

# Public-Private Partnerships in Healthcare and Life Science



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#### **Foreword**

People are living longer. We are better at treating diseases, more people are living with chronic diseases for many years, and patient expectations are rising. This is a testament to the progress we have made. But with longer lives come new needs. Health needs become more complex and people need long-term care. For these reasons, health systems across the world are under pressure. These challenges cannot be met through additional funding alone. They call for a fundamental transformation of how we deliver healthcare.

Public-private partnerships have the potential to support that transformation. In Denmark, we have a long-standing tradition of using public-private partnerships in healthcare. Not only do they bridge public health needs with private innovation capacity – they are also effective at turning research into real-world solutions. As a catalyst for research and innovation, they are shaping a resilient, forward-looking health system for the benefit of patients and healthcare professionals.

Solutions that result from mixing the best of public and private actors can contribute to shorter hospital stays, better treatment outcomes, and increased quality of life for patients and relatives. At the same time, they can enhance cost-effectiveness and free up time and resources in health systems. On top of that, they are key to driving research and innovation and transforming it into industrial solutions, growth, and export – strengthening Denmark's, and potentially Europe's, long-term competitiveness.

This publication highlights Danish perspectives and experiences with public-private partnerships in health and life science and outlines how they can create mutual benefit. The content reflects a national context shaped by Danish institutions, values, and priorities. While we fully recognize that no single approach fits all, we believe that the publication can provide valuable insights. We believe it can serve as inspiration for stakeholders across Europe and beyond, who are striving to promote health, create sustainable health systems, and be positioned as competitive, trusted partners in health and life science.

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#### 1.0 Introduction

Around the world, health systems are facing immense and growing pressure from aging populations, shifting healthcare demands, and the growing burden of noncommunicable diseases (NCDs), such as cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes. Tobacco, alcohol, physical inactivity, and obesity are significant risk factors for these NCDs<sup>1,2</sup>. At the same time, geopolitical instability, a shrinking workforce, and inflation challenge European long-term competitiveness and societal sustainability<sup>3,4</sup>.

In response, national governments are rethinking how to secure a strong health system with long-term quality that is cost-effective. The United Nations Sustainable Development Goals (SDGs) have the same ambition outlined in SDG 3 (Health for All) and places public-private partnerships (PPPs) at the heart of this mission through SDG 17 (Partnerships for the Goals)<sup>1</sup>.

At European level, the Draghi report, the 2025 Competitiveness Compass, and the 2024 Niinistö report emphasize that Europe's long-term prosperity depends on coordinated action between governments and the private sector, especially in strategic fields such as life science, biotechnology, and digital health. The life science sector is seen as a key enabler of both economic resilience and improved quality of life. In particular, the Niinistö

report calls for a European "Preparedness Union," underlining that resilient health systems must be designed to function not only in times of stability, but also in the face of crises such as pandemics, wars, and hybrid threats<sup>3,4,5</sup>.

European "life sciences" as a term is broadly understood as the study of living systems, from microorganisms, plants, animals and human beings to ecosystems.

This publication has a specific focus on human health. Life science is therefore understood as a term that includes pharmaceuticals, medical biotechnology, and medical devices, including health technology, assistive devices, welfare technology, health applications, AI solutions etc. as described in the Danish Life Science Strategy<sup>6,7</sup>.

At European level, the EU's 2025 Life Science Strategy highlights the role of partnerships, bioclusters and coordinated action as key tools to advance health innovation, improve outcomes for patients and healthcare professionals, and strengthen health systems' ability to adapt to future challenges and crises<sup>8</sup>.

Denmark aims to position itself as a frontrunner in this space, based on long-term policy commitments, dedicated governance structures, and a strong innovation ecosystem<sup>6,9</sup>. While challenges remain, the Danish experience illustrates how sustainable PPPs can support strategic innovation efforts, offering potential inspiration for other countries.

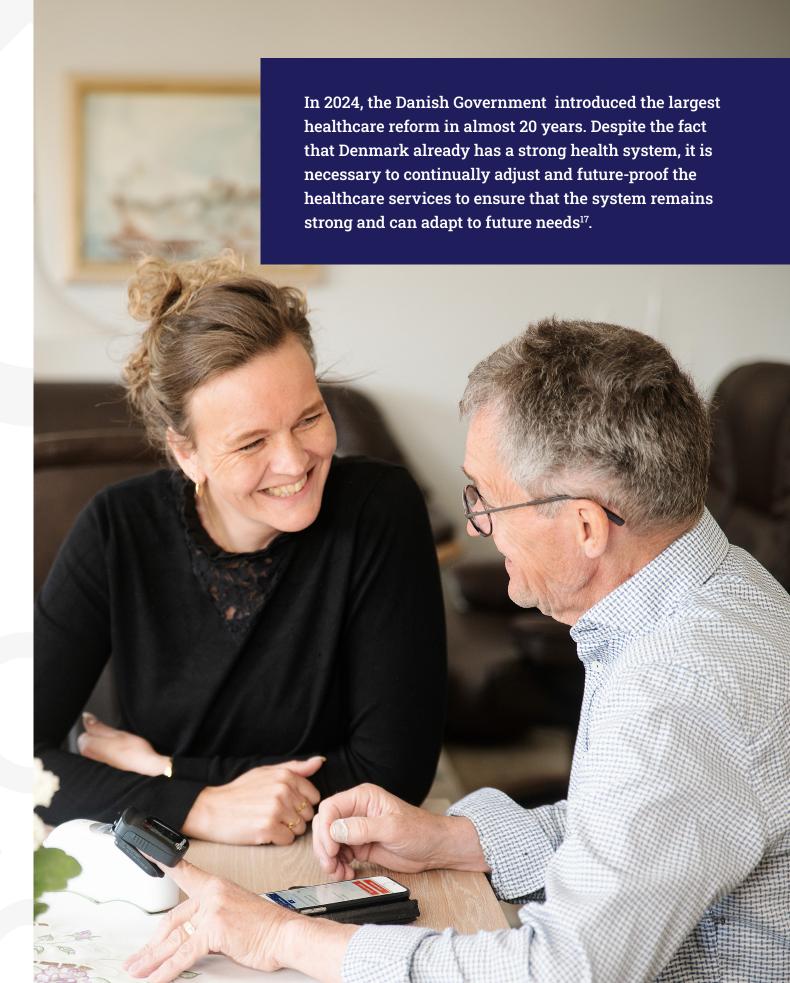
Well-designed partnerships can contribute to concrete outcomes: improved patient access, shorter diagnostic and treatment pathways, more equity in health, more efficient health delivery, and faster innovation uptake. At the same time, they can stimulate economic growth<sup>1,6,9</sup>. From a macroeconomic perspective, the Competitiveness Compass argues that innovation ecosystems that include both public and private entities are essential to reduce dependency on global supply chains, improve productivity, and position Europe as a hub for scalable health solutions<sup>4</sup>.

