Deliverable D1.4

Business case presentation & full set of requirements, version 2

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Description:

This document is a revision and update of deliverable D1.1.

Differences from deliverable D1.1 are mainly in the description of Scenarios:

- Fashion As Is and To Be scenarios:
  Story Telling are explained in a more detailed way, as well as Actors and Systems involved.
- Interior Design To Be scenarios:
  To Be processes are explained highlighting the implication of Morpheos’ implementation.

In D1.4 as well it was in D 1.1, the AS-IS processes for the on-line good and size selection by the final consumers and the TO-BE processes are described, defined as goals to reach.

Initial paragraphs of the document describe the partners who are going to test the Platform and therefore have been mainly involved in first activities: AIDIMME and PIACENZA.

TO-BE scenarios that will be reached adopting Morpheos and potential derived improvements will be explained in this document, as well.
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Full project title
Morpheos — MORPHotype EcOSystem – design remote definition based on big data morphology and use ecosystem for creative industries

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1. Introduction

1.1. Objective of WP1
By analysing current gaps and limitations as well as barriers of existing approaches, Work Package 1 is responsible of the identification of the description of AS-IS processes on which Morpheos will have an impact. New processes and related opportunities enabled by the solution will be presented. Finally, detailed business and technical requirements to guide the development activities will be extracted and formalised.

1.2. Objective of D1.4
Deliverable D 1.4 is an updated version of deliverable D 1.1, adding more details on AS-IS and TO-BE scenarios, providing a fully and definitive list of requirements.

Differences from deliverable D1.1 are mainly in the description of Scenarios.

- Fashion As Is and To Be scenarios:
  Story Telling are explained in a more detailed way, as well as Actors and Systems involved.

- Interior Design To Be scenarios:
  To Be processes are explained highlighting the implication of Morpheos’ implementation.

D 1.4 confirms AS-IS processes, for the on-line good and size selection by the final consumers. It provides more details for TO-BE scenarios after 9 months of involvement. The result is an identification of preliminary business requirements of general validity, that will guide the design of the technical solutions. TO-BE scenarios will be reached adopting Morpheos and potential derived improvements will be explained.

To ensure coherence through activities, the methodology, developed by Holonix and i-Deal, consists in a continuous check among involved actors in order to establish the direction they are following in their work. Moreover, many phone calls have been done and a meeting in the beginning of month 9 has been organized to take stock of the situation and of improvements.

During phone calls and the meeting, actors are asked to explain their activities, status, test made and planned.

This way of work management gives everybody the possibility to be aligned on all fronts and to exchange skills and knowledge.

Morpheos project expected results described in D1.4 will be commercially exploited by ISizeYou platform and www.isizeyou.com website, both property of i-Deal, which will be also responsible of all privacy protection activities described in WP8.

Therefore, from now on in the present deliverable, it will be also made reference to ISizeYou platform and website, containing also the results of Morpheos project.

Since privacy authority specifically requires that the owner of the website fulfils privacy protection activities and that the owner is the only subject entitled to act, the integration of
Morpheos software test releases and commercial version into ISizeYou platform is the only solution to respect privacy authority requirements. Otherwise, if a specific Morpheos URL and/or app would be used, a specific owner would be very hard to identify since the consortium is not a legal entity.

Therefore for Morpheos testing environment it will be used an URL of isizeyou.com, such as morpheos.isizeyou.com/ (or a similar one).

1.3. Content of the document

The document is divided in four chapters.

- Business Partners Introduction

This chapter gives an overview of those partners involved in the definition of AS-IS scenarios and of their evolution in TO-BE scenarios. AIDIMME and Piacenza are described at high level and their expectation within the project is treated.

- AS-IS Scenarios

This chapter represents the description of the use cases that will be analysed and tested during Morpheos Project.

Seven use-cases have been provided by end users AIDIMME and Piacenza. Three use-cases belongs to interior design sector; while four use-cases to fashion one.

Each use-case is described through a story telling and an overview of systems and actors involved. A graphic explains the process and the consequent problems and limitations.

- TO-BE Scenarios

In TO-BE Scenarios the evolution of AS-IS use-cases is shown, adopting Morpheos storytelling and processes change. Problems and limitations change into benefits. It’s possible to define target parameters and the different roles of systems and actors involved.

- System Requirements

This chapter represents the validation of system requirements elaborated during the first three months of the projects and already explained in deliverable D 1.1.

Stakeholder needs, strategy, methodology and different levels of requirements are explained.
2. Business Partners Introduction

This chapter presents the Morpheos business partners representative of the fashion and creative industries.

AIDIMME is a Spanish non-profit association specialized in research activities to support manufacturing companies in different industries (e.g. furniture, wood, metal processing, packaging and so on).

Piacenza belongs to Italian SME of fine woollen fabrics, clothing and accessories for fashion and luxury markets. It is supplier of fabrics to all world-leading fashion brand manufacturers (e.g. Zegna, Gucci, Prada, Louis Vuitton, Hermès among the others).

The next chapter describes in details the two companies, providing an overview of the related markets and peculiarities, expectations within the project as well as the description of the identified project use-cases.

2.1. AIDIMME

2.1.1. Company Description

The METAL-PROCESSING, FURNITURE, WOOD AND PACKAGING TECHNOLOGY INSTITUTE (AIDIMME) is a Spanish based, private, non-profit association consequence of the merger between AIMME (Metal Technology Institute) and AIDIMA (Wood and Furniture Technology Institute), both operating since the 80's in Research and Technology activities for their industrial affiliated companies.

AIDIMME’s headquarters include five buildings: two head offices, a pilot plant for training and advanced technologies, a technical unit for packaging and transport and a pilot plant including a flexible warehouse, all located at the Technology Park of Valencia. AIDIMME also has a technical unit in Madrid.

Figure 1 - AIDIMME Headquarters main entrance
AIDIMME has close links with their reference industrial associations and federations. It is the scientific and technical umbrella organization for around 800 associated companies throughout Spain, encompassing all kind of value chain companies: material suppliers, product manufacturers, retailers and ancillary services.

It belongs to other furniture networks, such as InnovaWood, that is an umbrella organization that integrates four European networks in the Forest, Wood-based and Furniture industries into a more effective mechanism to support innovation in these sectors.

AIDIMME has also very close contact at regional, national and international level with the following:

- Industrial associations: AEMMA, ACEBM, ACOMVAL, ASEMAD, AREMA, AFAMID, ANIEME, ASEMCOM, AMC, AFEMA, ASEFAPI, ASEFCA, AFCO, IAPRI
- Federations: FEVAMA, FECOMVAC, FEDERMUEBLE, CONFEMADERA, FAMO, FEDEMCO, CEI-BOIS, EFIC, UEA, FEIC, EPF, CEPF, CEPI, FEFCO, EFPRO
- Technology platforms: FTP - Forest based sector Technology Platform
- Vocational Training Centres related to Wood and Furniture.
- Network of Technological Institutes of the Valencia’s Region (REDIT): 14 in total.

**2.1.2. Main Business**

AIDIMME aims at fostering the competitiveness of the companies belonging to the activities of its sectors through Research, Development and Innovation, from products and processes to market and organization.

Among its sectors and activities AIDIMME works in:

- Metal products: household, machinery, jewellery, structural products, etc.;
- Surface treatments: electrochemical (metallic) and organic (paints, varnishes) both on metal, plastic and wood;
- Wood: wood-based products, veneer, plywood, boards, semi-finished products, doors, floors, wood pallets;
- Furniture: domestic, children, contract, office, kitchen, bathroom, regardless of the material (wood, plastic, metal...);
- Transport (automotive, aerospace, railway);
- Packaging: Cellulosic materials: wood, paper and cardboard and users of all types of industrial transportation packaging.

Regarding Standardization, AIDIMME is drafting some Spanish standards related to furniture and participation in the drafting of European and international standards concerning furniture, machinery safety, etc.

AIDIMME works in Quality control testing of raw materials, semi-elaborates, furniture and finished products. Over 200 companies have their products certified by AIDIMME’s Quality Symbol. AIDIMME helps in the implementation of ISO 9000 quality assurance systems in furniture factories and assesses in improvement of industrial and distribution logistics on shop floor.

Regarding Information to AIDIMME associated members/clients, it supplies of technical and economic information member companies and institutions through advanced information systems producing e-magazines for the furniture, wood, packaging & transport sectors, e-newsletters for the abovementioned sectors, on-line service for member requests and questions, managing competitive surveillance systems Furniture Explorer & Packaging Explorer.

AIDIMME has a longstanding experience coordinating European projects in ICT area for the furniture sector of more than 15 years, as well as developing web-based business solutions for enterprises. AIDIMME has an extensive experience developing interoperability e-Business solutions focusing on SMEs with the goal of providing “easy-to-use solutions” for industrial users.

AIDIMME’s key competences are in additive manufacturing, chemical technologies, product development, process and sustainability (environment, production management, logistics, safety), materials and products, information and communication technologies, socio-economic research, market research and business strategy and testing laboratories.

Market areas of interest are:
- Home furnishings and accessories, interior design;
- Furniture manufacturing companies and related industries, such as suppliers of fittings, wood coatings, etc. (mainly AIDIMME’s associated companies);
- Home product designers (mainly furniture and lighting);
- Interior decorators (i.e. woodwork, facing and flooring).

2.1.2.1. E-commerce as AIDIMME’s potential business area

**FURNITURE GLOBAL ONLINE COMMERCE**

Globally, online sales in the furniture industry represented 2.6% of the market in 2013, reaching around 20,850 billion dollars (source: CSIL). For 2014 the estimation was an increase of 14% in global online furniture sales, up to 23,800 billion dollars. By World regions, America and Asia are the largest furniture online markets, with more than one third of global sales each one. On the other hand, Europe captures the fourth part of furniture online global market.
Unconceivable some years ago, electronic commerce has finally reached the furniture market. Traditional players have always trusted on the belief that furniture must be touched and seen before making the purchase decision (and this is still a truth for most consumers). However, as it already happened in other markets, furniture online sales are gradually growing.

Three main formats are in competition for this market:

- General Websites and online purchase clubs (examples: Amazon, Alibaba, Vente Priveé, etc.):
- Furniture, decoration and other home elements (tableware, home textiles, lighting, etc.) specialized websites and online purchase clubs (examples: Westwing, One Kings Lane...);
- Websites of specialized brick-and-mortar retailers (example: Ikea, Conforama, etc).

As for other markets, online channels have facilitated the entry of new players in the furniture market, being mainly large international marketplaces which have been well positioned amongst consumers.

**Furniture, Resting and Decoration Online Commerce in Spain**

In Spain, 25% of online consumers purchased home and kitchen furniture, mattresses and decoration products in 2016 (source: Banco Cetelem, 2016), being 5 percentage units higher in relation to 2015. Notwithstanding, online average expenditure in these products decreased to 276€ in 2016, a 32% lower than in 2015.

In this market, home accessories and decoration was the most purchased category in 2016 (48%), followed by bedroom and living/dining room furniture (22% and 20% respectively). On the other hand, kitchen furniture is the category with the highest average expenditure (425%).
Figure 4: Category of furniture sales in 2015 and 2016

Home specialized retailers’ websites (49%) and international website marketplaces (37%, i.e. Amazon) stand out amongst consumer preferences. Particularly, home accessories, decoration and auxiliary furniture are specially demanded categories. 38% of furniture online consumers visited a brick-and-mortar store before online purchasing (this is known as showrooming consumer behaviour). On the contrary, 62% of consumers bought online without visiting physical stores.

Figure 5: Online furniture sales channels
Worst appreciations by consumers about furniture, resting elements and decoration online purchasing are following ones: “Not being able to see and touch products”, “Waiting time until product delivery at home”, and “Shipping costs”. In 2016, 17% of online consumers returned the product. Of these, 58% returned due to product flaw, 39% due to having received a wrong product, and 11% due to delay in delivery.

![Figure 6: Main causes of furniture returns from online sales](image)

2.1.3. High level expectation within the project

Morpheos means a ground-breaking approach for furniture creative industries which are not familiar with new technologies. It’s a truly innovative way to provide AIDIMME’s target users, such as interior designers and furniture manufacturing companies, with the possibility of adapting their products to the taste, lifestyle, habits, morphotype, and needs of their final customers. In the furniture case, final customers can be seen and perceived as homes under all its forms.

Here below AIDIMME Expectations from Morpheos:

- **E1: E-commerce support service by correct product suggestion to users**, with a related significant reduction of returns due to the difference between customer expectations and the reality of the product selected.
- **E2: Support the definition of the furniture fitting, satisfaction, adaptation, taste, etc.,** for the specific morphology, living space, and lifestyle of homes. Customers will influence the design process based on market-driven insights enriching the creative approach of designers and interior decorators.
- **E3: Total customized user experience** with reduced number of customers lost during the purchase process as well as a decrease in the number of clicks needed for product selection.
• **E4**: Increment of both online shopping and product reliability, especially true in a market like the furniture one where customers need to look and feel the products before making a decision and a purchase.

• **E5**: Easy to adapt and integrate into any e-commerce site. The Morpheos technical solutions must be as easy to integrate as possible in order to make a perfect fit in the e-commerce site.

Currently AIDIMME has identified the following use cases during the e-commerce purchase based on the customer’s morphology, preferences and specific interests:

**Use Case A1**: Support the selection of the most suitable product/s.

**Use Case A2**: Support a new project decoration design.

**Use Case A3**: Support a new product design.

### 2.2. Piacenza

#### 2.2.1. Company Description

![Figure 7: Piacenza Headquarters at Biella](image)

Piacenza is a SME manufacturer of fine woollen fabrics, clothing and accessories, leader in the top segment of noble fibre fabrics for fashion and luxury markets. It is supplier of fabrics to all world-leading fashion brand manufacturers (Zegna, Gucci, Prada, Louis Vuitton, Hermès among the others). Based in Italian textile district of Biella, where all its production is realized, it is one of the oldest textile industries of the world, founded in 1733 always been owned by the Piacenza family. Its production organization is fully performed in Italy and it is completely integrated from raw materials to finished fabric, except spinning phase which is performed on its behalf by sub suppliers.
Piacenza will provide its e-commerce platform www.piacenzacashmere.com to test Morpheos implementation and collect result KPIs into a real clothing business environment of value creation and growth potential. It will provide also the testbed to collect design manufacturer feedback about the integration of Morpheos platform into an SME CMS (in this case Prestashop) and the efforts to validate the ecosystem. Piacenza will actively participate to the definition of the requirements of the platform as well as to all its test in order to provide constant feedback to support its improvement towards real business environment application and final validation.

Piacenza exploitation aims at improving the performance of its e-commerce website as well as to improve its design development process by the exploitation of the information provided by Morpheos ecosystem. It will also actively support the demonstration process by IT partners, interested into commercial exploitation of Morpheos platform.

2.2.2. Main Business
EU Textile and Clothing sector is the absolute leader of fashion and luxury all over the world. Four of the five worldwide largest conglomerates fashion groups are located in EU: LVMH, Richemont, Kering and Hermes. EU industries have successfully faced market change by a radical refocus towards high end and luxury.
In these sectors they can exploit the peculiar competitive advantages of EU in design, quality, service and image, above all for the sophisticated luxury market, where design proposal, quality, flexibility in production and delivery, service and quick response to customers’ needs are critical to build the added value and overcome the pressure on prices. The overall size of the Textile & Clothing industry in the EU-28

Figure 8: Piacenza internal processes
represents\textsuperscript{1} investments of around 4 billion €, 173,000 T&C companies employ over 1.7 million workers, 90% SMEs, 6th in employment and the 4th highest share of added in EU.

