Digital Transformation Journey

September 4th 2023

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POLO TECNOLOGICO ALTO ADRIATICO

https://www.polotecnologicoaltoadriatico.it/

Agenda

1. **Introduction to Industry 4.0**

2. **How to guide a Digital Transformation Project**

3. **Digital Transformation Projects: evidences from the FVG firms**

Social and Environmental Megatrends

Demographic changes

Shortage of natural resources

Climate changes
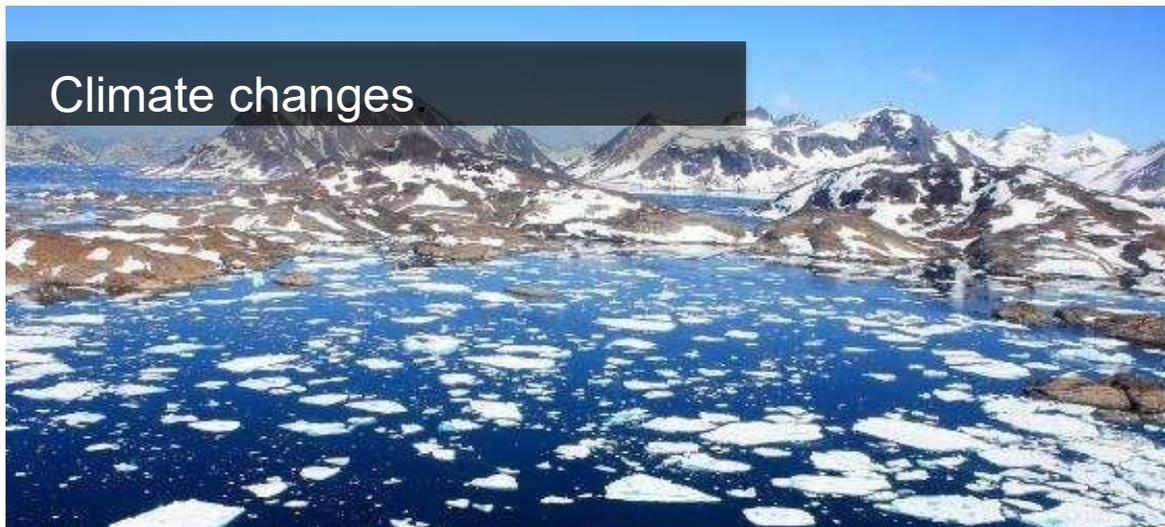
Urbanization of the population

Why can't we do without digital?

- Because it allows to enhance business competitiveness

- Because it allows innovation (creating new business models)

- <u>These tools have the potential to enable more smart and more sustainable **use of resources**</u>.

Digital is changing the world...

