Nordic Innovation

9 February 2022

Nordisk ministerråd består av samarbeidsministrene og **10 fagministerråd (MR)** for de forskjellige sektorene som støttes av 16 embetsmannskomiteer (EK)

Generalsekretæren har ansvaret for den daglige driften av det nordiske regjeringssamarbeidet.

12 samnordiske institusjoner og 3 baltiske kontorer

Nordisk ministerråd

Arbeidsliv	Næring, energi og regionalpolitikk	Fiskeri, havbruk, jordbruk, næringsmidler og skogbruk	Likestilling	Kultur	Samarbeids-ministrene	Lovsamarbeid	Miljø	Sosial- og helsepolitikk	Utdanning og forskning	Økonomi- og finanspolitikk

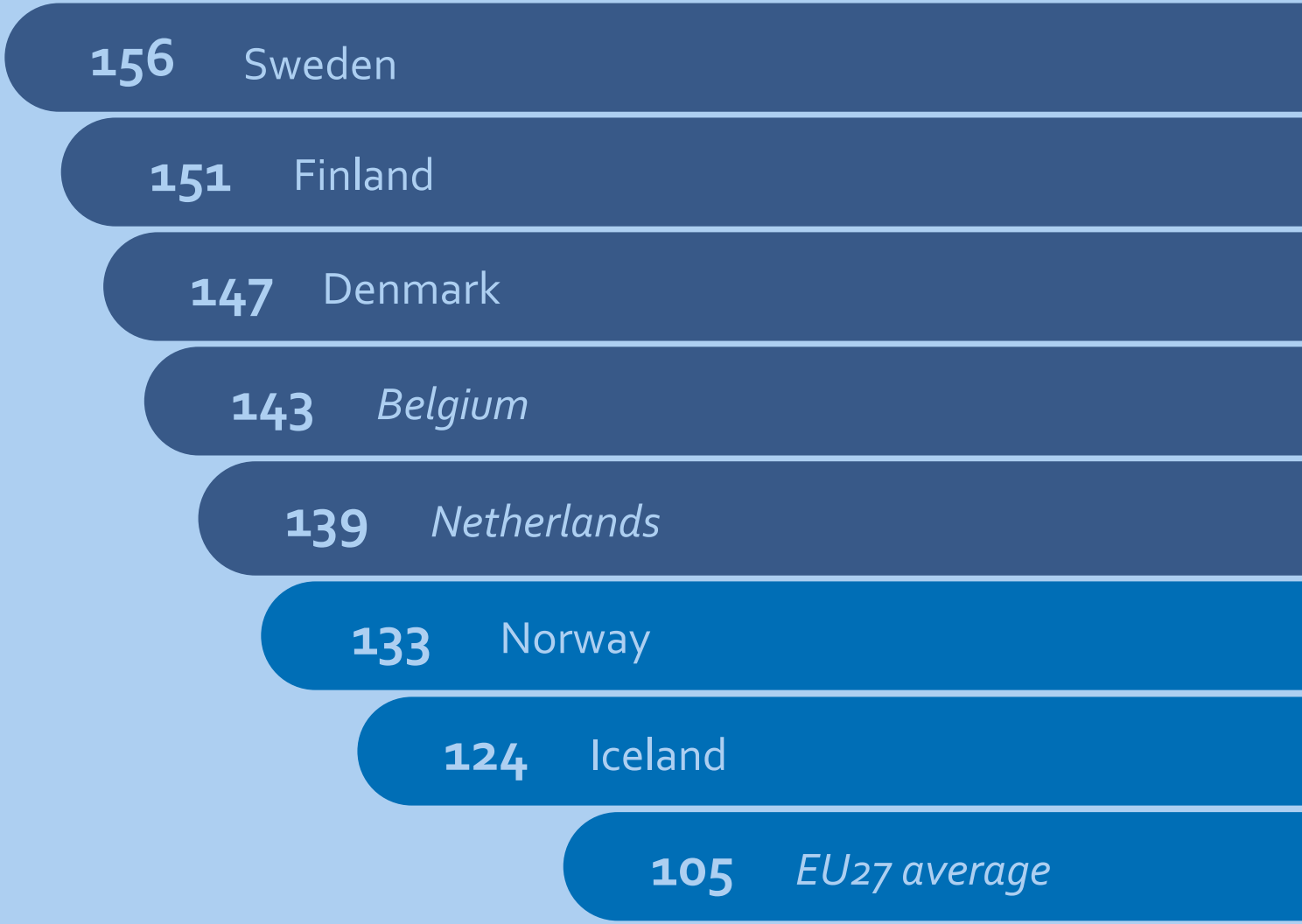
Generalsekretær
Nordisk ministerråds sekretariat

- Nordisk institusjon for videreutdanning innenfor arbeids-miljøområdet (NIVA)
- Nordisk Innovation
- NordGen
- Nordisk Energiforskning
- Nordregio
- Kulturkontakt Nord
- NMR Kontor i Estland
- Nordens hus i Reykjavík (NOREY)
- NMR Kontor i Latvia
- Nordens hus på Færøyene (NLH)
- NMR Kontor i Litauen
- Nordens institutt på Åland (NIPÅ)
- Nordens institutt i Grønland (NAPA)
- Nordens velferds-senter (NVC)
- NordForsk

European Innovation Scoreboard 2021

Top 5 EU Innovation System Performances

(plus Norway, Iceland and EU27 average)



Source: European Commission

Combined, the Nordics is the 11th largest economy in the world

Ranking	Country	GDP
1	United States	22,68
2	China	16,64
3	Japan	5,83
4	Germany	4,32
5	United Kingdom	3,13
6	India	3,10
7	France	2,94
8	Italy	2,11
9	Canada	1,88
10	Korea	1,81
11	**The Nordics**	**1,75**
12	Russia	1,71
13	Australia	1,62
14	Brazil	1,49
15	Spain	1,46

Source: *IMF World Economic Outlook April 2021. Numbers in trillion US dollars.*

Our vision 2030

The Nordic region will become the most sustainable and integrated region in the world

A **green** Nordic region

Together, we will promote a green transition of our societies and work towards carbon neutrality and a sustainable circular and bio-based economy

A **competitive** Nordic region

Together, we will promote a green groth in the Nordic region based on knowledge, innovation, mobility and digital integration

A **socially sustainable** Nordic region

Together, we will promote an inclusive, equal and interconnected region with shared values and strengthened cultural exchange and welfare

8 nye nordiske initiativer skal
drive erhvervslivet fremad
8 new Nordic initiatives
will drive business communities forward

Programs 2021 – 2024 (Vision 2030)

