DIMECC

DIMECC Program
InDEx - Industrial Data Excellence

Seppo Tikkanen

DIMECC
INTELLIGENT INDUSTRY
Turning digital into practical

DIMECC

Leading industry-led co-creation platform for boosting digital transformation

THE CO-CREATION PLATFORM BASED ON PUBLIC PRIVATE PARTNERSHIP (PPP)

SERVICES:

- **Open innovation** projects, programs and ecosystems
- **Co-creation services** boost new business creation
- **Networks** to open up new markets and businesses

NUMBERS:

- **12** employees
- **3** offices: Helsinki, Tampere, Turku
- **68** shareholders (45 companies & 23 research institutes)
- **300+** customers
- **2 000+** persons involved in DIMECC activities

DIMECC Co-creation services

FINNISH INDUSTRIAL INTERNET FORUM

Finnish Industrial Internet Forum, FIIF, is a company driven activity that boosts co-creation activities capitalizing on sustainable digitalization of Finnish companies and their businesses.

The main target of the FIIF is to boost concrete initiatives and practical actions that turn digitalization visions into business, as well as ensure and enhance the competitive edge of Finnish companies.

Currently +200 partner companies.

Price: Small 150€, SME ind.part. 500€, Midcap 2000 & Large 3000

More details: https://fiif.fi/

PoDoCo
Post Docs in Companies

Post Docs in Companies, PoDoCo program, is a joint initiative of Finnish universities, industry and foundations. The aim of the PoDoCo program is to promote academic research supporting long term competitiveness and strategic renewal of Finnish companies, and the employment of young doctors in industry.

The duration of PoDoCo period is 1-2 years and it consist of two phases: research period and targeted research period. PoDoCo program is funded by PoDoCo foundation pool and companies participating in the program.

More details: https://www.podoco.fi/

MACHINE LEARNING ACADEMY

DIMECC Machine Learning Academy includes diverse learning modules from ML algorithms to ethics, and from designing and managing artificial intelligence (AI) projects to implementing AI in the company business. The goal of the training is to increase the participants' understanding of how to utilize AI and machine learning in their company.

The course is organized by DIMECC in co-operation with Futurice Ltd.

DIMECC MLA a Nutshell:

- duration is 3 months, 7 learning modules, hands-on exercises and course project

More details: https://www.dimecc.com/dimecc-services/mla/

DIMECC Co-creation DEMOBOOSTER

The mission of Demobooster is to demonstrate new ideas in practice. The outcome is not a slide show presentation but a concrete solution! It provides a collaboration for companies hunting for killer applications through strategic partnerships: an innovation highway from ideas to products.

In 2018: 11 successful Demodays with 43 different challenges presented by the Applier companies.

Price: Micro 500€, Small 1500€, Midcap 3000€ and Large 6000€

More details: https://demobooster.dimecc.com/

One Sea Ecosystem

Vision: To lead the way towards an operating autonomous maritime ecosystem by 2025.

ABB
CARGOTEC
ERICSSON
FINNPILOT
inmarsat
KONGSBERG
Monohakobi Technology Institute
tieto
WÄRTSILÄ
Meriteollisuus Finnish Marine Industries
Suomen Satamaliitto Finnish Port Association
Suomen Varustamot Rederierna i Finland Finnish Shipowners' Association
SHIPBROKERS FINLAND
THE ROYAL INSTITUTION OF NAVAL ARCHITECTS
BUSINESS FINLAND
DIMECC

Intelligent Industry Ecosystem

Turning Digital Into Practical !

Vision: In 2028, Finland is global leader in intelligent industrial systems and related business ecosystems

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CARGOTEC 8760 Fastems HTT LASER elekmerk INNOFACTOR KONECRANES

elisa SMART FACTORY PONSSE Prima Power RAUTE NOKIA SSAB tieto BUSINESS FINLAND

melkki IT
ACTION FOR NEW DIRECTION

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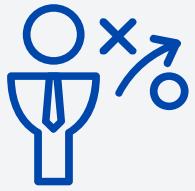
Themes and activities

THEMATIC FOCUS AREAS



HUMAN FACTOR

Human collaboration will be combined with smart machines and artificial intelligence. This co-creation performed by humans and machines will transform and enrich society and industries. Topics, like usability, ethics, safety and societal acceptance are important.