The Danish approach demonstrates how long-term PPPs anchored in strategic policy frameworks, clear governance structures, and a culture of trust and transparency can accelerate innovation, strengthen health systems, and deliver solutions that benefit both patients and society.

While the organization of health systems and collaboration among sectors vary across Europe, each country must chart its course. However, Denmark's experience suggests that PPPs can serve as a powerful tool for realizing shared ambitions in health and life science that cannot be achieved via traditional methods alone.

The Danish Health system offers universal health coverage with free and equal access to healthcare services, including psychiatric care, and is financed mainly by tax revenue (84%) with some small out-of-pocket payments, for example dental services and medicines copay. It is largely decentralised and divided into 5 regions and 98 municipalities, and is based on the individual's right to autonomy, with a free choice of hospital and general practitioner.





## 2.0 Public-private partnerships in Denmark: The Danish narrative

PPPs are a defining feature of Denmark's life scienceecosystemandareenvisagedasformalized structures of long-term collaborations between relevant stakeholders, including healthcare providers, universities, companies, associations, and civil society organizations<sup>1</sup>.

Such partnerships bring together expertise, resources, and innovation, aiming to leverage the complementary capacities from diverse sectors to create and deliver tested, scalable solutions with measurable outcomes in health and life sciences. In addition, they are founded on a culture of trust and transparency<sup>1</sup>.

The concept of PPPs is used in several dimensions: policy level (political agreements and strategies), structurally (national public-private advisory boards, councils, and centers), and operationally (private suppliers and public hospitals collaborating around bespoke solutions and innovative procurement). In that perspective, PPPs are means used both as a governance tool to develop strategies through structured dialogue and shared priority-setting between public and private stakeholders, and as an operational method to support the realization of strategies and the development of concrete health solutions<sup>1, 6,9,10</sup>.

Several governmental strategies actively support the conditions needed for more effective PPPs. They introduce clear incentives for the stakeholders involved, shared frameworks, and performance indicators with the ambition to make it easier for public institutions to enter and sustain long-term collaboration with private partners<sup>6,9</sup>.

5 Phases of Public-Private Innovation

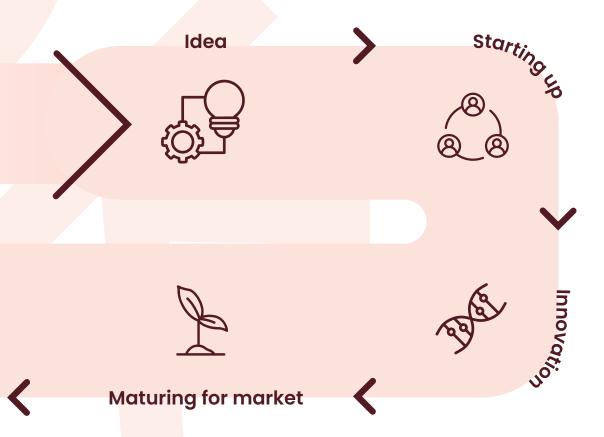
According to Danish Life Science Cluster

Implementation

These experiences reflect a Danish approach to PPPs that goes beyond isolated initiatives and builds a coherent, strategic foundation for health innovation, and thereby for improved healthcare. At its core, Denmark's PPP model is rooted in the belief that cross-sectoral collaboration is more than a method for solving technical health challenges. It is a societal commitment to shaping a more sustainable and resilient health system<sup>9</sup>.

Rather than being seen as exceptional cases, PPPs are increasingly embedded in how Denmark defines and delivers public value through inclusive policy processes, long-term alliances, and shared responsibility across sectors and stakeholders<sup>1,6,10</sup>.

In this context, PPPs in healthcare are not considered as a way of outsourcing health services, but as a targeted method to address complex societal challenges in the public health sector (state, regions, and municipalities) and improve patient treatment and care that neither the public nor private sector can handle alone.



## CASE Take a Stand – Organ donation awareness through public-private collaboration

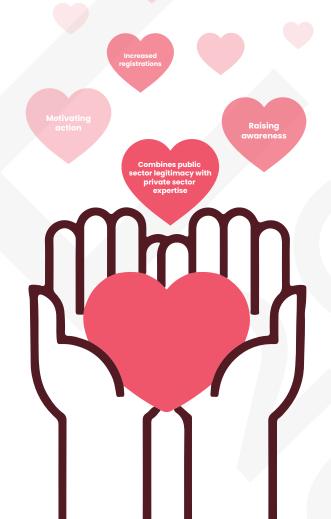
### Promoting citizen engagement in vital health decisions

Organ donation is a sensitive and essential area of healthcare. In Denmark, encouraging citizens to register their organ donation preferences is a national priority – not only to honor individual choices, but also to ensure more transplants are made possible.

To strengthen public engagement, the Ministry of the Interior and Health of Denmark partnered with a broad alliance of public and private stakeholders under the umbrella "Take a Stand Partnership". This PPP brings together NGOs, foundations, companies, government agencies, and communications experts with the shared goal of raising awareness and motivating action concerning organ donation.

The initiative was launched as part of a national campaign in 2024 and has since evolved into a long-term platform for behavioral change. It combines public sector legitimacy with private sector expertise in communications, targeting different demographic groups through tailored messages from each of the stakeholders involved to the people they are in contact with.