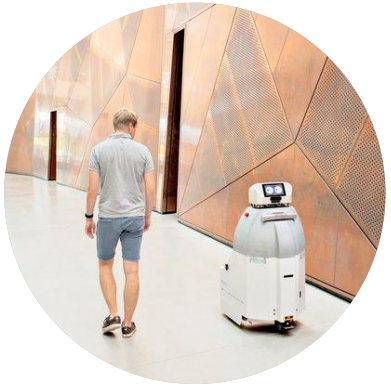
Nordic Green Mobility

Sustainable Construction

Circular Business Models

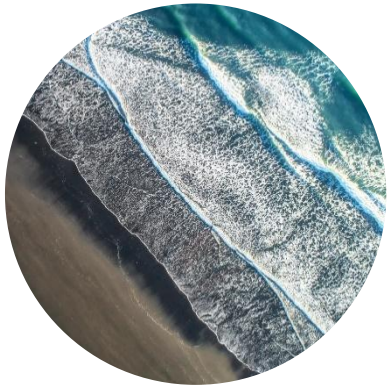
Sustainable Minerals

Smart Connectivity



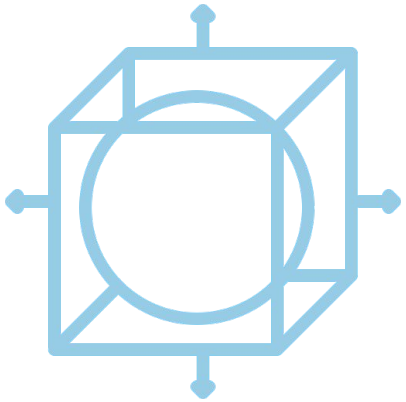
AI and Data

Life Science and Health Tech



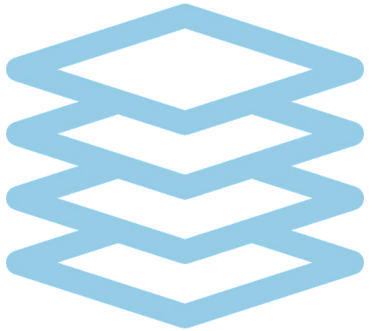
Sustainable Ocean Economy

Aspects of systems change



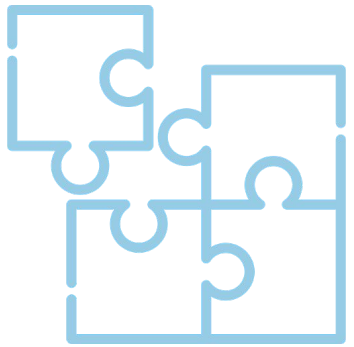
Multidimensional

Involves a wide variety of actors, institutions and technologies.



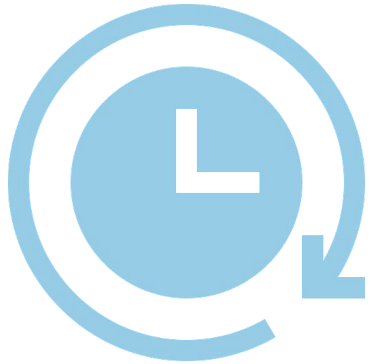
Multi-Scale

Change takes place on many different levels across different scales.



