PART 3

HOW TO DEFINE PUBLIC SECTOR INNOVATION

PART 3 IS DESIGNED TO HELP YOU:

- LEARN MORE ABOUT THE DIFFERENCE BETWEEN PUBLIC SECTOR AND BUSINESS SECTOR INNOVATION
- UNDERSTAND THE NEED FOR A MANUAL ON PUBLIC SECTOR INNOVATION
- BECOME MORE FAMILIAR WITH THE DEFINITION OF PUBLIC SECTOR INNOVATION
- UNDERSTAND THE INSPIRATION FROM THE OSLO MANUAL
- DEFINE THE UNIT OF MEASUREMENT
- UNDERSTAND THE DIFFERENCE BETWEEN INNOVATION AND INNOVATION ACTIVITY

3.1
USE A DESIGNATED YARDSTICK TO MEASURE PUBLIC SECTOR INNOVATION

If you want to understand and improve the empirical phenomena of public sector innovation, you need relevant, meaningful and systematic measurement to prioritise your efforts, track developments over time and learn from comparisons with others. This is the basic premise of the Innovation Barometer. This part of the manual argues that relevant and meaningful measurement requires an interest in public sector innovation on its own terms, not just as a presumed identical twin of business sector innovation that just happens to be non-profit..

Public sector innovation and business sector innovation have many parallels and innovation statistics on the business sector inspired the inception of the Innovation Barometer. In this part, however, the focus is on the characteristics of public sector innovation that distinguish it from its business sector counterpart.

”In my opinion the main difference is that, unlike public sector innovation, everyone sees business sector innovation as something that is needed, must be proactively reached and vital for businesses to survive in the market. In contrast, public sector innovation, and mainly public administration innovation, is still not seen by many as vital as there is basically no market competition between government agencies.

Thus, what makes public sector innovation special is that it must fight much harder to occur, to prove its importance, to convince the doubters and to survive its entire life cycle, from idea phase to implementation phase. Another challenge that makes it harder is that public sector innovation usually exists in a highly risk-averse environment. While in the business sector higher risk is associated with higher potential gains, governments usually prefer business as usual rather than spending taxpayer money on uncertain results.

Another important special aspect associated with public innovation is its positive impact on a society as a whole. In my opinion this is the main goal of public sector innovation, while the main goal of business innovation is (usually) to earn profits for the company.

Anna Urbanová, Analyst, Department for Strategic Development and Coordination of Public Administration, Ministry of the Interior of the Czech Republic

3.2
PUBLIC SECTOR INNOVATION AND BUSINESS SECTOR INNOVATION OPERATE WITH DIFFERENT LOGICS

The public sector operates with a political logic and conducts tax-funded activities aimed at creating a politically defined public good or at serving citizens' needs. This is fundamentally different from the logic of a competitive market. A somewhat trivial observation perhaps. Yet, it is far from inconsequential that some countries now have data that indicate how profoundly innovation activity is affected by differences in the overall framework for public sector and business sector innovation.

According to Innovation Barometer data two out of three public sector innovations have been initiated or promoted by new legislation or by the politically elected leadership under whose responsibility the innovative public sector workplace operates. In a Nordic context, the politically elected leadership is the minister, the regional council or the city council for public sector workplaces.

Innovation statistics for the business sector, in contrast, clearly show that gaining competitive advantages is a crucial driver of innovation. Obviously, this is not the case in the public sector. According to Innovation Barometer data the main drivers of public sector innovation are the not-for-profit spread of innovation, collaboration, political decision making, employee initiatives and citizen demands.

The distinction between a political logic and a market logic is not razor sharp. Business sector innovation is also indirectly affected by regulation. For example, incentives for innovation can be affected by changing regulations on product safety, environmental protection, taxation, requirement standards or intellectual property rights. Conversely, public organisations are also exposed to competition. They compete with other public organisations for political goodwill and budgets.

Still, very significant differences exist. Politicians do not run private companies. Elected politicians cannot on a daily basis dictate what specific products and services a private company should develop or how a private company should organise, manage and prioritise its innovation efforts. Politicians, on the other hand, can make tangible decisions on these matters in the public sector. Politicians sometimes even decide, for political reasons, that certain ways of doing things must remain unchanged.

Conversely, market pressures and disruptive technologies can dictate private companies to innovate their business model quickly – or go bankrupt. Public sector organi-

sations less often experience similar time pressure to innovate radically. The COVID-19 pandemic of course being one of the prominent exceptions.