But this leading position of EU players must be defended and supported by a dynamic distribution updated on the basis of fast evolving market from traditional retail to e-commerce, in a fully integrated omni channel strategy.

"E-commerce is booming and retailers face many challenges and opportunities. The rapid development of the e-commerce industry has led to traditional retailers moving into the online market. Retailers and e-tailors are facing pressure to adapt since a strategy focusing on a single channel may no longer be sufficient to attract the demanding customers of the 21st century.\textsuperscript{2}\"

But the rules of this new challenge for EU fashion is played with rules which are different from other e-commerce fields, due to the peculiar characteristics of clothing.

Since basic ecommerce platforms, in form of CMSs\textsuperscript{3}, have become a standard, the winning players will have to find a solution to the size problem, which is peculiar of this sector and in general of the ones where a physical relationship between human body and physical goods is expected - for example chairs, automotive seats, interior design, etc.

The percentage\textsuperscript{4} of worldwide clothing sales on-line has been 9\%, far below 50\% of computer electronics and 40\% of books. Yet computers sold on-line represent a market of 30 Bln Usd, 9\% of global apparel equals 31 Bln Usd. Apparel is already the biggest absolute sales category on the internet and in 2016 it is expected to double the turnover of 5 years before. Clothing market leaders have invested large amount of money in their own retail to control the image and distribution of their products and to grant their presence in the most promising markets. The fast growth of on line channel can represent, in the long run and in relation also with the growth of the "digital natives" expenditure power, a menace or an opportunity for EU leadership in the sector.

![Figure 10: Wrong size on line returns](image)

46\% of the clothing consumer who have experienced on line purchases have experienced returns because the clothing product (of which 9\% often and 39\% sometimes)

\textsuperscript{1} Source: Euratex
\textsuperscript{2} Source: Deloitte [https://www2.deloitte.com/content/dam/Deloitte/se/Documents/technology/Omni-channel-2015.pdf](https://www2.deloitte.com/content/dam/Deloitte/se/Documents/technology/Omni-channel-2015.pdf)
\textsuperscript{3} Prestashop, Magento, W-commerce, Jumla
\textsuperscript{4} eMarketer
\textsuperscript{5} Ventee Privee – Internal report 2013
does not fit the size of the customer. In North EU and US customers very often adopt the opportunistic behaviours to buy 2 sizes and to return the less fitting one, supported by the free return policy of the web retailers. A statistics presented by Zalando at textile and clothing EU technology platform the return rate overcomes 30% in Germany, Netherlands and Great Britain. In Southern EU countries, where the culture of consumer protection is weaker, the rate of return is lower and the impossibility of try on refrains the development of apparel on line sales.

This problem is strongly affecting the ROI of e-commerce and the success, especially of SMEs. Research by Barclaycard⁶, picked up by The Guardian, revealed that six out of 10 retailers have been impacted by the increasing number of people who make returns of online orders.

31% of the sample has in fact reported significant losses arising from the transactions made, and one in five admitted to having raised prices to cover the costs of returns. The problem, says the magazine, is such that many of the smaller business are backtracking from online. According to Barclaycard, 22% of retailers had consciously chosen to exit the business online or not to undertake it entirely on account of the operating costs of the deliveries and returns. The situation is particularly difficult for the player that offer free deliveries: according to the study, about half of consumers admitted that if there was a charge to be incurred for the return would not have ordered a product online. Moreover, send back the purchased products is getting easier and it seems that customers do not consider it a product purchased up to that is not delivered on the kitchen table, aware that even then may discard postponing it back. The result is that more and more products are returned.

2.2.2.1. E-commerce as Piacenza’s potential business area

Piacenza Cashmere first ecommerce was started in 1999 and it was a pioneer activity. The website of that time appears quite different in its graphical form: https://web.archive.org/web/20010419110454/http://www.piacenza1733.it:80/asp/default.asp

18 years have passes but the way to sell clothing on line and the information available for consumers were quite the same of the present website: www.piacenxacashmere.com. Even if the confidence of consumers towards ecommerce has been greatly improved, the problems of the returns due to size mismatching is the same. Because of this reason Morpheos is expected to greatly enhance Piacenza website performance in all to be scenarios described in chapter 4.

More in detail the benchmark in clothing luxury ecommerce is Burberrys, who is leader in web shopping, and the average ecommerce sales in luxury fashion are estimated in 7% of the total clothing market⁷ in 2016. Even if an SME, therefore with a very small dimension towards the giants of the market, Piacenza ecommerce sales in 2016 have outperformed, with 8% of the total finished division sales by the web. The joint application of all the tools described in chapter 4 is expected to have a positive impact on the conversion rate by desktop, by mobile, on return reduction and, finally, on the total turnover of e-commerce.

Even if hardly predictable, due to the absolutely novelty of Morpheos technology, Piacenza target is to reach at least 15% of clothing division sales by ecommerce by the end of 2018 and

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to reduce near to zero the returns due to size mismatching by the application of the project technology.

2.2.3. High level expectation within the project

Being a SME, Piacenza has the peculiar limits of EU players of its dimension. Although it’s a leader, it has to exploit at its most its financial resources, addressing all the field of investment, including manufacturing machineries as well as distribution and retail.

Trying to anticipate the tendency of the market, it has been decided to shift investment from brick and mortar to e-commerce retail by closing the flagship store in Milan “fashion quadrilatero”. It was too expensive and with decreasing ROI, Piacenza invested in e-commerce channel, whose inventory is fully integrated with the one wholesale distribution and of the local Piacenza shop, located inside the production premises in Pollone (Biella). This strategy is deploying a full omni channel strategy, where the 3 main channels (ecommerce, wholesale and retail) are exploiting the same logistics, inventory, information and production.

In order to improve the ROI of ecommerce clothing distribution, Piacenza expects from Morpheos:

- **#P1: e-commerce support service by correct size suggestion to users**, with a related significant reduction of the returns due to size mismatching and increased confidence of consumers regarding online purchases (measured by cart lost during size selection)
- **#P2: new clothing collection design and production support** on the basis of consumers’ morphology, with a related increased level of matching between produced inventory and related sales, and decreased level of unsold goods at the end of the season.
- **#P3: increased conversion rate of selling campaigns** by customized product communication, measured a significant increase of the conversion rate of e-commerce, both on dedicated mailing and offers tailored on the basis of specific consumer morphology.
- **#P4: enhanced and fully personalized user experience, both on desktop and mobile**, with reduced number of customers lost during purchase journey and number of clicks needed for product selection.
3. As Is Scenarios

3.1. Interior design Use Case #A1: Support the selection of the most suitable product/s.

3.1.1. Story Telling
Jose is interested in changing his bedroom since all of its furniture was inherited from his family and besides being rather old, it is unsuitable for his size. He needs a bedroom according to his dimensions, place for residence characteristics and personal preferences. He finds www.abcdef.com⁸, a furniture specialized e-commerce site, where he can browse for different bedroom concepts and styles, but after a while, he starts missing a full personalized bedroom proposal where he could see and feel a collection of bed products, mattresses, chest of drawers, etc., suitable for his needs, and personal lifestyle. The web lacks the customization part he now needs to adapt to his special needs. One after another, he browses through different websites without finding what he needs. They all look and offer the same everyday mainstream products. Finally, he makes the decision to go to a physical store and to prove his luck there, trying the products inside, thus making sure they will support his weight, taste, among other factors.

3.1.2. Involved Systems and Actors
In this section the main actors involved in the Use Case are presented:

- **End users (households)**
  They represent final consumers. The target audience are people with a taste for decoration and interior design of their homes. Users browse e-commerce sites trying to find products to fit their needs by inputting in the search field the products they want to acquire. If the end user wants a complete bedroom for example, he/she can send their requirements through the platform.

- **E-commerce furniture platform**
  They represent the online e-commerce sites where products are sorted into categories. The site has a full catalogue of products from their customer furniture manufacturers so that end users can browse through it. The lack of knowledge about who is accessing the web, including personal preferences and morphotypes, makes their final offer a non-personalized one, often leaving their customers unsatisfied when trying to buy furniture online.

- **Product designers for home furnishings, accessories, and interior decoration designers**
  The product designers working for furniture manufacturing companies are an important part by making their catalogues accessible in the portal to end users, so these can find them.

Designers’ use of the platform consists in keeping their catalogues updated, so end users can find their latest product offering. Under this business model, designers are not aware of the customers’ profiles of the final buyers. Final users can send possible ideas for decoration through the platform.

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⁸ Fictitious website
3.1.3. Processes

- A1.1 Customer accesses e-commerce site
- A1.2 Customer enters query search to look for bedrooms
- A1.3 Customer browses query results
- A1.4 Customer looks carefully for bedroom’s configurations that adapt to his/her taste and dimensions
- A1.5 Customer doesn’t find anything that suits his/her needs
- A1.6 Customer goes to a physical store
- A1.7 Customer buys bedroom at the store

![Figure 11: #A1 As Is Processes](image)

3.1.4. Problems and Limitations

<table>
<thead>
<tr>
<th>AIDIMME Expectations not met⁹</th>
<th>Process Number involved</th>
<th>Problems and limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#E1</td>
<td>A1.6</td>
<td>Products can be frequently returned</td>
</tr>
<tr>
<td>#E1</td>
<td>A1.7</td>
<td>Customer is reluctant about purchasing something he may later returns</td>
</tr>
<tr>
<td>#E2</td>
<td>A1.4</td>
<td>Product configuration is too general, so customer must check and discard too many products that don’t fit her/his preferences</td>
</tr>
<tr>
<td>#E2</td>
<td>A1.5</td>
<td>Customer wastes time in searching non-filtered product suggestions</td>
</tr>
<tr>
<td>#E2</td>
<td>A1.5</td>
<td>The customer doesn’t know exactly how the product fits to its body and taste</td>
</tr>
<tr>
<td>#E2</td>
<td>A1.5</td>
<td>Difficult matching between consumer lifestyle/preferences and ideas inspiration for furnishing.</td>
</tr>
</tbody>
</table>

⁹ As reported in 2.1.3 - E1: e-commerce support service by correct product suggestion to users; E2: Support the definition of the furniture fitting, satisfaction, adaptation, taste; E3: Total customized user experience; E4: Increment of user’s trust in online shopping
3.2. Interior design Use Case #A2: Support a new project decoration design.

3.2.1. Story Telling
Jose is interested in changing his bedroom since all of its furniture was inherited from his family and besides being rather old, it is unsuitable for his size. He needs a bedroom according to his dimensions, characteristics of his place of residence, and personal preferences. He finds [www.abcddef.com](http://www.abcddef.com), a furniture specialized e-commerce site, where he can propose an idea of how he want his bedroom to be. For that, he clicks on the “we make your project” tab, where he can enter his personal information such as name, address, email, and a free text message where he detailed a little more his needs. Finally, there is also an upload file button where he can upload a picture or a plane of his idea.

Although this information is necessary for the designer to have an idea of the future project, it lacks more details like personal preferences and lifestyle, let alone, this has to be done over and over since it is not stored under any profile. Jose finally hits the submit button and the web responds with a message that says “Thank you for your message. We’ll soon be contacting you”. Eventually, he gets a few ideas of bedroom projects, but Jose thinks that none of them satisfy his needs and decides not to go for any of them. He makes the decision to go to a physical store and prove his luck there, talking to interior designers and expressing onsite, the ideas and getting proposals right on the spot.

3.2.2. Involved Systems and Actors
In this section the main actors involved in the Use Case are presented:

- **End users (households)**
  They represent final consumers. The target audience are people with a taste for decoration and interior design of their homes. User enters information to get proposed project decoration concepts.

- **E-commerce furniture platform**
  It represents the online e-commerce sites where products are sorted into categories. The site has basic input text areas where users can enter their ideas for creative project decoration proposals. The simplicity of the information provided, and the lack of knowledge about who is accessing the web, including personal preferences and morphotypes, makes their final proposals

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Table 1: Summary of the perceived problems for use case #A1

<table>
<thead>
<tr>
<th>#</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>#E3</td>
<td>A1.3</td>
<td>The products are totally mainstream without any customization</td>
</tr>
<tr>
<td>#E3</td>
<td>A1.6</td>
<td>Customer needs talking to somebody about preferences and customization necessities, so online channel is abandoned</td>
</tr>
<tr>
<td>#E4</td>
<td>A1.3</td>
<td>The products are totally mainstream without any customization</td>
</tr>
<tr>
<td>#E4</td>
<td>A1.1</td>
<td>There is not value added in the CMS site offer. It is just “one more”.</td>
</tr>
<tr>
<td>#E5</td>
<td>A1.1</td>
<td>Potential web service failures, the search process is not easy to carry out, and results are not as accurate as they should be.</td>
</tr>
<tr>
<td>#E5</td>
<td>A1.2</td>
<td></td>
</tr>
<tr>
<td>#E5</td>
<td>A1.3</td>
<td></td>
</tr>
</tbody>
</table>

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10 Fictitious website
non-personalized, which causes users to abandon the idea of accepting the interior designers proposed projects, thus leaving their customers unsatisfied when trying to buy furniture online.

- **Product designers for home furnishings, accessories, and interior decoration designers**

The product designers working for furniture manufacturing companies are an important part since they propose their interior decoration projects based on users’ requests.

Designers’ use of the platform here consists in receiving the request from users and, based on minimum information provided, elaborate and propose their interior decoration projects to be accepted by the user. Under this business model, designers are not aware of the full customer profile.