Which are the trends?
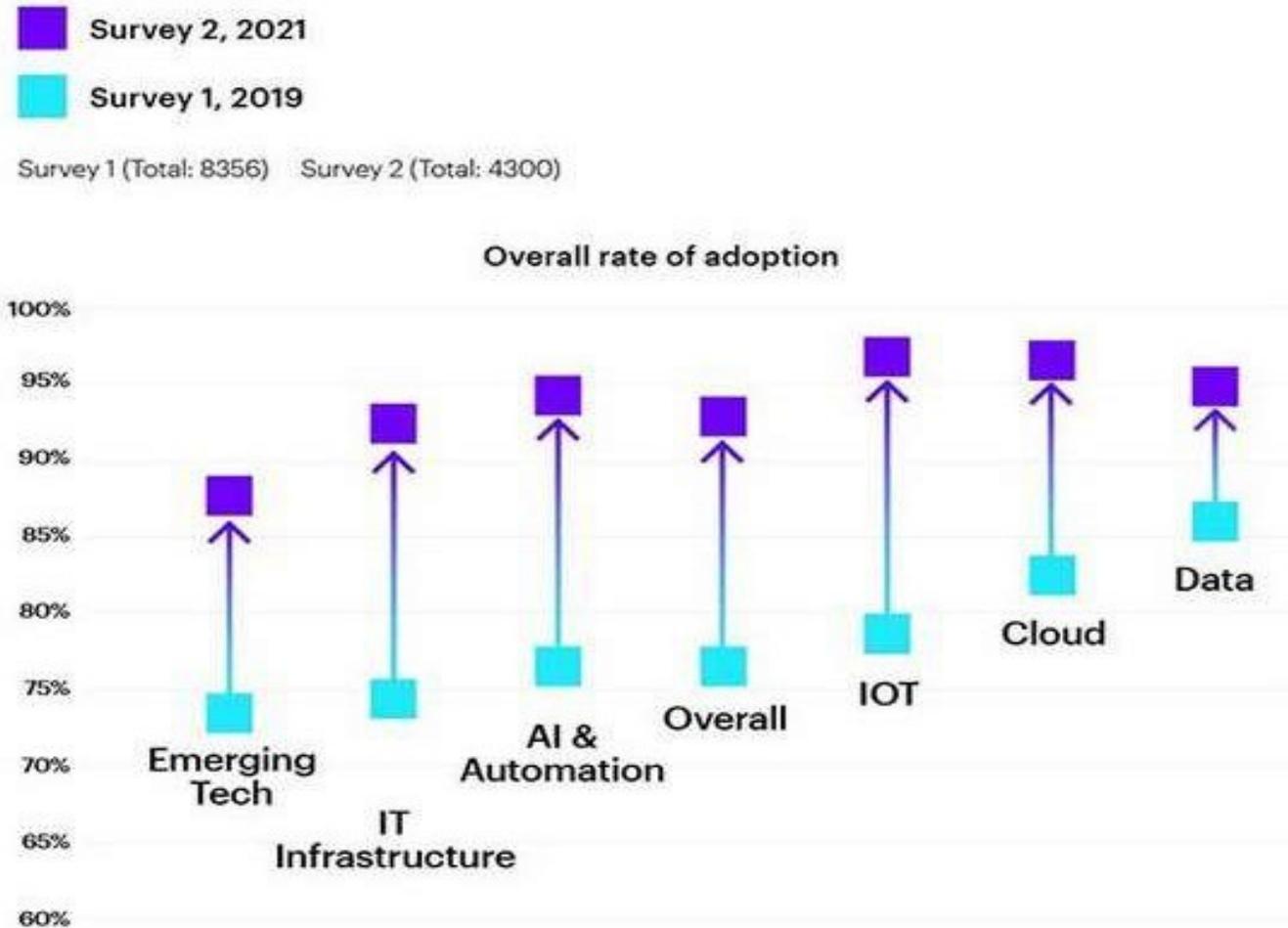
Hype Cycle for Emerging Tech