We argue that the dominant logic – politics or market – constitutes a master variable that induces differences in innovative practices in the public and private sectors, as shown in the infographic in figure 3.1.

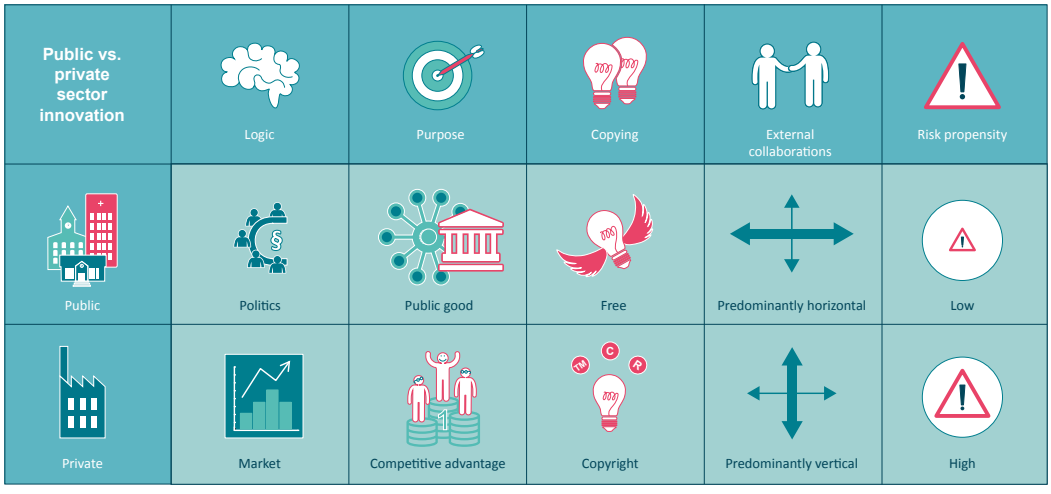

Figure 3.1. Differences in innovative practices in the public and private sectors.

As the infographic shows some public sector incentives and innovation practices are almost opposite to those of the private sector.

Innovation in the form of copying is widespread in the public sector and relatively common in the business sector as well. In the latter, however, the incentive to be copied is highly negative as it goes against the purpose of gaining a competitive advantage. That is why politicians have legislated on intellectual property rights so that private companies can protect their innovations with patents, utility models, design and trademarks for a limited period. While preventing direct copying, intellectual property rights, on the other hand, can stimulate copying in the form of licensing. Franchising is another example of widespread copying in the business sector. Both in terms of licenses and franchises, however, you must pay a fee to use what others have developed before you.

In the public sector, by contrast, uncompensated copying is the norm, since copying does not affect market shares. When a public nursing home introduces a new service to the elderly that the rest of the country's nursing homes subsequently adopt, the number of elderly citizens living on the innovator's premises remains unaffected.

Furthermore, a copy stresses the value of the original, providing positive branding to the innovator. In the nursing home example, the innovator may have a model named after the nursing home, which is of great symbolic importance in a system operating under a political logic. Indeed, according to Innovation Barometer data, every other public sector innovation is actively spread to others by the innovator. We do not know the corresponding figure for the business sector, as innovation statistics for the business sector do not ask this question.

Data also reveals differences in collaboration patterns, which aligns with incentives introduced by market competition (or not). In the public sector a high share of innovations (4 out of 5 in the Nordic countries) is carried out in collaboration. Most frequently horizontal collaborations occur among similar public sector workplaces within the same subsector, e.g. among multiple public schools.

Business sector collaborative innovations more frequently are the result of vertical collaborations up and down the value chain, i.e. with customers or suppliers. Horizontal collaboration with knowledge institutions is also quite common, while collaboration with similar companies within the same industry are rare, as they are usually competitors.

Another marked difference is the propensity to take risks. Risk taking in the public sector is associated with highly negative consequences in the event of failure. Any fiascos can lead to criticism from political opponents and the media, who do not weigh a current failure up against past successes when they pass judgment, unlike a private market where profits on successes can easily offset deficits on failures. In addition, in the business sector risk is associated with the chance of higher gains, as private companies potentially can conquer a world market. Whereas in many cases, the successes of public sector innovators have a more limited direct audience, e.g. the elderly living in a specific municipality.

On top of that, in the public sector, legislation on transparency, political opposition and media scrutiny practically ensures that failures are made public. Whereas business sector failures have a better chance of remaining hidden.