### 3.2.3. Processes

- **A2.1:** Customer accesses e-commerce site
- **A2.2:** Customer selects the "we make your project" tab
- **A2.3:** Customer enters personal information
- **A2.4:** Customer hits "Send"
- **A2.5:** Customer waits for proposals to arrive
- **A2.6:** Customer receives projects proposals
- **A2.7:** Customer is not satisfied with proposals
- **A2.8:** Customer goes to a physical store

**Figure 12: #A2 As Is processes**

- A2.1 Customer visits the e-commerce website to find a full creative project decoration proposal for his bedroom.
- A2.2 Customer selects the tab named “we make your project”.
- A2.3 Customer enters personal basic information and uploads a picture of the bedroom.
- A2.4 Customer hits the “Send” button.
- A2.5 After a confirmation message, customer waits for the proposals.
- A2.6 After some specific time, customers receive a few proposals to be studied.
- A2.7 After careful consideration, customer doesn’t find any proposal that meets his expectations.
- A2.8 Customer decides to go to a physical store where he can look and feel find what he wants.
3.2.4. Problems and Limitations

<table>
<thead>
<tr>
<th>AIDIMME Expectation doesn’t meet\textsuperscript{11}</th>
<th>Process Number involved</th>
<th>Problems and limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#E1 A2.7</td>
<td>Products can be frequently returned</td>
<td></td>
</tr>
<tr>
<td>#E1 A2.8</td>
<td>Customer is reluctant about purchasing something he may later return</td>
<td></td>
</tr>
<tr>
<td>#E2 A2.3</td>
<td>The customer doesn’t know exactly how the products fits to its body and taste: Personal information is focused on the house, but not in customer lifestyle</td>
<td></td>
</tr>
<tr>
<td>#E2 A2.6 A2.7</td>
<td>Difficult matching between consumer lifestyle/preferences and ideas inspiration for furnishing.</td>
<td></td>
</tr>
<tr>
<td>#E2 A2.8</td>
<td>Customer needs talking to somebody about preferences and customization necessities, so online channel is abandoned</td>
<td></td>
</tr>
<tr>
<td>#E3 A2.6 A2.7</td>
<td>The products are totally mainstream without any customization</td>
<td></td>
</tr>
<tr>
<td>#E3 A2.8</td>
<td>Customer abandons online channel as no one understands her/his preferences, which are highly subjective</td>
<td></td>
</tr>
<tr>
<td>#E4 A2.2 A2.3</td>
<td>There is not value added in the CMS site offer. It is just “one more”.</td>
<td></td>
</tr>
<tr>
<td>#E4 A2.6</td>
<td>The products are totally mainstream without any customization</td>
<td></td>
</tr>
<tr>
<td>#E4 A2.7</td>
<td>Current online channel seems to be too limited in terms of interaction with the customer.</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Summary of the perceived problems for use case #A2

3.3. Interior design Use Case #A3: Support a new product design

3.3.1. Story Telling

Jose is interested in purchasing a special office chair that can support his non-stop long daily hours of working at the computer. The chair he uses now, gives him a lot of back pain, plus its material is not suitable for his outdoor office located in the countryside. He is looking for a very specific design with a durable material for outdoor use, yet, extremely comfortable and able to massage his lower back when he’s seated.

He finds www.abcd.com\textsuperscript{12}, a furniture specialized e-commerce site, where he can propose an idea of how he wants his chair to be. For that, he clicks on the “design your product” tab, where he can enter his personal information such as name, address, email and a free text message where he can detail a little more about his needs. Finally, there is also an upload file button where he can upload a picture or of his idea.

Even though this information is necessary for the designer to have an idea of the future project, it lacks more details like personal preferences and lifestyle; this has to be done over and over since it is not stored under any profile. Jose finally hits the submit button and the web responds

\textsuperscript{11} As reported in 2.1.3 - E1: e-commerce support service by correct product suggestion to users; E2: Support the definition of the furniture fitting, satisfaction, adaptation, taste; E3: Total customized user experience; E4: Increment of user’s trust in online shopping

\textsuperscript{12} Fictitious website
with a message that says “Thank you for your message. We’ll soon be contacting you”. Eventually, he gets a few ideas of office chairs projects, but Jose thinks that none of them satisfy his needs and decides not to go for any of them. He makes the decision to go to a physical store and prove his luck there; talking to product designers and expressing verbally onsite, the ideas and getting proposals right on the spot.

3.3.2. Involved Systems and Actors
In this section the main actors involved in the Use Case are presented:

- **End users (households)**
  They represent final consumers. The target audience are people with a taste for the decoration and interior design of their homes. User enters information to get specific product concepts.

- **E-commerce furniture platform**
  They represent the online e-commerce sites where products are sorted into categories. The site has basic input text areas where users can enter their ideas for creative products proposals. The simplicity of the information provided and the lack of knowledge about who is accessing the web, including personal preferences and morphotypes, makes their final proposals non-personalized, which causes users to abandon the idea of accepting the product designers proposed projects, thus leaving their customers unsatisfied when trying to buy furniture online.

- **Product designers for home furnishings**
  The product designers working for furniture manufacturing companies are an important part since they are the ones to propose their projects based on users’ requests.

Designers’ use of the platform here consists in receiving the request from users and, based on minimum information provided, elaborate and propose their product projects to be accepted by the user. Under this business model, designers are not aware of the full customer profile, and work “blindly”.
3.3.3. Processes

- A3.1 Customer accesses the e-commerce site.
- A3.2 Customer selects the "design your product" tab.
- A3.3 Customer enters personal basic information.
- A3.4 Customer hits the "Send" button.
- A3.5 Customer waits for projects to arrive.
- A3.6 Customer receives projects proposals.
- A3.7 Customer is not satisfied with proposals.
- A3.8 Customer goes to a physical store.

Figure 13: Figure 12: #A3 As Is processes

- A3.1 Customer visits the e-commerce website to find a full creative product proposal for his home office.
- A3.2 Customer selects the tab named "design your product".
- A3.3 Customer enters personal basic information and uploads a picture of his home office.
- A3.4 Customer hits the "Send" button.
- A3.5 After a confirmation message, customer waits for the proposals.
- A3.6 After some specific time, customers receive a few chair proposals to be studied.
- A3.7 After careful consideration, customer doesn’t find any proposal that meets his expectations.
- A3.8 Customer decides to go to a physical store where he can look and feel find what he wants, and he is able to talk to product designers to express his needs.

3.3.4. Problems and Limitations

<table>
<thead>
<tr>
<th>AIDIMME Expectation doesn’t meet</th>
<th>Process Number involved</th>
<th>Problems and limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#E1</td>
<td>A3.6</td>
<td>Projects proposals are too impersonal for the customer</td>
</tr>
<tr>
<td>#E1</td>
<td>A3.7</td>
<td>Products can be frequently returned</td>
</tr>
<tr>
<td>#E1</td>
<td>A3.8</td>
<td>Customer is reluctant about purchasing something he may later return</td>
</tr>
<tr>
<td>#E2</td>
<td>A3.3</td>
<td>Personal information is focused on the house, but not in customer lifestyle</td>
</tr>
<tr>
<td>#E2</td>
<td>A3.3</td>
<td>The customer doesn’t know exactly how the products fits to its body and taste</td>
</tr>
</tbody>
</table>

---

13 As reported in 2.1.3 - E1: e-commerce support service by correct product suggestion to users; E2: Support the definition of the furniture fitting, satisfaction, adaptation, taste; E3: Total customized user experience; E4: Increment of user’s trust in online shopping
Table 3: Summary of the perceived problems for use case #A3

<table>
<thead>
<tr>
<th>#E2</th>
<th>A3.6</th>
<th>A3.7</th>
<th>Difficult matching between consumer lifestyle/preferences and ideas inspiration for furnishing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#E3</td>
<td>A3.6</td>
<td>A3.7</td>
<td>The products are totally mainstream without any customization</td>
</tr>
<tr>
<td>#E3</td>
<td>A3.8</td>
<td></td>
<td>Customer needs to talk to somebody about preferences and customization necessities, so online channel is abandoned</td>
</tr>
<tr>
<td>#E4</td>
<td>A3.6</td>
<td></td>
<td>The products are totally mainstream without any customization</td>
</tr>
<tr>
<td>#E4</td>
<td>A3.2</td>
<td>A3.3</td>
<td>There is not value added in the CMS site offer. It is just “one more”.</td>
</tr>
<tr>
<td>#E4</td>
<td>A3.6</td>
<td></td>
<td>The products are totally mainstream without any customization</td>
</tr>
<tr>
<td>#E4</td>
<td>A3.7</td>
<td></td>
<td>Current online channel seems to be too limited in terms of interaction with the customer</td>
</tr>
</tbody>
</table>

3.4. Fashion Use Case #P1 and #P4: “e-commerce support service by correct size suggestion to users” and “enhanced and fully personalized user experience, both on desktop and mobile”.

3.4.1. Story Telling

Like many other SMEs in order to limit the cost of e-commerce software, Piacenza has decided to use a diffused CMS platform instead of a fully personalized software.

The choice has fallen to Prestashop\textsuperscript{14} CMS because of this diffusion, adopted by more than 250,000 merchant around the world, but also because of its continuous update and its flexibility towards the specific needs of clothing sales.

The website, at the address \url{www.piacenzacashmere.com}, sells knitwear, jackets, coats and accessories (scarves, shawls, gloves, blankets, etc.), in Italy and abroad. The inventory of available pieces is fully integrated with the one of the shop in order to widen the range of choices and exploit the investment as much as possible. Logistics is also in common with retail and wholesale distribution while e-commerce is provided with a dedicated customer service, back office, technical management and communication staff.

The website is fully responsive to user device, therefore its dimension and user interface change in relation with the specific device used (desktop, tablet, mobile) and with the dimension of its specific screen. This function is critical since the access to the Web from mobile has overtaken desktop one in 2014\textsuperscript{15}:

\textsuperscript{14} \url{www.prestashop.com}

\textsuperscript{15} Source: \url{http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/}
This statistic is particularly interesting since the use of mobile (phone and tablet) is prevailing out of working time, when consumer dedicates to their own private purchases like clothing. The only exception, which confirms the rule, is the lunch break when e-commerce of consumer goods are visited mainly from desktop, the one in use at work.

Nevertheless, besides the efforts dedicated to enhancement of mobile user experience, the purchase of a clothing product from mobile is quite difficult, as demonstrated by the related statistics:
The behaviour of clothing consumers of Piacenza has been more than in line with the average statistics. From a significant statistical reference basis of 168.068 users, only 49% come from desktop, which has generated more than 78% of turnover.

The 2 main steps of the process where the purchase process is abandoned are the size selection, with 78% average interruptions, and payment process with 46% of cart lost. It must also be highlighted that desktop and most of all mobile data input is drastically refrained by the dimension of the screen and by the absence of the keyboard.

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Mobile ecommerce clothing consumers require an ad hoc purchase process development, which it’s expected to be implemented by Morpheos personalized user experience.

Mrs Caterina Calefato, has worked for more than 10 years as head of the financial office of a well know Japanese merchant bank Italian branch. Unfortunately 2 years ago Caterina has decided to move to Japan where her husband, a Japanese manager known during her career in the merchant bank, has been called back to his homeland. Caterina wants to buy a nice dress of Piacenza cashmere which is not available in Japan and can represent a nice novelty and surprise. But unfortunately she does not know the right size and she is too afraid to make a mistake, therefore she sadly renounce to the project to buy a nice and original Piacenza cashmere clothing, not otherwise available in Japan.

3.4.2. Involved Systems and Actors
The actors involved in the purchase process are:

- Consumer/customer: the final customer
- iSizeYou platform: the module installed in Prestahsop ecommerce platform of Piacenza and the mobile app to collect body measures
- Facebook (or other social network): mosto common social network platform like Facebook, Google+, etc...
- Amazon Payments (or other social payment platform): Payment method which transfer customer name, address and payment to the ecommerce of the vendor
- Back office: the office of the vendor which takes care of all the activities to carry out the order management
- Logistics: the office of the vendor which takes care of all the activities to carry out the order delivery to the customer
### 3.4.3. Processes

- A1.1: Customer visits Piacenza website and selects the clothing item which he prefers from the available products.
- A1.2: Consumer selects the size of the product, if available, and puts it in the shopping cart.
- A1.3: Consumer logs in (or register himself at first purchase) and enters his data and address for delivery.
- A1.4: Consumer chooses payment method (credit card, Amazon Payment, Paypal, debit card, bank transfer, etc...) and authorizes the payment.
- A1.5: Back office validates the order, contextually when payment is immediately approved by a third party (credit card, Amazon Payment, Paypal, debit card) or when the price is cashed in case of bank transfer.
- A1.6: Logistics prepares the order, its related documents of transport, and ships it by forwarder.
- A1.7: Customer receives the order, tries it on and decides if the size fits or not.
- A1.8A: When the size is OK, the clothing pieces is retained for use.
- A1.8B: When the size is not OK, the clothing piece is returned for substitution or payment refund.

![Diagram of Processes](image-url)
3.4.4. Problems and Limitations

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#A1.1</td>
<td>The navigation is standard but it is necessary to select the item to check which sizes are available.</td>
</tr>
<tr>
<td>#A1.2</td>
<td>The conversion table between Italian sizes and UK, France, Germany and US system is available, as well as the measures of the model. Nevertheless about 78% of the purchase processes are abandoned at the moment of size choice.</td>
</tr>
<tr>
<td>#A1.7B</td>
<td>Below 150 Euros of purchase, the return cost must be paid by the customer.</td>
</tr>
</tbody>
</table>

Table 4: Summary of the perceived problems during the As Is scenario #P1

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#A1.3</td>
<td>It is necessary to register, to provide personal information and log in Piacenza website with specific credentials. Average rate of cart lost in the payment phase is actually 46%.</td>
</tr>
<tr>
<td>#A1.4</td>
<td>The basic registration process is standard and does not save payment data (credit card number, expiry data, card holder).</td>
</tr>
</tbody>
</table>

Table 5: Summary of the perceived problems during the As Is scenario #P4

3.5. Fashion Use Case #P2: new clothing collection design and production support

3.5.1. Story Telling

Textile/Clothing product are object of a very fast renewal: each year at least fall winter and spring summer season are presented, each one declined for man and for woman market, for a total of 4 brand new design proposals per year. The needs of Fall/Winter and Spring/Summer seasons are different, like the ones of man and woman markets, therefore each collection is brand new.

Despite the short commercial lifecycle of the product (6 months), the length of each season activities is 18-20 months. Therefore, T/C companies must have a very well organized structure to face the several coexisting activities of different seasons.

During the most part of the year T/C companies manage at least 3 different seasons. For example, in the first semester of 2017 coexist the production and delivery of Spring/Summer 2017 season, the order collection and production of Fall/Winter 2014 and the design phase of Spring/Summer 2018. Design phase takes place more than 1 year in advance, almost in the same period when previous season is sold.

If we combine the intrinsic length of the design and industrialization process with the unpredictable fashion demand, we discover the risk dimension of this industry.

T/C is still based on physical sampling, which it’s necessary to show new design to traders, agents and retailers. The success rate of new design proposal is very low.
From more than 66,000 possible variations in initial samples of fabric only 500 final ones are selected for clothing sale to consumers, with a dispersion of energy and financial resources from now unbearable burden for industry.

The risk and the cost arising from the process of creation / design, which always absorbs the energies of the majority of fashion, leaving product innovation and its ability to deliver - and sometimes directing - the latest beauty and cultural trends, the possibility of commercial success of the company. It is estimated, in fact, that the incidence of design and product development of an Italian clothing company, including all direct costs, indirect and selling stocks, states around an average value between 6 and 7% of its global turnover (Source: Hermes Lab).

Actually the sources of information supporting incoming season design are:

1. **Traditional sources** of information are based on the closed collaboration with traditional retail, basically about the information from the sales of the previous corresponding (F/W vs F/W and S/S vs S/S) season during design period. This process has been fully explored and it’s based on efficient tools but it is affected by two critical limits. The first one is that it is limited to the past season proposal offer, therefore it is not able to describe future trends of product which are not included in the collection. The second is that this method is limited to quantitative indications, which do not include qualitative evaluations from the use of the product. If the choice of the product is based on its design and shape its quality and fitting, which regards its comfort, its duration and its appeal can be evaluated only on the use basis.

2. Because of the possibility of customer behaviour traceability and its interactivity, e-commerce offers some added trend analysis chance, accompanied by the feedback of customers which usually are more willing to offer their comments to websites. Large fashion groups are starting to integrate traditional retail and e-commerce platforms to offer customers a more flexible and quick service. For example, Burberry’s is providing its shop assistants of its flagship store in London of portable devices where all information about a customer, including its previous web purchases, are collected to give a more efficient and personalized offer. Piacenza website has already followed this trend by integrating design choice, production, inventory and logistics between traditional retail and ecommerce.

