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Soft, **Digital** and **Green Skills**
for **Smart Designers**:
Designers as Innovative TRIggers
for SMEs in the manufacturing sector

www.intride.eu

Needs' analysis related to Soft, Digital, Green, Design and Technology skills in traditional manufacturing sector

Final Analysis Report 2
- Workshops -

WP3. Field analysis of state of the art — September 2020

Co-funded by the Erasmus+ Programme of the European Union

INTRIDE Proiect

INTRIDE is a 10 partner alliance (Italy, Spain, Poland and Romania) aiming at the development of a structured cooperation framework between HEIs, clusters/business representatives, technical centers and enterprises




SPECIFIC GOALS:

- **Developing a Joint Master Degree Curriculum for Smart Designers** with added competences related mainly to **Soft, Digital and Green Skills, as designers** will in fact become the **future innovation triggers for SMEs** in the manufacturing sector.
- Building a **co-creation environment linked to a HE-Industry community platform** which is supposed to be a virtual place for **activation and monitoring of innovation, technological transfer, * R&D processes** under the cooperation between enterprises, HEIs ad technological centres

INTRIDE project

INTRIDE PROJECT'S SCOPES:

- Definition of skills needs towards future innovation scenarios for traditional manufacturing SMEs
- Co-design of a Training Path (Joint Master Degree)
- Co-creation of a HE-Industry community platform

Method proposed for skills needs identification:

- In each country meetings (workshops with focus groups) will be organized for skills needs and challenges identification involving both HEIs partners, clusters and business representatives partners ivvig bth HEIs parters ad custers ad busiess represetatives parters with selected SMEs in the manufacturing sector (at least 20 per country)
- The results will be summarized in a Final Analysis Report

CLUSTER MOBILIER TRANSILVAN

Methods proposed due the COVID-19 situation:

- On-line workshops taking into account the proiect's partners organizational opportunities (large workshops, small workshops, individual dialogs)
- On-line survey using a commonly developed questionnaire to identify the skills needs

RESULTS:

- 83 completed surveys
- 5 workshops
- 4 country reports containing the surveys analysis
- 4 country reports about the workshops results
- Final Analysis Report 1 – Survey
- Final Analysis Report 2 – Workshops

The modified scenario proposed for the on-line workshops:

Modified workshops draft program:

Workshops title: *Future supporting skills in traditional manufacturing*
Work package: *WP3*
Leader: *Transilvanian Furniture Cluster*
Scope: *Defining skills' needs related to future innovation scenarios for traditional manufacturing SMEs*
Number of participants: minimum 20 participants /country

1. On-line survey:

- a questionnaire has been shared and finalized and approved after the KOM
- after approval the questionnaire was translated in 4 languages
- minimum of 20 companies were invited to complete the on-line survey

2. On-line workshops for co-analyis of the completed surveys

- after the 20 surveys have been completed the participants were invited for a short on-line meeting, where the survey results were discussed and/or additional skills related information collected
- 5-6 industry members + moderator/ country is recommended

METHODOLOGY USED:

1. On-line survey:

- a questionnaire, consisting of 42 questions has been developed for skills needs identification

- the questionnaire has been translated in 4 languages

- minimum of 20 companies (for each partner country) have been invited to complete the online survey

2. Online workshops for co-analysis of the surveys

- after the surveys have been completed the participants were invited for a short online meeting, where the survey results have been discussed and additional skills' information collected

3. National reports prepared by partners

4. Final Analysis Report of the results

INTRIDE survey

EXPECTED RESULTS:

- report the specific industrial stresses ad challenges that emerged from SMEs
- report on the skills, competencies and knowledge needs emerging from the companies
- field analysis of the state of the art based on national workshops
- skills, competencies and needs harmonization to create a transnational common basis and training program

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National workshop - Italy

Needs' analysis related to Soft, Digital, Green sets of competences in the furniture – interiors sector

WP3 – state of the art analysis

03.06.2020 / 09.06.2020

Co-funded by the Erasmus+ Programme of the European Union

Erasmus+

dID distretto INTERNI DESIGN

Participants to the workshops

Carried out virtually / dID and DIDA (Univ. Of Florence) as moderators

Workshop 1_ 03 June 2020

1) **SMEs-furniture producers:**

LUCE5 www.luce5.it (medium) / Stefano Cetoloni, Rosalba de Santo – managing director and assistant

ABBI STORE www.abbistore.it (micro) / Stefano Margiacchi, Michela Anatoli – CEO and architect

CHELINI www.chelini.it (small) / Antonella Rosanò – direction assistant

NOI DELLA NOTTE www.noidellanotte.it (small) / Paolo Pasquini, Marcello Cassioli – production manager and property

2) Design studio:

STUDIO MICHELI www.simonemicheli.com (micro) / Simone Micheli - CEO

3) Tech. Companies:

TELCOMMS www.telcomms.it (small) / Simone Pistolesi – innovation manager

NUVAP www.nuvap.com (small) / Marco Magnarosa - CEO

4) Research Organisations:

UNIVERSITY OF FLORENCE

DIEF – Mechanical Eng. + robotics / Filippo Cavallo, Benedetto Allotta

DIDA – design / Giuseppe Lotti, Marco Marseglia

Workshop 1

The **4 furniture and interiors producers are all linked to a R&D** project idea (under development) connected to the **application of technologies to furniture products and living environments** – hospitality sector

2 of them have no experience in the application of technologies

the design studio: bringing the market needs perception

digital/technological companies: supporting in defining the needs together with RO competences

Participants to the workshops

Carried out virtually / dID and DIDA (Univ. Of Florence) as moderators

Workshop 2_ 09 June 2020

1) **SMEs-furniture producers:**

MARIONI www.marioni.it (small) / Simone Marioni – CEO

SAVIO FIRMINO www.saviofirmino.com (medium) / Cosimo Savio – CEO

2) REAL ESTATE SECTOR:

PROGENIA www.progenia.it (small) / Carlo Greco – partner

3) Tech. Companies:

AMT ITALIA www.amtitalia.com / Alessio Paolillo – CEO

4) Research Organisations:

UNIVERSITY OF FLORENCE

DIDA – design / Giuseppe Lotti, Irene Fiesoli

UNIVERSITY OF SIENA

DISPOC – dep. Of social sciences (competences on AR/VR and communication) / Maurizio Masini

Workshop 2

The **2 furniture and interiors producers are all linked to a R&D** project idea (under development) connected to the **application of technologies to living environment contexts – AR/VR and digital tecnologies as part of services for architects and interiors designers**

both have experience in the application of technologies

the real estate company for the luxury sector has been involved as expression of the market needs

digital/technological company: supporting furniture companies in understanding the needs together with RO competences

Workshop steps

1) Review of the questionnaire (each company had already filled in before the workshop)

2) Analysis of the actual situation: pandemic related

3) Future trends of the sector and competences' needs

Main highlights

- **Due to the pandemic actual situation** (still affecting several international markets) the way to deal with clients has and will completely change **towards virtualization and digitization of all services (sales, post-sales assistance)**

- **Companies, even micro ones, will be asked to manage internally+daily+continuously their presence on the market at digital level**

- **Competences related to** E-COMMERCE, DIGITAL MARKETING, SOCIAL MEDIA MANAGEMENT **will be the most requested in the near future**

- Most of SMEs have a very distributed territorial production chain: they don’t manage production lines directly and in most cases they only assemble and finish **robotics, process eng. and industry 4.0 are not seen as key important**

Main highlights

- **Digital and technological competences will need to be managed together with soft skills (<u>crisis management, creativity, teamwork</u>) and project skills (<u>aesthetic sensitivity, design methodologies</u>) or they could turn to be useless**

- **The market – clients (high level sector especially) don't require directly furniture companies to act towards sustainability**

BUT – their attention will grow following the market attention even at luxury level in the future

□ thus: actually GREEN competences are <u>only partially</u> requested to be integrated in the sector SMEs

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28 July 2020
Web Conference
on Survey and Focus Group results

National workshop - Poland

Soft, Digital and Green Skills for Smart Designers:

Designers as Innovative TRIggers for SMEs in the manufactoring sector

POLISH REPORT
on "Soft, Digital & Green" competences for designers

Co-funded by the Erasmus+ Programme of the European Union

POLISH REPORT

about the critical “Soft, Digital & Green” competences that a designer should have to successfully innovate SMEs’ manufacturing habitat products

Activities:

- Online survey taken on May 15th to June 16th.
- Workshop with entrepreneurs on 17th June 2020

Research Team:

Maciej Witkowski
Michał Szyszka
Ewelina Widerska
Sebastian Kwaśniewski

WSB University

Ewa Gołębiowska
Lubomira Trojan
Wioletta Beczek

zamek cieszyn

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POLISH SURVEY

21 respondents: representatives of traditional manufactureres (owners or general managing directors)

Examples of business areas:

Furniture/small architecture:

- furniture manufacturing, carpentry, manufacturing of ornaments,
- eco-friendly functional furniture for schools and kindergartens,
- small architectural components, like: benches, bins, bike stands etc.,

Food

- food delivery and a take-away restaurant,
- traditional bread baking,

Craft

- ceramic pattern shop, wattle craft company, producer of zippers
- stained-glass windows and artistic glass
- eco-friendly wooden toys
- production of entertainment equipment: air hockey, basketball, rocking chairs, billiard tables

IT & Ditgitalisation

- animated films, IT services
- digital and offset printing

Workshop with Entrepreneurs - Participants

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Workshop with Entrepreneurs - Panels

The workshop included 3 focus panels:

- Determining key competences of students and graduates from the perspective of the labour market – professional and project experiences of the sector.
- Current trends – what does an owner of a company/institution need to face?
- What do employers expect from newly recruited employees?
- What new challenges arise from the pandemic.