The partnership has contributed to a significantly increase in registrations in the national organ donor registry and created a sustained public conversation around an otherwise difficult topic. It exemplifies how PPPs can enhance preventive health strategies through shared agendas, targeted outreach, and long-term commitment<sup>11</sup>.



## CASE Integrated Health Solutions – Strengthening Operational Efficiency through Public-Private Partnerships

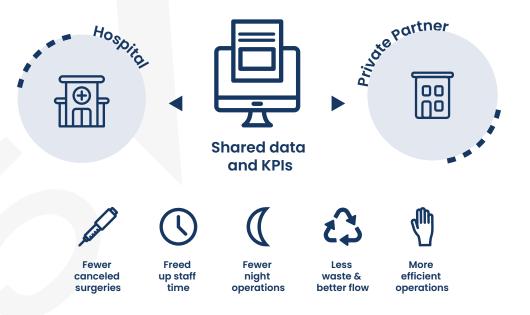
## Improving surgical planning and releasing clinical capacity through long-term collaboration

In the Central Denmark Region, a PPP has been established to improve capacity utilization and patient flow at Aarhus University Hospital. The collaboration brings together clinical leadership, operational experts, and an external industry partner to co-design, implement, and evaluate new service models in perioperative care.

The initiative is based on a five-year agreement focused on enhancing logistics, reducing surgical cancellations, and freeing up staff time through digital coordination tools, training, and workflow redesign.

The model builds on shared data, joint KPIs, and co-developed solutions that align with hospital priorities.

A similar partnership has been in place at Rigshospitalet since 2017, resulting in more efficient resource use, reduced waste, and better staff availability, including fewer surgeries at night and a measurable drop in elective surgery cancellations. Partnerships like these demonstrate how operational PPPs can address everyday challenges in hospital care by combining clinical insight with external innovation capacity.<sup>12,13</sup>



## 3.0 Governmental strategies and reforms

Government strategies and national reform processes are crucial in shaping the conditions under which health innovations through PPPs are developed, implemented, and scaled<sup>1,6</sup>. They do not merely set direction; they serve as infrastructure for translating public ambitions into collaborative action, enabling long-term partnerships across sectors and supporting the uptake of innovation in practice. In addition, stakeholders from both public and private sectors and universities are often invited to contribute to the development of reforms and strategies by advocating for the interests they represent<sup>1</sup>.

## 3.1 National strategies and reforms as a framework for public-private partnerships

Denmark's strategic life science policy began with the recommendations from the Growth Team in 2017 and the following launch of the Growth Plan for Life Science in 2018, which set out to strengthen Denmark's role as a European leader in life sciences. The plan emphasized the importance of the right framework conditions for PPPs and close collaboration between public institutions and private actors, particularly hospitals, universities, and industry<sup>14</sup>. This foundation was further developed in the two subsequent national strategies where PPPs were formalized as a key mechanism to achieve the ambitions of promoting better access to health innovation and improving patient outcomes<sup>6,15</sup>.

Denmark's health reform from 2024 also provides an opportunity for private healthcare providers to contribute to both the delivery of publicly funded health services and to public-private cooperation on developing the best solutions for patients and citizens<sup>17</sup>.

## CASE The Life Science Council – Strategic governance through public-private dialogue

## Aligning long-term vision with operational implementation across sectors

The Danish Life Science Council is a high-level, public-private governance forum established in 2021 to support strategic dialogue between government, academia, patient organizations, and the life science industry. The Council has 22 members and is established with participation at CEO/Managing Director level from ministries, regions, universities, companies, industry organizations, private foundations, patients, and the broader healthcare sector.

The Life Science Council is established to strengthen the dialogue between the public and private sectors and to foster closer collaboration between the healthcare system and the business community.

The Life Science Council will address both national and international priorities within the life science sector, provide input on relevant legislation, and focus its discussions on key areas that can drive growth in the life science industry. Through this work, the Life Science Council aims to support the development of improved patient care and healthcare solutions, ultimately enhancing health and welfare across Denmark. Further, the Life Science Council will monitor the implementation of the Life Science Strategy 2024–2027 and track progress on its key indicators.

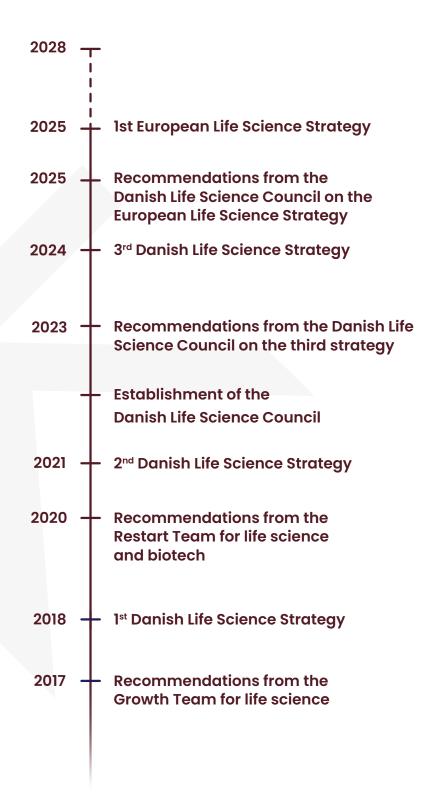
In 2023, the Danish Government requested that the Council submit formal recommendations to the next national life science strategy. The Council organized four thematic working groups, covering innovation uptake, industry growth, international cooperation, and investment frameworks. These groups included a wide range of experts and institutions and were supported by a dedicated secretariat established by the council members involved to ensure delivery of concrete proposals.

Several of the Life Science Council's recommendations have been incorporated into the 3rd Life Science Strategy.

Going forward, the Government will hold biannual discussions within the framework of the Life Science Council on, among other things, the implementation of the strategy and developments of key indicators.

Furthermore, in 2025 the Council delivered recommendations for the European life science strategy launched on July 2nd, 2025.