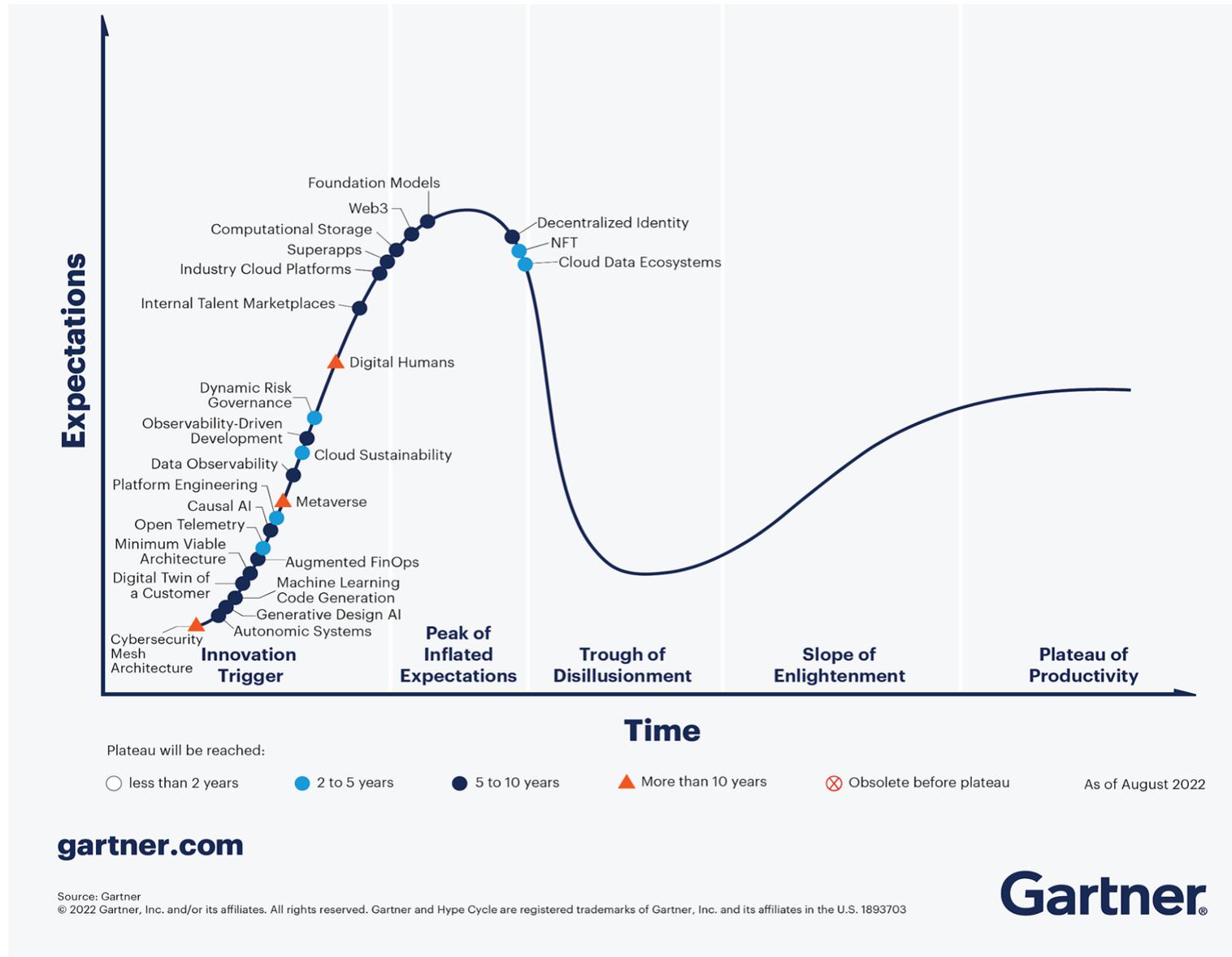
# **Hype Cycle** for AI Technologies in Business

