# "How to Public Sector?"

**Birgit Mager and Meredith Davis** 



"How to Public Sector?"

## "How to Public Sector?"

The Key to Impactful Collaborations Between the Public Sector and Service Design Universities & Programs

Birgit Mager and Meredith Davis

Logos Verlag Berlin



Prof. Birgit Mager University of Applied Sciences, Cologne Köln International School of Design

Meredith Davis Emerita Distinguished Graduate Professor Department of Graphic / UX and Industrial Design College of Design / North Carolina State University

Assisted by Katja Trinkwalder Paulina Porten Maxime Ridzewski

Bibliographic information published by the Deutsche Nationalbibliothek The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at http://dnb.d-nb.de.



This work is licensed under the Creative Commons license CC BY (https://creativecommons.org/licenses/by/4.0/). Creative Commons license terms for re-use do not apply to any content (such as graphs, figures, photos, excerpts, etc.) not original to the Open Access publication and further permission may be required from the rights holder. The obligation to research and clear permission lies solely with the party re-using the material.

Logos Verlag Berlin GmbH 2024 ISBN 978-3-8325-5881-9

Logos Verlag Berlin GmbH Georg-Knorr-Str. 4, Geb. 10, 12681 Berlin, Germany

Tel.: +49 (0)30 / 42 85 10 90 https://www.logos-verlag.com I would like to thank the TH Köln for the leave of absence that made this research possible. I would also like to thank Katja Trinkwalder, Maxime Ridzewski, and Paulina Porten for their wonderful support. I would like to express my sincere gratitude to the members of the Advisory Board who provided valuable input at all stages of the project. I would like to express my sincere thanks to all the interviewees for their generous cooperation without which this project would not have been possible. It was a great pleasure to work with the students in the doctoral program at Sapienza University, and I am grateful for their participation in the testing phase of the toolbox that was created as part of this research. My special thanks go to Meredith Davis for the great collaboration.

We acknowledge support for the publication costs by the Open Access Publication Fund of TH Köln.

## Technology Arts Sciences TH Köln

### Contents

Prefac	е		9	
Introd	uction		11	
About	Service	e Design	17	
The Pu	ıblic Se	ctor	25	
3.1	Challe	enges Facing the Public Sector Today	27	
3.2	Service Design and Higher Education			
3.3	Service Design and the Public Sector			
3.4	The S	ervice Design Maturity Model	36	
3.5	Servio	e Design Maturity in the Public Sector	38	
	3.5.1	Examples of Service Design Maturity	41	
	3.5.2	Practical Implications of Service Design Matu-		
		rity for Collaborations	46	
Public	Sector	and University Service Design Collaborations	49	
4.1	The R	esearch Approach	50	
4.2 Types of Collaborations		of Collaborations	51	
	4.2.1	Capacity Building within the Public Sector	52	
	4.2.2	Research Labs	53	
	4.2.3	Student Internships	53	
	4.2.4	Thesis and Dissertation Collaborations	55	
	4.2.5	Sprints	55	
	4.2.6	Service Design Student Projects	57	
4.3	Initiat	ting Collaboration	57	
4.4	Benefits and Reasons for Stakeholders			
	4.4.1	From the public sector perspective	62	
	4.4.2	From the University Perspective	63	

Challen	iges, Success Factors, and Tools		65			
5.1	The Landscape of Challenges					
5.2	2 Planning the Project					
	5.2.1 Considering Context and Environment	•	69			
	5.2.2 Assessing Partner Service Design Maturity	•	71			
	5.2.3 Reaching an Agreement or Contract	•	74			
	5.2.4 Identifying the Right Stakeholders	•	76			
	5.2.5 Setting the Level of Complexity	•	78			
	5.2.6 Anticipating Ethical Issues	•	80			
5.3	Starting the Project					
	5.3.1 Understanding the Problem	•	84			
	5.3.2 Balancing Project Objectives, Learning Goals	,				
	and Academic Rigor	•	86			
	5.3.3 Aligning Working Cultures	•	88			
5.4	On the Go	•	90			
	5.4.1 Ensuring Commitment	•	90			
	5.4.2 Engaging Students	•	92			
	5.4.3 Addressing Public Sector Overload	•	96			
5.5	After the Project	•	97			
	5.5.1 Evaluating and Measuring	•	97			
	5.5.2 Documenting and publishing	•	99			
Conclus	sions		101			
Append	lix		105			
7.1	List of Figures		106			
7.2	Bibliography		107			
7.3	Glossary		110			
7.4	Resources 1					
7.5	Interviewees 11					
7.6	Advisory Board	•	117			
	· · · · · · · · · · · · · · · · · · ·					

### Preface

Whether readers teach in higher education or practice in the public sector, this publication provides critical insights and tools for successful service design collaborations. Often, university collaborations—and especially student projects—are the entry point for service design and thus the gateway for citizen-centered, co-creative, innovation-driven transformations within the public sector. This publication will help service design partners to reflect critically on the value of these collaborations and to develop distinct recommendations and tools for success.

The quality of public services affects everyone who uses them. The public sector—including healthcare, education, public safety, transportation, etc.—is also the largest employer in the world. Today's pace of change in service delivery is unprecedented. Technology not only makes possible entirely new services but also makes possible new relationships between people and public service providers. The design challenge is to integrate strategies and technologies systemically in ways that improve the experiences of the people who use them and the employees who deliver them.

The practice of service design brings together management and design under a holistic approach to overcoming the problems of bureaucracy, standardization, and cumbersome tools and procedures in support of continuous innovation. Whereas design is typically associated with good form, the more substantive contributions to transformational processes of service design affect not only organizational infrastructure and policy but also the surrounding culture. The aims of service innovation are not simply the design of better-crafted messages, products, and spaces. They are ethically responsible systems, citizen satisfaction in interactions with the public sector, and motivating workplaces for creatively empowered employees. The sources of such outcomes reside deeper than physical or digital interfaces, and they address the future as well as the present.

Worldwide, however, few public sector organizations focus on service design. There is no widespread reflection of service design concerns in annual budgets or in service design positions within organizational charts. In some cases, an organization's first awareness of the value of making service design a part of its overall innovation process comes through collaboration with a university.

Further, university and public sector service design partners rarely share the tools they develop to support new collaborative work. Tools guide attention and action. They shape designers' perceptions of situations and bring order to the many aspects of experience. In particular, faculty and students who are new to service design benefit from access to tools that others have tested in their work.

There are many possible types of such collaboration, from short sprints to long-term partnerships, from undergraduate involvement to mature research investigations by doctoral students. This publication provides an overview of collaborations identified through surveys and interviews with college-level faculty who work with public sector organizations. To nourish the growth of service design for the public sector, it also recommends potential types of partnerships based on partner maturity, specific methods, and resources under various contexts for successful engagement.

The research informing this publication was conducted throughout 2023 by Professor Birgit Mager and research assistants Katja Trinkwalder, Paulina Porten, and Maxime Ridzewski from the Köln International School of Design, University of Applied Sciences in Cologne, Germany. Supported by an advisory board, they interviewed service design experts in universities worldwide who successfully collaborate with the public sector. The goal of the research project was to close the gap between opportunities for institutions to collaborate with public sector organizations and access to practical methods and tools necessary for success.

## Introduction 1

Public services engage people as citizens and as workers in the largest employment sector in the world. These relationships face ongoing change, not the least of which is a technological revolution in how organizations deliver the services they offer. It is not enough to simply keep up. Organizations must study forces likely to affect their service ecologies, embrace the future, and design for resilience under change, rather than simply react. Services 4.0—an equivalent to Industries 4.0, the next phase in the digitization of the manufacturing sector<sup>1</sup>—not only promises ubiquitous data-driven and emergent services but also delivers them. Service providers such as ZipCar, eBay, and Amazon launched an era of new value.

Citizens' expectations of services also change. The norm is now "fluid service experiences" that are available at any time, on any channel, and easily combined. In the past, a bank's services had to compete with those of other banks. Today, consumers judge them in relation to the array of financial and non-financial activities of everyday life. Likewise, people evaluate public sector services for access, transparency, speed, and customizability. Ethical considerations address how services are equitable and inclusive, even at the most basic algorithmic level of socio-technical systems. An imperative to implement environmentally responsible practices also pressures the public sector for sustainable service policies. And increasing demand for scaling services without scaling economic resources challenges public service organizations to do more, better, and faster with less effort. The big question is how to tackle these challenges for ongoing success.

By design? Certainly. However, if, under the common view, design is often seen as a physical craft—as modifying the material world of consumer-facing artifacts and spaces—then design effects in the public sector would be quite limited. There would be no attention to issues of governance, infrastructure, and policy where the root causes of problems often reside. As Director of the Melbourne School of De-

<sup>&</sup>lt;sup>1</sup>BCG Global. Available at: https://www.bcg.com/en-us/capabilities/operations/serv ice-4-0-transforming-customer-interactions.aspx (Accessed: 12 February 2024).

sign Dan Hill asserted, "Design has too often been deployed at the low-value end of the product spectrum, putting lipstick on the pig."<sup>2</sup>

Over time and in response to shifting social, technological, and economic forces, the role of design has changed. Today's design problems are "wicked,"<sup>3</sup>nested within complex networks of interacting systems, uncertain in their boundaries, and lacking clear stopping points as once-and-done solutions. Design theorist Horst Rittel described a design paradox, grounded on the one hand in "makeability" and the unlimited potential of the future and on the other hand in emotional engagement aimed at overcoming unequal social consequences. The industrial-era problem-solving strategy of making changes at a few leverage points in linear *causal chains falls short under the complexity of contemporary challenges. Instead, the effects of design action ripple throughout causal networks and across time.* 

Since the early 1990s, service design has developed theories, methods, and practice cases for addressing these problems of expanded scope and scale. Service design strategies reflect holistic perspectives on dynamic ecologies that include various stakeholders and the interdependent activities, objects, and environments that support their achievement of goals. These perspectives break through traditional disciplinary silos and management hierarchies for a more engaging and creative workplace. Unlike the location of traditional design practices at the end of cascading management decisions, service design embeds new ways of thinking in the core structures of organizations. Companies now hire and buy service design firms, build internal service design capacity, and create innovation labs that transform the work environment and express a new business culture throughout their policies and operations. In a recently published report, management consulting firm McKinsey documented the impressive positive

<sup>&</sup>lt;sup>2</sup>Hill, D. (2015) Dark matter and trojan horses: A strategic design vocabulary. Strelka Press, p. 30.

<sup>&</sup>lt;sup>3</sup>Rittel, H. and Webber, M. (1973) "Dilemmas in a general theory of planning," *Policy Sciences*, Volume 4. Amsterdam: Elsevier Scientific Publishing Company.

effects that design has on the profitability of these organizations<sup>4</sup>. As services comprise growing percentages of the value companies bring to people, insightful leaders recognize that services have to be designed.

This breakthrough work in service design also applies to the public sector. Innovation in public service systems requires framing complex problems, revising organizational structures, identifying new process insights, and increasing collaboration with stakeholders. Methods are participatory. They reveal not only how citizens perceive and use services but also how they think services might be drivers for positive change. Service designers test prototypes and monitor evolving conditions, often embedding opportunities for stakeholder feedback in products and service distribution systems. Continuous feedback acknowledges that services are updatable, living systems and that, unlike manufactured products, they can respond to changing users and circumstances.

The *Service Design Impact Report Public Sector*,<sup>5</sup> published by the Service Design Network in 2016, clearly illustrated how service design supports the innovation and transformation of public service processes and cultures worldwide. The report identified five major areas of service design intervention: the design of policies, regulations, and administrative provisions; cultural and organizational change; employee qualifications for dealing with service design; collaborative design processes that engage citizens; and comprehensive digitization of public services.

Internationally, in programs that range from undergraduate to doctoral study, universities integrate service design as content in design, management, marketing, engineering, and social science curricula. Other institutions develop freestanding service design degree programs. Students' public sector collaborations vary in format, includ-

<sup>&</sup>lt;sup>4</sup>Sheppard, B. *et al.* (2018) *The business value of design, McKinsey & Company.* Available at: https://www.mckinsey.com/capabilities/mckinsey-design/our-insig hts/the-business-value-of-design (Accessed: 12 February 2024).

<sup>&</sup>lt;sup>5</sup>Mager, B. (ed.) (2016) *Service design impact report public sector*. Köln: Service Design Network.

ing projects, theses, and internships. All evidence shows likely growth in public sector partnerships with higher education, even though service design has yet to reach widespread recognition in organizational budgets and management structures in many public sector organizations. Modeling successful educational collaborations with the public sector benefits students, partners, and citizens as the work matures.

## About Service Design 2

This discussion introduces the concept of service design and the key principles that guide the practice. Since the 1980s, there has been a shift in attention from artifacts to systems as the locus of design action and from human-centered to planet-centered outcomes as the scope and scale of possible consequences. As sociologist Lucius Burckhardt declared, "It is not the tram that makes the travel a successful experience, it is the schedule."<sup>1</sup>

Service design emerged under this new paradigm as a way of understanding significant relationships within and among dynamic systems and adding value for different stakeholders in a rapidly changing world. Whereas the practice aspires to successful "frontstage" userfacing experiences, it also addresses "backstage" operations and the people who make satisfying service experiences possible. Only if service design accounts for the strategic purposes of organizations, their structures and processes, and, above all, their people, the public sector will build resilience and create value under ongoing change.

There have been different approaches to the service design process. Some models underline its circularity as an ongoing process. As Meredith Davis from North Carolina State University and Hugh Dubberly from Dubberly Design Offices in San Francisco point out:

"The production of a physical object can be managed from beginning to end, typically through fixed plans, estimates, schedules, and budgets. Services, especially those delivered on the web, must adapt continually."<sup>2</sup>

In this sense, services are "living systems" and the work is never done. Other processes emphasize divergent and convergent aspects of problem-solving, going both broad and deep in understanding a challenge. Personas, journey maps, stakeholder maps, system maps, key insights, and opportunity questions are starting points for the divergent exploration of a "problem space." They first go wide to determine

<sup>&</sup>lt;sup>1</sup>Burckhardt, L. *et al.* (2017) *Design is invisible: Planning, education, and society.* Basel: Birkhäuser.

<sup>&</sup>lt;sup>2</sup>Davis, M. and Dubberly, H. (2023). "Rethinking design education." *She Ji*, 9(2), p. 102.

the dimensions of the situation, seeking causes as well as symptoms of friction or misfit. Co-creating multiple possible scenarios for the future, articulating them in storyboards, and building quick-and-dirty prototypes in the "solution space" allow designers to test, iterate, and then converge on strategies that have high probability of success.

The United Kingdom Design Council's 2005 publication of its "double diamond"<sup>3</sup> quickly became the dominant visualization of the service design process. Critics called it overly simple and lacking the integration of planning and implementation. In response, the council revised its model in 2019 to show the planning–implementation relationship and to recommend multiple iterations.

While the double diamond positions various activities as arising from four design principles, it is mostly silent in explaining the values that distinguish service design from other forms of design practice.

- **Service design is holistic.** It examines system and subsystem relationships, considers context, and treats services as living systems. It expands the scale of service journeys by considering experiences "before and after" the service, not just the user's or employee's interactions with the service life cycle. Service design also combines qualitative and quantitative data, rational and intuitive approaches, and structured and playful perspectives for a holistic understanding of the situation.
- **Service design is interdisciplinary.** It involves outside specialists in teams that depend on the type of challenge. It also employs experts and relevant decision-makers from within the organization. User behavior rarely mirrors the organization's structure. People often experience service gaps in which they miss information, lose direction, and unnecessarily repeat actions. Users are also "experts" in the lived service experience. Therefore, participants in the service design process must bridge disciplinary and organizational silos, with the service designer as a facilitator and translator working in the best interests of the people who use services.