#### Timeline of Life Science Strategies



## 3.2 From strategy to action – public procurement and long-term visions

Across Europe and the EU, strategic procurement is increasingly recognized as a key instrument for advancing and scaling innovation, improving resilience, and strengthening industrial competitiveness, particularly in health<sup>3,16</sup>.

The European Competitiveness Compass reinforces this by framing public procurement not merely as a cost driver, but as a strategic investment tool to create value, productivity, and innovation in health within the EU<sup>4,8</sup>.

The role of procurement in Danish hospitals is quite central as it is both a major driver of cost-efficiency and a strategic tool for innovation and for achieving long-term visions for health. Since 2010, regional procurement has contributed to savings of over EUR 469 million while enabling better patient outcomes, climate-friendly purchasing practices, and the uptake of new technologies and collaborative care models<sup>18</sup>.

Denmark offers a concrete example of how long-term visions can be put into practice through value-based procurement (VBP) and public-private collaboration.

Value-based procurement
(VBP) is a collaborative,
multidisciplinary approach to
support patient-centric, higherquality, and more sustainable
healthcare systems by awarding
contracts to solutions that
generate most value to patients,
healthcare systems and society
as a whole. In that sense,
VBP is a more advanced and
sophisticated procurement
method compared to simple
price-focused purchasing.

VBP links purchasing to patient outcomes and overall health system performance. This creates strong opportunities for public-private partnerships. When contracts focus on long-term value rather than short-term cost, private companies are more willing to co-invest, test new solutions, and share risks<sup>19</sup>.

The 2021 life science strategy introduced a strengthened focus on VBP through innovative purchasing and outcome-oriented models. The 2024 strategy build on this foundation and allocated new funding to develop a data-driven model with the aim of supporting VBP in the regions<sup>6,15</sup>.

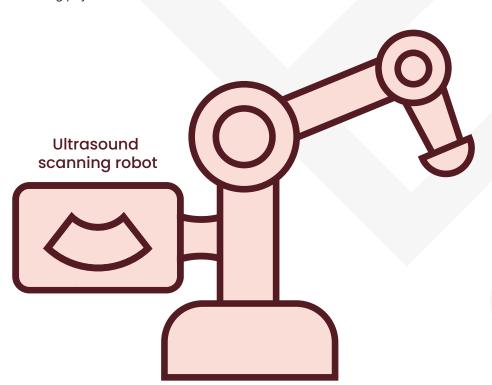
Alongside changes in procurement, new healthcare delivery models are also emerging. These models are linked to national health strategies and priorities and bring private innovation directly into daily healthcare practice in both hospitals and municipalities. These partnerships will support better patient outcomes, including clinical results, patient satisfaction, and workforce efficiency, as well as aiming to prevent re-operations and readmissions.

## CASE The world's first ultrasound scanning robot for pregnant women

## Improving working conditions for sonographers through public-private collaboration

Through a partnership between Aalborg University Hospital, Aalborg University, and Life Science Robotics, an ultrasound scanning robot has been developed to improve sonographers' working conditions. This technological innovation targets the ergonomic challenges associated with conventional ultrasound examinations, which demand repetitive, physically taxing movements. The robot automates these scanning tasks, enabling sonographers to guide its operations via joystick, thus substantially reducing physical strain.

Following extensive testing, the technology is now approved for use across the EU and was implemented in June 2025 at two Danish hospitals, offering a more comfortable experience for patients and contributing to the advancement of healthcare technologies. This project exemplifies how effective public-private collaborations can yield significant improvements in clinical practices<sup>21</sup>.

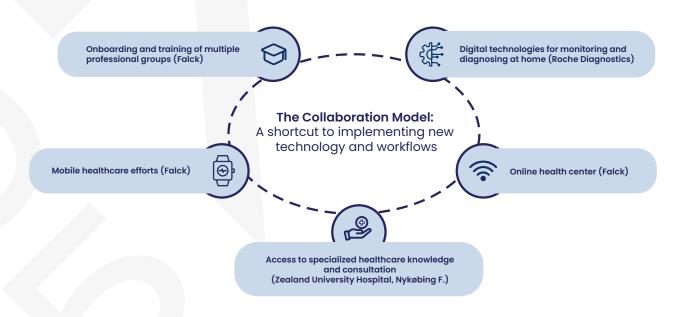


## CASE AcuCare – Bringing hospital-grade care into patients' homes

### Supporting health reform goals through decentralised, collaborative home-based monitoring and treatment

AcuCare is a public-private pilot initiative that reflects the ambitions of the 2024 Danish health reform by delivering hospital-quality treatment directly into patients' homes. The collaboration involves Zealand University Hospital, the Foundation for Life Science Innovation in Region Zealand (FIERS), and the private partners Falck and Roche Diagnostics.

The project enables healthcare at home for two patient categories: continuous advanced treatment at home for patients with infectious diseases, and continuous remote monitoring and care for patients with chronic heart failure. By aligning with hospital treatment plans and integrating professional care at home, AcuCare helps reduce unnecessary hospital admissions, relieve pressure on acute care units, and provide patients with more accessible and dignified care leading high patient satisfaction<sup>20</sup>.



#### CASE A Life in Balance

## Creating sustainable health solutions for citizens with severe obesity in Region Zealand

A Life in Balance is a public-private partnership aimed at improving the quality of life and health for people with severe obesity in Lolland Municipality, Region Zealand. This initiative involves Zealand University Hospital, Lolland Municipality, Novo Nordisk Denmark, Den Sociale Kapitalfond, and FIERS. It targets around 100 citizens with a BMI over 35 and related comorbidities, combining medical interventions for weight loss with support to enhance health competencies.

The program is a collaboration between Lolland Municipality's prevention and training team, the new health clinic, and specialists from Zealand University Hospital Nykøbing Falster. This holistic approach integrates healthcare delivery with social impact investment, promoting health equity and system efficiency across the primary and secondary sector. The model aims to be replicable across Denmark and beyond<sup>22</sup>.