Workshop with Entrepreneurs
Expected competences of an ideal employee in the company

- Communication skills / Teamwork skills / Good communication with the customer (the answer appeared 4 times)
- Professional and personal responsibility / (the answer appeared 3 times)
- Creativity /Ingenuity (the answer appeared 3 times)
- The ability to shape the strategy of functioning and promoting the company online / in the new media space / proficiency in handling new media / Digital Skills / Computer Animation (the answer appeared 3 times)
- Performing work and duties with passion (the answer came up twice)
- Involvement (the answer came up twice)

Workshop with Entrepreneurs

What competences do employers miss in young employees in the context of the previously indicated trends in the enterprise (organisation) of the "traditional manufacturer"?

- **Communication skills** (the answer appeared 4 times)
- **Cooperation** (the answer appeared 2 times)
- **Precision** (the answer appeared 2 times)
- **Humility** (the answer came up twice)
- **Willingness to learn** (the answer came up twice)
- **Involvement** (the answer came up twice)
- **Responsibility** (the answer came up twice)

Workshop with Entrepreneurs

What new needs/expectations towards employees have emerged in the context of the current pandemic

- Ability to build communication
- Ability to work in subgroups (teamwork)
- Punctuality and timeliness
- Self-discipline
- Ability to find solutions (creativity)
- Loyalty
- Independence
- Hardworking

Workshop with Entrepreneurs
Mapping of future labour market trends

Digitalization and transition to online space of design, production, distribution and customer contact processes,

Self-sufficiency and independence - the collapse of long supply chains – building closer or direct designer-producer-supplier-client relationships,

Locality - using local materials, relying on local suppliers, reaching out to local customers - will play an increasingly important role,

Universal design - including not only social inclusion but also recycling, ecology, environmental neutrality, design, production economics will increase,

Relations and ties - the economy will come closer to a pro-partner, not a pro-transaction model.

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National workshop - Romania

Soft, Digital and Green Skills for Smart Designers:

Designers as Innovative TRIggers for SMEs in the manufacturing sector

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WP3 : Field Analysis of State of the Art

Leader: Transilvanian Furniture Cluster (TFC)

People: Dana Dragonici
Levente Dénes
Lucian Maier

Field Analysis of State of the Art
CMT - RO

Questionnaire:

- ✔ **20** completed in Romanian
- ✔ **2** completed in English

Workshops:

- ✔ Introductory workshop - May 26, 2020
- ✔Summing workshop – September 15, 2020

Needs’ analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector

NATIONAL SURVEY 1 - May 26, 2020

18 participants

During Mai and September 2020, the INTRIDE Romanian partnership has submitted the survey on “Needs’ analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector” to SMEs working in the manufactoring sector, specifically in the Transylvanian Interior sector.

The first workshop gathered many members, especially companies from Transylvanian Furniture Cluster and we had the occasion to present INTRIDE project.

We were focused during this workshop, that took place in the “Innovation for Business event”, on the first results from our questionnaire regarding the skills of future designers (technical, design, digital, soft and green skills).

The second workshop, was focused on the final report and on the feedback we received from the universities and companies regarding this topic (extra informations towards our research).

Needs’ analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector

NATIONAL SURVEY 1 - May 26, 2020

The technical skills identified as most important were related to product management and process engineering. The ones committed to develop are product management and project management.

On the other hand, the skills recommended for training were automation and process engineering.

The digital skills with the highest percentage of importance were e-commerce and social-media and this ones are also the first two recommended for training.

Regarding the design skills, the most important ones are visualization and creative thinking.

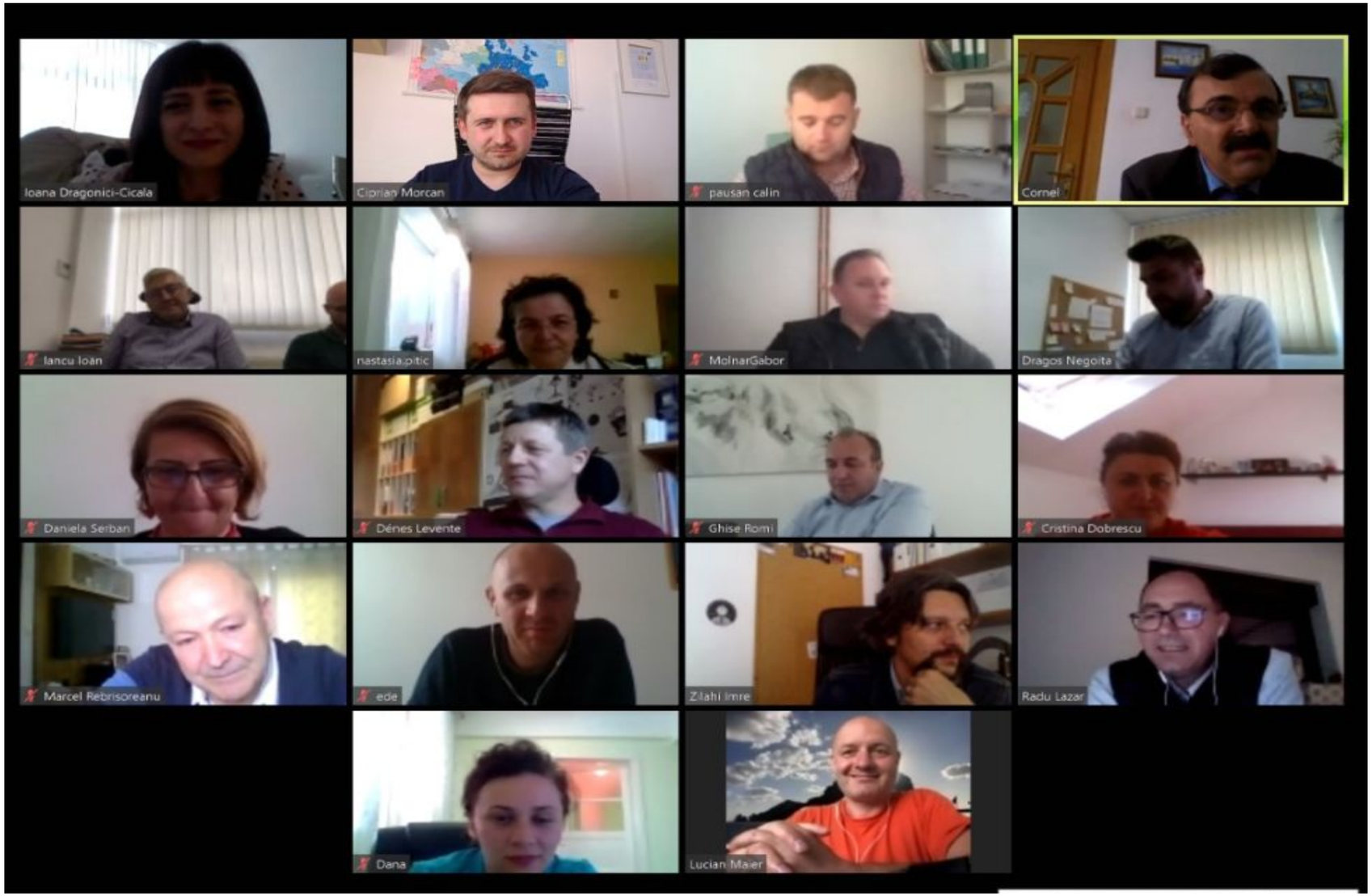
The first ones recommended for training are design methodologies and operation analysis.

If we are taking about green skills, the ones quoted as most important are consumption reduction and sustainable product development. The first two skills recommended for training are consumption reduction and resource management.

Taking about soft skills the main point of interest was around teamwork and communication, while the ones recommended for training were time management and communication.

Needs’ analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector

NATIONAL SURVEY 1 - May 26, 2020



Needs' analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector

NATIONAL SURVEY 2 – September 15, 2020

10 Participants

The Romanian second workshop was carried out virtually, by TFC as moderators, involving SMEs – furniture producers and universities.

We gathered for this workshop 4 representants from universitites (University of Art Cluj, Technical University Cluj, University from Brasov) and 3 representants from furniture companies and also 3 persons implied in the management of INTRIDE project.

The workshop was focused on:

- Discussions between universities and companies regarding the results of the questionnaire and further comments, suggestions to improve a future master curricula for young designers.

Needs' analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector

NATIONAL SURVEY 2 – September 15, 2020

The more important considerations emerged during the workshop are:

- high-performance equipment is not enough if you don't have a place to sell the furniture products
- the Technical University offers the opportunity for studying programming, also automatization and developing new products
- it was suggested there is place for improvement regarding critical thinking and also, for data visualisation
- digital marketing has gained a top position in the companies
- one of our TFC members told us their company is taking steps towards digitalization
- the digitalization should be implemented also in the technological process
- the virtual reality is not so important yet in the companies, because the basic stuff are solved through 3D, renderings, therefore the companies are not willing to have extra costs for now

Needs' analysis related to Soft, Digital, Green sets of competencies in the furniture – interiors sector

NATIONAL SURVEY 2 – September 15, 2020

The more important considerations emerged during the workshop are (cont.):

- universities have courses for eco-design
- it was recommended to take in consideration more the importance of design in projecting furniture and also the artificial intelligence in the future, having in mind the final consumer while choosing the design
- one of our companies are interested in a design training
- time-management is on the list of socio-emotional competences, that could be improved
- another topic discussed from a company was refering to the importance of packing and logistics
- as a conclusion, the universities have a strong desire to create awareness towards companies regarding the importance of design in production and also, to gain opening towards new technologies, virtual reality etc.