3. A third way is based on social networking and the information collected by the web, which is the quickest and un informal source of qualitative information about products, trend settings and use evaluations. In this field the analysis of trends is under development and a proper semantic analysis is still to be refined as well as instruments which can leads to interpret images and posts.
None of the actually available sources of information is able to satisfy the AS-IS following critical needs of design offices:

A. to measure the matching between clothing fitting and consumer body shapes (at aggregated level or per single consumer);
B. to provide precise indications regarding future collection measure definition in relation with the real morphology of customers;
C. to simulate the level of matching of new products and new markets.

Mrs Chiara Deva is the responsible of new design development at Piacenza Cashmere knitwear division. She designed a small “capsule” collection, with an innovative and audacious fitting. The design is warmly accepted by retail buyers, who place orders for the incoming season deliveries. As soon as they receive the goods the complaints as regards the fitting, especially in larger sizes, start to arrive to Piacenza customer service. Consumers are complaining with retailers that, even if the style is very attractive, when they try on the pieces they feel themselves constrained into too a narrow clothing. Therefore part of the production remains unsold and is returned to Piacenza with strong criticism by retailers, who have lost part of their sales. Piacenza is finally compelled to sale the returns with 70% discount in its outlet, with great loss of margin and image.

3.5.2. Involved Systems and Actors

- Clothing Stylist; the person in charge to define the style and the fitting of new clothing models
- Marketing and sales team: the team in charge to support the sales process
- Modellist: the operator in charge of the fine tuning of the size development, i.e. of the measure of the models in each size
- Retail (traditional and ecommerce) buyer: the operator who decides how many pieces, in each combination of design/color/size, to put into production and/or to purchase
- Production: all the operators in charge to carry out the process of physical production of the goods
- Sales and retail manager: the managers in charge to maximise the sale performance of the brand and of the retail channel (tradition and ecommerce ones)
3.5.3. Processes

- A2.1: Clothing stylist analyses the previous season performances to select the design which are to be represented and the ones which must be substituted by new proposals.
- A2.2: Marketing provides the target price limits in line with brand target consumer/market/image/distribution positioning.
- A2.3: The structure of new season collection is defined in terms of number of items, new or represented designs, materials, colours.
- A2.4: Clothing stylist proceeds to design the new collection and launches the production of 1 piece per design item, in 1 size and colour. The process is repeated until (up to 3 or 4 times) the prototype reflects the expected style.
- A2.5: Approved designs are selected or discarded for the new collection by stylist and marketing (very often also by general management and retail), including material and colours.
- A2.6: Clothing modellist defines the size development in the local sizing system (IT, FR, UK, US, etc.) and the specific measures per each item and size. The measures of different items may obviously vary in relation with each item style as well as with its expected fitting (slim, over, regular).
- A2.7: Retail buyers (direct or multibrand) select item, colour, size and number of pieces in each size and place orders for production.
- A2.8: Production is manufactured and delivered to shops.

Figure 19: #P2 As Is Processes
A2.9: Retail sales season takes place and unsold goods are cleared at the end of the season.
A2.10: Retail management and administration analyses the performances of the sale season and provide feedbacks for the incoming ones as regards items/materials/colours most successful (to be represented). They also provide retail buyer with most the sales per each size to support next season order placement.

3.5.4. Problems and Limitations

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1: A2.1-2.2-2.3</td>
<td>The feedback coming from the previous season is not able to consider specifically the fitting, i.e. if the success or failure of designs is related to unmatching with consumer body morphology. On the second hand it is not possible to simulate the matching of new style proposals and consumer body shape (aggregated) of target markets.</td>
</tr>
<tr>
<td>#2: A2.4-2.5</td>
<td>Prototyping selection and approval process does not consider fitting indications from actual or new target consumer body morphology</td>
</tr>
<tr>
<td>#3: A2.6</td>
<td>Modellist is not provided with the fitting information required to select the proper size development, i.e. the range of offered sizes (for ex from XXS to XXXL)</td>
</tr>
<tr>
<td>#4: A2.6</td>
<td>Modellist is not provided with precise measure suggestion per each size in order to cope with specific target consumer body shapes.</td>
</tr>
<tr>
<td>#5: A2.7</td>
<td>Buyers are only provided with the sale performance of previous season, therefore are not able to place orders taking into proper consideration:</td>
</tr>
<tr>
<td></td>
<td>- the specific measures of the new styles (which might be different even in case of repeated items) in relation of present consumers;</td>
</tr>
<tr>
<td></td>
<td>- the specific measures of the new styles (which might be different even in case of repeated items) in relation of new target markets.</td>
</tr>
<tr>
<td>#6: A2.9</td>
<td>Sale performances are affected by potential mismatching of new collection measures and consumer ones. Shop assistants might be not able to provide correct indications to consumers, especially in case of high rotation of style proposal. It is not possible to provide personalised service regarding fitting.</td>
</tr>
<tr>
<td>#7: A2.10</td>
<td>Retail management is not able to quantify fitting performance in terms of matching between consumer morphology needs and offered goods. This lack of information affects feedback reliability, since style/material/colour performance might be affected by the fitting of the clothing designs where they are used</td>
</tr>
</tbody>
</table>

Table 6: Problems currently perceived during the #P2 As Is scenario
3.6. Fashion Use Case #P3: increased rate of conversion of selling communication campaigns

3.6.1. Story Telling

Since ecommerce is not characterized by the physical presence of the traditional retail it is necessary to promote and communicate the presence of the websites. Large enterprises can exploit the synergy between the brand awareness created by the traditional business, but have to properly support their online presence, especially towards new consumers in terms of age or geographical location (in growing countries). SMEs, which do not have already settled a strong brand awareness, must even more consider the investment into communication as strategic.

In a highly erratic and fast evolving market like the online one, a smart and effective communication effort can become also an occasion to grow, especially where traditional retail requires very significant brick and mortar investments.

In 2016, because of this reason, marketing and communication has been the most significant investment for ecommerce player, with 38%\(^{17}\) of their short term investments, followed by user experience ones with 28%.

The most important KPIs to evaluate a communication and marketing campaign are the conversion rate and the cost per acquired customer.

In 2016 the average conversion rate of e-commerce (aggregated per all sectors) is 1.5%. Due to growing competition it is decreasing from 1.9% of 2015. The average cost per customer is 19 Euro. Clothing performance is below the average and acquisition cost are consequently even higher.

This fact is mainly due to the peculiarity of clothing, and of all similar sectors based on consumer morphology, that is the low consumer confidence that the product selected by ecommerce will fit for their specific morphology.

Since the investment in communication has become the barrier of entry to ecommerce like the investment into brick & mortar is for traditional retail and that clothing performance is poorer than the average market, it is critical to support SMEs with instrument which can maximise the cost per customer acquired.

MORPHEOS is required to support a customized product communication, measured by a tailored communication on the basis of specific consumer morphology. Consumers will receive personalized and dedicated communication regarding the products whose size is matching with their body morphology, avoiding annoying and useless advertising when size availability does not cope with their needs.

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\(^{17}\) Source: Casaleggio & Associati – Focus e-commerce 2016
newsletter complaining that it annoying the fact that it is never possible to find clothing pieces matching with their body sizes.

3.6.2. Involved Systems and Actors

- Marketing and communication manager: the subject in charge to optimise sales performance. In SMEs this role is very often carried out by ecommerce manager.
- Advertising agency for content definition (if not internal). Consulting agencies supporting companies to optimize ecommerce sales, especially SMEs
- Consumers: the final customers
- E-commerce manager: the operator in charge of ecommerce.

3.6.3. Processes

- A3.1: advertising campaign is scheduled on the basis of the plan and the dedicated budget.
- A3.2: the mailing list is defined from the available list of consumers of who have accepted to receive advertising. The selection of receivers is carried out on the basis of basic information like gender, age, residence. Additional selection parameters regarding consumer preferences and requirements are used if explicitly communicated by consumers and if the campaign is targeted on their basis.
- A3.3: ecommerce manager launches the mailing campaign.
- A3.4A: interested consumers click and read the advertising e-mail.
- A3.4B: not interested consumers cancel the advertising e-mail.
- A4.5: interested consumers visit the website and eventually purchase the goods.

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1A3.1</td>
<td>The conversion rate of clothing advertising e-mailings is not satisfying and below 1.5% average of other sectors. E-mailings campaigns are targeted only by basic consumer information like gender, age, place of residence.</td>
</tr>
<tr>
<td>#2A3.2</td>
<td>The available information to select consumers who can be effectively interested to the product are too generic, therefore mailing might appear useless and unsolicited to many recipients.</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>#3A3.3</td>
<td>The available information are to generic to support personalised contents on the basis of effective consumer needs.</td>
</tr>
</tbody>
</table>

Table 7: problems currently perceived during the #P3 As Is scenario
4. To Be Scenarios

4.1. Interior design Use Case #A1: Support the selection of the most suitable product/s

4.1.1. Story Telling
Jose is interested in changing his bedroom since all its furniture was inherited from his family and besides being rather old, it is unsuitable for his size. He needs a bedroom according to his dimensions, place for residence characteristics and personal preferences. He has recently completed his full profile in Morpheos, a process that took some time, but he is sure that it will be worthy. He accesses www.abcdef.com, a furniture specialized e-commerce site that implements the Morpheos ID capability. He performs a query, looking for bedroom products, and then he clicks on the Morpheos icon that will authenticate him and load his complete profile. Thanks to a complex and customized algorithm, the site filters and shows only the products that reflect his morphotype, and psychographic variables which reflect Jose’s lifestyle, decoration style preferences, house environment, etc.

All products being shown reflect exactly his idea of his bedroom. He is truly sure that everything he sees and buys will result in an immediate hit and that he will be able to enjoy for a long time. He selects all the desired products to complete his bedroom and makes payment. Then he just needs to wait for the goods to arrive home.

4.1.2. Involved Systems and Actors

**End users (households)**

They represent final consumers. The platform target audience are people with a taste for decoration and interior design of their homes. There are the two main reasons for which users will want to connect to, and participate in the platform. Once connected through their universal ID, each user can have access to valuable information from furniture manufacturers and designers (product catalogues, classic pieces, new products being launched, etc.). The platform becomes an obligatory reference point when renewing or furnishing their homes. The running of the platform is based on customizing the suggestions and product query searches that each user does.

**E-commerce furniture platform**

Once users make login with their Morpheos ID’s, their contents are immediately oriented to the type of furniture products asked from the users. Information gathered will be classified in order to be processed and made use of. Platform management must allow analysing the information (data, text, comments, images, etc.). With all the information obtained, the system will be able to provide just the solution that fits their preferences.

**Product designers for home furnishings, accessories, and interior decoration designers**

The product designers working for furniture manufacturing companies are key to provide products to the platform, so users can find them. Designers will participate uploading projects and catalogues that will respond to ends users taste and lifestyle, addressing their searches from products, or customized project decorations that will satisfy end users request, and searching for their clients’ profiles in order to offer them the best possible solutions according to their Morpheos ID.
4.1.3. Processes

- A1.1 Customer accesses the e-commerce website and browses through the available categories.
- A1.2 Customer enters query to look for bedrooms
- A1.3 After an initial selection, customer filters by entering the unique Morpheos ID.
- A1.4 A filtering of offer is performed, based on unique morphotype and preferences of customer.
- A1.4b Customer selects different search results to access their detail in order to try to find one that adapts.
- A1.5 Customer peruses through filtered search picking up a desired configuration and adding it up to the shopping cart.
- A1.5b Customer decides no configurations are of his/her like.
- A1.6 Customer finished the shopping cart and accesses the desired payment method.
- A1.6b Customer decides to go to a physical store where he can look and feel find what he wants.
- A1.7 Customer finishes the online transaction and simply waits for the product to arrive at its destination.
- A1.7b Customer ends up buying the bedroom at the store.
- A1.8 Happy customer means no returns, and possible return back to the site for more purchases.
### 4.1.4. Expected Benefits and Target parameters

<table>
<thead>
<tr>
<th>Expected benefits</th>
<th>Target parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of purchasing: less searching time, easy comparisons, secure payment, etc.</td>
<td>Instant product proposals according to consumer’s Morpheos ID.</td>
</tr>
<tr>
<td>Product customization: selection of possible choices according to lifestyle and preferences.</td>
<td>At least generation of 3 product choices.</td>
</tr>
<tr>
<td>Provider search: finding manufacturer or retailer for purchasing the selected product.</td>
<td>Radial map of closer providers according to consumer location. (Alternatively, a filtered list of providers ordered by expected delivery period).</td>
</tr>
</tbody>
</table>

**Table 8: Expected benefits from the usage of Morpheos in #A1 To Be Use Case**

<table>
<thead>
<tr>
<th>Related process number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1.1</td>
<td>AS-IS PROBLEM: There is not value added in the CMS site offer. It is just “one more”. <strong>SOLUTION:</strong> The CMS implements the Morpheos ID which adds the desired added value that differentiate it from others e-commerce sites.</td>
</tr>
<tr>
<td>A1.4</td>
<td>AS-IS PROBLEM: Products can be frequently returned. <strong>SOLUTION:</strong> The unique Morpheos ID offers good guarantee that the customer will be satisfied, thus returns turnover should be reduced.</td>
</tr>
<tr>
<td>A1.5</td>
<td>AS-IS PROBLEM: Customer is reluctant about purchasing something he may later return. <strong>SOLUTION:</strong> The unique Morpheos ID, offers a good level of “safety and trust” for the user, making him prone to make the purchase.</td>
</tr>
<tr>
<td>A1.3</td>
<td>AS-IS PROBLEM: The customer doesn’t know exactly how the product fits to his body and taste. Personal information is focused on the house, but not in customer lifestyle. <strong>SOLUTION:</strong> Having entered full profile under the Morpheos ID, customer will have a very clear idea the product bought will adapt to his body and taste.</td>
</tr>
<tr>
<td>A1.5</td>
<td>AS-IS PROBLEM: Difficult matching between consumer lifestyle/preferences and ideas inspiration for furnishing. <strong>SOLUTION:</strong> The matching is now more accurate since unique ID contains all data from user, thus making the job of the designers easier when adapting goods to them.</td>
</tr>
<tr>
<td>A1.3</td>
<td>AS-IS PROBLEM: The products are totally mainstream without any customization. <strong>SOLUTION:</strong> Not any more, with the ID that reflects morphotype and lifestyle preferences of users</td>
</tr>
<tr>
<td>A1.4</td>
<td>AS-IS PROBLEM: Product configuration is too general, so customer must check and discard too many products that don’t fit her/his preferences. <strong>SOLUTION:</strong> Not any more, with the ID that reflects morphotype and lifestyle preferences of users.</td>
</tr>
<tr>
<td>A1.5</td>
<td>AS-IS PROBLEM: Customer wastes time in searching non-filtered product suggestions. <strong>SOLUTION:</strong> With Morpheos ID information unnecessary searches are avoided.</td>
</tr>
</tbody>
</table>
Table 9: Problem and solutions

<table>
<thead>
<tr>
<th>AS-IS PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A1.6  AS-IS PROBLEM: Customer needs to talk to somebody about preferences and customization necessities, so online channel is abandoned. | SOLUTION: Morpheos ID must include lifestyle and subjective preferences, so latent demands of customer are covered. |
| 
A2.8  AS-IS PROBLEM: Customer abandons online channel as no one understands her/his preferences, which are highly subjective. | SOLUTION: Morpheos ID will enable high-level of personal specifications so customer-product matching is satisfactory. |
| 
A2.7  AS-IS PROBLEM: Current online channel seems to be too limited in terms of interaction with the customer. | SOLUTION: Morpheos ID will enable high-level of personal specifications so customer-product matching is satisfactory. |
| 
A3.6  AS-IS PROBLEM: Projects proposals are too impersonal for the customer. | SOLUTION: Morpheos ID will enable high-level of personal specifications so customer-product matching is satisfactory. |

4.2. Interior design Use Case #A2: Support a new project decoration design.

4.2.1. Story Telling

Jose is interested in changing his bedroom since all of its furniture was inherited from his family and besides being rather old, it is unsuitable for his size. He needs a bedroom according to his dimensions, characteristics of his place of residence, and personal preferences. He finds www.abcdef.com, a furniture specialized e-commerce site which supports the Morpheos ID. In order to propose his idea of how he wants his bedroom to be, he logs in with the unique ID under the section “we make your project tab”. Then, he just needs to click on the submit button and the web responds with a message that says “Thank you for your message. We’ll soon be contacting you”.

