

# How Do We Approach and Involve Companies in Design Fields? Lessons Learned from Surveys and Participative Workshops



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**Abstract** In the last few years, both materials and technologies are becoming one of the leading elements of product design practice as a lever to foster innovation and add value to final products. Despite the relevance of materials and technologies for advances in many fields, and particularly its importance to the success of the creative industries, there is a gap between the innovative design of products that meet the needs of the market and the research and development of new materials and technologies to be used in these products. The lack of collaboration between researchers and creative industries is at the heart of this issue (Innovamatnet, February 2013). Building on this ground the chapter shows the results of a survey submitted to more than one hundred companies in five different countries (Italy, Spain, Sweden, Finland, and Denmark). It was generated with the aim of collecting information regarding their specific interests and needs related to the four exemplified EM&T (ICS Materials, Nanomaterials, Advanced Growing Materials, Experimental Wood-based Materials) and the internal methods to manage knowledge related to them and the way they use to collaborate with academia and the channels they would prefer to use. The chapter also depicts the findings derived from a qualitative analysis done with academia and performed to identify their preferred channels to transfer knowledge. It finally describes the Company Manifesto, considered an engaging way to enhance and support the collaboration between Academia and the industrial sector.

## 1 Results of a Survey Submitted to More Than One Hundred Companies

In order to provide fundamental considerations regarding the current methods and tools used by companies as well as the existing relationships between research departments and enterprises that form part of the gap created between the academia and the industrial worlds, a study was developed to analyse and evaluate information

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regarding companies' specific interests and needs related to four EM&Ts, their methods and tools internally used by companies to manage of knowledge on that innovation area and to understand the ways they use to collaborate with academia, as well as the channels they would prefer to use. The study was carried out within the framework and under the umbrella of the objectives surrounding the Erasmus+ project DATEMATS "Knowledge & Technology Transfer of Emerging Materials & Technologies through a Design-Driven Approach", which goal was to create a transnational network among Universities, Research Centres and Organizations in contact with SMEs in order to develop and implement interdisciplinary new methods for both design and engineering students in the field of emerging materials and technologies, and to boost also knowledge and emerging material and technology transfers from academia and research centres to companies and vice versa.

The study elaboration embraced the collaboration of European Organizations of Industries involved in the definition and development of questionnaires addressing a total sample of more than one hundred companies in five different EU countries: Italy, Spain, Sweden, Finland, and Denmark.

The survey had a questionnaire format and referred to three main topics structured in three sections. The first section collected general company information: sector, size, departments, and business interests regarding the four EM&T areas.

The second section tackled the context of knowledge transfer within a business and industrial organization to identify internal methods to manage that knowledge: identifying skills needed, what tools they use to feed their knowledge and technology needs, methods followed, roles within the company to work on the EM&Ts areas, and previous projects implemented thereby. The third and last section approached the relationship between the company and the academia, including high education institutions, research and technological centres, and material libraries.

This last topic addressed issues such as the collaboration background of the respondent company with the academia to understand the ways they used to collaborate and the type of experiences, whether considered either negative or positive.

The study's main findings will be presented below according to each section and topic addressed. Firstly, EM&Ts' areas of interest according to company size and territory. Secondly, access to knowledge from the internal company's organization point of view. And thirdly, the relationship between companies and academia.

For what concerns EM&Ts' areas of interest according to company size and territory, wood-based EM&Ts are the most used or manufactured with 30%. Large companies are mostly not implementing them but are interested in applying them in the coming future. Italy is the country in which companies are mostly interested in wood-based EM&Ts. ICS wearable-based EM&T is the area where 53% of companies are interested in, though they don't implement it yet. SMEs are the most interested in using and/or manufacturing wearables, and Spain is where companies are the most interested in.

Advanced growing EM&Ts is the area which companies are the least interested in with 59%, and the company size is probably not a defining variable to explain the low interest in this area because that response about having no interest in was the most

answered in each category. According to territorial criteria, companies responding from Sweden and Finland were the most interested in this area.

Nanomaterials EM&Ts area represents the highest percentage, i.e. 67% of companies that manufacture and are interested in as well. Small and micro types of companies appear to be the most interested in applying nanomaterials EM&Ts in the coming future. Territorially, results showed a balance among all the four regions represented thereby.