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Soft, Digital and **Green Skills** for **Smart Designers**: Designers as Innovative Triggers for SMEs in the manufacturing sector

National workshop - Spain

NATIONAL WORKSHOP
Highlights & Conclusions

WP3. National Workshop (Spain) — July 2020

CENFIM Furnishings Cluster

ELISAVA Barcelona School of Design and Engineering

LEITAT managing technologies

Co-funded by the Erasmus+ Programme of the European Union

 Grant Agreement: 612622-EPP-1-2019-1-IT-EPPKA2-KA

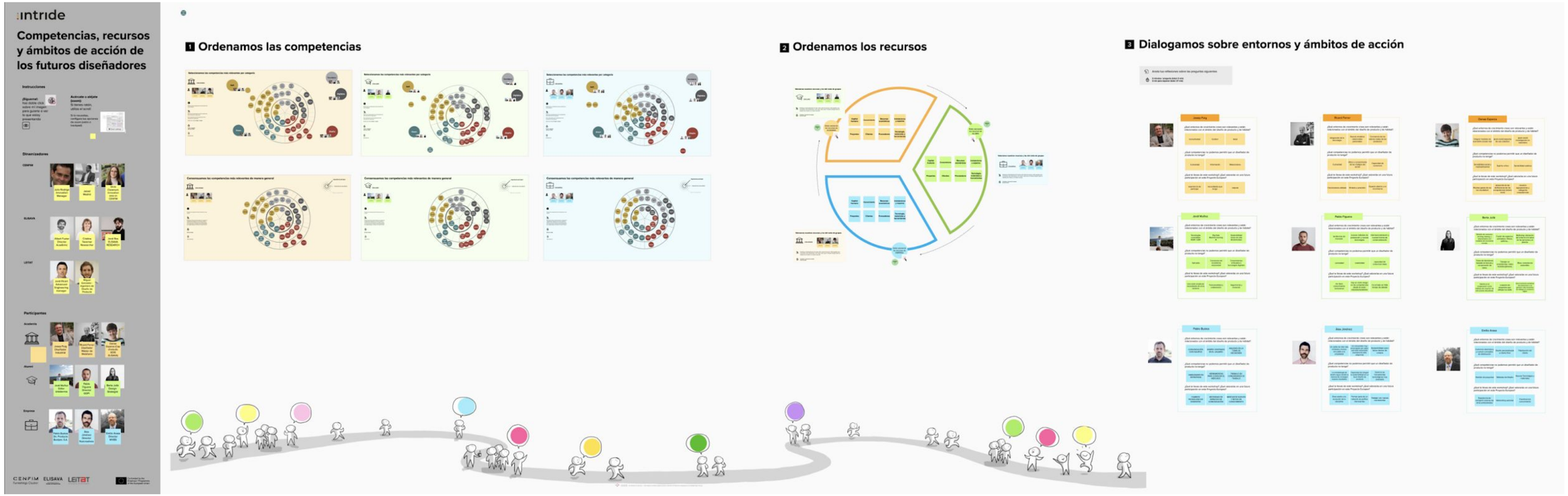
1. General Overview

Having a recorded **online workshop format** certainly presented an added challenge, particularly when trying to device the inner- working dynamics and logistics of it. It also introduced a learning curve, concerning both the potential participants and the organizers, when it came to interacting in such **virtual environments in both an engaging and effective way.**

That being said, almost all **participating parties** *(See Participants section)* verbally showed an appreciation for the opportunity to involve themselves in the dynamic and familiarize themselves with these new tools, while also displaying an interest in further sessions after giving a **generally positive feedback.**

In designing the **workshop methodology** *(See Dynamics section)*, we strived for balance to generate dynamics that were more strictly guided (Part I and II) and another (Part III) than acted more like an open forum for them to express their opinions and ideas on certain curated topics.

1. General Overview



Overview of the complete Virtual workspace for the National Workshop.

2. Participants

It was thought relevant to include a **diverse cluster of profiles** when drafting the list of possible candidates. These participants would then be grouped into three sectors: **SMEs, Academia, and Alumni.**

All workgroups were composed of three individuals, all related to the same sector, and a **Facilitator** in charge of them.
A **General Coordinator** was put in place as well for the whole session, in order to help disseminate and implement the digital platforms amongst the participants.

The impact of having these sectors represented in the workshop proved very useful and helped in **qualifying and complementing the results and conclusions extracted from the survey,** all to expand our field of vision and gain a better understanding of many of the considerations a plausible JMDP should take into account.

Sector 1: SMEs

This group included three executive profiles from different companies with a wide range of activities:

· Industrial and Manufacturing Logistics.

· Sustainable Design & Development.

· Contract Furniture Manufacturing.

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2. Participants

Sector 2: Academia

The Academic sector was comprised of three Directive and PHD profiles from different departments at ELISAVA :

· Director of Product Design Master’s Degree

· Head of Studies of Degree in Design.

· Director of Furniture Design Master’s Degree.

Sector 3: Alumni

Concerning the Alumni, all senior profiles were varied, composed of Product Designers with different areas of expertise:

· Lighting and Furniture Design.

· Outdoor and Urban Furnishing.

· Sustainable Design Management & Consultancy.

3. Selection of Skills

Based on the results from the initial survey, **a shortlist of skills was assembled in the consensus of all National Partners** (CENFIM, ELISAVA and LEITAT) and served as the basis to structure its different dynamics.

Skills Definitions

In regards to the workshop and concerning the skills and competences which appeared on the survey, **we uncovered some opportunities for further clarification**.

While some of the shortlisted skills self-describe and explain themselves well enough for all participants to understand, some of them still struck them as **being too broad or equivocal** and thusly stated they could perhaps be broken down into **more manageable and implementable categories**, regarding the JMDP.

This led to a firm push on what is an ongoing effort in defining each of the workshop selected skills further under strict criteria. This was helpful in order to level the field amongst all participants and **leave no room for ambiguous interpretations** while still facilitating their exchange of knowledge and conversation around these skills, particularly those which were identified as key ones by the vast majority.

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3. Selection of Skills

Justification of Skills & Related Bibliography

The task for expanded definitions is also closely related to the pursuit of **identifying and indexing all of the selected skills in relevant academic and scientific literature.**

Aside from building a curated bibliography, this effort will aid in focusing and narrowing the field in future stages of the project, in regards to which skills can be justifiably implemented in the best and most efficient manner.
This will be especially **relevant when designing and defining the methodologies, approach, and context of the future academic program.**

We find taking these steps now will help us in **establishing the conceptual bridges** needed between the building blocks for the JMDP, in order to achieve full consensus with all partners involved, where necessary.

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Skills Shortlist

Digital Skills

E-commerce

Digital Marketing

Networks & IT

Virtual & Augmented Reality

Programming & Coding

Cybersecurity

Advanced Computing

Data Literacy

Design Skills

Aesthetic Sensibility

Creative Thinking

Visualization

Design Methods

User Centered Design

Functionality

Ecological Sensibility

Design & Market Research

Curiosity

Criteria

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Skills Shortlist

Green Skills

- Environmental Awareness
- Sustainable Product Development
- Clean Technologies
- Clean Energy & Energy Efficiency
- Gestión de Recursos
- Circular Economy
- Waste Management
- Advanced Materials Development

Soft Skills

- Strategic Planning
- Communication
- Innovation
- Teamwork
- Positive Attitude
- Flexibility
- Leadership
- Literacy
- Ethics
- Responsability
- Assertiveness
- Time Management

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4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills

Goal:

The **first exercise** of the workshop was specifically designed to make all individual parties position themselves and cast a vote on every shortlisted skill within each of the general categories (Soft, Technological, Digital, Design, and Green).

Grouped by sector and following **a voting process**, each skill was placed in their respective Bull's Eye diagram.
Said map had three distinct circles of importance, where the most voted skills were placed by one of the Facilitators (CENFIM & ELISAVA). The closer to the center, the more voted that skill was by the participants. The number of skills that could be placed in each circle was limited, in order to **compel the participants to make a conscious decision.**