<sup>&</sup>lt;sup>3</sup>Design Council – Design for Planet. Available at: https://www.designcouncil.org.uk/ our-resources/framework-for-innovation/ (Accessed: 12 February 2024).



Fig. 1: Double Diamond Model, United Kingdom Design Council, 2019.

**Service design is life-centered.** Although it is rooted in the tradition of human-centered design principles that focus on the needs, expectations, and desires of people, service design also impacts the larger ecosystem of the planet. It aligns with other life-centered approaches that question the traditional neo-liberal values<sup>4</sup> under which design is not innocent in creating a harmful impact on the

<sup>&</sup>lt;sup>4</sup>Schaeper, J. (2023) "Reimagining service design beyond neoliberal economics", *Touchpoint*, 14(2), pp. 6–11.

ecosystem. Today, the planet is a stakeholder in every service design project.

- **Service design is co-creative.** It addresses different actors from different systems: users, front- and back-stage employees, and other stakeholders. A co-creative approach integrates these perspectives through participatory methods for framing and developing service systems. Thus, it fosters a learning organization that listens, critically reflects, playfully enacts, and embraces change.
- **Service design is visual.** It imagines futures that do not yet exist and brings them into being through tangible models that rely on their materiality to communicate the qualities of potential experiences. Models overcome the limits of words with diverse stakeholders and disciplinary experts. Models are also propositional. Through iterations, designers build agreement among stakeholders regarding the nature of the problem space and how to move forward. Prototypes help "to fail early" and thus gain speed and save money through these iterations.
- **Service design is radical.** It challenges the assumptions in a project brief. Often, organizations believe they know the solution to a problem without fully understanding its dimensions or root causes. Service design questions existing practices and reframes conceptions of service across the organization. It asks uncomfortable questions and responds beyond the expected.

"The creative designer interprets the brief, not as a specification for a solution, but as a starting point for a journey or exploration. The designer sets off to explore, to discover something new, rather than to reach somewhere already known or return with another example of the already familiar."<sup>5</sup>

<sup>&</sup>lt;sup>5</sup>Cross, N. (2023) *Design thinking: Understanding how designers think and work*. London: Bloomsbury Visual Arts.

#### Put the human in the center

#### **Avoid creating inequality**

#### **Give users control**

#### Data

Digital products and services get better from data, and it is, therefore, tempting to collect as much data as possible. But it is not legal to collect data that one does not need. And even if one is within the bounds of the law, data collection can easily become very unequal, so it is the company that reaps all the benefits while customers are left without knowledge of or control over their own data. It is your ethical choice wheter you as a company will use data in a way that increases people's sense of control, or whether you will use data solely for your own benefit.

#### Behavioural design

Humans are not always rational. We make decisions based on emotions, which can be manipulated via behavioural design, for example, by nudging. In the best case, behaviourial design is used to help people make wise decisions, but in the worst-case, behavioural design can be used to manipulate people in directions that are harmful to them. It is your ethical choice whether you want to use behavioural design to help or to manipulate.

01. Are you collecting too many data points, and do you keep them for too long?	02. Do you anonymize your data?	01. Does your design play with negative emotions?	02. Do you deliberately make it difficult for users to find or un- derstand information or funcitonality?
03. How do you store data?	04. Do you give people access to their own data?	03. Do you exploit your user's inability to concentrate to your own advantage?	04. Do you manipulate actions by taking ad- vantage of people's need to be social?
05. Have you obtained user permission to collect and process data?	06. Do you inform your users about how they are profiled?	05. Are you trying to create addiction to your product with cheap tricks?	06. Do you validate or challenge your users?

#### Avoid manipulating

#### Make your technology understandable

#### Automation

We can automate our digital solutions by using artifical intelligence and algorithms. Automation is ofthen a good thing because machines can solve tasks faster and more accurately than humans, but on the other hand, machines also make mistakes that can be quite significant and have serious consequences for humans. it is your ethical choice whether you want to design automated solutions that help people or override people.



Fig. 2: The Digital Ethics Compass, Danish Design Center, 2023. *Toolkit: The digital ethics compass* (2023) *DDC*. Available at: https://ddc.dk/tools/ toolkit-the-digital-ethics-compass/ (Accessed: 12 February 2024).

#### Service design is data-driven and embraces artificial intelligence.

Today's services rely on digital technology. Services 4.0—an equivalent to Industries 4.0 as the next phase in the digitization of the manufacturing sector—is data-driven, ubiquitous, proactive, and customizable. Although these technologies vastly expand service opportunities and many learn from their users, they also embed biases. Service designers need to be critical adopters who understand the implications of technological choices.

## The Public Sector 3

The public sector refers to the part of the economy that is controlled and operated by the government. It includes government agencies, departments, and organizations that provide public services and goods to citizens. Services can range from education, healthcare, transportation, and law enforcement to social welfare programs and infrastructure development. Most of these services are monopolies; they don't compete with the commercial sector, and all citizens use them as part of everyday life, regardless of the service quality. The following aspects characterize these services:

- **Government control:** Entities within the public sector are owned, funded, and operated by the government at various levels—local, regional, or national.
- **Service provision:** The primary purpose of the public sector is to provide essential services and utilities to citizens. These services often include healthcare, education, transportation, public safety, and social welfare programs.
- **Non-profit orientation:** While the public sector may generate revenue through taxes, fees, or other means, its primary objective is not profit maximization but the welfare and well-being of the population it serves.
- **Regulation and oversight:** The public sector often regulates and oversees various aspects of the economy and society, ensuring compliance with laws, regulations, and standards that protect public interests.
- Accountability and transparency: Because it operates on behalf of citizens, the public sector must be transparent in its operations and accountable for its decisions and actions. This includes helping citizens understand "how a service works."
- **Equity:** The public sector plays a crucial role in ensuring the equitable distribution of resources, fostering social welfare, and promoting economic development and stability within society.

### 3.1 Challenges Facing the Public Sector Today

Public services assist an enormous number of people and, as an aggregate, are the largest employer in the world. They impact the quality of life for people and the planet with purposes that range from personal growth to survival. Governments conceive of the organizations that deliver these services around the needs of citizens, keeping them healthy, well-educated, within legal compliance, and socially and publicly engaged.

For those who are public sector employees, the work culture influences their lives through rules and regulations, freedom and empowerment, and opportunities for success, reward, and growth. Recruiting, training, and sustaining a skilled workforce is an ongoing challenge for employers. In particular, attracting new talent, upskilling current employees, and adapting to changes in workforce demographics are critical concerns.

An overarching concern for global challenges exerts additional pressure on public sector services. Issues of environmental sustainability, pandemics, migration, and terrorism represent an uncertain future for which public sector organizations must plan and respond with agility and collaboration. Even as many tangible products and processes become digital services, there is urgency everywhere to reduce environmental effects. Further, many crises today are not contained within geopolitical boundaries and require anticipatory planning by governments and their agencies for a seamless multi-national response.

Rapidly changing technological and social conditions usher in a new era of citizen expectations and opportunities for design to create value. Combining private and public sector services is a frequent strategy that requires reconciling differences in the two service cultures for the benefit of users. Airbnb, for example, partners with the Red Cross and disaster relief organizations to train hosts in emergency preparedness. Ride-share service Uber partners with 700 healthcare organizations and government and commercial insurers for a 95% increase in doctor appointment attendance by patients who lack dependable, non-emergency transportation.

The artificial intelligence that now drives many of these service systems will only increase its impact on the public sector, sometimes in not entirely positive ways. While making responses faster and services more adaptive and adaptable, intelligent systems also raise ethical issues regarding transparency, security, and the jobs that support public services. The algorithms that underpin their operations are hidden from users and can bias both information and definitions of the audiences they serve. They share massive data sets, sometimes compromising privacy and security. And automation threatens routine work in which employees perform the same activities each day with little creative control.

Last but not least, the economic pressure on the breadth and depth of public services increases demand without scaling resources. The challenges to do more, better, and faster with less effort are enormous.

#### 3.2 Service Design and Higher Education

Since the mid-1990s, the influence of service design on theory, methods, and practice has continued to grow. The development of a designspecific approach to "immaterial products"—to the systematic design of the interactive relationships between people and organizations—was revolutionary. The Köln International School of Design at the University of Applied Sciences Cologne, Germany, established the first professorship in service design in 1992. Since then—despite variations in regional and national availability—many design and nondesign programs in colleges and universities around the world have integrated service design in their curricula or offer stand-alone programs at the bachelor's, master's, and / or Ph.D. levels. The 2020 publication, *The Future of Service Design*,<sup>1</sup> underscored the growing importance of the practice in general and its specific role in the public sector. Having achieved a "new normal" in the operations of high-performing companies, service design now offers new possibilities for the public sector that require greater attention to the certificate and degree curricula that prepare college and university students for service-oriented work.

Although there is growth in higher education programs that address service design at some level, no quantitative data is currently available. In 2017, a student project at Politecnico di Milano mapped existing programs<sup>2</sup> but did not regularly update findings in subsequent years. More than 40 higher education partners with service design programs have registered in Cumulus, the global association of art and design education.<sup>3</sup> Member institutions can participate in a service design working group that meets twice a year during the organization's conferences, but there is no systematic network and no exchange on curricula and projects. A 2023 publication by experts, titled *The Future of Service Design Education*,<sup>4</sup> *provided* an overview of service design programs worldwide, but without claiming completeness in the list of institutions.

Despite these efforts, there is currently no accessible database on service design programs and their specializations. Neither is there a system for sharing service design curricula, degree requirements, or the employment qualifications of graduates. In 2024, as one outcome, this research project established a Slack community for a more systematic exchange between the service design programs in academia.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup>Mager, B. *et al.* (2020) *The future of service design*. Available at: https://www.academ ia.edu/44459133/The\_Future\_of\_Service\_Design (Accessed: 19 February 2024).

<sup>&</sup>lt;sup>2</sup>https://www.servicedesignmap.polimi.it/ (Accessed 10 August 2024)

<sup>&</sup>lt;sup>3</sup>https://cumulusassociation.org/events/working-groups/service-design/ (Accessed: 19 February 2024).

<sup>&</sup>lt;sup>4</sup>Mager, B. et. al. (2023) "Product-service systems design education: Normalize, grow, and evolve," *She Ji: The Journal of Design, Economics, and Innovation*, 9(2), pp. 213–233.

<sup>&</sup>lt;sup>5</sup>https://servicedesignacademia.slack.com (Accessed: 7 June 2024)

What is known, however, is that most service design programs collaborate with the private or public sector in applied work. A number of factors motivate these partnerships. On the one hand, they expose students to real-world challenges for the later application of knowledge and skills to sustainable employment. On the other hand—and through public sector work in particular—they allow academic programs to demonstrate their relevance to the social responsibility missions of their institutions. Yet, there is little available data on how private and public partnerships differ and the curricular content that institutions agree is common to both types of practice.

#### 3.3 Service Design and the Public Sector

At first glance, design and the public sector do not appear to be a good match. "Design describes activities aiming at changing existing conditions into preferred ones."<sup>6</sup> It is the nature of designers to be in love with change, question the status quo, and cross boundaries. The priorities of the public sector are stability, conformity, and reliability through rules, regulations, and a culture that safeguards tradition rather than change.

Christian Bason of the Danish Design Center described these identities as "two waves crashing against each other, resulting in unpredictable ripple effects... [as a] creative fast-paced culture of designers meeting the old-fashioned bureaucratic culture of civil servants." He admitted both descriptions are stereotypes but that the professionals who occupy the two domains have "very different views of and appetites for innovation and change."<sup>7</sup>

Beyond these cliches, the two worldviews meet under rapidly changing times that call for new national strategies and careful consideration of the problem-solving role emergent technologies can play in

<sup>&</sup>lt;sup>6</sup>Simon, Herbert A. (1969) *The sciences of the artificial*. Cambridge, MA: MIT Press, p.130.

<sup>&</sup>lt;sup>7</sup>Bason, C. (2017) *Leading public design: Discovering human-centred governance*. Bristol University Press, p. 63.

service. The response can be seen as resistance—a longing for the social and moral order of the past and anger in having lost control of the future. Scholars warn, however, that dealing with the future cannot be based on the past. "People have to wake up. They have to 'see' that there is something [new] that has to be done, even though it is not yet clear how it can be done."<sup>8</sup>

Further, many public sector organizations now recognize that responses to change can no longer be incremental and that circumstances call for something substantially new to happen. Service design can help to make this change happen, to really understand that change is necessary, and to take ownership of the future as something new, not simply a prolongation of the past. As Sabine Junginger from Northumbria University pointed out,

"... design research and design methods can contribute to public sector innovation in significant ways—not only by reframing concepts, but also by opening up new avenues for management thinking and practice".<sup>9</sup>

The human-centered design movement of the 1990s added value to individual experiences and organizational competitiveness. But today's design challenges are of greater consequence and subject to continual change that undermines purely reactive approaches to known needs. Design is no longer only about the "what" (messages, objects, and space that respond to current conditions), but about an evolving "why" (facilitating, improving, sharing control, sustaining, and making things more equitable and just). This futures-oriented agenda focuses on possible consequences and opportunities under the velocity and volatility of change. The goals for organizations are foresight and resilience; and the ability to anticipate and adjust to rapidly changing conditions. And, as Morelli et al. underline,

<sup>&</sup>lt;sup>8</sup>Scharmer, C. O. (2020) Theory U. Von der Zukunft her führen. Heidelberg: Carl Auer, 5. Auflage, p. 52.

<sup>&</sup>lt;sup>9</sup>Junginger, S. (2018) "Design research and practice for thepublic good: A reflection," *She Ji: The Journal of Design, Economics, and Innovation*, 3(4), p. 301. 10.1016/j.sheji.2018.02.005

"In this context, design can play a role in generating elements of change that have the potential to trigger larger systemic changes. For instance, by scaling-up local initiatives, thus working from a lower scale—a community or a small institution—to larger contexts, such as a city administration or national policies."<sup>10</sup>

The task for service designers and their public sector clients, therefore, is to balance a longing for predictability, comfort, and control in the social order of the past with an imperative to design for both the present and the future, and to view services as "living systems" that mature through continuous feedback and evolve with their users and environment. Accomplishing this task means reaching an agreement on the shortfalls of current performance and collaborating on what to bring forward as a new way of doing things.

There are many amazing examples for service design and public sector innovation. One of the first service design projects created a survival station for the homeless in Cologne—successfully implemented in 2001 and still running today.<sup>11</sup>In 2005, think tank Demos published *The Journey to the Interface, illustrating design opportunities in the social and public sectors*. The United Kingdom's 2013 *Service Design Manual guided a later digital transformation of public services*. In implementing its 2013 "Action Plan for Design-Driven Innovation,"<sup>12</sup> the European Commission identified six strategic areas, including design innovation for the public sector. The commission sets future goals to support government officials in using design methods to innovate in research and development and to foster peer learning and cooperation among public sector decision-makers in design-oriented work. In 2016, the

<sup>&</sup>lt;sup>10</sup>Morelli, N., de Goetzen, A., and Simeone, L. (2021) "Service design capabilities," *Springer Series in Design and Innovation*, 10, p. 23. https://doi.org/10.1007/978-3-030 -56282-3

<sup>&</sup>lt;sup>11</sup>Mager, B.(2008) "Zwischen Notdurft und Bedürfnis: Ein Designprojekt mit Folgen", in: Erlhoff, Michael | Heidkamp, Philipp | Utikal, Iris (eds): Designing Public – Perspectives for the Public. Basel: Birkhäuser.

