Transitioning From University to Work in Service Design

Insights From the Product-Service System Design Tour Format Development

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The last decades have been of significant growth for the Service Design discipline. For supporting students in understanding the multifaceted profile of the Service Designer, academia needs to reflect on how this evolution affects the educational setting as Service Design methods are now applied in different contexts to face complex societal and business challenges. This paper explores how university-industry collaboration in extracurricular activities might support students in understanding the role of the Service Designer in practice. An extracurricular activity in the format of a digital event—the PSSD Tour—addresses this inquiry by involving companies and students in conversations to explore the different applications of Service Design methods in industry projects. After three co-design sessions with stakeholders trigger the development of the PSSD Tour format, three iterative tour tests with companies help experiment and evolve the format.

Keywords: service design; product-service system design; design education; university-industry collaboration; didactic innovation

Design Changes Affect the (Service) Designer's Role

The past 50 years have seen a change in how the role of design is perceived by business and society, recognizing it as an effective way of thinking, working, and solving problems (Voûte, Stappers, Giaccardi, Mooij, & Boeijen, 2020). This approach to design has enlarged the complexity of the challenges designers face (Sangiorgi, 2009), as the object of design transforms into a process aimed at achieving results, where "design no longer 'designs something' but rather 'designs for something' or to get something to happen" (Manzini, 2016, p. 3).

In this context, it is inevitable that the people who design change as well, moving from product-centered thinking and doing towards centering in the interactions of people, things, and places (Manzini, 2016). However, when designers start to shape these interactions, determining their identity is difficult (Meroni & Sangiorgi, 2016), since they adopt roles that go far beyond offering their creativity to perform a given task or designing a pleasant experience for an individual (Voûte et al., 2020), but to work to solve performance, systemic, contextual, and global challenges (Meyer & Norman, 2020).

To effectively tackle these challenges, Service Designers use a wide range of competencies and skills in their work, from the capabilities to empathise with others and initiate and facilitate participatory co-creation processes to the ability to envision possibilities for the future (Morelli, De Götzen & Simeone, 2021). Moreover, Service Designers apply these skills to developing numerous projects through different methods, working at different levels, from the operational to the strategic, and with different aims, like improving a service or starting organizational transformations (Morelli, De Götzen & Simeone, 2021; Meroni & Sangiorgi, 2016).

Finally, as design continues to expand its requirements and opportunities, new ways of working arise: designers' work patterns now vary, as jobs have evolved from lifelong employment in a company to a succession of jobs (Voûte et al., 2020) and from working in a physical studio in one location to working with geographically dispersed teams, employed by different firms or hired temporarily (Meyer & Norman, 2020). In this setting, scholars highlight the importance of preparing students for life-long learning to respond to rapid

developments in the field and draw a scenario in which design education reformulates to integrate other disciplines (Broadbent & Cross, 2003; Meyer & Norman, 2020; Frascara, 2020) while preparing students to be proactive, socially responsible, and culturally aware (Broadbent & Cross, 2003; Frascara, 2020). In this future scenario, Broadbent and Cross (2003) argue, technological developments will play a key role in shaping design education.

This transformation, however, might be hard to implement, as it not only confronts universities with the challenge of changing their processes but their mindsets (Norman, 2011; Calabretta, De Lille & Beck, 2016). Moreover, these institutions might lack the competencies to see these changes through (Oliva & Kallenberg, 2003), while organizational culture and employee behavior can undermine the effort to launch and develop these transformational processes (Calabretta et al., 2016).

While these and other issues might hinder curriculum changes, how can universities create efforts to prepare students to understand how Service Design is realized in different circumstances while bringing them closer to the industry where they will develop? Within this context, this paper aims to understand if universities can enhance the exchange of Service Design knowledge between companies and students. Would this interaction help clarify the role of a Service Designer in a specific setting?

This paper comprises four chapters. The first problematizes the research area by providing the theoretical background that drives the development of the Product Service System Design Tour format (later defined as PSSD tour): a digital extracurricular activity that involves companies and students in conversations to explore the different applications of Service Design methods in industry projects. The second chapter briefly illustrates how and why universities and industries collaborate, focusing on the context where the activity was tested and iterated. The third chapter details the development and testing of the format while presenting and discussing results. Finally, the last chapter concludes and addresses opportunities and limitations.

The Necessary Bridge Between Academy and Practice

Collaborating with industry

As academia and industry face new pressures and respond to environmental uncertainty, their efforts to enhance innovation through mutual collaboration have increased (Ankrah & Al-Tabbaa, 2015). This exchange aims to create mutual value over time by enabling the diffusion of knowledge, technology, and people (Ankrah & Al-Tabbaa, 2015) and has provided mechanisms that can change how educational institutions approach problems (Slater & Ravid, 2013).

For academia, this collaboration helps fulfil the need to graduate immediately employable students, serves as a source to foster new knowledge, and a means to confront rising costs and decreased funding (Meyer & Norman, 2020). Finally, it serves as training by exposing students to practical problems, new ideas, and technology, while it can also provide them with employment opportunities (Ankrah & Al-Tabbaa, 2015).

For companies, this exchange is an approach to keep up with market changes, to differentiate themselves from their competitors, and to increase their revenues. Organizations are also motivated to enter these relationships as a means of professional training and development, for facilitating internship and hiring processes, and to carry on parallel research and development processes to complement their traditional internal ones (Ankrah & Al-Tabbaa, 2015).