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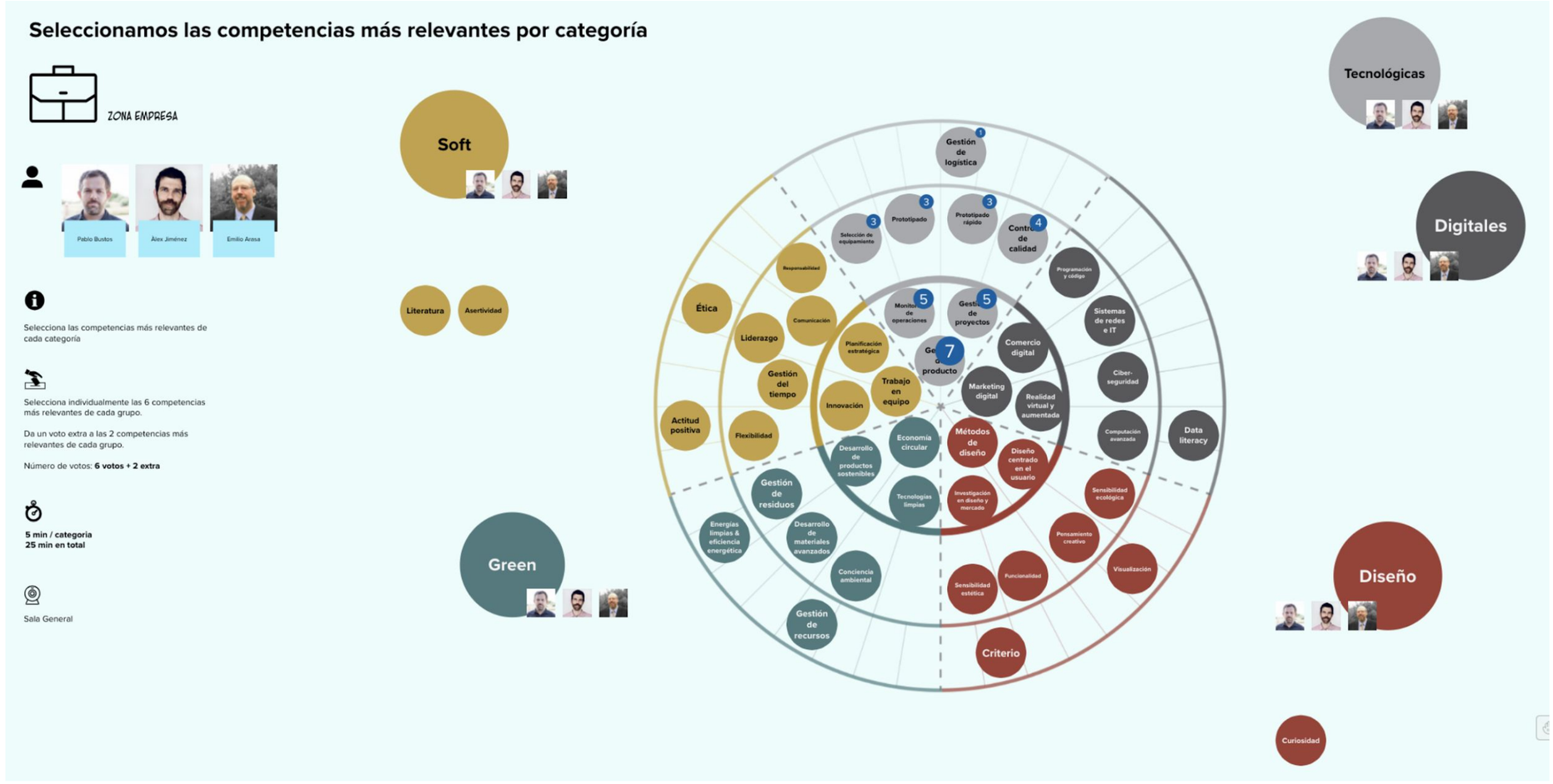
4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills



Example of results from a voting round on Technological Skills.

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4. Workshop Dynamics

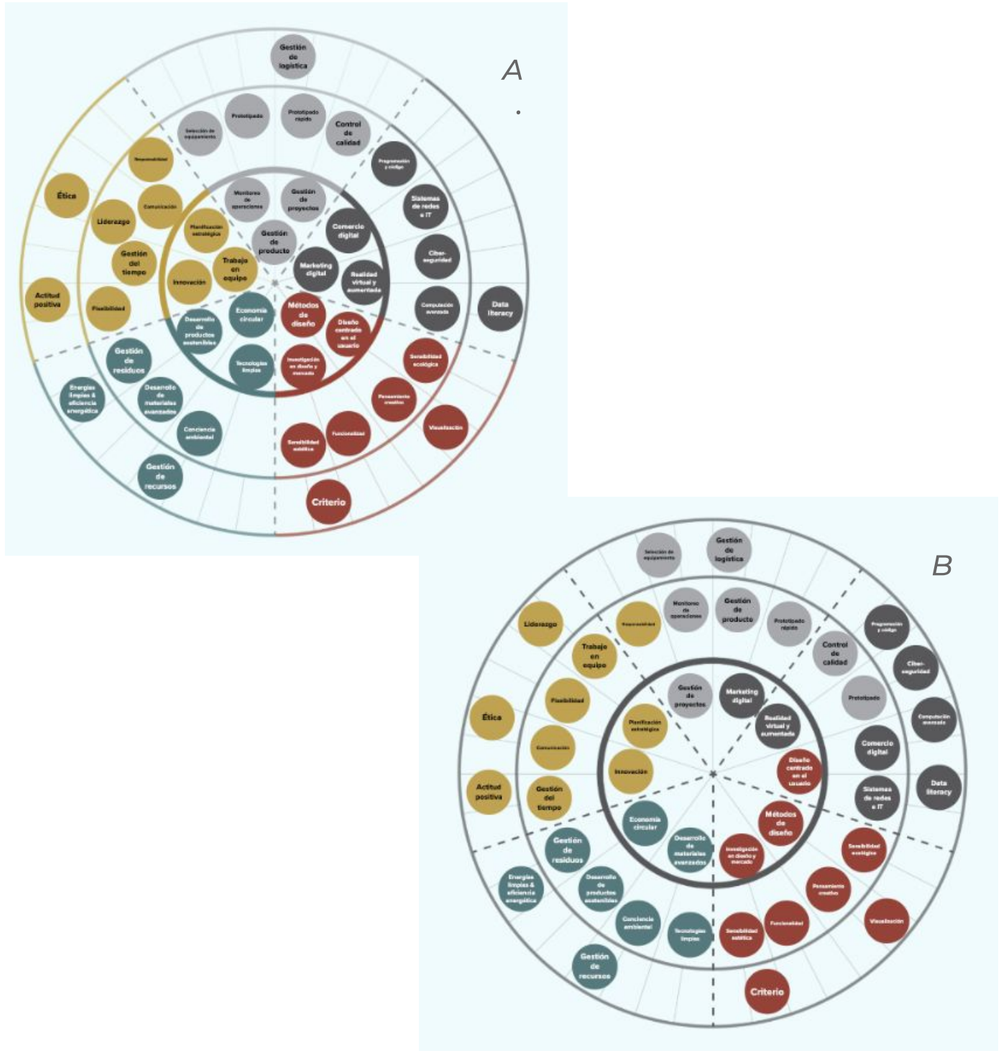
Part I: Evaluation & Hierarchization of Skills

Furthermore, after the workgroups had a **complete overview of their voting results**, they had the opportunity to meet privately with their Facilitators in a separate chat room. In there, the members could **freely discuss, debate, and reach a consensus if they wished to make any modifications** to their resulting skills diagram.

The key difference from the previous round was that there were no constraints placed on the number of skills per category they could place. In a very extreme example, they could have filled the center slots with only skills pertaining to the Green category, had they so wished.

Output:

The results did not differ greatly from their original diagrams, however, every sector did choose to alter their voting results in some capacity, allowing them to qualify and inform the enriching debate with their own experiences.



A. Initial Diagram after Voting session .
B. Resulting Skill Diagram after debate.

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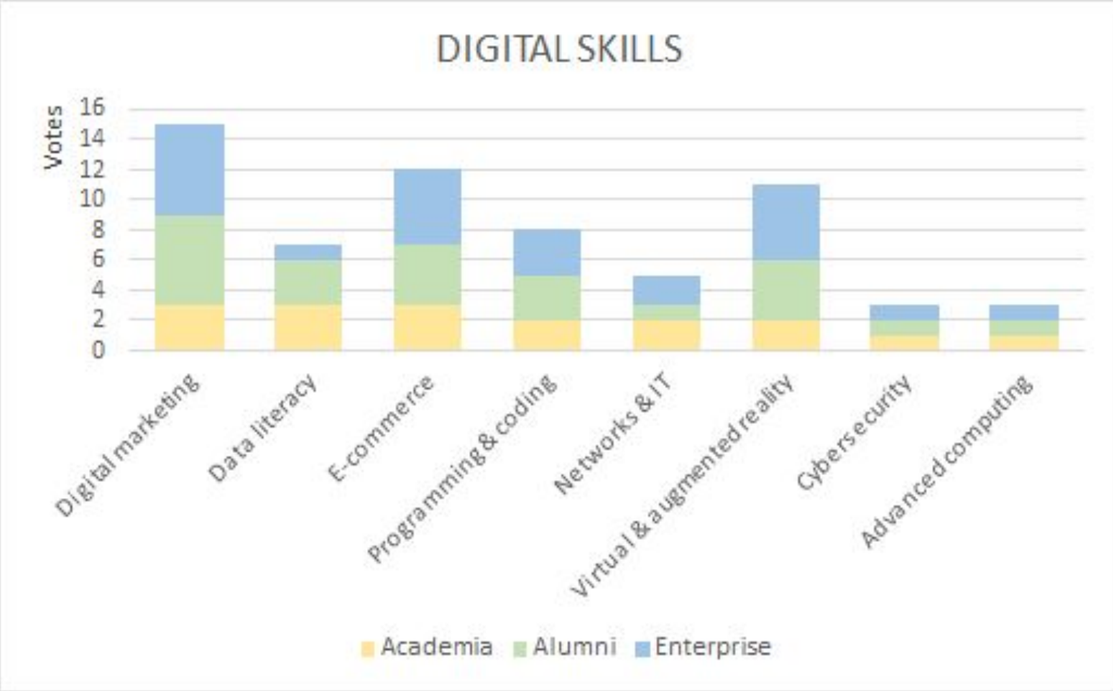
4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills

Results:



The graphic shows the voting results of each group (Academia, Alumni & Enterprise) regarding Digital Skills. Moreover, the total height of the bar offers a global overview of the sum of the votes collected for each skill.

