

**BUSINESS
FINLAND**

ONES, ZEROES AND BILLIONS – DATA ECONOMY AS A CONCRETE VALUE CREATOR

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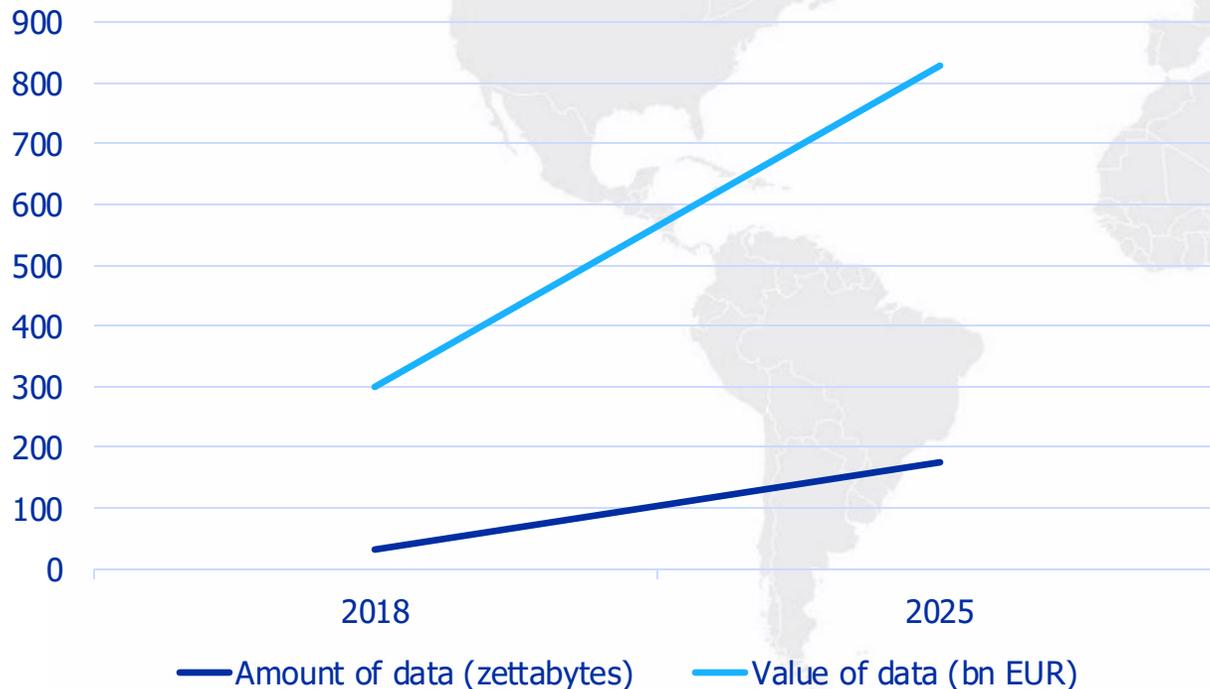
What is data economy and why is it important?



- the *total amount of data* generated by 2025 is set to accelerate exponentially to 175 zettabytes
- $175 * 10^{21} =$
175 000 000 000 000 000 000 000 000 bytes
- ... while at the same time, the *value of data economy* is estimated to reach 829 billion USD by 2025
- = 829 000 000 000 bn USD
($\approx 3 \times$ Finland's annual GDP!)

What is data economy and *why is it important to Finland?*

The amount of data vs. the value of data (2018-2025)



- We are **lagging behind our peers in productivity & economic growth**
 - Sweden and the Netherlands are expected to reach value of EUR 7–8 billion by 2025, while Finland's growth remains below EUR 1.5 billion
- Irrespective of that, **Finland ranks very high in digital development** e.g.
 - **#1 in DESI 2022**
 - #4 in AI Readiness Index 2021

→ **Large, yet untapped** opportunity to grow not limited to a specific industry

What is data economy and why is it important?

Data economy is the economic & social value generated by use, sharing and exchange of data.



- While data has no inherent value, its use has. It is a valuable resource, and unlike natural resources, it won't get depleted from use. It gets better. Value of data is obtained and increased from its use.



- When organized, categorized and transformed into information it can drive innovation, solve complex problems, and create new products and services of commercial value.