Regarding access to knowledge and internal methods to manage it, more than 30% have a specific department to manage EM&Ts issues and less than 10% of the companies of the sample use to outsource the service, according to the results obtained. On the other hand, more than 10% of companies have no one assuming a role to conduct EM&Ts related activities and not even contract services to do so.

When asking about the channels used by the companies to get information about ongoing researches, updates, news, and trends on materials and technologies, the most common manner to stay closer to that knowledge is attending sector trade fairs while social media channels and newsletters are the least use for that purpose.

On the other side, technological centres are most popular when requesting technical information. Material libraries as well as their databases are the least consulted. To the question "Are you using specific methods or a structured methodology to find out and manage that information?", it was found that almost 80% of responses were negative. When approaching the gap between companies and academia, an important aspect is knowing the main difficulties a company may face searching for information regarding EM&Ts. As per the results, it happens to be the lack of time and the lack of material resources the two main reasons pointed out by companies.

Concerning the relationship between companies and academia, results showed that half of the companies collaborated with academia for product development and another 40% for projects in general. To the question "Has your company contributed with information, knowledge or know-how to academia for the last 5 years?", 60% of responses were positive, showing that more than a half of the sample had been open and active for collaboration with academia. Nearly one quarter said they had never collaborated with HEIs, research centres, and/or material libraries, the two main reasons highlighted were because academia seems remote and distant from the private sector and their fees are too expensive. However, for companies being in close contact with academia, results indicate that the most valuable reason for them to collaborate is they recognize it as a value to work with professionals with an extensive and profound knowledge in relation to the issues that they deal with.

When companies were questioned about their willingness to establish research projects with the university and deepen the potentialities of the EM&Ts, different realities were found. There are companies which present a long experience working together with universities. In these cases, it happens to exist an actual collaboration or past projects' references. Their conclusions in that regard are that universities and academia in general are seen as good partners for the research phase but are not considered competitive in terms of time and industrialization. On the other hand, they consider the fact that the output obtained from a research project with a university is not commercial, therefore the above-mentioned actually results unattractive

from a start-up's or small company's position. In the particular case that no collaboration is found, the context for that to happen is given by their business core and the consideration that interaction between users and emergent materials are essential starting points. For instance, they would be willing to collaborate if the new material was applied on their existing products to offer better features and an improved performance.

When addressing the issue about difficulties in accessing knowledge, companies focus on research-based papers and books, which are seen as guidelines applicable within a research lab that are very difficult to apply in an industrial environment. The difficulty is found when accessing academic knowledge either through scientific papers or hiring a highly qualified expert from academia to assess them in a specific area related to EM&Ts, because industry is basically practice-based when academia is mainly research-based.

Ultimately, the following conclusions came out from the Confederation of Danish Industry's; indeed it was difficult to have respondents from Danish companies giving their limited number so, a researcher from KEA made a fit on purpose interview to the Head of the Confederation.

Hereafter the main findings: Internships and collaboration between education entities and companies, integrating students in their projects, are crucial to improve the knowledge transfer activity.

Since large companies have R&D departments where developing their own knowledge, collaboration between design academia and industry through contests, or including business challenges in academic courses, are channels for knowledge transfer mainly in SMEs. In that context, there is actually an opportunity to cause a pull effect from companies by inspiring them and providing them inputs for new solutions and product ideas.

## **2 Results from a Qualitative Analysis Done with the Academia to Identify Their Preferred Channels to Transfer Results and Knowledge**

Considering the Agenda for the modernization of Europe's higher education systems released in 2014, it presents various priority areas for higher education institutions. Among those key-points the following action is highlighted: "Strengthening the triangle of knowledge formed by education, research and innovation". The European communication recommends, first, public policies to encourage partnerships between higher education institutions and businesses; and second, higher education institutions to use the results of research and innovation in their educational offer to stimulate the development of entrepreneurial, creative, and innovative skills.

To this end, a qualitative analysis was carried out was to analyse the protocols used by academia for their knowledge transfer related activities addressed to the industrial world.

From the above-mentioned context, universities are nowadays required to carry out what has been named the *third mission*, which means to deal with the practices of technology transfer, knowledge transfer, and research results promotion. Researchers and educational practitioners have to transfer their know-how not only to the students through the development of educational activities and training methods but also to the third beneficiaries, industries, associations, and the market in general for exploitation and commercialization.