<sup>&</sup>lt;sup>12</sup> European Commission's action plan on design-driven innovation (no date) Core77. Available at: https://www.core77.com/posts/25624/European-Commissions-action-plan-on-design-driven-innovation (Accessed: 19 February 2024).



Fig. 3: Service Design Impact Report.

Service Design Network published *The Service Design* Impact Report Public Sector, *outlining five key areas of impact based on international research.*<sup>13</sup> Despite these aspirations to bridge the worlds of public services and design, greater collaboration is essential to a maturing practice of service design.

Even though many successful projects bridge the different worldviews of the public sector and service design, the field needs specific efforts from all partners to engage in continuous collaboration at a high level of professional maturity.

<sup>&</sup>lt;sup>13</sup>Mager, B. (Ed.), (2016) Service design impact report public sector. Köln, Germany: Service Design Network.




Fig. 4: Evolution Map, Mager and Moussavian, 2017.

## 3.4 The Service Design Maturity Model

The pace of service design development varies by region, industry, and organization. Interviews conducted in 2017<sup>14</sup> mapped the evolution of service design in 24 global organizations. Four distinct developmental phases were evident: an inception phase in which the organization first recognizes service design knowledge; an experimentation phase characterized by temporary teams, budgets, and spaces; an integration phase with sustained teams, budgets, spaces, and, often, training for the entire organization; and a final phase in which the organization naturally applies a service design approach and best practices without the direction of a specific service design leader. The dimensions used to understand these levels of maturity included:

**People**— internal / external, temporary / permanent, and numbers.

- **Practices** methods, mindsets, and the distribution of practices throughout the organization.
- **Places** internal/external, temporary/permanent, and special/everyday.
- **Budgets** temporary/permanent, experimental/integrated, and playground/measured.

Cortsen / Prick's 2019 maturity model is similar and uses four dimensions and five stages to illustrate embedding service design in an organization and transforming it as service design-led.<sup>15</sup>

#### **Dimensions:**

**People and Resources**— The extent to which people, budget, time, and facilities are available and dedicated to service design activities.

<sup>&</sup>lt;sup>14</sup>Mager, B. and Moussavian, R. (2017) Design thinking inhouse design driven innovation labs. Köln, Germany: Service Design Network Deutsche Telekom.

<sup>&</sup>lt;sup>15</sup>Corsten, N. (2019) "The service design maturity model," *Touchpoint*, 10th edn. Köln, Germany: Service Design Network, pp. 72–78.



Fig. 5: The Evolution Map, Corsten and Prick, 2019.

- **Tools and Capabilities** The extent to which the organization applies service design methodologies and tools and the level of skills and capabilities required for application.
- **Organizational Structure and Roles** The extent to which the organizational structure allows and facilitates multidisciplinary service design work and the assigned roles that are required.
- **Metrics and Deliverables** The extent to which metrics and key performance indicators (KPIs) are in place and drive service design, especially in relation to the form service design deliverables take.

#### Stages:

- **Explore** Crusading within the organization to explore service design as a new methodology and in collaboration with other service design enthusiasts in a first initiative.
- **Prove** Painstaking pioneering to establish service design within the organization through service design projects and evidence of its value.

- **Scale** Expanding service design across the organization through unifying tools, methodologies, training, and advocacy.
- **Integrate** Tearing down silos and rebuilding a design-led organizational structure that embeds the integrated systems and metrics of service design in the daily way of working.
- **Thrive** Evolving methodologies and the organization as a service design culture through leadership and experimentation that push the envelope.

## 3.5 Service Design Maturity in the Public Sector

The above-mentioned maturity models describe work in the public sector. In addition, the Public Sector Design Ladder provides a diagnostic and developmental roadmap for service organizations. It describes three levels of design integration in the work of government agencies.<sup>16</sup>

#### Level 1—Design for Discrete Problems

Public sector organizations often familiarize themselves with service design through projects in discrete problem areas and by working with partners, including other agencies and universities. As starting points for the systemic integration of design in service activities, these projects introduce the organization to the value of design thinking in concrete situations. Problem-focused work continues as the organization builds capacity and work expands under a holistic approach across departments and agencies.

<sup>&</sup>lt;sup>16</sup> The value of design to the public sector (2013) Design for Europe. Available at: https://de signforeurope.eu/news-opinion/value-design-public-sector/ (Accessed: 19 February 2024).

#### Level 2—Service Design as a Capability

In expanding organizational capabilities, service design at this level impacts several areas:

- **Digital transformation initiatives** When governments digitally transform services, they leverage online platforms to streamline processes, optimize service efficiency, and improve the interactive effectiveness of overall user experiences. Agency online portals direct people to relevant information, answer questions, assist in submitting forms, and deliver satisfying service responses. Through technology, therefore, successful service design reinvents the relationships between citizens and their government, rather than simply converting bad analog services into bad digital services.
- **Collaboration and cross-agency coordination** Public sector service design capacity depends on the ability of government agencies to collaborate and coordinate their efforts. Breaking down silos by facilitating conversation and adopting a common service design language is crucial to a shared understanding of the problem space and successful solutions for various stakeholders.
- **Data-driven decision-making** A maturing service design culture bases decisions on data. Citizen and employee feedback is both qualitative and quantitative and is used predictively as well as reactively. Data analytics continually inform service strategies under evolving conditions. Intelligent digital systems learn from use, allowing governments to better respond to the diversity of people's needs.
- **Training and capacity building** The capacity of government employees to implement service design methods is essential in building and sustaining a mature service design culture. Training programs and knowledge-sharing empower public sector staff to apply service design principles intelligently and creatively.

## STEP

Design for policy

Here design thinking is used by policymakers and designers working together, with design thinking helping policymakers overcome common structural problems in traditional policymaking such as high-risk pilots and poorly joined up processes.

#### Design as capability

Here, public sector staff not only work with designers, they understand and use design thinking themselves. Many design techniques are easily transfereable to non-designers and can create significant efficiencies as part of day-to-day operations.

#### Design for discrete problem

Here design teams are hired for individual projects tackling discrete problems. Projects can be very large and have systemic implications, but the projects are one-offs and design thinking is not part of the culture of the commissioning organisation.

Fig. 6: SEE Platform, Public Sector Design Ladder, 2013.

#### Level 3—Service Design for Policy

**Citizen-centric focus**— A mature service design culture adopts a citizen-centered approach, acknowledging the importance of understanding and meeting constituent needs over secondary system demands. Innovation, therefore, requires interrogating strategies through a user-centered lens. Royal College of Art professor Clive Gringer observed, "People in the government change every eighteen months. Government in particular is an almost impossible

area in which to sustain action. A new minister or a new civil servant comes in and then it's difficult for them to embrace some of the great ideas that we've come up with."

**Policy design and implementation**— In the most mature public sector cultures, service design is not limited to consumer-facing activities; it connects all practices under design-sensitive policies that guide the quality of services.

#### 3.5.1 Examples of Service Design Maturity

Although there is growing recognition of the importance of applying service design principles toward improving citizen experiences and enhancing the efficiency of public services, the maturity of service design cultures still varies widely across regions and governments. While some governments make significant strides in adopting and maturing their service design practices, others are in the early stages of realizing the potential benefits. An ongoing commitment to citizens, collaboration, and innovation plays a pivotal role in shaping the future of service design maturity in the public sector. There are some outstanding examples of integrating service design with governmental strategy and policy.

#### **National policies**

Governments around the world increasingly anchor their policies and practices on citizen-centered principles. While the extent and details of these efforts vary, several countries are notable in their policy and process prioritizations of citizen service needs:

• The United Kingdom embraces citizen-centered approaches such as the Digital by Default strategy, which makes online government services more accessible and user-friendly. The Government Digital Service (GDS) leads efforts to improve digital services and to enhance citizen experiences across various government departments.

	Exploring SD	Experimenting with SD
<b>PURPOSE</b> Why is SD used?	<ul> <li>SD is firstly explored within the organization</li> </ul>	<ul> <li>SD to improve existing services</li> <li>establish a common understanding of the citizens &amp; customer perspetive</li> </ul>
<b>PEOPLE</b> Who is dealing with SD?	<ul> <li>single SD Enthusiast(s) &amp; Initiator in the Organisation</li> <li>ad hoc Team with Initiator</li> </ul>	<ul> <li>team trainings &amp; up- skilling</li> <li>bringing additional skill sets &amp; disciplines into the team</li> </ul>
<b>PRACTICES</b> What does SD involve?	<ul> <li>SD in small scale pilot projects</li> <li>(self organized) trainings/ talks</li> <li>no budget or time for SD projects</li> </ul>	<ul> <li>SD in project work</li> <li>prototyping and implementation of quick-fixes</li> <li>limited involvement of citizens/ users</li> </ul>
<b>PROCESSES</b> How are SD processes managed?	<ul> <li>no defined processes and standards</li> </ul>	<ul> <li>creating structures &amp; development a set of methods</li> <li>low awareness of best practices</li> </ul>
AUDIENCE Whom are results com- municated to?	<ul> <li>individuals that are interested in SD</li> </ul>	<ul> <li>assigned service team</li> <li>communicate successful projects within organization</li> </ul>

Integrating SD		Experts in SD
•	SD for innovation identify unmet stakeholder needs identify and implement new services	<ul> <li>SD for strategy</li> <li>explore future service de- velopments</li> </ul>
•	dedicated service designer(s) in teams external support (agencies, univer- sities,)	<ul> <li>decentralized SD teams &amp; SD units</li> <li>management-level positions lead SD efforts</li> </ul>
•	SD in strategic projects to discover and explore new areas for services collaboration projects with academic institutions co-creative design with citizens and stakeholders prototyping and implementation of new services	<ul> <li>trend and future forecasting to adjust strategy</li> <li>consistent evaluation and iterative improvement of services</li> </ul>
•	visualize and expand SD toolkit open innovation, workshop, events, courses indicators to measure success processes and methods are available to broader teams	<ul> <li>consistent application of SD across projects and audiences</li> <li>qual./ quant. indicators for continuous iteration</li> <li>constant refinement of methods through method team</li> </ul>
•	across teams within organization top management communication with all stakeholders that are impacted	<ul> <li>top management, leaders and decision makers</li> <li>communication of successful projects inside and outside of organization</li> </ul>

Fig. 7: Service Design Maturity Matrix.

- In the United States, a growing emphasis on citizen experiences through initiatives such as the President's Management Agenda (PMA)—focuses on improving government service delivery. The United States Digital Service (USDS) and the 18F design group exist precisely to work *across* other government agencies to modernize services and prioritize users.
- Estonia often serves as an example for innovative e-government initiatives, including its digital identity system and wide range of e-services accessible to citizens. The country's e-residency program allows individuals from anywhere in the world to access Estonian services remotely.
- Australia makes strides in promoting citizen engagement through its Digital Transformation Agency (DTA), which improves government services and enhances digital interactions with citizens. The Australian government ensures the user-focus and accessibility of digital services through initiatives like the Digital Service Standard.
- Canada prioritizes citizens through its Digital Government Strategy and Canada.ca, which provides a single access point for citizens to government services and information. The Canadian Digital Service (CDS) works to improve digital services and streamline citizen interactions with the government.
- Singapore is known for its Smart Nation initiative, which harnesses technology to improve the lives of citizens and enhance government services. The country's approach uses design and data analytics to tailor services to citizen needs.
- In 2023, Shanghai launched the Shanghai Service Initiative, using service design "to empower Shanghai to become a world-class design city and make visible and effective contributions to sustainable development for the real world!" The stated goals are for more transparent and efficient government processes, as well as more humane service touchpoints and increased citizen participation in government affairs. By enhancing interaction, the government hopes to build public trust and satisfaction. It also seeks more sustainable development.

- Trustworthy and equitable services (funded by relatively high levels of taxation) characterize the public sector in Norway. Since 2010, a government commitment to improving services uses service design to identify and respond through public policy to what people truly need. A Norwegian regulation mandates the inclusion of designers and social scientists in creating public services with users in mind.<sup>17</sup> Oslo School of Architecture and Design professor Mari Suoheimo commented, "You have to have someone from the field say, 'What does the customer want?' In that sense, we have a very important role in Norwegian society today. This is at the level of public policy, which has set this as a goal."
- Designation as a 2012 "World Design Capital" affirmed Helsinki's claim of "Open Helsinki—Embedding Design in Life." Service design in the city's public sector is routine under dozens of service design processes and at different scales of impact. It appears to be a productive and cost-saving model for public administration and the best version of the city in its collaboration with citizens. In particular, the city's Central Library Oodi receives international acclaim for its well-functioning service design, built on input from users throughout the design process. "We currently have dozens of service design processes of different scales underway. It's obvious to me that this is the right operating model. I believe that the best version of the city and new innovations are created through cooperation with residents and adopting new methods in an agile way."<sup>18</sup>

"More functional services can be achieved by using service design in public administration, whilst simultaneously bringing about financial savings. User-centric design has become a key element of the strategy of the City of Helsinki," Tiia Lappalainen, 25.11.2019.

<sup>&</sup>lt;sup>17</sup>https://doga.no/en/activities/design-and-architecture-in-norway/design-in-nor way/service-design/service-design-in-norway/ (Accessed: 20 January 2024).

<sup>&</sup>lt;sup>18</sup> https://www.aaltoee.fi/en/aalto-leaders-insight/2019/more-functional-public-ser vice-with-service-design-e2-80-94helsinki-central-library-oodi-as-a-shining-exa mple (Accessed: 7 February 2024).

In 2023, the Irish Government launched the "Action Plan for Designing Better Public Services,"<sup>19</sup> building on the 2022 "Design Principles for Government in Ireland," = The plan evidence-informed social policies and services designed *for* and *with* public participation. The goal is seamless user experiences, delivered digitally and at scale.

These examples already impact the public sector in their countries. Others are theoretical and are still awaiting an action plan to bring policies to life at all levels of the public sector.

#### 3.5.2 Practical Implications of Service Design Maturity for Collaborations

As governments deepen their emphases on citizen experiences, service design for the public sector will continue to mature and extend its impact on the lives of citizens. Collaborations with higher education not only improve the quality of service strategies but also qualify an innovative service design workforce and increase access to practical knowledge through documented applications in the field. Increasingly, these partnerships align the missions of institutions with the public good and elevate the topic of service design in national and professional discourse.

At the same time, making progress in developing public sector service design practices and collaborations with universities is not without challenges. HTW Berlin professor Daniela Hensel commented, "I'm totally on my own with this topic at my university. The public sector itself should actually have a much greater interest in it, and I already have a lot of ideas for education policy. When I was in Finland a few years ago, an interview partner said that the state looked at the higher education infrastructure and worked closely with universities to think about how we can meet the challenges of the future in this country.

<sup>&</sup>lt;sup>19</sup>(2023) Action plan for designing better public services launched by minister Donohoe. Available at: https://www.gov.ie/en/press-release/6a866-action-plan-for-designi ng-better-public-services-launched-by-minister-donohoe/ (Accessed: 19 February 2024).