These collaborations are shaped by organizational realities, meaning that the issues that might hinder curricula development in universities might also inhibit these types of operations. They also change depending on the involvement of both parties and the type of agreement (Ankrah & Al-Tabbaa, 2015). Finally, before collaborating, both partners should understand that working together will be more advantageous than working apart and should articulate an exchange that furthers each other's goals (Slater & Ravid, 2013).

The case of Product Service System Design (PSSD)

The Master of Science course of Product-Service System Design (M.Sc. of PSSD) is a two-year post-graduate program at Politecnico di Milano. The program relies on industry collaboration to refine and adjust its educational offer by collecting inputs, opportunities, and feedback from the job context.

The M.Sc. in PSSD course has launched several industry collaborations to improve the training program, such as joint and individual lectures and joint supervision of the Master thesis and by creating the PSSD Advisory Board, a group composed of a community of professionals, civil servants, and adjunct and structured professors connected to the course.

In 2016, the Directions of the course and the School of Design launched this last initiative with two goals. First, to create a community of interest around the course that would support the teaching staff in defining the

profile of the graduate student and the training the program provides by obtaining inputs and feedback from the job context. Second, to open a space to jointly develop and promote new academic and professional opportunities for students.

During the second Advisory Board meeting (ABM), held in 2018, the stakeholders explored the strengths and weaknesses of the course while defining the most important skills PSSD alumni must have. Here, the need for integrating life-long learning into the curriculum was also highlighted, as students need to be prepared to continue learning while on the job. Finally, this meeting helped open conversations about how to develop new collaborations between the course and the design sector, with the suggestion to implement moments outside of the curriculum for students to share with industry members, and that would inspire them to reflect on their future career.

The third ABM, held in 2019, focused on facilitating the entrance of alumni to the workplace. Here, the idea of enlarging and strengthening the course's alumni network to create new collaborations and opportunities was introduced as an issue, since many studios hire new employees through referrals. When discussing how to achieve this goal, the board proposed the cultivation of contacts as part of a possible solution.

The links the M.Sc. in PSSD course has developed with industry have shaped the program, as industry members are currently involved in student training and mentoring. However, the development of the Advisory Board and its yearly meetings have also shed light on how the course can provide new learning moments and links with industry for students without having to intervene with the curriculum, providing a more flexible space for experimentation and iteration.

Designing a Format to Foster Collaboration

Research through design

The literature of Design Research (Dorst, 2008) in education (Bakker, 2018) informed the theoretical background for the methodology of this paper. Research through Design (Zimmerman et al., 2010) and Educational Design Research (McKenney & Reeves, 2014) are both approaches centering on developing a theoretical understanding through the design and implementation of practical interventions.

The Research through Design process followed by this paper shapes the PSSD tour. This digital extracurricular activity serves as both an informative and formative action by aiming to understand how Service Design practices are put in place by companies while helping the participating students understand the nuances of the Service Designer role in different contexts.

The format development started with a co-design session involving companies during the 2020 ABM, followed by a series of co-design sessions, surveys, and interviews with M.Sc. in PSSD students and alumni held virtually with a digital whiteboard. These and other research activities resulted in the design principles for building and refining the initiative. The initiative was then tested by carrying tours with three different companies. Here, direct observation of participant interactions during the experiences and feedback collection resulted in further insights.

The Covid-19 pandemic pushed the PSSD Tour format into the digital world, which brought opportunities and limitations discussed in the conclusion of this document. However, the name of "tour" was kept since the concept behind the activity continues to be, metaphorically, exploring a company.

Co-designing with stakeholders

To kick-start a dialogue about how Politecnico di Milano and companies could work together to create extracurricular experiences for knowledge diffusion that bring together students and industry, three co-design sessions were developed. The PSSD Advisory Board was involved in the first session, while M.Sc. in PSSD students and alumni participated in the following two. During these activities, the stakeholders would expand and assess the Design Tour, an idea based on previous learnings devised to drive forward concept creation.

The co-design session with the Advisory Board members took place during the yearly ABM in February 2020, intending to inspire the stakeholders to challenge the conventions of their current relationship with the course and envision new collaborations while generating concrete ideas considering feasibility. Guided by five facilitators and with the help of a board and a set of cards (Figure 1), 26 faculty and industry members participated in the activity, where they tackled the challenge of creating their Design Tour.

The student sessions, on the other hand, centered on the value the tours could provide. Guided by a facilitator and through Google Hangouts and Miro—an online collaborative whiteboard platform for distributed teams, the students created their Design Tour by playing a game that required them to answer five questions as a group. In real-time, the participants could view and edit the game board with colored post-its in Miro (Figure 2) while discussing the process and results through a conference call in Hangouts.