Discussions on similarities and differences between private and public sector innovation are prevalent in academia. Professor Mariana Mazzucato's 2013 book, *The Entrepreneurial State*, documents that the public sector is the core initiator, funder and risk taker of many of the innovations that are later considered to be private innovations developed in a free competitive market. The border between the private and public sectors, also in terms of innovation, is permeable but needs to be drawn firmly when deciding what to include in measuring public sector innovation statistically.

In conclusion, these differences make it necessary to conduct the measurement of public sector innovation in a somewhat different manner if the results are to be relevant and meaningful.

One would not want to measure phenomena in the business sector using a scale labelled "not fully reliable in the presence of market competition". Similarly, measurements of phenomena in the public sector that do not overlook the importance of political logic are preferable. This methodological choice of designing an innovation survey fit for the public sector increases the response rate and the usefulness of the results.

WARNING!

Do not exaggerate the differences. Part 3 might give the impression that public sector innovation and business sector innovation are from different planets; they are not. They are closely related, just not identical. So, whenever you meet innovators from another sector, be prepared to learn from them.

Consequently, direct comparison with business sector innovation statistics becomes more difficult. However, direct comparisons would be challenging regardless, as the phenomena being observed operate with different logics.

Still, innovators in the two sectors will have much in common and much to learn from each other, especially if they have a mutual understanding of their differences supported by meaningful measurements of innovation.

3.3
MEASURING BUSINESS SECTOR INNOVATION – THE OSLO MANUAL

The Oslo Manual, the first edition of the OECD's manual on collecting statistical data on business sector innovation, was published in 1991. Since then a large and an increasing number of countries around the entire world have begun regularly measuring business sector innovation in accordance with guidelines set out in the Oslo Manual. The fourth and current edition was published in 2018 and aims at a global approach to measuring innovation.

Multiple attempts have been made to conduct similar measurements of public sector innovation, but a lack of consensus has led to inconsistent methodologies.

In 2011 the five Nordic countries conducted a joint pilot called Measuring Public Innovation in the Nordic Countries, known as MEPIN. A lesson learned was that it is crucial to adopt questionnaires to a public sector context. The MEPIN project set out to do this, but the pilot questionnaire was quite similar to the one used for measuring business sector innovation.

The Innovation Barometer, initially developed in 2014, draws on principles described in the third edition of the Oslo Manual (2005). Note that additional changes were made between the third and fourth editions of the Oslo Manual, which is also the case for iterations and national implementations of the Innovation Barometer. As a result the current editions of the surveys diverge in several areas, for instance in the classification of innovation types. Although the definitions used in the Innovation Barometer resemble the third edition of the Oslo Manual more closely than the fourth, the key concepts in the Innovation Barometer are described in relation to the fourth and current edition of the Oslo Manual.

The comparisons provided below between the Oslo Manual and the Innovation Barometer are deliberately kept simple, though volumes could be written on the detailed differences between innovation in the public and business sectors. If this topic further intrigues you, delve into the Oslo Manual.

3.4
DEFINITION OF PUBLIC SECTOR INNOVATION AND BUSINESS SECTOR INNOVATION

Key concepts and the methodology used in the Oslo Manual provide the underlying basis of the Innovation Barometer, and the definition of innovation is inspired by the one in the Oslo Manual:

> "An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)."
>
> Oslo Manual 2018: section 1.25

The current and fourth edition of the Oslo Manual captures innovation in the business sector but also in government, non-profit organisations serving households and households. Section 2 provides a generic framework for measuring innovation in various sectors, with section 2.6.1 focusing especially on the general government sector.

For comparison, the definition on public sector innovation used for the Innovation Barometer is shown below in figure 3.2.

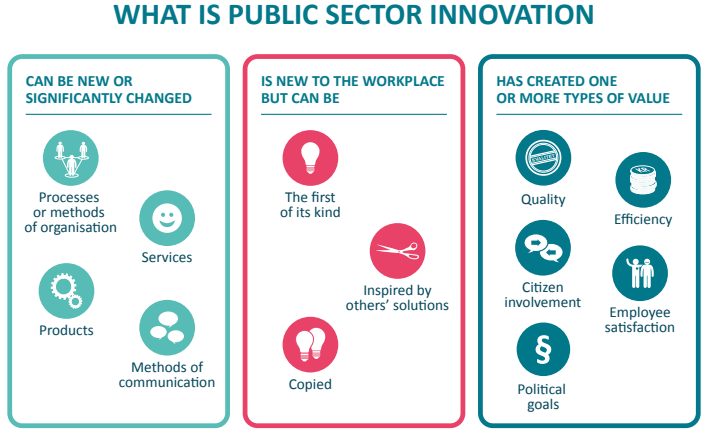

Figure 3.2. Definition of public sector innovation.