VALUE CO-CREATION IN ECOSYSTEMS

In the era of intelligent industry value networks are built around customer needs and competitiveness is based on the power of ecosystems and ability to harvest the resources of ecosystems to deliver customized solutions. Such value co-creation requires novel ways to create value as well as new business and revenue sharing models.

AUTONOMOUS SYSTEMS

Autonomous systems integrating computational and physical resources are at the center of the transition into the intelligent industry. Future systems will continue to improve in terms of adaptability, autonomy, functionality, reliability, safety and usability.

DATA & ADVANCED ANALYTICS

Data forms the basis of the intelligence industry. Novel solutions facilitating exchange, connection, analysis and utilization of data between organizations are needed to unlock the value of data and to enhance development of value integrated value ecosystems.

CORE ACTIVITIES

- R&D&I programs & projects
- Pilots, PoCs
- Standards & regulation
- Competence development
- Promotion/Comms

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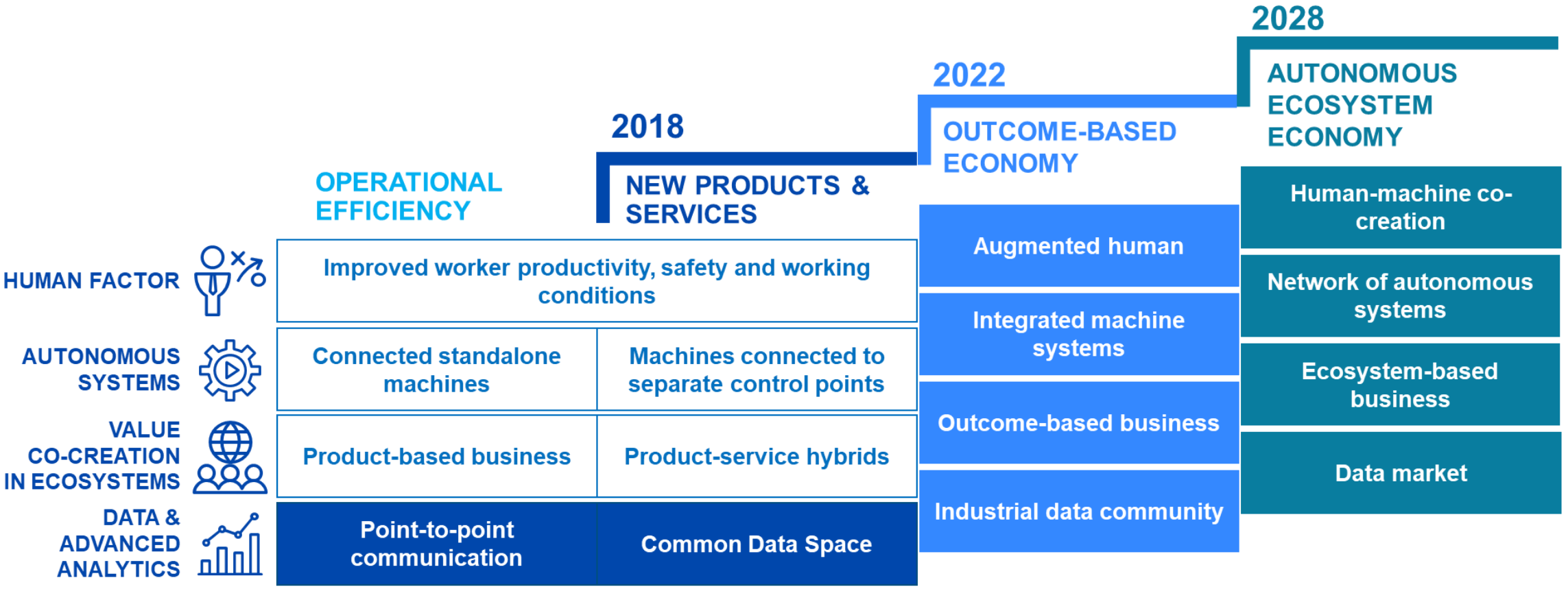
Intelligent Industry Roadmap



New topic in planning: Digital Twins

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InDeX – Industrial Data Excellence

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InDeX - Industrial Data Excellence

Key Facts

Started September 2019

Two years

11 Companies

7 Research institutes

8,5 Million €

Partly funded by Business Finland

CARGOTEC
KALMAR
HIAB
MACGREGOR
Danfoss
elekmerk
8760 Fastems
HTLASER
KONECRANES Lifting Businesses
NOKIA
Prima Power
RAUTE
tieto
SSAB
Aalto-yliopisto
Aalto-universitetet
Aalto University
HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI
Tampereen yliopisto
Tampere University
JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ
Vaasan yliopisto
UNIVERSITY OF VAASA
VTT
UNIVERSITY OF TURKU
BUSINESS FINLAND