Regarding value, the discussion led towards the experience becoming a learning opportunity for all participants. Students viewed the Tour as an opportunity to widen their understanding of the Service Designer role and learn how company culture molds project development while recognizing the capabilities they need to reinforce to work in a specific context. In the case of the companies, to receive feedback, to easily connect with future collaborators, and as an approach to understanding how Service Design profiles evolve in terms of methodologies, tools, and interests. These considerations resulted in stakeholders suggesting a student pre-selection process to enrich the experience.
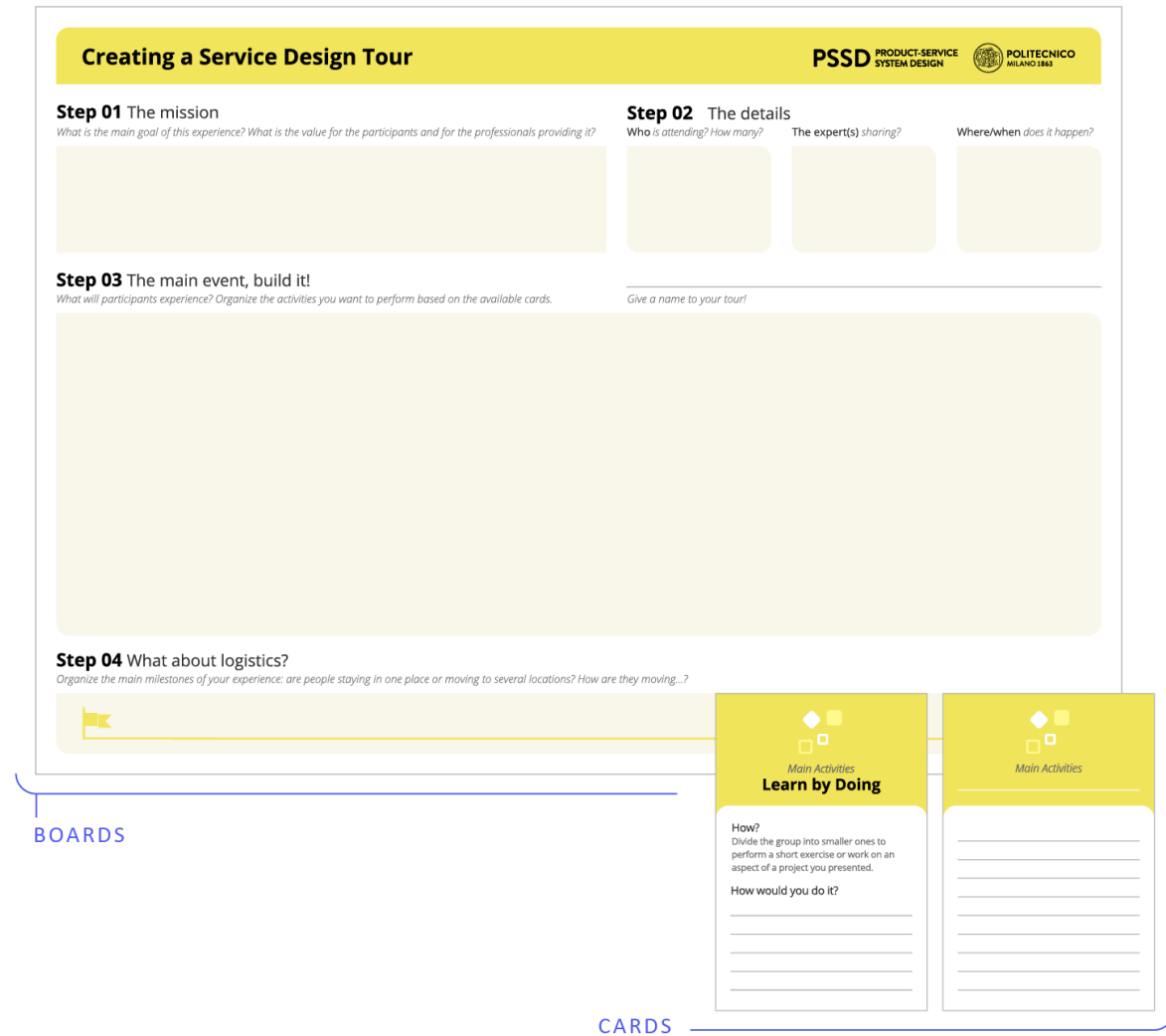

Figure 1. Materials used in the ABM co-design activity

For industry, feasibility related to Tour structure and participant numbers. All groups expressed their desire to interact with students based on a less is more approach to generate valuable connections and ease activity management while highlighting that Tour structure should allow topic exploration without consuming many resources.
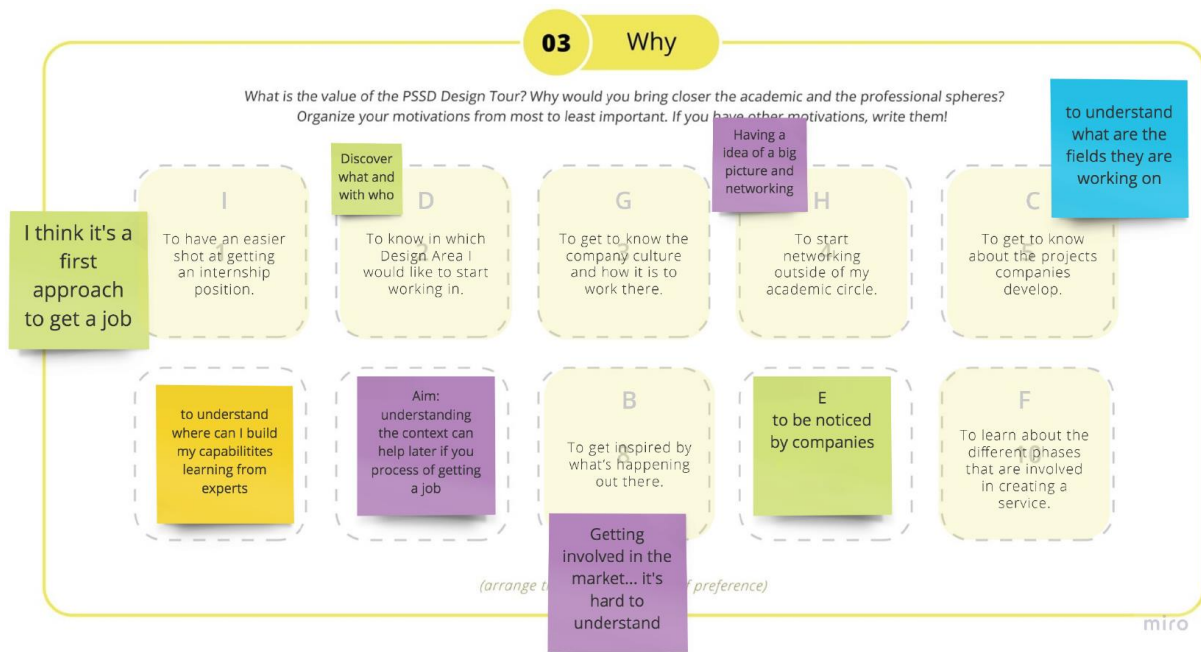
Figure 2. Detail of the filled game board from the second student co-design activity in the Miro platform