That's how I think it should be. What can we do to bring the right players together?" Hensel's comment suggests that sharing examples and intellectual resources can also accelerate development across institutions and governments.

Public Sector 4 and University Service Design Collaborations

## 4.1 The Research Approach

Prior to the study that informed this publication, there was no systematic research on service design collaborations between higher education programs and the public sector. Previous efforts focused on work with service design professionals and the role that in-house design teams can play in public sector organizations.<sup>1</sup> Given the continuing growth of academic-public sector partnerships, there is a need to close the gap between different types of service design opportunities and the practical guidelines and tools that lead to student success in these challenges. This is the purpose of the discussions that follow.

A quantitative survey developed by the Köln International School of Design research team identified experts in the field and provided a first overview of the types of collaborations undertaken by higher education. College and university respondents participated in the survey, which guided the development of questions for open interviews with 32 experts.

From the survey work, it was evident that there is no strong network of educational institutions linked by their service design interests. Further, there is little evidence that institutions share the types of collaborative efforts and outcomes with the public in any systematic way. Therefore, the research team found a dearth of collective knowledge on service design for the public sector and in partnerships, which is crucial for widespread sustainable innovation. This gap in networked information will close partially through this research, but opportunities for additional efforts in the public sector will remain.

The research team followed the survey with in-depth interviews of 36 faculty experts in its search for types of public sector collaboration, challenges, and success factors. Some interviews were online, while others took place on-site at the experts' universities. The team transcribed interviews, conducted content analyses, and clustered and condensed findings around the three categories that comprise the

<sup>&</sup>lt;sup>1</sup>Bason, C. (2017) *Leading public design: Discovering human-centred governance*. Bristol University Press.

content of this publication (collaboration type, challenge, and success factors). In two online meetings with the advisory board, the research team reflected on and added to its insights.

Based on the best practices that emerged from the research, the team developed guidelines, templates, and tools for assisting academic programs in preparing, implementing, and evaluating public sector service design collaborations. The advisory board and experts helped to refine these recommendations. Birgit Mager also tested prototypes in the Service Design and Public Sector Ph.D. program<sup>2</sup> at the University Sapienza in Rome, Italy. After iterations, further tests were conducted in the projects at the Köln International School of Design during the summer term 2024. The final outcome of guidelines, templates, and tools was published on a Miro-based platform for open access in July 2024. Readers can access the research outcomes through links in this publication.

## 4.2 Types of Collaborations

Research for this publication identified and mapped different types of collaboration between the public sector and university service design programs. They vary in the maturity of both partners' service design cultures, as well as the duration and levels of involvement. The collaborative work in participating universities ranged from a few hours to several years. In some cases, the focus is on student learning. In other cases, faculty and public sector employees collaborate with little or no student involvement.

The following overview of collaboration types describes how partnerships begin and reflect a relationship between the type and maturity of service design cultures. Its purpose is to identify starting points for new collaborations, specifically under the lenses of organizational maturity in the use of service design practices and the intent and

<sup>&</sup>lt;sup>2</sup>Srl, C.I. (no date) Dottorato in service design for public sector | Sapienza. Available at: https://phd.uniroma1.it/web/SERVICE-DESIGN-FOR-PUBLIC-SECTOR\_ nD3972\_IT.aspx (Accessed: 12 February 2024).



Fig. 8: Types of Collaboration.

structure of university curricula. The range of activities that follow also reveals new possibilities that make it easier for the public sector and university programs to initiate and grow partnerships, thus continuing service design engagement regardless of the available time and human resources.

#### 4.2.1 Capacity Building within the Public Sector

A range of university and public sector collaborations in the study aimed at building service design capacity. While events, conferences, and summer schools share ideas and establish networks, the goal of certified courses and curricular programs is the sustained application of in-depth knowledge and skills by public sector organizations. The advantage of these longer, recurring programs is that with time they can tailor approaches for the specific public sector organization and draw on regional and national information. In service design programs designed specifically for public servants, universities impart knowledge about service design but also practical approaches for implementing it. Programs and courses may require public sector participants to bring practical cases from their workplace to support theoretical study and gain feedback from faculty and peers. Alumni of these courses often remain in close contact with the universities where they enrolled and, in turn, contribute topics and study sites for internships, projects, and theses.

#### 4.2.2 Research Labs

Research labs, such as the Horizon Europe and Marie Sklodowska-Curie Action programs created by the European Commission, undertake long-term investigations that often engage international partners and university staff. Their success rate in applications for research funding (between 4% and 20%) is a continuing challenge in maintaining the stability of resources. The administrative requirements of most funded research are quite high and often reflected in standard research overhead percentages set by universities. Labs may not routinely include students, but some universities recruit doctoral students for specific work on service design projects as integral to their research education. The dissertations or theses of these students, as well as the research reports and published articles of faculty, add to the repository of knowledge in the field in ways often less possible under the intellectual property restrictions of private companies.

#### 4.2.3 Student Internships

Internships usually last between three and six months and may be required or elective components of university curricula. Typically, there are contracts between students and public sector partners, perhaps including non-disclosure agreements. There may also be a memorandum of understanding between the sponsor and the university that describes the appropriate level of work for college credit and the evaluative responsibilities of employers. Although national laws may apply to paid versus volunteer work, student compensation normally follows minimum wage guidelines.

Universities may transfer the supervision of internship students to an assigned public sector employee under a clear set of learning objectives. Faculty expect employers to engage and mentor students in meaningful work and to not exploit them as laborers in menial duties extraneous to the service design mission. The goal of an internship is to extend the theoretical and skill-based learning of the classroom through observations or applications in real-world settings. Mandatory and for-credit internships may require a student report or reflection on their work experience.

The research for this publication identified different organizational purposes for sponsoring student internships in public sector service design:

- "One-shot" internships that strengthen the creative potential of the organization through student contributions to a distinct project. This employment may extend semester work to ensure implementation follow-through on concepts developed under a class assignment.
- Recurring internships that amplify the ongoing service design capacity of the organization and that provide public sector access to young creative talent.
- Internships that deepen and diversify ongoing organizational expertise by building service design relationships with disciplinary talent beyond that of design.

Regardless of the organization's purpose for engaging students in their public sector work, the learning objectives of the university curriculum are a priority. Universities encourage internship activities that involve students in user research; group facilitation and the application of co-creative methods; visualization of problem spaces, processes, and supportive data; and solution prototyping and testing. These learning experiences help students affirm their commitment to public sector goals and many secure full-time service design jobs where they interned as students.

#### 4.2.4 Thesis and Dissertation Collaborations

Research for this publication found an established history of bachelor's and master's thesis projects arising from collaborations with the public sector. Requirements vary. Some universities use structured templates that often address intellectual property issues and publication norms under a scholarly approach. Others encourage reflections on personal experiences or have no consistent requirements.

Bachelor's and master's design theses generally have a practical component: problem-based, situated work that results in an artifact, plan, process, policy, or guidelines. Doctoral programs generally expect a more analytical approach that contributes to the generation of theory under rigorous research standards. Consistent with other areas of emergent practices, this student work represents important speculation on the field worthy of a publication platform for sharing both findings and the curricular practices that support it.

#### 4.2.5 Sprints

Sprints are focused, time-bound collaborations. Organizations use them as special workshops or as part of a basic toolkit under agile development processes, depending on the maturity of the service design culture. A sprint is typically short and intense, spanning one to five days in duration. It has a clearly defined objective, understood by all participants as the end-state of work.

Sprints usually bring together diverse experts whose skills and perspectives constitute a cross-functional team. They apply a service design methodology that guides a series of exercises or activities to stimulate creativity, foster multiple ideas, and facilitate decision-making.

#### What format of collaboration fits your needs?



Fig. 9: Maturity and Collaboration Type Matrix.

A key sprint feature is an emphasis on the rapid prototyping and testing of low-fidelity solutions for insights from real users or stakeholders.

Trained moderators often facilitate sprints, guiding participants through the various stages of work, ensuring adherence to schedules and rules for active participation, and resolving conflicts when necessary. In collaborations between universities and the public sector, there are opportunities for students to design and facilitate the workshop. Public servants get a taste of the intensity and outcomes of the service design process.

Gov Jam is a sprint version translated from the Service Design Jam and often organized by universities. Jammers work simultaneously and prototype services inspired by a common project or theme. The weeklong Global Design Jam occurs both physically and online, with different durations depending on the participation medium. These sprints bring together service providers and citizens, providing a first approach for engaging service design participants.

#### 4.2.6 Service Design Student Projects

Many university service design programs focus student work on practical projects. The best of this work engages real partners and real people in real challenges. Only 5% of survey respondents for this publication did not collaborate at all, while 90% partnered with the public sector in student projects. University curricula that focus on social good tend to work with both the private and public sectors. Faculty claim that student motivation is high when working with the public sector because they see such work as particularly meaningful. Only one survey respondent said that students prefer private sector work because they believe it engages them with "the real world." This perception may reflect limited student understanding of employment opportunities.

Most student projects last between six and twelve weeks. In a few cases, different groups of students work on a topic over several semesters. Around 50% of all interviewees stated that they regularly carry out student projects with a public sector partner over a long period. The benefits of a long-term partnership are obvious: managing expectations becomes easier, trust builds, and a common language develops.

The increasing challenges and consequences of public sector work argue for preparing university graduates to lead and innovate in this domain. There is a long-standing assumption that all design practices share roughly the same processes and similar problem scales. However, as services occupy more work in design offices and as public sector organizations look for strategies that address systems-level complexity, university curricula must confront a world of problems beyond "almost-perfect" artifacts and spaces.

## 4.3 Initiating Collaboration

Collaborations between higher education and public sector organizations arise from either partner. Although faculty, students, and alumni



Fig. 10: Which External Partners Do You Collaborate With?

may initiate work on behalf of their institutions, public sector organizations typically know less about service design and opportunities for collaboration with schools. Therefore, presentations by design programs and university participation in public sector events are good ways to open conversations about potential partnerships. Open house events with examples of successful projects, and "pitch days" in which public sector organizations brief universities on opportunities for collaboration are useful strategies. Once university programs and faculty build a history of public service projects, they may face more demand than they can meet; word-of-mouth often leads to a regular flow of opportunities from which to choose the best fit with the required curriculum and student groups.

Faculty typically make connections. They choose partners based on their professional network and personal preferences. Marfalda Moreira at the Glasgow School of Art commented,

"I choose organizations that I think would be a good challenge And these are actually nice human beings to work with because they are passionate." However, because this work takes individual commitment to lessthan-typical duties, relationships can end when key faculty or public sector employees move to other positions. Programs that seek longterm relationships with the public sector need to memorialize the commitment to collaboration in curricular requirements and mentor faculty for future participation.

Alumni play an important role in initiating public sector collaborations. Universities actively nurture alumni relationships for a variety of reasons. When well informed about the mindset, processes, and impact of service design, these graduates are entrepreneurial and show a strong preference for meaningful work with social impact.

"We have many of our graduates working for the public sector in the UK (for example at the Scottish Social Security) and we often invite them back to give expert input to our students and talk about their career path." Marfalda Moreira

Alumni have mature perspectives on service design and encounter opportunities for students to do good work that often falls outside the scope of their own professional assignments. It is likely that initial overtures for collaboration require further framing to fulfill curricular obligations, but there are great advantages in having enthusiastic advocates. Typically, a partnership begins with the discussion of a draft document that describes the participants, goals, and conditions of work. Partners negotiate subsequent revisions so that work proceeds under open and shared understanding of purposes, responsibilities, resources, and timing. Tuuli Mattelmak at Aalto University described the relationship with Espoo, the second most populous municipality in Finland,

"We typically start during the winter time to negotiate with Espoo, call for proposals, and try to adjust those proposals into a format and briefs that can be worked with by students during the six-week course. I think negotiation has much to do with the teacher seeing whether the framing and expectations fit."



Fig. 11: Initiators of Collaboration.

Non-academic administrative units within universities frequently help in matching academic programs with external partners and structuring outreach activities. Such staffing is common in institutions where public service is an explicit aspect of their mission. These units—or specific academic program staff with a similar assignment are often the point of first contact between the university and the public. They initiate conversations with organizations on behalf of an academic program or find interested faculty to respond to a public sector request. Staff often have more experience in developing memoranda of agreement than the faculty who run projects. They anticipate potential areas of risk, address intellectual property issues, and maintain a history of engagement with the organization that spans individual faculty. Some institutions also have units that manage student internships, extracurricular service-learning experiences, or co-operative education as their scope of work.

### 4.4 Benefits and Reasons for Stakeholders

The large and varied landscape of university collaborations with the public sector shows benefits for both.



Fig. 12: Benefits of Collaboration Between Universities and the Public Sector.

#### 4.4.1 From the public sector perspective

"One requirement I have when I'm setting up these collaborations is that the organization sees that they have a learning goal themselves, that they don't necessarily have a development goal, but that they have a learning goal connected to the project." Stefan Homlid, Linköping University, Sweden

"We probably agree that for us change, creativity and innovation are positively connotated. But it is not the case with everybody." Tuuli Mattelmäki, Aalto University, Finland

"Sometimes the projects developed with the students are a sort of Trojan horse. They are ways to shake up the company a little bit through activities done with the intent of training students, but with the power of presenting completely new perspectives on the usual business. This can bring the organization to the question 'why don't we try it?'" Anna Meroni, Politecnico di Milano, Italy

- Additional resources: It should not be, but it is a reality. When it comes to innovation, the resources of the public sector seem to be always limited. Having a team of students working on a project is often perceived as the only chance to give time and attention to important yet postponed projects / topics.
- Capacity building: Through collaboration, new knowledge and new skills are brought into the organization. Indirectly every service design project is a learning project.
- Cultural change: Public sector culture is shaped by the need for control and stability, and the service design culture is shaped by curiosity and the desire to change for the better. The requirements of the service design process challenge the role of hierarchy, the traditional silos, and the anxiety to play and potentially even to fail.
- New perspectives: Framing and reframing a briefing, zooming in and out, building new patterns, questioning given structures. All of these lead to new perspectives on given situations.

• Employer of choice: Through collaborations, the public sector has the opportunity to build relationships with young talents and present themselves as a potential employer – even an employer of choice. "Collaborators have the opportunity to change the paradigms of what they do. They also want to attract young people, because in Italy we don't yet have much of a culture of service design in public administration. But things are changing. So we have more and more positions in public administration, even though the positions are not very rewarding in terms of money." Anna Meroni, Politechnico Milano, Italy

#### 4.4.2 From the University Perspective

- Practical experience: For service design education, the practical experience of working with organizations on real cases is essential. No theory and no role-playing can replace exposure to real clients / partners with complex problems in often highly regulated environments. No case study can replace the experience of discovery with real people. And no checklists and bullet points can compare to the learning that comes from feedback in a real-world situation.
- The greater good: Some of the universities that participated in our research even have the university's contribution to society and the greater good embedded in their strategy. So, the collaborations feed into the strategic goal at a higher level.

