



## **Collaboration of Design Schools and Public Institutions: Towards a Strategy to Introduce Service Design to Public Sector**

**Saniye Fışgın**

*Pamukkale University Faculty of Architecture and Design Department of Industrial Design, Denizli, Turkey  
sfisgin@pau.edu.tr*

**H. Hümanur Bağlı**

*Şehir University Faculty of Architecture and Design Department of Industrial Design, İstanbul, Türkiye  
humanurbagli@sehir.edu.tr*

### **ABSTRACT**

Complex problems of public services and the changing world force public institutions to innovate. Service design can be considered as one of the essential tools for innovations in the public sector. However, it is not well realized and not widely used worldwide. This research attempts to understand the challenges and opportunities for design-driven public service innovation in order to find ways to spread this discipline through the public sector. Even though they also encounter barriers in public sector, design schools can be one of the most important actors for design-driven innovation in the public sector. Design schools and public sector collaborations can be gain for both parties. While public sector could be introduced design driven innovation, design schools can see public organizations as an experimentation area for research and education. Therefore, to gather relevant data, sixteen case studies of design schools and public organizations partnerships around the world are reviewed in terms of their actors, aims, outcomes, and results. This research is a part of an ongoing Ph.D. study in an Industrial Design Department in Turkey.

**Keywords:** Public service innovation, service design, public service design ecosystem, design schools

### **INTRODUCTION**

Beginning with Buchanan (1992), it has been started to consider intangible things like services as a design object. Design skills that can help to cope with wicked problems (Rittel & Weber, 1973) can be used in many different areas. In line with this, Press and Cooper mention that designers have some features which are more than designing things. They observed that designers who are open to change, self-expressive and have abilities to empathize with other people, are principled and responsible in this complex and dangerous world. Hence, Press and Cooper suggest designers to focus on not only business and management disciplines but also social sciences like psychology and sociology (2003). On the other hand, society and economy started to base on knowledge, experience, and services at the end of the 20th century (Rifkin, 2000; Levy, 1994). Due to this change, design objects started to dematerialize and become more fluid (Manzini, 2006). Therefore, rather than as an absolute profession, design is seen as an "attitude" (Boland and Collopy, 2004); it is studied to be employed to diverse types of products and embraced by different disciplines (Buchanan, 1992) as a way of thinking and doing (Kimbell, 2011; Sangiorgi, 2015).

Because of the increase in the share of services in GDP of developed countries, after the 70s, a new term emerges called "services economy". In these service-dominant economies,



a new term called service marketing emerged and under this term (Mager, 2009), Shostack, who is a service marketing academician, used the term service design for the first time in 1984. Designers started to adopt the term in 1990 with the book entitled "Total Design" (Pugh, 1990).

Sangiorgi claims that service design academicians and practitioners directed their interest to the public sector since its first emergence. Some researchers draw attention to New Labour policies about public engagement (Cook, 2011; Sangiorgi, 2015) and user-centered public service reform (Great Britain, 2005; Sangiorgi, 2015) as well as their effects to the design agencies in the UK which work on social change and public services at the beginning of 2000. It is also mentioned that there are committed support programmes to enhance design and creativity in the social field and expand awareness. Also mentioned is the value of design for innovation support and the new kind of design studios such as the Creative Pioneers Programme by NESTA in 2003 to support creative graduates with an innovative business idea also with a social impact, or the Design of The Time (DOTT) set up by the Design Council (2010) (Cox, 2005; Sangiorgi, 2015).

Many policymakers and public managers started to try different kinds of design approaches in varied contexts and settings (Boland & Collopy, 2004; Bate & Robert, 2006; Boyer et al., 2011; Cooper & Junginger, 2011; Manzini & Staszowski, 2013; Lietdka et al., 2013; Service Design Network 2016).

The emergence of service design in the public sector can be traced from several angles. While as a public institution European Union emphasized on service design and innovation in the public sector (Junginger, 2014), Design Management Academy Conference (Junginger and Terrey, 2014) launched a division which focuses on design for public sector and policy, also papers about design for public services and policies multiply gradually in years in academic service design conference ServDes. Moreover, service design firms launch public services and policy departments and they add more and more public service projects to their portfolios. Policy labs and innovation labs were founded all around the world.