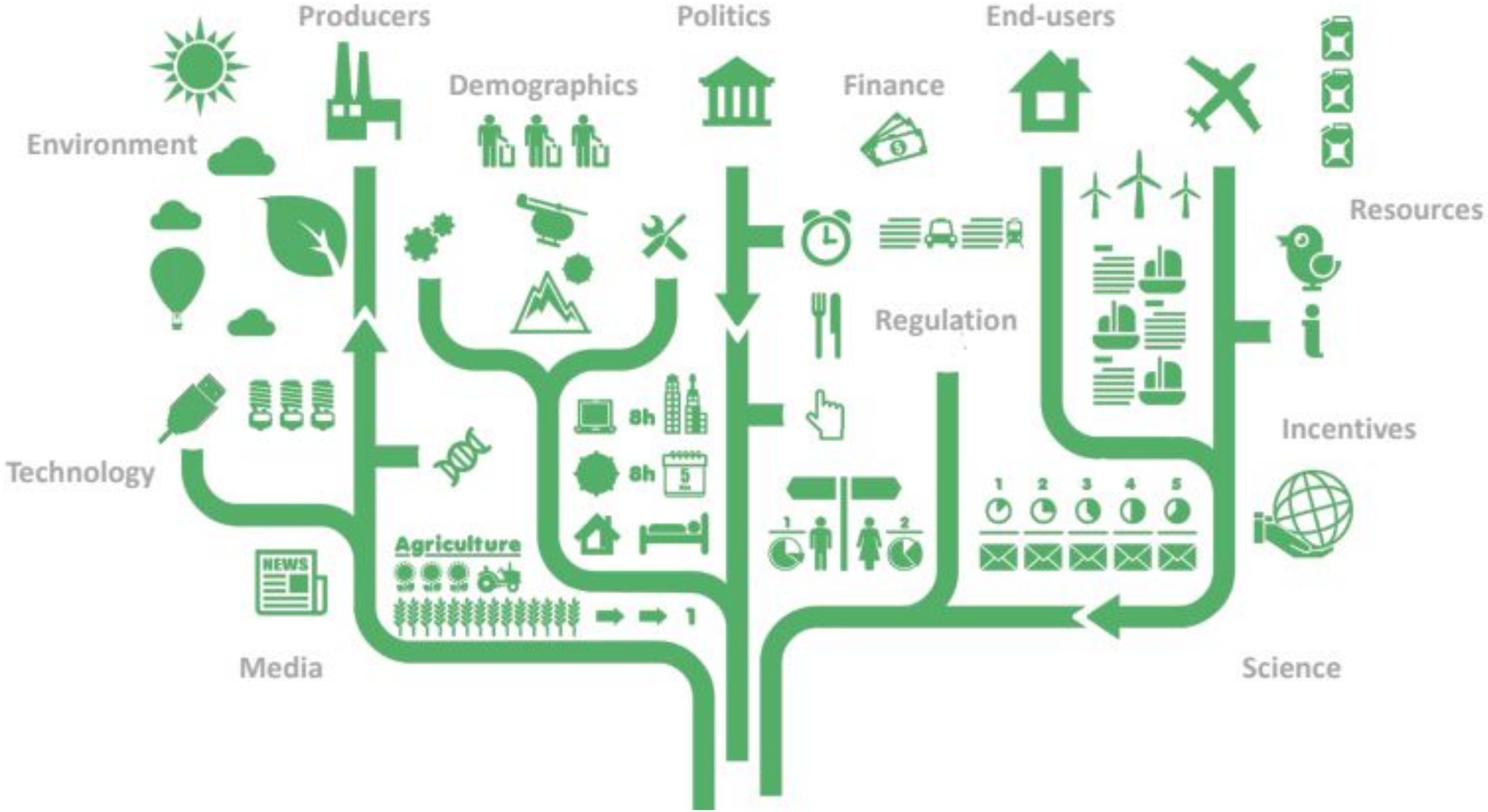
Co-evolution

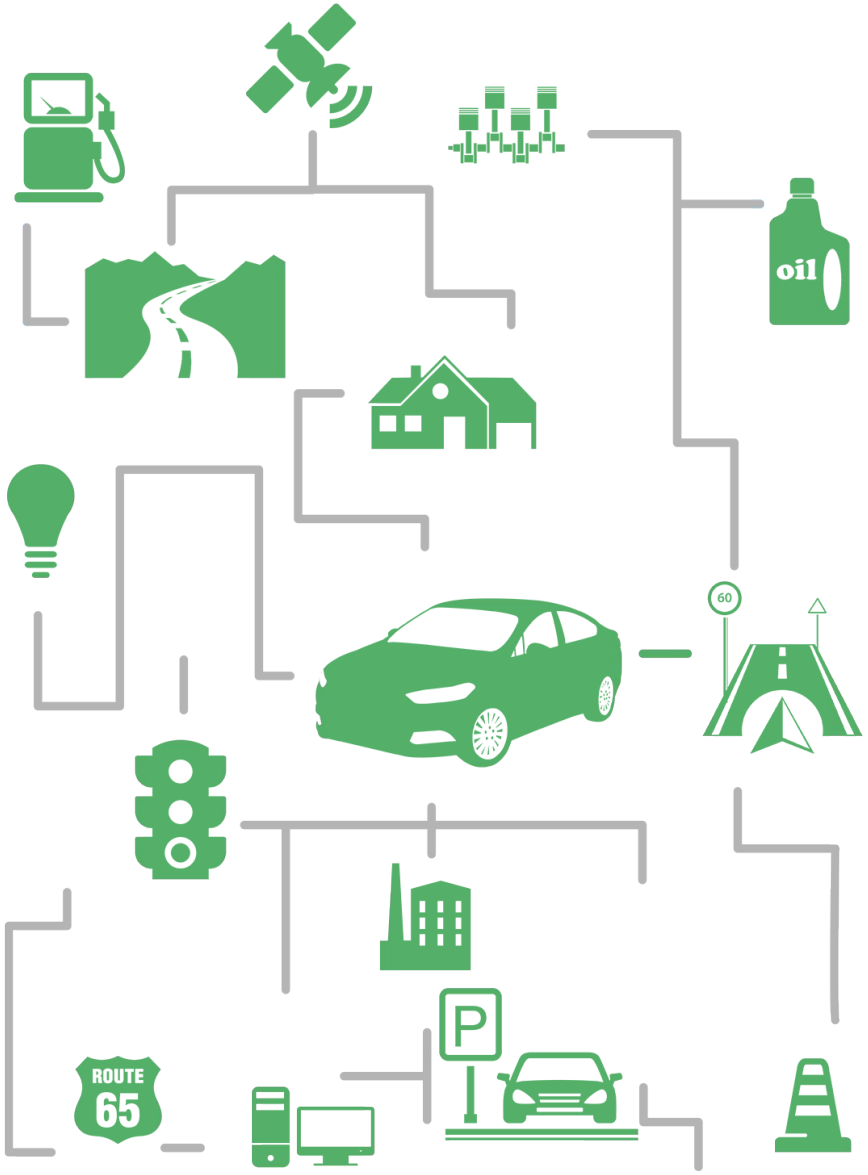
Co-development of different systems, processes and elements



History

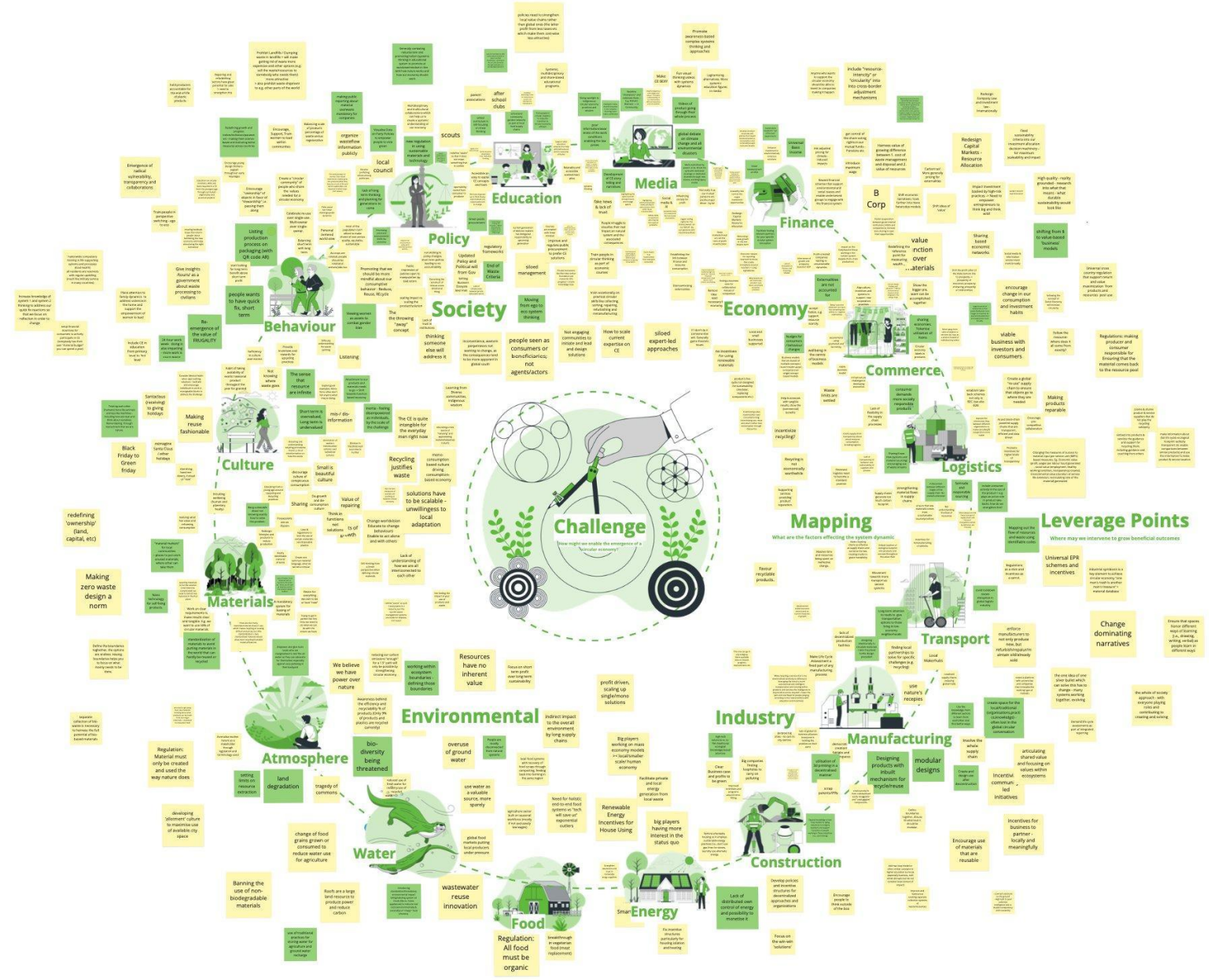
Prolonged processes that develop over the course of multiple decades


Producers
Politics
End-users
Demographics
Finance
Environment
Resources
Regulation
Incentives
Technology
Agriculture
NEWS
Media
Science