Therefore, the analysis examines the actual academic approach to deploy the so-called *third mission*. In order that the analysis could be carried out, the European Organization of Industries involved in DATEMATS set out a questionnaire with a total of eighteen enquiries addressing different aspects to be responded by researchers and academia's professionals. The set of questions span from what term is used for explaining the research impact in terms of social, cultural, and economic development to a more specific focus on how the research results are transferred: methods, activities, channels, difficulties faced when transferring results to companies, strategies to start collaboration with the industry, resources that universities have and use to boost that collaboration, etc.

Eventually, it is offered an overview of best practices implemented in the different universities' departments approached by the study. It is shown the current practices applied to deal with some of the difficulties and barriers that arise when it comes to technology transfer, knowledge transfer, and research results promotion. Researchers and educational practitioners present a broad sample of good practices when collaborating with companies and business professionals, having actually a significant impact in what we previously referred to as the *Triangle of Knowledge*, linking education, research and innovation and consequently, reducing the gap between Universities and Industrial worlds.

In order to explain the impact of research in terms of social, cultural, and economic development, 52% of HEI's interviewed use interchangeably both terminology, knowledge transfer and technology transfer. Knowledge transfer (26%) is more commonly used than technology transfer (17%), and rarely other terminology is used. Design department is the only one that uses other terminologies to explain the impact of research, such as design culture, anthropocentric design, knowledge transfers, and exchange.

As for the methods, *academic paper* (32%) is the most used method by academia to transfer knowledge. Although this trend is seen in all areas of specialization, Design areas also use *books* to spread their research. Material areas regularly use *patents* jointly with *papers*. And in the Engineering areas it's remarkable the fact that they also show a relevant use of *patents*, but also others like setting up *start-ups* involving business professionals and elaborating *product samples* to get the company's interest. About activities performed by HEIs to transfer results, while the development of *practical applications* (36%) are the most common, other activities mentioned like *training courses*, *hackathons*, or *focus groups*, which are actually used by Design and Sustainability areas, should also be taken into consideration. In terms of dissemination channels, the most used are *conferences* (29%), especially in

Design and Engineering areas, followed by *social networks* (19%) and *newsletters* (16%).

The main troubles expressed by academic respondents when transferring their results are the differences on *time perception* including the fact that academia can't adapt to the time reduction companies demand (25%) and *finding companies* willing to go through a knowledge transfer process (23%), representing both of them almost half of the total answers. Regarding formulas to contact industry from academia and make the first contact, they mostly address companies by sending *research publications* (36%). However, academia expresses that actually this first contact is normally done by companies. The importance of time management from academia's point of view is revealed by the 41% answering that *time management* may affect the scope of the knowledge transfer process, and 38% of the sample's respondents answered to *adapt their time* periods to the company demands.

The importance of language when transferring research results is seen by the fact that almost half of the answers (49%) agree that academia adapts the results to a more understandable language, however, the other half of respondents (44%) consider that technical language is not a barrier for transferring knowledge to companies.

Lastly, addressing the fact that knowledge may be transferred into the company having an impact in the way company's target users consume and relate to the company's products or services, user's perspective is integrated in the process, however, that integration is mostly seen after a theoretical analysis about the user's perspective in that subject in particular (50%), it is less seen but also applied that users are involved personally in the knowledge transfer processes (38%).

### 3 Best Practices in Knowledge Transfer Methods

To foster a peer-to-peer learning, academia was approached regarding best practices when collaborating with companies and third parties from the industrial world: "*Could you describe a best practice regarding the collaboration with companies/third parties?*".

Most of them pointed out the following practices: showing economic benefit companies will have when collaborating with HEIs; responding to all companies' needs and priorities as for requirements, objectives, time frame, and knowledge improvement, according to the market demand; and applying collaborative research programmes funded by national and EU funding programmes. Nevertheless, there are other best practices mentioned that may contribute to shorten distance between HEIs and companies for knowledge transfer: setting up collaboration agreements between parties to run a research; specialized workshops for companies' improvement; establishing non-disclosure agreements with companies; collaboration with talent incubators which followed the students' projects' development bringing them to the market; the company sets a brief and frames a problem to work closely with students in the design process.

