Easy Life Co.

Easy Shop Panel

**Product Definition
&
Quality Function Deployment**

Version 3

What is the aim of Product Definition?

Product Definition is generally known as System Requirement Specification (SRS). It is the main document at which the customer defines what the product is going to be. The customer here refers to the person or entity ordering the product or the people in the company who asks for the product, such as marketing. Using the product definition, engineers must be able to write a specification of the product and then design the product.

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What Easy Shop Panel is expected to do?

The target market of Easy Life is handicapped people who are physically disabled and dependent on other people to do their grocery shopping or reaching to the emergency stations. Their need is independency in reaching to service/product suppliers. Because, physically handicapped people have disadvantages to do shopping in terms of reaching to the market and carrying the goods to home. Our solution is Easy Shop Panel, which consists of a touch screen to get customer shopping orders or emergency call requests directly from consumers, and deliver those orders or requests to the service suppliers. Easy Life aims to make physically disabled people's lives easier by increasing those people's access to products/services.

How Does Easy Life Serve?

On the screen, there are options given as grocery shopping, purchasing bottled water, purchasing bottled gas, calling a taxi and calling emergency stations that include fire station, police station, ambulance etc. Users decide on their shopping orders or emergent requests and choose their needs from the available list of products/services. Then, they send the order to the receiver of the supplier after they confirm their order of action through the screen. Services are given by the firms that provide home delivery of shoppings and service providers that respond to received calls. The panel also does not require any computer knowledge and internet connection.

The flow chart of Easy Life System:
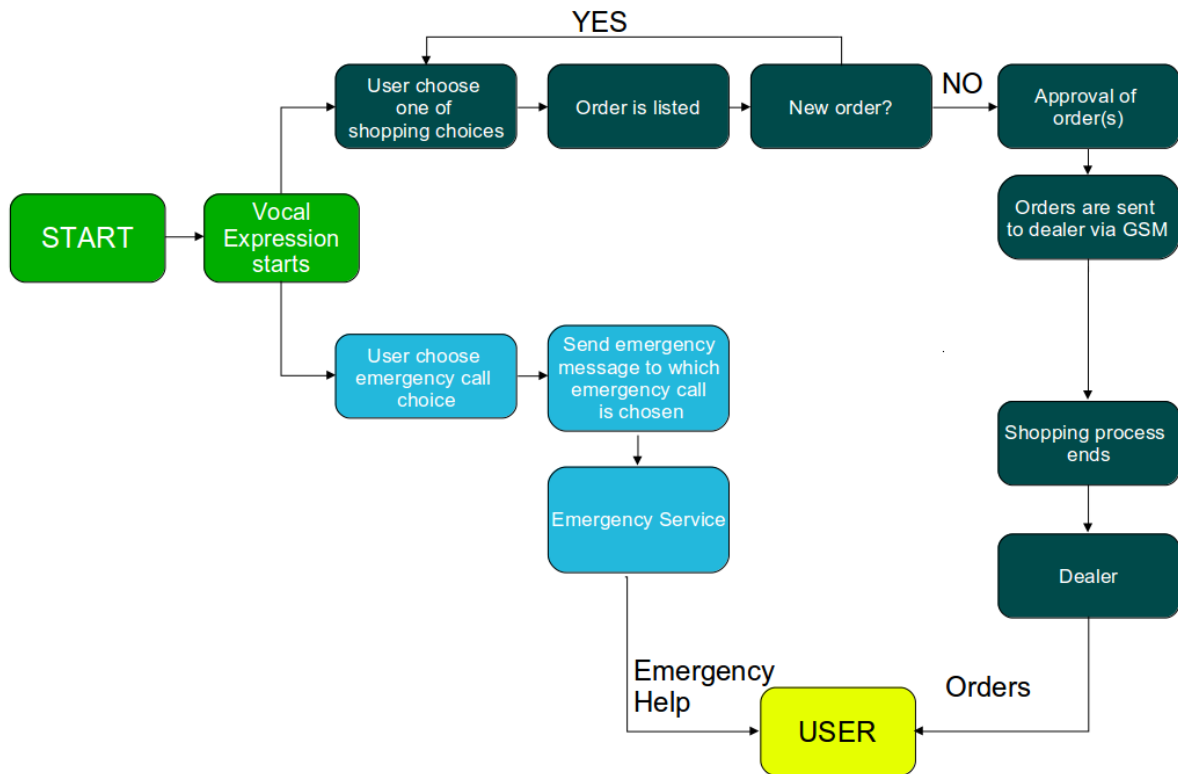
Figure 1: Flowchart of the Work Principle of Easy Life Panel

Easy Life Panel provides these shopping and call options

     - Meat and Frozen Food

     - Water (serving by demijohn)

     - Detergent and Hygiene Products

     - Charcuterie

     - Drinks

     - Vegetables & Fruits

     - Legumes and Oil Products

     - Gas (Cylinder)

     - Emergency Calls

These options are selected by searching the frequent needs of the target market who are physically disabled. Primary data is collected through surveys and interviews with the target market.