"[Students] really like practical projects. Having this kind of real life case and working on that makes them feel like they can have this first hand in an intervention that might work. And they love to see things in practice; seeing things change, talking to people." Ivo Devit, University of Antwerp, Belgium

"The University of Lapland has the mission to have impact on society. It's very, very explicit." Satu Miettinen, University of Lapland, Finland "They're really interested in having this kind of experience. Most of our students are really mission-oriented. They come to Parsons and the New School because they want to work with socially meaningful projects." Lara Penin, Parsons School of Design / The New School, United States

"I need students who take the project seriously and are willing to go on a journey with me. I think our projects with public sector partners are very exciting for our students. They all want to do them. For them, that's why they're at the RCA." Clive Gringer, Royal College of Art, London, UK

"An employer in the public sector once told me that they wanted to hire a service designer but the job title had to be something else. They wouldn't let them hire someone with 'service designer' as a job title but the required skill set really was a service designer. Maybe we need a paper or a guide on 'How to hire a service designer without hiring a service designer.'" Iain Reid, The Glasgow School of Art, Scotland  Motivated students: Students are eager to spend their time on meaningful issues. And improving social and public services is so impactful for society that it is perceived as extremely meaningful and valuable to students. Students tend to choose universities that explicitly promote work on real-world cases with the public sector.

- Reputation: Successful collaborations have a positive impact on a program's reputation; being perceived as a relevant partner and expert on complex societal issues is also a motivating aspect for faculty.
- Financial benefits: Depending on the contract/agreement, third-party income can be linked to collaborations – this enables investment in additional staff and strengthens the capacity of the service design program.
- Jobs: Successful collaborations can lead to public sector partners hiring students. This is beneficial for the students, the public sector, and society. However, it is still a challenge to create official service design roles within the public sector.

# Challenges, 5 Success Factors, and Tools

Collaborations between university service design programs and the public sector represent a powerful nexus where innovation, societal issues, and the development of future service designers converge. Throughout the research, there were excellent examples: improving hospital emergency department management and service time; helping prisoners rehabilitate and transition to a normal life; engaging stakeholders in planning for a new healthcare facility; and setting up innovation labs for citizen co-creation in their cities. Municipal internship programs for university service design students strengthen the creative capacity of cities. And service design graduates now work with museums, libraries, and transportation and waste management. What these examples demonstrate is that high levels of success are possible when partners confront and tame the inevitable challenges in public sector work.

The following discussions highlight potential hurdles to overcome, as well as success factors to consider when developing university and public sector partnerships. The explicit focus in this discussion is student service design projects, since they are often the entry point for collaboration and all other types of collaboration often build on class experiences.

To assist university programs in collaborating with the public sector, this publication also offers a toolkit. The tools reside in a Miroverse Toolbox on the Miro platform, accessed through links in this text. Philosopher John Dewey described the role of tools as "disclosing relationships not otherwise apparent."<sup>1</sup> Consistent with this idea, the purpose of the tools in this publication is not to arrive at a particular design outcome. Instead, the tools direct attention to activities that ground the partnership and reveal aspects of problem-solving that partners may otherwise overlook. In addition, they make external the distinct concepts, processes, and values that partners may incorrectly assume are shared. Such externalization allows teams to account for

<sup>&</sup>lt;sup>1</sup>Dewey J. and Boydston J. A. (1981). *John Dewey: The Later Works, 1925-1953*. Carbondale, IL: Southern Illinois University, p. 70.

differences, manipulate strategies, and reach consensus regarding how to move forward.

## 5.1 The Landscape of Challenges

The identification of challenges in this publication emerged from indepth interviews with 36 international faculty experts. To provide a structured framework for understanding current practices, Köln International School of Design interviewers identified 14 challenges:

- 1. Context and environments
- 2. Partner maturity
- 3. Agreement and contract
- 4. Stakeholder identification
- 5. Level of complexity
- 6. Ethical issues
- 7. Understanding the problem
- 8. Balancing project objectives, learning goals, and academic rigor
- 9. Aligning working cultures
- 10. Ensuring commitment
- 11. Engaging students
- 12. Public sector overload
- 13. Evaluation and measurement
- 14. Documentation and publication

To further clarify the landscape of challenges, researchers mapped responses with different project phases:

- Planning the project,
- Starting the project,
- On the go, and
- After the project.



Fig. 13: Landscape of Challenges.

Some challenges persist across phases of work; challenge 8, for example, can be understood as an overreaching challenge.

The framework below represents a range of challenges and leads to specific activities through which partners can address them. This breakdown is intended to operationalize the research findings for service design educators and to establish direct applicability to projects.

## 5.2 Planning the Project

This phase of work is about managing expectations. An initial project brief and contract describe partner responsibilities in the work that follows. Partners use such documents to negotiate a shared conception of the collaboration, even though more detailed dimensions of the problem itself are likely to emerge across time. Design theorist Horst Rittel described "wicked problems" as understood through argument and coming into focus gradually through the act of working on them.<sup>2</sup> However, without agreement on the fundamental purpose of the investigation, partners are unlikely to make good use of their cross-functionality and collective creativity.<sup>3</sup> And if partners don't adopt open conversational practices and establish trust from the very beginning of work, they are unlikely to capitalize on the benefits of collaboration. The time spent in this phase of work is crucial, especially in the first collaborations.

There are key planning considerations in this phase of work. It is important for partners to understand the context *in which* and *for which* collaborative work will take place. In addition, partners may not be at the same level of understanding service design as a practice, and students may not fully grasp the work of the public sector organization. Therefore, some orientation may be necessary. Identifying key stakeholders in advance guarantees that the search for information and co-creation methods is well matched to the design task. As a better understanding of the problem emerges, it is also important that the proposed scale of action not exceed the resources and time under which the organization is prepared to act. And partners should agree on the core values and ethics that drive decisions throughout the project.

#### 5.2.1 Considering Context and Environment

The definition of a problem is subjective and usually political, especially with regard to public services under the regulations that govern them. There are many ways to frame a problem and many future ways of being to bring forth. Designers are facilitators and creative problem-solvers who assist stakeholders in (re)framing a problem, energize the public sector through new perspectives, and co-create new futures. Such activities must account for existing laws, organizational

<sup>&</sup>lt;sup>2</sup>Rittel, H. and Webber, M. (1973) "Dilemmas in a General Theory of Planning", Policy Sciences, Volume 4, Elsevier Scientific Publishing Company, Amsterdam. p. 159.

<sup>&</sup>lt;sup>3</sup>Mathieu, J.E. and Goodwin, G.E., Heffner, T.S., Salas, E., and Cannon-Bowers, J.A.. (2000). "The Influence of Shared Mental Models on Team Processes and Performance." Journal of Applied Psychology 85. Pp. 273-283.

decision-making structures, and inevitable areas of conflict. Public sector organizations are closely intertwined with the local and political environment and prevailing national cultures, policies, and perspectives on design. Regardless of how socially and environmentally desirable a service design may be, it is not likely to succeed if not politically viable and organizationally sustainable.

Governing parties, national and local laws and regulations, and university guidelines all influence what is possible. Hierarchies and internal conflicts within organizations further complicate collaborative efforts. One interviewee for this publication observed,

"Projects are going to be challenges that are sometimes almost impossible to get through when they're political in nature, and especially within a three-month process. And that's something that we're struggling with, if I'm honest, in terms of how to move this [work] forward.

RMIT service design professor Matt Kuroswik concurred,

"Public sector innovation in Australia is highly controlled in the framing area by the government itself. So, there is very little discovery work that's ever done that challenges a brief; the opportunity to reframe the brief from a government point of view is very, very limited."

In China, the government controls the public sector. Despite shared values for improving social welfare and managing social services, tight government control poses unique challenges. In contrast, the rapid turnover characteristic of democratic government positions creates instability and hinders sustained action, making it difficult to adopt innovative ideas. Mari Suoheimo at the University of Lapland in Finland said,

"To make it better, the law has to change. [The public sector] is quite different from the private sector in that sense. The freedom of design is limited through legislation and if you don't manage to get on that level, it's hard to change concrete policies."
These findings underscore that the politics are particular to place. Anna Salmi from Laurea University of Applied Sciences in Finland said,

"Systemic knowledge and understanding how the society is structured and works is crucial. How is the public sector organized? Which actors are responsible for which parts of services? You need to know the laws and regulations, not think like sometimes we tend to do in design schools."

Where governments commit to design principles, there is greater flexibility in what service design collaborations might produce. Where there is less public sector understanding of design in general, universities must play a role in elevating discussions of how the field can assist governments in better serving their citizens. However, universities alone cannot initiate these conversations. National and local networks, such as the Service Design Network, create synergies to drive change on the political platform.

#### 5.2.2 Assessing Partner Service Design Maturity

When planning and implementing a collaboration, the partners' service design maturity level is an important consideration. It is often taken for granted that others understand what designers do, but this is not always the case. Clive Gringer observed, "People's perceptions of design are the things we have to break down all the time because they don't understand design as problem solving." Nicola Morelli at Aalborg University in Denmark added,

"In this sense, language is important, but in many cases the problem was not the language itself but the jargon. So, understanding when we ask, 'What is your ecosystem?'... [a municipal city] says, 'What are you talking about?""

The better prepared the public sector partner in the basic principles and procedures of service design, the greater the chances of success. This may mean that in first-time collaborations, university programs



Fig. 14: Miroverse "How to Public Sector?" Service Design Onboarding. This tool provides a framework for introducing the public sector to service design and familiarizing partners with the characteristics, advantages, and possible formats of collaboration. https://miro.com/app/board/uXjVNnNgS9s=/

provide service design case studies, procedures, and core values and practices to orient the organization and team. Glenn Robert at King's College London, UK, advised,

"It's about being very careful in the initial stages of a project and providing reassurance; getting them into the right mental space where they are willing to give this a go at least. And then once they do that, we can progress."

The toolkit accessed through the link below includes a simple application for creating a presentation about service design in the public sector. While some universities have their own approaches to this im-

### Service Design Maturity Matrix



Experimenting with SD	Integrating SD	Experts in SD
<ul> <li>SD to improve existing services</li> <li>establish a common understanding of the citizens &amp; customer perspective</li> </ul>	<ul> <li>SD for innovation</li> <li>identify unmet stakeholder needs</li> <li>identify and implement new services</li> </ul>	<ul> <li>SD for strategy</li> <li>explore future service developments</li> </ul>
<ul> <li>team trainings &amp; up-skilling</li> <li>bringing additional skill sets &amp; disciplines into the team</li> </ul>	<ul> <li>dedicated service designer(s) in teams</li> <li>external support (agencies, universities, etc.)</li> </ul>	<ul> <li>decentralized SD teams &amp; SD units</li> <li>management-level positions lead SD efforts</li> </ul>
<ul> <li>SD in project work</li> <li>prototyping and implementation of quick-fixes</li> <li>limited involvement of citizens/ users</li> </ul>	<ul> <li>SD in strategic projects to discover and explore new areas for services</li> <li>collaboration projects with academic institutions</li> <li>co-creative design with citizens and stakeholders</li> <li>prototyping and implementation of new services</li> </ul>	<ul> <li>trend and future forecasting to adjust strategy</li> <li>consistent evaluation and iterative improvement of services</li> </ul>

Fig. 15: Miroverse "How to Public Sector?" Service Design Maturity Matrix. This tool helps to assess the maturity of the public sector organization in relation to service design. According to the identified maturity, appropriate steps can be taken to ensure a successful collaboration. https://miro.com/app/board/uXjVNhgwMog=/

portant orientation, others may need guidance in developing agreements regarding the practice among partners.

Unanimously, experts interviewed for this research among participants in this research reported advantages in long-term collaborative relationships. Amalia de Goetzen at Aalborg University in Denmark commented that, "If there is service design competence, [work] is easier; if not, it is more difficult." Anna Salmi added, "It would be great if we could do more continuous collaboration. I think this project [format] is really, really limited. So, the world savior in me wants to have a true possibility to make a change of course."

Recurring work builds trust, deepens understanding of service design, and acknowledges the limitations of working with students. It also builds a repository of past work from which to draw examples and evaluate outcomes.

#### 5.2.3 Reaching an Agreement or Contract

Contracts or memoranda of agreement codify project expectations for partners. Marfalda Moereira affirmed that, "Contracting is a crucial part of these collaborations because that brings expectations to the table." Many universities have administrative departments that support the development of these documents. Generally, these professionals are more familiar with the legalities, risks, and intellectual property issues than are faculty. Likewise, governments may regulate what is possible in work between universities and public sector agencies. Therefore, the specific content of any contract is particular to the project.

However, there are general categories of collaboration that are likely to be relevant to most project agreements:

- Financial issues
- Project deliverables
- Communication processes
- Criteria and measures of success

If and how the public sector compensates academic programs for project work is a matter usually determined by the university administration and laws governing issues ranging from the use of facilities dedicated to the project to academic competition with the private sector. In some cases, students cannot receive both university credit and

# **Checklist Components**

# **A) Project Definition**

The project definition is crucial as it serves as a cornerstone for effe collaboration. It defines the content and the scope of the project, fa expectation management and addresses organizational needs.



Fig. 16: Miroverse "How to Public Sector?" Collaboration Set Up. The tool helps to set up the framework for collaboration projects between service design universities and public sector partners, including the formal foundation for the collaboration. It clarifies the roles, responsibilities, obligations, and rights of the partners.

https://miro.com/app/board/uXjVNnNoTtY=/

payment, unless their work is done through an off-site internship. Other policies may apply to money that contributes directly to the project budget, who is authorized to spend, and accounting procedures that track the dispersal of funds.

Faculty interviewed for this publication had varied experiences with funding project work. Some don't sign contracts because public sector organizations don't have the money to pay them. A comment by Iain Reid suggested a general perspective on collaboration that didn't call for money, "Collaborators are not viewed as clients but as contextual partners." Mark Jones at the Institute of Design at Illinois Institute of Technology, USA, observed, "We used to charge private companies, but we stopped doing that because we found that when we charged money they were more concerned about the brief and wanted to control outcomes. So, we actually stopped doing it from an education point of view to have more freedom by just saying we're doing it for free. [Their] job is to give access to [their] employees for interviews. [They're] going to do reviews... but [they're] not going to control work that is publishable and freely open to the world."

On the other hand, this work represents an investment in the public sector by the university, above and beyond the demands of a typical class. Mari Suoheimo commented, "The pressure to raise funds is growing."

Even if the partnership doesn't involve money, written agreements that describe deliverables and rules governing their use, including non-disclosure agreements and intellectual property rights are advisable. These written agreements also assign specific roles to partners and communication channels that maintain clarity regarding project status as work proceeds. There should be further agreement as to the criteria for success, especially given the short time frames typical of student work. Rarely do semester projects allow for design, implementation, and testing that fully address the consequences of design action. Therefore, determining the measures applied to end-of-course work needs to be realistic and well understood by all.

#### 5.2.4 Identifying the Right Stakeholders

As a collaborative activity, the success of service design depends on having the right people involved at the right time. This includes access to people from across the organizational hierarchy. As well as considering the wider political and local environment, however, strategic choices need to be made when identifying the particular stakeholders who actively participate in a collaborative project. Anna Meroni commented, "It is important [to consider] the hierarchical level you are contracting." Identifying and engaging relevant stakeholders is crucial for any meaningful change to take place.

Decision-makers, often at the upper management level, need to be actively involved in the collaboration to achieve effective results. Satu Miettinen at Lapland University in Finland affirmed that,

"Only if you succeed in involving all stakeholders—also, the management level—is there a chance for transformation... In the public sector, [the work] is always transformation management, so you need all stakeholders involved."

Management controls communication channels, access to information, and deployment of the human resources necessary for success. Experts highlight treating the public sector as a client and managing expectations as success factors. The commitment of leadership and management is particularly important for the success of long-term research projects that contribute to transforming the organization, not simply solving an isolated problem.