Given all the data and results obtained, a comparative analysis was provided in view of the context in companies regarding their access to new knowledge about emerging materials and technologies and how they manage and integrate them internally in their innovation and business strategies. This analysis has been implemented identifying weaknesses, challenges, and opportunities in terms of channels and methods used by both actors, academia, and companies, having problems and difficulties on both sides: when transferring research results and cutting-edge technology to companies and when these companies search for new information and need to deal with innovative applications.

Although analysis' reflections raised widely divergent issues between industrial and academic world, some relevant concurrent trends arise thereto. Below, the main weaknesses, challenges, and opportunities in that regard are explained.

Channels used by companies to access new knowledge, and innovative applications do not match with those popular channels in the academic sector. While social networks are the second channel most used by academia, companies that are not yet implementing EM&Ts, but are willing to do so, show that social media is the least used (5%).

The most used method in academia to transfer their knowledge is through academic papers and patents (53%), although companies don't feel familiar with scientific publications.

Two of the most used formulas to contact companies are sending scientific publications (36%) or a book resulting from the research activity (22%). Academia uses a much more theoretical method than the one demanded by companies with a more result oriented and commercial perspective.

Academia's results in general show a minor use of methods such as elaboration of product samples (14%) and development of start-ups involving business professionals (9%).

The academia's difficulties found when transferring innovative knowledge to industry—differences on time perception (25%), differences on interest and/or motivation (14%), the agreement regarding the problem formulation with the company (12%), and the language (11%)—could explain why companies still identify reasons for not collaborating.

The second trouble mostly expressed by academics when transferring their research results to companies is that they do not know how to find out companies willing to go through a knowledge transfer process (23%).

The companies' reasons for not collaborating are that they think collaboration itself seems complicated and academia is remote and distant from the private sector (40%); besides, companies don't realize how collaboration could help their businesses and think that there is no need to do so (26%).

Half of the academic respondents do not adapt their language because 44% do not think that technical language may be a barrier to transferring knowledge to companies. For only 2% of the respondents from academia language is always adapted to the target audience.

Companies find difficulties in accessing new knowledge from academia, resulting in the second main barrier to adopt innovative technology, it is expressed as the

information is hard to find (23%) plus they find restricted access to that information (14%).

Within the top three channels most commonly used by companies to get new information on EM&Ts are sector trade fairs and conferences. In this scenario we find that conferences are also considered as one of the channels mostly used by academia. Nonetheless, conferences for academia may differ from those addressed to companies. Therefore, an opportunity arises for academia to be more present in trade fairs and conferences, not only the scientific ones, but also those approaching the industrial sector.

From companies' perspective, curricular education is seen as an effective way to transfer innovative knowledge to students who will become part of companies; in the current context, academic references are mostly applied during the research phase but not in the product development, collaboration may only be seen as convenient if it leads to a commercial product.

A few academic respondents approached the industrial focus when answering how they use to transfer their research results, for example, they share research results during their classes to students or during professional courses to companies; they elaborate product samples, prototypes, technical briefs, and similar to provide companies the knowledge to improve and optimize their products, services, and processes, also collaborating directly with them to develop new products; and one case expressed to have an observatory for knowledge transfer.

Considering the activities that academia performs to transfer their knowledge to companies, up to 75% of cases involve companies and practical applications, for instance, 36% develop practical applications with or without companies, 21% develop case studies, and 21% implement workshops addressed to companies.

Although language is not expressed as a relevant difficulty by companies (5%), there is a clear link between the channel used to transfer knowledge and the kind of language adopted. *Papers and patents* (53%) as methods the most used by academia, and academic *conferences* (29%) as the most used channel, it seems that scientific and technical are the predominant languages, and obviously they don't need to be adapted in those cases. However, when *sector trade fairs* and *internet search* are identified as the two main channels for companies to access to new knowledge, academia should consider it to necessarily adapt their scientific and technical language to the final target, the survey's results show an only 2% of HEIs who specifically do so, albeit they also show that a 49% adapt their results to a more understandable language.

By defining channels and the language accordingly for knowledge transfers to the industrial world, academia has a real chance to overcome those problems found by companies when searching EM&Ts information—information is hard to find (23%) and there is restricted access to that information (14%)—as well as proving that academia is not remote and distant, so making collaboration evident and simple.



## 4 Conclusions

Transferring knowledge from academia to companies has become a key issue to improve the competitiveness of the countries' economies. In this regard, universities are recognized to have both missions, education, and research. All the same, they are required to deal with knowledge transfer and research results promotion, in other words, to develop what has been called the third mission. In that regard, universities have been considered a driver for social and economic development.