When addressing activity formats, participants drew attention to digital interactions and how they could cater to more students and help expose them to diverse environments and design approaches while easing management and preparation. Students also highlighted the need for an active environment where social interaction is part of the dynamic.

Finally, all participants saw facilitating internship processes as a desirable outcome of the Tour and not the driving force. Moreover, students envisioned it as a space for learning and inspiration, prioritizing Tour content over format.

The evolution of the PSSD tour format

As a result of the co-creation process and following synthesis and concept validation, we proposed a new extracurricular activity involving companies to validate and test the assumption introduced in Chapter 1 of this paper. We named it the Product-Service System Design Tour (PSSD tour). This extracurricular university-industry collaboration aims to spotlight different approaches to doing Service Design, helping students understand how their role evolves depending on context and the competencies they require to work in specific environments.

After defining the concept to develop, a logic model detailed how the project would achieve these goals starting from its activities and helped define the people, materials, and resources needed to create the Tour's components (Figure 3).

We then built the activity around three main stages and the tour event around five moments cemented by the co-design sessions (Figure 4). The phases regard the activities developed before, during, and after each event. Before the tour, the facilitators would select the company partners and hold individual meetings to share the tour creation guidelines. With the guidelines, the companies would create the events while the facilitators populated the tour's informational website for students, which they would use to apply to the program. After the submission period, the facilitators would select the students. And finally, the tours would be held and evaluated by all participants.

While on tour (see *Second Phase* in Figure 4), and after the event introduction, the students would take over with an ice-breaking activity. The company team would then share the processes they follow to develop and deliver projects and finally open the floor to engage in conversations before the tour closing. These moments aimed to alternate the direction of the interactions, first by contextualizing the experience into the course path with the introduction and the conclusion and then developing two interactions that place students at the center, likewise with company partners.

