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DANISH LIGHTHOUSE LIFE SCIENCE

A NEW KPI MODEL FOR COLLABORATION AND CHANGE

Nordic Wellbeing Academy

Nordic Healthcare Group

Danish Life Science Cluster

Lundbeck

novo nordisk

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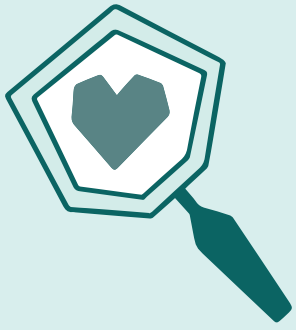
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EXECUTIVE SUMMARY

Strategic long-term partnerships are essential to tackle complex societal challenges. To strengthen these partnerships, a combination of inclusive funding models, organizational support, trust, motivation, commitment and effective communication is needed. By implementing these elements, partnerships can develop innovative solutions that have a lasting positive impact on multiple parameters.

The Danish government in 2021 established a ”lighthouse” for Life Science with the hope and intent that all kinds of stakeholders would participate in a public-private partnership that included the growing Danish Life Science industry from SME and startups to unicorns and global companies. This was a new approach, where the act of “pulling together” is explored as a solution to solving complex and difficult challenges.

The core observation was, that collaboration was healthy. And also, that better solutions for future health required collaboration. At thus the Lighthouse Life Science (LLS) was born.

The experiences from LLS show that successful partnerships require a flexible approach, clear goals and a strong shared vision. And also, that the success of a partnership requires a detailed KPI model for impact to be measured - especially when economic growth, innovation, societal development, and more equality in health are all important for the ambition.

We want to illustrate how this is implemented in practice, across sectors and boundaries. To accommodate this, we start from traditional definitions and evaluate how this Danish case of partnership and collaboration can make a difference. We believe this constitutes a model of collaboration based on trust, sharedness and common goals.

Our lesson is also that such a collaboration will benefit from a joint KPI reporting model, as this is crucial to ensure that the partnership is not only established and started correctly, but also maintains its sustainability and results in truly implementable and effective solutions. A KPI model with indicators that can support a holistic perspective with systematic collection of data both across the projects and across governance in the partnership.

Pilot projects and initiatives in LLS have not yet shown their full evolution potential due to constraints in time, funding, and evaluation structures. This is in part by design, as the purpose of these pilots is to show viability and scalability, not to develop industry spin offs or develop innovative health institutions. But we can recommend that future projects are designed with a focus on evidence gathering through systematic knowledge gathering on value creation, which also supports national strategies and political priorities by solving real health challenges with prevention, early detection and treatments in areas such as mental health.

It is therefore relevant to develop a KPI model with focus on measuring the success of economic and social systems based on their ability to promote human and environmental well-being rather than traditional economic growth alone. This approach involves a holistic evaluation of the impact of projects on different aspects of well-being.

One of the unique things about the lighthouse is precisely that it is anchored in ministries – and across the various ministries – which contributes to the vision being to create increased health and well-being combined with economic growth and business promotion through positioning, national scaling and global exports.

A core recommendation based on the summary of earlier evaluations is therefore that there is a need for a more holistic, stringent and methodical evaluation design that can be applied across the board and is based on more overall, uniform KPIs that can illustrate ongoing knowledge and learning to ensure better health in society for all, while at the same time strengthening the country’s growth and exports – and positioning Denmark as an international beacon in life science.

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PUBLIC-PRIVATE PARTNERSHIPS IN LIFE SCIENCE - SDG 17

Sustainable Development Goal (SDG) 17 focuses on the critical role of partnerships in achieving the other 16 global goals. The rationale behind SDG 17 is rooted in the understanding that global challenges like poverty, inequality, climate change, and health crises are complex and interconnected. No single country, organization, or sector can tackle these challenges alone. Collaboration across governments, the private sector, civil society, and academia is essential for pooling resources, sharing knowledge, and ensuring the inclusivity of solutions.

The principle behind SDG 17 is the need for multi-stakeholder collaboration at local, national, and global levels. This means that different sectors and disciplines must align to address systemic barriers, create innovative solutions, and share responsibilities. International partnerships, such as those fostered by the UN, play a vital role in mobilizing financial resources, technology, expertise, and political commitment across borders. Without a strong foundation of cooperation, progress in addressing issues like climate change, hunger, or global health disparities would be insufficient and fragmented.

The Importance of Partnerships for Sustainable Solutions

Partnerships amplify the impact of sustainable solutions by allowing diverse entities to bring unique strengths and expertise to the table. Public-private partnerships, for example, combine the innovative capabilities of private enterprises with the public sector's regulatory oversight and ability to mobilize resources. Likewise, cross-disciplinary collaborations in science, technology, and social sciences can drive more holistic solutions that take into account the environmental, economic, and social dimensions of sustainability.

For a sustainable future, the partnerships are important as they enable:

- Resource Mobilization: Governments, NGOs, and corporations can pool financial, technological, and human resources to address large-scale problems. Partnerships help align funding mechanisms, avoid duplication of efforts, and create synergies for greater effectiveness.

- Knowledge Sharing and Capacity Building: Partnerships foster collaboration in research and knowledge transfer, which is especially critical in developing regions. Organizations can build local capacities by transferring skills and technology, enabling more sustainable, long-term solutions.

- Innovation and Scalability: Collaborative efforts encourage innovation by blending diverse perspectives and expertise. Partnerships help scale up successful pilot projects and replicate them in new contexts or regions.

- Accountability and Inclusivity: By engaging multiple stakeholders, partnerships ensure that sustainable solutions are more inclusive and representative of diverse interests, which increases accountability and broadens the impact of initiatives.

Implications for Life Science Partnerships

In the life sciences, partnerships are particularly vital. The field of life sciences, which includes biotechnology, pharmaceuticals, health care, and environmental biology, plays a critical role in addressing SDGs related to health (SDG 3), hunger (SDG 2), and climate action (SDG 13). The complexity of challenges in these areas requires collaborative innovation, such as in drug development, biotechnology applications, and global health initiatives.

Partnerships between academic institutions, pharmaceutical companies, biotech firms, and governmental organizations are essential to accelerate scientific discoveries and bring new treatments or sustainable solutions to market. For example, during the COVID-19 pandemic, the rapid development of vaccines was only possible through global partnerships that integrated knowledge from various scientific disciplines, financial backing from governments, and logistical support from international organizations.

In addition to health, life science partnerships are key in areas like sustainable agriculture, where biotech companies work with environmental organizations to develop crops that are more resilient to climate change. These partnerships enable breakthroughs in food security, disease prevention, and ecosystem conservation.

Collaborations in life sciences are crucial for translating research into practical applications. These partnerships can improve access to life-saving medicines, advance global health outcomes, and support sustainable ecosystems—ensuring that progress in one area does not come at the cost of another.

SDG 17 emphasizes that partnerships are the foundation for achieving sustainable development. As global problems grow in complexity, the need for strong, diverse, and equitable partnerships across sectors and borders becomes increasingly evident. In the life sciences, partnerships are indispensable, driving innovation, improving global health, and ensuring sustainability through collaboration and shared responsibility.

PARTNERSHIPS FOR WELLBEING - IN COMMUNITIES AND ECONOMY

We live in a time with complex challenges, where key factors for well-being; sickness and avoidable deaths are fundamental challenges for societies across the globe.

Denmark has a high standard of living and financial growth. Despite the financial growth, year over year, we are facing societal and environmental challenges. As an example, the economic inequality is increasing, mental health is deteriorating, more people suffer from stress, it is increasingly difficult to retain workers on the labour market, greater social inequality and an imbalance in risks and well-being. In addition, significant environmental changes are experienced with inappropriate precipitation and heat wave records. Similarly, we experience a deterioration of biodiversity and the amount of microplastic found in people and in nature is increasing.

Towards a Wellbeing Economy

To accommodate for the well-known and well documented challenges there is a need for implementation and application of the Wellbeing Economy principles, to an even higher degree compared to more traditional financial models.

Today, Wellbeing Economy is an agenda that is pushed forward by organizations across the world, and it is applied by more and more governments that we in Denmark can be compared to. The Wellbeing Economy represents a visionary approach to economic development in that it prioritizes well-being, social justice and sustainability. This model challenges the traditional perception of financial success and aims to create a future where economy serves humans and the planet rather than to ignore these.

In a wellbeing economy our definition of societal success changes from a GDP-growth focus to a measure of well-being. This involves a fundamental change to our system. A good economy is when rules and incentives are designed to ensure that everyone has enough to ensure a life of comfort, security and happiness. When humans feel safe and when they can use their creative energies to support the flourishing of life on the planet. When we thrive in a restored, safe and living natural environment, because we have learned to give just as much back as we have been given. When we have a voice over our collective destiny and find a sense of belonging and purpose through genuine connections to the people and the planet that sustains us.

- **Fairness**: Justice in all its dimensions at the heart of economic systems.
- **Participation**: Citizens are actively engaged in their communities and economic decisions.
- **Nature**: Humans are one with nature and we

give as much back as we take from the ground.

- **Purpose**: We all have a shared sense of belonging & our institutions serve the common good.
- **Dignity**: Everyone has enough to live in comfort, safety and happiness.

Measuring Wellbeing

Progress shown below is based on the recommendations made in 2009 by the Commission on the Measurement of Economic Performance and Social Progress to which the OECD contributed significantly. It also reflects earlier OECD work and various national initiatives in the field.
This Framework is built around three distinct components:

Current wellbeing, inequalities in wellbeing outcomes, and resources for future wellbeing.

These KPIs and the reporting of them allows OECD Member States to assess key impacts and challenges and also to build strategies and policies for improving wellbeing for country and/or regions or communities. The use of a wider set of KPIs enables holistic understanding of complex problems and builds a better map for navigating paths forward.

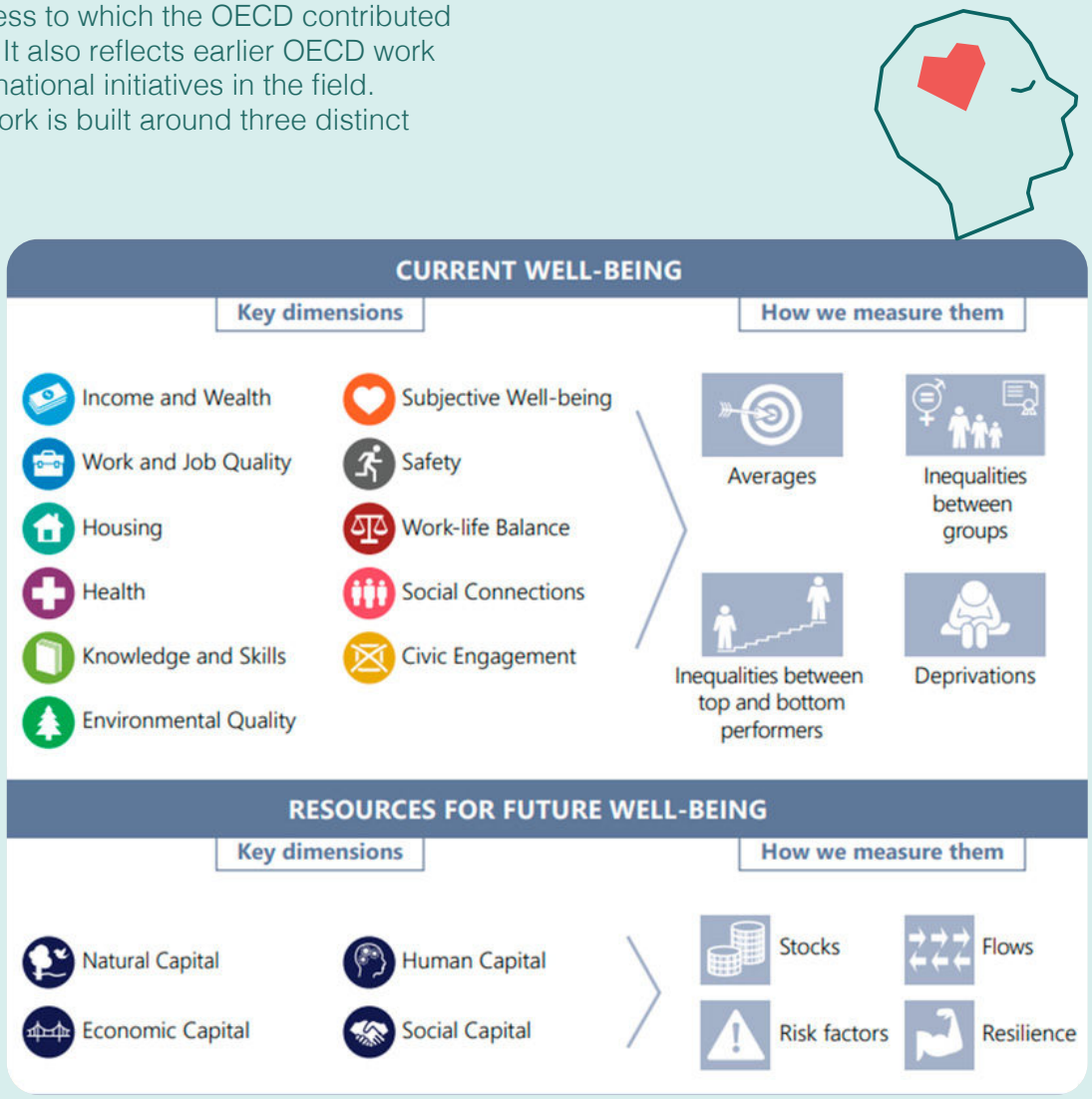


Figure 1: OECD wellbeing framework.