After some specific amount of time, he receives a set of fully customized decoration proposals of bedroom projects that adapt to his original idea of how he wanted the project to be. After careful perusal, he makes a decision and chooses one of the proposals. Then he just needs to pay for it and schedule the work that will make his idea of a bedroom come true.

4.2.2. Involved Systems and Actors

End users (households)

They represent final consumers. The target audience are people with a taste for decoration and interior design of their homes. Users log in via their unique Morpheos ID to get fully customized project decoration concepts.

E-commerce furniture platform

They represent the online e-commerce sites where products are sorted into categories. The site implements the Morpheos ID making the full morphotype and psychographic variables available to the designers to propose creative project decoration proposals. This will have their customers very satisfied when buying furniture online.

Product designers for home furnishings, accessories, and interior decoration designers

The product designers working for furniture manufacturing companies are an important part since they are the ones to propose their interior decoration projects based on users’ requests.
Designers’ use of the platform consists in receiving the request from users and based on the unique Morpheos ID, elaborate and propose their interior decoration projects to be accepted by the user. Under this business model, designers are fully aware of the full customer morphotype and lifestyle preferences.

4.2.3. Processes

- A2.1 Customer visits the e-commerce website that implements the Morpheos ID.
- A2.1b Customer visits the e-commerce website to find a full creative project decoration proposal for his bedroom.
- A2.2 Customer enters his unique Morpheos ID.
- A2.2a Customer enters his unique Morpheos ID.
- A2.3 Customer selects the tab “we make your project”.
- A2.3b Customer enters personal basic information and uploads a picture of the bedroom.
- A2.4 Customer just needs to hit the button “Send”.
- A2.5 Customer waits for proposals to arrive.
- A2.6 Customer receives customized proposals and studies them carefully.
- A2.7 Customer selects one proposal.
- A2.7b After careful consideration, customer doesn’t find any proposal that meets his expectations.
- A2.8 Customer accesses the desired payment method and selects scheduling for work.
- A2.8b Customer decides to go to a physical store where he can look and feel find what he wants.
- A2.9 Happy customer means no returns, and possible return back to the site for more purchases.

4.2.4. Expected Benefits and Target parameters

<table>
<thead>
<tr>
<th>Expected benefits</th>
<th>Target parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of purchasing: less searching time, easy comparisons, secure payment, no need to enter any kind of personal information, etc.</td>
<td>Instant product proposals according to consumer’s Morpheos ID.</td>
</tr>
<tr>
<td>Project customization: selection of possible proposals according to lifestyle and preferences.</td>
<td>At least generation of 3 proposals based on customer’s ideas.</td>
</tr>
<tr>
<td>Provider search: finding manufacturer or retailer for purchasing the selected product.</td>
<td>Radial map of closer providers according to consumer location.</td>
</tr>
<tr>
<td></td>
<td>(Alternatively, a filtered list of providers ordered by expected delivery period).</td>
</tr>
</tbody>
</table>

Table 10: Expected benefits from the usage of Morpheos in #A2 To Be Use Case

More details have been provided in Table 9.

4.3. Interior design Use Case #A3: Support a new product design.

4.3.1. Story Telling

Jose is interested in purchasing a special office chair that can support his non-stop long daily hours of working at the computer. The chair he uses now, gives him a lot of back pain due to the long hours without getting up, plus its material is not suitable for his outdoor office which is located in the countryside. He is looking for a very specific design with a durable material for outdoor use, yet extremely comfortable and that can massage his lower back while he works.

He finds www.abcdef.com, a furniture specialized e-commerce site which supports the Morpheos ID. In order to propose his idea of how he wants his chair to be, he logs in with the unique ID under the section “design your product tab”. Then, he just needs to click on the submit button and the web responds with a message that says “Thank you for your message. We’ll soon be contacting you”.

After a while, he receives a set of fully customized product proposals that adapt to his original idea of how he wanted the chair to be. After careful perusal, he makes a decision and chooses one of them. Then he just needs to pay for it and schedule delivery to start enjoying his new chair. Long working hours will never be the same.
4.3.2. Involved Systems and Actors

- **End users (households).**
  They represent final consumers. The target audience are people with a taste for the decoration and interior design of their homes. Users log in via their unique Morpheos ID to get fully customized product concepts.

- **E-commerce furniture platform.**
  They represent the online e-commerce sites where products are sorted into categories. The site implements the Morpheos ID making the full morphotype and lifestyle preference available to the designers to propose creative product decoration proposals. This will have their customers very satisfied when buying furniture online.

- **Product designers for home furnishings.**
  The product designers working for furniture manufacturing companies are an important part since they are the ones to propose their projects based on users’ requests.

  Designers’ use of the platform here consists in receiving the request from users and based on the unique Morpheos ID, elaborate and proposed their product projects to be accepted by the user. Under this business model, designers are fully aware of the full customer morphotype, and lifestyle preferences.
4.3.3. Processes

- A3.1 Customer visits the e-commerce website that implements the Morpheos ID.
- A3.2 Customer enters his unique ID.
- A3.3b Customer enters personal basic information and uploads a picture of his home office.
- A3.3 Customer selects the tab “design your project”.
- A3.4 Customer just needs to hit the button “Send”.
- A3.5 Customer waits for proposals to arrive.

- A3.6 Customer receives customized product proposals and studies them carefully.
- A3.7 Out of the several product chair proposals received, customer selects the best fit.
- A3.7b After careful consideration, customer doesn’t find any proposal that meets his expectations.
- A3.8 Customer accesses the desired payment method and selects scheduling for home delivery of his chair.
- A3.8b Customer decides to go to a physical store where he can look and feel find what he wants, and is able to talk to product designers to express his needs.
- A3.9 Happy customer means no returns, and possible return back to the site for more purchases.
4.3.4. Expected Benefits and Target parameters

<table>
<thead>
<tr>
<th>Expected benefits</th>
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</thead>
<tbody>
<tr>
<td>Efficiency of purchasing: less searching time, easy comparisons, secure payment, no need to enter any kind of personal information, etc.</td>
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</tr>
<tr>
<td>Project customization: selection of possible proposals according to lifestyle and preferences.</td>
<td>At least generation of 3 product proposals based on customer’s ideas.</td>
</tr>
<tr>
<td>Provider search: finding manufacturer or retailer for purchasing the selected product.</td>
<td>Radial map of closer providers according to consumer location. (Alternatively, a filtered list of providers ordered by expected delivery period).</td>
</tr>
</tbody>
</table>

Table 11: Expected benefits from the usage of Morpheos in #A3 To Be Use Case

More details have been provided in Table 9.

4.4. Fashion Use Case #P1: Support the size suggestion during the e-commerce purchase

4.4.1. Story Telling

Clothing size suggestion module18 will be designed to be certified for purchase by Prestashop (and in the future by major CMSs) marketplace: to obtain this certification it will be plug & play. Fully integrated and stable. The certification process is carried out by Prestashop inspectors and it’s mandatory of public availability of the module.

The module is divided into 3 processes: user profiling collecting user data and his measures (by direct input or by the mobile app), product profiling back end to collect clothing measures and, finally, matching platform supported by its dedicated algorithm.

When the module will be installed in Piacenza website, each customer, having completed the process of profiling and provided (or collected by mobile app) his measures, will be able to login in with his ISizeYou username. If he will use, or will have opened, Facebook or Amazon Payment or Paypal or by the module username (Morpheos for test or iSize You in the public commercial version) itself in the same session, he will be automatically recognized in Piacenza website by the cookies, whose application is described in D8.1 regarding privacy protection. He will be also recognised by all other websites using ISizeYou module.

This process is very user friendly, since it is very likely that especially Facebook or Amazon have been opened in the same session or recently.

When recognised, the consumer will receive his specific size suggestion per each model, with a fully personalised interaction with the sales website. He will be also not required to input credentials, since e-commerce website will recognize him by ISizeYou login or by Facebook or Amazon credentials. No passage of information is carried out from the module Morpheos/iSizeYou to ecommerce, since this last one recognizes the user name of the consumer

18 commercially identified as ISizeYou
by Facebook or Amazon cookies. If the customer uses this last one he will not be required to input also payment data, which is provided by his Amazon Payment profile.

The process has 3 variants: ISizeYou username login, Facebook (or other social network) login, Amazon Payment (or Paypal or other payment platform) login.

Mrs Caterina Calefato, has worked for more than 10 years as head of the financial office of a well know Japanese merchant bank Italian branch. Unfortunately 2 years ago Caterina has decided to move to Japan where her husband, a Japanese manager known during her career in the merchant bank, has been called back to his homeland. Caterina wants to buy a nice dress of Piacenza cashmere which is not available in Japan and can represent a nice novelty and surprise. But unfortunately she does not know the right size and she is afraid to make a mistake, therefore she is tempted to abandon her project. Visiting the website of Piacenza she notes a new function supporting the product choice, named ISizeYou. After a negative experience of an on-line purchase of a jacket, which she returned because too narrow for her body, Caterina has decided to avoid on-line sales, but the possibility to be supported in the sales choice by a dedicated service has risen her curiosity. After being asked to register with her Social network id she downloads ISizeYou app on her mobile by her camera, she just take 2 pictures, with a support of her husband (back and right side) of her body following the tutorial and provides height and weight. She is happy and positively surprised to verify that the process is simple, no picture is transmitted and that her measures seems to corresponds to her own. Magic of new technology, it took 2 minutes! Even if still skeptical, her confidence has increased and she decides to use ISizeYou suggestion to buy on-line a Piacenza Cashmere pullover.. After 2 days she receives the pullover that fits perfectly her body, even if the size suggested has been different form the one she expected (one size more, since the design is very slim).

4.4.2. Involved Systems and Actors

- Consumer/customer: the final customer
- ISizeYou platform: the module installed in Prestahsop ecommerce platform of Piacenza and the mobile app to collect body measures
- Facebook (or other social network): mosto common social network platform like Facebook, Google+, etc...
- Amazon Payments (or other social payment platform): Paument method which transfer customer name, address and payment to the ecommerce of the vendor
- Back office: the office of the vendor which takes care of all the activities to carry out the order management
- Logistics: the office of the vendor which takes care of all the activities to carry out the order delivery to the customer
### 4.4.3. Processes

#### Description (in green TOBE actions)

- **A1.1:** Consumer visits Piacenza website and selects the clothing item which he prefers from the available product.
- **A1.2:** Consumer selects the size of the product, if available, and puts in the shopping cart. Consumer is required to login at the module link and receives automatic size suggestion, shown in green. If he clicks “add to cart” button the correct size is directly poured into his shopping cart.
- **A1.3:** Consumer logs in (or register himself at first access) and enters his data and address for delivery. Not required anymore.
- **A1.4:** Consumer chooses payment method (credit card, Amazon Payment, Paypal, debit card, bank transfer, etc...) and authorizes the payment.
- **A1.5:** Back office validates the order, contextually when payment is immediately approved by a third party (credit card, Amazon Payment, Paypal, debit card) or when the price is cashed in case of bank transfer.
- **A1.6:** Logistics prepare the order, its related documents of transport and ships it by forwarder.
- **A1.7:** The customer receives the order, tries it on and decides if the size fits or not.
- **A1.8A:** When the size is OK, the clothing pieces is retained for use.
4.4.4. Expected Benefits and Target parameters

Solution in TO BE scenario (in green) vs AS IS problems:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| #A4.1  | **PROBLEM:** The navigation is standard but it is necessary to select the item to check which sizes are available.  
**SOLUTION:** It’s under investigation if show only the items where consumer size is available. To provide this function it is necessary a previous login at ISiziYou.com. It will depend only on each e-commerce commercial policy. |
| #A4.2  | **PROBLEM:** The conversion table between Italian sizes and UK, France, Germany and US system is available, as well as the measures of the model. Nevertheless, about 78% of the purchase processes are abandoned at the moment of size choice.  
**SOLUTION:** Consumer is required to login at iSizeYou link and receives automatic size suggestion, shown in green. If he pushes “add to cart” button the correct size is directly poured into his shopping cart. In the same navigation session, the size is automatically shown in green and selected for the customer in all website using ISizeYou platform and not further authentication is required. |

Table 12: Expected benefits for #P1 To Be Use Case

**Target Parameters**

- KPI A4.1-1: decreased return rate due to size mismatching.
- KPI A4.1-2: increased conversion rate at size selection.

4.5. Fashion Use Case #P2: new clothing collection design and production support

4.5.1. Story Telling

Morpheos is expected to satisfying the following needs of clothing design offices, actually not finding a proper answer (as described in AS IS par. 3.2):

A. to measure the matching between clothing fitting and consumer body shapes (at aggregated level or per single consumer);

B. to provide precise indications regarding future collection measure definition in relation with the real morphology of customers;

C. to simulate the level of matching of new products and new markets.

The information collected by Morpheos (ISizeYou in its public commercial version) are required to address these specific needs of clothing market and to lead the increase of the rate of success between new design fitting and its target market or group of consumers or, eventually, even single user for fully tailored production.

*Mrs Chiara Deva is the responsible of new design development at Piacenza Cashmere knitwear division. She has in mind a new line of knit, with quite audacious fitting, but she is also very reluctant to involve the company in the risk, due to a previous unsuccessful test with a small “capsule” collection, which was mainly returned by Piacenza shops due to their fitting, not matching Piacenza target customer morphology. Piacenza style needs a renovation but Chiara does not know how to handle the problem of the fitting. She decides to ask for support to the consultants of iSizeYou service, which provide the size suggestion service to Piacenza Cashmere website. On the basis of their feedback about the morphology of Piacenza*
consumers, collected by iSizeYou app, they are able to provide a simulation of the level of matching of the measures of the new design which Chiara has defined with the customers of Piacenza. She is provided of some specific suggestion, especially on larger sizes which are too narrow for the consumers of Piacenza of larger sizes. On the basis of this information she defines a size development, i.e. the measures of the designs in each size, which can satisfy beyond 855 of Piacenza target customers. The production is launched following also the specific measure statistical distribution of Piacenza customers, collected by iSizeYou app. The final result has been a significant success of the collection and a very low rate of returns and unsold stock, mainly due to wrong color choice.