- Easier, cheaper access to high quality data will generate new value and new business opportunities

The road to data economy

As seen by industry

EVOLUTION OF DATA OVER TIME



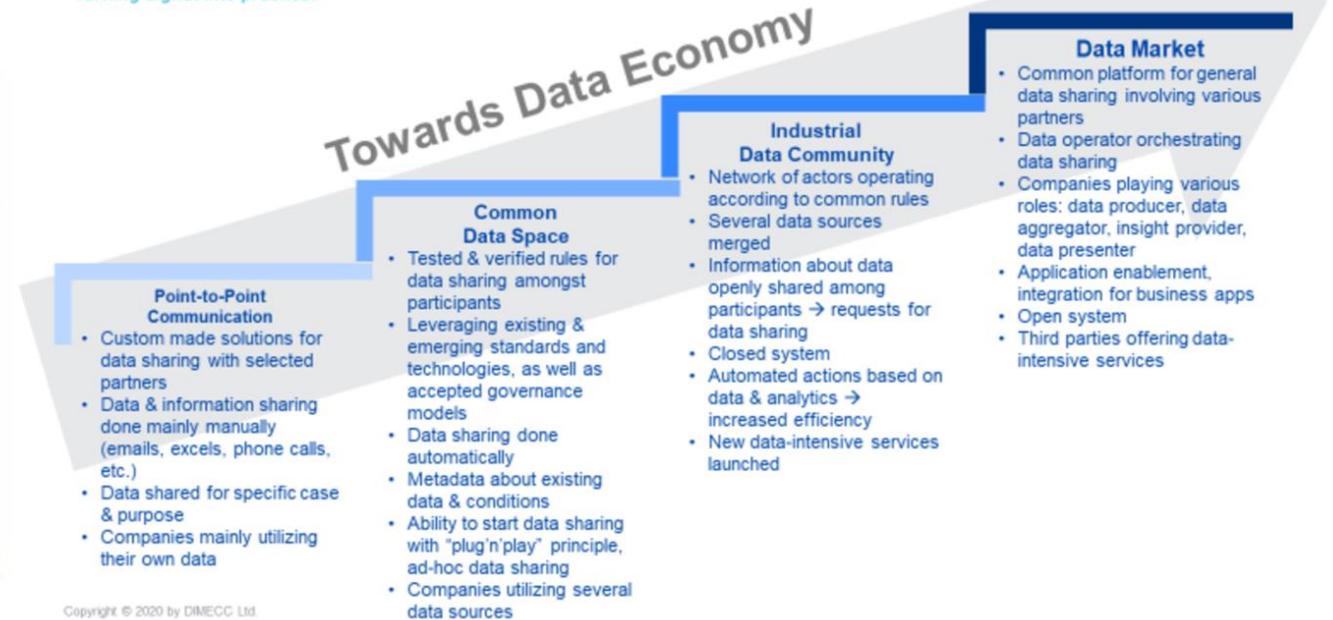
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FUTURE WATCH 7

- Use of data has been around for decades. What is new is the transition from use of **data** as an **enabler** to use of data as **means to create value**
- Major paradigm change is underway from data as an **asset in the need of protection**, to data as a **value adding commodity** for exchange and commerce

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Path towards data economy



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- We are currently witnessing a transition from point-to-point communication towards a more **ecosystemic approach** – with multiple players contributing different types of data to the network
- Ultimately, a true **data economy** is seen at the **data market** phase, allowing **systematic monetisation** of various types of data and individual participants taking different roles in the ecosystem (e.g. data aggregator, insight provider, data presenter)