Reference https://www.oecd.org/en/topics/sub-issues/measuring-well-being-and-progress.html

USING PUBLIC-PRIVATE PARTNERSHIPS FOR TRANS-FORMATION

There are several ways of constructing public-private partnerships (PPPs). The term can often be used to describe transactional relations, where a specific public task is to be solved by a private partner:

A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and remuneration is linked to performance.[2]

Increasingly however, the idea of partnership has evolved from this task-orientation to more mission-oriented partnerships:

A mission-driven partnership is a type of collaboration where entities, such as nonprofits, governments, or businesses, come together with a shared objective that aligns closely with the mission of at least one of the partners involved. Unlike traditional partnerships, which might focus primarily on mutual benefits or financial gains, mission-driven partnerships are deeply rooted in advancing a specific mission, often related to sustainability, social justice, or public health.[3]

These partnerships often involve a "mission-driven convener," an organization that initiates and supports the partnership to achieve its own broader mission. For example, a nonprofit might establish cross-sector partnerships to further its sustainability goals, such as creating more sustainable supply chains or addressing climate change through collaborative efforts. The convener's role in these partnerships is not just to facilitate cooperation but to ensure that the partnership's outcomes align with their coremission, thereby driving meaningful change in the targeted area.

This approach is particularly effective in addressing complex, systemic challenges that require coordinated action across different sectors, such as achieving the United Nations Sustainable Development Goals (SDGs) or for addressing other wicked problems—complex, multifaceted challenges that cannot be easily solved by a single entity. These partnerships leverage the strengths of both sectors: the public sector's commitment to the common good and regulatory power, and the private sector's innovation, efficiency, and resources.

By collaborating, they can pool knowledge, share risks, and align incentives toward common goals, allowing for more comprehensive and adaptive solutions. This cooperative approach fosters innovative strategies and dynamic responses, making it possible to tackle the interdependent and evolving nature of wicked problems in ways that would be unattainable for either sector alone.

Choosing a partnership model

The choice of the specific model can vary depending upon local tradition, experience and mission, but also share a lot of characteristics. A key to this choice would be to have an extensive discussion about how best to align public goals with private expertise and resources. Here's a breakdown of key methodologies, their benefits, and a comparison of their differences and challenges:

1. Public Finance Initiatives (PFI)

- Description:
  - A form of partnership where the private sector finances, builds, and operates public infrastructure, with the public sector repaying the costs over time through long-term agreements.

2 World Bank Online Reference Guide

3 World Resources Institute, MDPI

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- Key Benefits:
  - Access to Private Capital: Facilitates the completion of public projects without immediate government spending.
  - Lifecycle Accountability: The private sector is responsible for the asset's long-term quality and maintenance.
- Challenges:
  - High Long-Term Costs: Can be expensive over time due to repayment structures and profit margins.
  - Complex Financial Arrangements: Managing these partnerships requires sophisticated financial oversight.

2. Build-Operate-Transfer (BOT)

- Description: The private sector finances, constructs, and operates a project (such as infrastructure) for a specific period, after which it transfers ownership to the public sector.
- Key Benefits:
  - Risk Transfer: Significant risks, including construction and operational risks, are transferred to the private partner.
  - Innovation: Encourages innovative approaches in project delivery and management.
- Challenges:
  - Complex Negotiations: Requires detailed contracts to manage various project phases and ensure smooth transitions.
  - High Initial Costs: Often involves substantial upfront investment, making it suitable mainly for large-scale projects.

3. Joint Ventures

- Description: The public and private sectors co-invest in a project, sharing risks, rewards, and management responsibilities, often in areas like infrastructure development or technology initiatives.
- Key Benefits:
  - Shared Risk and Reward: Both sectors share the financial risks and potential benefits, aligning their interests.
  - Enhanced Collaboration: Promotes a deep level of cooperation and alignment of strategic goals.
- Challenges:
  - Complex Governance: Requires clear agreements on decision-making processes and profit-sharing.
  - Cultural Differences: Potential conflicts can arise due to differing operational cultures between the public and private sectors.

4. Mission-Based Partnerships

- Description: The public and private sectors collaborate on a shared mission or goal, often in sectors like healthcare, education, or environmental sustainability. These partnerships focus on achieving specific outcomes rather than financial returns.
- Key Benefits:
  - Aligned Social Goals: Both sectors work together to address societal challenges, leveraging each other's strengths.
  - Flexibility: These partnerships can be more flexible, adapting to the needs of the mission rather than being bound by rigid financial structures.
- Challenges:
  - Measurement of Success: Defining and measuring success can be complex, as outcomes may not be purely financial.
  - Sustainability: Ensuring long-term commitment and resources from both sectors can be challenging.



Method	*Risk Transfer*	*Cost to Public Sector*	*Complexity*	*Flexibility*	*Public Control*
Public Finance Initiatives	High	High	High	Low	Low
BOT	High	Low	High	Low	Low
Joint Ventures	Shared	Shared	High	High	Shared
Mission-Based Partnerships	Medium	Medium	Medium	High	Medium

Differences and Challenges

1. Risk Allocation: BOTs typically involve a higher transfer of risk to the private sector, while Mission-Based Partnerships often feature shared or balanced risk, depending on the nature of the mission.

2. Financial Structure: Public Finance Initiatives and BOTs often involve complex and long-term financial commitments, whereas Mission-Based Partnerships and Joint Ventures may be more flexible and focused on social outcomes rather than financial returns.

3. Flexibility and Control: Mission-Based Partnerships offer more flexibility and a stronger alignment with public goals, while BOTs and PFIs provide less public control and are more rigid due to their financial nature.

4. Public Perception and Political Risk: PFIs can be politically sensitive, especially in sectors like healthcare or education, where the public may resist private involvement. In contrast, Mission-Based Partnerships tend to garner broader support due to their focus on social benefits.

Each methodology presents unique trade-offs, and the choice depends on the project's goals, the sector, and the capacity of both public and private partners to manage the partnership effectively.

The Danish Lighthouse Case

In the case of the Danish Lighthouse Case, the choice was made to use a Mission-Based Partnership due to the high applicability to issues related to healthcare and the ability to work with flexibility to achieve the complex goals.

But as mentioned above and in our Pilot Project Evaluations, getting a clear measurement of success and outcomes becomes trickier and requires a different model than traditional transactional partnership. Indeed, the value of the partnerships should likely be seen through a different lens than e.g. traditional outcome or ROI assessment criteria. Essentially because the true value goes beyond this type of results, with the strong action-learning bonds leading to trust and thus also a very different level of ownership and engagement in the activities.

> *We consider trust and co-creation between stakeholders to be the key ingredients to empower people and communities to drive the transformation of systems…* (WHO, Tallinn Charter 2023)

In the Report 2, this structure for innovation and learning is described in further detail. Including the fact that an important and significant factor in these types of partnerships is the ability to also enable knowledge transfer between sectors, disciplines, and partners, and the ability to work in co-creative ways to extend networks, relations, and build trust. This is indeed a core additional value creation in these partnerships and crucial to the success, as this remains a key - but often elusive - ingredient for systems transformation.

In the Report 1, this can also be seen via the unique high level of pilot projects that have found a path across the traditionally tricky research-implementation gap with an impressive 88% of projects leading to continued practice.

The next chapter will explore the element of trust further and the interrelation it has with both process and results.

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TRUST FOR TRANSFORMATION

The nature of transformation always has elements of uncertainty. People or organizations take a step into the unknown to embrace new connections, new workflows, new tools or some other different element than the old status quo. This can often happen with little or no challenges in a safe environment, but even at the best of times and with the best of intentions, transformations can be tricky, have unexpected outcomes or even fail.

A significant factor for the success of such a process is often the existence of trust. Few transformations can have a 100% guarantee of success, but trust can often enable the frail attempts to survive, the first iterations to be repeated, or the doubt to turn into hope - and later confidence.

Trying to attempt transformations without trust will sometimes be needed. A ceasefire in war will sometimes fail. And sometimes be the first step towards peace. Yet in most human relations we are fortunate to be able to build our transformation on an existing level of trust.

But a key message from a Nordic perspective is also; With the right strategy and effort, you can build trust. Trust is not just a coincidence, but an outcome of dedicated efforts and initiatives that support the creation of stronger bonds.

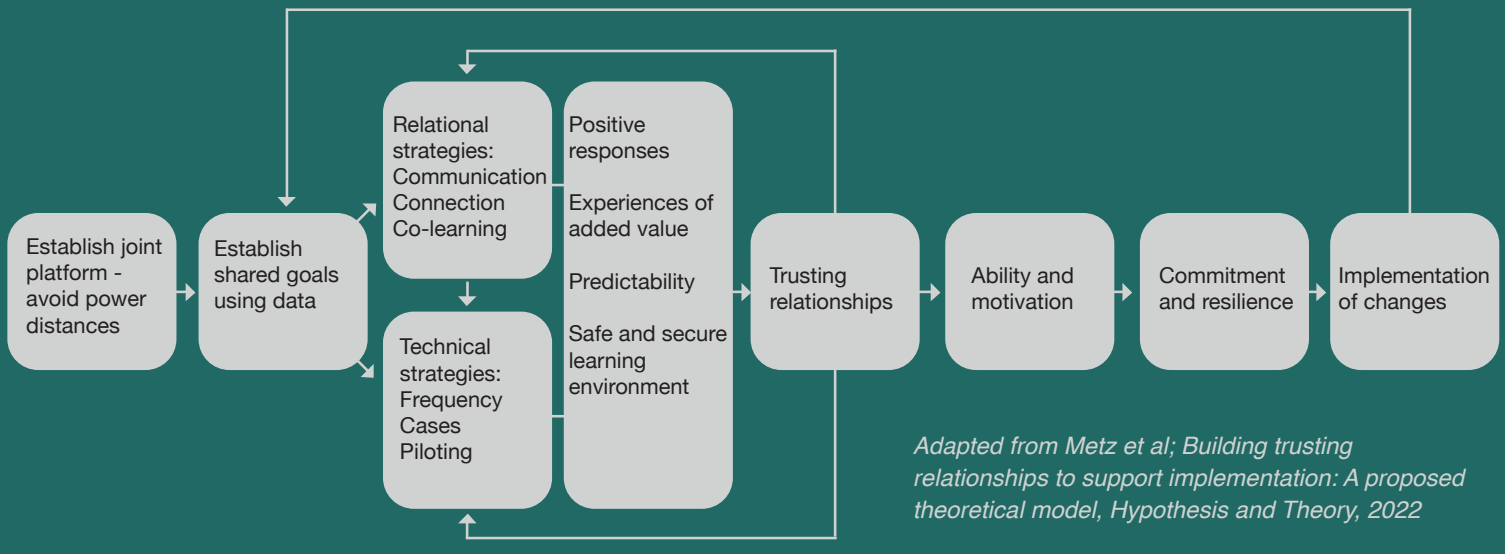
So, one of the key objectives of a Danish Lighthouse is the creation of trust to be able to pave the way for transformation.

This interrelation can be described in the graphic below - and is both a core element in the theory of change for the individual pilot projects but are also the foundation for the ambition of this public-private partnership.