Consequently, the research community has to spread its knowledge and know-how not only to the students but also to the third beneficiaries such as companies, industrial professionals, and associations, aiming at commercially exploiting the research from academia to have an impact on market activity and on society. Hence, they contribute to the link between education, research, and innovation. In that context, knowledge transfer effectiveness is crucial. In this regard, below, relevant outcomes and reflections are explained based on the results obtained from the survey conducted among the Universities involved in the DATEMATS project, and the comparative analysis carried out with these results and those obtained from the survey and several interviews conducted with private sector representatives.

In the above-mentioned context, channels, methods, and activities to get in touch and to collaborate with companies must be taken as a crucial matter because, at the present, companies find two main barriers to adopt innovative technology: it is considered an expensive investment, and they do not have knowledge to implement it. They find difficulties in accessing new knowledge from academia expressing that the information is hard to find and there is restricted access to that information. Besides that, companies still identify reasons for not collaborating with academia, pointing to their thoughts about collaboration being complicated; academia seems remote and distant from the private sector; and they don't know how collaboration could help their businesses realizing that there is no need to do so.

In relation to the mentioned topic, academia finds difficulties when transferring innovative knowledge to industry in differences on time perception, differences on interest and motivation, the agreement regarding the problem formulation with the company, and the language. And the second trouble mostly expressed by academics when transferring their research results to companies is that they do not know how to reach companies which want to collaborate and run a knowledge transfer process.

Considering these facts above-mentioned, academia can approach those challenges to conduct their goal thereby and to overcome the problems found by companies as well as defeat those reasons for not collaborating with academia by adopting considerations that are exposed below:

- Keep in mind that there is a clear link between the channel used to transfer knowledge and the kind of language adopted. Since sector trade fairs and internet search are identified as main channels for companies to get new knowledge, academia should consider it to go beyond the adaptation to a more understandable language, and instead, expressly adapt their technical language to the final target.

- Industrial focus when defining how to transfer their research results, for example, elaborating product samples, prototypes, technical briefs, and similar to provide companies the knowledge to improve and optimize their products, services, and processes.
- Bearing in mind, as a strength, the activities that academia currently perform when transferring their knowledge to companies, since they already involve companies and practical applications, developing case studies and conducting workshops addressed to companies.
- Different solutions are suggested by HEIs to face the problems identified when transferring their knowledge. These solutions focus on the creation of common environments, where both academia and companies can share, exchange, and align activities, creating a peer-to-peer or a mutual win–win situation. Eventually, the goal is to promote mutual understanding and build bridges of communication and knowledge exchange between academia and industry. So that to be a reality, regular activities involving companies like training courses, workshops, hackathons, or focus groups, should be encouraged and carried out by HEIs, conceived as areas for: exchanging knowledge from academia to companies through training activities; a more straightforward communication, aligning languages; co-creating and setting up joint projects with common interests.

It is shown that these criteria, already used by HEIs' Design and Sustainability areas, would help to create an effective collaboration and guide companies in their innovation processes. Since design facilitates a user centred approach and helps the assimilation of new technology in the market, using *design thinking* methodologies in different dynamics of the workshop would be useful to achieve common interests of academia and companies.

At the present time, scientific publications—*papers*—arise as the most common method used by academia to transfer their results, and the industry expresses not to be familiar with it. Neither *patent* make companies learn about new findings. It is crucial to find **successful protocols in which companies could see contribution and benefits for their businesses**, for example, showing best practices of collaboration between companies and academia when developing innovation; having academic profiles in companies and vice versa, attracting research profiles with experience in the business world. In that regard, both industrial and academic spheres must **work together to establish common spaces, environments, and channels for a fluid and permanent exchange of interests and motivations**, like participation in trade fairs and conferences, collaborative projects development, generating both mutual confidence and participative workspaces to boost long-term relationships. Much likely, these scenarios would contribute to a more fluent and better bi-directional communication, aligning companies' demands with academia research and knowledge context, resources, and timings.

## **5 Company Manifesto: An Engaging Way to Enhance and Support the Collaboration Between Academia and the Industrial Sector**

A Company Manifesto was presented to involve the industry and the business sector in a transnational network because of the project activities and therefore to contribute, to create, and strengthen a cross-field multiplier network.