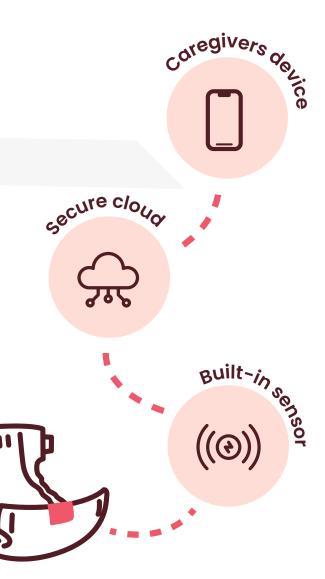
## CASE Diaper System 2030 – Sustainable and dignified incontinence care

## A public-private partnership for circular innovation and better elderly care

Diaper System 2030 is a PPP led by University of Southern Denmark (SDU) in collaboration with Aarhus and Odense Municipalities, Trace, ABENA, and other partners to modernize incontinence care through digital technology and sustainable product design with a strong focus on reducing waste and supporting circular solutions.

The project takes a holistic look at continence care approaches and aims to find alternatives to traditional routines, such as the adoption of sensor-based solutions that alert caregivers when change is needed, improving dignity and skin health for citizens while reducing unnecessary waste. The system enables better resource use and work environment improvements for care staff.

This partnership shows how public actors and private companies can co-create solutions with measurable benefits across health, sustainability, and efficiency, particularly in primary care and eldercare settings. 23,24,25,26



#### 4.0 Leveraging publicprivate partnerships in Denmark and Europe

WHO Europe's Innovation Agenda for Public Health 2025-2030 positions PPPs as a "mega shift" for accelerating transformative, equitable health system innovation<sup>27</sup>.

For PPPs to succeed, they should ideally operate within ecosystems that support collaboration, testing, and long-term scalability. While there is no single formula that fits all countries, Danish experiences and strategies suggest that PPPs may also benefit from an ecosystem where research infrastructure, regulation, capital, and clinical practice work together effectively<sup>1,6</sup>.

Danish experiences also indicate that the success of PPPs depends not just on having the right structures, but on collaboration throughout the process among the involved parties. Key learnings also include the value of a unified clinical research system that brings together public and private stakeholders, national entry points for health data that make access easier, and funding models that blend public support, private risk-taking, and foundation backing<sup>1,6</sup>.

Public-private partnerships are indispensable in enabling public health innovation to move from potential to real-world impact across the WHO European region. By fostering collaboration between governments, industry, and communities, we can close the persistent implementation gap — bridging the distance between breakthrough solutions and their widespread adoption in public health systems. With the second European Program of Work (EPW 2.0) dedicating 30% of our efforts to innovation, we are committed to ensuring that bold ideas translate into concrete outcomes: improved health, greater equity, and resilient systems for all.

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Dr Hans Henri P. Kluge, WHO Regional Director for Europe

#### 4.1 A solid ecosystem

The Danish experiences demonstrate how an aligned ecosystem can enable PPPs to evolve from isolated initiatives into structured models for long-term collaboration.

In Denmark, key structural enablers have been established to support the flow from research to implementation. This includes platforms like the Center for Public-Private Innovation (CO-PI), BioInnovation Institute (BII), Nordic Health Lab, Health Tech Hub Copenhagen, and Innovation Fund Denmark programs<sup>9,29,30,31,32,33</sup>. Further, Innovation District Copenhagen creates a world leading innovation hub that brings together public and private stakeholders<sup>40</sup>.

#### **5 Characteristics of structural enablers**

#### Multi-stakeholder orchestration

Innovation structures that actively bring together hospitals, universities, municipalities, companies, patient and health organizations, and researchers to co-develop solutions. **CO-PI**, for example, serves as a national platform that coordinates actors across the public and private sectors to build scalable innovation partnerships based on shared goals and anchored in welfare sector needs<sup>1,28,33</sup>.

#### Innovation anchored in user needs

Clearly defined clinical and societal challenges, ensuring that innovation efforts are rooted in real world demands. This strengthens relevance, and the potential uptake and scalability of the developed solutions. **The Factory of Needs (Behovsfabrikken)** at Bispebjerg and Frederiksberg Hospital exemplifies this approach by hosting open calls where clinicians and public professionals define and prioritize problems that require innovative solutions<sup>28,34,35</sup>.

2+

#### **5 Characteristics of structural enablers**

## 3

#### Innovation by healthcare professionals

Empowering clinicians and frontline staff to lead innovation. When healthcare professionals are supported in co-developing solutions, it strengthens both relevance and the likelihood of uptake.

BETA.HEALTH is a national initiative funded by the Novo Nordisk Foundation. Through targeted funding and expert support, BETA. HEALTH helps clinical teams move from idea to implementation. Whether the right path is adoption, procurement, integration into practice, or spinout, BETA.HEALTH supports the journey by making healthcare innovation more connected and patient-focused from the inside out<sup>36</sup>.

#### Faster iteration and implementation

Initiatives, such as the public-private foundation for health innovation **FIERS in Region Zealand**, have an ambition to create structured frameworks for testing and developing new health technologies in close collaboration with clinicians and patients. This practice-based approach aims to accelerate adaptation, ensure documented impact, and provide clarity for the potential scaling of solutions across the health system. Based on concrete needs, FIERS acts as a catalyst for partnerships between hospitals, municipalities, companies, civil society, and international actors – always with a focus on increasing health equity and strengthening a sustainable health system<sup>37</sup>.

4



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#### Scalability across the health system

Scaling cross-sectoral health innovation projects is difficult and requires more than successful pilots. To overcome this challenge, new Danish platforms such as the upcoming **National Centre for Health Innovation** are designed not only to test solutions, but also to assess their real-world impact through clear and consistent evaluation methods. These insights can make it easier to adopt effective solutions in other hospitals as well as provide input to national policy makers<sup>17</sup>.