It is of course important to note that this interrelation and process is not to be taken lightly. Even with good intentions and support, the willingness and readiness of the stakeholders before beginning the process are also to be considered, as well as a robust set of contingency plans when good strategies for change meet challenges - as they will. When reading the evaluations of the LLS, it is clear that both misunderstandings and hiccups are to be expected, but these also be used as an opportunity for stronger bonds.

One cannot claim that the path towards higher trust between organizations is always smooth and easy, but one can claim that joint experiences - including some from conflict or challenges - can be the basis for a prosperous joint understanding and better ability to solve issues in the future.

Figure 2: Building trusting relationships



Adapted from Metz et al; Building trusting relationships to support implementation: A proposed theoretical model, Hypothesis and Theory, 2022

https://doi.org/10.3389/frhs.2022.894599.

MEASURING TRUST

As part of our preparation and deliberations about the best way to construct a model for assessment of impact and outcomes, we realized that our method of measuring trust was vital to our entire understanding of progress and impact.

While previous research and publications have shown the strong intrinsic value of trust in Denmark (Svendsen, 2018), the power of trust is also often taken for granted among Danish institutions, organizations, and citizens. The means that while using trust and enhancing trust are often at the core of collaborative initiatives and projects, the actual change in trust levels is rarely measured - even as the existence of it is vital to most interactions in society (see below).

In effect, this leads Danish initiatives to both depend on, use, and produce trust, but also have little to no reporting of these dynamics and outcomes. And ironically, these effects are fundamental to the successful transformation of health systems and societies across the globe towards future-fit concepts and practices.

The WHO Tallinn Charter of 2023 mentioned briefly above highlighted the importance of establishing better mechanisms to support the creation of trust and to ensure inclusivity in all public and private initiatives.

Especially the last bullet of the Charter rings true for our work in both the Danish Life Science Cluster and the building of a new KPI model; governance frameworks should be established to ensure that collaboration with the private sector functions to benefit the public and contribute to strengthening of health systems.

Figure 3; Trust is crucial for success, NHG 2024

Nordic Healthcare Group

Background: Trust the crucial for both economic stability and successfull relationships.

This presentation explores why trust is oimportant and how society, partnerships and businesses can build and maintain it.

Economic Stability and Welfare

Trust reduces transaction costs and fosters cooperation.
According to Professor Gert Tinggaard Svendsen, trust is the foundation of Denmark's economic prosperity and welfare state.
A lack of trust can lead to increased control measures, which are costly and inefficient. High levels of trust mean that verbal agreements suffice, and people can move freely and safely.

The Finanacial Crisis and the Collapse of Trust

During the financial crisis, trust in financial institutions plummeted due to fraud and opportunistic behaviour. According to G. Corsetti and colleagues, this led to higher costs and lower investments. The erosion of trust caused investors to pull back, leading to liquidity issues and tighter credit conditions.
Rebuilding trust in the financial sector is essential to ensure a resilient economic framework.

Trust as a Strategic Resource

Deloitte insights highlights that trust should be treated as a strategic resource. Companies that build and maintain high trust can experience significant economic benefits and outperform the S&P 500 (stock market index that measures the performance of 500 of the largest companies) in the United States by up to 50%. trust must be integrated into all financial integrity, to create a robust and sustainable organization.

Corporate Trust Crisis

The pandemic revealed a trust crisis in many companies, leading to trends like "quiet quitting" and "the Great Resignation". These phenomena reflect a lack of trust in companies' ability to support their employees. Research shows the employee disengagement cost the global economy $ 8.8 trillion in lost productivity annually. This disengagement can also lead to higher turnover rates and a decline in overall workplace morale. Companies must prioritize trust to enhance employee satisfaction and organizational resilience.

Trust is a strategic asset for economic prosperity, welfare and stability.

Trust crisis in financial and corporate sectors: Key to economic stability and employee engagement.

We consider trust and co-creation between stakeholders to be the key ingredients to empower people and communities to drive the transformation of systems. This requires that:

- equity and inclusivity are prioritized in all aspects of the transformation;
- people of all ages and gender, from across the socioeconomic gradient and from diverse cultural backgrounds, trust the system and those who provide care to act in their and the wider public's best interests above all other considerations, and are meaningfully engaged in co-producing health;
- health and care workers trust that their work, their careers and their wellbeing are valued;
- transparent and inclusive forms of communication and the fostering of a shared understanding of transformation goals are recognized as integral to building and maintaining trust;
- policy-makers in all sectors recognize that better health is central to the well-being economy, and trust that the health system will use investment effectively to deliver for all their citizens;
- all people, including persons living in vulnerable situations and communities, are meaningfully engaged in health service design and implementation, and use their full potential to support transformative action and to build resilience for themselves, health systems and societies;
- the public, patients, and health and care workers are equipped with strong health literacy skills;
- evidence-informed initiatives are implemented to counter the negative and inequitable health impacts of misinformation and disinformation; and
- governance frameworks are established to ensure that collaboration with the private sector functions to benefit the public and contributes to strengthening of health systems.

Figure 4: Excerpt from the WHO Tallinn Charter 2023

And while the LLS was created before the Tallinn Charter, the ethos of the need for trust and collaboration was at the center from day one. As part of the core vision of the LLS is thus this ambition; It is healthy to collaborate. This core observation is then expanded as follows:

- *Lighthouse Life Science exists to create a healthier society for all, and at the same time strengthen the country's growth and exports – positioning Denmark as an international beacon within life science. The means to achieving this goal is collaboration.*
- *By working together across the public health sector, academic institutions and private companies, we can create new health solutions that spread like ripples in water: from one case to the next, from the capital to the rest of the country, from Denmark to the world.*
- *Together, we have the strength to solve pressing health challenges for the benefit of the teenager and the worker, the health care system, research, the business sector, Denmark and the entire world.*

https://erhvervsfyrtårnlifescience.dk

However, the ambition to use collaboration to produce trust does not in itself require a measurement of the trust produced or the mechanisms involved. And while measuring improvements of trust in a highly trusting environment can have challenges, the point is not to measure the exact level of trust, but rather the evolution of it - as accurately as possible and as diligently as possible.

The Nordic HealthCare Group has produced an insightful report on the best contemporary ways of measuring trust and the different relations that trust might work in - a community of peers, from citizens to public, among institutions, and a number of other societal interrelations. But for the LLS the main interest is of course the trust generated by and within a public-private partnership. The image below describes a key methodology for measuring this kind of trust.

TRUST DATA

Questions	**Interpersonal trust** 1. I invite partners to explore discrepancies in their views and opinions 2. I use clear and specific feedback when addressing issues within the partbnership. 3. I provide resources when necessary to support the partnership's objectives. 4. I have complete confidence in the reliability of our organization. 5. I trust that our partner organization will act with integrity. 6. I believe this person has my best interests at heart. 7. I feel confident about the person's skills. 8. I feel there is mutual respect among the team members. **Safe learning environment (Psychological safety)** 1. Members of the partnership feel comfortable raising problems and tough issues. 2. Members of the partnership feel that taking risks is safe within the partnership. 3. Members of the partnership find it easy to ask others for help when needed 4. Members of the partnership feel that it is safe to openly express their opinions. 5. Members of the partnership feel there is room for expressing uncertainties. 6. Members of the partnership request consultation or input from others when needed for better decision-making. 7. Members of the partnership ask for clarification and confirmation to ensure mutual understanding among partners. 8. Members of the partnership evaluate decisions made within the partnership. **Trust in public-private partnerships** 1. The partners involved in the partnership are able to handle deadlocks and problems. 2. The parties believed that each party is competent for their work. 3. The partners uphold their commitments within the partnership. 4. There is trust in the partners initiative to fulfill their responsibilities. 5. There is mutual respect and high level of trust among public and private partners. 6. A belief that the partners genuinely consider each other's interests. 7. There is a prevailing atmosphere of mutual trust among the partners. 8. The partners involved in the partnership have succeeded in managing internal conflicts and disagreements in an adequate manner.
Strengths	• The questions demonstrate high validity and reliability across international contexts. • Adapted to a public-private partnership and captures a range of trust-related behaviors. • Consolidated into a framework.
Weaknesses	• The synthesis is not validated but adaptable to fit a public-private partnership. • The questions are not supported by the same research background and remains to be seen transferred from interpersonal relations between two individuals or a team to a partnership amongst different organizations.

What makes public-private partnerships work?

In depth

Questions	**Measurement of network cooperation and trust (likert scale 1-10)** 1. Managing internal conflicts: The actors involved in the network have succeeded in managing internal conflicts and disagreement in an adequate manner. 2. Presence of deadlocks: I did not experience any cumbersome deadlocks during the process. 3. Course of cooperation: The actors have improved the cooperation over the past years. **Measurement of network management (lickert scale 1-10)** 4. Defining principles: When information is being collected, the focus is on developing and establishing common principles and information needs for both public and private actors in the project. 5. Involving partners: (Private) Contractors are consulted and involved in project management decisions. 6. Communication: Much time is spent on the communication between various actors. 7. Aligning interests: During deadlocks and problems, the management focuses mainly on aligning conflicting interests. **Measurement of trust: 10-point Lickert scale** 1. Range (1) 'There is no trust between public and private partners' (10) 'There is a lot of trust between public and private partners.
Strengths	• The questions demonstrate high validity and reliability across international contexts. • Adapted to a public-private partnership and captures a range of trust-related behaviors. • Consolidated into a framework.
Weaknesses	• The synthesis is not validated but adaptable to fit a public-private partnership. • The questions are not supported by the same research background and remains to be seen transferred from interpersonal relations between two individuals or a team to a partnership amongst different organizations.

Source: Warsen, R., Nederhand, J., Klijn, E., H., Grotenberg, S., & Koppenjan, J. (2018) What makes public-private partnerships work? Survey research into the quality of cooperation in PPPs. Public Management Review, 20(8), 1165-1185. https://doi.org/10.1080/14719037.2018.1428415
- https://www.tandfonline.com/doi/full/10.1080/14719037.2018.14284157?scroll=top&needAccess=true#d1e182

Figure 4: Measuring trust in PPP. NHG 2024

For the future of the LLS, the importance of collaboration and trust generation cannot be understated. And consequently, measuring the evolution of trust in the partnership will be a key priority.



KPI LIGHTHOUSE MODEL - A FUTURE-FIT KPI STRUCTURE

PROCESS AND VISUALISATION

To develop a KPI Model able to capture the needs shown in the previous evaluations, the Danish Life Science Cluster has collaborated with a number of Danish and international knowledge partners to assess the needs, implications, and possibilities within an updated model for measuring PPP impact.

Based on the mentioned Theory of Change (see figure 2) and the key conclusions of the previous evaluations, the observations were clear, that while it is healthy to collaborate, the needed KPIs to both demonstrate this observation in detail and to lead strategy and initiatives to streamline PPP activities, did not yet exist.

Following a series of explorative discussions with the experts, the process identified five Domains to gather a new set of KPIs for. With the ultimate goal still, of course, to demonstrate both overall and detailed impact of activities on either processes or outcomes for members or stakeholders of all kinds.