The most voted Digital Skills were:

- **Digital marketing**
- **E-commerce**
- **Virtual & augmented reality**
- **Programming & coding**

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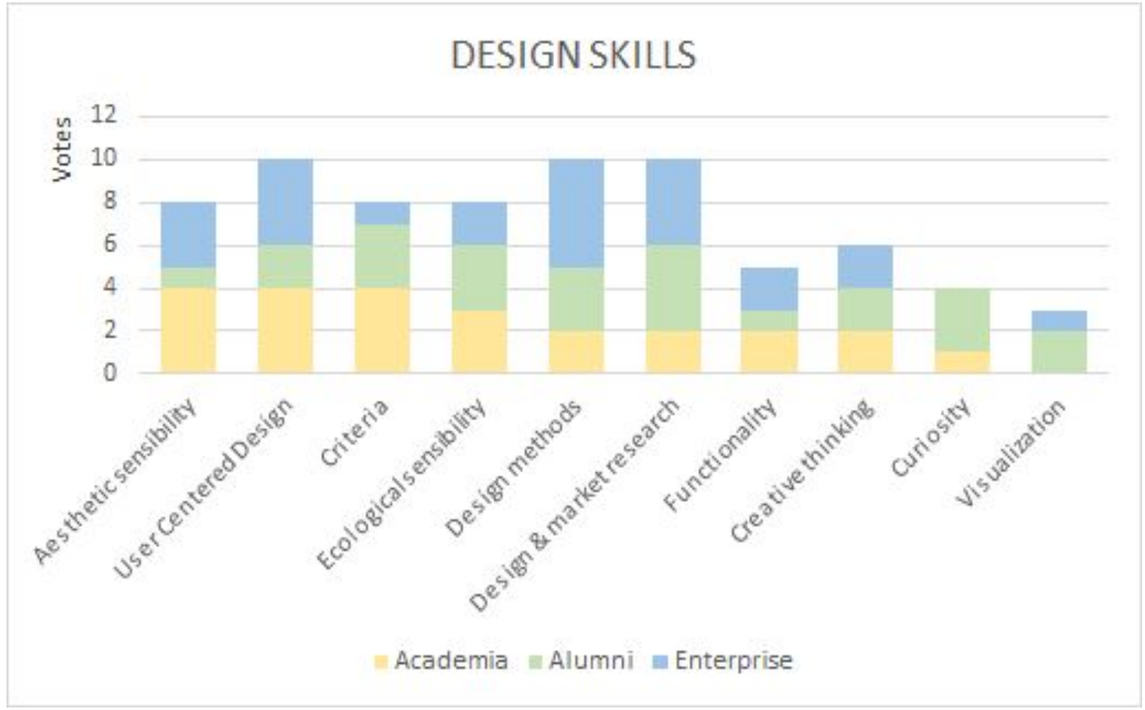
4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills

Results:



The graphic shows the voting results of each group (Academia, Alumni & Enterprise) regarding Design Skills. Moreover, the total height of the bar offers a global overview of the sum of the votes collected for each skill.

The most voted Design Skills were:

- **User Centered Design**
- **Design methods**
- **Design & market research**
- **Aesthetic sensibility**
- **Criteria**
- **Ecological sensibility**

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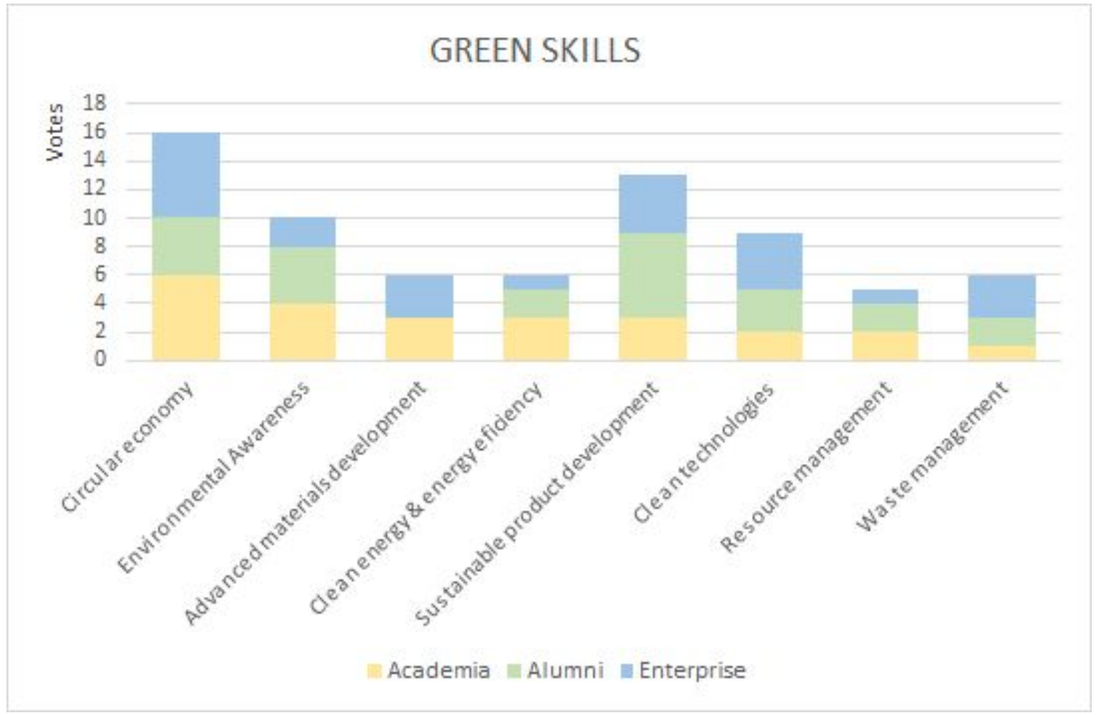
4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills

Results:



The graphic shows the voting results of each group (Academia, Alumni & Enterprise) regarding Green Skills. Moreover, the total height of the bar offers a global overview of the sum of the votes collected for each skill.

The most voted Green Skills were:

- **Circular economy**
- **Sustainable product development**
- **Environmental Awareness**
- **Clean technologies**

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CENFIM Furnishings Cluster
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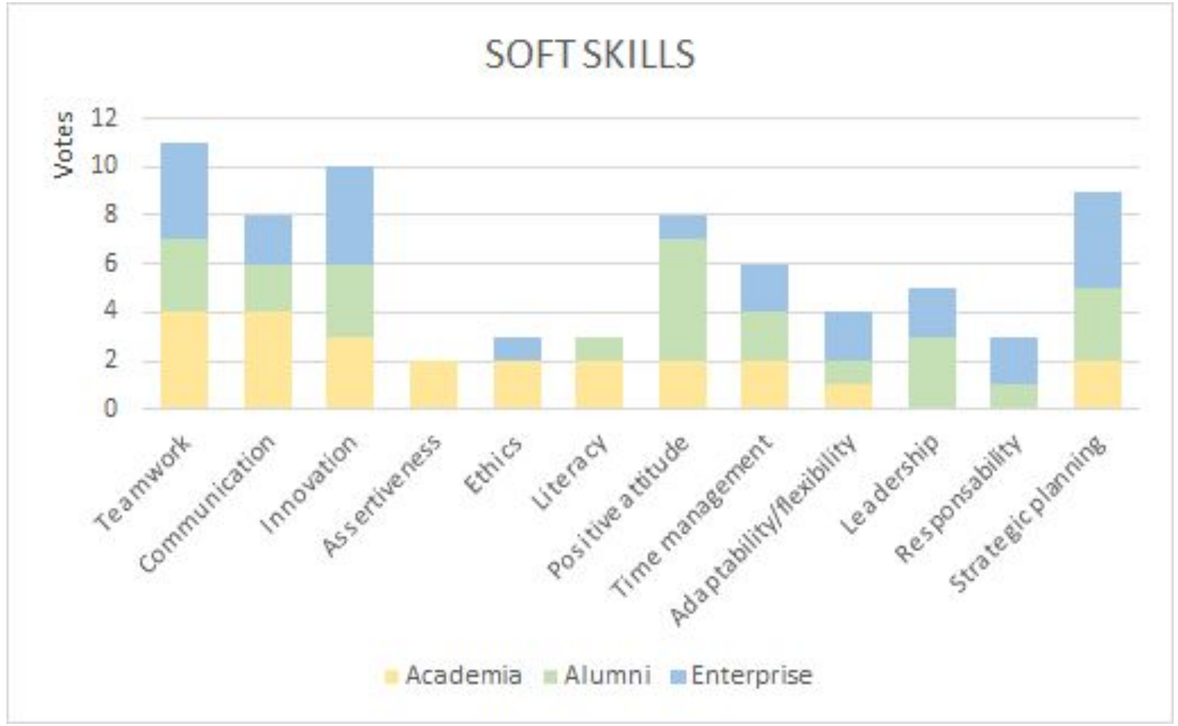
LEITAT managing technologies

4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills

Results:



The graphic shows the voting results of each group (Academia, Alumni & Enterprise) regarding Soft Skills. Moreover, the total height of the bar offers a global overview of the sum of the votes collected for each skill.