The challenge in involving stakeholders includes ensuring a diversity of input from the right hierarchical level. While in-the-trenches employees may have good ideas of where problems reside in the service system, it is unlikely that a public sector organization will sustain new practices without buy-in at the policy level. New technological strategies may be technologically feasible but not economically viable. And making services equitable depends on understanding how change affects all users, not simply a general idea of "the customer." The task is to persuade stakeholders and their peers to participate from the outset, rather than miss opportunities and later regret shortfalls in understanding the project from multiple points of view.

It is also important to tailor stakeholder engagement to the participant group and the political environment. Organizational leaders can be helpful in planning the collaboration and navigating the challenges of reaching people. At the same time, less powerful participants need assurance that there is value in their observations regarding conditions. Designers need to construct a project narrative that is consistent and jargon-free in all conversations, but that also puts participants at ease. Further, stakeholders need to understand what service designers are asking of them at a particular time in the transformative process. Asking for feedback on a prototype or strategy is different from implementing a solution; the two conversations may imply very different consequences for employees.

#### 5.2.5 Setting the Level of Complexity

Services reside within complex causal networks, unlike industrial-era causal chains in which action at a few leverage points in the design of a physical artifact resolves a simple problem. Today's services are usually components of larger ecologies in which any element has myriad relationships with other system elements and with forces in the external environment. Complexity is defined not only by the number of elements but also by the volatility and velocity of change in their relationships. Therefore, public sector service design can tackle problems at different scales and at different rates of change.

In entering into collaborations with the public sector, university programs must determine where to draw the boundaries of an investigation. Improving the user experience of an existing website is vastly different from converting operations from a physical to a digital system. How success might look, the resources and expertise required to achieve it, and the time to completion all relate to the scale and scope of the collaboration. Although the root cause of a much larger problem may remain fully unresolved, collaborators can agree on the current level at which to take action and on how far-reaching the consequences of that action are likely to be.

University and public sector partners make such decisions by considering a variety of factors. Ideally, there is a shared understanding of the larger problem space and how much of it a specific project can address within the designated time. Faculty or doctoral students, not undergraduates, typically have the research skills to map the network of relationships. Agreement on a manageable scope of work within this larger problem space depends on a variety of factors:

Project suitability for students at a particular level— Not all work is appropriate for students. There may be legal, technical, and time constraints that argue for faculty rather than student participation. In other cases, the scope of the project may be too extensive for completion under the constraints of student schedules or their level of expertise or disciplinary backgrounds. Jane Kukk from Tallinn University of Technology in Estonia advised,

"We discuss whether the challenge is suitable for a student project. Sometimes it is too broad or the people involved aren't really ready for change... and putting a solution into practice. If that's the case, there is no point in wasting everyone's efforts."

- Access to disciplinary expertise— Because service design is a holistic practice that often calls for design, management, social science, and technology expertise, it is important that the design team includes the right knowledge and skills or has access to experts beyond team membership. This may mean involving more than one university program, requiring additional coordination by faculty. Or, it may argue for a broader representation of various operations within the public sector organization than initially seen as necessary. The more functionally diverse the team, the greater the challenge in reconciling the language of collaboration and worldviews on the problem.
- **Public sector commitment to change** Unless there is a clear understanding of a hypothetical investigation, partners need to agree that the public sector organization is committed to the access, resources, personnel, and follow-through necessary to implement a service design solution. For some organizations, working with students can be an overload in the time and resources necessary for success. Mark Jones, who teaches graduate students, argued, "We choose a partner and have as broad a brief as I can manage with the partner so it doesn't get too constrained. We don't want to fix

people's little problems." However, in agreeing to this openness, the organization needs to understand the possible level of commitment involved. Otherwise, students run into roadblocks that compromise the timeliness of the investigation and confidence in its recommendations.

#### 5.2.6 Anticipating Ethical Issues

Service design is a form of social and environmental production. Service design action has consequences beyond the consumer-facing layers of society: in infrastructure, governance, culture, and nature. And as technology takes on increasing roles in people's everyday lives, it embeds values and biases deep within systems and below the levels of people's detection, including those who build services on third-party platforms. The design of services determines who can and cannot use them, how users perceive the values of the organizations that offer them, and the ethics of behaviors they enable.

Beyond projecting profiles of potential users, service design projects engage students with real people: in research terms, with "human subjects." One faculty expert commented that,

"Service design in the public sector often deals with vulnerable communities. Inclusion and exclusion, exploitation, interference, and raising expectations that cannot be fulfilled are issues of ethical reflection."

Kaja Misvaer Kirstorp at the Oslo School of Architecture and Design in Norway said,

"We didn't want a brief that involved children because we wanted the students to talk to users and not need parental consent. We didn't want to target vulnerable user groups because [students] are not yet trained to deal with that situation."

Mark Jones agreed,



Fig. 17: Miroverse "How to Public Sector?" Identify Potential Harm. This tool, which can be conducted as a mini-workshop, provides a step-bystep guide to the potential impact areas of your collaborative project and helps you identify project ethics and potential harm. https://miro.com/app/board/uXjVK9TVDII=/

"How do you deal with vulnerable populations in doing research? That's become a big topic at IIT, and the stance is that research on vulnerable populations without a longterm commitment is exploitative."

Another expert reported that their university has

"come up with rules around post-graduate research or any study that requires human data collection... anything that is considered sensitive would have to go through a full ethical approval process, which is impossible from a design perspective."

Institutional Review Boards for vetting project proposals by American universities are either internal (composed of research faculty from across the institution) or external (composed of faculty from a number of institutions). Many universities mandate IRB reviews for public sector work and evaluate how academic programs propose to inform participants of project purposes; determine who has access to information; collect, store, report, and dispose of data; and inform participants of potential effects. Verification of "informed consent" is usually required. These reviews can strengthen projects, reassure public



Fig. 18: Miroverse "How to Public Sector?" Ethical Reflections. This tool helps students reflect on their potential biases and blind spots when it comes to ethics. This helps them identify areas where they need to pay special attention. https://miro.com/app/board/uXjVK9Wx8NQ=/

sector partners that stakeholders will be treated well, and highlight for students the breadth of ethical concerns.

Work with the public sector also reveals that service designers are not objective bystanders; they have their own cultural positions that can influence the direction of a project. Lara Penin offered,

"I don't assume that anybody will come from the same understanding of things as I do. I have adopted a lot of decolonial perspectives in terms of design in general. The way I communicate with students is very much through a critical lens that doesn't assume or accept the universality of design or the universality of principles of service design."

There are other ethical concerns for the effects on students. A faculty expert commented,

"Students have to be carefully considered in regard to their emotional stability and the burdens put on them through specific [project demands]. How far out of their comfort zone can you push them and how much supervision and safe spaces do they need?"

Another expert cautioned that, "Exploitation of students can also be an issue. Are they doing unpaid work?" Or, do they unknowingly relinquish intellectual property rights simply by enrolling in a course required for graduation? These concerns look beyond the specific project itself. Lara Penin,

"If we look at a professional perspective for young designers, it is a question of self-exploitation and how we create a system that also pays young people for that kind of work—making a living from trust-building, from getting access to specific communities in order to be able to design from the inside."

It is important that ethics not be an after-thought, something to check after arriving at a design solution. Instead, it is a worldview or a set of values that drives service design from the very beginning of work and is at the heart of an organization. For example, there is a difference between reducing the expense of one service through a cheaper alternative and evaluating organizational performance under a triple bottom line that considers social and environmental consequences as well. Therefore, ethical considerations reside at different scales: for individuals, the organization, the culture, and the planet.

#### 5.3 Starting the Project

#### 5.3.1 Understanding the Problem

Ensuring that all stakeholders share the same conception of the problem is not simply a matter of language clarity; it influences all aspects of the collaboration. Partners cannot assume that there is consensus regarding the task or that a public sector project brief actually reflects existing conditions. Ivo Dewit emphasized the importance of reaching an explicit agreement. He highlighted that public sector partners often seek solutions to symptoms of a problem without determining root causes. In these cases, basing design action on the client brief may leave the core problem unresolved but also change surrounding conditions for any future action.

Further, there are many ways to frame a situation, all of which may be valid. The process of negotiating the problem frame reveals differences in core values that guide the search for information, identification of relevant stakeholders and constraints, ranking of competing priorities, choice of methods, and expectations of outcomes. Professor Judah Armani from Royal College of Art stated that, "The real design work is the definition of the problem and the creation of the brief... because lots of people can engage." Participants are more productive when their work is aligned with shared project objectives.

Time, access, and/or available resources often determine the problem scope that a university program or public sector organization can address. These limitations may argue for phased work across multiple projects or focused collaboration on a particular component of the service system. In these instances, however, agreeing on a model of the larger problem space contextualizes the narrowed task. It allows designers and stakeholders to adopt a theory of "how things work"—a story of relevant stakeholders, systems that govern their behavior, external forces likely to change surrounding conditions, and possible consequences beyond more focused problem boundaries. Systemslevel problems cannot be solved without such a model. In addition to a narrative project brief, a visual representation of the problem con-

# **Problem definition**

Summarize the problem in a few sentences.

What is the challenge? How can the problem be described? What opportunities are there?

## **Expectations**

Summarize the expectations in a few sentences.

What are we trying to do? What do we expect to accomplish? What impact do we want to have?

Fig. 19: Miroverse "How to Public Sector?" Shared Problem Understanding. This tool provides a framework for a short workshop that helps to create a shared understanding of the problem that will be the starting point for the joint project. https://miro.com/app/board/uXjVNnMQ5o4=/

text overcomes differences in professional language in communicating these concepts.

It is also important to adjust the definition of the problem as more information becomes available, reframing when necessary. And services are living systems that evolve with surrounding conditions. Monitoring their status or behavior across time allows public sector organizations to anticipate future change and design for resilience. Today's technology can embed mechanisms for user or environmental feed-

# Glossary Creating a shared language



Fig. 20: Miroverse "How to Public Sector?" Mini Glossary. This tool helps to create a common language within your collaborative project between service design universities and public sector partners. https://miro.com/app/board/uXjVN5LR0yI=/

back. Artificial intelligence can generate possible responses to this feedback for consideration by public sector managers, including the system's "confidence" among various alternatives for action. In other words, understanding the problem includes foresight regarding how future conditions that affect the service might change.

#### 5.3.2 Balancing Project Objectives, Learning Goals, and Academic Rigor

Public sector organizations have the dual challenges of overcoming immediate service design problems and sustaining a long-term service design perspective. These two objectives typically call for different kinds of action. "Service Design Lite"—is a frequent response that compromises service design principles to make a solution feasible within a short time frame. This objective may be what brings the public sector organization to the university for help, a low-consequence "quick fix" that benefits from additional attention by students. While this approach may satisfy short-term needs under an existing organizational structure, it is often at the expense of comprehensive change in the organization's culture that sustains long-term service design success.

If service design is to transform service outcomes, the design process must support research and practices at the level of organizational infrastructure and governance. Projects cannot leap to idea generation and action on symptoms without fully understanding the root cause of problems.

It is also important to consider the value of collaboration for the university. Projects should achieve outcomes beyond doing good deeds for good causes or providing one-off solutions that organizations cannot sustain without free student labor. They are extensions of curriculum that carry expectations of student learning and qualify graduates for future work. Therefore, these learning experiences must be designed; they must balance project objectives, learning outcomes, and academic rigor.

Faculty experts were clear that the problem-solving undertaken in collaboration with the public sector needs to fulfill objectives beyond that of service to a worthy organization. Mari Suoheimo commented,

"Often in service design in [academia] many of us are very much interested in hands-on research and practice, but we also need to understand and create new theories to make practice better."

Fred Creedon from the Cork Institute of Technologies in Ireland emphasized transferable learning about the nature of organizations and how they operate,

"It is essential to integrate into education the comprehension of organizations, including understanding politics... and acquiring the skills to create alliances and establish support systems."

Jürgen Faust, professor at SRH Fernhochschule, Germany, addressed the need for the pedagogy of collaborations to foreground transferable models, "Design educators often acknowledge that their teaching methods lack robust foundations in models. If instructional practices are not well-supported by theory and models, they are not very scientific or simply not evidencebased. That constitutes the main problem."

#### 5.3.3 Aligning Working Cultures

While it is important for participants to share an understanding of the service design problem, it is equally important to agree on the process used. The challenge is to align two very different cultures—the open-ended problem-solving culture of design and a rules-oriented public sector culture that typically prioritizes predictability and risk aversion. At the same time, public sector employees will have varying degrees of commitment to past practices, depending on the tasks and metrics for which they are accountable. If we want to innovate in government, we have to figure out how to encourage public servants to make mistakes in the name of progress says Brian Elms, Innovation Practice Lead at the Change and Innovation Agency in the city of Denver.<sup>4</sup>

These differences call for transparency in the research and design processes used by the team. It is easy to assume that because management understands how work will proceed that all employees do as well. Explaining the role of service design and a process with phases of exploration > creation > reflection > implementation prepares all stakeholders for the work to come. Employees need to share a vision of success in which change is positive. They need to understand when project activities are exploratory and when decisions have been made regarding implementation.

Underpinning these discussions is the concept of designing *with* people rather than *for* people. Researcher Liz Sanders describes a historical transition in how designers think about the beneficiaries of their

<sup>&</sup>lt;sup>4</sup>https://apolitical.co/solution-articles/en/why-public-servants-must-learn-to-fail (accessed 11 August 2024)

# People

# EqualityHierarchyPatienceProfessional-<br/>ismEloquencePunctualityTrans-<br/>parencyRelaxed<br/>interactions

During collaborations, ... is/are important.

Fig. 21: Miroverse "How to Public Sector?" Cultural Check. The purpose of this tool is to visualize differences and similarities between the working cultures of the service design program and public sector partners. https://miro.com/app/board/uXjVNnN0\_J0=/

work: from consumers, to users, to participants, to co-creators.<sup>5</sup> Students must view stakeholders as "experts" in their lived experiences. They must value the use of participatory methods—not simply as confirmation for their own ideas—and listen as well as talk. Co-creation methods involve more than stakeholders providing feedback on designers' solutions to the problem; they empower people in actively shaping outcomes from the very conception of the problem through the generation and testing of alternative solutions.

<sup>&</sup>lt;sup>5</sup>Sanders E.. (2006). "Scaffolds for Building Everyday Creativity." In *Designing Effective Communications*. Jorge Frascara. New York: Alworth Press, p. 66.

#### 5.4 On the Go

Even though the planning phase sets many factors for the success at the beginning of a project, keeping on top of priorities throughout the process is important. Some ethical issues, for example, can't be anticipated, arise during project work, and require a reassertion of core values. The definition of the problem also evolves over the course of a project and must be adjusted continuously to meet current conditions. However, maintaining the motivation and commitment of those involved is of particular importance during the course of the project and is the topic of this section.

#### 5.4.1 Ensuring Commitment

While enrollment in a course, internship, or research obligation ensures some level of student and faculty commitment to a public sector collaboration, public sector employee engagement is less certain. Management may assign participation to an employee who is not fully invested in outcomes and simply views the project as "outsourcing." In other cases, working with a university is on top of public sector employees' other assignments and without additional time and resources. Priorities may change over time and the attention to the project may suffer. Further, when the project calls for involvement by more than one public sector department, it can be unclear how employees interact and who is responsible for decisions. Uneven levels of engagement can jeopardize project outcomes.