1. Function

1.1 Structure of the Easy Shop Panel

The Easy Shop Panel includes a touch screen monitor, a Braille Alphabet numpad, a loudspeaker, a mini computer and a GPS/GSM module.
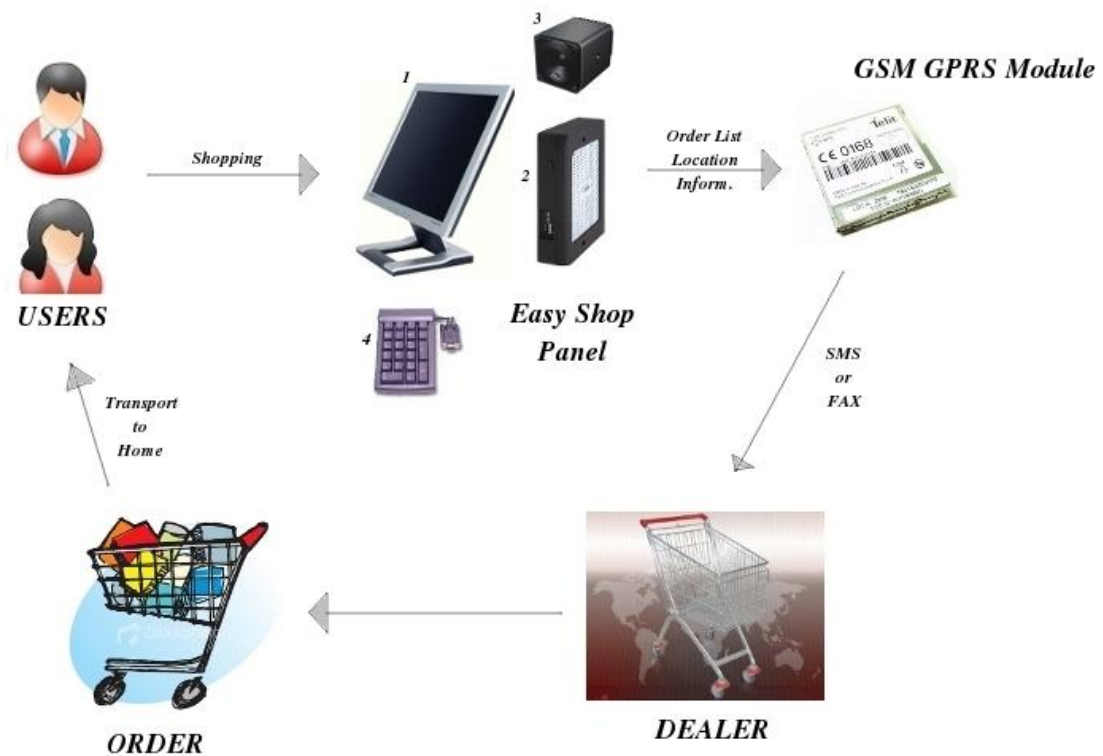

Figure 2: Role of Easy Life Product

1.2 General Design Specifications

- The panel should not have sharp corners.
- The panel should not have a heating problem.
- The whole system must be lightweight and portable.

1.3 Monitor

- A bright and thin LCD monitor, which will be mounted on the operating

hardware part, will be used.

- The monitor is 15 inch in order to obtain a good view of user-interface. Resolution is 800x600 for high quality display of images.

- In order to make usage easier and eliminate the need for a mouse, the monitor will be a touch screen. The reaction time should be around 10 milliseconds. The touch screen should be sealed to resist dirt, dust and splashes.

- In order to connect this display to the mini-PC component, the monitor should have a RGB or USB input port.

1.4 Numpad

Numpad is for people who cannot use touch screen monitor or people who are visually impaired.

- Numpad is modified by Braile alphabet and only numbers are used on numpad in order to provide simplicity. When there is an action going on the screen that is controlled by the user, user-interface will start a vocal expression and express the situation of user on process. For example, product says: "Press 1 for meat and frozen foods, or press 0 to complete the order."

- For visually disabled people's usage, numpad will be modified with embossing stickers, which are prepared in Braille Alphabet.

- Numpad will be connected through USB port to the Mini-PC of the product.

- All of the buttons will be as easy as possible for usage of older and disabled people. Control buttons will be in a logical and reasonable placement with relatively large font sizes. To increase the convenience for visually impaired people, the numpad should be placed horizontally.

- The buttons will operate in a way that any non-stop operations will be avoided for the convenience. Preventing non-stop operation means, any button of numpad will process 1 time when it's pressed, it's no continuous operation until another button is pressed. This operation is done in most of keyboards, numpads and other devices working by buttons. Since the code of keyboard will be written by us, this operation will be added in order to prevent non-stop button operations. In addition, roll buttons should be avoided in case of physical disability in grabbing and controlling an object.

Therefore, if the user can use his hands only one button on the numpad should navigate the ordering system.

1.5 Loudspeaker

Basic loudspeaker will help user to command the program. The main reason to use a loudspeaker is helping visually impaired people. Sound system will repeat all of the actions, which are made by user and the program. So, user can follow the process of shopping. This system also helps older people, who cannot use monitor and numpad, to follow the process.

- Having an output power for 60-70 dB is enough for a good sound level.