The most voted Green Skills were:

- **Teamwork**
- **Innovation**
- **Strategic planning**
- **Communication**
- **Positive attitude**
- **Time management**

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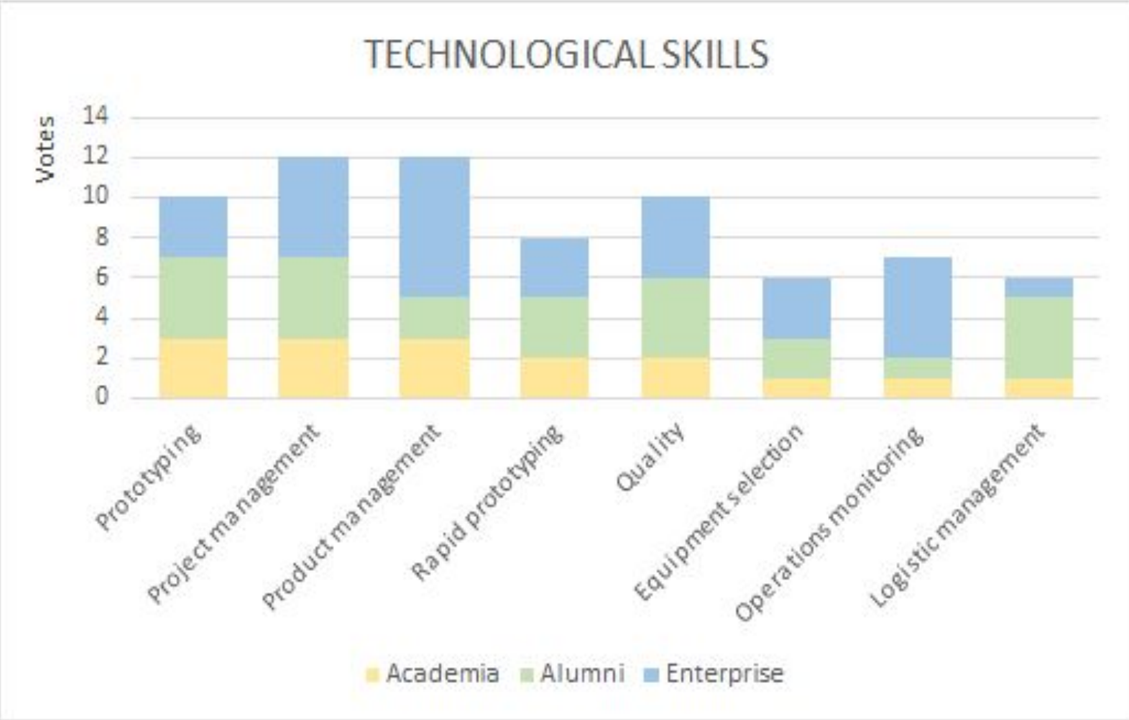
4. Workshop Dynamics

Part I: Evaluation & Hierarchization of Skills

Results:



The graphic shows the voting results of each group (Academia, Alumni & Enterprise) regarding Technological Skills. Moreover, the total height of the bar offers a global overview of the sum of the votes collected for each skill.

The most voted Green Skills were:

- **Project management**
- **Product management**
- **Prototyping**
- **Quality**
- **Rapid prototyping**

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4. Workshop Dynamics

Part II: Identifying Relevant Resources from Key Actors

Goal:

The workshop and it's diverse participants also provided a more than adequate stage to **rethink the relationship between all of these actors** (SMEs, HEIs and Professionals) in the context of a future JMDP. This was orchestrated by making each sector **assess and evaluate their own resources individually**, (Human Capital, Knowledge, Economic Resources, Facilities & Spaces, Projects, Clients, Suppliers and Technology, Materials & Tools) and then asking them **to repeat the exercise regarding the other two sectors** in a similar fashion.

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4. Workshop Dynamics

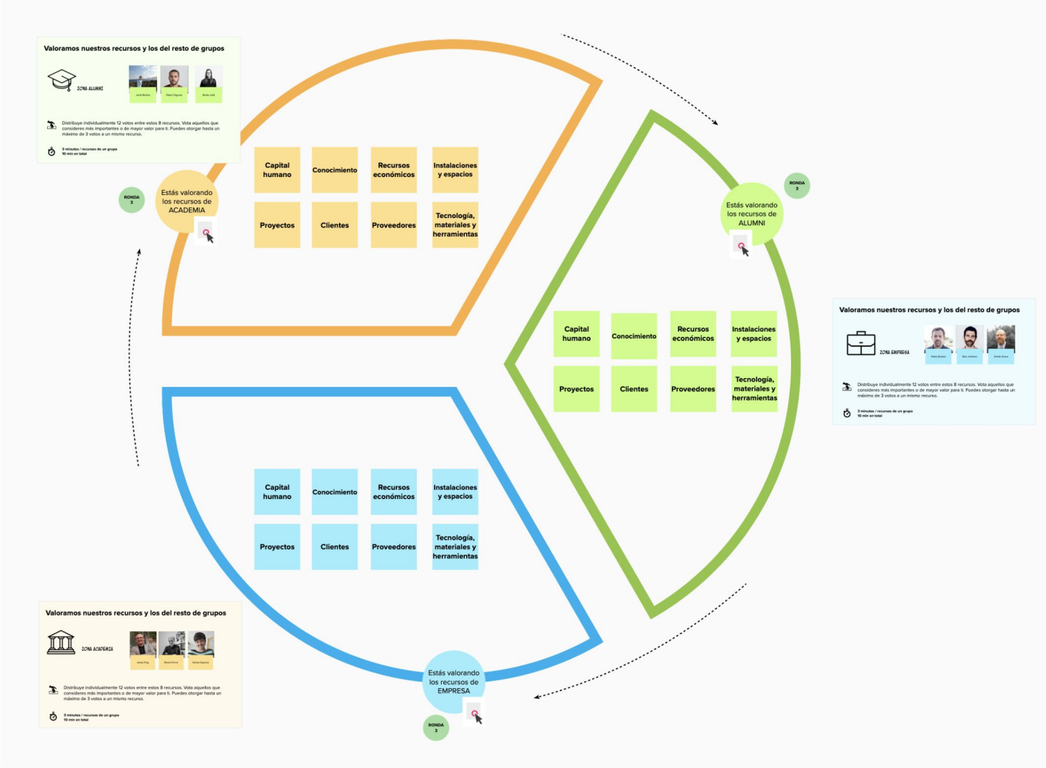
Part II: Identifying Relevant Resources from Key Actors

Consisting of three voting rounds, this dynamic had the participants vote individually on their own resources. The aim was for them to define their perceived strengths and value. In consecutive rounds they would have to do the same, but regarding the other two sectors.

Output:

This gave us a better **understanding of how these participants perceive themselves collectively**, and also how they perceive the two others. The dynamic illuminated on new possible and interesting **trade-offs for each actor**.

Leading them to find opportunities which could arise when encouraged to not only **rethink and innovate in what their role currently is**, but also what it could be in the future in interconnected and fluid environments.



Starting with their own, participants went around the board voting on which resources they perceived as most valuable.

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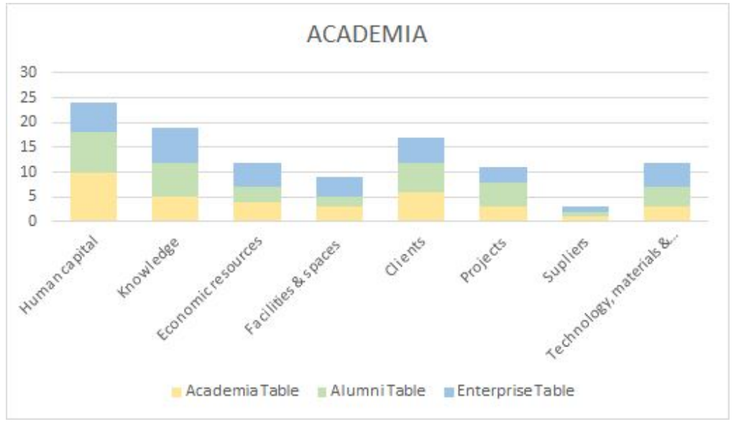
CENFIM Furnishings Cluster
ELISAVA Barcelona School of Design and Engineering
LEITAT managing technologies

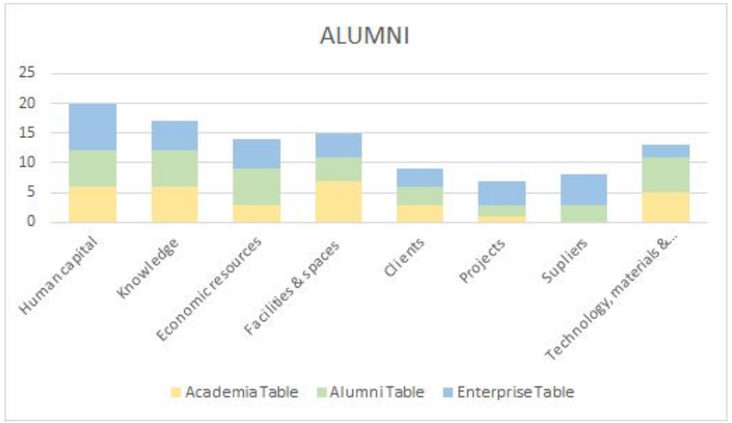
4. Workshop Dynamics

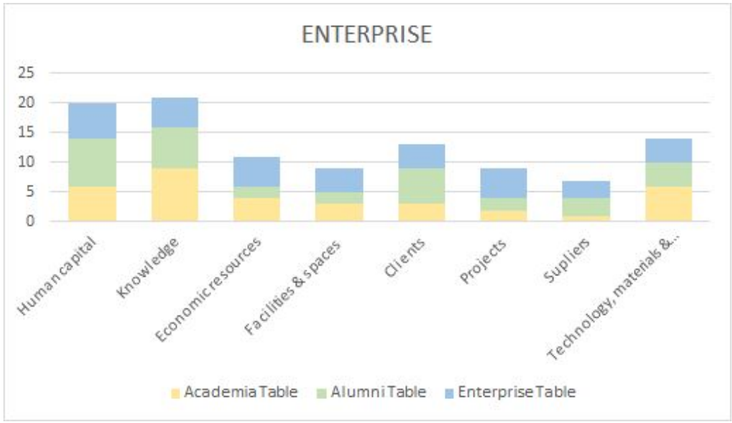
Part II: Identifying Relevant Resources from Key Actors

Results:

These graphics show the voting results of the three groups (Academia, Alumni & Enterprise) though all resource's tables. Furthermore, the total height of the bars offer a global overview of each group considering the different actors.