We created the five moments comprising the tour events to minimize the passivity of low engagement by nudging attendees into taking participatory action in the experience while providing quality contact to spark as many moments of interactions between participants. The communication and format's goal was to create an informal atmosphere that would support the organic growth of participant interactions.
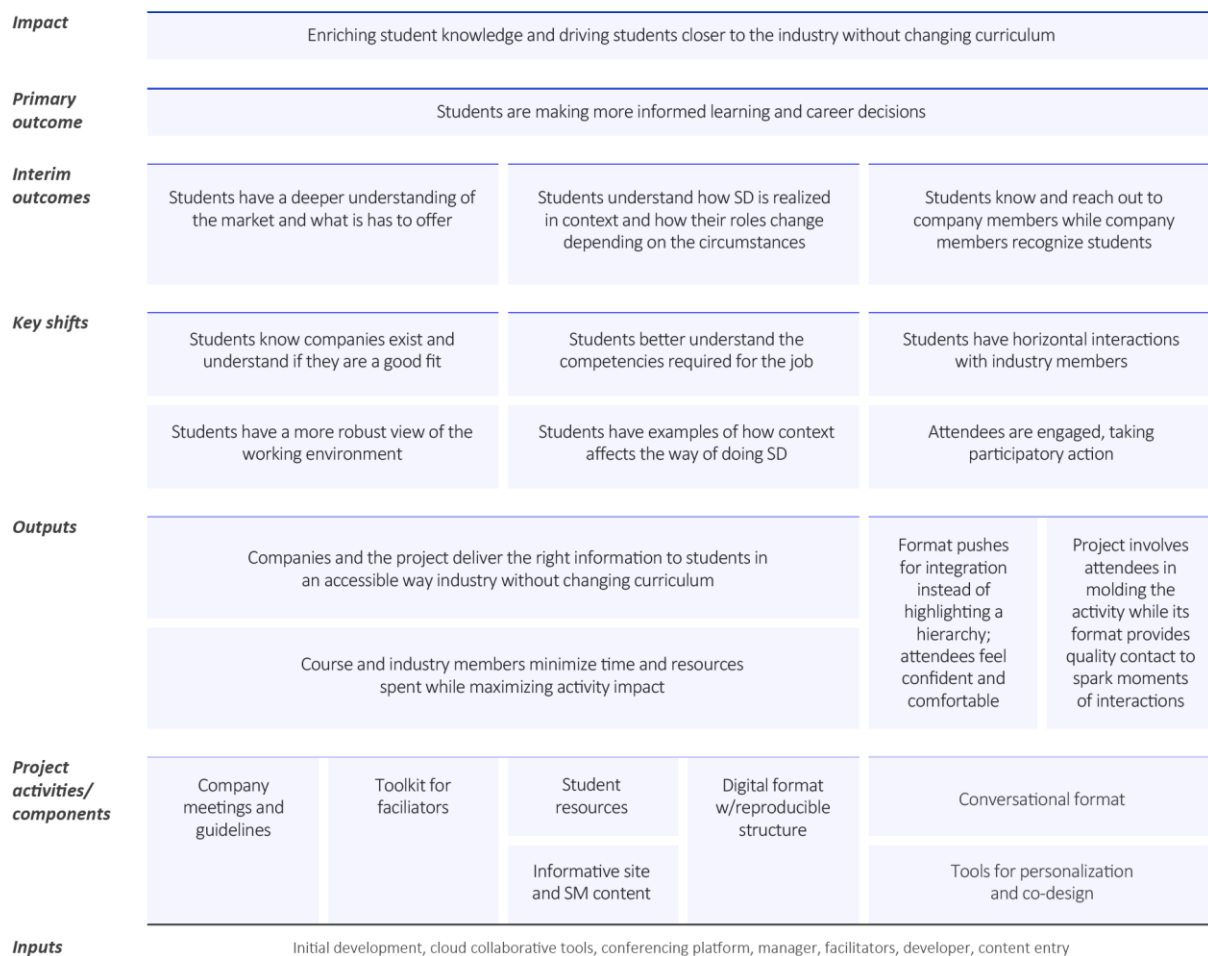
Impact	Enriching student knowledge and driving students closer to the industry without changing curriculum			
Primary outcome	Students are making more informed learning and career decisions			
Interim outcomes	Students have a deeper understanding of the market and what is has to offer	Students understand how SD is realized in context and how their roles change depending on the circumstances	Students know and reach out to company members while company members recognize students	
Key shifts	Students know companies exist and understand if they are a good fit	Students better understand the competencies required for the job	Students have horizontal interactions with industry members	
	Students have a more robust view of the working environment	Students have examples of how context affects the way of doing SD	Attendees are engaged, taking participatory action	
Outputs	Companies and the project deliver the right information to students in an accessible way industry without changing curriculum		Format pushes for integration instead of highlighting a hierarchy; attendees feel confident and comfortable	Project involves attendees in molding the activity while its format provides quality contact to spark moments of interactions
	Course and industry members minimize time and resources spent while maximizing activity impact			
Project activities/ components	Company meetings and guidelines	Toolkit for faciliators	Student resources	Digital format w/reproducible structure
			Informative site and SM content	Conversational format
				Tools for personalization and co-design
Inputs	Initial development, cloud collaborative tools, conferencing platform, manager, facilitators, developer, content entry			

Figure 3. The PSSD Tour's logic model

Three tour tests with companies linked to the Advisory Board (Experientia, Tangity, and H-Farm) helped assess the program components to understand if the tour could achieve the final impact (Figure 3). Two tour facilitators managed each test, which involved around 20 students and 3-4 company members. The learnings from the first two tests informed the final concept and helped create a second tour structure centered on cyclical sharing of information (Figure 5), tested with H-Farm.

The first two tests confirmed interest from all stakeholders, highlighted the value of developing the tours in the digital format, and confirmed participant numbers. They also determined the effectiveness of the touchpoints while underlining the best-suited conferencing tool to deliver the activity. Finally, these two experiences proved temporary staff can handle facilitation and management if they access clear guides. As a result, the materials we created for these two pilots served as the base for a facilitator toolkit for future development.

The issues that arose from these first experiences stemmed from tour structure (see *Second Phase* in Figure 4) and communications. The experiences were pleasant for students but failed to deliver on all of the objectives set. Due to resource-related constraints, companies leaned towards sharing the content they already had, leaving out topics. Discussions at the end of the tour left students saturated with information and created a conference-type atmosphere that did not push for integration. Finally, since communications promoted the experience as an opportunity to build the students' networks but never expanded how this would happen, there was a generalized understanding that these networking opportunities would happen regardless of student engagement and participation. These last two elements combined pushed students to become passive participants instead of viewing the tour as an experience to make opportunities and learning happen.
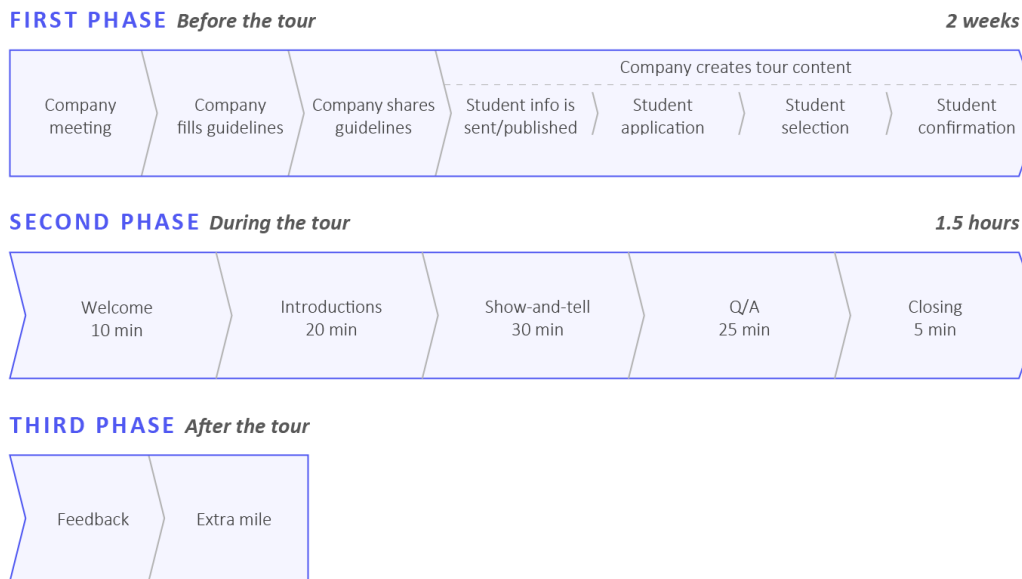
FIRST PHASE *Before the tour* *2 weeks*