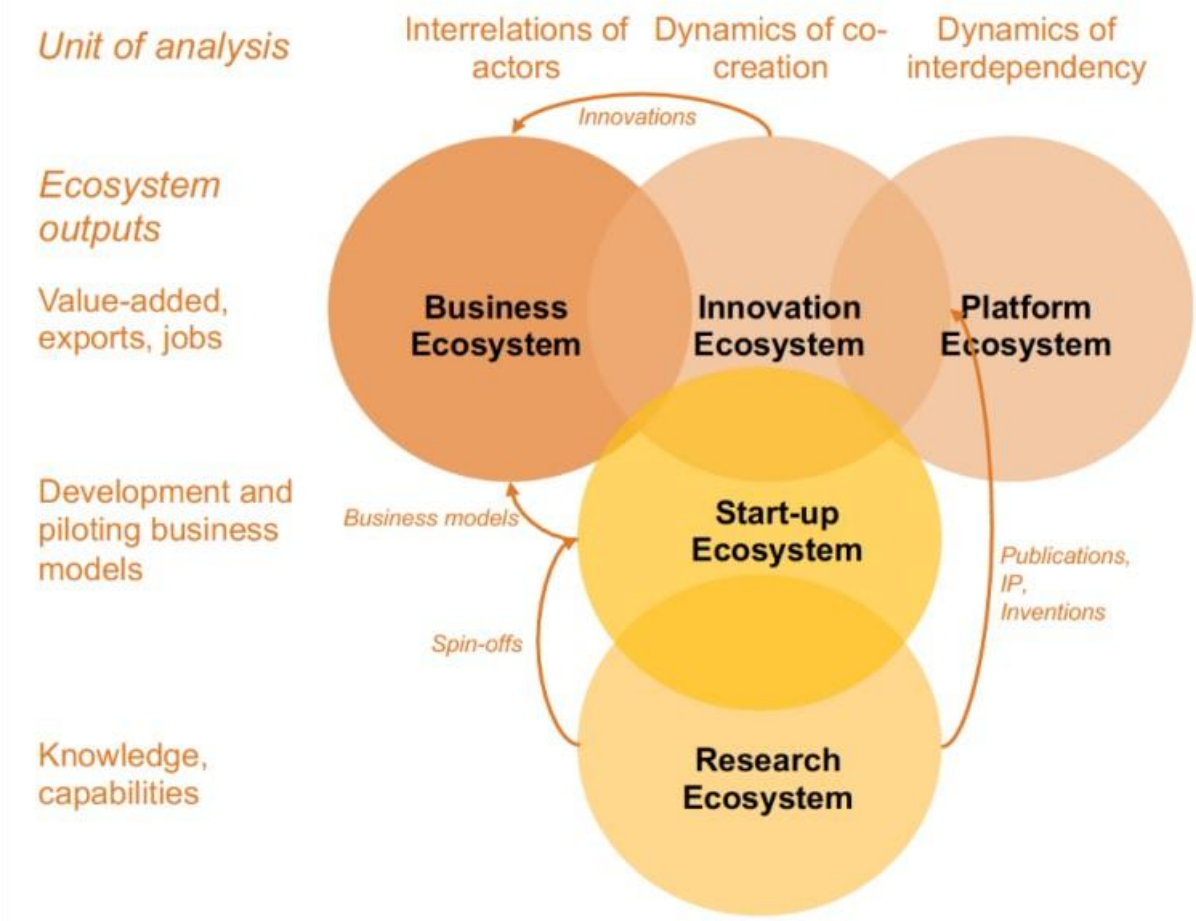
Because socio-technical systems are interlinked and interdependent they form an overall pattern or paradigm, within which technologies, economics, business models, social and cultural institutions fit and interoperate.

If we take the example of the automobile, the car is in fact dependent upon a whole transport paradigm. To get modern personal transportation required a significant number of interlinked changes to road infrastructure and traffic systems, traffic rules and regulations, symbolic meanings, marketing, cultural changes, fuels, the development of new infrastructure, changes in user behavior and mass production capabilities, and distribution networks, etc.


Challenge
How might we enable the emergence of a circular economy?
Society
Behaviour
Policy
Education
Media
Finance
Economy
Commerce
Logistics
Mapping
What are the factors effecting the system dynamic
Leverage Points
Where may we intervene to grow beneficial outcomes
Transport
Manufacturing
Industry
Construction
Energy
Food
Water
Atmosphere
Materials
Environmental
Culture

Innovation ecosystem

- Global and inter-regional nature
- Blurring of industry and sector borders
- Dynamic interaction and co-opetition
- Common goals, interests and values
- Self-directing and regulating, distributed responsibilities and decision-making
- Open knowledge exchange
- Adaptability to new environments
- End-users/customers have an active part in value creation



Source: Piirainen et al (2020) Impact Study: World-class Ecosystems in the Finnish Economy, Part A.

Five key stakeholders critical to the success of innovation ecosystem creation

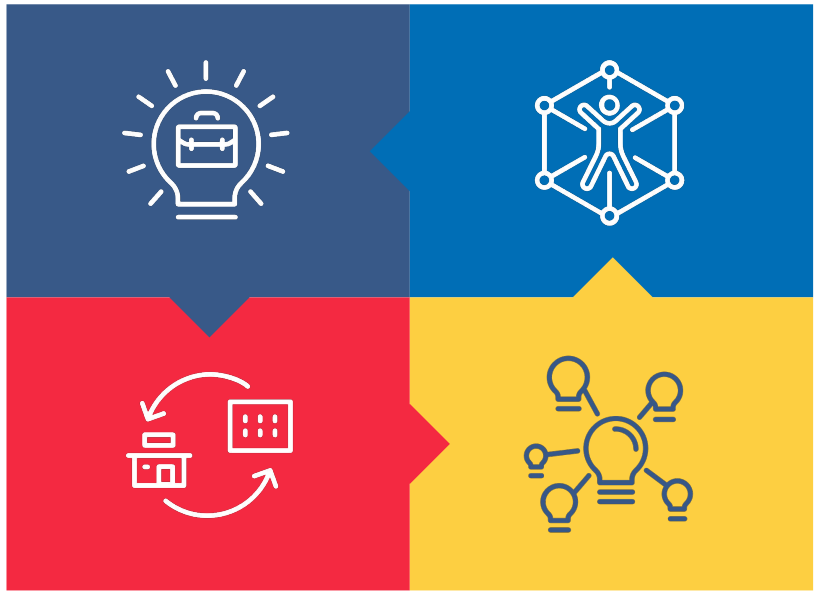
Fra EFIS rapport

Nordic Innovation

Innovation Intermediator

Visions
creating narratives for sector specific problems and the rationale for innovation. Provide grounds for interaction and give direction to learning processes and technical developent activites.

Solutions
give opportunities and arenas for companies to engage demonstrate, test, piloting and show-case new and cutting-edge solutions.



Ecosystems
create platforms for interaction with the surrounding eco-system of actors. Enhancing alignment and learning of multi-actor network.