1.6 Mini PC

Mini-Computer part is the main part of the product. In this part, a linux distro will be operated. By using linux distribution, java program which will be used for both main program and user interface of the product. Mini-computer will be controlled by both numpad and touch screen (optionally). User interface will be optimized for touch screen drivers. Mini-computer will only include basic parts to be able to run Linux Distribution, Java, USB connection.

- Using a Mini PC will help us to get a higher performance and prevent heating problem since it consumes less power.
- In Mini PC, we will use a very basic linux distro, java environment and will process very simple applications. Therefore, the CPU should have around 1-1,66 Ghz of speed.
- In order to provide connection with the monitor, numpad and GPS module, it must have USB and RGB output ports.

1.7 GSM GPS Module + External SIM Card

This module gets the order information from program at mini-pc and forwards orders to the dealers by SMS and/or Fax. Java runtime program generates a text file, which

includes order list and location information of the user. By using GSM part of the module text file will be sent to dealer.

- The size of this module must be small enough to be mounted inside the mini PC used.

- Updates are necessary especially for price and good changes. Updates will be provided by the company. Easy Life device will check once a week whether there is an update or not. If there is an update, the device will get all necessary information via GSM infrastructure and update itself.

1.8 Usage Characteristics

- Usage life time is more than 5 years.
- Usage time of battery in the device is more than 3 years.
- Software program will be updated when a new version of program is developed.

2. Interface

Software part consists of user interface and logic part which documents the order, formatted according to the GSM GPS module requirements.

- Logic part will merely get the input as number and types of orders from user via user interface and will produce a text file include the order information for the GSM module.

- On the other side, most important part of the software of this project is user interface. Since the target users will be handicapped in some ways, user interface will be as clear as possible for easy interaction. No pre technological device knowledge involvement will be assumed.

- Also for visually handicapped people, user interface will provide sound feedback for every action.

- Language is Turkish but there will be language options in the future.

- Furthermore, buttons and any input component on the GUI will be designed by considering easiness of touch pad usage. A basic visual example of user interface which is given below, demonstrate how user does shopping easily with large images. Large images are better than the words for elder people.

The illustration of the user interface is exposed below:

Figure 3: User Interface of Easy Life Panel Screenshot

As it can be seen from the figure of GUI illustration, there are large buttons for user options. Also describing images are added to all buttons. The aim of large buttons and images is providing a user-friendly interface.

- All order options and warnings will be given with large font and big images in high resolution with respect to simple usage. The images that are on the interface are designed for visually disabled people who cannot read small fonts.

- Additionally, for visually-impaired people, Easy Shop Panel includes voice property. This feature pronounces all shopping steps. Program indicates the current step and the following choices on shopping panel by making sound of it. For example, voice feature tells that user is at main menu of shopping process or user approves the order to be sent.

2.1 Possible Applications

Ideas for applications are skimmed from the customer survey responses. Survey insights show that there is an obvious need for availability of mobile applications. According to two respondents, refrigerator also seems to be an alternative way for installation surface.

- There is availability of the interface integration on alternative situations such as a mobile application on cell phones. This is a way to increase the availability of the service where the target market can reach service providers free from a certain place or a device.

- Another option is to integrate the screen into refrigerator door. In this way, place will be used efficiently. This also helps to give food&beverage orders when needs are recognized by the time consumers looked for a product in refrigerator or kitchen.

3. Physical Characteristics

Screen Specifications

Working Voltage	DC 11.5V-13V
Working Temperature	0~60
Input configuration	1*VGA (AV/TV/DVI optional)
Screen size	15 inches (4:3 diagonal)
Display case(cm)	38X30.8X5
Resolutions	1024(H)×768(V) pixel
Brightness	400cd/ m2

Contrast   550:1

Electronic consumption   20W

Touch screen   4-wire resistive USB2.0

Visual angle   up/down 65-60Deg /---left/right 70-70Deg

Reaction time touch-panel (ms)   <10

Surface hardness   3H

Full Touch Function

Stand Optional

VGA Port

The Highest Resolution is to 1920×1200

Operation System is Windows XP

Mini PC Specifications

Features
 VIA C7-M+VX855 is compatible with popular operation system and software.

 HDMI output: support up to 720P/1080P

 Supports HD media file

 Supports LAN/WIFI

 Built-in 3in1 card reader, support SD/MMC/MS memory card

 Included 4 USB ports 2.0,

 Included coaxial output

Specification
 VIA C7-M + VX855

 1G DDR2 (2G DDR2 as optional)

 Built-in 2.5 160G SATA HDD

 Included SD/MMC/MS card reader

 4 USB HOST: USB 2.0 (2 on front and back panels)

Interface

HDMI, VGA

Network

10/100M RJ45

Built-in Wi-Fi 802.11b/g (optional)