The definition used in the Innovation Barometer resembles that in the Oslo Manual in various ways. Table 3.1 sums up the similarities and differences in the definitions. The practical measurement recommendations in the Oslo Manual focus on business sector innovation, which the right-hand column in the table reflects.

Table 3.1. Summary of the differences between the definition of innovation in the Innovation Barometer and the Oslo Manual 2018, fourth edition.

	Innovation Barometer definition of public sector innovation	**Oslo Manual definition of business sector innovation**
Novelty	Innovation must be something **new or significantly changed.** The workplace surveyed must define whether a change is significant. Innovations must be new to the workplace but can be inspired by or a copy of solutions developed and used elsewhere. While private companies patent innovations to prevent competitors from copying them, public sector workplaces are usually at liberty to share innovations with others, and the public sector can benefit from the diffusion of innovation. New solutions and copies regarded equally to emphasise that the value of workplaces successfully implementing others' solutions is just as good (and sometimes even better) as workplaces developing their own solutions.	Innovation must **differ significantly** from the unit's previous products or processes. The surveyed firm must define whether a change is significant based on the definitions, guidance and context provided (section 3.9). Innovations not developed by the firm also included when collecting data (section 3.20). Degree of novelty explored through questions like whether the innovation is new to the world, new to the firm's market or new to the firm only (section 3.56).

Types of innovation	Adjusted version of the four types of innovation in the Oslo Manual third edition: • Products • Services • Methods of communication • Processes or methods of organisation Example of adjustments: "Methods of communication" replaced "Marketing". External communication in the public sector serves many purposes but cannot be reduced to marketing. Products and services are separated into different categories. Conversely, "Process innovation" and "Organisational innovation" are merged into one category as cognitive testing showed that respondents had difficultly distinguishing between them. Language adjusted to better suit the public sector, e.g. "goods" implies items for sale, whereas "products" has greater relevance.	Third edition includes four types of innovation: • Product • Marketing • Process • Organisational All four types include subcomponents and, notably, product innovation includes both goods and services (2005: sections 155-156). The fourth edition uses eight types of innovation, divided into two overall types: • Product • Business process The third column in the small table inserted table below lists what product and business innovation consist of (section 3.30, 3.39). The inserted table also provides a simplified comparison between the third and fourth editions. Table 3.2 in the fourth edition shows a comprehensive comparison (section 3.45)

	Innovation Barometer	Oslo Manual third edition	Oslo Manual fourth edition
	Product: • Services	Product: • Goods • Services	Product: • Goods • Services
	Methods of communication	Marketing	Business process: • Production of goods and services • Distribution and logistics • Marketing and sales • Information and communication systems • Administration and management • Product and business process development
		Process	
	Processes or methods of organisation	Organisational	
Implementation and outcome	By definition an innovation must have created some value to be considered an actual innovation and not merely an innovation process. The fact that the innovation has created value implies that it must have been implemented. The first Innovation Barometer covered four public sector innovation outcomes: **Quality, efficiency, citizen involvement** and **employee satisfaction**. As it did not fully reflect the complex political context in which public sector innovation must produce value later iterations included specific political outcomes like "value for businesses" and "value for local communities", leading to the inclusion of **political goals** in figure 3.2 and its use in the third edition of the Danish Innovation Barometer.	Must have been made available to potential users or brought into use by the firm to be considered an innovation (section 3.9.). The creation of value is an implicit goal of business innovation as well as innovation in other sectors, but not directly included in the definition of innovation (section 2.2). Inclusion of a comprehensive list of qualitative innovation objectives and outcomes (Tables 8.1 and 8.2). Quantitative measures like sales also suggested as a way of measuring innovation outcomes (section 8.23).	

3.5
WHAT IS THE UNIT OF MEASUREMENT?

An important question is: What entity should an innovation survey focus on? The Oslo Manual defines the unit of measurement as the smallest autonomous legal unit:

> "The **statistical** unit in business surveys is generally the **enterprise**, defined in the SNA [System of National Accounts] as the smallest combination of legal units with "autonomy in respect of financial and investment decision-making, as well as authority and responsibility for allocating resources for the production of goods and services""
>
> (Oslo Manual 2018: section 9.18, in OECD, 2015b: Box 3.1).