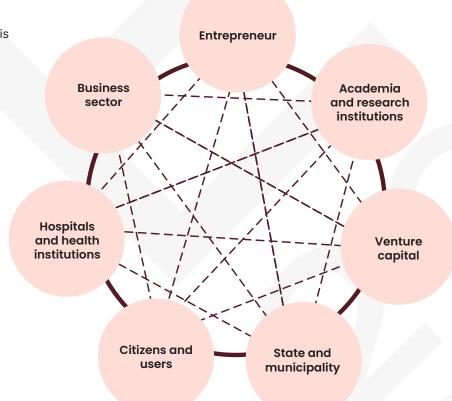
## Innovation District Copenhagen - a world leading innovation hub in Denmark

The Danish Government, City of Copenhagen, and the University of Copenhagen, together with a broad coalition of partners, have agreed on an ambitious plan for developing Innovation District Copenhagen inspired by Kendall Square in Boston.

The aim is to strengthen collaboration between businesses, educational institutions, and public actors to promote new technology, innovative solutions, and job creation thereby establishing a world-leading innovation district for life science and quantum technology<sup>6,38,39</sup>.

Innovation District Copenhagen is already a driving force for innovation today. Over 500 innovative companies are established in the district. To realize this vision, the area must be further developed to accommodate more students, more researchers, more entrepreneurs, and more businesses<sup>40</sup>.

The realization of Innovation District Copenhagen holds great potential for the city of Copenhagen and for Denmark as a whole. The innovation district will create new, well-connected and attractive workplaces and pave the way for a vibrant urban life with new meeting places, open facilities, and improved connections that benefit the city's residents. Furthermore, the innovation district will be a key component in securing Denmark's future competitiveness by strengthening, expanding, and future-proofing our global leadership in life science and quantum technology<sup>40</sup>.



#### The five main principles for Innovation District Copenhagen:

- Developing an epicenter for life science and quantum technology that connects research and entrepreneurial communities in Denmark and globally.
- Shaping a cohesive and vibrant urban district with attractive opportunities for new developments, tailored to the area's unique character and identity.
- Attracting international talent, companies, and investments to drive innovation and growth.
- Creating inviting, identity-defining public spaces and improving connections for pedestrians and cyclists to strengthen urban life and district integration.
- Establishing a dynamic stakeholder organization to lead the implementation of the vision and ensure long-term, sustainable district development.

#### To realize the vision, the development of the innovation district is guided by **eight key areas** for long-term success:

- World-class research environments
- A future center for global innovation
- Leadership in emerging technologies

- A hub for patient health and care
- Capital as an engine for growth
- An international gathering point for talent
- The best city in the world to live in
- Strong connections to the world



Located in the heart of Innovation Copenhagen District BioInnovation Institute (BII). The institute's model is built around foundation grants and financial support, lab space, business development assistance, and access to international networks to early-stage life science projects and spinouts, with the goal of turning scientific breakthroughs into scalable, commercially viable solutions<sup>30</sup>.

## CASE The Digital Health Centre - Digital solutions for health promotion and prevention

## Public-private digital innovation for healthier, self-empowered citizens

The Digital Health Center is a partnership of 35 municipalities across Denmark, regional actors, patient organizations, and private companies. The center provides digital services within health promotion and prevention by developing and integrating digital solutions in the municipalities' health centers. Besides being publicly funded, the partnership also gained financial support by private funds.

The actual product consists of an app "My Life - My Health" made in cooperation with a private company in which citizens can gain knowledge and support.

Based on user-centered design, health professionals are involved in creating the professional content. Likewise, the citizens participate in co-creation workshops, testing, and in evaluation of the programs. The digital services provide possibilities for citizens to become more empowered and self-reliant. This has the potential to free up time and resources in the municipal health centers, with the possibility of full scalability across the Danish healthcare system.<sup>49</sup>

Dialogue support tool between citizens and professionals

Digital chronic care

Supports healthy lifestyles among vulnerable citizens

The digital solution does not replace the physical meeting with healthcare professionals. But it provides flexibility, closeness, and support to citizens who, for various reasons, cannot make use of traditional services.

It is also a way to reduce health inequality and to meet people where they are, in their everyday lives.



Anja Lund, Chair of the Committee for Digitalisation and Innovation, Region of Southern Denmark

## CASE Lighthouse Life Science – Solving healthcare challenges through public-private partnerships

### Mobilizing broad alliances to co-create scalable health solutions

Lighthouse Life Science is a Danish national platform addressing urgent healthcare challenges through innovative PPPs. It was initially focused on promoting "healthy weight" as part of Denmark's response to the growing obesity trend and its broad societal impact. Since then, it has expanded to mobilize more than 300 partners across municipalities, hospitals, research institutions, and industry. Today, the partnership is led by Lundbeck and concentrates on mental health, developing scalable solutions that strengthen prevention, improve psychiatric services and patient pathways, enhance system efficiency, and create long-term societal value.

The Lighthouse is primarily publicly funded by the Danish Government and the Danish Board of Business Development, co-funded by the European Union, and supplemented by (mostly in-kind) support from private and other public actors. Since 2022 the Danish Board of Business Development has invested 155 million DKK through the Lighthouse Life Science platform to support SME innovation and skills.

The work has gained recognition from WHO Europe as a model for sustainable healthcare innovation. In collaboration with the World Health Organization, the Danish Life Science Cluster is exploring how to establish similar lighthouse initiatives in other countries, adapting Danish PPP approaches to support global health priorities.



In its current mental health phase, Lighthouse Life Science demonstrates how PPPs can actively support the implementation of Denmark's 10-year National Strategy for Psychiatry. By bringing together municipalities, hospitals, researchers, and industry partners, the initiative develops and tests concrete solutions such as new care pathways, digital health tools, and coordinated interventions for systemic mental health needs. In this way, it shows how broad public—private collaboration can turn national strategies into practice, strengthen health systems, and deliver sustainable value for society.

#### CASE Luja™ - Co-developing Next-Generation Urological Care

## Patient-centred innovation through public-private collaboration

Luja™ is a next generation intermittent catheter developed by Coloplast in close collaboration with healthcare professionals and users in Denmark and other EU countries\*. The project combined the company's R&D expertise with clinical insight from hospitals and community nurses to address one of the most frequent and costly complications in catheter care: urinary tract infections.

The catheter was co-developed through structured feedback loops with clinicians and patients, ensuring clinical relevance and usability. Luja sets a new

standard for bladder emptying, featuring novel Microhole Zone Technology and is designed to reduce the risk of urinary tract infections, a challenge identified by both healthcare stakeholders and users.