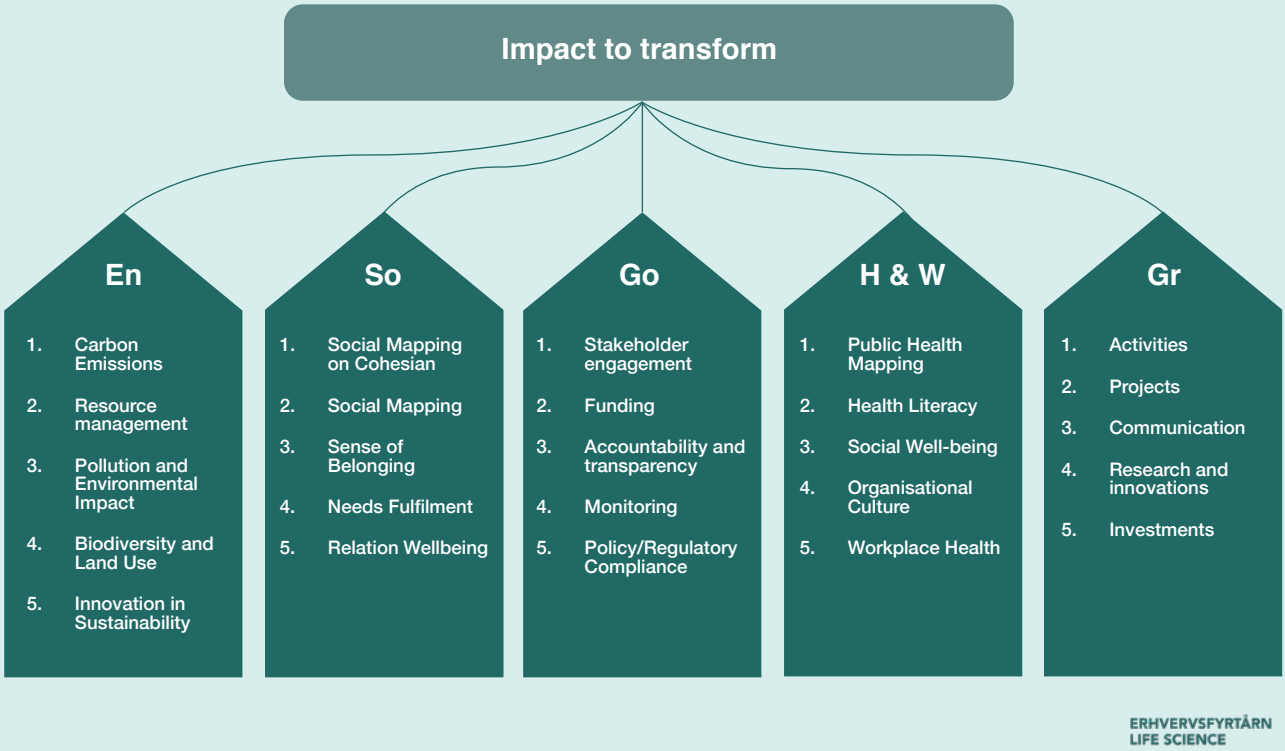
These five Domains drew upon existing and contemporary categories for reporting in the socalled ESG framework, that are commonplace for business reporting, but so far not as used by PPP or public domain institutions or organisations. The traditional ESG factors cover the impact and outcomes of an organization's activities on Environmental, Social, and Governance-factors.

KPI MODEL



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KPI DOMAINS - IMPACT INDICATORS



MATERIALITY ASSESSMENT

To understand, assess and prioritize ESGH impacts the partnership should undertake a double materiality assessment for the partnership for the duration of the envisaged partnership, focusing on the expected or planned partnership activities. The EU CSRD regulation prescribes the double materiality process in detail, one which is mandatory to undertake for EU incorporated companies of a certain minimum size. The regulation – and the integral nature of the double materiality approach to the professional ESGH community ensures significant experience is present in relevant functions by many market participants.

The double materiality process can be summarized in 5 key steps, which should be undertaken by the partnership participants jointly (for more detail the CSRD regulation may be consulted, see also Appendix 1):

1. Identify Key Stakeholders and Material Issues

- **Engage Stakeholders**: Identify and consult key stakeholders relevant to the partnership (e.g., partners, beneficiaries, local communities).
- **Determine Relevant Issues**. Based on stakeholder input, identify sustainability issues that could impact the partnership (financial materiality) and how the partnership activities impact society and the environment (impact materiality).

2. Assess Financial and Impact Materiality

- **Financial Materiality**: Evaluate how sustainability issues could affect the partnership's financial outcomes, including risks and opportunities over the four-year period.
- **Impact Materiality**: Analyse the partnership's activities to assess their environmental and social impacts, prioritizing those with significant positive or negative effects.

- **. Prioritize Material Issues**

3. Prioritize Material Issues

- **Create a Materiality Matrix**: Map the identified issues based on their financial significance and impact on stakeholders and the environment.
- **Validate Findings**: Review the prioritized issues with all partners to ensure alignment and consensus.

4. Report and Communicate Findings

- **Document the Assessment**: Prepare a report outlining the materiality assessment process, key findings, and rationale for the identified material issues.
- **Integrate into Partnership Strategy**: Ensure that the material issues are reflected in the partnership's goals, actions, and reporting.

5. Monitor and Update Regularly

- **Ongoing Review**: Continuously monitor the identified material issues and adjust the assessment if significant changes occur during the partnership.
- **Annual Update**: Reassess and update the materiality findings annually to stay aligned with evolving risks and impacts.

For any public-private partnership a double materiality assessment does not just lead to selection of KPIs, but also adds some key benefits for strategy and communication. The Double materiality helps PPPs enhance risk management by identifying not only the financial impacts of environmental, social, and governance (ESGH) issues but also how their activities impact these areas.

This dual perspective allows for better risk management by ensuring that all significant risks—both to the partnership and the broader community—are recognized and addressed. It also strengthens the basis for stakeholder trust and transparency as the PPP can demonstrate their commitment to transparency and sustainability and shows the partnership is aware of and actively managing its broader societal impact.

And finally, it is one of the better ways to create an alignment with regulatory and stakeholder expectations. These benefits make the partnership more resilient and socially responsible and supports the long-term success and sustainability of the partnership.

CHALLENGES AND CONSIDERATIONS

It is mission-driven partnerships, that simple, numerical KPIs can be very hard to uncover and misleading by nature. The essential quality of the partnership is no different than other action learning environments where individuals across organisations try to solve interrelated and complex challenges by using mixed-methods or sometimes trial-and-error approaches.

And while the Theory of Change is an important backbone for operations and approaches, the PPP is also part of a complex society where other events and stakeholders are acting in the same space and framework with perhaps similar, competing, or even opposing agendas.

Based on the principles of Action Learning , this calls for three key considerations:

1. Qualitative vs. Quantitative

Partnership relations are inherently qualitative, so numerical growth KPIs often need to be supported by qualitative assessments like interviews and surveys to capture nuances among partners and intentions and perceptions behind initiatives and actions.

2. Context-Specific

The relevance and importance of these KPIs can vary depending on the specific goals and structure of the partnership. This both mean that new members in the partnership may lead to a shift in the needed KPIs as their networks, needs, and experiences can lead to different outcomes and should thus be leveraged in a different way that the former composition of the network.

3. Time Lag

The impact of this type of partnerships, and especially the trust-building initiatives among them will often take time to manifest, so long-term tracking is essential. To quote Stephen Covey; “Change happens at the speed of trust” - so while the specific deadline for trust can be harder to predict than other measures, it will certainly not happen

Action Learning - Understanding Time Lag

1. In any learning organisation trying to deliver change, the first important relation to remember is:
2. $L > C$
3. where L is the rate of learning and C is the rate of change. This means that organisations need to learn faster than things change to keep up and prosper.
4. The second relation is: $L = P + Q$
5. where L is learning, P programmed, or existing knowledge and Q is questioning or emerging insights. In combination with the first relation, this means that existing knowledge will not be sufficient to solve growing challenges.
6. So for organisations to consistently enable change, a strong focus on emerging insights and understanding of relations and concepts have to be developed as fast or faster than the desired change. Without understanding the involved complexities of change, the organisation will either fail or stand still - and without emerging insights from new interactions, the existing knowledge will not be able to solve the challenges or handle the change needed.



[6] John Edmonstone, The Handbook of Action Learning, Routledge 2024.

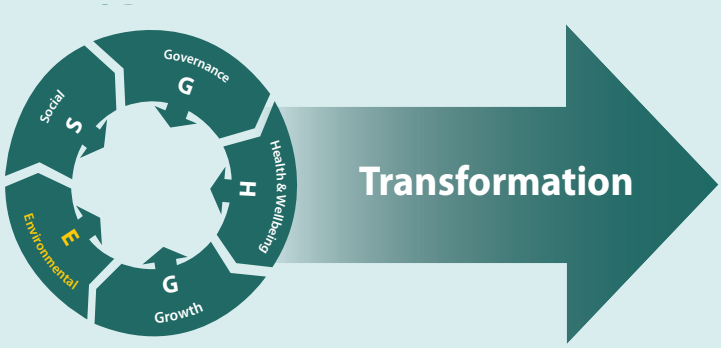
KPI DOMAINS

ENVIRONMENTAL

Introduction

Public-private partnerships (PPPs) in the life sciences sector are crucial for addressing several key environmental factors, including climate change, pollution, and biodiversity loss. By combining the strengths of public institutions and private enterprises, these collaborations drive innovation and sustainability efforts that significantly impact the environment, climate, and nature.

One critical environmental factor that PPPs influence is climate change. Through joint initiatives, public and private entities can develop and implement renewable energy technologies, such as biofuels and biomass energy, reducing greenhouse gas emissions and dependence on fossil fuels. These partnerships also enable the advancement of carbon capture and storage technologies, helping mitigate the impact of industrial activities on the climate.



Biodiversity conservation is also a key focus of PPPs in life sciences. These partnerships can spearhead initiatives to protect endangered species and restore degraded ecosystems. By combining scientific research with practical applications, PPPs can develop and implement strategies for habitat conservation, sustainable land use, and the prevention of invasive species. These efforts are essential for maintaining ecological balance and ensuring the survival of diverse plant and animal species.

Furthermore, PPPs play a vital role in addressing the intersection of environmental health and public health. They can develop innovative solutions to monitor and reduce the impact of environmental pollutants on human health, such as air and water quality improvement technologies. By integrating health and environmental data, these partnerships can inform policies and practices that protect both human populations and natural ecosystems.

In the following, we'll demonstrate key factors to measure and use to leverage this important potential.

The environmental domain

The environmental domain as it relates to partnerships consists of the positive and negative impacts on the environment resulting directly or indirectly from partnership activities. The process by which to identify the material environmental impacts is previously described in the proposed approach to a double- materiality assessment.

This section outlines the broader scope of environmental impacts which broadly falls in three domains:

- **Impacts on airshed, land and/or water bodies from resource extraction and pollution**
- **Impacts on the health of the natural environment – biodiversity and eco-systems**
- **Opportunity to improve the environment with partnership innovation**

The double materiality assessment process is applied to determine which environment topical areas are triggered and assess to what extent the identified impacts are material to the partnership and society at large. The below listed topical areas serve as inspiration on what topics to consider on one hand and on the other introduce approaches to drive value creation for the environment with e.g. circular economy and innovation.

For each topical area there are professional standards for measurement with one point of reference for specific topical KPIs is the CSRD and ESRS reporting data standards relevant to the topic.

KPIs FOR ENVIRONMENTAL TOPICS



Considering the significant and urgent environment pressures calling for action on climate, water and biodiversity it is recommended that the partnerships collect data to measure the on the following three KPIs across partners as a fundamental ask to help drive initiatives, inform decision-making, and to initiate ideation that can help the partnership to contribute to a significant reduction of the impact of these elements on the wider society, communities, and planet:

- **Climate impact** – t CO2e (as defined by the GHG protocol)
- **Water use** – m3 water consumed
- **Biodiversity** – net m2 protected area

KPIs for Environmental topics

The environmental component of Environmental, Social, and Governance (ESG) refers to the criteria used to evaluate a partnerships' impact on the environment and how it manages environmental risks and opportunities. This component is critical in assessing a partnerships' commitment to sustainability and its long-term viability. Here's an explanation of the key aspects:

1. Climate Change and Carbon Emissions

- **Greenhouse Gas (GHG) Emissions:** Partnerships are assessed on their total emissions of greenhouse gasses. This includes emissions from direct operations (Scope 1), indirect emissions from energy use (Scope 2), and emissions across the value chain (Scope 3).
- **Climate Risk Management**: Evaluation of how partnerships identify, assess, and manage risks associated with climate change, such as regulatory changes, physical risks (e.g., extreme weather), and market transitions.
- **Emission Reduction Targets:** Partnerships are expected to set and pursue targets to reduce their carbon footprint, aligning with global initiatives like the Paris Agreement.

2. Resource Management

- **Energy Efficiency**: Partnerships are assessed on how efficiently they use energy in their operations and whether they are transitioning to renewable energy sources.
- **Water Use and Conservation**: Evaluation of how Partnerships manage water resources, including efforts to reduce consumption, improve water quality, and ensure sustainable use in water-scarce regions.
- **Material Sourcing and Waste Management**: Partnerships are judged on their sourcing of raw materials, efforts to minimize waste, and strategies to promote recycling and a circular economy.

3. Pollution and Environmental Impact

- **Air, Water, and Soil Pollution**: Partnerships are evaluated on their efforts to minimize and manage pollution, including emissions to air, discharges to water, and soil contamination.
- **Toxic Substances**: Management of hazardous chemicals and toxic substances is also scrutinized, especially in industries like manufacturing, chemicals, and agriculture.
- **Waste Management:** Partnerships are assessed on how they manage waste, including reducing production waste, promoting recycling, and safely disposing of hazardous waste.