Research for this publication found different levels of public sector involvement.

The lowest level typically involved sharing case studies and information. In these instances, the expected outcomes were uncertain. Employee inexperience with service design contributed to ambiguity regarding a vision of success and concern that engagement may not be worth their time.





The next level included providing feedback at interim or final presentations of student or faculty work. While this supports work with new information and allows for redirection of effort, there may be questions of how knowledgeable participating employees are about the problem and collaboration. Students must distinguish between employees' personal preferences and the priorities of the organization, especially when the points of contact are limited or inconsistent.

Active public sector participation at the leadership level is necessary to respond to long-term goals, transform essential processes, and implement innovative solutions. The larger the public sector organization, the more complex its decision-making hierarchy. If public sector feedback, direction, and resource allocation come from too low in the hierarchy, there is a good chance that student efforts will produce little effect on how the organization achieves its service mission. Student and employee motivation also plummets when managers disengage. Even high-level leader attendance at kick-off and final presentations shows respect for student contributions and inspires confidence that the organization values ongoing interaction with the university.



Fig. 23: Miroverse "How to Public Sector?" Involvement Check. By going through five dimensions of involvement, this tool helps to discuss and improve the commitment in collaborative projects between service design universities and public sector organizations. https://miro.com/app/board/uXjVNww5Qvg=/

#### 5.4.2 Engaging Students

As students hold significant responsibility for the outcomes of public sector collaborations, their level of engagement is both a challenge and a success factor. If they lack motivation or are unreliable in carrying out tasks, results may not be as expected. A number of issues may contribute to low student motivation:

- Lack of familiarity with service design concepts and methods
- Lack of confidence in addressing the problem scale



- Fig. 24: Miroverse "How to Public Sector?" Student Maturity. This tool includes a survey-like structure for service design students to selfassess their experience and knowledge of service design and the public sector. Based on the results, student teams collaboratively create a team agreement. https://miro.com/app/board/uXjVKbdzzd0=/
  - Interpersonal demands in working with stakeholders and in teams
  - Time lag in public sector response to information requests or shared tasks
  - Lack of public sector enthusiasm for their work

Faculty must monitor student work and probe regarding any lack of progress. Ruth-Helen Melioranski at the Estonian Academy of Arts warned,

# **Checklist Components**

# A) Before the project

#### Set learning goals:

Define and share skills students can gain. For example: At the end of the project, students will have ...

... developed communication, information-building and workshop facilitation abilities.

... the ability to work through and reframe the problem presented by a client using a holistic and systemic understanding. Motivate students by ...

... defining deliverables and expectations regarding the potential deliverables and successful outcomes at the beginning of the project.

... providing preparation material.

... openly discussing students' expectations and motivations and incorporating them into the project framework.

# Tailor the project to diversity:

Understand the students' levels of knowledge about the public sector and the complexity of public sector services, e.g. by using the tool "Student Maturity".

Understand the students' levels of knowledge about service design and the application of it to the public sector services, e.g. by using the tool "Student Maturity".

Fig. 25: Miroverse "How to Public Sector?" Student Engagement. The checklist provides an overview of possible steps that can be taken to enhance student engagement in a collaborative project between service design universities and public sector organizations. https://miro.com/app/board/uXjVN2K1gzM=/

"These are still students and they can disappear if they decide not to continue with their studies—for family issues or whatever it might be. It's not only keeping the partner motivated, but we have to motivate the students as well."

It is also necessary to fully orient students for this work. Gerda Mihhailova, management lecturer at Pärnu College, University of Tartu, Estonia, commented on preparation for a tourist destination project,

"We have a two-day intensive meeting where [students and public sector partners] get to know each other and go through the first steps of the process. After these two days, they know the double diamond process... and tools." The research for this publication showed that structured preparation for public sector collaborations is the exception, not the norm. In most cases, universities throw students into learning by doing. Both the design and management fields, in general, are remiss in teaching discrete skills of project management.

In addition to service design knowledge and skills, universities need to prepare students socially and emotionally for engagement with shareholders and teams. They need to understand their roles in public sector work. Active listening, "reading the room," and modeling what they hear from others are not skills typical of other class experiences. The service design project may be the first time students facilitate a workshop, conduct a professional interview, or negotiate design ideas with people from other fields. And some public sector work may require special preparation. Judah Armani recounts preparing his students to work in challenging situations, like prisons. Emotional support for these students is as important as any technical or process training.

Likewise, students often lack team-building expertise. University disciplinary silos and scheduling encourage students' teamwork only with peers in their own disciplines who share similar worldviews. And few programs teach and evaluate team and leadership skills; instead, they place students in group work expecting them to figure out on their own how to manage workflow, resolve conflicts, and reach decisions. For many students, teamwork means a loss of control in high-stakes activities or a division of labor in which they are only accountable for a narrow task, not overall project outcomes. And faculty evaluation frequently focuses on the quality of work products, not how those products came to be as an important learning objective. Therefore, faculty need to shift the student value system to the behaviors and attitudes of service design work.

#### 5.4.3 Addressing Public Sector Overload

The research for this publication found that the outcomes of a service design project can overload the public sector organization. Tuuli Mattelmaki at Aalto University observed,

"[Public sector partners] are sometimes a bit frozen when they see the resulting service design. They might be unable to deal with them and paralyzed about how to take them further."

Students' effort to see the big picture can lead to recommendations that far exceed the partner's capacity to implement them. Students need guidance regarding which findings to present and how to stage steps toward long-term transformations that are concrete and feasible.

Scaling responses might suggest phasing work in a master plan, first applying guiding principles to existing operations rather than implementing new initiatives, or testing a few prototypes. In some cases, a student internship with a specific follow-through assignment can follow the class project. Mark Jones described a recent project to reduce parking fines,

"Policies were really biased against low income people. People were getting fines and over a period of time they doubled, tripled. They started to go bankrupt. So in the second half of the semester, the students focused more on things that could be implemented. They wanted to be able to fix things in a reasonable amount of time. Just to do a whole system approach is a multi-year project."

Students began by mapping issues of poverty, but in a second phase faculty refocused them on the parking problem.

A design strategy for taking on large challenges is to break down the problem into smaller chunks. In some cases, this may mean taking on a narrower problem definition, by drawing problem boundaries on a smaller section of the organization's operation or by focusing on a specific stakeholder group. But helping public sector partners distinguish among audits of existing practices, identification of relevant service design principles, guidelines and prototypes for intervention, and processes for implementation may also reduce overload by suggesting various lenses through which to view the larger task.

## 5.5 After the Project

Usually at the end of a project and after the final presentation, professors and students are busy checking documentation and evaluating student performance. However, just as important is reflection on the original problem frame and results in addressing student learning objectives. In other words, there are two lenses for evaluation: one on the outcomes achieved through a service design intervention and another on the design of the project as a learning experience. Both require university and public sector input and either can be the topic of publications. And both call for systematic analysis, shape public perception of the university and partners, and inform future collaborations.

#### 5.5.1 Evaluating and Measuring

Prototyping is a crucial step in the service design process. As Villa Alvarez et al. pointed out, prototyping has four main purposes: communication, exploration, evaluation, and experimentation, followed by learning, evolution, understanding, demonstration, integration, piloting, and milestones.<sup>6</sup>

Prototyping may occur throughout the project or after deciding on a likely solution to the problem. Interim testing builds public sector confidence that final recommendations are grounded by evidence from stakeholders in concrete situations. It also demonstrates how organizations may make incremental progress on manageable "chunks"

<sup>&</sup>lt;sup>6</sup>Villa Alvarez, D., Auricchio, V., and Mortati, M. (2020) Design prototyping for policymaking, in Boess, S., Cheung, M. and Cain, R. (eds.), Synergy - DRS International Conference 2020, 11-14 August, Held online. https://doi.org/10.21606/drs.2020.271

of the overall problem when the resources for full implementation are not yet available. However, prototyping a dynamic service design involves challenges different from those of testing physical messages, objects, and spaces. A theory of situated action—users' ad hoc improvisations to circumstances not anticipated by the plan—argues for studying breakdowns for more than simply redirecting user behavior to an optimal path.<sup>7</sup> Insights in these situations can build an understanding of what people do when concrete situations don't match their expectations. Prototyping methods range from low to high fidelity and from understanding how using the service experience might feel to understanding significant differences in the patterns of use among various groups.

Often, the things that can be "measured" are not the things that matter most. Evaluation is both quantitative and qualitative. Marfalda Moreira reported, "We have a number of colleagues who are focusing on impact measurement and evaluation and building evaluation into their research projects. We're starting to introduce the techniques of evaluation and impact into the ways we teach, to see if we can equip students to take this into future partnerships." Therefore, it is important for the university and the public sector organization to agree on what constitutes "evidence" and how best to evaluate change in complex systems.

Further, the effects of design action frequently become apparent over time; consequences emerge at different levels of the organization and society and at different rates of change. Adopting a "triple bottom line" that evaluates social and environmental effects as well as economic impact is critically important but unlikely to show tangible results by the end of a semester. Anna Salmi at Laurea University of Applied Sciences commented, "When we did feedback interviews—say approximately five years after we had finished the project—we asked partners. 'How much do you remember or have you used that you now think are

<sup>&</sup>lt;sup>7</sup>Suchman, L. (1987). Plans and Situated Actions. New York: Cambridge University Press. P. 3.

benefits?" This delayed evaluation can be useful to both the university and the partner.

At the same time, as universities evaluate the effectiveness of service design solutions, they are also responsible for evaluating student learning. Research for this publication found little discussion of measuring student learning outcomes. In general, the design field typically focuses evaluation on the qualities of the final work product rather than the learning acquired in the process of producing them.

Among the competencies not evident in tangible work products is teamwork. Service design students are likely to work in groups and engage in activities that produce plans, principles, and guidelines, rather than the physical products more frequently associated with design. Advanced students focus on research that informs the development of theory. Therefore, it is important that students understand the relationship between holistic grades and the specific learning outcomes that define the course, rather than assume that learning criteria reside only in finished work.

Student learning outcomes delineate what students should know and be able to do as a result of learning experiences. They use action verbs to describe learning behaviors that can be observed. An analytical rubric offers a gradient of proficiency as evidence of different learning levels with respect to each outcome. The value of the analytical rubric is that it tells students specifically where they succeed and where they need to improve. For example, a student may be very skilled in interviewing stakeholders but struggle to analyze results in ways that inform a plan.

#### 5.5.2 Documenting and publishing

During the research for this publication, it became apparent that some universities document their collaborative projects very carefully and comprehensively, subsequently publishing them on the university website. Some participants in this research also provided beautiful print publications that documented students' work with the public sector. These publications acquaint future public sector partners with university program capabilities and illustrate the change that is possible under a service design effort.

The research team also found good examples of public sector partners publishing project results within their organization and raising awareness of service design. Publications range from short articles and videos on the public sector partner's website to printed posters and reports. This communication attracts the attention of non-involved stakeholders and strengthens interest in and understanding of service design.

On the other hand, the systematic documentation and publication of project results are often neglected due to time constraints. This is both understandable and regrettable. Many experts in this research study expressed the need for an international project database in which cooperation between universities and the public sector is accessible to all as inspiration for future projects and cooperation among universities.

# Conclusions 6

This research shows the value of collaboration between service design programs at universities and the public sector. Student projects, in particular, often open the door to long-term and in-depth collaborations. Recurring collaborations lead to better results as mutual trust grows and understanding of each other's working methods and cultures deepens.

University and public sector collaborators set many of the parameters for success before the project begins. Access to the right level of the organizational hierarchy and the right players is the only way to ensure the necessary support and decisions that lead to implementation. A very important component is the written agreement that clarifies the focus of work, participants, and extent of cooperation required for success. The level of public sector involvement in ongoing project work is crucial to success; if only to brief project teams and attend a final presentation, deeper organizational understanding of service design and its value is unlikely. The most frequently cited problem in collaborative projects is the lack of active involvement from public sector partners. While there are many understandable reasons for disengaging, there is a minimum level of partner activity necessary to anchor service design processes in the culture of the organization. External projects lose their educational value if students lack ongoing interaction with the organization in ways that distinguish applied from hypothetical work.

Complexity is characteristic of all service systems. Therefore, it is necessary for partners to define project boundaries in order to create a workable framework for students. Solid agreement on a realistic scope of work at the beginning of the project is necessary for success. Such agreements should account for positive relationships between public sector needs and student learning objectives. Regular care for student development is also of great importance. The issues that public sector organizations address are complex and may challenge students emotionally and socially. Sufficient methodological preparation, support in understanding the project partner's working culture, and safe spaces to reflect on collaborative experiences and effects on citizen groups need attention before crises arise.

While collaborative projects tend to emphasize final outcomes, including presentations and assigning credits to students, deeper reflection is necessary for partners to make sense of collaborative service design experiences. Issues emerge that were not foreseen when negotiating the scope of work. Levels of engagement by either partner vary with implications for outcomes. And results suggest opportunities for continuing work and effective practices that hold promise for future collaborations. The goal of reflection is to learn from both success and failure in an environment of open conversation.

More frequently neglected under time constraints are the issues of documenting and publishing collaboration results on websites and in other venues. Beyond documentary accounts of individual service design projects are opportunities for faculty to analyze concepts that are generalizable to the field at large; for example, design issues particular to the public sector services or pedagogies for engaging students in framing as well as solving problems. The relatively low level of shared documentation and scholarly analysis of service design collaborations with the public sector suggests an area in need of some attention. If a reason for limited dissemination is the lack of publishing platforms for applied student work—that is, venues other than research journals and trade publications—universities might need to organize open access opportunities for sharing learning experiences in public sector service design collaboration.

Further, there are research opportunities in student employment and progress in transforming organizations following their participation in a university service design collaboration with the public sector. Labor statistics internationally don't appear to track design practice specifically in the public sector, and university knowledge of alumni success may be the best source of long-term success stories.

Additional research into how public sector partners view working with universities would also be appropriate.

There is some evidence of progress in connecting universities that teach service design. Cumulus, a global association of art and design education, has a Service Design Working Group. As a result of research for this publication, there is now a Slack group through which academic partners with a service design focus can network. And finally, a LinkedIn group has been created to discuss and deepen the results of this study.