The most voted resources by Academia group were:

- **Human capital**
- **Knowledge**
- **Clients**
- **Economic resources / Tech., materials & tools**

The most voted resources by Alumni group were:

- **Human capital**
- **Knowledge**
- **Facilities & spaces**
- **Economic resources**

The most voted resources by Enterprise group were:

- **Knowledge**
- **Human capital**
- **Technology, materials & tools**
- **Clients**

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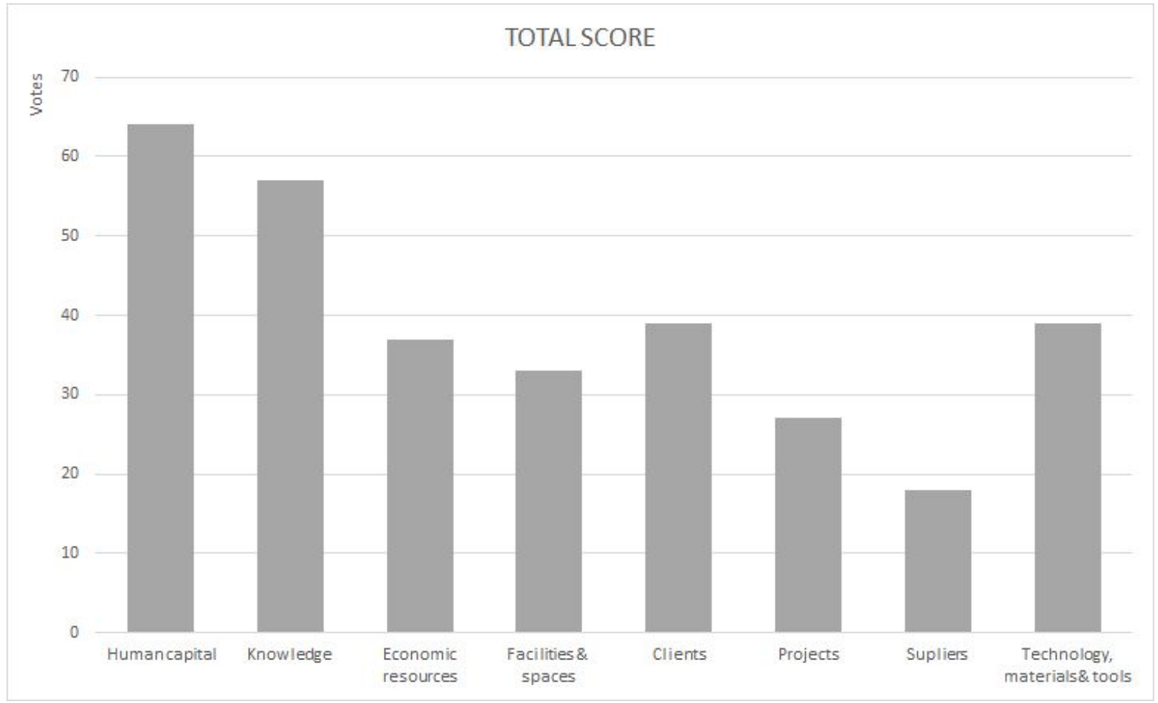
4. Workshop Dynamics

Part II: Identifying Relevant Resources from Key Actors

Results:



The total sum of the first group of three graphs and the second group is equal. This sum is showed in the graph and represents the most voted resources, regardless of who the votes come from.

The most voted Resources were:

- **Human capital**
- **Knowledge**
- **Clients**
- **Technology, materials & tools**

4. Workshop Dynamics

Part III: Round Table & Debate on Key Topics

Goal:

The **final exercise** of the workshop was a bit more uninhibited and contemplative, when compared to the first two heavily restricted dynamics. Every participant had a separate virtual workspace set up for them, where they were presented with **three guiding questions around three main topics: Emerging environments, *Sine qua non* Skills for designers, and Takeaways/Expectations** from their current and future involvement in the INTRIDE project.

4. Workshop Dynamics

Part III: Round Table & Debate on Key Topics

· *In your view, which emerging environments will be relevant, related to Product & Habitat Design practices?*

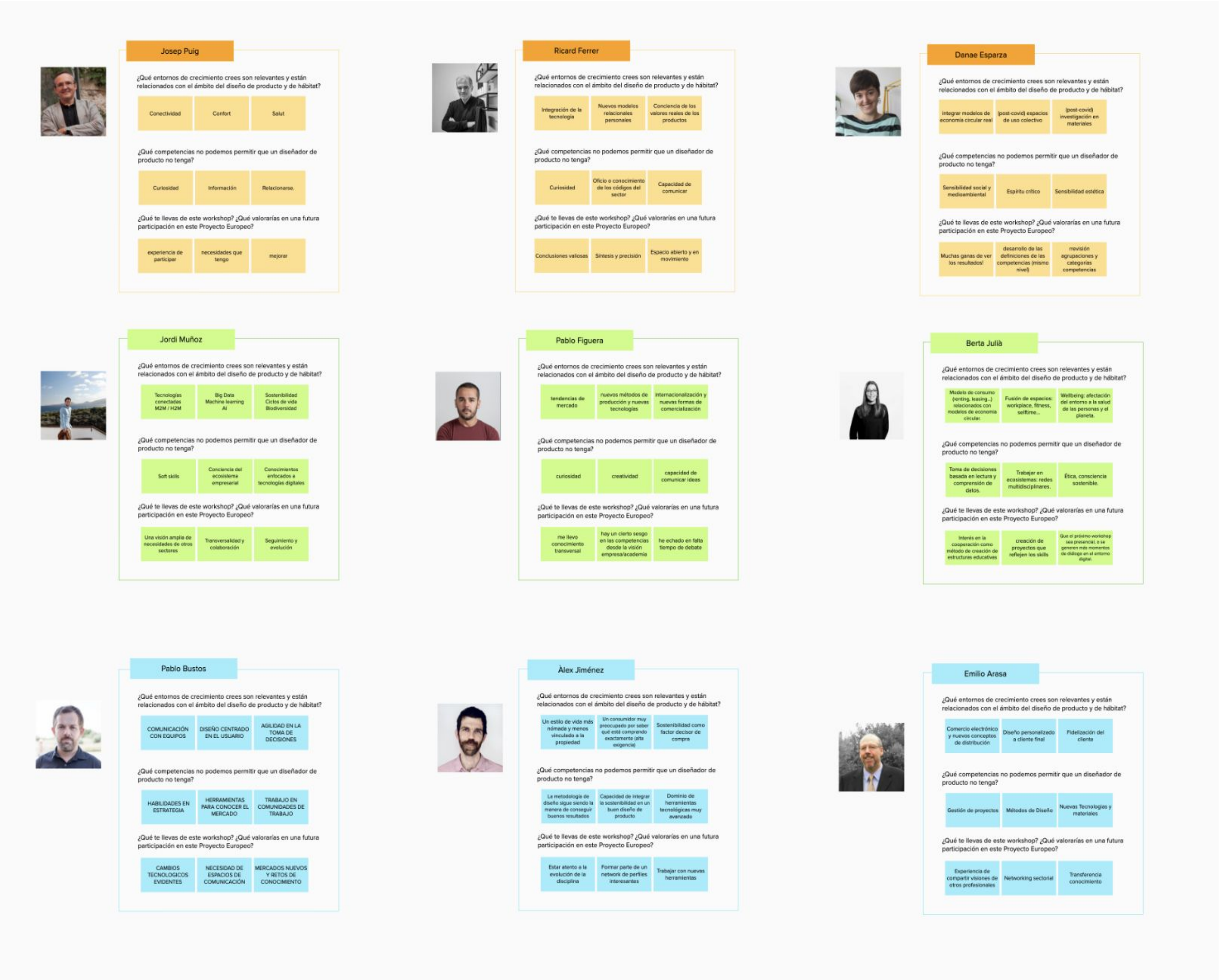
· *Which Skills do you believe we must not allow Product Designers to go without?*

· *What are your main takeaways from the Workshop? What would you value most in a future involvement with the INTRIDE Project?*

Output:

These topics were also set by a consensus from all National Partners. They were seen as **opportunities to expand on fields of interest** that were somewhat constrained on the original survey and that could further inform future approaches and possible declinations of the JMDP, while also alerting of certain biases.

After they had answered each question individually, they were prompted by the Coordinator to **elaborate on their answers, enabling them to explain their own point of view to all other participants.**
That, in turn, enabled us to further pick up on the nuances of the matter, by initiating a focused debate around their answers.