Tekniikka & Talous

Uutinen

Yritykset lupaavat: tekoälyn vetämä teollisuusvallankumous tuo kymmeniätuhansia uusia työpaikkoja

Jukka Lukkari 10.9.2019 10:03 | päivitetty 10.9.2019 10:03 DIGITALOUS TEKOÄLY TEOLLISUUS

Konecranes on yksi ohjelmaan osallistuvista yrityksistä. ANTTI MANNERMAA

Teollisuusyritykset käynnistävät ohjelman, jonka ne uskovat synnyttävän Suomeen kymmeniätuhansia uusia työpaikkoja

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Index-ohjelmassa (Industrial Data Excellence) keskeistä on datan radikaalisti tehokkaampi hyödyntäminen muun muassa tekoälyn avulla.

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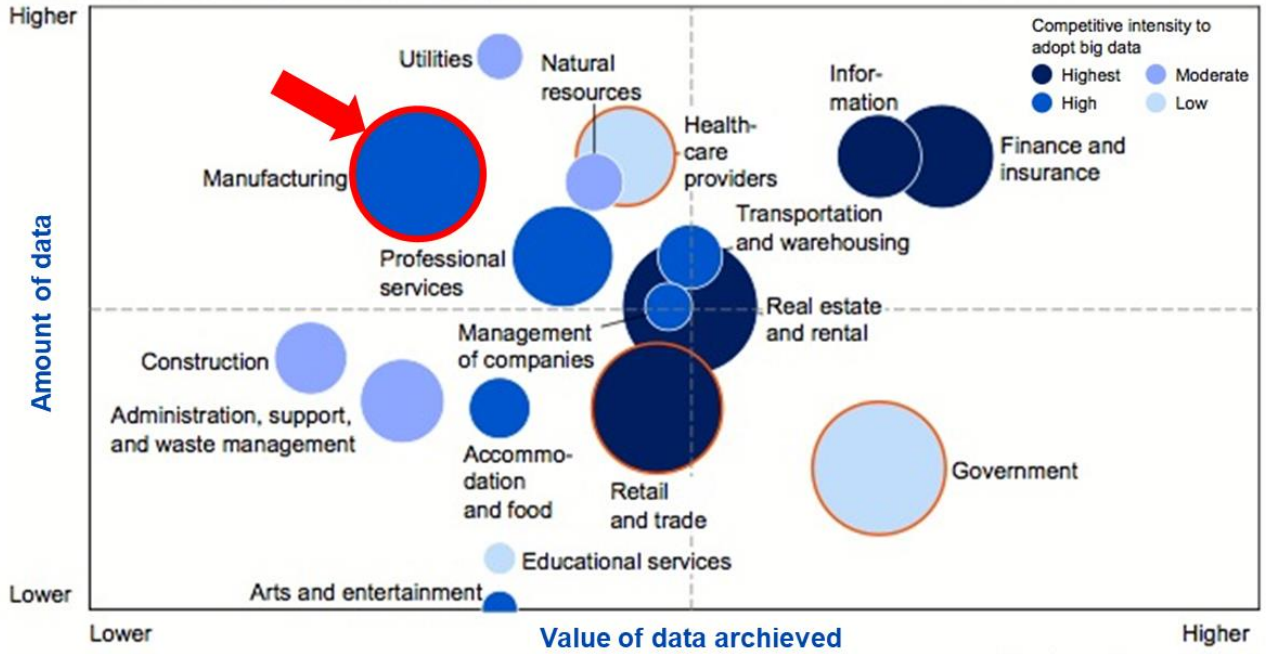
Only a Fraction of the Value of Data Has Been Captured in Manufacturing Sector

At the moment **99% manufacturing data value is lost**



Source: *McKinsey Global Institute analysis*

- ✓ **15%** able to connect IOT data with ERP system
- ✓ **15%** use Big Data Solutions
- ✓ **3%** of data is tagged and analyzed

The focus of current data activities are mainly on how a company can leverage its own data, individual data sets and single data sources.