Audio

Front panel: headphone, mic

Back panel: right/left channel, coaxial

Button and Indicator LED

Power ON/OFF, HDD indicator, Network indicator, Remote receiver

GSM GPS Module

Power Supply	3.4 to 4.2 Vdc
Physical	SIM interface 1.8V / 3V available
Antanna	RF Connector, External Antenna PAD
Operating Temperature	-20°C to 60°C
Dimension(mm)	44.5mm × 31.6mm × 3mm
Weight (g)	9.5g
Software	AT command Meet GSM 07.07
	SIM application toolkit Support SAT Class 3,
	GSM R98, R99 Launch Browser supported.
	Firmware update Download over USB
SMS	Point to point MT and MO
	Cell broadcast

FAX service   Direction : MO Call & MT Call

Fax GSM TS3.45 fax transparent mode

TS 61,62

Transmission speed rate : 2400, 4800, 7200, 9600bps

Numpad Specifications

19-key USB numeric keypad
Extra Backspace key
Plug-and-play
Come with extra usb2 port hub
Slim, compact and lightweight
Perfect for your notebook data entry
White box packaging
Numeric keyboard

Loudspeaker
Lithium battery inside, USB power or recharge.
Dimension: W66.4xH65xD67mm
R.M.S: 1.5W x 2
Unit driver: 1.5" x 2

4. Standards

- **ISO/IEC 24755:2007** - Information technology -- Screen icons and symbols for
  personal mobile communication devices

  ISO/IEC 24755:2007 defines a consistent set of screen icons and symbols,
  together with their related functions, that are presented by personal mobile
  communications devices (e.g. mobile phones and personal digital assistants).
  These devices have touch screens accessible by stylus pen, finger or button with
  personalized application.

  ISO/IEC 24755:2007 provides a consistent set of icon graphics for controlling
  these devices and for using personal information management-related

applications. These icons and symbols represent typical functions and statuses by their association with conventional controls and functions on real-world objects.

ISO/IEC 24755:2007 applies to all icon graphics displayed with a resolution of 32 x 32 pixels or higher. The graphic presentation can be either dynamic or fixed.

- **ISO/TR 11548-1:2001** - Communication aids for blind persons -- Identifiers, names and assignation to coded character sets for 8-dot Braille characters -- Part 1: General guidelines for Braille identifiers and shift marks

- **ISO/TR 11548-2:2001** - Communication aids for blind persons -- Identifiers, names and assignation to coded character sets for 8-dot Braille characters -- Part 2: Latin alphabet based character sets

- **ISO/IEC 14496-23:2008** - Information technology -- Coding of audio-visual objects -- Part 23: Symbolic Music Representation

ISO/IEC 14496-23:2008 specifies Symbolic Music Representation (SMR). A symbolic representation of music is a logical structure based on:

1. Symbolic elements representing audiovisual events,

2. The relationship between those events, and

3. Aspects related to how those events can be rendered (visually as music notation or audibly) and synchronized with other media types.

The Symbolic Music Representation enables the development of new applications in several domains of entertainment, edutainment, infotainment, etc., from education and distance learning, to rehearsal and musical practice at home, from consumer electronics like set-top boxes for interactive TV to personal computers and mobiles systems. The SMR may be used to represent many kinds of symbolic music including different styles of Chant, Renaissance, Classic, Romantic and 20th Century styles, Korean notation, simplified notations for children, Braille, etc..

ISO/IEC 14496-23:2008 specifies Symbolic Music Extensible Format (SM-XF) an XML based language used to encode musical scores as main scores, single parts and the associated lyrics;

Symbolic Music Formatting Language (SM-FL) an XML based language used to define the rendering rules that are applied to the SM-XF format for rendering it;

Symbolic Music Synchronization Information (SM-SI) a binary format describing the synchronization information between the SMR elements and the other audiovisual elements; syntax and semantics of the SMR bit stream.

- **ISO 9241-920:2009** - Ergonomics of human-system interaction -- Part 920: Guidance on tactile and haptic interactions

ISO 9241-920:2009 gives recommendations for tactile and haptic hardware and software interactions. It provides guidance on the design and evaluation of hardware, software, and combinations of hardware and software interactions, including: the design/use of tactile/haptic inputs, outputs, and/or combinations of inputs and outputs, with general guidance on their design/use as well as on designing/using combinations of tactile and haptic interactions for use in combination with other modalities or as the exclusive mode of interaction; the tactile/haptic encoding of information, including textual data, graphical data and controls; the design of tactile/haptic objects, the layout of tactile/haptic space; interaction techniques.

It does not provide recommendations specific to Braille, but can apply to interactions that make use of Braille.

The recommendations given in ISO 9241-920:2009 are applicable to at least the controls of a virtual workspace, but they can also be applied to an entire virtual environment — consistent, in as far as possible, with the simulation requirements.

NOTE: It is recognized that some interactive scenarios might be constrained by the limitation that a real workspace is to be modeled in a virtual environment.

Objects can be in suboptimal positions or conditions for haptic interaction by virtue of the situation being modeled.

5. References:

http://www.thescreamonline.com/technology/monitor/monitor_res.html

http://www.noyabilgisayar.com/default.aspx?pid=10916&prID=22429

http://www.noyabilgisayar.com/default.aspx?pid=10916&prID=4399

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http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=45531

http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=42904

QUALITY FUNCTION DEPLOYMENT (QFD)

What is Quality Deployment for Easy Life?