4.5.2. Involved Systems and Actors

- Clothing Stylist; the person in charge to define the style and the fitting of new clothing models
- Marketing and sales team: the team in charge to support the sales process
- Modellist: the operator in charge of the fine tuning of the size development, i.e. the measure of the models in each size
- Retail (traditional and ecommerce) buyer: the operator who decides how many pieces, in each combination of design/color/size, to put into production and/or to purchase
- Production: all the operators in charge to carry out the process of physical production of the goods
- Sales and retail manager: the managers in charge to maximise the sale performance of the brand and of the retail channel (tradition and ecommerce ones)
4.5.3. Processes

Description (in green TOBE actions)

- A2.1: Clothing stylist analyses the previous season performances to select the design which are to be represented and the ones which must be substituted by new proposals.
- A2.2: Marketing provides the target price limits in line with brand target consumer/market/image/distribution positioning.
- A2.3: The structure of new season collection is defined in terms of number of items, new or represented designs, materials, colours.
- A2.4: Clothing stylist proceeds to design the new collection and launches the production of 1 piece per design item, in 1 size and colour. The process is repeated until (up to 3 or 4 times) the prototype reflects the expected style.
- A2.5: Approved designs are selected or discarded for the new collection by stylist and marketing (very often also by general management and retail), including material and colours.
- A2.6: Clothing modellist defines the size development in the local sizing system (IT, FR, UK, US, etc...) and the specific measures per each item and size. The measures of different items may obviously vary in relation with each item style as well as with its expected fitting (slim, over, regular). A2.7: Retail buyers (direct or multibrand) select item, colour, size and number of pieces in each size and place orders for production.
- A2.8: Production is manufactured and delivered to shops.
- A2.9: Retail sales season takes place and unsold goods are cleared at the end of the season.
- A2.10: Retail management and administration analyses the performances of the sale season and provide feedbacks for the incoming ones as regards items/materials/colours most successful (to be represented). They also provide retail buyer with most the sales per each size to support next season order placement.
- A2.10B: By Morpheos platform aggregated data, collected by the web and by other websites exploiting the platform\textsuperscript{19}, i-Deal is able to provide morphology indications regarding new targeted customers, and related customer needs.
- A2.11: Fitting needs, on the basis of actual (A2.10) and new (A2.11) targeted customer morphology are defined and provided to interested subjects: stylist (A2.1-A2.5), modellists (A2.6), buyers (A2.7), sale assistants (A2.9) and managers.

### 4.5.4. Expected Benefits and Target parameters

Solution in TO-BE scenario (in green) vs AS-IS problems:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| #1: A2.1-2.2-2.3 | **PROBLEM:** The feedback coming from the previous season is not able to consider specifically the fitting, i.e. if the success or failure of designs is related to mismatching with consumer body morphology. On the second hand it is not possible to simulate the matching of new style proposals and consumer body shape (aggregated) of target markets.  
**SOLUTION:** Style receives precise indications from i-Deal about present (A2.10+A2.11) and new (A2.10B + A2.11) targeted consumer morphology and related fitting needs and evaluation of matching between new design proposal and targeted consumers. |
| #2: A2.4-2.5 | **PROBLEM:** Prototyping selection and approval process do not consider fitting indications from actual or new target consumer body morphology.  
**SOLUTION:** New design approval (A2.5) consider also the fitting requirements of present and new targeted consumers. |
| #3: A2.6 | **PROBLEM:** Modellist is not provided with the fitting information required to select the proper size development, i.e. the range of offered sizes (for ex from XXS to XXXL).  
**SOLUTION:** Modellist receives precise indications from i-Deal for size range selection (A2.6) per each size on the basis of present (A2.10 + A2.11) and new targeted (A2.10B + A2.11) consumer morphology and related fitting needs, evaluating also a match between new design proposal and targeted consumers. |
| #4: A2.6 | **PROBLEM:** Modellist is not provided with precise measure suggestion per each size in order to cope with specific target consumer body shapes.  
**SOLUTION:** Modellist receives precise indications from i-Deal for measure definition (A2.6) per each size on the basis of present (A2.10 + A2.11) and new targeted (A2.10B + A2.11) consumer morphology and related fitting needs evaluating match between new design proposal and targeted consumers. |
| #5: A2.7 | **PROBLEM:** Buyers are only provided with the sale performance of previous season, therefore are not able to place orders taking into proper consideration: |

\textsuperscript{19} Morpheos and IsizeYou in the public commercial version
the specific measures of the new styles (which might be different even in case of repeated items) in relation of present consumers;
the specific measures of the new styles (which might be different even in case of repeated items) in relation of new target markets.

**SOLUTION:** buyers are provided with precise size selection for order placement coping with present consumers and new targeted ones.

### #6: A2.9

**PROBLEM:** Sale performance are affected by potential mismatching of new collection measures and consumer ones. Shop assistants might be not able to provide correct indications to consumers, especially in case of high rotation of style proposal. It is not possible to provide personalised service regarding fitting.

**SOLUTION:** Sale assistants are provided with correct training regarding new design measures in relation with user body morphology. A dedicated mobile device size suggestion software for sale support on the basis of the platform is under investigation.

### #7: A2.10

**PROBLEM:** Retail management is not able to quantify fitting performance in terms of matching between consumer morphology needs and offered goods. This lack of information affects feedback reliability, since style/material/colour performance might be affected by the fitting of the clothing designs where they are used.

**SOLUTION:** on the basis of the specific measures collected by the mobile app developed in Morpheos and elaborated by i-Deal, it will be possible to evaluate the level of matching between product fitting and consumer morphology at the end of the sale season and to separate performance feedback regarding fitting from the ones related with style, colour and material.

### Table 13: Expected benefits for #P2 To Be Use Case

<table>
<thead>
<tr>
<th>Target Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPI A4.2-1: increased conversion rate of new design proposal due to fitting matching.</td>
</tr>
<tr>
<td>KPI A4.2-2: increased level of matching between size measures and consumer morphology.</td>
</tr>
<tr>
<td>KPI A4.2-3: decreased number of abandoned purchase processes due to unavailable size.</td>
</tr>
<tr>
<td>KPI A4.2-4: decreased level of unsold inventory at the end of the sale season.</td>
</tr>
</tbody>
</table>

### 4.6. Fashion Use Case #P3: increased conversion rate of selling campaigns

#### 4.6.1. Story Telling

The information collected by Morpheos not only will suggest the size matching with consumer morphology but it will also support the correct matching between communication messages and targeted consumer morphology. No more useless ads will be sent as regards clothing not fitting for the user body or frustrating sensation when opening websites where the right size is not available. The information collected by Morpheos will support the address communication messages only to those consumers who effectively be interested in products, since they are available in their size. It will also support and extremely personalised content definition on the basis of each consumer morphology.

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**Mr Humberto Maureria is the ecommerce Manager of Piacenza Cashmere. He is in charge of the allocation of resources to advertising, to be distribute to google adwords, social networks and direct mailing to consumers. The advertising budget constraints by the general managing direction need the best optimization of its allocation. Humberto knows that direct mailing has the best rate of success, but he asks himself how to improve the conversion rate without spending more. He asks a support to iSizeYou service, which is able to**
provide a specific targeting of e-mails on the basis of Piacenza consumer measures, On this basis Humberto sends alerts of availability of goods on sale or discounted in the specific size matching customer morphology, avoiding the very annoying generic communication action of discounted goods, never fitting to consumers. With a limited efforts and a small budget he is able to optimize advertising conversion rate on one side, and consumer satisfaction on the other, who receive a real service and not an annoying useless mailing.

4.6.2. Involved Systems and Actors

- Marketing and communication manager: the subject in charge to optimise sales performance. In SMEs this role is very often carried out by ecommerce manager.
- Advertising agency for content definition (if not internal). Consulting agencies supporting companies to optimize ecommerce sales, especially SMEs
- Consumers: the final customers
- E-commerce manager: the operator in charge of ecommerce.

4.6.3. Processes

Description (in green TOBE actions)

- A3.1: Advertising campaign is scheduled on the basis of the plan and the dedicated budget.
- A3.2: The mailing list is defined from the available list of consumers who have accepted to receive advertising. The selection of receivers is carried out on the basis of basic information like gender, age, residence. Additional selection parameters regarding
consumer preferences and requirements are used if explicitly communicated by consumers and if the campaign is targeted on their basis.

- A3.3: The measures and related sizes of the list of targeted consumer are checked.
- A3.4: Target consumers and available inventory are compared and matched.
- A3.5: Consumers, whose morphology is not satisfied by available sizes, are excluded from the mailing list.
- A3.6: Dedicated messages and contents (for example, pictures and colours) are defined per each available size.
- A3.7: The mailing campaign is launched, consequently a dedicated message regarding the product matching proper size is sent to each consumer.
- A3.8A: Interested consumers click and read the advertising e-mail.
- A3.8B: Not interested consumers cancel the advertising e-mail.
- A3.9: Interested consumers visit the website and eventually purchase the goods.

Solution in TO BE scenario (in green) vs AS IS problems:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1A3.1</td>
<td>PROBLEM: The conversion rate of clothing advertising e-mailings is not satisfying and below 1.5% average of other sectors. E-mailings campaigns are targeted only by to basic consumer information like gender, age, place of residence. SOLUTION: Available information regarding consumers will consider also their body morphology. Targeting will be more accurate and conversion rate is expected to be increased.</td>
</tr>
<tr>
<td>#2A3.2</td>
<td>PROBLEMS: The available information to select consumers who can be effectively interested to the product are too generic, therefore mailing might appear useless and unsolicited to many recipients. SOLUTION: Consumers are selected on the basis of the sizes which are effectively matching with their morphology. Interested consumers will effectively find goods in their size. The number of advertising emails will be reduced and focussed, useless and unsolicited ones will be avoided.</td>
</tr>
<tr>
<td>#3A3.3</td>
<td>PROBLEMS: The available information are too generic to support personalised contents on the basis of effective consumer needs. SOLUTION: Mailing contents will be personalised per each consumer morphology, fitting and size. Contents will be coherent with the specific and personalised needs of each consumer morphology.</td>
</tr>
</tbody>
</table>

Table 14: Expected benefits for #P3 To Be Use Case

4.6.4. Expected Benefits and Target parameters

**Target Parameters**

KPI 3.4-1: increased percentage of advertising mail messages opened by consumers.

KPI 3.4-2: increased conversion rate of communication and advertising mailings.
4.7. Fashion Use Case #P4: enhanced and fully personalized user experience, both on desktop and mobile

4.7.1. Story Telling

If he will use, or will have opened, Facebook or Amazon Payment or Paypal or the platform itself in the same session, he will be automatically recognized in Piacenza website by the cookies, whose application is described in D8.1 regarding privacy protection. He will be also recognised by all other websites using ISizeYou module.

This process is very user friendly, since it is very likely that especially Facebook or Amazon have been opened in the same session or recently.

When recognised, the consumer will receive his specific size suggestion per each model, with a fully personalised interaction with the sales website. He will be also not required to input credentials, since e-commerce website will recognize him by ISizeYou login or by Facebook or Amazon credentials. No passage of information is carried out from the platform to ecommerce, since this last one recognizes the user name of the consumer by Facebook or Amazon cookies. If the customer uses this last one he will not be required to input also payment data, which is provided by his Amazon Payment profile.

The process has 2 variants: social network login or payment platform login.

Mrs Caterina Calefato, after her previous successful experience, decides to purchase a second piece from Piacenza Cashmere website, in a different model. With great surprise, after providing Piacenza website the authorization to use ISizeYou service, she automatically receives the suggestion of the correct size of this model fitting for her body. Since it is a very slim fitting model the size suggestion is higher than expected, but she now knows that she can trust in ISizeYou service. Being not so convinced of the color she shifts to another design and, again, she receives the automatic indication of the size. This process appears very rapid even if she uses her mobile and she decides to proceed with the purchase (usually she stops the process and pass to desktop to input the data). On the basis of her Amazon Payment credentials she is only required to authorize the purchase by Piacenza Cashmere website, with no manual input. In fact her address and payment data are provided by Amazon Payment platform to Piacenza website after her clock on purchase authorization button, reaching a real “2 click” fully personalized purchase process.

4.7.2. Involved Systems and Actors

- Consumer/customer: the final customer
- The platform (Morpheos – ISizeYou in the commercial version): the ecommerce CMS (in case of Piacenza is a Prestashop one)
- Facebook (or other social network): the social network platform
- Amazon Payments (or other social payment platform). The platform, providing the vendor with consumer name, address and payment after consumer authorisation.
- Back office: the customer service of the vendor taking care of order fulfillment
- Logistics: the service in charge of order delivery
4.7.3. Processes

**Social Network login**

- A4.1: Customer visit the website, is recognized, selects the garment and receives size suggestion.
- A4.2: Customer checks size availability, logs in iSizeYou link and receives size suggestion.
- A4.3: Customer logs in (or register himself at first access).
- A4.4: Customer carries out payment process, providing his payment credentials.
- A4.5: Back office validates the order and send payment confirmation.
- A4.6: Logistics prepare the piece and ships it.
- A4.7: Customer receives the garment and tries it on.
- A4.8: Customer keeps the garment.

*Figure 27: P4 To Be Processes – Social Network*

**Description (in green TOBE actions)**

- A4.1: Consumer visits Piacenza website and selects the clothing item which he prefers from the available product.
- A4.2: Consumer selects the size of the product, if available, and puts in the shopping cart. If the consumer has its social network username to login into Morpheos/iSizeYou and the social network has been opened in the same session (or recently) he is automatically recognised without login and receives automatic size suggestion, shown in green. No login is required any more for all websites using ISizeYou in the same session. If the consumer clicks “add to cart” button the correct size is directly poured into his shopping cart.
- A4.3: Consumer logs in (or register himself at first purchase) and enters his data and address for delivery → Not required anymore.
- A4.4: Consumer chooses payment method (credit card, Amazon Payment, Paypal, debit card, bank transfer, etc...) and authorizes the payment.
- A4.5: Back office validates the order, contextually when payment is immediately approved by a third party (credit card, Amazon Payment, Paypal, debit card) or when the price is cashed in case of bank transfer.

Solution in TO BE scenario (in green) vs AS IS problems
#A4.3 PROBLEM: It is necessary to register, to provide personal information and log in Piacenza website with specific credentials.

SOLUTION: Consumer receives size suggestion and a personalised user experience in relation with his specific morphology. It will be investigated to offer also the possibility to hide the items where fitting size is not available. Consumers will not have to login anymore at ecommerce websites using Morpheos/iSizeYou since their social network user credentials will be used also for this purpose. This function is particularly interesting for mobile purchases, since it is very hard to input registration data from the small keyboard of mobile devices.

