

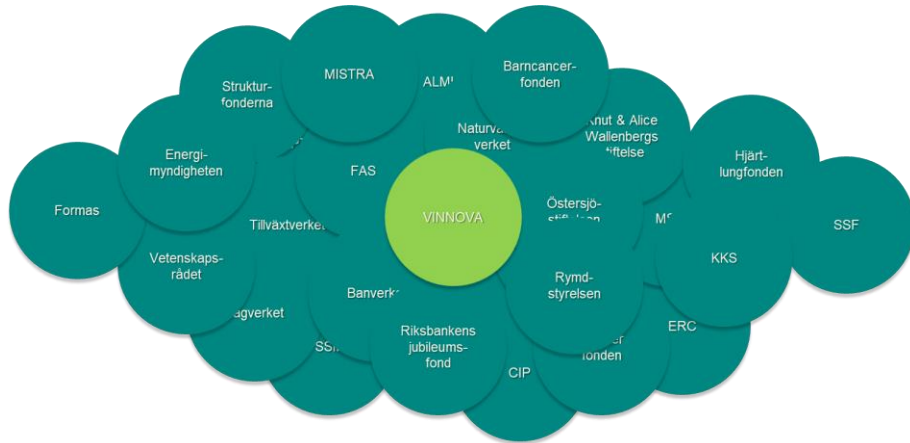
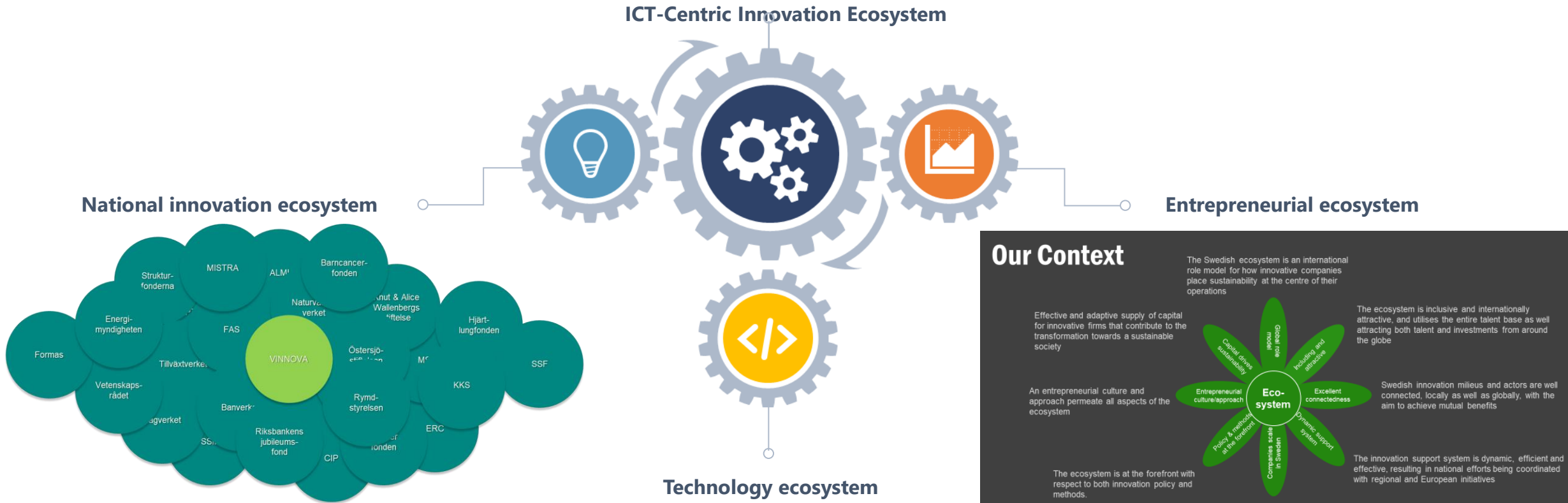
# Digital transformation and CDI

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CHALLENGE-DRIVEN INNOVATION

**VINNOVA**  
Sweden's Innovation Agency



# Three Engines of Growth



### Our Context

The Swedish ecosystem is an international role model for how innovative companies place sustainability at the centre of their operations

Effective and adaptive supply of capital for innovative firms that contribute to the transformation towards a sustainable society

An entrepreneurial culture and approach permeate all aspects of the ecosystem

The ecosystem is inclusive and internationally attractive, and utilises the entire talent base as well attracting both talent and investments from around the globe

Swedish innovation milieus and actors are well connected, locally as well as globally, with the aim to achieve mutual benefits

The innovation support system is dynamic, efficient and effective, resulting in national efforts being coordinated with regional and European initiatives

Sweden offers excellent conditions for innovative sustainable companies to grow with Sweden as their base