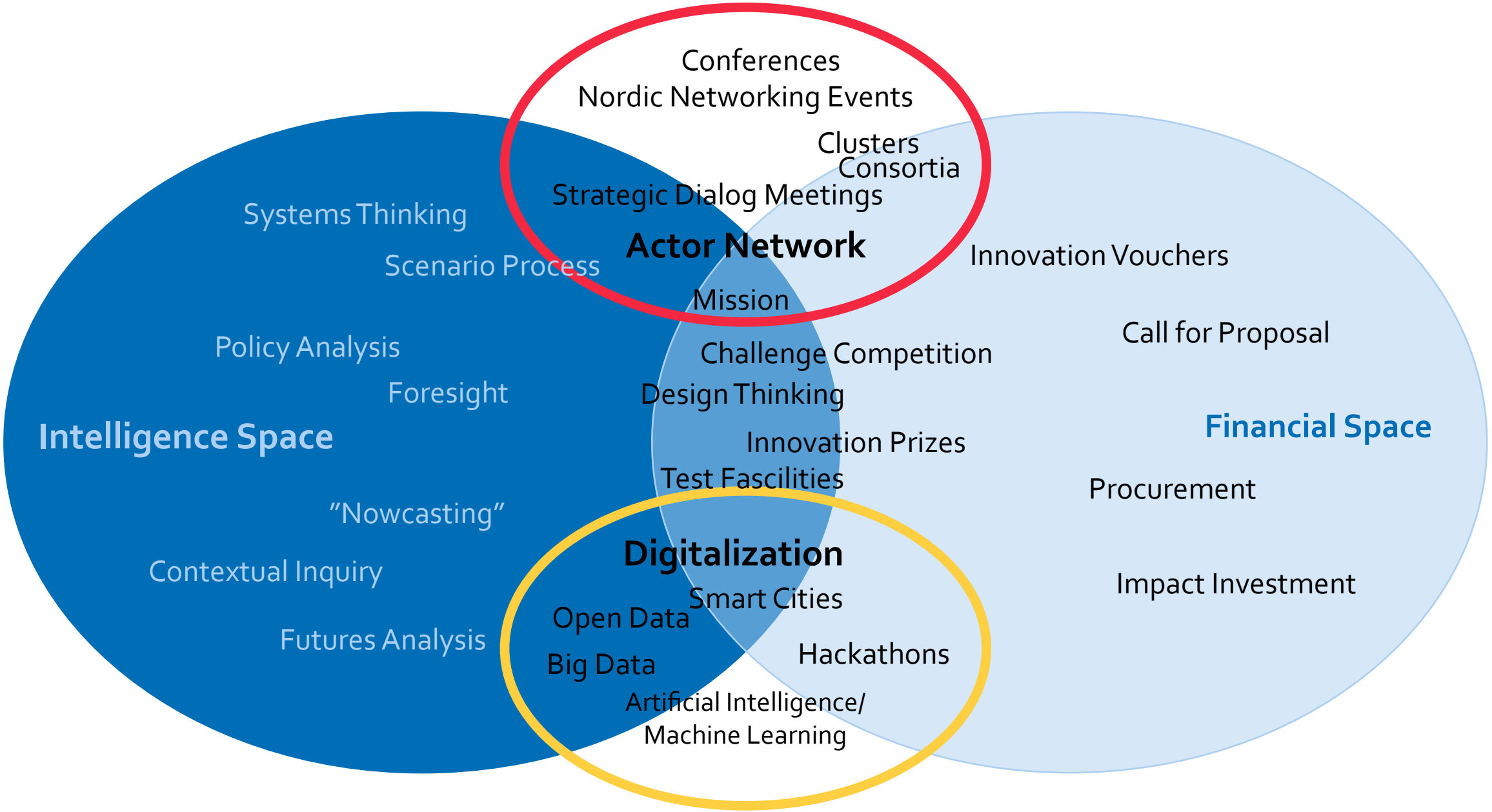
Learning processes
facilitate exchange of experience and knowledge. Stimulate out-of-the-box thinking and encourage targeted knowledge transfer and information exchange.