Company creates tour content

| Company meeting | Company fills guidelines | Company shares guidelines | Student info is sent/published | Student application | Student selection | Student confirmation |

SECOND PHASE *During the tour* *1.5 hours*

| Welcome 10 min | Introductions 20 min | Show-and-tell 30 min | Q/A 25 min | Closing 5 min |

THIRD PHASE *After the tour*

| Feedback | Extra mile |

Figure 4. The PSSD Tour's service journey and format for tour testing 1-2

The changes for the third test started with communications, which we modified to be more impactful in engaging students to become active participants. We used the application questions to help students understand what they wanted to get out of their tour experience while thinking about the value they would bring. Before the activity, the company partner received a document that comprised information about the students and their aims in joining the tour.

As for the format, the third test had company teams share a topic and then discuss it with the students. The topics pointed to the company partners the specific issues they needed to address to bring value while creating a more dynamic atmosphere without overloading students with information (Figure 5). Moreover, the company team would have the freedom to share the information in whichever way they wanted, reflecting company culture.

The cyclical tour structure and communications to the students and company team helped address all six key shifts detailed in the logic model (see Figure 6), resulting in the highest attendee engagement rate of all testing processes and generating unique conversations amongst participants. The three-topic strategy helped students glimpse into the culture, learn about the behind-the-scenes of how the teams carry out some projects and understand what the company expects from a collaborator. Finally, this approach can create a space of privilege that simplifies later contact with the company. However, the initiative will fulfill the key shifts only if students interact with several companies during the academic year.

Two new tour experiences with agencies connected to the course (Strategic Design Scenarios and Nesta Italia) applied the resulting format (Figure 5).
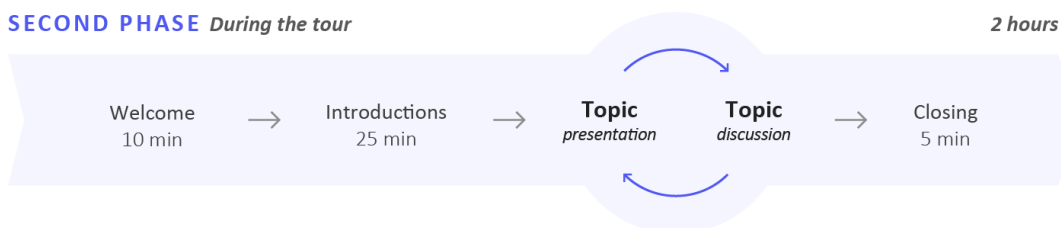
SECOND PHASE *During the tour* *2 hours*

| Welcome 10 min | → | Introductions 25 min | → | **Topic** *presentation* | **Topic** *discussion* | → | Closing 5 min |

Figure 5. The PSSD Tour's format for the third test

The ***three topics*** touched during the tour		
Who we are	Our people	What we do
Company information — Mission/values — Clients/sectors — Types of projects — Team size — Team composition	— The tasks and work activities they undertake — The abilities that influence their performance — The skills important for their role — The knowledge important for their role — The work styles that affect how well they work — The tools/tech the job requires them to use	

The ***cyclical*** format

Students know companies exist and understand if they are a good fit	Students better understand the competencies required for the job	Students have horizontal interactions with industry members
Students have a more robust view of the working environment	Students have examples of how context affects the way of doing SD	Attendees are engaged, taking participatory action

Tour objectives (key shifts)

Figure 6. The PSSD Tour's logic model and the third test's components

Discussion of findings resulting from format experimentation

Evaluating the feedback of the tour activities, performing student interviews, and observing each tour during its development allowed us to reflect on the use of the PSSD Tour format. This section identifies the factors that impact the format's success, challenges, good practices, and opportunities.

From passive to active learners

When students become active participants, they create interactions that drive knowledge transfer while building bridges for themselves and other participants to later approach company partners for inputs. The format should create opportunities for students and company partners alike to take center stage and mold the tour, as new collaborations are fortified when embraced by all participants (Slater & Ravid, 2013). Therefore, the university should promote the tour as an empowering and exclusive experience that is most valuable when students take the lead.

Shift relevance from outcomes to contributions

In this activity, an exchange between active participants is the key to successful interactions. Ensure that rather than just using the tour to further personal goals, participants look to becoming contributors to the group, offering something of value and focusing on the experience.