**Eco-system**

- Capital drives sustainability
- Global role model
- Inclusive and attractive
- Excellent connectedness
- Dynamic support system
- Companies scale in Sweden
- Policy & methods at the forefront
- Entrepreneurial culture/approach

Företag	Omsättning (×1000) SEK
1 Volvo, AB	431 980 000 ▲
2 Volvo Car AB	274 117 000 ▲
3 H & M Hennes & Mauritz AB	232 755 000 ▲
4 Ericsson, Telefon AB LM	227 216 000 ▲
5 Skanska AB	172 846 000 ▲
6 Vattenfall AB	166 360 000 ▲
7 Scania CV AB	152 419 000 ▲
8 Scania AB	152 419 000 ▲
9 Essity AB	128 975 000 ▲
10 ICA Gruppen AB	119 295 000 ▲
11 Electrolux, AB	118 981 000 ▼
12 Securitas AB	110 899 000 ▲
13 Atlas Copco AB	103 756 000 ▲
14 Sandvik AB	103 238 000 ▲



Innovative abilities

Digital transformation

Ecosystems for innovative companies

Emerging innovations

Future skills supply

Transformative public sector and civil society

Societal challenges

Sustainable industry

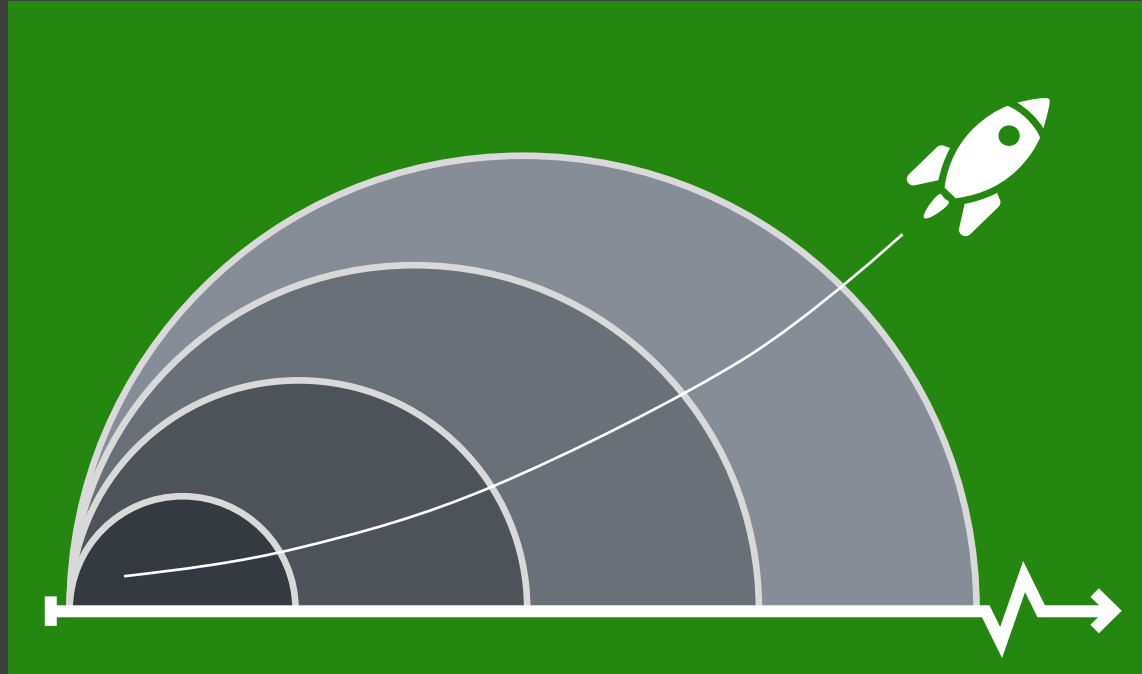
Sustainable food systems

Sustainable mobility systems

Sustainable precision health

Sustainable built environments

# Our transformation plan – Digital transformation



**Sweden is the leading digitalized welfare nation, a country easy to live in. The digitalization has made the society more inclusive, safe and sustainable.**

**Milestone 1:**  
Broad collaborations and proactive policy and standards development have taken place in the public sector and industry, which has significantly improved the conditions for powerful digitalization with ambitious goals.

**Milestone 2:**  
Mature, data-driven, smart systems with interoperability have been implemented at a high rate in many sectors, driving new values, sustainability and world-class innovation

**Milestone 3:**  
An innovative human and data-centric digital infrastructure that creates trust has been put in place, which opens for even more values while strengthening the individual.

**Milestone 4:**  
Industry and society have reached a new level of digitalization where people and autonomous systems are collaborating in common environments.