These are the signs that there is a growing interest in service design in public. Furthermore, in the course of time, the positive impacts of design for public service innovation can be traced more. However, Junginger claims that even though there is a growing interest in educating policymakers and policy implementers, the interest of design schools and design researchers to the public services and policies is not enough. She points out a specific design education for public service innovation and public policies and also the need for support of design academics to the innovation initiatives to build sustainable design capabilities (Junginger, 2015). There is several researches focus on education of service design. While some researches is about the methods in terms of generative tools (Ali, Silvia, and Monica, 2017) or methods for social transformations (Morelli and Götzen, 2017), some studies are about social design and its education (Easterday, Gerber and Lewis, 2018). Addition to these contributions to design education, design schools-public organization partnership projects can help the development of design education in the context of public sector. Because, public sector innovation practices which involve many societal challenges need broad enduring associations with several stakeholders with continuous processes rather than short-term projects (Björgvinsson et al., 2010; Hyvärinen et al., 2015).

Collaboration of institutes in the context of innovation is in the industry's radar for a long time. Lambert (2003) relates open innovation in collaboration and gives importance to the role of universities in the development of the economy. Together with the contribution to the economy, collaboration projects can transform design students in the way of working as teams and innovating, developing solutions within the context, identifying the problems



(Spellmeyer and Weller, 2003). On the other hand, representatives of companies can gather new ideas, authentic observations and visually represented perspectives from design students (Spellmeyer and Weller, 2003; Baysal, 2007, p.18). Thus, several kinds of collaborations among design schools and public institutions can enrich public service innovation and also train design students for public sector.

Consequently, this research aims to contribute this subject in terms of the strategies of design schools to diffuse design in public service innovation by examining several cases.

## **METHODS AND PROCEDURES**

### **Research Questions**

The study aims to address and seeks to answer these research questions:

- What are the key actors of a successful service design project in a government institute?
- What are the challenges and enablers which the key actors encounter in the designing process?
- What are the important aspects and potentials of design school and public organization partnership? How can it be more impactful and efficient?
- What are the barriers of this partnership?

### **Method**

The aim of this paper to discuss and create a framework for the partnership of design schools and public institutions in terms of service design. Hence, 16 case studies were reviewed to have a wider understanding of the context of local governments. Therefore, the data belongs to 16 case studies could be gathered by a wide literature review. Journals, conference papers, books, reports, websites are reviewed to reach the relevant information about the design projects.

There is a possibility to access the presentation of the projects and wide data about social projects in media (Margolin and Margolin, 2002). Giving examples of Margolins, Gurdere Akdur and Kaygan named their research design "*document analysis*" to "*make an extensive overview that simultaneously reflects the dominant ways in which social design is viewed and presented by its practitioners and the media*" (Gurdere Akdur and Kaygan, 2018). Therefore, the main research method of this study can be named as document analysis.

In addition to the document analysis actions, several cases in this research could be observed in person and researchers could have a chance to do unstructured interviews with organizers of the projects. This data also reported and used in the analysis phase.

After a wide reviewing process, relevant documents were chosen. To have wider information from an individual case study, several documents were reviewed. For example, a case study from Service Design Network website was also searched from other internet sources, even the podcasts are reviewed in order to reach relevant data.

Webster and Watson claim that developing knowledge requires a solid base which can be created by an influential review. Theory development is facilitated, areas, where there are plenty of research, are closed and fields, where there is a lack of research, are uncovered by a good literature review (2002).

Through reviewing the design projects, three types of collaboration were found among the case studies. While some projects (1-8) are school projects which are the subjects of design



studios, some projects (9-12) are action research found in dissertations and some projects (13-16) are sub-projects of bigger funded projects which have several different stakeholders in addition to schools and public institutions. Projects are compiled from 14 different countries between 2012-2018.

## **DESIGN FOR PUBLIC SERVICES**

### **Service Design**

According to Mager, service design is for forming services in the point of view of users and the functionality. In the customers' standpoint, the objective of service design to create useful, usable and desirable interfaces, while in the suppliers' standpoint its objective is to build effective, efficient and distinctive interfaces (2009). Designing services were defined as dipping into services from an outside-in point of view beginning with users' perspective and its contrast to a concept of design which focalizes on designers making forms (Holmlid & Evenson, 2008). Kimbell accepts the idea of designing product-service systems (Meroni & Sangiorgi, 2011) as an important influence on the emerging field of service design and its effects on considering services as socio-technical systems (Morelli, 2002; Kimbell, 2015). Moggridge sees service design as a subcategory of the design field which relates to designing interactions with technology (Moggridge, 2006; Kimbell, 2015). Finally, Stickdorn mentions five principles of service design thinking: user-centered, co-creative, sequencing, evidencing and holistic (2010).