The biggest value opportunities lie in merging multiple datasets driving new insights

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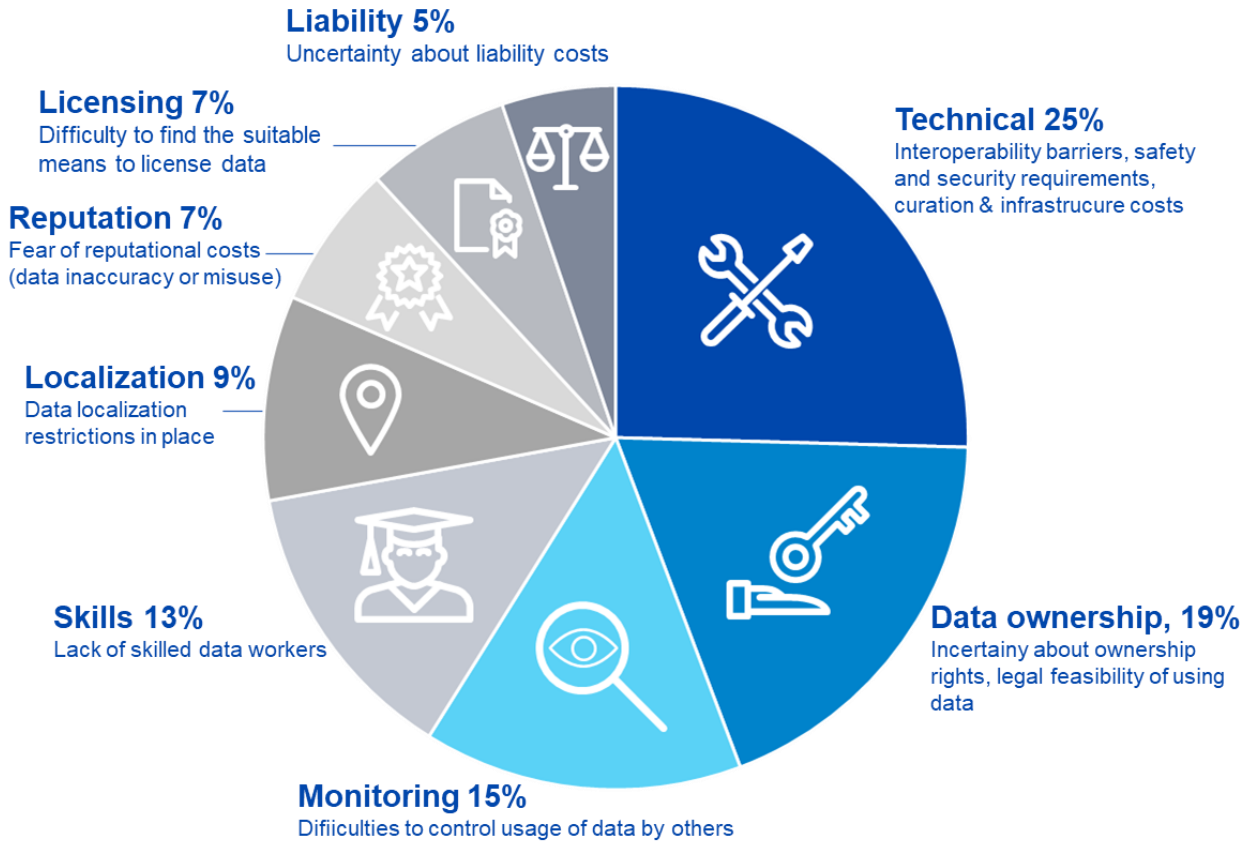
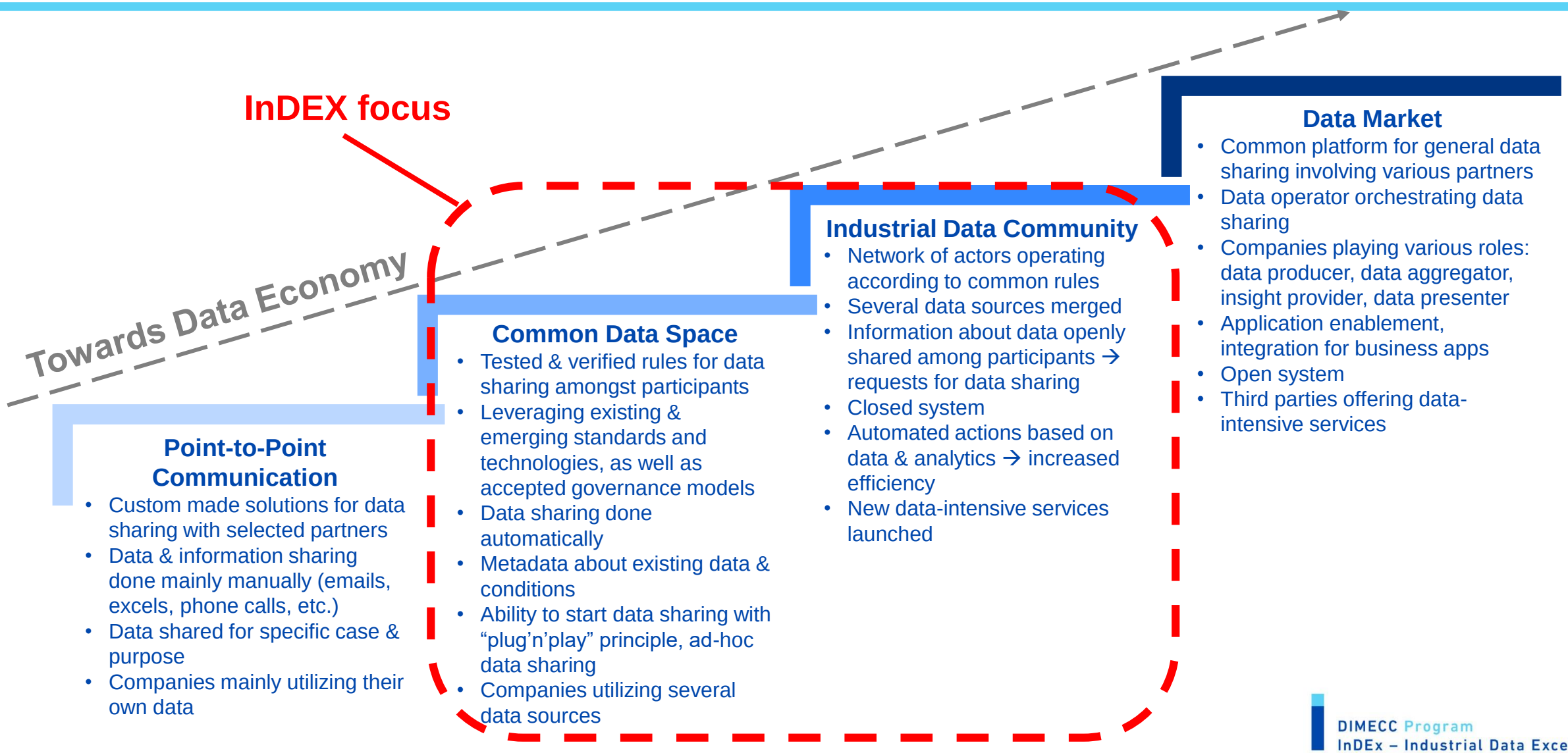
Data Sharing Is not only a technical challenge – holistic approach Is needed