Product development process of Easy Life Co. is based on focusing on meeting customer needs, making better decisions and reducing the uncertainty by following certain rules to align with certain quality standards. In order to achieve its aim of deploying high quality over objective criteria, Easy Life incorporates a quality cycle that is including processes that are related to design, production, finance and customer relations.

Quality cycle consists of:

- Creating a design that meets customer needs,
- Conducting detailed product analyses of parts and components,
- Identifying the processes necessary to make the product,
- Developing product requirements,
- Prototype testing,
- Final product testing,
- After-sales troubleshooting.

STEPS TO CREATE THE QFD

Potential Customer Survey is Created to Listen to the Voice of Customer

To establish a more reliable house of quality we published a customer survey on 'Easy Shop' shopping panel and developed our "WHAT"s according to the results of this survey.

This questionnaire is carried out with potential customers who are physically disabled, work and busy. Target market is reached through foundations for handicapped. In the survey, we provide a brief product definition to help them understand our product. It is followed by the customer survey to integrate the potential customer opinions on the product to strengthen our competitive advantage in the market.

Full version of the survey is provided as appendices but here are the questions (17, 18 and 19) mainly related and used as the quality deployment criteria in the report.

Survey Questions

Number of participants: 32

Easy Shop Panel

Easy Shop Panel, which provides a platform to get the basic customer needs directly from consumers, will make daily routine of disabled and elderly people easier by changing their shopping characteristics from passive to active. By this panel, disabled and elderly people will be able to order frequently used goods from the dealers without any computer knowledge and internet connection. These people can choose what they need through the user-friendly software on Easy Shop Panel and send their orders to the dealer via GPS/GSM module. Then, the dealer will deliver the orders to these people's addresses.

Q-17 After reading our brief product definition do you think you would purchase such a shopping panel and use it for your self shopping purposes without any dependence on other people.

- o   Yes, definitely
- o   I would purchase it but I would use it occasionally
- o   I might purchase it if I was living alone
- o   I would not purchase nor use such a product. Reason is ……………….
- o   Undecided

      Other, please specify………………………………………………………

Q-18 Compared to other available shopping solutions (call order, online shopping, by yourself, getting help from another person) how would you rate our idea of freedom (independece) in shopping?

- o   Much better
- o   Somewhat better
- o   About the same
- o   Somewhat worse
- o   Much worse

Q-19 Which attribute of this product would you prioritize the highest according to your needs and expectations? Please list your rate of importance on a scale of 1 to 5 for each. (1 being the least important and 5 being the most important)

1	2	3	4	5

Adaptability: Installing the product or software on appealing multifunctional surfaces such as refrigerator or cell phone.

1	2	3	4	5

Affordability: The price should be kept as low as possible for a larger customer adoption

1	2	3	4	5

Convenience: It should be distributed through social service management of municipalities' disabled people units to have a wide public recognition

1	2	3	4	5

Reliability: The system should prove to work properly under warranty period and conditions.

1	2	3	4	5

Customer service: There should be a 24-hr customer service for maintenance, registration and breakdown notifications of the product.

1	2	3	4	5

Service variety: The product should be advanced such that there can be more service operators are added/declared over time to sustain a 7/24 continuous service.

1	2	3	4	5

Insights got from the Survey Results are Analyzed Below

Q-17 After reading our brief product definition do you think you would purchase such a shopping panel and use it for your self shopping purposes without any dependence on other people?

First question results are used to analyze purchase intention of potential customers. As it can be seen below, there is a high intention to buy Easy Shop even it is an innovative product and normally not expected to be adopted as 66%.

Here is the graphic show the raw data:
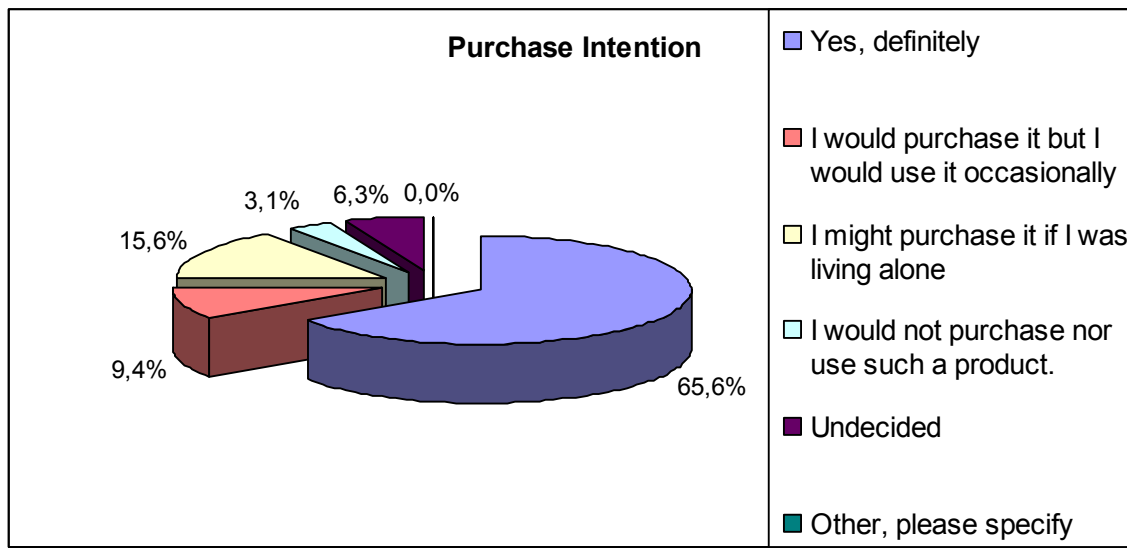
Purchase Intention