### **Service Design for Public Sector**

Several challenges related to governments like the new technologies, the aging populations, the crisis in the infrastructures, the climate change and the pressures of public finances force public institutions to change in many angles (Gagnon & Cote, 2016). Economic crises and demand for new services from educated and active citizens are also a reason to innovate for public institutions (Rebolledo, 2016). Besides, authorities at the national and regional level view service innovation as a facilitator for "society-driven innovation" with policies like European Commission, "*using service innovation to address societal challenges and as a catalyst of societal and economic change*" (E.C., 2009, p.70; Sangiorgi, 2011). The term of 'innovation imperative' for the public sector is in the agenda of the OECD and the other authorities because governments should start to move in order to facilitate fundamental supporting factors for public sector innovation to catch the changes of environment (OECD, 2015; Rebolledo, 2016). Sangiorgi asserts that even though innovation in public sector is not a new practice, New Public Management approach leads to emerge studies on public sector innovation (Mulgan 2007; Langergaard, 2011) and there must be a strategy to embed innovation culture as a fundamental principle in the public institutions (Albury, 2005; Sangiorgi, 2015). Therefore, service design could canalize the attention to people, interfaces, and relationships in public organizations, so it can be a technique to transform innovation culture and practices in these institutions by providing the balance the inclination to managerialism which dominates the language (Parker and Heapy, 2006).

While some researchers see design as a promising strategy and methodology to tackle with these challenges or at least to dilute the bad impacts on people (Manzini, 2014; Kolko, 2013; Gardien & at al., 2014), recently, design-driven innovation is accepted as an innovation model which offers effective tools to overcome these difficulties (Kimbell, 2009; 2011; 2014; Cope & Kalantzis, 2011; Design Council 2013; Sangiorgi & et al., 2015; Bason & et al., 2014; Gagnon & Cote, 2016).

Design for public services can reduce public expenses consistently and support efficiency (Design Council, 2013). Design can help to understand a large amount of data and discover the problems to solve for the new services and policies with its visualization techniques (Boyer et al., 2011; Mulgan, 2014; Bason, 2014). In order to make ideas more concrete and



measurable; building prototypes, testing them or making process models are important phases for service design (Kuure, Miettinen, and Alhonso, 2014). Overall, design helps the whole stakeholders to produce a new kind of perspective to bring openness and novelty to the public services (Mulgan, 2014).

### **Ecosystem of Service Design for Public Sector**

Actors from Service Design Ecosystem agree on the importance of service design in the public sector innovation. While service design companies publish reports to promote service design in public (SDN, 2016; IDEO et al., 2016), many academic studies are done (Junginger, 2014; Malmberg, 2017; Bason, 2017; Selloni, 2014) and public authorities build strategies and policies to enhance the usage of service design in public sector innovation (UK Design Commission, 2013, Thomson and Koskinen, 2012).

There are many attempts to introduce design to public institutions in order to bring up change and innovation with a special interest to user-centered approach. Like Thinkpublic, Live/Work, Design Continuum, Experientia, Engine, Reboot, Snook, Open Change, Design Managers, many consultancies began to work for public sector in ten years (Deserti & Rizzo, 2015). Innovation, design or policy labs which are attached to the public institutions are big enablers who act as a bridge among several stakeholders such as citizens, designers and decision makers. SILK, La 27 Region, SITRA can be added to examples for these kinds of actors.

In countries like Australia, New Zealand, Singapore, France, Denmark, the UK, Canada and the United States, public sector organizations employ collaborative design manner in different levels and different formats to innovate and change (Parker & Heapy, 2006; Bate & Roberts, 2007; Shove et al., 2007; Bason, 2010; Boyer et al., 2011; Cooper & Junginger, 2011; Meroni & Sangiorgi, 2011; Bason, 2014).

Communities which aim to promote design and innovation have distinctive effect for ecosystem such as Apolitical, GovDesign, WDO. NGOs like NESTA, Young Foundation, create information, networks, and projects to promote public and social innovation. EU funds are important because they connect several researchers, designers, private and public organizations for a purpose and provide them the economic sources in order to build information, solutions, and visions together. Especially SPIDER and CIMULACT are projects funded by EU and focuses on innovation, design, and collaboration. Finally, university collaborations are important for building awareness of design in public sector. Mager, Alonso and Hopiavuori define these corporations as win-win situations and provide sustainable conditions for working with future stakeholders (2016). Therefore, the present research examines some collaborations to promote and spread design in the public sector.