InDEx paves the way towards Data Economy in the Finnish Industry



InDeX - Industrial Data Excellence

Strategic Targets

1

FINNISH INDUSTRIAL DATA COMMUNITY

Common Data Space drives the establishment of Finnish Industrial Data Community, a network of actors utilizing Common Data Space.

2

NOVEL VALUE CREATION

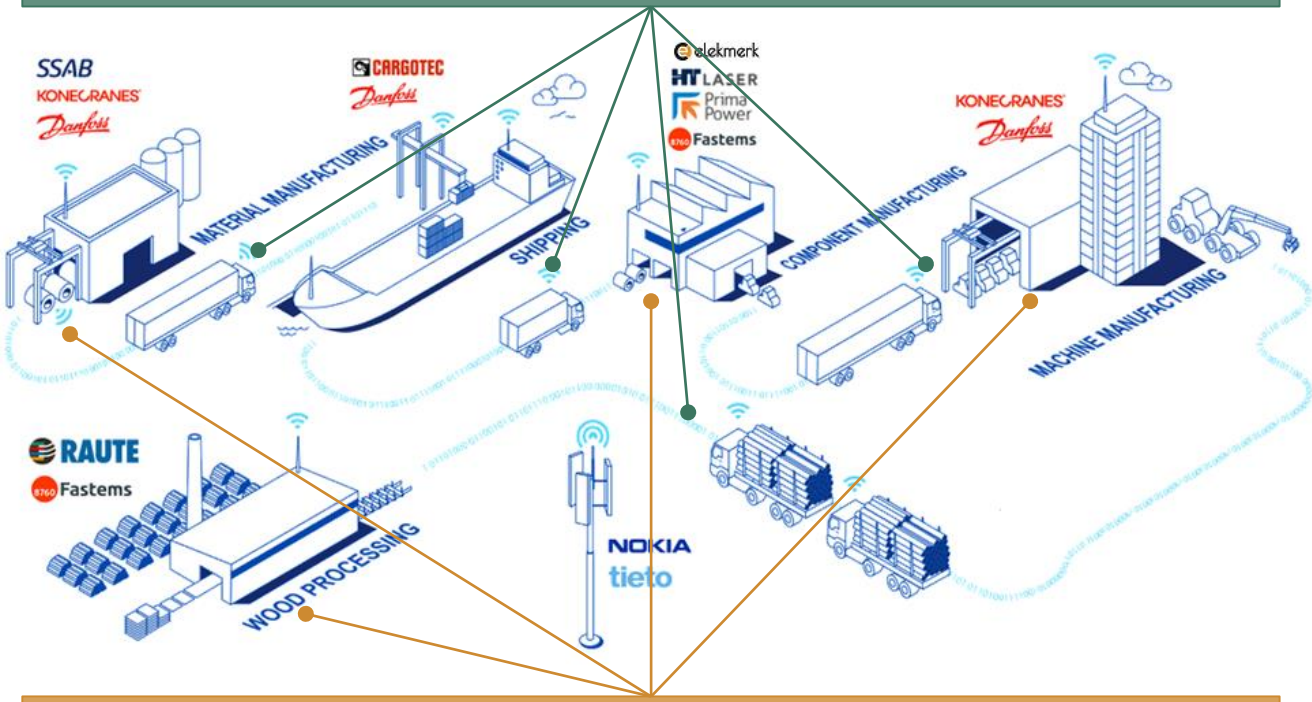
Common Data Space forms the basis for novel data ecosystems opening new value creation possibilities for all the value chain partners.

3

INTERNATIONAL STANDARDS

Common Data Space will leverage existing and emerging standards and technologies and drive international standards for data sharing.

Smart Chain:
A highly interconnected network of enterprises that integrate data seamlessly to advance production and distribution.



Smart Factory:
A completely connected entity of machines, materials, operators, manufacturing management systems and products that relies on a constant flow of data from connected operations and production systems.

InDEx
Comprehensive Approach to Data Sharing

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Smart Factory

A completely connected entity of machines, materials, operators, manufacturing management systems that relies on a constant flow of data

Smart Chain

A highly interconnected network of enterprises that integrate data seamlessly to advance production and distribution.

WP1: Novel connectivity solutions & technologies for collecting and delivering data

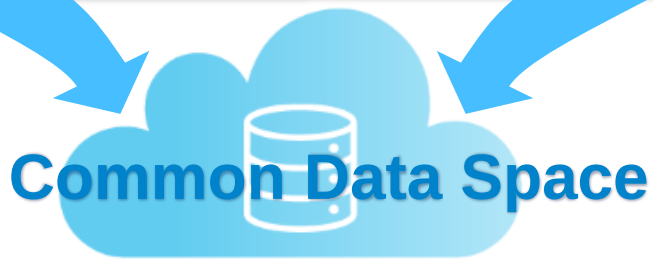
- Novel solutions for data sharing between value networks partners considering interoperability and technical issues and defining common data governance rules.

WP2: Advanced analytics methods for processing data

- Common tool sets for optimization, visualization, and machine learning algorithms as well as adequate User Interfaces, while taking into consideration relevant ethical issues to enable intelligent use of data.

WP3: Ecosystem business models for creating data-intensive solutions in ecosystem

- Shared understanding on rules, roles and responsibilities of differing parties, as well as fair sharing of costs and benefits.



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Experiments of InDEx program

Smart Factory

A completely connected entity of machines, materials, operators, manufacturing management systems that relies on a constant flow of data

- Smart Factory Connectivity
- Prescriptive Maintenance
- Manufacturing process excellence with AI

Smart Chain

A highly interconnected network of enterprises that integrate data seamlessly to advance production and distribution.

- Material information flow in value chain
- AI-assisted demand-order-delivery process
- Manufacturing logistics

Experiments drive the work of the program

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Interested on InDex or II ecosystem ?

If you are interested to join or have collaboration with InDeX contact us

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