- Yes, definitely
- I would purchase it but I would use it occasionally
- I might purchase it if I was living alone
- I would not purchase nor use such a product.
- Undecided
- Other, please specify

3,1% 6,3% 0,0%

15,6%

9,4%

65,6%

According to results, it is possible to turn answers that stand between 'Not buy' and 'Buy' side to 'Buy' side by creating a reliable marketing and distribution strategy collaborating with associations for handicapped people.

Q-18 Compared to other available shopping solutions (call order, online shopping, by yourself, getting help from another person) how would you rate our idea of freedom (independence) in shopping?

Here is the graphic show the raw data:

Competitive Benchmarking

Perceived Value

Much better	Somewhat better	About the same	Somewhat worse	Much worse
81,3%	18,8%	0,0%	0,0%	0,0%

Scale

Since there is no direct competitor in the home order industry, results show the competitive advantage of Easy Life by 81%. 19% comes from the responses that point out also indirect competitors' strengths and weaknesses, which make us to realize their competitive degree.

Q-19 Which attribute of this product would you prioritize the highest according to your needs and expectations? Please list your rate of importance on a scale of 1 to 5 for each. (1 being the least important and 5 being the most important)
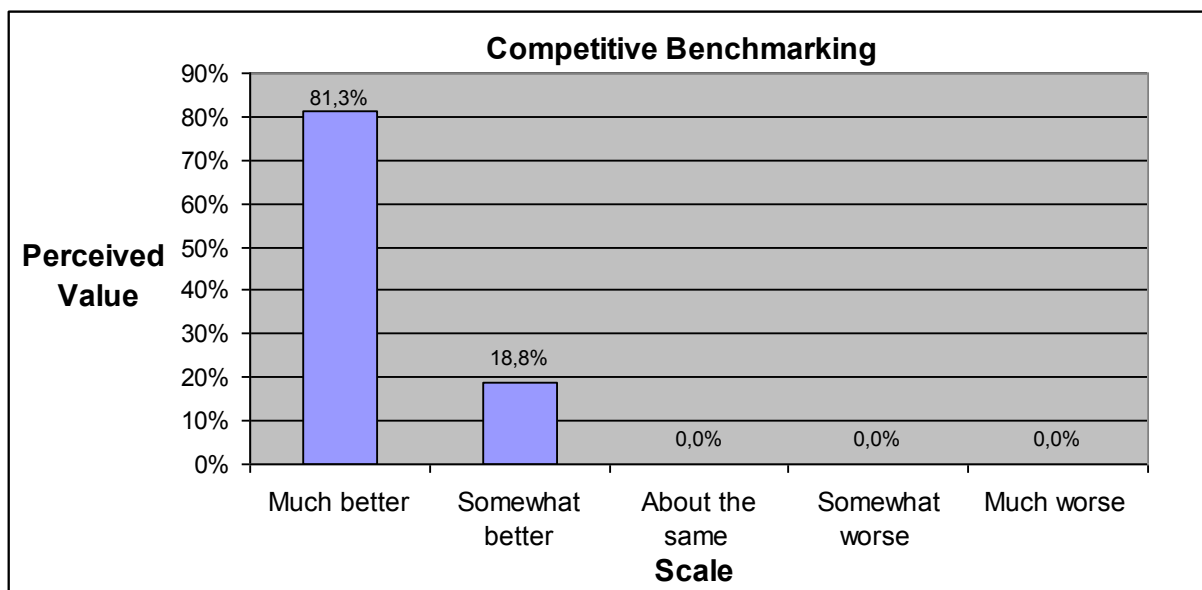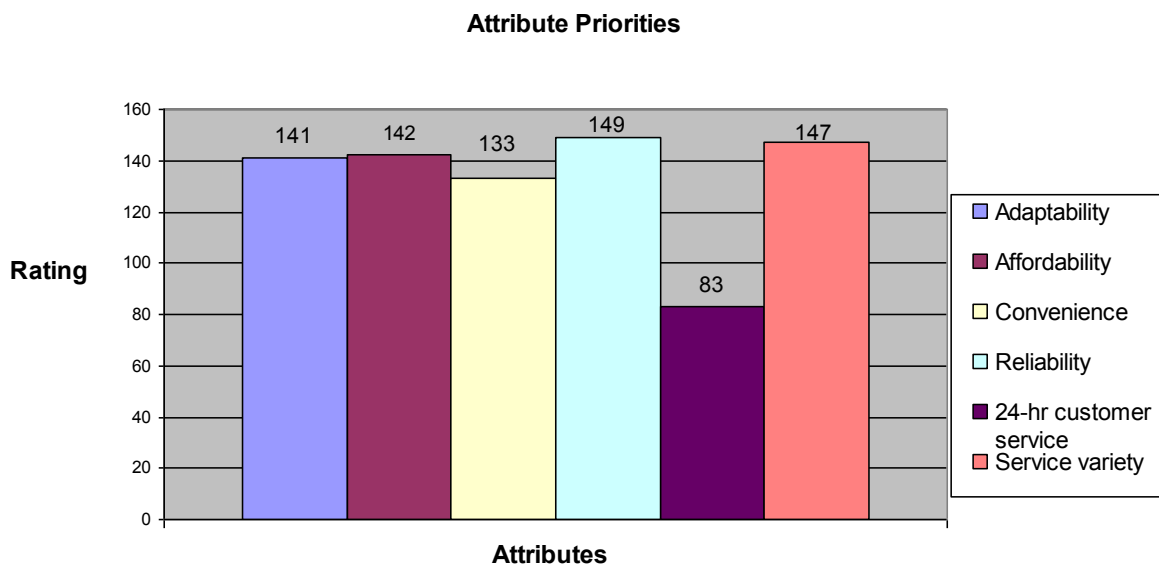**Here is the graphic show the raw data:**