### **Barriers of Service Design in Public Sector**

Even though there are plenty of innovation in the public sector, public institutions are considered as not innovative (Mulgan, 2014; Bason, 2010; Hartley, 2005) because there are several barriers on innovating in the public sector, but they can be overcome with the design capabilities of organizations (Bason, 2010). However, there are several barriers related to design in the public sector as listed below:

- Even though there are so many attempts (like supports of Nesta, EU) and several projects for 'design readiness' of institutions (Bailey, 2012) to promote and introduce design in the public sector, they still do not consider design as a sufficient and legitimate tool (Bason, 2012; Deserti and Rizzo, 2015). Furthermore, Malmberg and Wetter-Edman claim that introducing design methods and process to public servants



is not a sufficient strategy. Moreover, it is mentioned that there is not an investigation about the continuity of support the employees to use their new skills or motive and engage them efficiently (Sangiorgi, 2015) to develop the design capability of organizations (Malmberg and Wetter-Edman, 2016).

- Sustaining the co-produced services is another challenge since they tend to end after the design research project. In most cases, active community attachments get lesser after the design involvement ends (Saad-Sulonen et al., 2012; Botero & Saad-Sulonen, 2013). Besides, outsourced designers in the projects are considered as barriers in terms of project's continuity because of high budgets and lack of attention of organizations (Blyth, Kimbell, 2011; Mulgan, 2014a), and this kind of projects are not suitable for organizations to benefit design efficiently (Malmberg & Wetter-Edman, 2016).
- The nature of design is based on experimentation, collaboration, creativity (Bailey, 2012; Bason, 2010; Hyvärinen et al., 2015) result-openness, co-creation, partially fuzziness (Mager, Alonso and Hopiavuori, 2016), long-term involvement, transparency and has actual power-sharing process (Sangiorgi, 2015), but it conflicts to the public sector which is export-oriented, hierarchical and 'siloes' (Bailey, 2012; Bason, 2010; Hyvärinen, Lee & Mattelmaki, 2015), bureaucratic, regulative, complex on procurement procedures, has ever-changing political landscapes (Mager, Alonso and Hopiavuori, 2016), deficient of resources and commitments (Hyvärinen et al., 2015) and lean to short-term thinking (Hyvärinen et al., 2015; van der Bijl-Brouwer, 2016).
- There is a need to develop and revise design skills to work in the public sector (Design Commission, 2013; Hopiavuori and Alonso, 2016). Designers sometimes are not aware of the difficulties of overcoming the barriers and resistances of rigid public sector systems (Sangiorgi et al., 2015), and complex societal problems and different target groups are not common for many of them (Dorst, 2015). Mulgan criticizes the tendency of designers in public and social innovation to develop too many ideas but lack of skills to implement them (Mulgan, 2014b). He also states that designers do not give attention to economics and organizing issues and cultures (2014b), while Bækkeliie finds the implementation process of a design project as one of the significant difficulties (2016).

In this research, it is assumed that design school-public institution collaborations can be a solution to these barriers.

### **MAIN APPROACHES ON THE DESIGN SCHOOL-PUBLIC INSTITUTION PARTNERSHIP**

In order to analyze the data relevantly, there is a need to understand the character of the projects in this research. Mainly, there are two approaches/methods which are followed in the process of these projects. While student projects are in the structure of design studios, dissertation projects mostly follow action research approach.

Nowadays, design studios are in the center of design education. Because of its process of learning by designing, Schön finds design education genuine and privileged. The process trains students to discover their style and gain the ability to think to discover it (Schön, 1985). Design has a bold process which is not linear and it focuses on researching on the problem rather than to solve it (Rittel and Webber 1973; Schön, 1985). This nature of design requires a different education style that has a process of exploring new possibilities with setbacks, and repetitions and a system by loyalty and patience, and practices on producing human-centered ideas (Gür, 2003; Dikmen, 2011). Design education varies among other fields of science education. Experience-based knowledge transfer like a master-apprentice relationship is an essential approach in design education. In order to teach how



to deal with wicked and ill-defined problems, data gathering and learning by doing practices are emphasized especially in design studios. The term studio was defined in the Webster Dictionary as “the working place of a painter, sculptor, or photographer; a place for the study of art (such as dancing, singing, or acting)” (Anonymous, 1993). Design studios have an experimental approach with a semi-structured strategy (Delahaye, 2005), which is adopted from the education of visual arts (Hetland and Winner, 2007). While visual, verbal, tactile, written and communication capabilities are enhanced in design studios, students can have a chance to build teamwork skills by working in groups (Nicol and Pilling, 2000; Düzenli et.al., 2018).