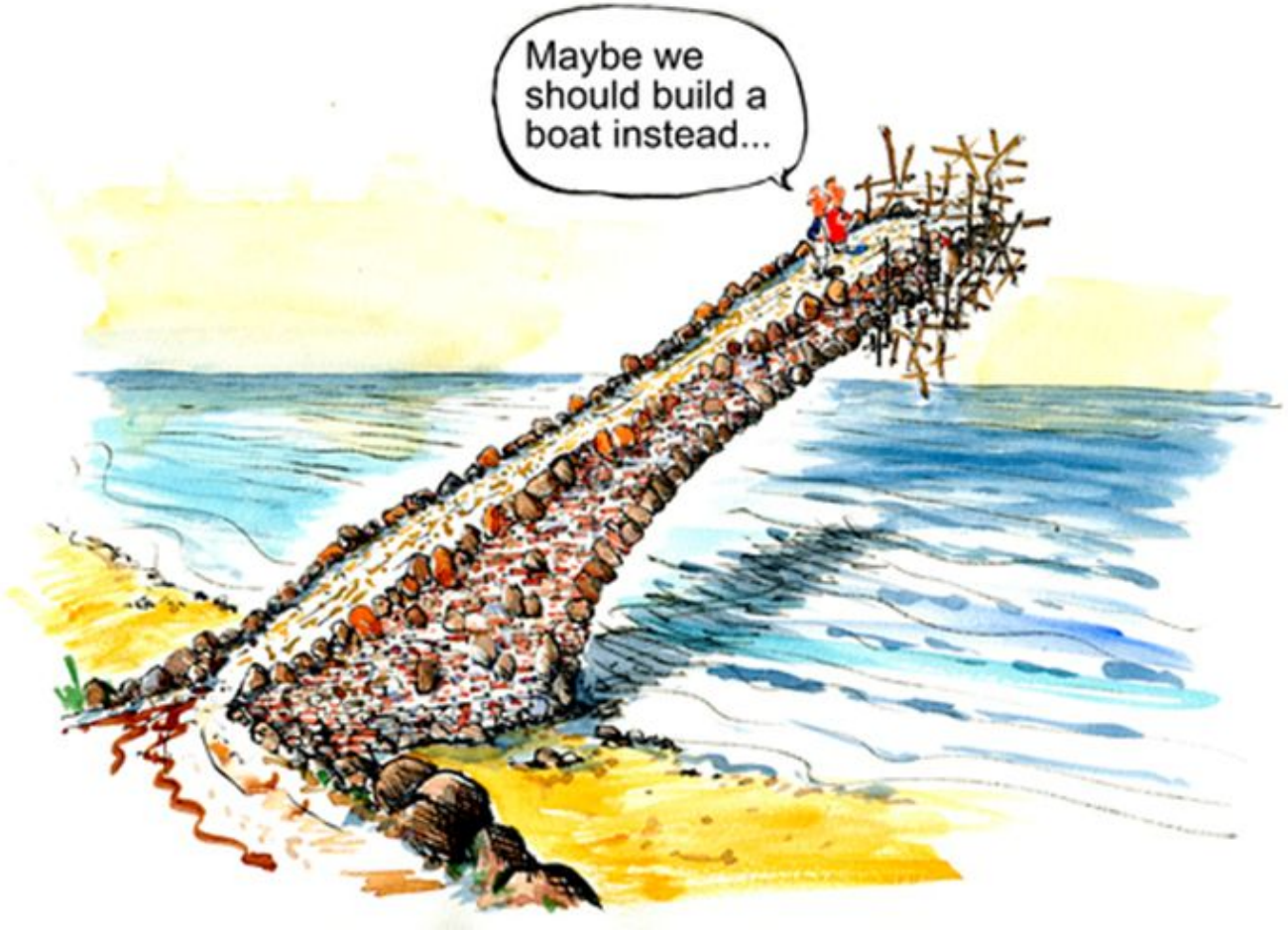
Enabling Transition

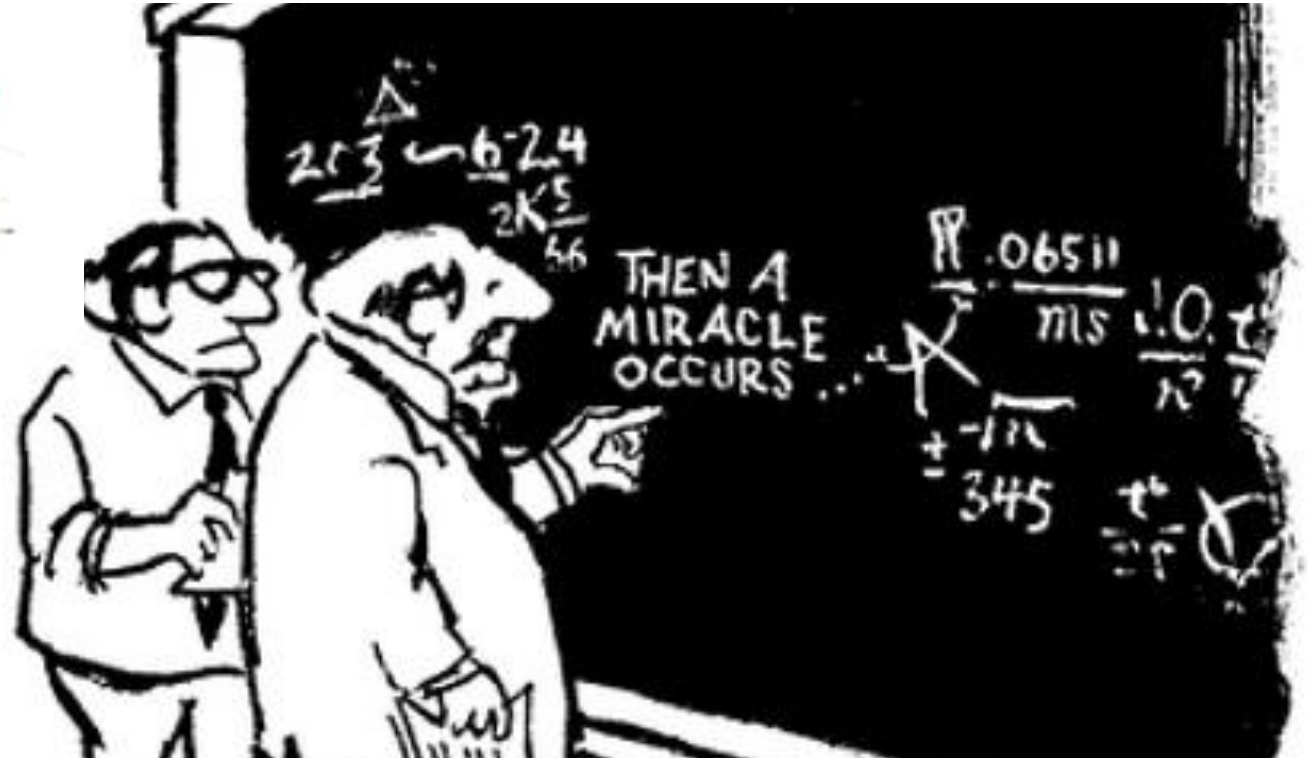
- Cross sector matchmaking
- Identifying barriers/enablers
- New markets & opportunities
- Scaling and internationalisation

Creating Nordic added value

- Strong Nordic internal market
- Nordic wide solutions
- Common Nordic policies and standards
- Nordic brand


Conferences
Nordic Networking Events
Clusters
Consortia
Strategic Dialog Meetings
Actor Network
Systems Thinking
Scenario Process
Mission
Innovation Vouchers
Call for Proposal
Policy Analysis
Challenge Competition
Foresight
Design Thinking
Intelligence Space
Financial Space
Innovation Prizes
Test Fascilities
Procurement
"Nowcasting"
Digitalization
Contextual Inquiry
Smart Cities
Impact Investment
Open Data
Futures Analysis
Hackathons
Big Data
Artificial Intelligence/
Machine Learning


Maybe we should build a boat instead...


THEN A MIRACLE OCCURS ...