Examples of data-driven solutions

Traffic Data Ecosystem



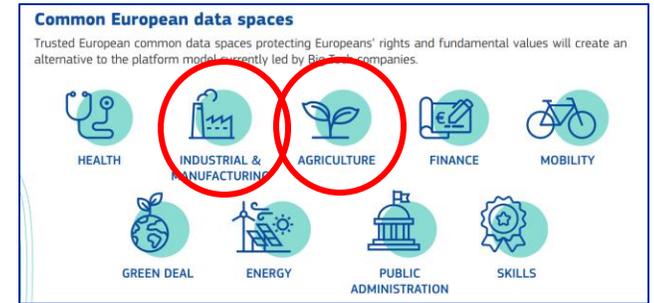
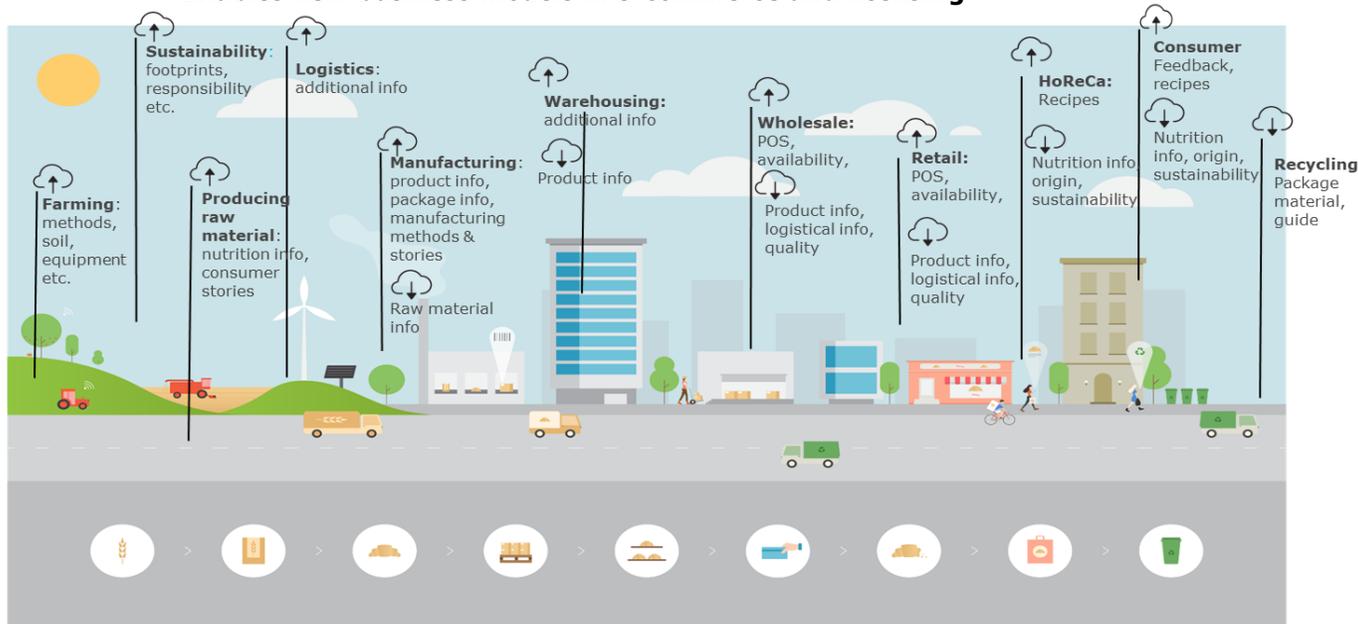
- Strong collaboration of Finnish traffic operators and supporting parties (tech companies, cities...), coordinated by Fintraffic
- Creates innovative **data-based solutions**
- Builds a **fair digital business environment**
- Offers domestic and international **scalable** traffic and mobility solutions that are **co-created**
- Has created a **rulebook for data sharing** and agreements



Data Economy Case Example – Agri & Food

Digital food chain offers significant business opportunities, such as:

- **Primary production and food industry**
 - Competence through transparency: sustainability, health, premium products, plant-based products
 - Productivity increase in all phases from 'farm to fork'
 - Compliance with upcoming regulation
- **Digital solutions**
 - Collection and analysis of farming data, common data structures, dataspace
- **Commerce**
 - Enables new business models in e-commerce and licensing



Finnish agrifood ecosystem is aiming for full **digitalization of the food chain**. This digital transformation will enable Finland to be the first country in the world to have a completely **transparent, safe and responsible** food chain, targeting to increased competitiveness and a billion-euro export growth by 2032. Building of '**Food Data Finland**' –growth engine was initiated and supported by BF and its Food From Finland – program:



A young boy with blonde hair, wearing a bright green t-shirt, stands on a grassy field with his arms raised in a celebratory gesture. He is looking slightly to the left with a focused expression. In the background, a crowd of people is visible, some clapping and holding water bottles. A black banner with white text is partially visible on the left side of the frame. The scene is outdoors on a sunny day with trees and a building in the distance.

WE BELIEVE THAT COMPANIES WHO
UTILIZE AND SHARE DATA IN
BUSINESS WILL OVER TIME **WIN** IN
THE MARKETS, **REPLACING**
COMPANIES WHO DON'T

PROGRAM IMPACT and DESIRED CHANGE

1. **Awareness:** Companies have internalized the significance of the emerging **disruption** in data economy and its' impact to **business** and **organizations**

2. **Change:** Companies have built **capabilities** and **business models** to capitalize on the potential of novel data based solutions

Finnish companies have created significant **new international business** through efficient **utilization** and **sharing** of data, acting as **role models** internationally

3. **Ecosystems:** Data based **ecosystems** & **networks** in applicable domains have been created