Action research is becoming popular and important for design studies. According to Swann, practitioners apply action research when they encounter a problem, dilemma or ambiguity (2002). Firstly, it is a systematic and documented study which includes a process with a spiral of cycles of planning, acting, observing, and reflecting. Secondly, researchers have to collaborate fairly with other stakeholders as a participatory activity, and finally, the main theme of the research is a social application that requires change (Kember and Kelly, 1993). Even though action research is more common in education studies, its nature is suitable for design research, especially design for social innovation studies. Swann claims that action research can enhance design practice and it is suitable for undefined final outcomes in design projects. Swann also asserts that action research can make clear an underlying design process, so members of design team learn from each project and boost their skills, thanks to the course (2002).

## RESEARCH SAMPLE

After reviewing the case studies, three types of design school-public institution collaboration were detected. The first type of collaboration is under the context of design studio. In order to teach students design by doing, design schools sometimes prefer public sector as design subject and they collaborate with public organizations. They mostly try to solve the problems of the users of this organization in the process of the studio. Through design process in studio, the ideas are produced and they are shared to the representatives of the public institutions. Nowadays, action research gets popular among design researchers, therefore the second type of collaboration takes place between PhD or Master’s students and public institutions. The last type of projects is developed in the collaboration of many different actors under the umbrella of a big fund such as EU Horizon 2020. In this type of funding, it depends on the existing of actors from several different countries to cooperate in order to receive a fund and perform the project. In conclusion, the research sample is divided into three groups in terms of their collaborations. All are listed below in the following tables:

**Table 1.** Student projects

City	Actors	Aim/Theme	Funds/ Support	Outputs
<b>Case 1:</b> NewYork 2012-2013 (Staszowski et al., 2013) Dragoman et al., (2013)	New York City Department of Housing Preservation & Development The DESIS LAB at Parsons Public Policy LAB	Creating affordable housing solutions	DESIS the Public & Collaborative international initiative The Rockefeller Foundation’s 2012 Cultural Innovation Fund	Pilot Proposals
<b>Case 2:</b> Singapore 2014-2015 (Yeo et al.,	The Singapore government A Design University	Designing government services for vulnerable workers	Government	Service Prototypes and Video Narratives



2013)				
<b>Case 3:</b> Rio de Janeiro 2016 (UFRJ DESIS Group,2016)	DESIS Lab at Universidade Federal do Rio de Janeiro/ Rio de Janeiro Municipality	Designing a collaborative lodging service in older people's homes	Research Support Foundation of the State of Rio de Janeiro	An Implemented/ Co-produced Service (Riovivido,2019)
<b>Case 4:</b> CHILE 2014 Duoc UC DESIS Lab (2014)	Escuela de Diseño Duoc UC (Design school),Rodrigo Medina,SENAME (National children Service)	To co-create new ways/ capabilities of self- management for fundraising	Escuela de Diseño Duoc UC, Rodrigo Medina	Service Ideas Posters
<b>Case 5:</b> Ulsan 2017 Baek (2017) Pahk, Y, Self, & Baek (2016)	Ulsan Buk-gu District office, Ulsan National Institute of Science and Technology, DESIS lab at UNIST	Designing sustainable community enterprise models to support sustainable food production and consumption	Ulsan Buk-gu District Office	Co-created Business Ideas
<b>Case 6:</b> Pittsburg 2016 (Hughes et. al, 2014)	Carnegie Mellon University, School of Design, School of Architecture, Heinz College of Public Policy,Latham St. Commons	Reconnecting People through daily life needs	Local Foundations, Crowd-funding	Co-created Community Place
<b>Case 7:</b> Istanbul 2016	ITU, Design Atelier Kadikoy, Kadikoy Municipality, Akademi Kadikoy	Creating service design ideas for problems of residents of Moda District	no-Funding	Service Design Ideas
<b>Case 8:</b> London 2013 (Salinas et al., 2018). (Thorpe et al.,2016)	Public Collaboration Lab, London Borough of Camden, University of the Arts London,local government, Higher Education Institutions (HEI), Camden's library services	Identifying potential contributions of participatory art and design practice to deliver more creative and possibly more inclusive engagement and consultation	AHRC-funded	Service Prototypes

**Table 2** Action/Practice-Based Thesis Research Projects

City	Actors	Aim/Theme	Funds/ Support	Outputs
<b>Case 9:</b> Turku 2013- 2014 (Salmelin,2014)	The City of Turku – Welfare Division City of Turku and elderly care centre, home care A45 - ANELJÄVIIS (thesis student)	to develop short-term care services and specifically to introduce co-creative techniques and increase collaboration between the units	no-funding	Ideas
<b>Case 10:</b> Scotland 2016 (Rice, 2016) (SDN, 2016)	Argyll and Bute, PHD design student Glasgow City Council, Leaving Care Service	The objective of this re- designed interaction was that young people felt safe enough to engage in this conversation, and felt listened to, heard and understood	PhD funding	A Road Plan
<b>Case 11:</b> Malta 2016 (Walding,	Design Student, The Government of Malta	Servizz Design, a set of service design tools aimed to create change in the	Unknown, School Project	A Set of Service Design Tools