2022
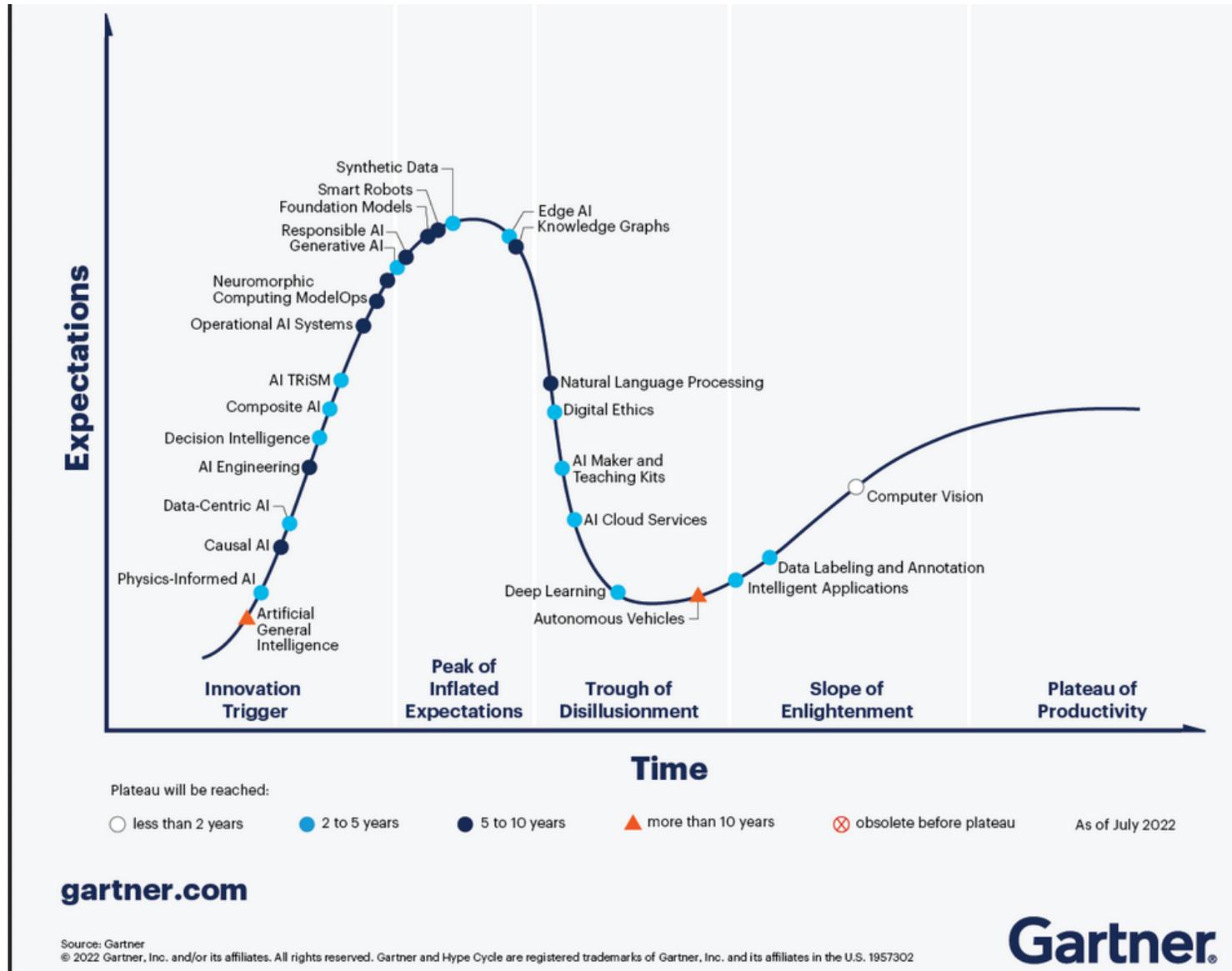
# **Hype Cycle** for AI Technologies in Business
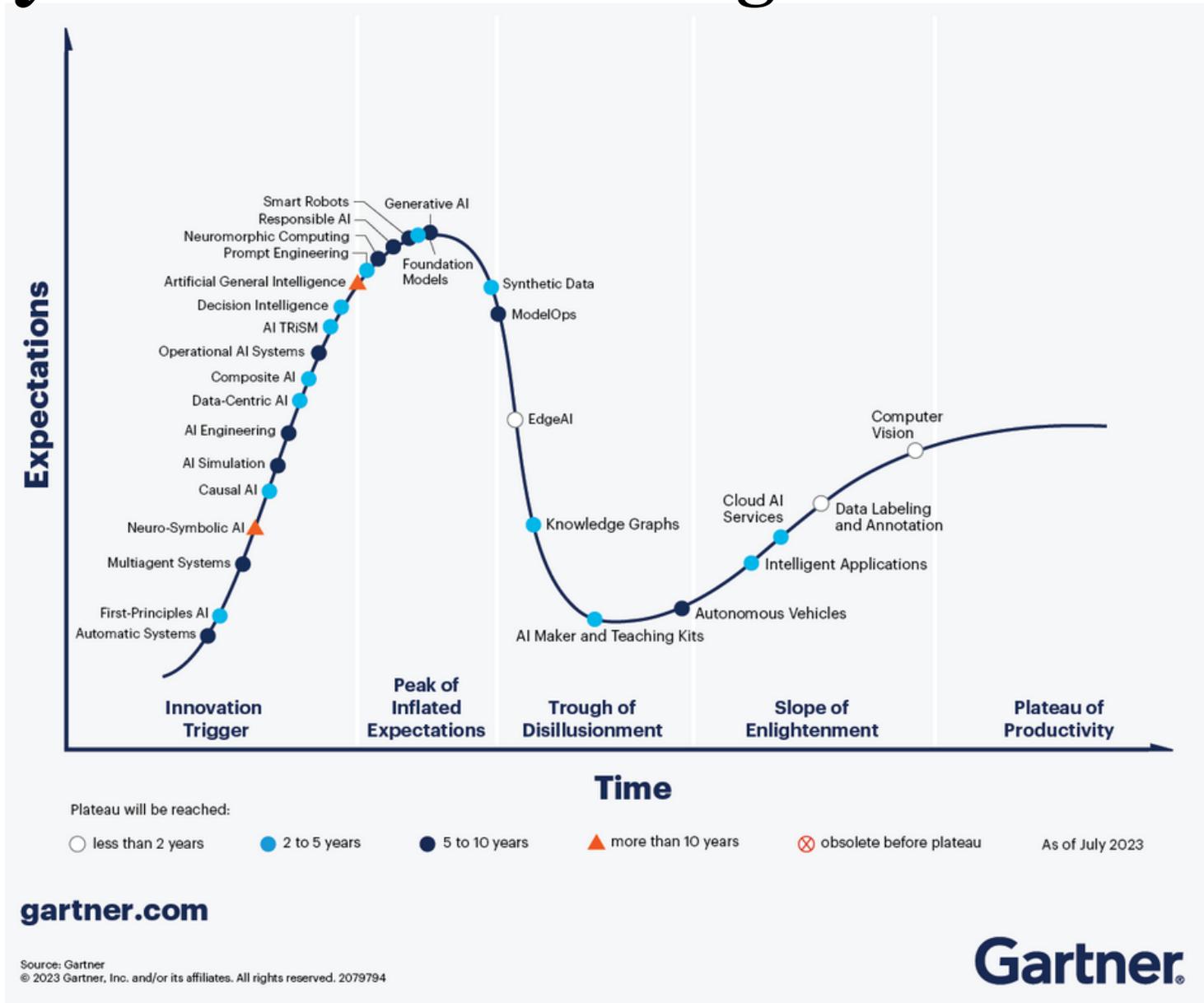