The development for the setup of the manifesto document and this to be presented to companies including its format and the process followed to engage them, not only in a way they would sign up the manifesto but also how to make them part of the above-mentioned network.

The goal of the initiative was to create a transnational network among universities, research centres, innovation and design institutions, and companies to develop and implement interdisciplinary and transdisciplinary methods for education and training on EM&Ts. The objective thereby is to share approaches, knowledge, and needs among individuals coming from either the academia or the industry world, for further collaborations and to keep alive the connection after the end of the project.

### ***5.1 Format Identification and Implementation***

The manifesto was set up to be an agreement and a statement of intent by companies to keep updated about the project results, also to be part of a network formed by different kinds of research centres and enterprises and be involved in future activities related to the topic. The Manifesto description needed to be concise, precise, and straightforward to the issue. It was agreed that it wouldn't appear as a signing a legal document but to be an action to confirm companies' commitment in being part of a network to share information and participate in knowledge transfer related activities.

The format chosen to develop the Manifesto initiative was to subscribe to an online form through which to join the DATEMATS Companies Manifesto. The form included companies profile identification and specific statements for companies to give their consent and show their interest in participating in future project's activities and receive project related results. Below, the relevant sections and statements of the online form:

Type of company: Material Manufacturer, Potential Material Manufacturer, End-user of Materials, or Potential user of Materials.

Area of EM&Ts most interested in: Interactive Connected Smart (ICS) Materials: wearables, Nanomaterials, Wood-based Materials, Advanced Growing Materials.

*"I am interested in Emerging Materials and Technologies knowledge and transfers with a design driven approach"* with two given options: Yes or No.

*"I am interested in being part of interdisciplinary workshops with other companies and students to test and assess new knowledge transfer methods"* with two given options: Yes or No.

*“I want to receive project results as well as being part of the above referred transnational network to be connected after the end of the project”* with two given options: Yes or No.

Considering the information gathered from the Manifesto form, the interest of the companies involved is very transversal, most of the companies selected the three or all of the EM&Ts’ areas. All of the Manifesto form respondents expressed a yes in the above three statements.

The companies’ Manifesto was uploaded in one section of the DATEMATS website as a list of companies with their names, logos, and links to their organization websites as a tangible result to show. Therefore, one part of the action of joining the manifesto was also the consent to appear on the project’s website.

The initiative reached 57 companies resulting in a number above the 30 expected to sign the Manifesto. So considering the Manifesto description, these companies and industry professionals have become part of a network with access to the project’s outcomes, which involved a series of activities and publications addressing companies and professionals such as exhibitions and events, knowledge transfer days, final international conference, training guidelines in the field of EM&T, training workshops directed to managers, companies and students, and entrepreneurship workshops for EM&Ts related start-ups. As a result, it allows to develop new guidelines and approaches to technology, transfer knowledge from academia to industries, and to create new professional competences and entrepreneurial skills in young students.

## ***5.2 Implications of the Manifesto’s Results During the Project Implementation and Beyond***

The Manifesto initiative had a direct impact on other tasks and goals of the DATEMATS project. For example, the interdisciplinary EMT&s challenges were conceived as four experimental workshops, each one of them focusing on one of the four specific EM&Ts’ areas. All the workshops needed to involve companies, which were selected from those that signed the Manifesto and therefore they became part of the transnational network which one of its goals was to develop interdisciplinary methods for education and training on EM&Ts. When selecting companies to be part of the interdisciplinary workshops, it was agreed to select companies according to their experience instead of their interest, meaning that a company that is interested in an EM&T area has not necessarily experience in that area. Companies that already have experience in specific EM&Ts can provide materials and knowledge that students can use to prototype and design. It is not necessary that selected companies be the manufacturer of that EM&T, but that show expertise and application experiences. Therefore, an analysis was done by HEIs to the companies signing the Manifesto to identify their experience and expertise in the specific areas of EM&Ts. The HEIs contacted companies that were classified as interested in their

EM&Ts' area of specialization to start defining a design briefing and a challenge to be presented to students during the foreseen workshops.

As a result, the above-mentioned actions represented a first step to start building links and connecting the industry world with the academia and their students, so the ultimate consequence of the Manifesto initiative is that all the companies and academia being part of this network will have the means to share approach, knowledge, and needs for further collaborations and to keep alive the connection after the end of the project.

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