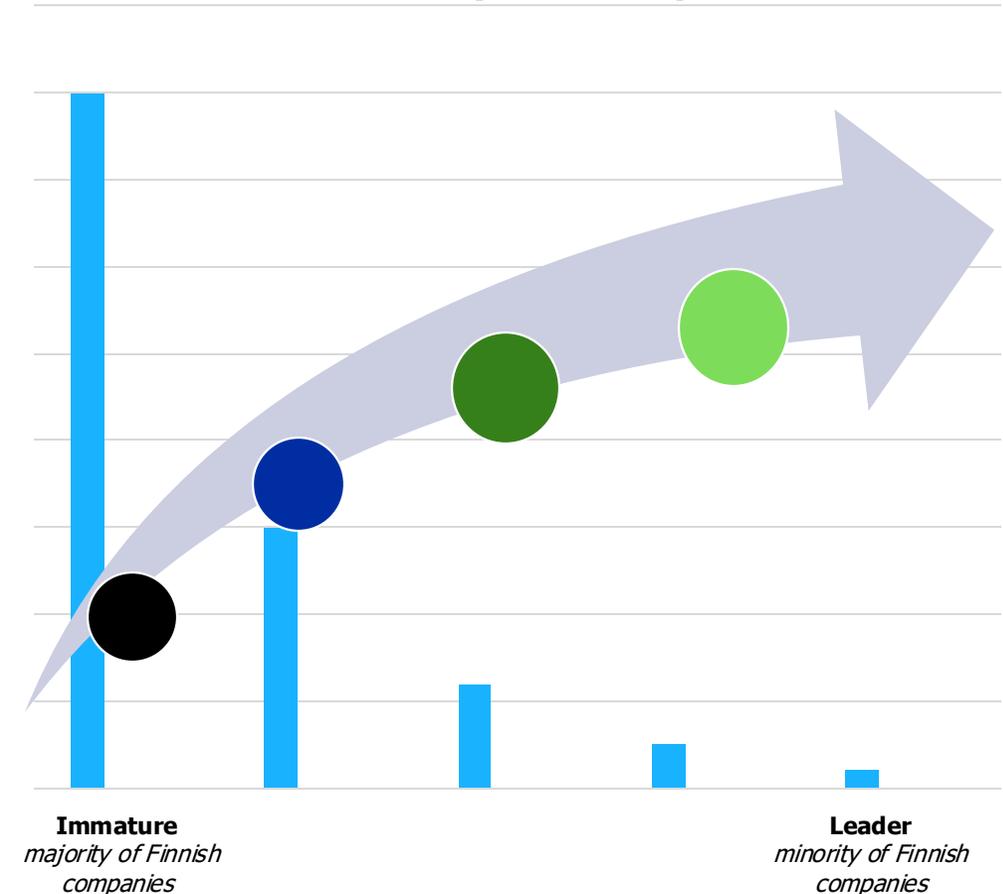
4. **Growth:** **Renewal** of the **existing** and creation of **new businesses** have generated significant new economic value



CUSTOMER OUTCOMES

Subgoal	Target customer segment	Desired Outcome by 2028
Awareness; Understanding disruption	Companies that have not yet realized the commercial value added of data sharing	Awareness; Companies have internalized their role in data economy and have initiated the transition
Change; Developing capabilities & business	Companies that understand the value of data economy but do not have the means to execute	Change; Companies have invested in capabilities and business models to commercialize the export potential of novel data based solutions
Ecosystems; Generating Networks	Organizations that have data based solutions but need partners to further innovate and deliver their solutions to the international markets	Ecosystem based Joint Offerings; Data based ecosystems & networks have been created & commercialized
Growth; renewing and building new	Companies that have data-based business ideas that have international potential	Growth: Renewal of the existing and creation of new businesses have generated significant new export value , possibly to the level of Data Unicorns

The growth journey of companies towards data economy leadership



What is the company's view on data?



Backward or **forward** looking?

Reporting or **pre-empting**?

Internal or **external**?

Leading or **following**?

...Is data part of the **business**
...or IT department?

...Does the company have a **data strategy**
...and what does it say?

...Does the leadership team have a **CIO**
...and what are their responsibilities?