Attribute Priorities

Each attribute has its rating calculates according to the following formula:

Total rating = (number of votes for 1*1)+ (number of votes for 2*2)+ (number of votes for 3*3)+ (number of votes for 4*4)+ (number of votes for 5*5)

And the following chart is attained.

According to the graphic, attributes assessment can be categorized as it is done in the Importance Rating of Customer Requirements table below.

WHATs are Created

The responsible manager examined the data gathered from this questionnaire and some inferences about customer needs are made. These inferences formed the basis of the WHATs of QFD. The importance ratings were assigned according to the number of people paying attention to the respective WHATs and the importance they underlined.

Importance Rating of Customer Requirements

Customer Requirements of WHATs	Importance Rating
Adaptability: Installing the product or software on appealing multifunctional surfaces such as refrigerator or cell phone.	3
Affordability: The price should be kept as low as possible for a larger customer adoption	3
Convenience: It should be distributed through social service management of municipalities' units for disabled people to have a wide public recognition	2
Reliability: The system should prove to work properly under warranty period and conditions	5
Customer service: There should be a 24-hr customer service for maintenance, registration and breakdown notifications of the product.	1
Service variety: The product should be advanced such that there can be more service operators are added/declared over time to sustain a 7/24 continuous service.	4

The insight got from responses to the 9th question exposes that the most essential customer requirement is reliability of the technical aspects and customer satisfaction through service promises under warranty conditions. The least essential requirement is seen as 24-hr of customer service that consists of immediate fixing service and application availability. Easy Life's implication to that assessment can be seen as 'Technical descriptors of HOWs' part below.

Competitive Assessment is Based on Technical and Customer Expectations

Since Easy Life does not have any direct competitors offering the exact same solution, indirect competitors are taken as benchmarks. The WHATs were then compared between Easy Life and indirect competitors. Those competitors are categorized according to their relevance and decided take Kangurum, Erikli and Sucu Burada as prior benchmarks. Other indirect competitors that were included in the competition report are EMN8[®], Sispar, Nexus, Ideal Yazılım and we prefer to form a single group called ESNIY with fairly competitive advantages over Easy Life to represent them as possible future competitors for Easy Life

Competitive Assessment of Companies

Here are the ratings that are got from the 19th survey question responses.

"WHAT"s	Easy Life	Kangurum	Sucu Burada	Erikli	ESNIY
Adaptability	4	1	1	2	3
Affordability	2	2	2	4	3
Reliability	3	5	2	5	3
Availability	5	3	1	4	3
Customer service	4	4	1	5	3
Service Variety	3	5	1	1	3

The inference is, Sucu Burada is the weakest threat in all aspects. On the other side, Erikli and Kangurum are strong competitors especially in reliability and customer service issues.

Therefore, we think of taking them as not direct competitors but business alliancees who join the service provider network in Easy Shop panel.

HOWs are Created

Then, technical and managerial departments discussed the ways to reach customer needs and expectations by considering the product and company limitations at the same time. What the teams came up with formed the HOWs of QFD.

Number	Technical Descriptors of HOWs				
1	Finding possible applications for installation on appealing multifunctional surfaces such as refrigerator and cell phone.				
2	The price is kept as low as possible, around 200TL for a larger customer adoption				
3	Distribution and marketing strategies are based on increasing availability and public recognition by focusing on advancing the quality of the service operators and increasing the number of modules in service segments				
4	Conducting more tests to make the product more reliable under certain warranty conditions				
5	Set goals for sustaining at least 12hr customer service for maintenance, registration and breakdown notifications of the product by a new department or outsourcing.				
HOWs	1	2	3	4	5
Target Goals	□	□	↑	↑	□

| Symbol	Target Goal
↑	Maximize or increase attained value
↓	Minimize or decrease attained value
□	Achieve a target value

Correlation Matrix is Created by Compare and Contrast Method

The next step is to create the correlation matrix between the technical descriptions of HOWs. Depending on the correlation between each HOW pair, relationship levels are decided. In addition to this, an analysis of how each HOW is established within the competitors is made. As explained above, other similar companies were formed into one possible future competitor for Easy Life. Rating for each HOW is then seen from this analysis.