Every tour has a different atmosphere

Human interactions drive the success of this type of collaboration. However, even though the tour follows the same format, replication is hard to accomplish as each activity has different company partners with their own organizational culture permeating all interactions (Slater & Ravid, 2013). The tests unveiled company culture plays a major role in tour development, as the willingness to experiment, integrate company members, and generate diverse interaction opportunities for students depends on how the companies envision themselves and the objectives they set up for their own tour experience.

Fruitful interactions

The tour's unique value proposition for students is the opportunity to engage in conversations with professionals who work in companies applying Service Design. In this context, creating an informal atmosphere can support the organic growth of interactions. When Creative Directors or managers participated in the tours,

other employees tended to limit their inputs and became cautious when sharing. Based on these experiences, the participating company teams should be made up of 3 to 5 professionals, from junior to senior members, to create a safe and nonthreatening environment that pushes for integration instead of highlighting a hierarchy, making students and industry members feel confident and comfortable in participating. Furthermore, having all professionals be from the same academic background (all service designers, for example) seemed to limit the conversations, so the company staff should display expertise in different areas to give a complementary view and diverse opinions on the topics discussed.

Limiting factors
These elements pertain to the capacity and resources of both the course and the companies involved. Lack of university funding and human resources can hinder the development of this extracurricular collaboration. Meaning the format should function with little, or none, capital and maintenance and no in-person training of the activity staff. On the other hand, company partners prioritize other endeavors and limit their time working for these collaborations (Slater & Ravid, 2013), leaving little time for co-creating and co-managing the activity. Other issues that may affect the outcomes can relate to the degree of trust established between the university and the company partners (Ankrah & Al-Tabbaa, 2015) and the communication between the activity organizers and company staff. Because of these last two points, universities should launch this type of collaboration in conjunction with firms they have collaborated with previously. In our case, we tested the format with companies linked to the Advisory Board of the course.

Metrics for success
A successful tour collaboration refers to quality interactions among industry partners and students during tour execution; it results in achieving student and company expectations to a satisfactory degree and a willingness to repeat collaboration from both parties. Finally, since what surrounds the job service designers perform are transversal skills, students need to attend several tours in one academic year for the project to accomplish its intern and primary outcomes (see Figure 3).

Conclusion and Recommendations

Limitations of the experiment
Understanding the limits of the design experiment is necessary for concluding. The limited number of events the course has carried out (five) might be considered a small sample to evaluate success. Further events using this format might generate new insights and strengthen current observations while providing a larger spectrum of context in which the Service Designer plays a role. Moreover, we organized the experiment with companies that have collaborated with the course or/and the Advisory Board.
Finally, measuring long-term positive impacts is difficult. Setting a longitudinal measurement strategy might provide further data to analyse success in the future.

Recommendations for further experimentation
This section addresses course staff and researchers interested in the topic by suggesting strategies that would help overcome the limitations and improve the format.
Regarding course staff, the suggestions aim to enable student participation and provide a rich experience through the format. Students need to attend several tours during the program's academic year to successfully transfer knowledge from the different contexts they might operate in once they graduate. The results from the tour tests are the basis for this assumption. Future facilitators should understand the average number of tours a student needs to attend for fulfilling the outcomes detailed in the logic model (Figure 3). Building on this reflection, it is relevant to highlight that the tours collaborate with companies representing different Service Design approaches to enlarge the perspective on how these contexts reflect in the discipline.
By tracking quantitative and qualitative data points, the tour's team can understand its effectiveness in achieving its goals and create future improvements to the initiative. Here, we outline a few possible quantitative indicators for monitoring its implementation:
- Number of tours that have been delivered per season.
- Number of seasons that have been delivered per year.
- Number of students who attend one season per year.
- Number of students who attend two seasons during the entirety of their studies.
- Number of new companies integrated into the program per year.
- Number of companies who are willing to attend one season per year.

Regarding the researchers, the suggestion aims to understand and obtain actionable knowledge from empirical evidence. Measurement of the program's outcomes is the key to achieving impact faster and more

efficiently. Here, feedback from participants can offer insights into why the program is or not working. The following indicators can help evaluate format outcomes, provide data for future longitudinal studies, and measure format success:

- Percentage of students who have attended the program who demonstrate improved knowledge of the working context.
- Percentage of students who have attended the program who demonstrate improved knowledge of the capabilities needed to work in the context of the toured companies or similar contexts.
- Percentage of students who have attended the program who demonstrate improved knowledge of the capabilities they need to reinforce to work in the contexts shared on the tours.
- Percentage of students who have attended the program who contacted company members after the tours are over.

In this case, students demonstrate 'improved knowledge' when they understand the general competencies required for Service Design practice in each of the professional environments they visited and can grasp how their role changes depending on the working context. Qualitative methods, like questionnaires and surveys, can assess this indicator. However, a qualitative analysis through follow-up interviews might be a better procedure for measurement. These would be most valuable if repeated once students become professional practitioners.

Finally, other activities such as mentoring programs might support students to find the professional context of their interest while guiding them in understanding how they see themselves as practitioners.