4. Biodiversity and Land Use

- **Impact on Ecosystems and Habitats:** Partnerships are evaluated on how their activities impact biodiversity, including the destruction or conservation of natural habitats and ecosystems.
- **Land Use and Deforestation:** Partnerships involved in activities like agriculture, mining, or real estate are assessed on their land use practices, with a focus on avoiding deforestation and land degradation.
- **Conservation Efforts**: Evaluation of company initiatives to protect and restore biodiversity, such as supporting wildlife habitats, reforestation projects, and conservation partnerships.

5. Innovation in Sustainability

- **Sustainable Products and Services**: Partnerships are evaluated on their development of environmentally friendly products and services, such as energy-efficient appliances, low-emission vehicles, or sustainable packaging.
- **Research and Development**: Investment in R&D for sustainable technologies and processes, including innovations that reduce environmental impact and support sustainability goals.
- **The environmental component of ESG** is crucial for understanding a Partnerships sustainability practices and its ability to mitigate environmental risks. It reflects the company's commitment to protecting natural resources, minimizing its ecological footprint, and contributing to a sustainable future.

The listed environmental factors are designed to provide a comprehensive view of a partnership's environmental impact and how it manages environmental risks and opportunities, aligning with broader EU sustainability goals and the ESRS reporting standards.

It is also vital to consider regulatory compliance. This element can be placed in the Governance Domain also, but one should be conscious of the current differences between environmental reporting requirements (and emerging needs and standards) that are not integrated in diversity standards.

Environmental Compliance and Reporting

- **Regulatory Compliance**: Partnerships are assessed on their compliance with environmental regulations and standards at local, national, and international levels.
- **Transparency and Reporting**: Partnerships are expected to disclose their environmental impact and performance, including transparent reporting on metrics like carbon emissions, water usage, and pollution levels. This often includes adherence to recognized frameworks like the CSRD and ESRS, the Global Reporting Initiative (GRI) or the Task Force on Climate-related Financial Disclosures (TCFD).

Additional undertakings for environment

- **Identifying the material environmental** impacts, risks and opportunities through a double-materiality process lays the foundation for a partnership creating environmental value for partners and society at large. In addition to the materiality assessment across environmental topics the partnership should consider the following undertakings:

Environmental targets and performance

- **The Partnerships** should set specific environmental targets (e.g., emission reductions, resource efficiency) and report on progress towards these goals.
- **Performance indicators** must be provided to measure and explain the Partnerships environmental performance over time.
- **Integration with Strategy**
- **Partnerships must explain how** environmental factors are integrated into their overall business strategy, including how they align with global sustainability goals and regulatory requirements.

Ongoing assessment of environmental impacts, risks and opportunities

- **Partnerships should evaluate** how environmental factors might affect their financial performance, such as risks from climate change, regulatory changes, or resource scarcity on an ongoing basis, updating the materiality assessment as needed.
- **This may warrant the inclusion** of scenario analysis and risk assessments to gauge the potential financial implications of environmental risks.

The approach ensures that Partnerships provide a comprehensive view of their environmental responsibilities and the associated risks and opportunities, fostering greater transparency and accountability in their sustainability practices.

SOCIAL

Introduction

Public-private partnerships (PPPs) in the life sciences sector are also recognized as vital mechanisms for addressing complex health challenges and driving innovation. These collaborations harness the strengths of both the public and private sectors, combining resources, expertise, and capabilities to achieve shared goals.

Key social factors that significantly influence the success of PPPs in life sciences include community engagement, equity in healthcare access, and the fostering of public trust. Community engagement ensures that the needs and perspectives of diverse populations are considered, enhancing the relevance and acceptance of new health solutions.



Equity in healthcare access is critical, as PPPs must strive to address disparities and ensure that advancements benefit all segments of society, particularly underserved and marginalized groups. Additionally, fostering public trust through transparency, ethical practices, and effective communication is essential for building long-term support and collaboration.

By prioritizing these social factors, PPPs in life sciences can create more inclusive, sustainable, and impactful health outcomes. In the following we dive into key factors and methods used in the KPI Model to assess impact on these factors.

Context

Through joint projects, research and knowledge mobilization the Life Sciences PPP (LSPPP) should examine and emulate the basic social conditions for a successful society,

The complexity of many challenges in society has their antecedence in failures to consider, measure and improve conditions in society – for everyone.

The pervasive decline in self-reported mental health is directly related to a field of social issues captured by the notion of social connections, for example. Similar factors are at play for physical health.

Health care systems invest predominantly in the response to illness and unwellness. Our understanding of how these arise has privileged physical illness and the “upstream” remedies have focused on improving healthy lifestyle behaviours.

KPI’S

To track success in the Social Domain the PPP should establish KPIs – for society (and for the partnership itself) – fields related to the following:

Social Health Mapping on Cohesion

Social cohesion data is crucial for life science because it provides insights into how social relationships and community dynamics impact health outcomes and the effectiveness of public health interventions. In life science, integrating social cohesion data allows for a more holistic approach to health, considering not just biological factors but also the social environments that profoundly influence individual and community health.

1. Social Cohesion

Self-reported loneliness.

- Loneliness is a significant social determinant of health. For both lifestyle, empowerment, engagement and more, loneliness is a common denominator/challenge that needs addressing if other initiatives are to succeed.

Number of relationships for times of need

- The social network of individuals are important for support and efficacy of health promotion and efforts, and are an indicator for probability of interventions, changes or concepts to take root. Having one or more persons one can rely in times of change, stress, and need substantially strengthens personal resilience and wellbeing.

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Trust landscape (health care, research, media, government)

- Trust is a vital component for societal and individual change. Understanding the landscape of trust is important to also understand challenges and opportunities for change. Trust is the medium through which successful undertakings and societal resilience depends. Interpersonal trust (amongst strangers, neighbours, colleagues and close relations) can be distinguished from institutional trust (government, media, business, academia and the community/NGO sector) and can be measured separately. This KPI also relates to a KPI on Partnership Trust - see below.

Experiences of discrimination

- External and internal, the reported experience of discrimination are an important factor to monitor to also enable the needed trust or changes to current operations that can lead to change. Experiences of discrimination can severely undermine other efforts of learning and transformation.

Diversity landscape (gender, ethnicity etc)

- Ensuring focus on challenges of diversity in terms of services, labour market, education or other are linked to challenges of health and transformation.

2. Social Health Mapping on Inequality

Integrating data on wellbeing inequalities ensures that the PPP initiatives for more research and public health also consider how efforts can help reduce gaps in health equity, leading to a more just and inclusive approach to improving population health. The data can help to uncover causes of health disparities, such as unequal access to resources, education, and opportunities, which can lead to variations in physical and mental health - important for building new health innovation, ideas, and initiatives.

Inequalities of Social Health

Happiness

- Self-reported levels of happiness and its landscape enables an understanding of the current perceived quality of life. International Happiness Index Scores and complex relations are indicative of progress in social cohesion, health and wellbeing.

Purpose and Meaning, Hope, Autonomy

- These indicators are vital for an understanding of the capacity to cope with both personal or community adversities and transformations.

Financial Resources

- Current income levels and available resources across geography, social groups, education levels and more are amongst the most important variables for ensuring wellbeing for persons of limited means. Without the ability to meet basic needs, a cascade of complex problems is experienced in families and the broader society.

Literacy/Education

- If not measured as a KPI in health and wellbeing, educational systems and challenges in them are also social determinants of health that are vital to monitor.

Data gathering for Social Health Mapping

Social mapping data are often available in national statistical datasets. And while gathering them for the benefit of the KPI tool does not lead to change, it is a vital component in understanding the social landscape that any efforts made by life science have to work within and sometimes work towards. High levels of loneliness can be a key barrier for successful implementation of health initiatives, but changes in this social domain can also work as a powerful enabler for increased efforts for health and wellbeing.

GOVERNANCE

Introduction

The success of PPP collaborations heavily relies on robust governance factors that ensure effective coordination and accountability. These governance factors include clear regulatory frameworks, transparent decision-making processes, and strong leadership.

Clear regulatory frameworks provide the necessary guidelines and standards to align the interests of public and private entities, ensuring compliance and safeguarding public health. Transparent decision-making processes are vital for building trust and ensuring that all stakeholders have a voice in shaping the partnership's direction and priorities.



Strong leadership is essential for driving the partnership forward, navigating challenges, and maintaining a focus on shared goals.

By emphasizing the right governance factors, the PPP can drive and achieve greater efficiency, accountability, and impact, ultimately leading to more innovative and sustainable health solutions. In the following we dive into the consideration, key factors and methods used in the KPI Model to assess impact on these factors.

Health governance defined

For the purpose of this project, we can define health governance as the structures, processes, and activities through which decisions about health policy, strategy, and resources are made and implemented.

Health governance encompasses the roles and responsibilities of various stakeholders—including government bodies, international organizations, healthcare providers, and the community—in shaping and managing the health system. The stakeholders -levels' depend of course on how the health systems are organised, and can be focused on national, regional and local level.

The governance dimension thus has a unique role to organise and oversee the integration between different parts of the health systems, between health and care systems, and with 'external' sectors that have an impact on the health governance, such as environment, education, transportation, etc.

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KPIs for Governance

Using the described Double Materiality Assessment mentioned previously, the following elements are to be taken into consideration to develop the specific and dedicated KPIs into five overall areas. In the framework of the KPI Model it is also worth mention that the governance Domain could be looked at as a more structural element of the model, with its KPIs not just being somewhat parallel with the other Domains, but also but equally providing the structure and oversight framework of all the other KPIs.

The KPIs highlighted in green are especially important in the early stages of developing the PPP. Considering that it can be a challenge to secure sufficient resources to develop a full set of data for these KPIs in the initial stages of a partnership, these elements are mission critical, especially for a mission-driven partnership.

1. Stakeholder Engagement

This governance dimension is focused on the strategic involvement of all stakeholders, at different levels, that play a crucial role in decision making processes, planning and implementation of PPPs, to ensure the interconnection between regulation, resources and health needs. In parallel to stakeholder engagement, we surely have the element of 'trust', enabled, fuelled and maintained via transparent, organised and meaningful stakeholders engagement.

A. Mapping for diversity

- **Focus**: A mapping of X categories of stakeholders, in which Y stakeholders, for each category, would be identified for engagement activities. A precise numerical KPI cannot be identified in an overarching manner but should rather be focused on the specific sector/level of governance and stakeholder engagement (national, regional, etc). Furthermore, the mapping should consider the engagement of other sectors outside of the pure healthcare dimension to support other elements of the lighthouse model.
- **Purpose**: A numerical KPIs identifying the number, type of stakeholders and the dedicated engagement activities most suitable for each of them,

B. Engagement Activities

- **Focus**: A numerical KPI identifying several different activities that would serve as stakeholders engagement following the initial mapping. The evaluation of these activities will be carried out in the context of the engagement score analysis. Activities would equally cover the regular information actions that would be targeted to all stakeholders for transparency purposes.
- **Purpose**: list and number of stakeholders engagement activities, for each stakeholder/ stakeholder type.

C. Engagement Score

- **Focus**: A composite score to measure the level of quality of engagement of the different stakeholders involved. It could be seen as a composite KPI including elements such as how timely the engagement was, how clear the engagement information and details was, how productive meetings/activities were, how clear the engagement actions (from the side of the stakeholders) were and how easy it was to 'follow'/implement them. This will be strongly linked to the KPI in the Social Domain on Trust.
- **Purpose**: To evaluate the level (on a multiple scale touching different elements as above) of perceived engagement satisfaction and impact on the process of decision making/partnership.

Data gathering

In addition to internal assessments, the validated Joint Action survey tool can deliver a solid part of these data. One can also consider adding focus groups and interviews to add to the qualitative elements of these data.



2. Funding

Frameworks guiding the allocation of resources, financial, human and technological. Concerning PPP, this element is linked to the allocation of resources and investments directed to achieve the health needs of the population. It helps both visualise the efficiency of the PPP, but also the relative ability to exact change, considering the level of funding (absolute or over time).

A. Allocation of financial resources

- **Focus**: This KPI would measure the percentage of financial resources, over an overall budget, dedicated to projects
- **Purpose**: The KPI would visualise the amount of resources, in a set budget, dedicated to PPPs.