Theory of Change

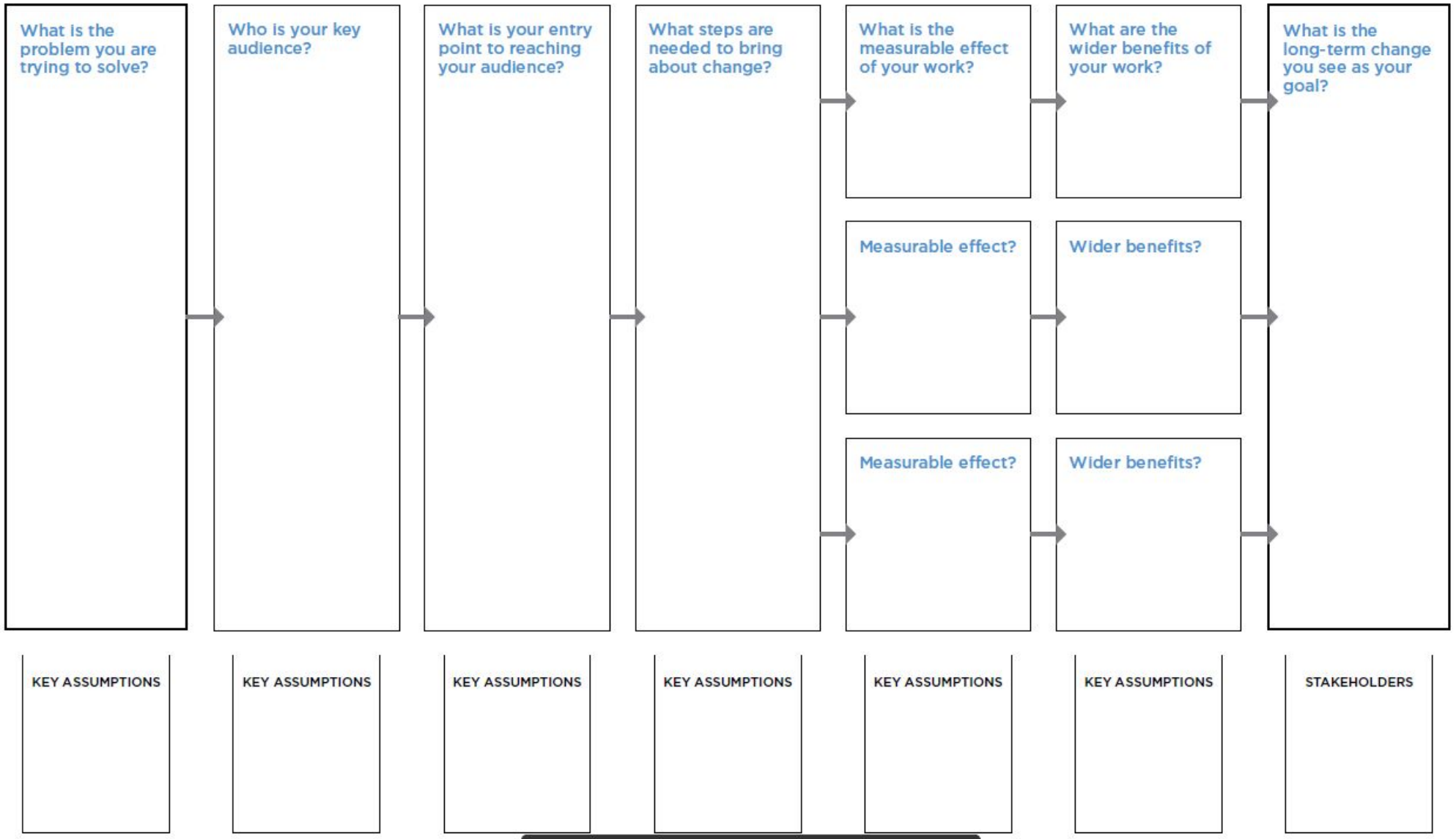
Theory of change - steps

1. Identify the problem area or opportunity to be addressed by your programme (preconditions and causes)
2. Identify the long-term and intermediate objective of your programme/activities
3. Develop an impact pathway
4. Develop indicators

Nesta...

THEORY OF CHANGE

Define your goals and how you will achieve them



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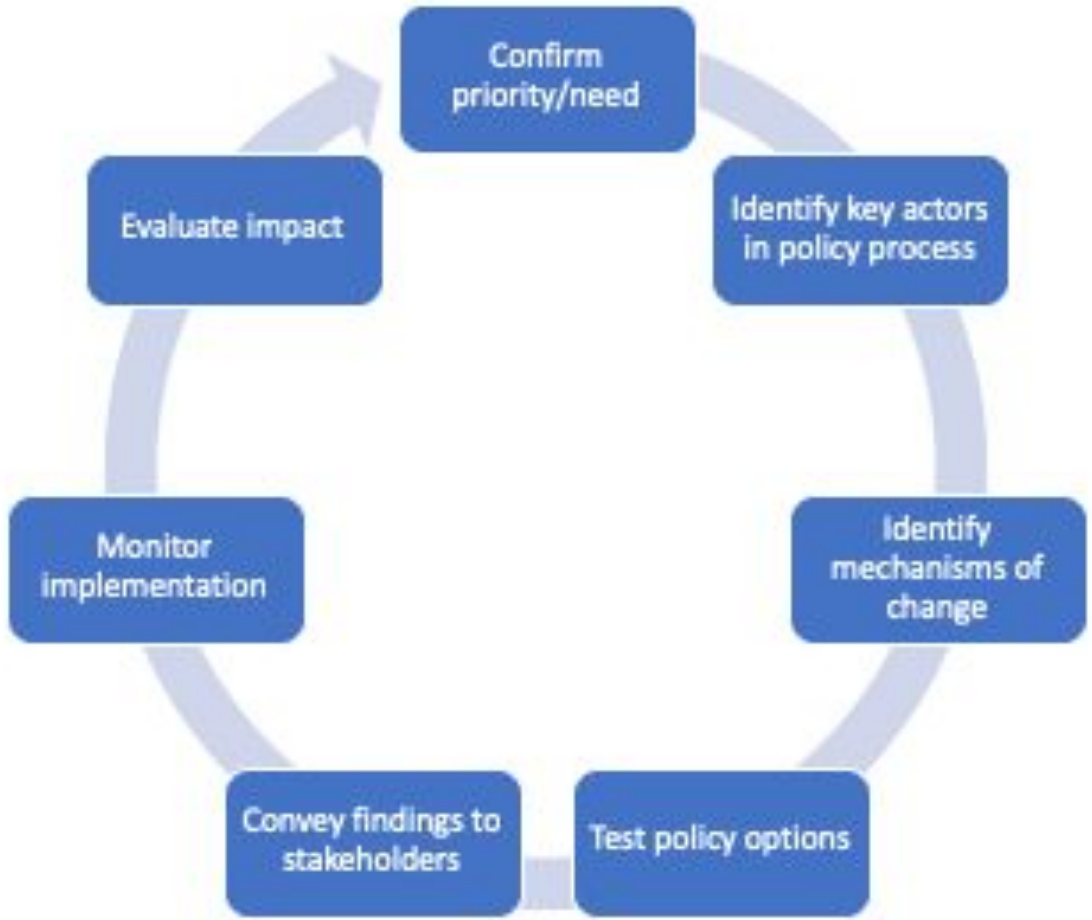
INSPIRED BY: Nesta (2011) Theory of Change

How does a theory of change support policy implementation and monitoring

- Unravelling the problem: direct and indirect causes and their interrelations
- Helps to develop a roadmap or pathway of change/change process
- Includes and spells out assumptions
- The ToC is descriptive and takes into account aspects less easy to quantify (e.g. awareness raising, networking changes)
- Outputs, outcomes and impacts are clearly spelled out
- Be a basis for monitoring and evaluation (M&E)

The policy cycle and identifying mechanism of change



How we will work

HELSE
NORDIC INNOVATIV.
Helse
Helse og Velferd
Helse EU
Helse -EU
Life Science
DIGI Health
My data / Sundhuds data
Cyber Security
Offentlige digitale tjenste
IT och telekom

SPACE
SURFACE
SUBSEA

Health, Demography and Quality of life

Activities

Bridging Nordic Data Initiative:
- Scenario process (2018–19)
- Interoperability case (2019)
- Hackathons (2019–2020)
- Legal obstacles (2020)
- Business case (2020)
- Presentation of outcomes (2020–21)

Preventive Health (2020–2021):
- Welfare and prevention with use of data and behavioural data

Healthy Cities:
- Impact Start-up Nordic (Innovative public procurement solutions)
- City-lead innovative solutions related to the SDGs

Nordic Value Chain Collaboration
- Internationalisation and new methods for collaboration
- Sustainable healthcare