This public-private innovation model exemplifies how medical device development can be rooted in real patient and system needs, user experience and sustainability, and demonstrates how PPPs can foster scalable product innovation with system wide benefits. 43,44,45,46



\*Product evaluations in Australia, Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Sweden, Switzerland, UK, and US.

## CASE Columna Flow – Digital clinical coordination at Aalborg University Hospital

#### Streamlining acute care with public-private collaboration

Columna Flow Clinical Tasking is a mobile communication platform co-developed in a PPP between the emergency department at Aalborg University Hospital and Systematic. The solution improves coordination and reduces pressure in a fast-paced clinical setting by allowing clinicians to view incoming patient information, monitor task status, and assess workloads in real-time.

All clinical tasks are tied to the relevant patient and visible to treating healthcare staff, creating a shared overview of responsibilities. The application supports secure video and messaging and includes check-in functionality to indicate which clinicians are on call and available.

Clinical staff already experience significantly fewer calls and greater overview throughout the day. By embedding development in a clinical setting, the project demonstrates how PPPs can deliver solutions that directly improve workflows, reduce unnecessary communication, and enhance patient care.<sup>47,48</sup>



#### 4.2 Clinical research and trials

The Danish system for clinical research enables robust collaboration between the public and private sectors, supporting innovation in medicine and medical technologies. National health registries, population-wide coverage, and governance enable precise feasibility assessments, continuous monitoring, and linkage between trial data and health outcomes. The Danish data environment supports both early-phase research and real-world evidence generation, making Denmark attractive for conducting research<sup>6,9</sup>.

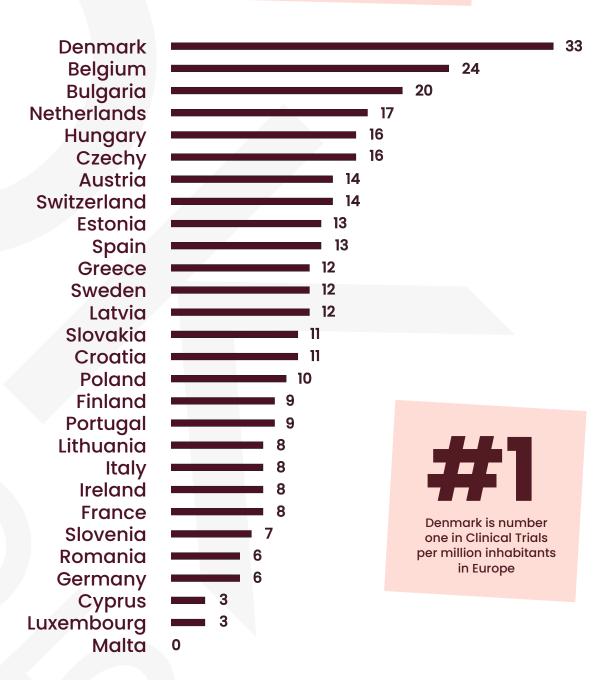
In 2024, Denmark was the leading country in Europe measured by the number of clinical trials relative to population size. A total of 198 trials were conducted in Denmark, corresponding to 33 clinical trials per million inhabitants<sup>50,51</sup>.

A central component of the success is **Trial Nation** – a public-private initiative launched under the 2018 Growth Plan for Life Science. Trial Nation offers a single national entry point for Danish and foreign life science companies, patient organizations, and clinical researchers wishing to sponsor, participate in, and conduct clinical trials in Denmark. By working across all public hospitals and with more

than 20 industry and government stakeholders, Trial Nation aims to strengthen Denmark's global position in both pharmaceutical and MedTech trials by making it easier and more attractive to conduct clinical research across hospitals. Crucially, the initiative also enhances the dialogue between public authorities and private industry, fostering a deeper understanding of each partner's needs and processes. The improved collaboration has been instrumental in the decision-making by public health authorities to implement key efficiencies like a fast-track approval pathway for phase 1 trials<sup>6,14,52</sup>.

An initiative currently under development is the **National contact point for health data access.** The public project is led by the Danish Health Data Authority and financed by a EUR 26.8 million grant from the Novo Nordisk Foundation. The contact point will offer a single digital entry for researchers to apply for and access Danish health data across registries. The ambition is to improve coordination and simplify processes to enable faster, more secure data use<sup>53</sup>.

## EU Countries Ranked by Clinical Trials per 1 million Inhabitants (2024)



Source: 51



Another initiative to support clinical research and ensure faster and more safe innovation is the EVA Partnership (Evidence in an Al age) - a PPP dedicated to advancing evidence-based medicine through artificial intelligence, spanning private, academic (with the University of Southern Denmark, SDU, as the academic partner), life-science industry, and regulatory partners. The initiative consists of a digital engine that consolidates peer-reviewed clinical research in near real-time, which enables faster identification of treatment effects and side effects. EVA supports regulatory bodies such as the Danish Medicines Council by enhancing their decision-making capabilities. It also allows researchers and life science companies to access continuously updated evidence streams<sup>54</sup>.

Beyond national initiatives, cross-country cooperation plays a critical role in strengthening the research base. Through the **Nordic University Hospital Alliance**, the five leading university hospitals in the region, Rigshospitalet (Denmark), Karolinska University Hospital (Sweden), Oslo University

Hospital/Rikshospitalet (Norway), Helsinki University Hospital (Finland), and Landspítali University Hospital (Iceland), are advancing joint clinical research, platform trials, cross-border data sharing and new approaches to patient treatment. Together, these hospitals serve a population of more than 27 million people, creating a unique environment for generating robust and generalizable scientific evidence and positioning the Nordic region as an attractive location for global clinical trials and innovation<sup>55</sup>.











#### CASE The BioInnovator Academy

## A strategic training course to strengthen healthcare professionals' digital competencies and innovation skills

At Rigshospitalet, the BioInnovator Academy was launched in 2021 as a long-term PPP with Roche Diagnostics, aimed at enhancing staff competencies — particularly in data-driven decision-making and innovation. The goal is to empower employees to identify and lead improvement initiatives that streamline patient pathways and optimize clinical operations through more effective use of diagnostic data.