# Appendix 7

# 7.1 List of Figures

1	Double Diamond Model, United Kingdom Design Coun-	
	cil, 2019	20
2	The Digital Ethics Compass, Danish Design Center, 2023.	23
3	Service Design Impact Report	33
4	Evolution Map, Mager and Moussavian, 2017	35
5	The Evolution Map, Corsten and Prick, 2019	37
6	SEE Platform, Public Sector Design Ladder, 2013	40
7	Service Design Maturity Matrix	43
8	Types of Collaboration.	52
9	Maturity and Collaboration Type Matrix	56
10	Which External Partners Do You Collaborate With?	58
11	Initiators of Collaboration	60
12	Benefits of Collaboration Between Universities and the	
	Public Sector.	61
13	Landscape of Challenges	68
14	Miroverse "How to Public Sector?" Service Design On-	
	boarding	72
15	Miroverse "How to Public Sector?" Service Design Ma-	
	turity Matrix.	73
16	Miroverse "How to Public Sector?" Collaboration Set Up.	75
17	Miroverse "How to Public Sector?" Identify Potential	
	Harm	81
18	Miroverse "How to Public Sector?" Ethical Reflections	82
19	Miroverse "How to Public Sector?" Shared Problem Un-	
	derstanding	85
20	Miroverse "How to Public Sector?" Mini Glossary	86
21	Miroverse "How to Public Sector?" Cultural Check	89
22	Levels of Involvement.	91
23	Miroverse "How to Public Sector?" Involvement Check.	92
24	Miroverse "How to Public Sector?" Student Maturity	93
25	Miroverse "How to Public Sector?" Student Engagement.	94
### 7.2 Bibliography

#### Books

- Bason, C. (2017). *Leading public design: Discovering human-centred governance*. Bristol University, Press, p. 63.
- Burckhardt, L. (2017). Design is invisible: Planning, education, and society. Basel: Birkhäuser.
- Corsten, N. (2019). "The Service Design Maturity Model," in *Touchpoint*, 10th edn. Köln, Germany: Service Design Network, pp. 72–78.
- Cross, N. (2023). *Design thinking: Understanding how designers think and work*. London: Bloomsbury Visual Arts.
- Davis, M. and Dubberly, H. (2023). "Rethinking design education." *She Ji*, 9(2), p. 102.
- Dewey J. and Boydston J. A. (1981). *John Dewey: The later works, 1925–1953*. Carbondale, IL: Southern Illinois University, p. 70.
- Hill, D. (2015). Dark matter and trojan horses: A strategic design vocabulary. Strelka Press, p. 30.
- Junginger, S. (2017). "Design research and practice for the public good: A reflection." She Ji: The Journal of Design, Economics, and Innovation, 3(4), p. 301. https://doi.org/10.1016/j.sheji.2018.02.005
- Mager, B. and Moussavian, R. (2017). *Design thinking inhouse design driven innovation labs*. Köln, Germany: Service Design Network Deutsche Telekom.
- Mager, B. (ed.) (2016). Service design impact report public sector. Köln: Service Design Network.
- Mager, B., Corona, C., Ruiz, K., Chen, Y., Sistig, M. (2020). *The future* of service design. Available at: https://www.academia.edu/44459133/ The\_Future\_of\_Service\_Design (Accessed: 19 February 2024).
- Mager, B. (2008). "Zwischen Notdurft und Bedürfnis: Ein Designprojekt mit Folgen," in: Erlhoff, Michael | Heidkamp, Philipp | Utikal,

Iris (eds): Designing Public – Perspectives for the Public. Basel: Birkhäuser*buchtitel kursiv?* 

- Mager, B., Marco Susani, Elena Pacenti, Erico Fileno, Michael W. Meyer (2023). "Product-service systems design education: Normalize, grow, and evolve." She Ji: The Journal of Design, Economics, and Innovation, 9(2), pp. 213–233.
- Mathieu, J.E., Goodwin, G.E., Heffner, T.S., Salas, E., and Cannon-Bowers, J.A. (2000). "The influence of shared mental models on team processes and performance." *Journal of Applied Psychology*, Volume 85, pp. 273–283.
- Morelli, N., de Goetzen, A., and Simeone, L. (2021). "Service design capabilities," *Springer Series in Design and Innovation*, Volume 10, p. 23. https://doi.org/10.1007/978-3-030-56282-3
- Rittel, H. and Webber, M. (1973). "Dilemmas in a general theory of planning," *Policy Sciences*, Volume 4. Amsterdam: Elsevier Scientific Publishing Company.
- Sanders E. (2006). "Scaffolds for building everyday creativity." *Designing Effective Communications*. Jorge Frascara, New York: Alworth Press, p. 66.
- Schaeper, J. (2023). "Reimagining service design beyond neoliberal economics," *Touchpoint*, 14(2), pp. 6–11.
- Scharmer, C. O. (2020). *Theory U. Von der Zukunft her führen*. Carl Auer, Heidelberg, 5. Auflage, p. 52.
- Simon, Herbert A. (1969). *The sciences of the artificial*. Cambridge, MA: MIT Press, p. 130.
- Suchman, L. (1987). *Plans and situated actions*. New York: Cambridge University Press, p. 3.
- Villa Alvarez, D., Auricchio, V., and Mortati, M. (2020). "Design prototyping for policymaking," in Boess, S., Cheung, M. and Cain, R. (eds.), *Synergy DRS International Conference 2020*, 11–14 August, Held Online. https://doi.org/10.21606/drs.2020.271

#### Websites

- https://apolitical.co/solution-articles/en/why-public-servants-must-l earn-to-fail (Accessed: 11 August 2024)
- Action plan for designing better public services launched by Minister Donohoe. Available at: https://www.gov.ie/en/press-release/6a866-actio n-plan-for-designing-better-public-services-launched-by-minis ter-donohoe/ (Accessed: 19 February 2024).
- https://www.aaltoee.fi/en/aalto-leaders-insight/2019/more-functiona l-public-service-with-service-design-e2-80-94helsinki-central-lib rary-oodi-as-a-shining-example (Accessed: 7 February 2024).
- *BCG Global.* Available at: https://www.bcg.com/en-us/capabilities/ operations/service-4-0-transforming-customer-interactions.aspx (Accessed: 12 February 2024).
- *Cumulus Service Design Working Group*. Available at: https://cumulusass ociation.org/events/working-groups/service-design/ (Accessed: 19 February 2024).
- Design Council Design for Planet. Available at: https://www.designco uncil.org.uk/our-resources/framework-for-innovation/ (Accessed: 12 February 2024).
- https://doga.no/en/activities/design-and-architecture-in-norway/de sign-in-norway/service-design/service-design-in-norway/ (Accessed: 20 January 2024).
- *European Commission's action plan on design-driven innovation* (no date) *Core77.* Available at: https://www.core77.com/posts/25624/Europe an-Commissions-action-plan-on-design-driven-innovation (Accessed: 19 February 2024).
- PhD Program Service Design and Public Sector Srl, C.I. (no date) Dottorato in service design for public sector | Sapienza. Available at: https://phd.uniroma1.it/web/SERVICE-DESIGN-FOR-PUBLIC-SEC TOR\_nD3972\_IT.aspx (Accessed: 12 February 2024).
- Service Design Map https://www.servicedesignmap.polimi.it/ (Accessed: August 2024).

- Sheppard, B., Yeon, H., London, S. (2018). The business value of design, McKinsey & Company. Available at: https://www.mckinsey. com/capabilities/mckinsey-design/our-insights/the-business-val ue-of-design (Accessed: 12 February 2024).
- https://servicedesignacademia.slack.com (Accessed: 7 June 2024).
- The value of design to the Public Sector (2013) Design for Europe. Available at: https://designforeurope.eu/news-opinion/value-design-p ublic-sector/ (Accessed: 19 February 2024).
- *Toolkit: The digital ethics compass* (2023) *DDC*. Available at: https://ddc. dk/tools/toolkit-the-digital-ethics-compass/ (Accessed: 12 February 2024).

### 7.3 Glossary

- **Benchmark** A "benchmark" is a standard or point of reference against which things can be compared or assessed, often used to measure performance, quality, or progress in various fields.
- **Case Study** A service design case study documents a practical service design project, covering project context, methodology, cocreation, concept implementation, impact, and reflection. The goal is to analyze exemplary examples to identify cross-case phenomena within the system(s) under study.
- **Civic Sector** The civic sector, also known as the nonprofit or third sector, includes organizations dedicated to the public good without government ownership or profit motive. It includes charities, foundations, advocacy groups, and more. Focused on social, cultural, educational, or environmental missions, these organizations provide care and support to those in need and rely heavily on volunteerism and donations.
- **Client** A client, whether an individual, organization, or entity, seeks assistance with service design from a professional or agency. Throughout the project, the service design provider offers advice,

insights, and solutions tailored to the client's needs. This professional relationship typically involves payment and specific expectations from both parties, documented in written agreements.

- **Co-Creation** Collaborative and participatory processes involve various stakeholders working together to design, develop, and improve a service. These processes emphasize shared insights, creativity, and contributions from all involved parties, fostering a mutual exchange of ideas and expertise. Co-creation recognizes that diverse perspectives lead to more innovative, effective, and user-centric service solutions.
- **Collaboration** In the field of service design, collaboration is a key aspect of the iterative design process. It involves engaging a diverse range of stakeholders, experts, and users in collective decision-making, open communication, and active participation. This interdisciplinary approach is designed to create innovative, effective, and inclusive solutions that align with the needs and desires of end users.
- **Design Thinking** A problem-solving methodology that emphasizes empathy, ideation, and iteration to address complex issues and generate innovative solutions. The term is closely related to the service design methodology.
- **Ethics** Service design ethics emphasizes designer accountability and responsibility. Ethical frameworks guide decisions to prevent harm, promoting consistency with set values, including inclusivity, accessibility, diversity, and community engagement. They also encourage reflection on responsibility, privilege, and power dynamics.
- **Expert** An expert is a highly knowledgeable person who has both profound theoretical knowledge and practical experience in the context of collaboration between public sector organizations and service design universities.
- **Human- and User-Centered Design** Placing people at the core of the design process and understanding their behaviors, needs, and

preferences to create effective solutions. Human- or user-centered design therefore usually involves aspects like co-creation, collaboration, participation, and awareness of ethics and vulnerable groups.

- **Impactful** An impactful service design creates meaningful and desirable changes, addressing the identified needs and goals with a measurable and beneficial influence on the user experience and broader societal context.
- **Innovation** Process of introducing and implementing new ideas, methods, products, or services that lead to positive change, improvement, or advancement in a particular field or context. Innovation involves creativity, problem-solving, and the application of novel approaches to address challenges and meet evolving needs.
- **Participation** Involving citizens and stakeholders in decision-making processes and allowing for greater transparency and inclusivity in public sector activities. Interdisciplinary Collaboration between different professional or academic disciplines to address complex problems, combining different approaches and perspectives. Interdisciplinary work is crucial in service design as it leads to more holistic and innovative solutions and ensures adaptability, effective communication, and a user-centered approach.
- **Partner** A partner, whether an individual or an organization, contributes specific skills and expertise to a service design project in a collaborative, equal relationship. Unlike client-agency dynamics, partner relationships involve greater involvement, fostering longterm trust through shared contributions and learning. Core partnership principles include respect, reciprocity, and shared responsibility for learning.
- **Persona** A "persona" is a fictional character created based on user research to represent a specific segment of the target audience, encapsulating their behaviors, goals, needs, and challenges to guide design and marketing decisions.

- **Planet-Centric** A planet-centric mindset differs from a human-centric mindset in that it prioritizes the well-being, sustainability, and health of Earth. It entails minimizing the environmental impact, promoting ecological balance, resource conservation, and overall ecosystem health. This design philosophy is based on the principle of responsible decision-making, which is essential for ensuring the long-term health of the planet.
- **Policy Design** A creative, user-centered approach to problem-solving in the public sector context engaging users, stakeholders, and delivery teams at multiple stages of the policy process. Design for policy is an emerging yet growing field of research and practice.
- **Private Sector** The private sector consists of privately owned and operated businesses that seek to generate profit and economic value in a variety of industries (e.g., manufacturing, retail, finance, and hospitality). Driven by market forces, competition, and maximizing shareholder value, private sector companies actively target specific customer groups. Their activities are influenced by local, national, and global economic and governmental structures.
- **Project Definition** A concise and focused document that provides key information about the project, the scope, and the desired outcomes for a specific project. In service design, it should give direction and at the same time leave enough space for reframing and redefining the problem
- **Prototyping** Creating early models or versions of a service or product to test and refine its functionalities and usability. Prototyping helps to uncover potential issues, gather feedback, and iterate on the design, fostering a more refined and user-centered service solution.
- **Public Sector** The public sector, controlled and operated by the government, includes agencies and organizations at various levels. Its main goal is to provide essential services that promote the well-being of citizens, including education, healthcare, and transportation. As a service provider, it facilitates the coexistence of diverse populations. The structure and scope of the public sector

vary from country to country, depending on the structure of the government.

- **Service Design** Service design orchestrates processes, technologies, and interactions to co-create value in complex systems, prioritizing a human- and life-centered perspective. It collaboratively generates value for users and providers across the service lifecycle. Service design is applicable across multiple sectors, helping to deliver strategic and tactical objectives for both the private and public sectors.
- **Stakeholder** Individuals, groups, or organizations affected by or involved in a particular project or process, including users, policymakers, administrators, and the public. Their involvement is essential in service design as they contribute perspectives, needs, and expectations, influencing the design process and the ultimate success of the service.
- **Vulnerable Groups** "Vulnerable groups" are populations that are at a higher risk of experiencing harm, exploitation, or discrimination due to factors such as age, disability, health status, economic hardship, social marginalization, or lack of access to resources and services.

### 7.4 Resources

**Toolbox "How to Public Sector?"** https://miro.com/miroverse/profile/how-to-public-sector/

Slack Channel https://servicedesignacademia.slack.com

#### Linkedin Group "How to Public Sector?"

https://www.linkedin.com/groups/9859986/

# 7.5 Interviewees

Armani, Judah: Royal College of Art Chen, Jiajia: Nanjing University of the Arts Creedon, Fred, Dr.: Cork Institute of Technologies de Götzen, Amalia: Aalborg University Copenhagen Dewit, Ivo: University of AntwerpFaust, Jürgen, Dr.: SRH Fernhochschule - The Mobile University Grinver, Clive: Royal College of Art Hensel, Daniela: HTW Berlin - University of Applied Sciences Holmlid, Stefan: Linköping University Jones, Mark: Institute of Design Illinois Tech Kälviäinen, Mirja: LAB University of Applied Sciences Kares, Antti: Savonia University of Applied Sciences Kemilä, Teemu: Oulu University Hospital Kistorp, Kaja Misvær: The Oslo School of Architecture and Design Kukk, Jana: TalTech Kumpulainen; Kati: LAB University of Applied Sciences Kurowski, Matt: Royal Melbourne Institute of Technology Mäkinen, Milla: LAB University of Applied Sciences Mattelmäki, Tuuli: Aalto University Melioranski, Ruth-Helene: TalTech Meroni, Anna: Politecnico di Milano Miettinen, Satu: University of Lapland Mihhailova, Gerda: University of Tartu Moreira, Mafalda, Dr.: The Glasgow School of Art Morelli, Nicola: Aalborg University

Penin, Lara: Parsons School of Design, The New School Plesner, Andrea Caroline: The Oslo School of Architecture and Design Reid, Iain, Dr.: The Glasgow School of Art Robert, Glenn: King's College London Salmi, Anna: Laurea University of Applied Sciences Sirviö, Timo: Savonia University of Applied Sciences Suoheimo, Mari: The Oslo School of Architecture and Design

# 7.6 Advisory Board

Armani, Judah: Royal College of Art Cook, Justin W.: Rhode Island School of Design Davis, Meredith: NC State University Chen, Jiajia: Nanjing University of the Arts Junginger, Sabine, Dr.: Hochschule Luzern Meroni, Anna: Politecnico di Milano Morelli, Nicola: Aalborg University

## "How to Public Sector?"

The Key to Impactful Collaborations Between the Public Sector and Service Design Universities & Programs

Whether readers are teaching service design in higher education or practicing it in the public sector, this publication provides critical insights and tools for successful service design collaborations. Often, university collaborations—and especially student projects—are the entry point for integrating service design into the public sector, and thus the gateway to citizen-centered, co-creative, innovation-driven change in the public sector. This publication and the associated Miroverse Toolbox will help service design partners to critically reflect on the value of these collaborations and to develop clear recommendations and tools for success.

**Logos Verlag Berlin** 

ISBN 978-3-8325-5881-9