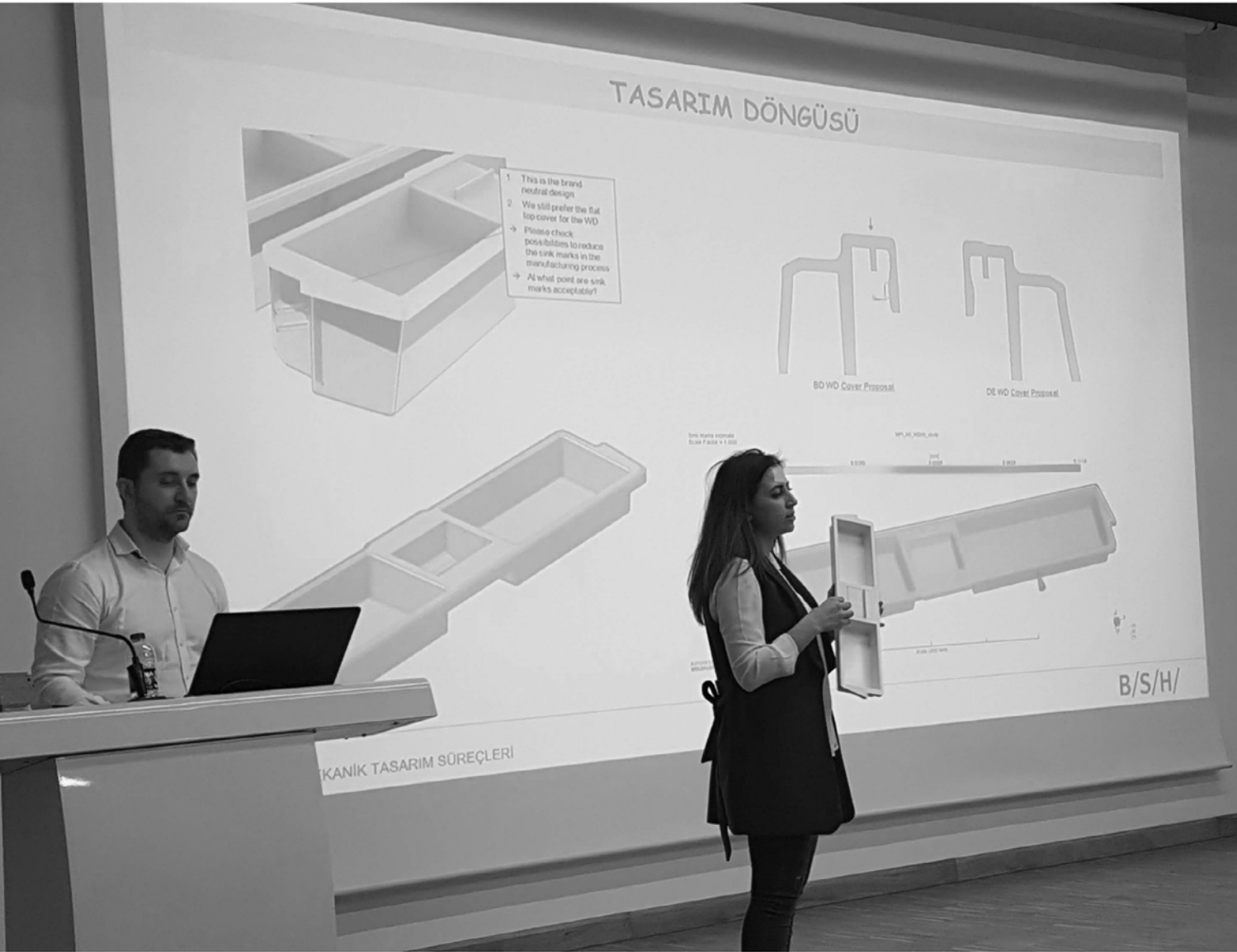
"T-MEA-CIS"

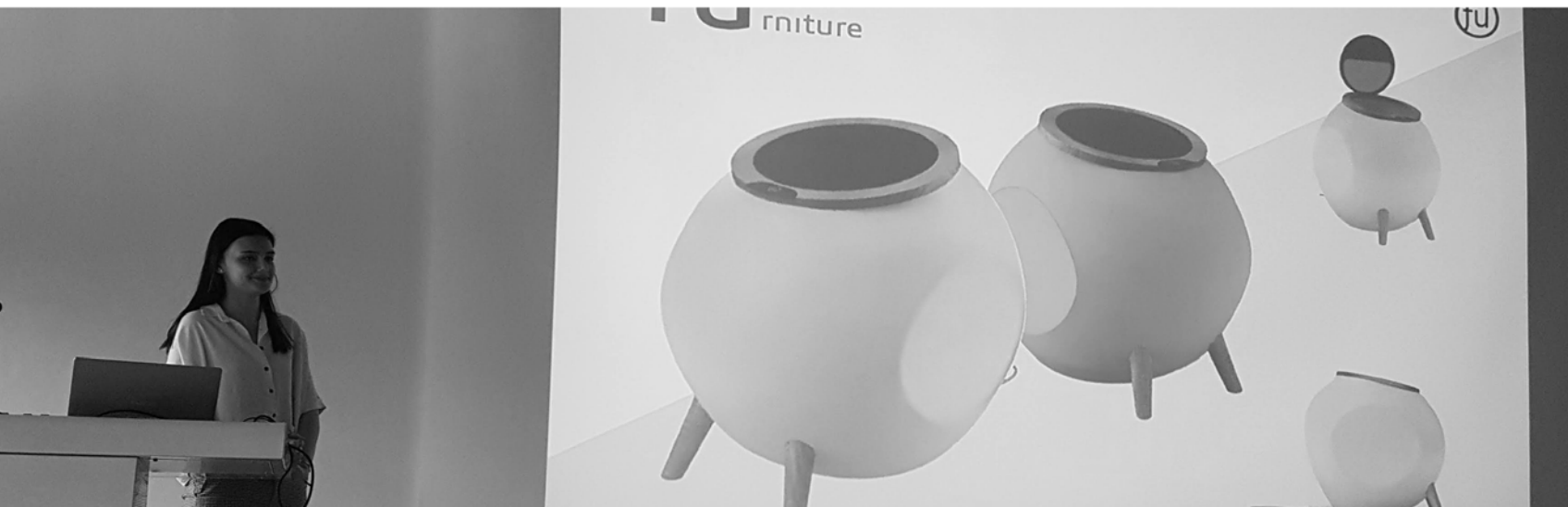