2018;2017)		Government of Malta		
<b>Case 12:</b> Milano 2012-2014 (Selloni, 2014).	PhD Researcher, Cascina Cuccagna, DESIS, associations, local shops, committees and institutions of Zone 4	Focusing on design contribution not only in developing public interest services but also in building a bridge between citizens and institutions	PhD Funding	Business Ideas Related to Public Services

**Table 3** Funded Research Projects

City	Actors	Aim/theme	Funds/Support	Outputs
<b>Case 13:</b> SIC_Master Class Turin 2017 (Deserti, 2018). (Komatsu Cipriani, 2017).	Turin Municipality, SIC, University of Bologna and the Politecnico di Milano	Creating services for the aging population the design of a center for measuring the social impact of both social innovations and SI policies	EU, Turin Municipality	Ideas
<b>Case 14:</b> SIC Summer School Samsun 2018	SIX, UNIBO, OKA, Samsun Municipality	R(ur)ban transportation: Connecting rural to urban by innovative solutions	EU	Ideas
<b>Case 15:</b> RedActiva Chile 2017-2018	Laboratorio de Innovacion Publica (LIP) of the Universidad Catolica de Chile, the Municipality and traffic authority	RedActiva is comprised of a system of urban devices designed to facilitate and promote the mobility of older adults	Oportunidad Mayor Foundation	Implemented Ideas
<b>Case 16:</b> MyFutures Holland 2017 (Sleeswijk Visser, 2018)	Delft University of Technology and Design Academy Eindhoven (Afdeling Buitengewone Zaken, KoDieZijn, Muzus, and STBY, care organisations municipalities and the Association of Netherlands Municipalities.	How can we help people in thinking, handling and anticipating for their future old age?	Netherland Research Fund	Ideas, Toolkit, Books

## RESULTS

### Insights from Student Projects

#### Enablers

*"The DESIS Network's Public & Collaborative Thematic Cluster initiative is one example of how universities and design schools around the world are trying to create different opportunities for students and faculty to engage with a multiplicity of public and community partners. Exposure to these kinds of project situations is fundamental to the development of future designers' capacity to work collaboratively and engage in cooperative processes."* (Case 1) (Staszowski et al., 2013, p.35)



Dragoman et al., (2013) in Case 1 asserts that creating local solutions with communities can attract local government authorities and can spread easily. This way of thinking is parallel to the idea of Christiansen (2016, p.59). He also adds that the trust can be created in small projects because of the process's traceability (Dragoman et al., 2013). Yeo et al. from Case 2 talk about "design ambassadors" like design champions (Cooper et al., 2011; Sangiorgi, 2011; Yee and White 2016) and "long term contract with university to develop design capabilities and set the goals and action strategies together" as strategies (Yeo et al., 2013).

Case 1, 3, 5, 6 show that the organization DESIS is an important enabler for design projects of the collaborations of schools and local organizations. This organization does not only provide know-how and manpower for the projects but also spread them through its channels like its website. Because of DESIS efforts and its worldwide network, there are many service design projects for social and public innovation not only in USA and EU but also in the other part of the world. Together with different DESISLABs, innovation/policy labs are an important actor for projects such as Design Atelier Kadikoy (Case 7), Public Collaboration Lab (Case 8), and Parsons Public Policy Lab (Case 1).

Co-creation design workshops of Case 5 provided not only designing outcomes but also making strong the bond in between the participants which made stronger the community network (Baek, 2017). While Baek talks about collaboration of stakeholders with co-design workshops, Hughes et al. from Case 6 emphasis on the importance of collaboration of different stakeholder to deal with complex and sensitive problems (Hughes et al., 2016). However, Salinas et al., in Case 8, question the participation in decision-making process in government (Salinas et al., 2018).

Visualization techniques in the workshops in Case 8 help the participants to communicate (Salinas et al., 2018).

### *Barriers*

Staszowski et al. point to the lack of a strong professional and academic tradition around service design in public sector and they offer to increase projects like Case 1. They also call attention to changing roles of designers in the public sector which is from enhancing existing service structure to a more transformative and political role (Staszowski et al., 2013).

*"The design community needs to shift the discussion focused on user-centered methods towards a political commitment to participatory and democratic processes."* (Staszowski et al., 2013). This view can be considered as an example for the barriers of designers who are not familiar to public sector.