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**Payment Platform login**

A4.1: Customer visit the website, is recognized, selects the garment and receives size suggestion

A4.2: Customer checks size availability, logs in iSizeYou link and receives size suggestion

A4.3: Customer Logs in (or register s himself at first access)

A4.4: Customer clicks on payment button carries out payment process, providing his payment credentials

A4.5: Back office validates the order and send payment confirmation

A4.6: Logistics prepare the piece and ships it

A4.7: Customer receives the garment and tries it on

A4.8: Customer keeps the garment

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**Figure 28: #P4 To Be Processes – Payment**

Description (in green TOBE actions)

- A4.1: Consumer visits Piacenza website and selects the clothing item which he prefers from the available product.
- A4.2: Consumer selects the size of the product, if available, and puts in the shopping cart. If the consumer has its payment platform username (for example, Amazon Payment or PayPal) to login into Morpheos/iSizeYou and the payment platform has been opened in the same session (or recently and cookies have not been cancelled) he is automatically recognised without login and receives automatic size suggestion, shown in green. No login is required any more for all websites using iSizeYou in the same session. If the consumer clicks “add to cart” button the correct size is directly poured into his shopping cart.
• A4.3: Consumer logs in (or register himself at first purchase), enters his data and address for delivery → Not required anymore.

• A4.4: Consumer chooses payment method (credit card, Amazon Payment, PayPal, debit card, bank transfer, etc.) and authorizes the payment → Not required anymore, since the simple click on payment button confirmation (for ex. Amazon Payments) carries out the whole payment process.

• A4.5: Back office validates the order, contextually when payment is immediately approved by a third party (credit card, Amazon Payment, PayPal, debit card) or when the price is cashed in case of bank transfer → Not required anymore, since the payment has already been finalised.

Solution in TO BE scenario (in green) vs AS IS problems

| #A4.4 | PROBLEM: The basic registration process is standard and does not save payment data (credit card number, expiry data, card holder). Average rate of cart lost in the payment phase is actually 46%. SOLUTION: Consumers will not have to input their payment data anymore, following Amazon “one click” user experience. This function is particularly interesting for mobile purchases, since it is very hard to input payment data from the small keyboard of mobile devices. The fully personalised user experience is implemented, covering size suggestion, automatic login and “one click” payment. |

4.7.4. Expected Benefits and Target parameters

**Target Parameters**

KPI A4.4-1: decreased percentage of cart lost at registration from desktop.
KPI A4.4-2: decreased percentage of cart lost at registration from mobile.
KPI A4.4-3: decreased percentage of cart lost at payment from desktop.
KPI A4.4-4: decreased percentage of cart lost at payment from mobile.

4.8. Clothing TO BE use case conclusions

The main factors which increase the satisfaction of consumers in purchasing process and the related conversion rate are the simplicity of the purchasing process, the convenience feeling, the assistance during the purchasing process, the perceived feeling of right choice, the customer relationship and the speed of purchasing.

Excluding the second one, which is directly related with the commercial and marketing strategy of the selling enterprise, Morpheos four uses cases will address all the other parameters affecting ecommerce purchasing process, providing a fully personalised user experience to consumers and reducing useless and frustrating communication messages and contents:
- **#P1: e-commerce support service by correct size suggestion to users** is expected to impact on all the parameters, the second excluded, affecting consumer purchasing process satisfaction in clothing.

- **#P2: new clothing collection design and production support** is expected to increase the satisfaction of consumer as regards offered design, i.e. the feeling to have made the right choice for their need.

- **#P3: increased conversion rate of selling campaigns** will support the simplicity of purchasing process by communication advices promoting only those good with the right size as well as the feeling to have made the right choice in relation with consumer specific morphology. Finally, it will also provide a feeling of personalized customer relationship with consumers.

- **#P4: enhanced and fully personalized user experience, both on desktop and mobile,** will directly and significantly enhance the simplicity of purchasing process as well as its speed.
5. System Requirements

This chapter presents the requirements elaborated during the first three months of the project. They will be used to support the development and the implementation of Morpheos system. Based on the identified requirements, the team defined the proper system architecture, presenting different modules and interaction among them, as well as features to be addressed for each of the part of the system. The requirements presented in this document are the final version of the final system requirements.

5.1. Business Requirements

5.1.1. Stakeholder needs

Provided the requirements of the end users, it will be necessary to design an IT development strategy which can properly address them as well as to grant an effective commercialisation activity. This last one must address the needs of 4 main groups of stakeholders.

![Stakeholders](image)

Figure 29: Main Stakeholders of the Morpheos platform

Each one must find a proper response to its needs and all of them must be satisfied at the same time.

**Consumers.** On the basis of a Nielsen worldwide survey carried out between 27,000 consumers in 52 countries\(^{20}\) at the question “Will consumers pay for online news and entertainment they now get for free?” 85% has answered that free on-line content will remain free. Nearly eight out of every ten (79%) would no longer use a website that charges them, presuming they can find the same information at no cost. The service offers an answer to the need of consumers to be suggested the right size to buy on-line and to improve their trust in on-line channel for their clothing purchases but it is extremely unlikely that they will be willing to pay for it. On the other hand, the quick growth of consumer morphotype DB dimension is a key element to start the self-refining positive loop of size suggestion. Because of this reason the service will remain free for consumers. Always in a user friendly philosophy the integration with major social platforms will be supported, in order to avoid multiple registrations and to push data standardisation and

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interoperability. The quality of on-line service to consumers will be considered a key element to attract and to retain consumers but no income has been considered in the business plan from them.

**Vendors and web agencies.** Since on-line sales generally accepted policy, also supported by major local regulations, is “free return”, the related costs (logistics, administrative and financial) are sustained by vendors, which may be industries on their own or specialized operators, to which iSizeYou service will be charged. The first approach of i-Deal team has been focused to clothing industries and brand owners even in the fashion sector and in the technical sport one. The surprising outcome of this activity has been an immediate interest, flowed by an inexplicable resistance to its adoption. This attitude appeared illogical and the question: “who is really managing clothing or furniture e-commerce?” required an answer. This resistance is due to web agencies, to which the development of e-commerce platform is delegated, which are not willing to accept a third party application which is not developed or commercialised by their own. To jointly address the needs of vendors and web agencies, it has been decided that the platform will be integrated with the major CMSs\(^{21}\) on the market, which are also the ones used by web agencies, and that these last ones will be approached to distribute the service as an additional function of the e-commerce which they develop for vendors. By this approach, a potential resistance is transformed into a source of introduction.

**Creative industries:** Morpheos concept, in a wide vision, is based on the matching of consumer physical body shape and a physical piece. Therefore, beyond clothing and interior sectors addressed in the project, the platform will be designed to be open to support also 3rd parties solutions and apps in other sectors\(^{22}\), since its concept can be exploited in a wide range of applications, usually where EU is leader. For example it can support apps dedicated to the interaction between on-line and physical world (for ex. webrooming\(^{23}\) and shoprooming to integrate ecommerce and traditional retail), with additional personalised functions (for ex a personal virtual wardrobe) but also in security (protection apparel for workers or sports), personalised interior design, automotive, civil engineering and, in general, where a physical interaction between a consumer body and a physical piece (clothing, seats, workplaces, etc...) requires best matching of body end piece side, or deep personalisation. On the basis of the specific IT provider sector structure in EU, fragmented and characterized by many small SMEs, this iSizeYou approach will facilitate the development of new ideas, the creation of a community of developers, the enforcement of the project social positive effect by the setup of an open ecosystem supporting for new web entrepreneurs.

### 5.1.2. Information flow and related solutions

To address these specific stakeholder needs i-Deal will implement the following software architecture and information flows. The process of size matching (Fig.7) has been designed to sustain iSizeYou integrated approach and consists of 3 groups of phases (A,B and C):

---

\(^{21}\) For ex.Prestashop, Wcommerce, Magento, etc...

\(^{22}\) Described in expansion phase at par.1.4.2.1

\(^{23}\) In 2014 more than 50% of fashion purchases have been proceeded by online search – Accenture rep.03/2015
1-Customer profiling consists in the collection of consumer measures and anagraphic data (A1). If the consumer is already registered in a social network (Facebook, Twitter, etc...) or web service account (Gmail, Yahoo) he can register into ISizeYou service by their IDs. Measure data collection will be performed by mobile app24, exploiting native integration with mobile technology25. The process combines measures collected by the camera with 2 information available to consumers (height and weight) and finally processing them with a comparison with the most likely morphotype. This methodology, developed on the basis of H2020 Somatch project26, grants user friendly rapid consumer profiling, estimated between 1,5 and 2 minutes, and high data reliability by cross checked measure control by 3 sources (optic, physic, statistic). Each consumer is assigned a Unique ID code in ISizeYou DB (A2). During future navigations consumer profile will be recognized if using the same device or required to provide its ISizeYou ID27 (usually the social network one). Only at session start, when changing device or internet temporary files are removed, the platform will be ready to support 3rd parties dedicate apps28, which will be developed to enrich ISizeYou with additional functions (like virtual wardrobe, to increase consumer involvement and fidelity in the long run) and with new applications for sectors different from clothing, exploiting the potential of matching function (interior design, automotive, etc...)29. ISizeYou Addon to CMSs will take trace of the purchases of the customer and of the feedback to refine size suggestion by consumer preferences, providing fully personalized service.

24 If mobile is not available a B solution is based on the request of 4 basic measures, which the customer can self collect. On their basis and by an extrapolation by morphotype statistical indications a fifth one will be requested to verify the correspondence of consumer measure with the model of reference of his morphotype suggested by algorithm probability function.

25 A request of update of this process will be periodically requested to update body shape evolution. The reliability of data collection will be further refined by the purchase feedback.

26 H2020 Somatch project, into which i-Deal and Holonix are participating, is focused on web image analysis for fashion.

27 This ID is independent from the one used on vendor websites, who remain proprietary of consumer information (credit card number, address where to ship, etc...) and are not required to communicate them to ISizeYou

28 IOS, Android and Windows Mobile

29 Par. 2.1.1.4
2-Product profiling process relies on the collection of the linear measures (B1) of the product. It is needed a set of 8 basic measures\(^\text{30}\), specific for upper and lower part of the body, per each product size. In the 1st period of ISizeYou algorithm set up a physical test of one piece per each style are be performed to integrate clothing measures with material characteristics (elasticity, extensibility and resistance). This process is necessary to refine the answer provided by size matching algorithm taking into consideration the real physical construction of the product. Vendor operators are be provided of a dedicated webpage where to input product measures\(^\text{31}\). ISizeYou model creator will assign (B2) each product GS1/EAN code per size by an internal code, which will be stored into a dedicated repository ready for matching definition. When clothing will propose for on-line sale, by producer own e-commerce or by a specialized 3rd party one, inventory will be requested to be integrated with EAN codes (B3). This standard is already adopted by all market leaders\(^\text{32}\) and it is a standard of logistic providers.

3-Size indication is the only real time process: when consumers will select the model and colour in the clothing sale website, the service will be invited to user and the ISizeYou profile will be provided. If he still has no profile, he will be redirected to the measure collection page. If already registered, he will be requested his username (advisable if one of a social network) or the e-mail by which he has registered into ISizeYou. When the ISizeYou consumer code is available (C1) all the information necessary for size indication are ready: a query for the EAN codes (one per size) of the requested product (C2) is sent to ISizeYou system, which will proceed to the right size definition. The 1st step will be the selection of product internal codes (C3-C4) associated with EAN codes. With the internal product and customer, ISizeYou algorithm will proceed (C5) to verify the matching of measures in the morphotype multidimensional space, taking into account the clothing category, material and consumer preferences. The best size indication will be translated into the selection of the related specific EAN code associated to that size of that product, which is returned to the ecommerce portal (C6) and finally to consumer (C7). These last 2 passages can be alternatively performed in the form of pop up with size indication (ISizeYou branded or anonymous, on vendor request).

5.1.3. Strategy

The specific object of ISizeYou, i.e. the matching of human body shape with a physical piece, open wide expansion potentials. Its architecture, ready to 3rd parties’ additional applications, its peculiar native development for mobile and for social and its deep consumer personalisation have been designed to exploit this possibility, with the following timing:

SHORT TERM (1-3 years). Expansion from traditional clothing and interior design to wellbeing and healthcare, car sharing and automotive in general. These sectors are characterised by problems very close to the ones addressed in Morpheos and products are provided very often as a service in the 1st 2 ones, with a higher turnover and shorter lifecycle of the product due to wearing in comparison with fashion market.

MEDIUM TERM (3–5 years). The creation of ISizeYou Big Data DB, including morphotypes, product measures and consumer preferences can be a precious source of information to support industries in their product development process. Despite the very short commercial lifecycle (6 months), the length of each season design and preparation activities is 18-20 months\(^\text{33}\). The

\(^{30}\) Upper body: height, waist, belly, hips, shoulder length, arm length, upper arm width, collar width. Lower body: height, waist, belly, hips, belt, inside leg length, crotch, upper leg width

\(^{31}\) An automated solution for measures acquisitions through sensors and/or scanners is under evaluation

\(^{32}\) Vente Privee, Amazon-BuyVip, Privalia, Yoox

\(^{33}\) Per 2 seasons: Fall/Winter and Spring/Summer
incidence of design and product development states an average value between 6% and 7% of its global turnover\textsuperscript{34}, the rate of survival between new fabric design proposal, in terms of item and colours, and the ones effectively chosen by retail is less than 5%. ISizeYou will put in evidence the potential and unsatisfied demand: on the basis of size matching requests and fitting product requirements, expanding in the sector of clothing modelling consultancy. It can be also imagined the extension of the “clothing as a service” model to luxury\textsuperscript{35} and business travel, where basic clothing (shirts, underwear, sport) can be provided in different locations where people will travel, in relation with their preferences and expected use.

**LONG TERM (>5 years).** The contemporary presence of consumer morphotype integrated DB and the measures of different goods are key technical enablers to create an efficient on line goods search and selection engine\textsuperscript{36}, which can support customer choices even in on line sales and in traditional retail, exploiting the fast growing synergy between these 2 channels\textsuperscript{37}. For example the expected service will be able to provide a customer the possibility to search its most fitting clothing piece on his mobile and go the nearest shop to buy it, certain to find its right size, and can be integrated into TV advertising provided by smart TV and set top boxes\textsuperscript{38}. If producers and distributors will add the 3rd necessary information regarding product available quantity, all the necessary information to create a clothing search engine will be possible.

5.2. Technical Requirements

5.2.1. Methodology adopted

This subchapter introduces the methodology adopted to elaborate business and technical requirements for the overall Morpheos system. From the use cases presented in the previous chapters combined with the technical and RTD partners’ expertise as well as with the overall Project vision the team has elaborated some preliminary system requirements that will be evaluated and validated up to month 9. In order to model the identified requirements, it has been used the SysML diagrams.

SysML is a graphical modelling language in response to the UML for Systems Engineering RFP developed by the OMG, INCOSE, and AP233. It supports the specification, analysis, design, verification and validation of systems that include hardware, software, data, personnel, procedures and facilities.

There are nine SysML diagrams represented in white rectangles in the figure below:

\textsuperscript{34} Hermes Lab: “La distribuzione della moda” – Marco Richetti 2009

\textsuperscript{35} For example Armani has already expanded its business in luxury travel from ore than 10 years

\textsuperscript{36} Business model of Booking.com or Expedia

\textsuperscript{37} In 2014 more than 50% of fashion sales have been supported by a previous web research: Webrooming – Accenture March 2015

\textsuperscript{38} H2020 – ICT19 - 2015 TEASER proposal
The behaviour diagrams include the use case diagram, activity diagram, sequence diagram and state machine diagram. A use case diagram provides a high-level description of functionality that is achieved through interaction among systems or system parts. The activity diagram represents the flow of data and control between activities. A sequence diagram represents the interaction between collaborating parts of a system. The state machine diagram describes the state transitions and actions that a system or its parts perform in response to events.