Furthermore, for each HOW-WHAT pair, the effectiveness of the HOW in securing a WHAT is rated and these ratings are then used to calculate the weighted scores; representing the relative position of Easy Life in home order industry.

CORRELATION MATRIX

Error!
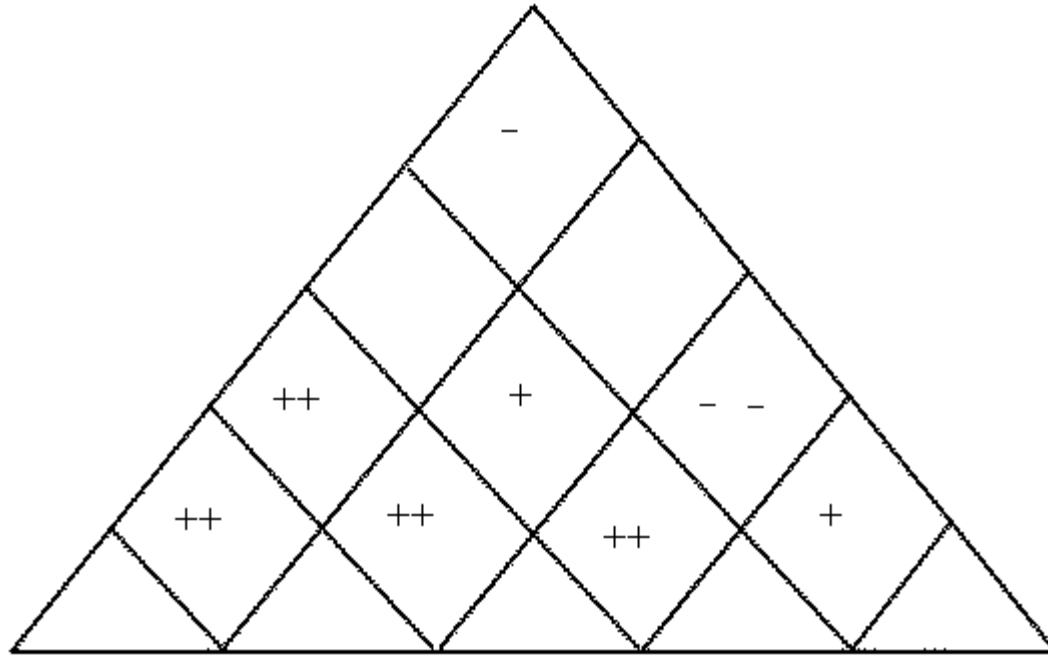
HOW#1	HOW#2	HOW#3	HOW#4	HOW#5
Possible Applications	Fair Price	Business Alliancees	Good Warranty Terms	New department-Outsourcing

The relations between each of these technical descriptors and specifications can be examined from the table below via the following symbolism: ++ meaning that there is a strong positive correlation, + meaning that there is positive correlation, - meaning that there is negative correlation and − meaning that there is strong negative correlation.

Relationship Matrix

WHATs	Importance ratings	HOWs				
		Possible Applications	Fair Price	Business Alliancees	Good Warranty Terms	New department-Outsourcing
Adaptability	4	5 (20)	4 (16)	1 (4)	3 (12)	0 (0)
Affordability	2	3 (6)	5 (10)	0 (0)	3 (6)	0 (0)
Reliability	3	0 (0)	0 (0)	4 (12)	5 (15)	3 (9)
Availability	5	5 (25)	0 (0)	5 (25)	0 (0)	0 (0)
Customer service	4	0 (0)	0 (0)	0 (0)	0 (0)	5 (20)
Service Variety	3	0 (0)	3 (9)	5 (20)	3 (12)	0 (0)
Absolute Score		51	35	61	45	29
Relative Score		4	2	5	3	2
Tech. Comp. Assessment		4	4	4	3	3
Weighted Abs. Score		204	140	244	135	87
Final Relative Score		2	3	1	4	5

'5' indicates that there is a high relationship; '3' indicates that there is a medium relationship; '1' indicates that there is a low relationship and '0' indicates that there is no relationship for WHATs-HOWs.

According to the final relative scores in the table, business alliance network is at the first importance level for Easy Life Co. Possible applications to increase availability of Easy Shop takes the second place, fair price is at the third place and good warranty terms that brings trust issue between customer and Easy Life Co. takes the fourth place. Lastly, forming a new department or outsourcing it for sustaining at least 12hr customer service of maintenance, registration and breakdown notifications is at the least essentail level or it seems possible to improve by time.

To conclude, Easy Life Co. believe that accomplishing these target assessments will attain a sustainable competitive advantage in the market. After collecting all sorts of information from customer surveys, determining the benchmark companies and assessing our abilities just

like a SWOT analysis does, this quality function deployment process helped us to understand Easy Shop panel and the market at a great extent.