Yeo et al. give "lack of awareness on the designer's role" as a barrier in Case 2. They added to barriers limited manpower and time to implement the design ideas and the limitation of project ownership because of the different teams in ideation and implementation process (Yeo et al., 2016).

School-Public Institution Cooperation is an innovation strategy in several cases because of its win-win situation, however, people from Case 7 indicate that there are also risks on using novice designers when introducing service design to an incognizant public institution such as insufficient design ideas, inability to deal with complex problems, etc. This risks can create a bad image on non-designer public authorities. If there is not any involvement from public employees, there are also risks in the implementation process of ideas.



## **Insights from Action/Practice-Based Thesis Research**

### *Enablers*

In the Case 10 of Gayle Rice, (SDN, 2016) service blueprints, timelines, and interaction guidelines and products provide the visualization of services; therefore, the innovation of services became easier. Rice also finds participative abilities of design as an enabler (Rice, 2016).

*"The first use of the toolkit completely changed the relationship between Servizz.gov and the housing department, leading to a service transformation, significantly reducing delays for customers. The toolkit has proved itself to be an effective process for breaking down silos."* (Walding, 2017; Case 11). She also considers managers as enablers in the service design process (Walding, 2018).

In her research Selloni (Case 12) finds the power of community building in service design for public-related innovation like Yee and White's research (2016), but she emphasizes on the importance of participation of government to the design process (Selloni, 2014).

### *Barriers*

Salmelin, who is the designer of Case 9, talks about the communication challenge among different stakeholders of a project with the challenge of achieving adequate commitment from these stakeholders. However, she indicates that the biggest challenge for her project is the lack of funding to implement designed ideas (2014). She also points to the disappointment and anger of participants after co-design sessions, because of the lack of information from the further process (2014). They believe that their ideas are not going any further (2014).

The actions of managers also important for a successful service design project. If they do not involve the process, the other stakeholders do not think the project as meaningful (Salmelin, 2014).

Walding (Case 11) finds difficult to change the mindset, but she thinks it is possible with changing behaviors (Walding, 2018).

## **Insights from Projects Funded by Big Organizations**

### *Enablers*

Networking and ecosystems are important for fostering design in public services. It is possible to say that when the problem is social and public, design and social innovation have strong connections. As it is observed from Case 14, while design provides the tools to innovate for social, social innovation provides the ecosystem to design.

Case 13, as a small experiment of a big EU project, was well coordinated and created valuable insights. This project shows that this kind of design events are meaningful when they are connected to big research because the data which is gathered from one individual event can have problems to be valid as a research data. Furthermore, it is easier to find key stakeholders in a big project and every step of the event are decided in collaboration so that it can expedite the process. The one-day event was defined as informative by civil servants. They could learn about design, service design and design project examples in governments from other countries. In this process, the presentations about service design and examples in the public sector context were impactful (Komatsu Cipriani, 2017).

Sleeswijk Visser indicates funding as an important enabler in Case 16 because it supports to employ people, design researchers, to build project and organize field and design work with research interpretations. She adds visionary decision makers and employees in the institutions as an important enabler. *"For example nurses that have to do the daily work*



*with elderly. Some of these nurses or elderly carers, ergotherapists, social workers, who dared to try out our prototypes in their everyday practice and shared with us the enormous amount of knowledge.*" She also defines using prototypes as another great enabler, because its help in the design process to implement the ideas (2018).

Tello et al. see service design useful for citizen participation in terms of its methodological approach and practical tools. They also add that service design can also be used in engaging and coordinating different partners in the process to solve "*wicked problems*". According to Tello et al., seeing users' interest as a common goal can get all employees from different departments together. This approach can be valued for governmental policies which are mostly designed and implemented in silos with a lack of contribution from other organizations or departments. Besides, this user-centered approach can be helpful to develop enhanced exchange among public workers and organizations with tools like user journey map, co-creation and piloting (2018).

### *Barriers*

In Case 13, it is seen that one-day events for public servants are not enough for building and embedding design in the organization. It can only give an idea about design to the participants. In the post-report of the workshop, it can be traced that participants wished to have more time in the process of ideation and they wished to have a more participative process like having citizens or public servants from other departments in their team (Komatsu Cipriani, 2017). Deserti points to the knowledge and skills of public employees. Even though these kind of events teach them the design tools, they do not become designers. It is essential to transform them to be more innovative, but it is difficult because of the strong resistance to change of public institutions (Deserti, 2018).