This collaboration illustrates how a PPP can enable healthcare professionals to spearhead innovation within their own clinical environments. For the private partner, the initiative provides valuable exposure to clinical workflows and key insights into future developments in digital diagnostics.<sup>57</sup>

Training is offered in areas such as data visualization, change management, service design, and sustainability. The teaching team comprises experts from both Rigshospitalet and Roche Diagnostics.

At Rigshospitalet, integrated public-private partnerships are a central part of our strategy. We must harness all available strengths if we are to succeed in ensuring a resilient and sustainable healthcare system for the future.

The collaborative projects, we engage in, are firmly anchored in our clinical departments, where new healthcare solutions are shaped in close dialogue with both patients and professionals. I believe this is absolutely essential to ensure that we prioritize innovations that are relevant and in demand and ready for real-world implementation, ultimately benefiting patients and the healthcare system



Rasmus Møgelvang, Chief Executive, Rigshospitalet

## CASE ReproUnion – A cross-border platform driving reproductive health innovation in Greater Copenhagen

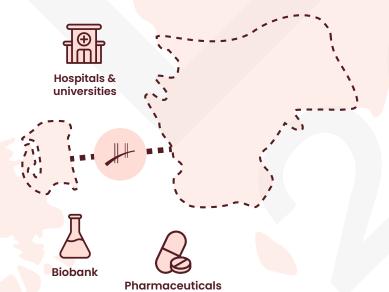
## Aligning public and private stakeholders to address fertility challenges

ReproUnion is a PPP uniting hospitals, universities, companies, and regions across Denmark and Sweden to strengthen clinical research and innovation in reproductive medicine.

For 15 years, this partnership in Medicon Valley has run projects in i.e. fertility diagnostics, treatments, and reproductive epidemiology, with the goal of improving patient access, clinical outcomes, and reproductive health. By establishing a common governance model, research infrastructure, and project pipeline, ReproUnion enables real cross-border trial activity and platform development – also related to its flagship biobank and infertility cohort RUBIC.

The collaboration demonstrates how public-private research initiatives can scale beyond national boundaries, address complex population health challenges, and make the Nordic region a hub for high-impact clinical research.

ReproUnion is funded by EU-Interreg ÖKS, the Capital Region of Denmark, Region Skåne, and Ferring Pharmaceuticals as the main industry partner.<sup>56</sup>



#### 4.3 Capital

Access to long-term capital is a critical success factor for the development and scaling of innovative solutions that arise from PPPs<sup>6</sup>. However, limited access to capital is a major barrier to scaling innovation across Europe<sup>6,16,58</sup>. The Competitiveness Compass for the EU explicitly highlights the need to channel more private and public investment into Europe's strategic sectors, including health and life sciences, to accelerate industrial competitiveness across Member States<sup>4</sup>.

Private foundations such as the Novo Nordisk Foundation, Lundbeck Foundation, LEGO Foundation, and the A. P. Møller Foundation play a visible and strategic role in Denmark. In addition, The Danish Industry Foundation has supported Health Tech Hub Copenhagen for seven years. The foundation aims to accelerate the development of a strong HealthTech industry in Denmark by building a well-functioning ecosystem of entrepreneurs, established companies, investors, and skilled practitioners from the healthcare sector<sup>59</sup>.

Denmark has made significant efforts to improve access to capital through state-backed institutions. The Export and Investment Fund of Denmark (EIFO) co-invests with private funds in high-risk, early-stage life science ventures that are typically underserved by the market. In addition, the fund can support financing further up the companies' growth path in collaboration with private investors. This type of combined financing ensures that promising but capital-intensive innovations can continue development when traditional funding mechanisms fall short, for example, in rare diseases and research in new antibiotics<sup>6,60</sup>.

As Europe moves forward to enhance its economic resilience and health sovereignty, Denmark's experiences illustrate how a strong public commitment and public-private risk-sharing can support that PPP-driven innovation continues beyond early pilots.

#### **5.0 Future perspectives**

Denmark has a long tradition of working with public-private partnerships. The method is deeply embedded in the DNA of the health and life science ecosystem and shapes the way innovation is developed. Yet, to fully unlock the potential and harness all the innovative capacity from our health and life science companies, Denmark could benefit from having an even more systematic and structured approach to PPPs<sup>6</sup>.

In Denmark, recent structural reforms and national strategies have laid the groundwork for the next generation of PPPs. In the future, a new National Center for Health Innovation is to be launched. The center will serve as a national point of contact for companies and public health organizations and foster dialogue on how to promote more sustainable healthcare solutions. By supporting local innovation initiatives across the healthcare system and identifying mature solutions ready for scaling, the center can enable innovation to be translated into measurable improvements for patients and health systems<sup>6,17</sup>.

The Danish experiences with PPPs outlined in this publication can support the broader European ambitions. The strategy for European Life Sciences calls for stronger integration between research, innovation, and implementation – underlining PPPs as one of the key mechanisms to deliver transformative health solutions. In addition, the Draghi report highlights that Europe's competitiveness depends on its ability to rapidly adopt breakthrough technologies, invest in translational infrastructure, and create regulatory environments that reward smart risk-taking<sup>3,8</sup>. PPPs can play a role in each of these areas.

Denmark's ambitions are similarly outward-looking. As stated in the Danish Life Science Strategy, Denmark aims to engage more actors, including health authorities, research institutions, companies, and civil society, in driving international partnerships based on shared goals. PPPs are not only positioned as drivers of domestic transformation but as strategic platforms for sustainable health innovation, export of solutions, and bilateral and multilateral engagement<sup>6</sup>.



Looking ahead, Denmark does not see itself as a blueprint, but as an example of inspiration on how sustainable investment and national prioritization of innovation ecosystems, combined with mission-driven partnerships, can enable measurable health and economic impact. In sum, the value of PPPs lies not only in the technologies they advance, but also in the outcomes they deliver, enabling life-improving innovation, reduction of inequity, and powering a competitive, sustainable health economy.

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