Concluding remarks

The discussion of the findings helps us conclude that the PSSD Tour format can help students understand Service Design as it creates meaningful conversations regarding the practice while highlighting the figure of the Service Designer concerning all collaborators in the workplace. The tour format provides the course insights into how professionals use Service Design methods and tools in different environments while creating links with new industry collaborators, crucial activities for evolving its offer. Therefore, in a dynamic discipline strongly linked with modern transformation as Service Design, this collaborative activity is valuable since it helps prepare future Service Design professionals by connecting practitioners with the students who are learning the method.

The Covid Pandemic accelerated and temporarily cemented the role virtual worlds could have in education (Broadbent & Cross, 2003), as institutions performed virtually all the educational tasks they considered needed face-to-face contact for success. Before the pandemic, knowledge transfer and valuable interactions in the course tended to happen in the physical space, relegating digital formats as touchpoints for enhancing educational experiences. This experiment pushed these boundaries, forcing us to understand how to translate the value of in-person interactions to a digital experience while offering the possibility of connecting with partners locally and globally.

As stated in Chapter 1, this paper aimed to propose a format that could enhance the exchange of knowledge from Service Design practice with students aspiring to become Service Design practitioners while understanding the benefits of this exchange for all stakeholders involved, namely students, companies, and researchers.

The format has the potential to benefit students by involving them in guiding how each event develops, first by framing what they want to learn from each visit and then structuring it through their active participation. On the other hand, companies can interact with the future workforce by sharing knowledge that will support their development as professionals. Lastly, the format provides researchers working in an educational context, a privileged view for observing the discipline's trends and emerging needs.

Finally, for students to prepare for the plurality of Service Design practice, they need to foster the competencies for finding a job while evolving alongside it and rising to future challenges by engaging in constant learning. It's in this last matter that university-industry collaboration has an opportunity to enhance the learning experience without overly demanding from course staff or disrupting the course curriculum. To become successful, extracurricular interactions like the one explored by this paper, require students to be proactive and take participatory action in getting answers and in molding the experience to fulfill their expectations.

These conclusions highlight the potential for a paradigm shift in how students approach the learning experience. Envisioning the switch from reactiveness to proactiveness helps visualize more flexible learning scenarios. Spaces that allow for the course and students to experiment, iterate, and co-create the learning enhancements they require.

References

Ankrah, S., & Al-Tabbaa, O. (2015). Universities–industry collaboration: A systematic review. *Scandinavian Journal of Management, 31*(3), 387-408. doi:10.1016/j.scaman.2015.02.003

Bakker, A. (2018). *Design Research in Education. A Practical Guide for Early Career Researchers.* Taylor & Francis.

Broadbent, J. A., & Cross, N. (2003). Design education in the information age. *Journal of Engineering Design, 14*(4), 439-446. doi:10.1080/09544820310001606867

Calabretta, G., De Lille, C., Beck, C. (2016). Service Design for Effective Servitization and New Service Implementation. In *Service Design Geographies. Proceedings of the ServDes2016 Conference* (No. 125, pp. 91-104). Linköping University Electronic Press.

Dorst, K. (2008). Design research: A revolution-waiting-to-happen. *Design Studies, 29*(1), 4-11.

Frascara, J. (2020). Design Education, Training, and the Broad Picture: Eight Experts Respond to a Few Questions. *She Ji: The Journal of Design, Economics, and Innovation, 6*(1), 106-117. doi:10.1016/j.sheji.2019.12.003

McKenney, S., & Reeves, T. C. (2014). Educational design research. In *Handbook of Research on Educational Communications and Technology* (pp. 131-140). Springer.

Manzini, E. (2016). Introduction. In A. Meroni & D. Sangiorgi, *Design for Services* (pp. 1-6). Taylor & Francis.

Meroni, A., & Sangiorgi, D. (2016). *Design for Services.* Taylor & Francis.

Meyer, M. W., & Norman, D. (2020). Changing Design Education for the 21st Century. *She Ji: The Journal of Design, Economics, and Innovation, 6*(1), 13-49. doi:10.1016/j.sheji.2019.12.002

Morelli, N., De Götzen, A., & Simeone, L. (2021). *Service Design Capabilities.* Springer Nature.

Norman, D. (2011, October 04). Design Education: Brilliance Without Substance. Retrieved February 10, 2020, from https://www.core77.com/posts/20364/Design-Education-Brilliance-Without-Substance

Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management, 14*(2), 160-72.

Sanders, E. & Stappers, P. J. (2008). Co-creation and the New Landscapes of Design. *CoDesign, 4*, 5-18. doi:10.1080/15710880701875068.

Sangiorgi, D. (2009). Building up a framework for Service Design research. In J. Malins (Ed.), *Proceedings of the 8th International Conference of the European Academy of Design* (pp. 415-420). The Robert Gordon University, Scotland, 1-3 April 2009.

Slater, J. J., & Ravid, R. (2013). *Collaboration in Education.* Routledge.

Voûte, E., Stappers, P. J., Giaccardi, E., Mooij, S., & Boeijen, A. V. (2020). Innovating a Large Design Education Program at a University of Technology. *She Ji: The Journal of Design, Economics, and Innovation, 6*(1), 50-66. doi:10.1016/j.sheji.2019.12.001

Zimmerman, J., Stolterman, E., & Forlizzi, J. (2010). An analysis and critique of Research through Design: Towards a formalization of a research approach. In DIS '10: Proceedings of the 8th ACM Conference on Designing Interactive Systems (pp. 310–319). Aarhus, Denmark, 16-20 August 2010.

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