## Challenges:

Sweden needs skills linked to digitalization, but Swedish companies have difficulty finding the right workforce. Small and medium-sized companies are lagging in their digitalization journey with low digital maturity. The same can be said for the public sector. The digital infrastructure and access to data is neglected in Sweden, which is an obstacle to digital transformation (according to DIGG and the Digitization Council, among others).

## Current state:

Sweden is at the forefront in several areas of digitalization with competitive large and small companies. However, there are weaknesses and great needs for strengthened capacity in both business and the public sector when it comes to applying knowledge and technology. In addition, development is rapid and global competition is increasing. In many countries, within Europe and abroad, strategic reinforcements take place with extensive efforts and large investments.

## Enablers:

Strong collaborative culture and high trust in society. Robust digital infrastructure that meet society's needs and demands for accessibility, trust and integrity. Development and application of enabling technologies such as AI, software development, data management, communication technology, automation and cyber security. Powerful international collaborations and strong leadership linked to EU programs.

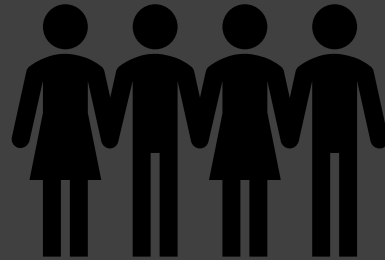
# The core of CDI



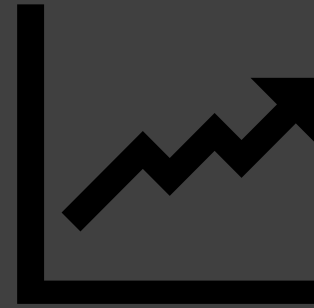
Challenge in focus



Innovation with System perspective



Cross collaboration



Long-term funding in three steps



To contribute to the SDG's



# Project example: Rural ICT Testbed - #fullcover

**Budget:** 5 MEUR in total 2 MEUR in grant

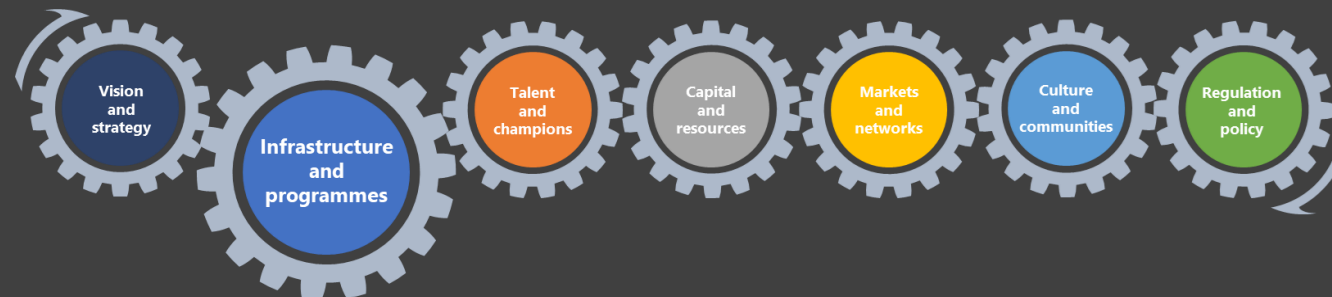
**Actors:** 24 actors from academia, industry and public sector

**Objective:** Attractive and competitive rural regions with full areal broadband coverage provided by dedicated rural network operators based on new technology.

**Summary:** The problem of mobile coverage in sparsely populated areas is a challenge that we do not seem to be able to solve. In 2019, mobile data speeds of 30 Mbit / s reached only 16% of Sweden's land area. # Full coverage therefore addresses three challenges: 1) Introductory: even sparsely populated areas must have 100 Mbit / s, which we can achieve at low cost with the right technology. 2) Security: residents and visitors must have mobile coverage everywhere; 3) Value increase; the hospitality industry, agriculture and forestry, transport, power, mines and other industries should not be hampered by a lack of communication.

# A successful digital gathering of forces for a sustainable digitalised Sweden presupposes:

- Governance, collaboration and leadership: Strategic governance, coordination and collaboration between key actors in all parts of society towards common objective.
- Priorities and investments: Purposeful, powerful and long-term government investments in strategic dialogue and collaboration with business and the public sector to create conditions and to solve societal challenges.
- Strategic analysis, foresight and learning: Systematic collaboration for proactivity, renewable capacity and continuous learning in the national concentration.



# CDI as a means in this future?

- Higher level of coordination is needed!
  - Mission-oriented programs and initiatives as an umbrella
  - System demonstrator arenas needed
  - Top down needs to be met by bottom-up due to the cooperation ability
- A new program design is now developed for CDI – to be continued ... .. into an instrument!?



# Thank you!

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