Outputs

- Improved access to data for innovation, prevention and treatment purposes
- Increased awareness for relevant stakeholders use of data to increase quality of life in a secure way
- Strengthen value chain collaboration between clusters, businesses and ecosystems
- Improved sustainable health and welfare solutions
- Strengthening markets for Nordic health and welfare solutions

Outcomes

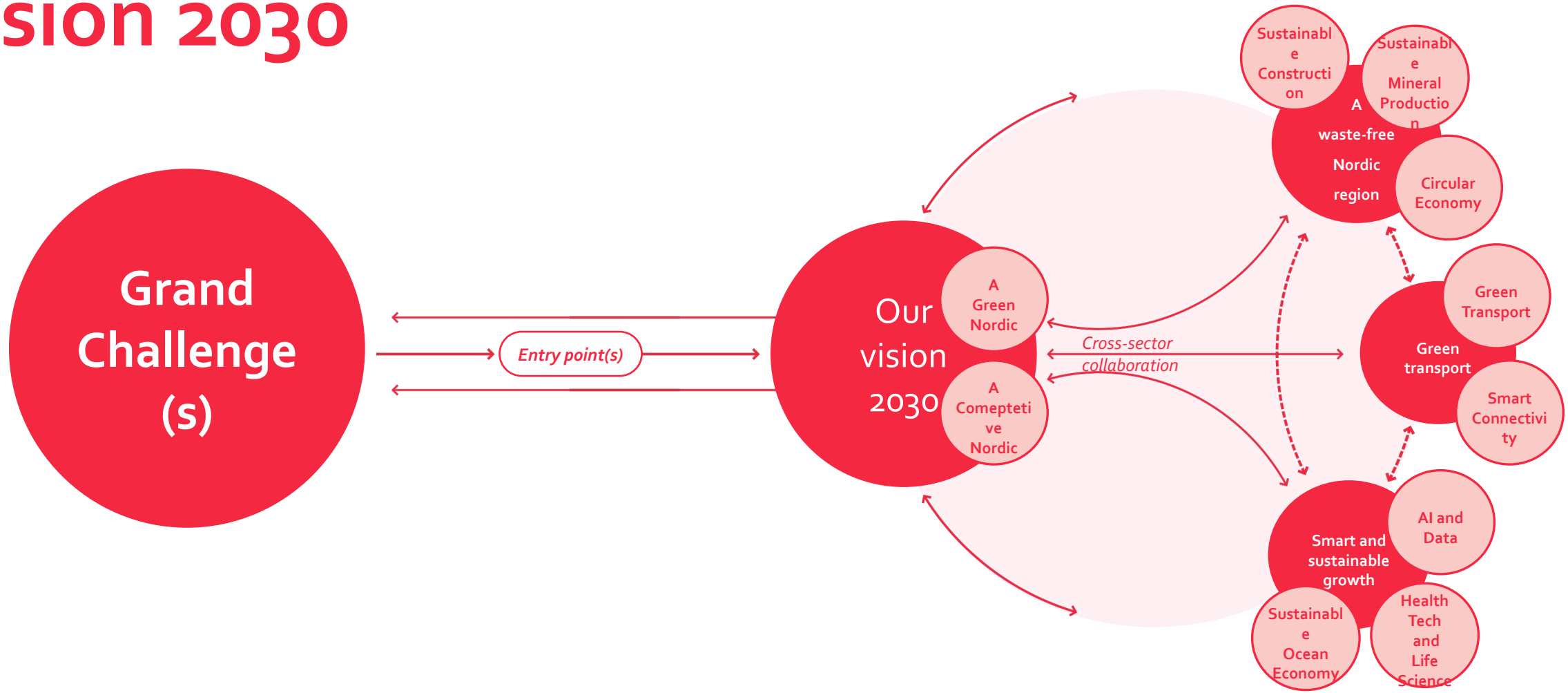
- Contribute to the Nordic region being a hub for new innovative preventive health solutions
- Stronger transsectorial collaboration
- Increased competitiveness and internationalisation of Nordic businesses

Impact

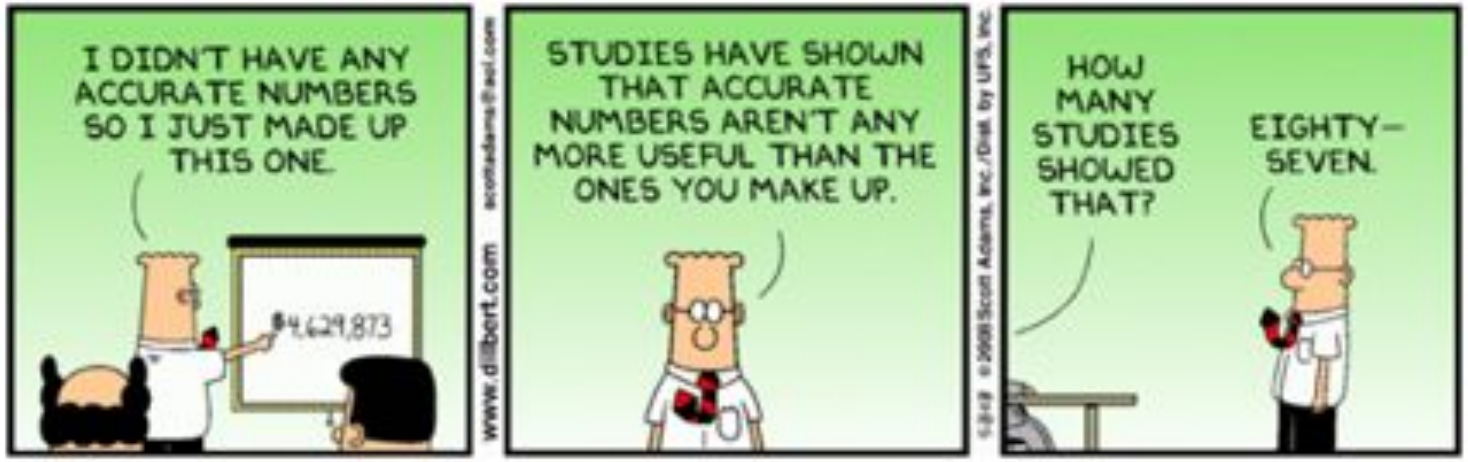
In 2030 the Nordics will be the most sustainable and integrated health region in the world providing the best possible personalised health care for all its citizens.

Vision

Nordic Innovation Vision 2030



Indicators or the search for the magic number



Key do's and don't's for an effective monitoring and indicator system

Do

- Set up a system that takes account of time lags, complexity and risky nature of innovation (policy);
- Adopt a mixed-methods approach, don't expect monitoring & evaluation to result in a single number that captures all impact
- Look for behavioural additionality by observing changing co-operation patterns & capabilities of firms/organisations to innovate.

Don't

- …forget to take account of external factors that may be bottlenecks to improved innovation performance of supported organisations
- …Expect to prove significant short-term (1-2 years) quantitative impacts of interventions;
- …Limit indicators to those that count direct outcomes of projects/activities.

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