B. Financial resources efficiency

- **Focus**: Either a ratio between the outcomes achieved and the amount of resources utilised, or an index assessed by external experts evaluating these two elements.
- **Purpose**: This KPI would measure the effectiveness of resources allocation (financial) vs. The desired and intended results and positive change in the population's needs. The results and expected changes should be equally identified beforehand as part of the model.

Data gathering

The KPIs should of course be linked to the economic reporting - and then added an internal analysis and assessment based on the mentioned factors

3. Accountability and Transparency

This governance dimension focuses on mechanisms aimed at holding institutions and individuals accountable for actions, initiatives and decisions, and thus ensuring full respect of policies, regulations, allocation of resources and decision-making processes. Equally said implementation and processes should remain open to external analysis and scrutiny. It can equally include elements of ethics.

- **Focus**: A KPI based on a score measuring the quality and transparency of communication between the actors involved in a PPP initiative.
- **Purpose**: A measure of the quality of the information fluxes between the different actors.

Data gathering

A survey consisting of internal and external data points. The analysis should be undertaken by an external evaluator

4. Monitoring

Linked directly to the accountability mentioned above, this governance KPI is responsible and central in defining tools and methodologies to guarantee standardised, fair monitoring and evaluation.

A. Project/initiatives success vs. proposals

- **Focus**: A composite KPIs including the percentage of projects that have successfully reached the foreseen goals and an evaluation scale, evaluated by experts, of the project success quality, including compliance with existing policies and regulations and compliance with ethical rules.
- **Purpose**: To identify not only how many projects reached the expected results, but equally on what scale of quality/respect of the proposals. This scale could be composite and based on targets/objectives, budgets, timeline, plus provide an overview result.

B. Processes efficiency measure

- **Focus**: The KPI assesses time spent on admin and coordination issues, in order to provide an index of quality and efficiency of the processes involved in a partnership/project, from decision making to adaptation.
- **Purpose**: To assess and evaluate the quality and efficiency of the different steps of a partnership/project process, from its inception to proposal drafting/submission and decision, and its implementation/management.

C. Adaptation to change

- **Focus**: this KPI would be focused on giving a score to the reactivity of the Partnership to adapt to unforeseen issues or necessary changes, through time measurement and an adaptation index.
- **Purpose**: The KPI It would be composed by a measure identifying the time needed to react to possible adversity/changes, and an index measuring the successful or unsuccessful adaptation. It would also include an assessment of the use and implementation of any risk management strategies.

Data gathering

The measuring of project success can be done via internal evaluation but should include comments from external evaluators in the shape and form of either scores, or a transfer of qualitative feedback into a positive, neutral and/or negative response. For the Process's efficiency, an external interviewer can structure data from a series of interviews and an internal mapping. The Adaptation to Change can be done via an analysis of risk strategies or key mitigation initiatives during the reporting period.

5. Policy/Regulatory Compliance

The PPP should be using a mechanism of formulating policies addressing population needs in an equitable and sustainable way. In the case of PPP, this element is linked to the alignment of policies and regulations between health provision and equity and the correct involvement of the private sector. The data gathered about Public Health Mapping, Social Health Mapping and Environment should inform the actual policies in this KPI.

A. Regulatory Evaluation

- **Focus**: A KPI based on a score measuring how policies or regulation facilitate or hinder PPPs in their set domain and level (national, regional, local or even European).
- **Purpose**: measure how PPP-friendly existing or new policies are on a set scale. An explanation of obstacles and facilitation elements should be equally provided.

B. Overall governance system and coordination evaluation

- **Focus**: A KPI based on a score measuring how the governance system framework in a set location (national/regional/local) guarantees low, sufficient or optimal coordination between healthcare levels and between healthcare and other sectors (e.g., environment).
- **Purpose**: To measure how the governance system framework manages to ensure coordination across the partnership.

C. Partnership longevity and renewal

- **Focus**: A KPI measuring the duration of the partnership, numbers of partnership renewals and/or a score index identifying the feasibility of a partnership extension/renewal if not achieved yet.
- **Purpose**: By measuring how strong the partnership would be, matching the initial intended timeline with possible extended duration or even renewal (ongoing or perspective through an index). This KPI would thus measure the stability of the PPP and its governance system.

Data gathering

Regulatory and governance system reporting should be done by a combination of internal reporting and a review by an external evaluator. The partnership renewal rate should be linked to the financial reporting, but add an extra insight from the composite basic financial measure.



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HEALTH & WELLBEING

Introduction

In addition to Environment, Social, and Governance factors, the integration and promotion of Health & Well-being are central to the success of PPPs. Health & Well-being is a key objective and foundation for the achievement of Well-being Economies and therefore included in the Nordic Lighthouse Model too.

Ensuring people- and patient-centric approaches, promoting preventative healthcare, and enhancing the overall quality of life are fundamental to the objectives of PPPs in this field. A patient-centric approach ensures that the development and implementation of health solutions are tailored to the needs and experiences of patients, leading to more effective and acceptable outcomes.



Emphasizing preventative healthcare helps reduce the burden of diseases through early intervention and health promotion, which is crucial for long-term public health improvement. Enhancing overall quality of life involves addressing not just medical needs but also social determinants of health, such as nutrition, housing, and education, to foster holistic wellbeing.

Life quality indicators, such as life expectancy, disease prevalence, and access to healthcare services, are critical metrics that reflect the overall health status of a population. These indicators are essential for guiding PPPs in developing strategies that not only address immediate health issues but also contribute to positive societal development. By focusing on improving life quality indicators, PPPs can drive meaningful progress in public health, leading to healthier, more resilient communities. This, in turn, supports broader societal goals, including economic stability, social cohesion, and improved quality of life for all citizens. By prioritizing health and wellbeing factors and leveraging life quality indicators, PPPs in life sciences can achieve sustainable, inclusive, and impactful health outcomes that foster positive societal development.

Promoting health and well-being helps individuals and organizations build resilience, enabling them to build positive relationships and cultures as well as better handle challenges and adapt to changes. Trust is enhanced when people see that an organization supports their capacity to cope with and overcome difficulties.

By prioritizing health and well-being, organizations and communities can enhance communication, demonstrate competence, promote fairness, and build a positive culture, all of which are fundamental to establishing and maintaining trust.

Measuring health and well-being is multifaceted, as it encompasses for instance physical, mental, and social dimensions. When tracked and analyzed regularly, KPIs in this area can provide a comprehensive picture of an individual's, organizational or a population's health and well-being.

In the context of public-private partnerships (PPPs) focused on health and well-being, KPIs are critical for measuring the effectiveness, efficiency, and impact of collaborative efforts between public entities and private organizations. These KPIs help ensure that the partnership is achieving its goals, delivering value to all stakeholders, and improving quality of life as well as public health outcomes.



KPI FOR THE HEALTH & WELLBEING DOMAIN

1. Public Health Mapping

To enable the Partnership to relate activities and strategic choices, a series of societal KPIs as a background for performance would enable and strengthen the overall reporting. And while it would obviously be ideal if the partnership could magically fix all problems and challenges, the intent is simply to provide a joint understanding and background for the conversations, communication initiatives, and strategic development of the PPP.

- **Disease Incidence and Prevalence Rates.** Monitoring changes in the incidence and prevalence of specific diseases or conditions targeted by the partnership (e.g., reductions in diabetes, cardiovascular disease, or infectious diseases).
- **Mortality and Morbidity Reduction.** Tracking reductions in mortality and morbidity rates related to specific health issues addressed by the PPP.
- **Self-Reported Health Status.** Asking individuals to rate their overall health on a scale (e.g., excellent, good, fair, poor).
- **Happiness and Quality of Life.** Using surveys like the Satisfaction with Life Scale (SWLS) to gauge overall happiness and contentment.
- **Mental Well-being Index.** A composite score based on surveys like the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) or WHO-5 Well-Being Index.
- **Quality of Social Support Networks.** The quality and extent of social connections and perceived support from friends, family, and community.
- **Lifestyle related Indicators.** Statistics on smoking, alcohol, physical activity, diet, sleep, screen behaviour.

Data gathering

Several of these indicators will be available from national reporting sources - but will be most enlightening for the individual partners so reduce silo thinking, but also helpful across borders and sectors to have a better understanding of the landscape of Health & Wellbeing that the specific PPP are operating in. Specific diseases or challenges are more relevant if the prevalence is high - some social determinants are important to be aware of as factors or barriers.

2. Health Literacy

Health literacy is the ability to obtain, read, understand, and use healthcare information to make appropriate health decisions and follow instructions for treatment. It involves not just the ability to read but also the skills to navigate complex health systems and critically evaluate information related to one's health. Measuring progress on the ability of the PPP to improve health literacy will both reflect short and long term improvements on life quality and empowerment.

- **Health Literacy Improvement** The degree to which the partnership's initiatives have improved health literacy among target populations, leading to better health outcomes.
- **Self-Reported Health Literacy** Asking individuals to rate their overall health literacy using the HLS or another tool.
- **Organizational health literacy** Identifying general health literacy strategies, policies, action plans and programmes within organizations.
- **Health literacy responsiveness** Identifying health literacy responsiveness to meet specific needs of vulnerable population groups.

Data gathering

Used in various countries, a number of validated HLS tools have been measured and are in continuous use to assess different dimensions of health literacy and are often used in research and public health assessments. This data can be used for reporting. The existence of plans and strategies among partners can also be done by using dedicated HLS tools. In addition, the International Health Literacy Association can assist in identifying local sources that can provide comprehensive data on the current status of health literacy, as well as insights into the effectiveness of various local strategies and initiatives aimed at improving it.

3. Social Well-being

For any partnership or community, the internal relations between partners and stakeholders are a vital component in the ability to learn, transform, or grow. KPIs in this area will help the PPP to both identify strengths and opportunities to further develop relations for ideation, collaboration, or impact.

- **Sense of Belonging**
  Feeling of connectedness and inclusion in one's community or social circles. (if not reported in Social)
- **Stakeholder Satisfaction Scores**
  Regular surveys to assess the satisfaction of all stakeholders involved, including public agencies, private partners, and beneficiaries of the partnership.
- **Community Engagement Levels**
  The extent to which the partnership engages with the community, including participation in decision-making processes and feedback mechanisms.
- **Transparency and Communication**
  The effectiveness of communication between public and private partners, as well as transparency in decision-making and reporting. (if not reported as part of Governance)

Data gathering

Internal surveys that also connect with onboarding data and progress during day-to-day operations and events are useful for this area. A checklist (and documentation for the level of use of the suggested steps or barriers to their implementation) and evaluation mechanism that includes data on and from community interactions are also helpful for these KPIs.

4. Organisational Culture

A partnership - of any kind - is a sum of a whole, that should ideally create a synergy based on the individual members. Data to assess the quality of these interactions and relations are therefore also vital to enable strategic choices for either the overall PPP or the individual partners on the progress of the partnership. These factors are very critical to the speed, quality, and complexity of problem solving that the PPP can manage.

- **Positive Organizational Culture**
  Organizations that prioritize health and well-being often cultivate a positive culture that values respect, support, and inclusivity. This positive culture fosters trust among employees, stakeholders, and the broader community.
- **Relational Capacity in the Partnership**
  Quality and outcome of relationship initiatives contribute to collaboration. Positive, supportive, and trustful relationships organisational environments contribute to health & wellbeing and higher quality of partnership outcomes.
- **Alignment with Values**
  Aligning organizational practices with the values of health and well-being reinforces trust by demonstrating that the organization's actions are consistent with its stated values.
- **Collaboration and Teamwork**
  In workplaces and communities that emphasize well-being, individuals are often more collaborative and supportive of each other. This cooperative spirit helps build and sustain trust. (if not reported in Governance)

Data gathering

The validated data tool Joint Action is a great way to measure relational capacity. This gives the entire PPP good data on both the capacity itself, the "temperature" of the organisation and the general perception and connectedness of the full partnership. Using this data tool can ensure that the reporting also includes data from otherwise silent partners and can thus reduce the challenge of bias from more active or vocal partners.



5. Workplace Health

For several PPP, the day to day operations are solved in a joint secretariat or by a single leading partner. The health and wellbeing of this core group has a profound importance to the individual members and the PPP in general. And while the purpose of the PPP is of course not the Health & Wellbeing of specific employees, but challenging or toxic environments in this part of the organisation will often have enormous practical and political impact on the PPP in general. And without data, also rumours of such challenges can have disastrous effects on short and long-term goals.