We want to encourage companies to look into the future ... and ask the following questions

What **added value** could the use and exchange of data bring to you

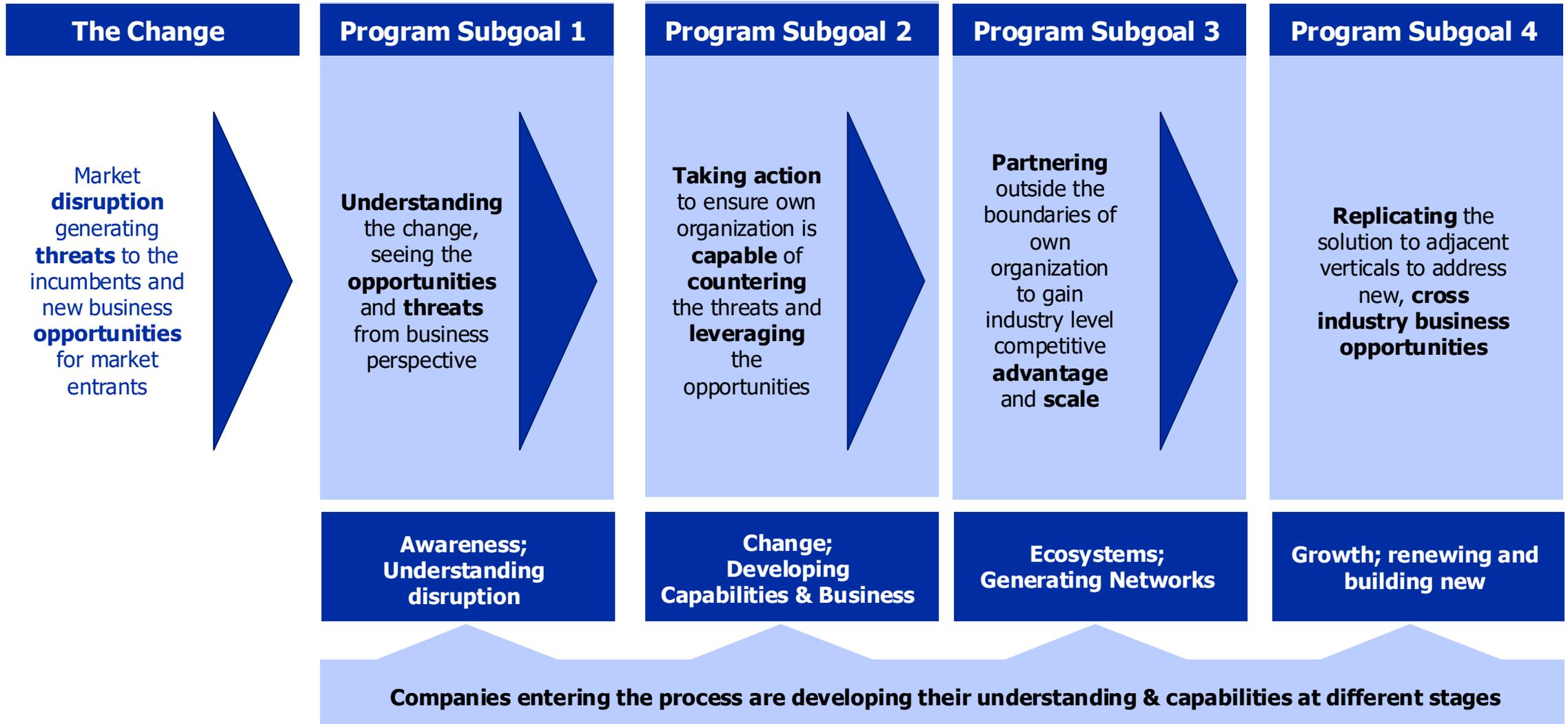
What kind of a **business model** do you need to monetize the added value

How can you **challenge the existing** conventions of your vertical

What kind of **collaboration** could you do **across vertical** domains



The roadmap for companies towards Data Economy leadership



DATA ECONOMY PROGRAM – OUR OFFERING

We strive to generate and boost projects that create **new business value towards international markets through (the *use, sharing and exchange* of) data**

Our key services:

- Sparring individual and consortium project outlines and initiatives looking for funding – we always have money for good ideas!
- Networking opportunities for companies and research institutions
- Market knowledge, matchmaking with and visits to relevant players
 - **USA, UAE market studies** currently underway!
- Encouraging new players (especially SMEs), sharing best practices & success stories
- Information about EU funding, regulation and networks
 - **EU Data Playbook** to be published in Q1/25 – stay tuned!
- Insights about Data Economy, new business opportunities



More information & newsletter

Program Website



Data Economy

Newsletter September 2023

Greetings from Data Economy Program Team

Dear Friends

Business Finland has started the autumn activities and we are excited to tell you that there will be many different interesting events and publications in the autumn!

Data Economy Program and BusinessOulu organized a roadshow event on digitalization, data economy and sustainability in Oulu on 19th September. We had many great presentations, such as **Futurice**, **Nokia**, **LastBot**, **Bittium** and **Louhe** as well as interesting pitchings from many different organizations. We have now gathered the event materials, check them out!

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IT IS TIME TO THINK BIG

**FINLAND
DEFINING THE FUTURE**

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