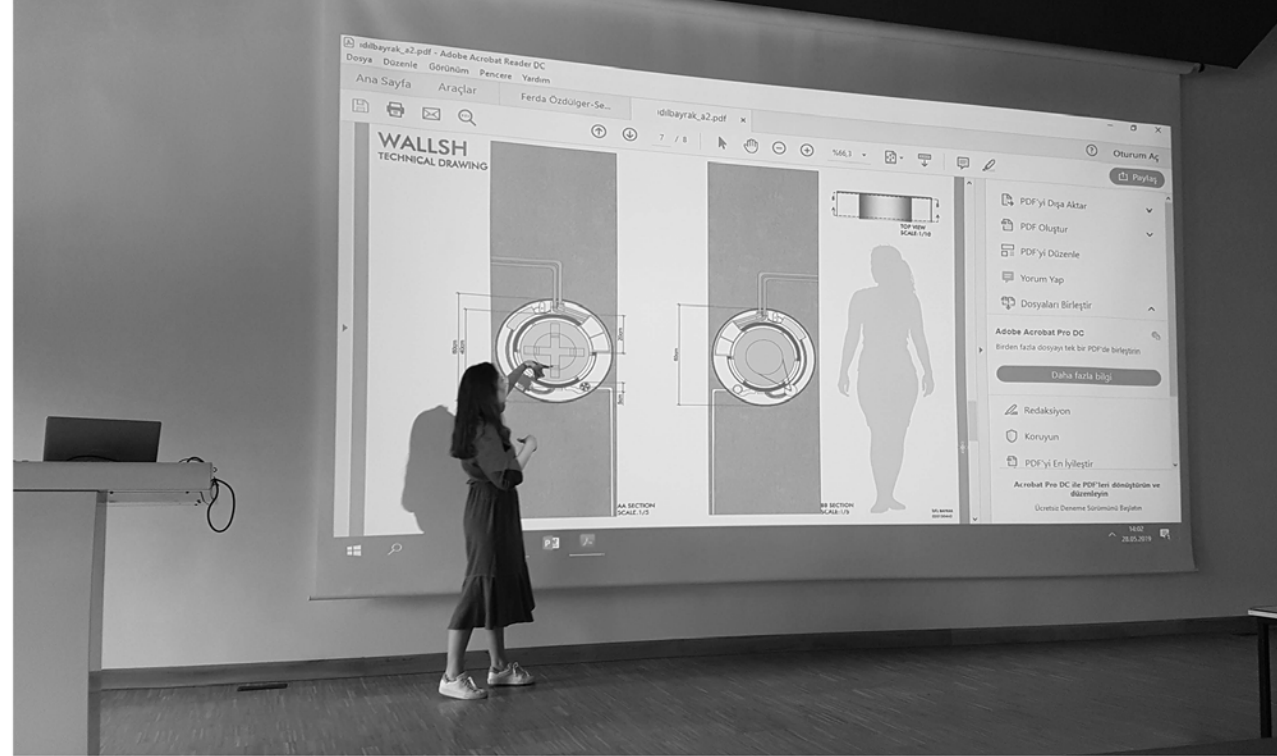
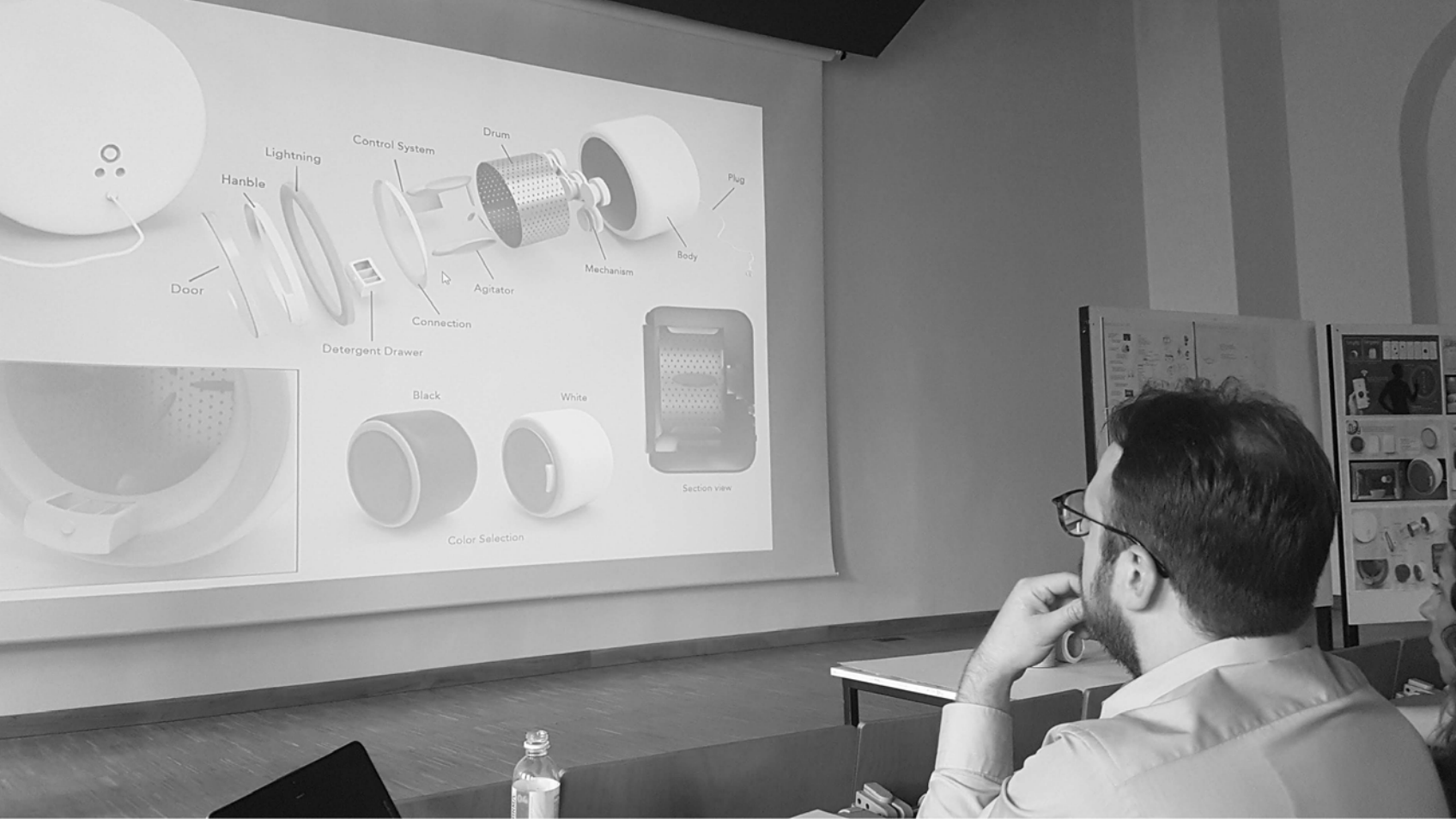