Sleeswijk Visser defines barrier the stop of funding in Case 16. Even though the whole stakeholders of the project wish to continue to the project, it is not possible due to the lack of resources like human resources. She also indicates that public institutions are not willing to use their own resources because they are used to have funding (Sleeswijk Visser, 2018). As the other barrier, she finds working *extremely "local"*. Because, they encountered several obstacles to scale up the created concepts to other institutions or even other departments within the same institute (Sleeswijk Visser, 2018).

As it is observed in Case 14, developing ideas with interdisciplinary teams enhanced the design process however, implementing the generated ideas is not easy as it is difficult to convince decision makers.

Tello et al., consider the challenge of mobility which requires a new governance model. "*RedActiva requires a coordination entity that can articulate the roles and project contributions of each organization, as well as the interaction with users and the continuous improvement and redesign of the network.*" Even though service design helps institutions to get together a broad spectrum of partners and actualize an active involvement of users by its process, it is difficult for the public institutions to participate of the global coordination of RedActiva because it is an exceeding of their responsibility and expertise and it cannot be solved without a new governance model which is a need for the sustainability and scaling-up of initiatives like RedActiva (2018).

### **CONCLUSION**

As stated previously, design began to engage in more intangible subjects rather than tangible artifacts with its ability to deal with wicked problems. Therefore, new disciplines like service design and user experience design have emerged and developed in the last decades. On the other hand, the problems and situations of today's world force public institutions and



governments to change and innovate. For these reasons, in this research, the role of service design in the public sector innovation is tried to be analyzed. While detected barriers and enablers help to illustrate the practices of service design in public sector, they also show the existing ecosystem and strategies.

In the present research, 16 cases are reviewed in terms of their barriers and enablers after the examination of their actors, themes, funding, and outputs. These 16 cases are chosen because they are the products of the collaboration between design schools and local public institutions from the point of the service design.

The examination of these projects showed that they have similar problems and advantages with other service design practices in public sector. However, we can observe that the collaboration of these two institutions provides several advances to public service design ecosystem. The cases are divided into three different groups in terms of the actors who were involved in the projects. While some projects are the subject of action research of dissertations, some projects are studio projects of design schools and some of them are the part of bigger funded research. Therefore, it was observed that they all have different benefits and handicaps as summarized below.

Firstly, design studios which are organized with collaboration of a public institute can be easier to sustain. Because universities and public institutions have similar dynamics in terms of working traditions and regulations, they can understand each other much easier. Many actors in the public innovation ecosystem assert that designers have difficulties to understand public sector dynamics in an account of lack of experience in this sector. Coaching design students in this kind of studio sessions for public sector can be seen as a good strategy. Learning by doing perspectives of the studios can give opportunities to public institutions in the context of more affordable human resources. Therefore, it can be a path to solve time and money constraints in public sector innovation. However, design projects of students are mostly not suitable to implement and they always carry a risk to not showing the expected qualities of design to public authorities as they can be considered novice designers.

Action research/practice-based studies are useful to introduce design to public organizations because while they contribute to academic knowledge, public organization can also have a chance to experience the design practices. Moreover, especially in PhD studies, comprehensive data is generated for the ecosystem. Since they can improve their design capacities by *doing*, these practice-based actions are also important to these design researchers. Nevertheless, the design researchers are mostly alone in their design processes, and they usually do not have any financial support to implement their ideas or sustain the process.

Big funded projects, on the other hand, gather several stakeholders for common purposes. They are events that create environments for exchanging information. While academicians from design schools produce related knowledge, reach the occasions for their experiments and learn technical details of the subject sector, other stakeholders can learn design and its practices. Events of these big funded projects are suitable for networking to meet the next collaborators of innovators. The design process of this kind of events are not ended with implementation too and it is impossible to continue the project after funding.

For all ways of collaboration can be transformative for public sector employees, long term or short term relationship with designers can make "the future innovation champions" (Cooper et al., 2011; Sangiorgi, 2011; Yee and White 2016) to discover themselves. However, these



champions usually stand alone after the project ends as it is observed in two projects in Turkey, and mentioned by Sleeswijk Visser in Case 16.

In conclusion, service design can be considered as an important asset for public sector innovation and it is essential to introduce, spread and embed this practice to the public sector. Design schools and public organization cooperation can be a strategy to diffuse design and its values to public sector innovation ecosystem. This strategy can provide affordable and accessible design related human resource, enhance capabilities of future designers, and create an environment for networking for future design projects. However, there are obstacles to sustain this kind of projects such as the inability to implement produced ideas, difficulties to sustain them after the funding process, the risk of creating bad perceptions on the public servants because of novice designers and not well-prepared co-design activities which can influence citizens and the other stakeholders negatively.

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