The system structure is represented by block definition diagrams and internal block diagrams. A block definition diagram describes the system hierarchy and system/component classifications. The internal block diagram describes the internal structure of a system in terms of its parts, ports and connectors. The package diagram is used to organize the model. The parametric diagram represents constraints on system property values such as performance, reliability and mass properties, and serves as a means to integrate the specification and design models with engineering analysis models.

A SysML requirement diagram enables the visualization of any kind of requirements of a specific system, both functional and non-functional. It’s also possible to visualize the inter-relationships between requirements. By using SysML requirement diagram it’s possible to have a complete set of system requirements that involve the business goal, the user stories that describes user problems/concerns and the requirements to address the problems.

39 OMG SysML 1.4 (OMG Document Number: ptc/2013-12-09)
The structure of the SysML Requirement Diagram element is composed by two parts: the requirement diagram and the association. In particular, the structure is composed by the following elements:

- Requirements (A requirement specifies a capability or condition that a system must satisfy. A requirement may specify a function that a system must perform or a performance condition that a system must fulfil)
  - Label: Usually <<requirement>>, but can be used to differentiate types of requirement (e.g. <<functionalRequirement>>)
  - Name: A concise, descriptive name for the requirement.
  - ID: An ID (for nested requirements, a suitable notation can be adopted)
  - Text: A longer text describing in detail the requirement
- Associations
  - Containments Used to connect composite requirements
  - Derivations Used to signify that a requirement is derived from another (e.g. a requirement derived from “The car shall go fast” could be “The car shall have a strong engine”).

The requirements must be composed in the following diagrams:

![Figure 31: An example of composite SysML requirement diagram](image)

Besides the graph, requirements can easily be transformed into a table for reports:

<table>
<thead>
<tr>
<th></th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>The system shall do A and B</td>
</tr>
<tr>
<td>5.1</td>
<td>A</td>
</tr>
<tr>
<td>5.2</td>
<td>B</td>
</tr>
</tbody>
</table>
### 5.2.2. SysML Overall schema

The project Morpheos aims to provide an Open and Centralized Ecosystem based on Consumer Morphology to support creative industries in the improvement of already existing product or in the development of new and better products to satisfy consumers’ expectations. From the other side it could be also used to support consumers during the selection of the most suitable product that satisfy its wishes and needs. In order to achieve the technical objectives of the project, a functional decomposition using SysML modelling diagrams, has been defined. The results of the decomposition are presented in the figure below and detailed in the next subchapters.

<table>
<thead>
<tr>
<th>The system shall do A</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2</td>
</tr>
<tr>
<td>B</td>
</tr>
</tbody>
</table>

The system shall do B

---

Table 15: SysML requirement diagram in table form
Morpheos shall provide an Open and Centralized Ecosystem based on Consumer Morphology

Text: Morpheos shall support the design of new products based on the customer preferences
Id: MORPH_GEN_3

Morpheos shall Indicate the best design and product already available

Text: Morpheos shall adapt already existing product to the customer needs
Id: MORPH_GEN_2

Morpheos shall adapt already existing product to the customer needs

Text: Morpheos shall support the design of new products based on the customer preferences
Id: MORPH_GEN_3

Morpheos shall support the design of new products based on the customer preferences

Text: Morpheos shall adapt already existing product to the customer needs
Id: MORPH_GEN_2

Morpheos shall support the design of new products based on the customer preferences

Text: Morpheos shall adapt already existing product to the customer needs
Id: MORPH_GEN_2

Figure 32: First version of the generic system requirements
5.2.3. General Requirements

This section lists the general requirements of the Morpheos system in a tabular form. Each requirement element from the requirement diagram is represented in a separate table. The format of the tables is as follows:

<table>
<thead>
<tr>
<th>Requirement ID</th>
<th>Requirement Name</th>
<th>Requirement Description</th>
</tr>
</thead>
</table>

Table 16: Requirement table format

The requirement MORPHEOS_GEN0 is the most abstract requirement towards the Morpheos system and represents the overall goal of the project:

<table>
<thead>
<tr>
<th>MORPH_GEN_0</th>
<th>Provide an Open and Centralized Ecosystem based on Consumer Morphology</th>
</tr>
</thead>
</table>

The MORPHEOS system shall provide an Open and Centralized Ecosystem based on Consumer Morphology.

Table 17: General requirement

The general requirements show in the following table (Table 18) specify in more detail which processes and results should benefit from the implementation of the MORPHEOS system. These requirements cover the main pillars of the project: indicate the best design and product available based on consumer expectations, adapt goods or design new products.

<table>
<thead>
<tr>
<th>MORPH_GEN_1</th>
<th>Indicate the best design and product already available</th>
</tr>
</thead>
<tbody>
<tr>
<td>MORPH_GEN_2</td>
<td>Adapt and Personalize Products</td>
</tr>
<tr>
<td>MORPH_GEN_3</td>
<td>Design New Product</td>
</tr>
</tbody>
</table>

Table 18: Second level of General Requirements

In particular MORPH_GEN_1, MORPH_GEN_2 and MORPH_GEN_3 are fully covered by the use cases provided in chapter 2 and 3 from AIDIMME and Piacenza in fact:

- **#A1**: During the e-commerce purchase, provide services to the user to support the selection of the most suitable product/s based on customer’s morphology, preferences and specific interests and **#P1**: e-commerce support service by correct size suggestion to users are strictly related with MORPH_GEN_1.
- **#A2**: During the e-commerce purchase, provide services to the user to support a new project decoration design based on customer’s morphology, preferences and specific interests; **#P3**: increased conversion rate of selling campaigns and **#P4**: enhanced and fully personalized user experience, both on desktop and mobile can be used to personalize services based on already existing goods as indicated with MORPH_GEN_2.
- **#A3**: During the e-commerce purchase, provide services to the user to support a new product design based on customer’s morphology, preferences and specific interests
Based on the general requirements it has been analysed how the overall system features have to be addressed. In particular it has been defined three main system functionalities to achieve the MORPHEOS objectives represented in the table below (Table 19).

<table>
<thead>
<tr>
<th>MORPH_CONSUMER</th>
<th>Customer Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall collect consumer information</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORPH_PRODUCT</th>
<th>Product Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall collect products information</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORPH_MATCH</th>
<th>Match Consumer data with Products information</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall match Consumer data with Products information</td>
<td></td>
</tr>
</tbody>
</table>

Table 19: Requirements identify the three main system functionalities

Regarding the collection of Customer Information (MORPH_CONSUMER) the system should be able to:

<table>
<thead>
<tr>
<th>MORPH_CONSUMER_1</th>
<th>Identification Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall collect Identification Data from the consumer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORPH_CONSUMER_2</th>
<th>Preferences Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall collect data to understand the consumer preferences</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORPH_CONSUMER_3</th>
<th>Morphotype Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall collect data from consumer morphotype</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORPH_CONSUMER_4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall collect data from consumer’s psychographic variables in a way that combinations result in Decotypes (Decoration Morphotypes).</td>
<td></td>
</tr>
</tbody>
</table>

Table 20: Decomposition of the MORPH_CONSUMER requirement

Based on the request of the use cases presented in chapter 2 and chapter 3 the MORPH_CONSUMER_1 requires data to individuate people origins as well as the main personal information. This data can be explicated in the following information:

- Name
- Surname
- Gender
- Date of birth
- Place of birth

MORPH_CONSUMER_2 requires all the information to understand the customers’ interests. Example of data requested could be:

- Design Style preferences
  - Slim
MORPH_CONSUMER_3 requires data to be used to analyse the consumer morphotype. This information can be the following:

- Height
- Weight
- Neck girth
- Chest girth

- Waist girth

- Hip girth

- Shoulder width

- Upper arm girth (biceps)
- Arm length (shoulder to wrist)

- Crotch length

- Crotch height

- Femur length (from hip to knee)
- Fibula length (from knee to end of heel)
- Back length (from back of the neck to tailbone end)

MORPH_CONSUMER_4 involving consumer’s psychographic variables that will result Decotypes (Decoration Morphotypes).

- Type of environment where your decoration target residence is located:
  - Coast
  - Countryside
o Mountain
o Urban
o Suburban

This next 4 variables could be summarized when entering them into the app (so they are easy to input)

- People living in the house.
- Children living in the house.
- Elderly living in the house
- People with special needs living in the house

- Perception about own house (decoration target residence) as a home: (app will include a help menu explaining these variables since they are not obvious to the everyday user)
  - Functional
  - Base camp
  - Nest
  - Relax
  - Self-fulfilment
  - Workplace
  - Meeting people
  - Art Gallery
  - Other: __________). (open field to capture new possible tendencies)

- Preferred interior decoration style: (app will include a help menu explaining these variables since they are not obvious to the everyday user)
  - Contemporary
  - Scandinavian
  - Vanguard
  - Zen
  - Classic
  - Baroque
  - Art Deco
  - Kitsch
  - Rural
  - Colonial
  - Other: __________). (open field to capture new possible tendencies)
It is important to notice again that the algorithm will match critical combinations of psychographic variables in order to come up with a combination result in *Decotypes* (Decoration Morphotypes), for example, Classic, Urban, etc.

Purely morphological values such as the different body lengths do not have such a direct impact in the deco type outcome as the psychographic variables do, mainly since the latter reflect the lifestyle and the preferences of customers. Morphological variables are needed to select sizes of, for instance beds and chairs, but first the system needs to return the correct piece of furniture, or the proper interior decoration project before correct sizing can be applied.

Regarding the collection of goods information (*MORPH_PRODUCT*) the system should be able to:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MORPH_PRODUCT_1</strong></td>
<td>CMS Interoperability</td>
</tr>
<tr>
<td></td>
<td>The MORPHEOS system shall be interoperable with the most common Content Management System</td>
</tr>
<tr>
<td><strong>MORPH_PRODUCT_2</strong></td>
<td>Collect Products Data</td>
</tr>
<tr>
<td></td>
<td>The MORPHEOS system shall collect product related data</td>
</tr>
</tbody>
</table>

Table 21: Decomposition of the MORPH_PRODUCT requirement

The MORPH_PRODUCT_1 requirement regards the Morpheos interoperability with the most common CMS from which the system should be able to acquire product related information.

In particular, the main CMS identified from AIDIME and PIACENZA are:

- PrestaShop\(^{42}\)
- Magento\(^{43}\)
- Vcommerce\(^{44}\)
- Mabisy\(^{45}\)

Based on the request of the use cases presented in chapter 2 and chapter 3 the MORPH_PRODUCT_2 requirements can be decomposed as follow:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MORPH_PRODUCT_2.1</strong></td>
<td>Goods Design Data</td>
</tr>
<tr>
<td></td>
<td>The MORPHEOS system shall collect Design Data of Different Products</td>
</tr>
<tr>
<td><strong>MORPH_PRODUCT_2.2</strong></td>
<td>Style Information</td>
</tr>
</tbody>
</table>

\(^{42}\) [https://www.prestashop.com/en/](https://www.prestashop.com/en/)
\(^{43}\) [https://magento.com/](https://magento.com/)
\(^{44}\) [https://www.vcommerce.com/home.shtml](https://www.vcommerce.com/home.shtml)
\(^{45}\) [https://www.mabisy.com](https://www.mabisy.com)
The MORPHEOS system shall collect Style Information

Table 22: Decomposition of the MORPH_PRODUCT_2 requirement

**MORPH_PRODUCT_2.1** requires data to individuate dimensions, shapes, colours, yarn information of different goods category.

Piacenza has expressed the needed to collect information for its clothing regarding the following aspects:

**TOP PART OF THE BODY**

A. Body length
B. Chest width
   Shoulder width
C. Sleeve length from centre collar
D. Sleeve length
E. Underarm length
F. Front raglan length
G. Muscle width
H. Bottom hem height rib 1x1 double
I. Cuff height rib 1x1 double
L. Neck hem height rib 1x1 double
M. Neck opening width
N. Neck opening height
O. Sleeve width at 10cm from the bottom
P. Bottom width

**LOWER PART OF THE BODY**

Q. Waistline height
R. Crotch height
S. Hipline height
T. Kneeline height
U. Waistline width
V. Hipline width
W. Kneeline width

All these parameters are available as production technical specifications per style and size.

For AIDIMME the focus will be the house, that is the target of the decoration project, so that the main information that will be required to categorize this type of product is:
o Environment
  - coast
  - countryside
  - urban
  - mountain
  - suburban

o Home inhabitants arrangement
  - single
  - couples
  - number of children under 6
  - number of children above 6
  - number of elderly people at home
  - number of people with special needs

MORPH\_PRODUCT\_2.2 requires data to understand needs regarding the style

o Target place perception
  - Refuge
  - Functional
  - Experimentation
  - Social
  - Relax
  - Base camp

o Design style
  - Vanguard
  - Classic
  - art-deco
  - Scandinavian
  - Rustic
  - Colonial
  - Zen

Regarding the collection of goods information (MORPH\_MATCH) the system should be able to:

<table>
<thead>
<tr>
<th>MORPH_MATCH_1</th>
<th>Fitting Algorithms</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall develop fitting algorithms to evaluate the product fitting with consumer sizes</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORPH_MATCH_2</th>
<th>Matching Algorithms</th>
</tr>
</thead>
<tbody>
<tr>
<td>The MORPHEOS system shall develop matching algorithms to evaluate the degree of matching with consumer interest</td>
<td></td>
</tr>
</tbody>
</table>

Table 23: Decomposition of the MORPH\_MATCH requirement

In particular, for MORPH\_MATCH\_1 Piacenza needs to compare the fitting of the selected garment with the morphotype of their consumer.

For the requirement MORPH\_MATCH\_2 Piacenza needs to provide to the e-commerce customer the best size of its knitwear while AIDIMME the suggestion of most appropriate
measured for the selected home furniture as well as the best decoration styles compared with the consumer preferences.
6. Conclusion & Future Activities

6.1. Conclusion
The goal of this deliverable is the definition of the As Is and To Be Scenarios where Morpheos’ implementation is involved. They are explained in order to start the development of the different modules of the project. The methodology adopted to reach the goal has been focussed on the definition of the project requirements based on the desiderata from the representative of creative industries involved into Morpheos, Piacenza for the fashion and clothing aspects and AIDIMME for the manufacturing and provision of furniture goods, supported by the competences of the RTD and technological partners. Requirements have been defined using the use cases approach, where business partners, expressed their expectations providing a clear story presenting the current scenarios and how Morpheos will improve processes, relations with actors and systems. Based on the AS-IS situation the team has elaborated how Morpheos will act on the presented processes describing the TO-BE scenarios. Preliminary target parameters and solutions to solve perceived problems have been defined in order to make feasibility studies during the next period. In the last part of the document, Morpheos requirements have been modelled using SysML requirement diagrams presenting a preliminary list of Morpheos functionalities.

6.2. Future Activities
From month 3 to month 9 of the project, the team checked and evaluated the technologies to be developed in order to reach the Morpheos’ goals. Defining in this document how To Be scenarios will be, the team has defined functional and technical requirements in order to reach the goal to implement Morpheos in Interior Design and in Fashion sector; these requirements are being used as guidelines for the technical partners who are currently developing the platform in WP2, WP3 and WP4.