- Turkey
- Middle East
- India
- Subcontinent



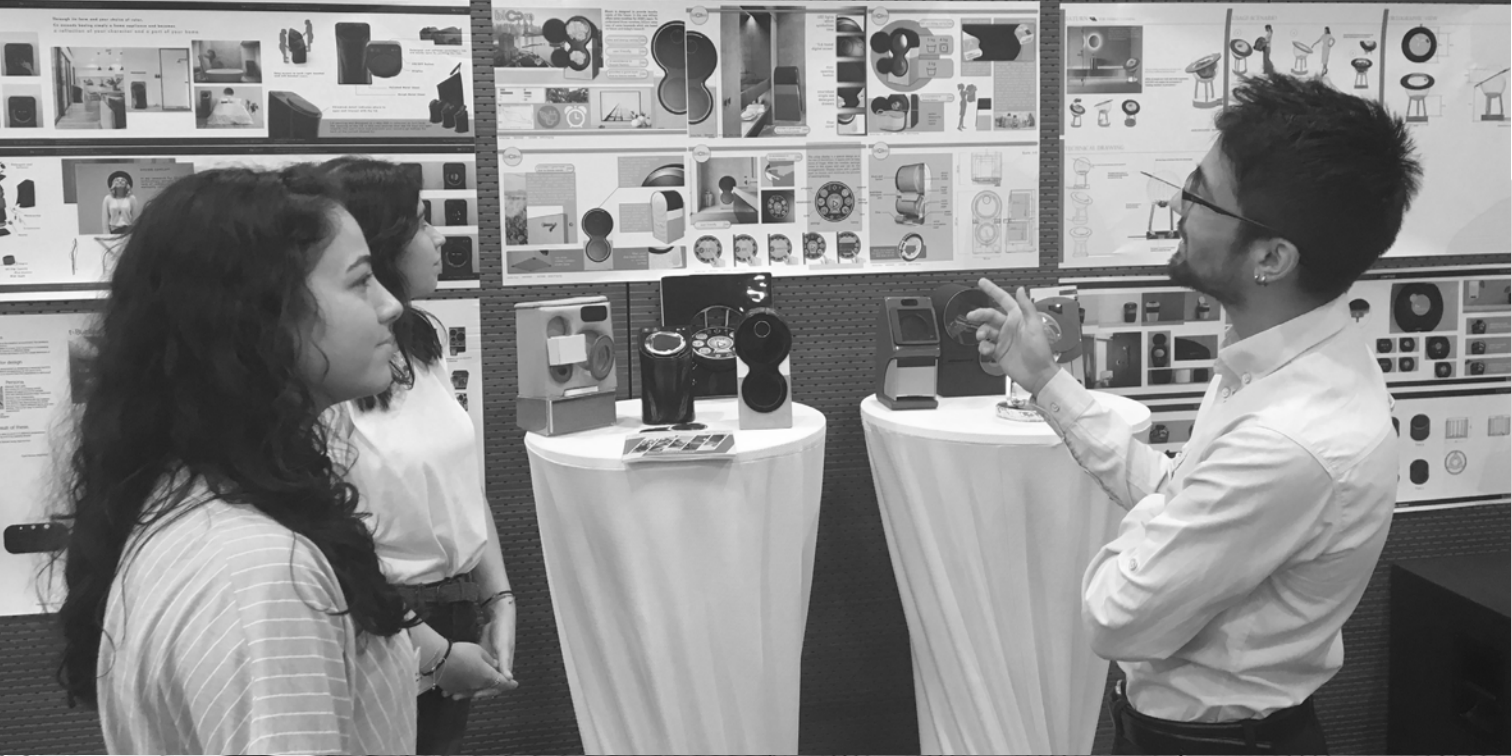














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