4. Workshop Dynamics

Part III: Round Table & Debate on Key Topics

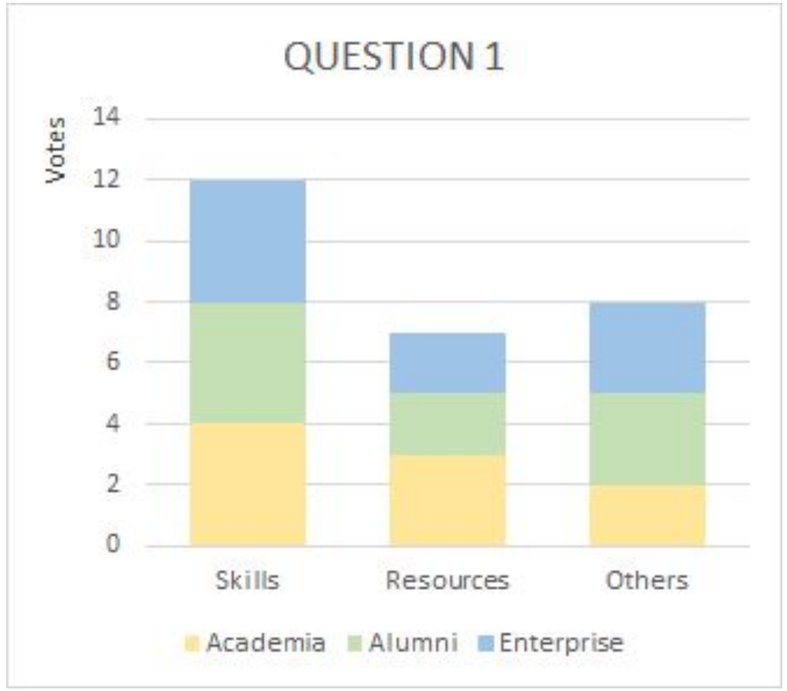
Results:

Question 1 - In your view, which emerging environments will be relevant, related to Product & Habitat Design practices?

The open answers are more prone to a subjective interpretation. For this reason they have been classified in three main groups: *Skills*, *Resources* and *Others*.

The graph related to Question 1 a balance distribution although there is an inclination towards *Skills*. The mentioned Skills in the answers were: Soft Skills (x3), Green Skills (x2), Digital Skills (x2), Design Skills (x1) and Other Skills (x4).

Those Skills that could not be classified in one of the five major proposed proposed(Design, Digital, Soft, Green and Technological) have been considered Other Skills.



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4. Workshop Dynamics

Part III: Round Table & Debate on Key Topics

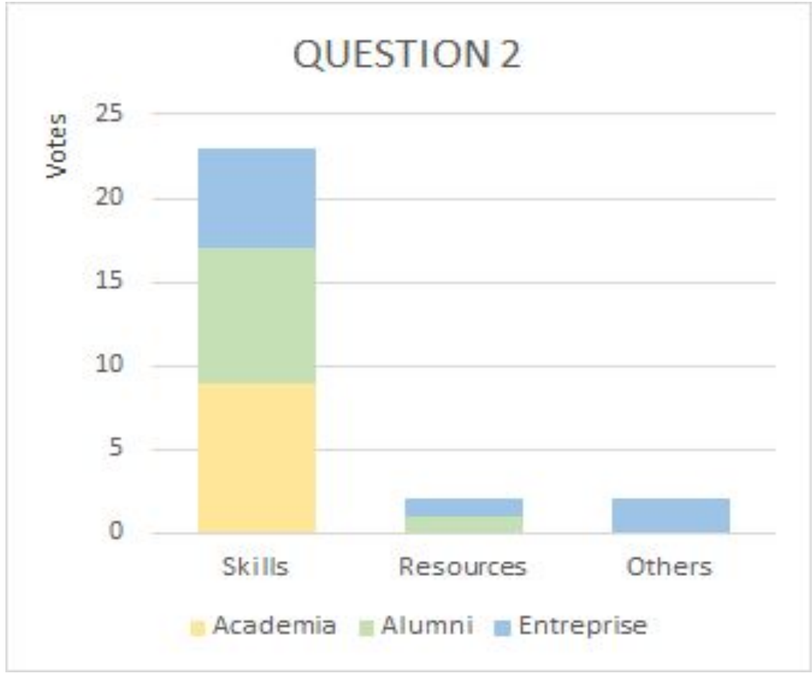
Results:

Question 2 -Which Skills do you believe we must not allow Product Designers to go without?

The open answers are more prone to a subjective interpretation. For this reason they have been classified in three main groups: *Skills*, *Resources* and *Others*.

In the graph related to Question 2 most of the answers were related to *Skills*: Design Skills (x8), Soft Skills (x7), Green Skills (x1), Digital Skills (x1), Technological Skills (x1) and Other Skills (x1). *Resources* and *Others* were mentioned approximately the same number of times: four and five times.

Those Skills that could not be classified in one of the five major proposed proposed(Design, Digital, Soft, Green and Technological) have been considered Other Skills.



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4. Workshop Dynamics

Part III: Round Table & Debate on Key Topics

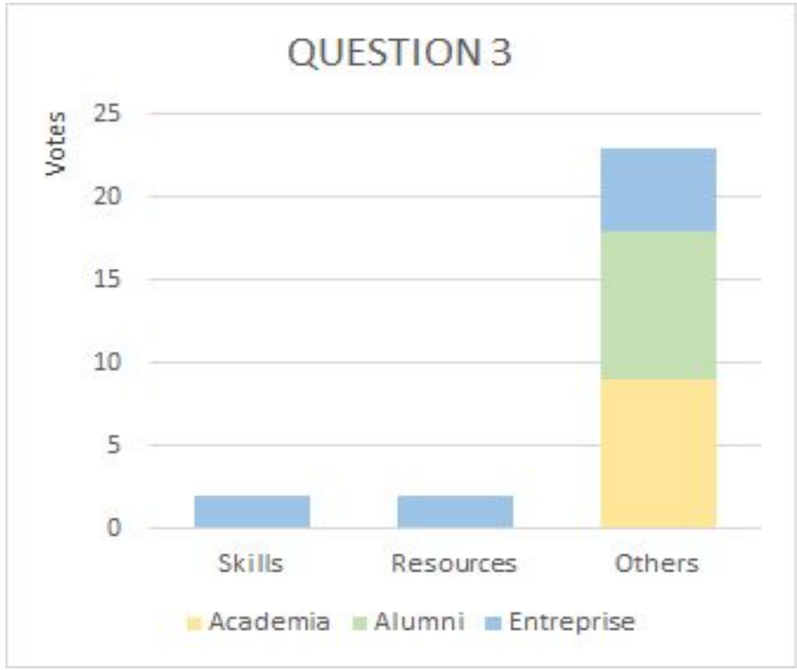
Results:

Question 3 - What are your main takeaways from the Workshop? What would you value most in a future involvement with the INTRIDE Project?

The open answers are more prone to a subjective interpretation. For this reason they have been classified in three main groups: *Skills*, *Resources* and *Others*.

The answers represented in the graph, related to Question 3, were mainly related with the topic *Others*. *Resources* only appears twice and *Skills* also twice: Technological Skills (x1) Other Skills (x2).

Those Skills that could not be classified in one of the five major proposed proposed(Design, Digital, Soft, Green and Technological) have been considered Other Skills.



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4. Workshop Dynamics

All of the participating parties showed **an avid interest in the INTRIDE project**, manifesting what they thought to be an interesting scope, and one of considerable beneficial results for all actors involved. Most notably, to stay connected with not only a national network of actors but also a European forum for **transversal dialogue** on the sector's needs, trends, developments, and continuous evolution.

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INTRIDE workshops

Highlights:

- ✔ The workshops validated the survey results
- ✔ There is a significant shift towards virtualization and digitization of all services (sales, post-sales assistance, …), therefore competences related to e-commerce, digital marketing, social media management will gain more attention
- ✔ Digital and technological competences will need to be managed together with soft skills (crisis management, creativity, teamwork) and project skills (aesthetic sensitivity, design methodologies)
- ✔ An ideal employee possess not just professional competences (technical, digital, design) but soft and green competencies as well
- ✔ Future market trends preceived by respondents are:
  - ✔ Digitalization and transition to online space of design, production, distribution and customer contact processes
  - ✔ Self-sufficiency and independence - the collapse of long supply chains – building closer or direct designer-producer-supplier-client relationships

INTRIDE workshops

Highlights:

- ✔ Future market trends preceived by respondents are (cont.):
  - ✔ Locality - using local materials, relying on local suppliers, reaching out to local customers - will play an increasingly important roleDigitalization,
  - ✔ Universal design - including not only social inclusion but also recycling, ecology, environmental neutrality, design, production economics will increase
  - ✔ Relations and ties - the economy will come closer to a pro-partner, not a pro-transaction model.
- ✔ High education institutions are partially prepared to deliver knowledge in the skills companies ask for, but are interested to respond the skills developments needs formulated by SMEs
- ✔ HEIs have a strong desire to create awareness towards companies regarding the importance of design in production and also, to gain opening towards new technologies, digitaization, virtual reality, etc.

INTRIDE workshops

Highlights:

- ✔ Participants at the workshops appreciated their inclusion in the INTRIDE proiect
- ✔ The companies and workshops' participants were consistent in defining the key skills they consider important and plan to develop in the future
- ✔ The workshops gave a better understanding of how SMEs, HEIs and business representatives perceive themselves collectively, and also how they perceive the two others
- ✔ Human capital, knowledge, clients and technology, materials & tolls were considered the most important resources
- ✔ The open answers are more prone to subjective interpretation
- ✔ All of the participants showed an interest in the INTRIDE project, they are intended to join the training program developed in the mainframe of the project and to be part in developing a structured cooperative framework between HEIs, cluster/business representatives and SMEs from the traditional manufacturing sector