The public sector equivalent to the level of enterprise used in the business sector survey is not straightforward. The Innovation Barometer refers to the units of measurement as public sector workplaces, but they can be hard to define precisely. Units or workplaces in complex public organisations might have some degree of autonomy, but not necessarily enough to be considered autonomous. To complicate matters further, autonomy in the workplace varies by country.

Decisions must be based on feasibility and national context – no definitive answers are available about the best approach. Make your decisions transparent so others know what reservations to make about your data and results.

ACTIONABLE ADVICE 3.1
BE PREPARED TO MAKE PRACTICAL DECISIONS

Be prepared to make some practical decisions about what constitutes a public sector workplace. The decisions you need to make will vary by country, so be sure to describe the decisions you make.

- How does one categorise a given workplace as belonging to the public sector or to the business sector? There are clear international standards to define this in the System of National Accounts. The Oslo Manual (2018, section 9.11) suggests defining this by the extent to which the workplace is operating on a market basis,
- What are the minimum and maximum sizes for workplaces? Based on Danish Innovation Barometer experience, it is recommended to omit public workplaces with fewer than three employees from the sample, but the best advice is to test in one's national context. The Oslo Manual (2018, section 9.43) suggests limiting international comparisons to workplaces with 10 employees or more,
- What should be done when the autonomy of a type of workplace is unclear?

If in doubt, try contacting some of the workplaces in question and ask whether answering the survey would be meaningful to them.

USE CASE
DEFINING PUBLIC SECTOR WORKPLACES

For the Danish Innovation Barometer, public sector workplaces were defined using Statistics Denmark's National Accounts definition of public and business sectors and the Business Enterprise Register from Statistics Denmark of all public and business sector workplaces in Denmark. The business register is based on the geographical location of workplaces, i.e. a workplace is defined mainly by having a unique address. Although the business register is a great starting point for defining public sector workplaces, practical decisions still had to be made:

- Since some public sector workplaces are extremely large (1,000+ employees), this is a tradeoff as large workplaces could not be split without deviating from the business register and losing the opportunity to weight the final data to the population.
- Only workplaces with three or more employees were included in the survey.
- Publicly owned enterprises were deemed to mainly operate on a market basis
- Managers could manage more than one workplace, which means including the name of the workplace in the email invitation and at the beginning of the questionnaire helped managers to know which workplace to answer for.

3.6
HOW TO ASK QUESTIONS? AN OBJECT-BASED APPROACH TO INNOVATION

There are multiple ways to ask questions on innovation. A key distinction is whether to focus on a single innovation within a workplace (object-based approach) or on the workplace's innovation activities in general (subject-based approach) (Oslo Manual 2018: section 2.79). Questions on a single innovation can be made highly specific but do not cover all innovation activity within a workplace. Both approaches can be used within a single survey if some questions focus on innovation activity and others on a single innovation.

Object-based approach	Subject-based approach
Innovation as a single, focal innovation; focuses on the phenomena of innovation	Innovation activities; focuses on the actors responsible for the phenomena

The Innovation Barometer mainly takes an object-based approach, as most questions are focused on the workplace's latest innovation and the Oslo Manual (2018: sections 10.11–10.13) suggests using the latest innovation as one of multiple ways of singling out an innovation. Questions on the most recent innovation generate broad knowledge on a wide range of innovations. This creates knowledge about innovation in general and not just on individual innovations.

Only a few questions in the Innovation Barometer are specifically subject based as they focus on innovation activity in general. If your main interest is innovation capacities and activities, you might need to develop additional questions to cover this thoroughly, for example by asking more questions on the specific process that led to the latest innovation. This could include whether goals and solutions changed during the innovation process, how the workplace handled uncertainties and whether the innovation was the result of a conscious innovation activity or a development that happened to fit the definition of innovation.

WARNING!

Public sector workplaces might not think of their innovation as innovation. Consequently, when asking them questions about innovation capacity in general, be aware that their developments might not be considered an innovation. They may be unsure of how to answer when asked about unspecified innovation activities and capacities.

ACTIONABLE ADVICE 3.2
FOCUS ON THE MOST RECENT INNOVATION

- Asking questions about a workplace's most recent innovation creates broad insight into many different innovations, including simple solutions, innovations copied from others and innovations with unintended outcomes. If the focus is instead on the most successful innovation or on the innovation a workplace is most proud of, it skews the overall picture of innovations toward more prestigious projects, making it resemble the total variation in public sector innovations less.
- Focusing on the most recent innovation has the added benefit that respondents are more likely to remember more details about recent processes.