- **Absenteeism and Presenteeism Rates**
  Tracking the frequency and reasons for absence or reduced productivity.
- **Job Satisfaction and Engagement**
  Measuring how satisfied and engaged individuals are with their work.
- **Frequency of Mental Health Symptoms**
  Tracking the occurrence of symptoms like anxiety, depression, or burnout.
- **Ergonomic Assessments**
  Ensuring workspaces are designed to minimize physical strain and injury.

Data gathering

Internal surveys and data gathering on workplace performance are commonplace and should be readily available for organisation with an employer-employee relation to a number of individuals. These data should be gathered for the purposes of the KPI tool also to add to the insights and documentation about transparency and operational efficiency.



GROWTH

Introduction

All of the mentioned factors so far have at their core, the power of the PPPs to leverage the strengths of both public and private entities to achieve shared objectives, which can also have significant implications for economic growth.

Key factors that enable PPPs to contribute to economic growth include fostering innovation, creating jobs, and enhancing healthcare infrastructure. By combining resources and expertise, PPPs accelerate the development and commercialization of new medical technologies, treatments, and pharmaceuticals, driving innovation and expanding market opportunities.



This innovation, in turn, spurs job creation, not only within the life sciences sector but also in related industries such as manufacturing, logistics, and information technology.

Moreover, PPPs contribute to the enhancement of healthcare infrastructure, improving the efficiency and effectiveness of healthcare delivery. This leads to healthier populations, which are more productive and can contribute more robustly to the economy. Investments in healthcare infrastructure through PPPs also attract further investment, creating a positive feedback loop that stimulates economic activity. Additionally, improved health outcomes reduce the economic burden of disease, lowering healthcare costs and increasing disposable income and economic participation.

By focusing on these economic factors, PPPs in the life sciences can drive substantial economic growth, fostering a more dynamic and resilient economy. The synergistic benefits of innovation, job creation, and enhanced healthcare infrastructure underscore the vital role of PPPs in promoting not only health and wellbeing but also sustainable economic development.

KPIs to assess the Growth Domain

To measure the growth factors of the impact of the partnership, a set of Key Performance Indicators (KPIs) can be developed around the five elements: Members, Activities, Projects, Communication, Research Initiatives, and Investments.

1. Activities

The ability of the partnership to engage partners and stakeholders in activities during the reporting period - relative to both the existing funding and the reported interest/needs of the members gives an insight into both the productivity and scope of the PPP.

- **Participation Rate in Activities**
  Measures the percentage of members and non-members actively participating in partnership activities and open events, signaling their interest in partnership issues.
- **Satisfaction with Activity Outcomes**
  Surveys or feedback mechanisms to gauge member satisfaction with the outcomes of activities, reflecting their satisfaction with the partnership's activities and offers.
- **Activity Completion Rate**
  The percentage of planned activities that are successfully completed, indicating the operational capabilities.

Data gathering

This is done via internal reporting based on the activity report. Data on satisfaction has to be surveyed immediately after or at the events in question.

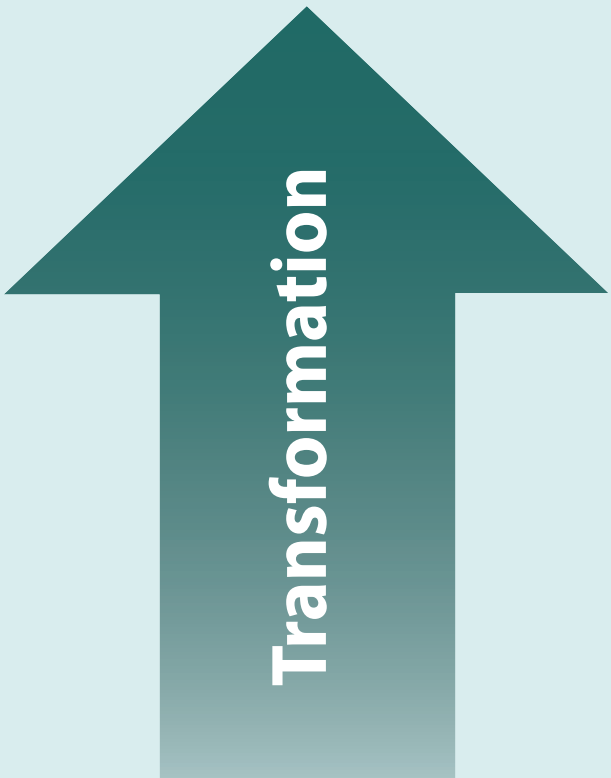
2. Projects

In addition to the different activities, the actual projects - defined as externally funded, externally coordinated and/or internal predefined projects (including pilot projects funded and/or governed by the PPP) with set goals, timelines, and budgets - will be assessed in this category. The KPIs are strongly linked to the KPIs reported in the Governance Domain for Efficiency also.

- **Project Success Rate**
  Measures the percentage of partnership projects that meet their goals, on time and within budget, demonstrating partnership's project management capabilities.
- **Stakeholder Involvement in Projects**
  The level of involvement of different partners and stakeholders in projects, reflecting their trust and commitment to the partnership.
- **Quality of Collaboration in (Pilot) Projects**
  Assesses the effectiveness of collaboration through post-project reviews, highlighting the challenges, benefits and trust between partners during joint efforts.

Data gathering

This is done via internal reporting based on the project reports and use of a mixed/methods approach to gather insights from projects.



3. Communication

The activity level and the efficiency of the PPP communication remains a vital component to both supplement activities, events, and projects, but also provide the needed pathways across sectors and geography to share insights in and from the PPP.

- **Frequency of Communication**
  Measures how often communication occurs from the PPP and between partners, indicating the level of ongoing engagement and trust.
- **Responsiveness**
  Tracks how quickly and effectively partners respond to communications, reflecting the reliability and trustworthiness of the partnership.

Data gathering

Based on an internal reporting by the communication team, supplemented by data analytics from key media/SoMe metrics.

4. Research Initiatives

While sometimes more or less identical with other projects and initiatives, the ability to build or connect with researchers or to contribute to academic publications are inherently different from other communication or event activities. These are therefore highlighted in an individual KPI to both underline the importance also for PPPs focusing on implementation or innovation, that it is vital to remember the importance and impact of a research based approach where at all possible.

- **Number of Joint Research Initiatives**
The number of research projects initiated and completed collaboratively, indicating trust in each partner's expertise and contributions.

- **Adoption of Research Findings**
Measures how widely research findings are implemented or adopted by partners, reflecting trust in the partnership's intellectual outputs.

- **Peer Review and External Validation**
The extent to which research outputs are validated by external experts, indicating the credibility and trust in the partnership's research activities.

5. Investments

The ability to attract investments - not just as projects, but also in terms of framework funding, donations, new revenue streams or other - are an important cornerstone to secure a sustainable mission-driven partnership. Striving for a diversity of funding is also very important, even if existing funding seems adequate for current operations.

- **Financial Commitment/Generation of Funding**
  Tracks the ability to attract funding from foundations, members, stakeholders, authorities, income-generation, and all other sources. This is of course also covered in financial reporting, but for the benefit of growth factors, the level and time-line of funding is also a key performance indicator.
- **Funding Diversity**
  The range of funding sources, indicating trust from a broad spectrum of stakeholders in the partnership's initiatives.

Data gathering

These data should be possible to extract from the financial reporting, but especially the breakdown of sources and types are important to also provide strategic insights for.



MITIGATION MEASURES

The purpose of reporting KPI and outcomes of course goes beyond some kind of fascination with numbers. The ability to report performance should be considered a fundamental requirement for both internal and external stakeholders as a tool to not just measure success (or failure if so be it), but more accurately to provide information on the progress so far.

With the analogy of navigation across open seas, the information contained in the KPI Model are mostly important to inform the navigator, crew, and captain about course adjustments, maintenance needs, and current status on cargo and supplies - all to enable the best chances of the success for the current mission or journey.

Therefore, in addition to the described methods of mapping and assessing location, it is also vital to have an adequate sense of relevant mitigation measures that can enable a course correction or solution to upcoming challenges in the navigation. Across the many different KPIs, however, this becomes less straightforward than it might sound. The mitigation measures vary by context, resources, history, and other factors - but even so, good knowledge sharing can still be the key to progress.

So while the experience of the Danish Lighthouse Case are the key building blocks for developing the KPI Model, the actual implementation of the KPI Model and the challenges of implementing mission-based partnerships will still be before us all.

Having this as a basic recognition in the nature of co-creative, trusting partnerships, the Danish Life Science Cluster intends to explore the potential of a global community of practice, that can explore both the specific use of the KPI Model, the general use of KPIs for strategic change, and the experiences of local stakeholders in life science as transformation agents.

This ambition and idea will be described in further detail in the following chapter. In addition, the Danish Life Science Cluster will initiate a series of webinars on mitigation measures to both share local experiences and to integrate global experiences in a joint dialogue about possible actions and initiatives that can either deliver on needed challenges or help change course when circumstances calls for it.

What is important to realize is certainly that the KPI Model is not a truth sayer, that tells a captain where the ship can go. But it is a vital tool to inform a captain on mission critical needs and possibilities that can help guide the ship safely across the seas.

As a further help in this ambition, in coming years the Danish Life Science Cluster intends to lead a conversation among partners at a global level to build both a generic and a purpose-fit catalogue of mitigation measures based on local experiences, data, and outcomes. And in this particular journey, we hope many will join us to learn more - the next chapter will share more - or read more about this initiative at the Erhvervsfyrtårn Life Science website and read about or join upcoming webinars for more information.

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GLOBAL LIGHTHOUSE COMMUNITY - A HEALTHY COLLABORATION

DETAILS AND VISION

Considering the first chapters of this report as an introduction to the concept of the Public-Private Partnerships in Life Science and the benefits of this for the Danish Life Science community, it will come as little surprise, that we believe that public-private partnerships have a unique and powerful role to play in transforming local and international health care, in solving local issues, and in securing a vital new interaction of stakeholders, that enable a greater trust and basis for solving our local and global challenges.

So a global community of Lighthouses would also work to promote a useful model for public-private partnerships in life sciences that in turn offers multifaceted values, ranging from enhanced innovation and economic growth to improved quality of life and strengthened healthcare systems. By prioritizing inclusivity, sustainability, and collaboration, these partnerships can make a profound and lasting impact on local and global health outcomes.

A global network of these Lighthouse-partnerships can also foster international collaboration, enabling the sharing of knowledge, resources, and strategies across borders. This collaborative approach enhances global health security and preparedness.

But there are multiple, additional values of a global community of Public-Private Partnerships in Life Science:

SPEED OF IMPLEMENTATION

By leveraging the expertise and resources from both public and private sectors, Lighthouse PPPs foster an environment conducive to breakthrough innovations. These partnerships accelerate the development of new drugs, therapies, and medical technologies, addressing unmet medical needs and improving patient outcomes. And allows for a faster time from idea to implementation of new technology into practice and into life science research, further enhancing efficiency and precision in healthcare solutions.

QUALITY OF LIFE

The partnerships can lead to a significant boost in the quality of life for local communities (depending on the focus), where innovations developed within these partnerships ensure that local communities have access to the latest medical advancements. This leads to improved diagnostics, more effective treatments, and better management of chronic diseases, significantly enhancing the quality of life.

The KPI Model presented also emphasizes inclusivity and equity, ensuring that advancements in healthcare are accessible to all segments of society, particularly underserved and marginalized groups. This reduces health disparities and promotes social justice.

Economic Growth and Development

Establishing PPPs in life sciences leads to the creation of high-quality jobs in research, healthcare, and technology sectors. Additionally, local communities benefit from skills development programs and training opportunities, enhancing their employability and economic prospects.

Successful lighthouse projects also attract both public and private investments, boosting local economies. The presence of cutting-edge research facilities and healthcare innovations can turn regions into hubs of economic activity.

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SUSTAINABLE HEALTHCARE

PPPs can lead to more efficient use of resources and cost savings in healthcare delivery. By sharing expertise and funding, these partnerships reduce duplication of efforts and streamline processes, making healthcare more sustainable in the long run.

Lighthouse partnerships emphasize capacity building, equipping local healthcare systems with the knowledge, tools, and infrastructure needed to handle current and future health challenges. This results in more resilient and responsive healthcare systems.

Global Health Impact through scalable Solutions: Innovations and best practices developed within the KPI Model can be scaled and adapted to different regions worldwide. This has the potential to address global health challenges, such as pandemics, more effectively.

COMMUNITY ENGAGEMENT AND EMPOWERMENT

An inclusive participation that engages local communities in the decision-making process ensures that their needs and perspectives are addressed. This leads to healthcare solutions that are culturally sensitive and widely accepted.

These partnerships also often include initiatives to improve health literacy and awareness among local populations, empowering them to make informed decisions about their health and well-being.



THE FUTURE OF COLLABORATION

The Danish Life Science Cluster therefore proposes to initiate and coordinate a three-year strategy to Build a Global Community of Public-Private Partnerships Based on the Danish Lighthouse Case for Life Science. This has the following timeline and steps;

YEAR 1: FOUNDATION AND COLLABORATION

1. Develop Collaborative Platforms:

a. Create online platforms and forums for knowledge sharing, collaboration, and best practices dissemination among PPPs globally.

b. Organize thematic workshops and webinars focused on specific challenges and innovations in life sciences.

2. Set Up Initial Lighthouses:

a. Launch pilot projects in a few strategic locations to serve as initial lighthouses. These will act as models showcasing successful PPPs in life sciences. Secure funding and resources for these pilot projects through joint investments from public and private entities.

3. Strengthen Regulatory and Ethical Frameworks:

a. Work with international regulatory bodies to harmonize standards and guidelines for PPPs in life sciences.

b. Promote ethical practices and transparency in all partnership activities to build trust and credibility.

YEAR 2: INTEGRATION AND INNOVATION

1. Integrate Technological Solutions:

a. Leverage digital health technologies, big data, and AI to enhance research, development, and delivery of healthcare solutions.

b. Facilitate partnerships with tech firms to incorporate cutting-edge technologies in PPP projects.

2. Promote Cross-Sector Innovation:

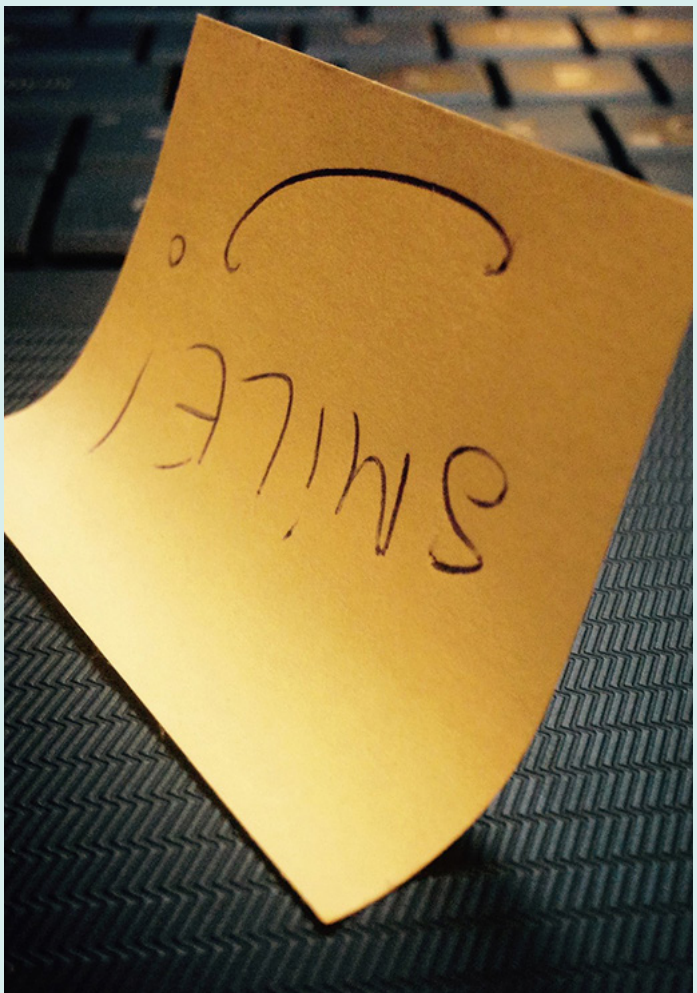
a. Encourage cross-sector collaborations, bringing together stakeholders from various industries such as pharmaceuticals, biotechnology, IT, and healthcare.

b. Launch innovation challenges and grants to support breakthrough ideas and solutions.

3. Enhance Capacity Building and Training:

a. Develop training programs and workshops to build capacity among stakeholders, focusing on project management, regulatory compliance, and innovative research methodologies.

b. Foster exchange programs and internships to facilitate knowledge transfer and skills development across regions.



YEAR 3: CONSOLIDATION AND SUSTAINABILITY

1. Evaluate and Refine Strategies:

a. Conduct comprehensive evaluations of the PPP initiatives to assess their impact, sustainability, and areas for improvement.

b. Refine strategies and models based on feedback and lessons learned.

c. Institutionalize Successful Practices:

d. Institutionalize best practices and successful models into standard operating procedures for future PPPs.

e. Create a certification or accreditation system to recognize and standardize exemplary PPPs.

2. Ensure Long-Term Sustainability:

a. Develop strategies for long-term financial sustainability, such as diversified funding sources, public grants, private investments, and revenue-generating activities.

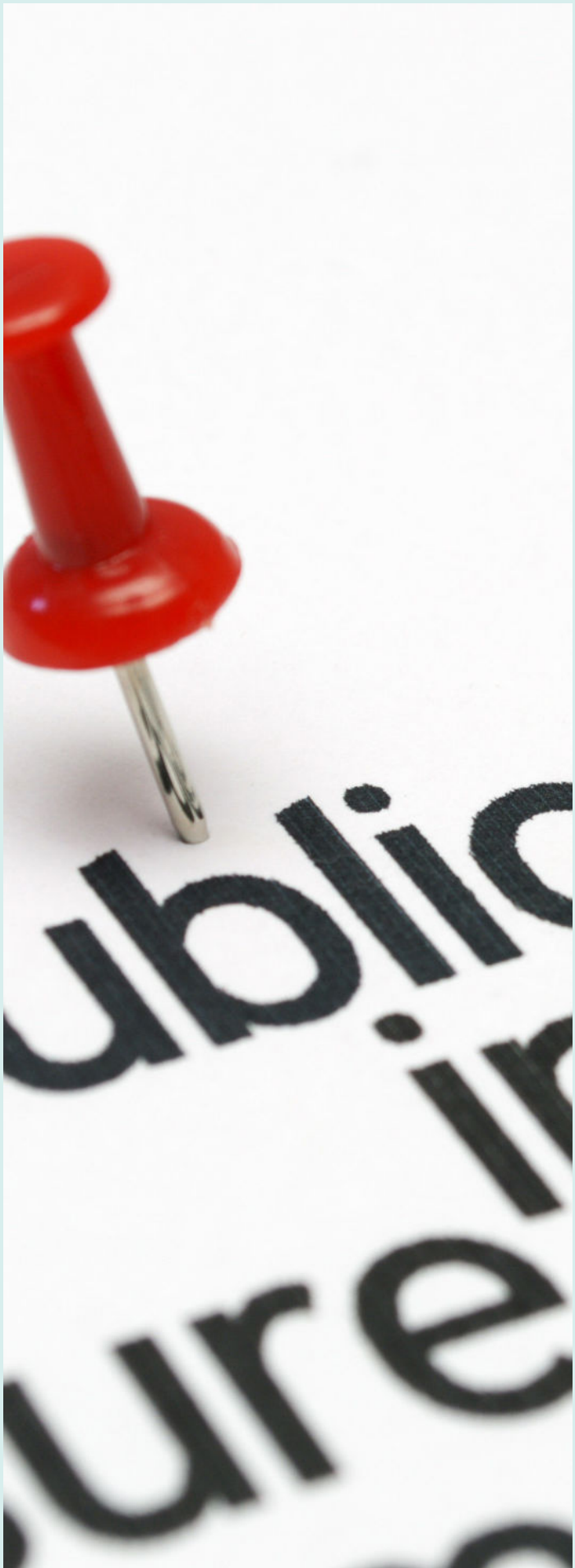
b. Strengthen local capacities and infrastructures to ensure the longevity and independence of PPP projects.

3. Global Dissemination and Advocacy:

a. Promote the global adoption of the Nordic Lighthouse model through international conferences, publications, and partnerships with global health organizations.

b. Advocate for policies and frameworks that support the growth and sustainability of PPPs in life sciences worldwide.

By following this strategic plan, a global community of public-private partnerships in life sciences can be effectively built, drawing on the strengths of the Danish Lighthouse Case and the KPI Model to foster innovation, sustainability, and equitable health outcomes on a global scale.



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Appendix - Double Materiality Assessment

Additional details on the process of a Double Materiality Assessment

Undertaking a double materiality assessment according to the Corporate Sustainability Reporting Directive (CSRD) involves a structured approach to evaluate and disclose both financial materiality and impact materiality.

For in-depth guidance as to process and content, we can recommend consulting specialized consultants, but the basics are accessible for all dedicated organisations. Here's how to approach this process:

1. Understand the Scope and Requirements

• Familiarize with the CSRD: Understand the specific reporting requirements under the CSRD, including which sustainability topics are mandatory to assess (e.g., climate change, biodiversity, human rights).

• Identify Reporting Boundaries: Determine the boundaries for reporting, including the entities and operations covered, supply chain considerations, and stakeholder groups affected.

2. Stakeholder Engagement

• Identify Stakeholders: List key internal and external stakeholders (e.g., employees, investors, customers, suppliers, NGOs, local communities, regulators).

• Engage with Stakeholders: Use surveys, interviews, workshops, and other engagement methods to gather input on what sustainability issues are material from their perspective.

• Understand Expectations: Stakeholder feedback helps identify what impacts matter most to them, guiding the impact materiality assessment.

3. Materiality Assessment

• Financial Materiality (Inside-Out Perspective):

o Identify Sustainability Risks: Determine how various sustainability issues could impact the company's financial performance, position, and development. Consider risks related to regulations, market changes, environmental events, and social factors.

o Assess Impact on Financial Metrics: Analyze how these risks might affect revenue, costs, asset values, liabilities, and cash flow.

• Impact Materiality (Outside-In Perspective):

o Identify Company's Impacts: Assess how the company's operations, products, and services impact the environment, people, and society. Consider areas such as carbon emissions, water use, human rights, labor practices, and community effects.

o Evaluate Significance: Evaluate the scale, scope, and irremediability of these impacts to determine their materiality.

o Prioritize Impacts: Prioritize the issues that have significant positive or negative impacts, using stakeholder feedback and impact assessments.

4. Data Collection and Analysis

• Gather Data: Collect quantitative and qualitative data on identified material issues. Use internal data sources, industry benchmarks, and third-party data where available.

• Analyze Data: Analyze the data to quantify impacts and financial risks, applying appropriate methodologies. Scenario analysis and risk modeling can be useful for assessing financial materiality.

5. Determine Material Topics

• Map Material Issues: Create a materiality matrix that plots financial materiality against impact materiality. This visual tool helps to highlight which issues are most material from both perspectives.

• Review and Validate: Involve senior management and the board in reviewing and validating the materiality assessment results to ensure alignment with the company's strategy and risk management framework.

6. Reporting and Disclosure

• Prepare the Sustainability Report: Disclose the material topics identified, explaining the process undertaken, the stakeholder engagement involved, and the rationale for the selected material issues.

• Include in Financial Statements: Integrate financially material sustainability risks into the company's financial reporting and risk management disclosures.

• Communicate Double Materiality: Clearly articulate how both financial and impact materiality have been assessed, providing transparency about the process and outcomes.

7. Continuous Monitoring and Improvement

• Monitor Changes: Regularly monitor changes in sustainability risks, stakeholder expectations, and regulatory requirements.

• Update the Assessment: Periodically update the double materiality assessment to reflect new information, evolving stakeholder concerns, and changing business contexts.

• Continuous Stakeholder Engagement: Maintain ongoing dialogue with stakeholders to keep the assessment relevant and aligned with emerging issues.

8. Integration with Strategy

• Align with Corporate Strategy: Ensure that the insights gained from the double materiality process are integrated into the company's overall strategy, risk management, and decision-making processes.

• Set Targets and Actions: Based on material issues, set specific sustainability targets and action plans that align with both financial goals and impact reduction.

By following these steps, companies and organizations can effectively undertake a double materiality assessment in line with the CSRD, ensuring that they address both the financial implications of sustainability issues and their broader impacts on society and the environment.