Comparison (one year)
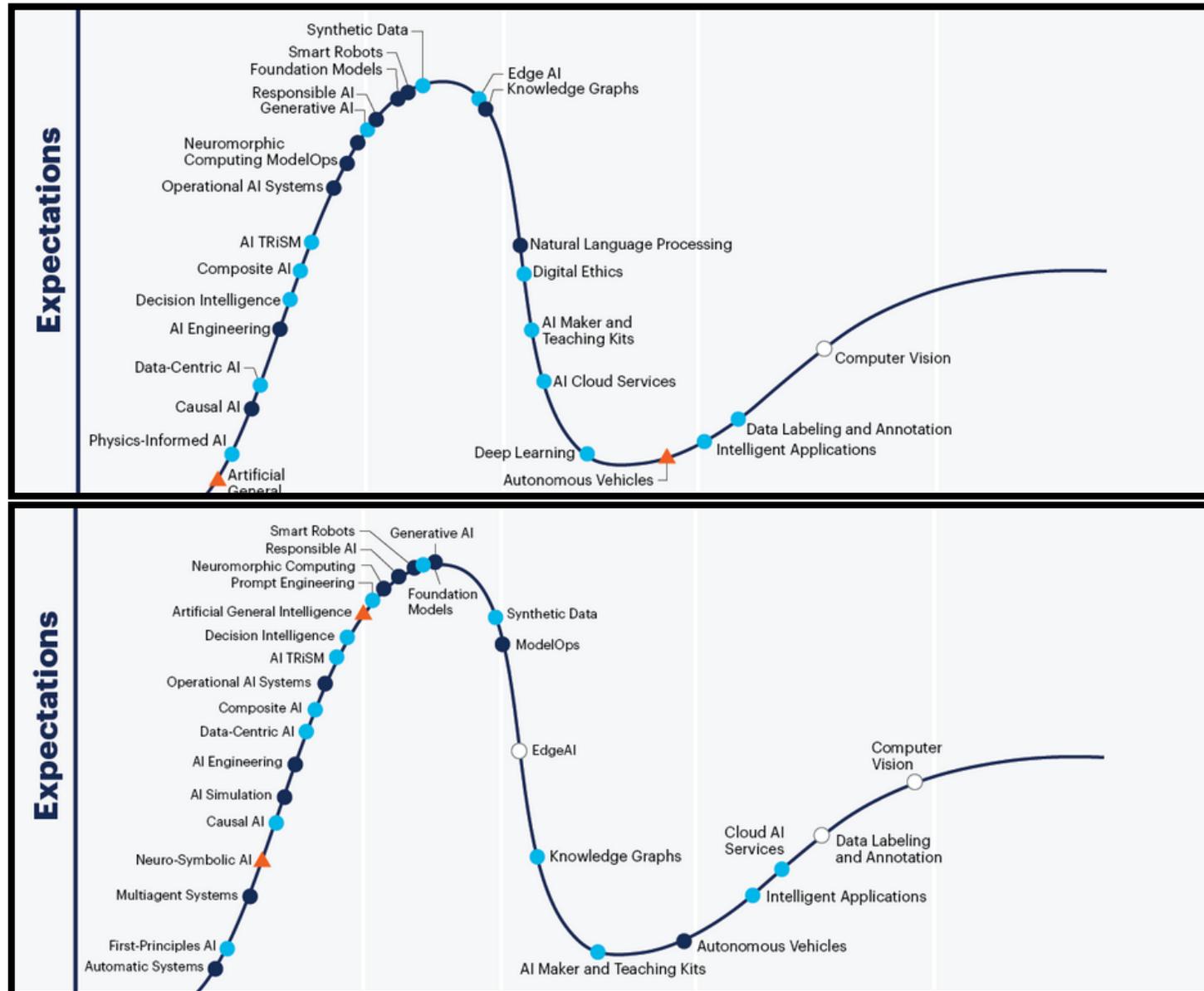
2022

2023

Gartner Emerging Technologies and Trends Impact Radar
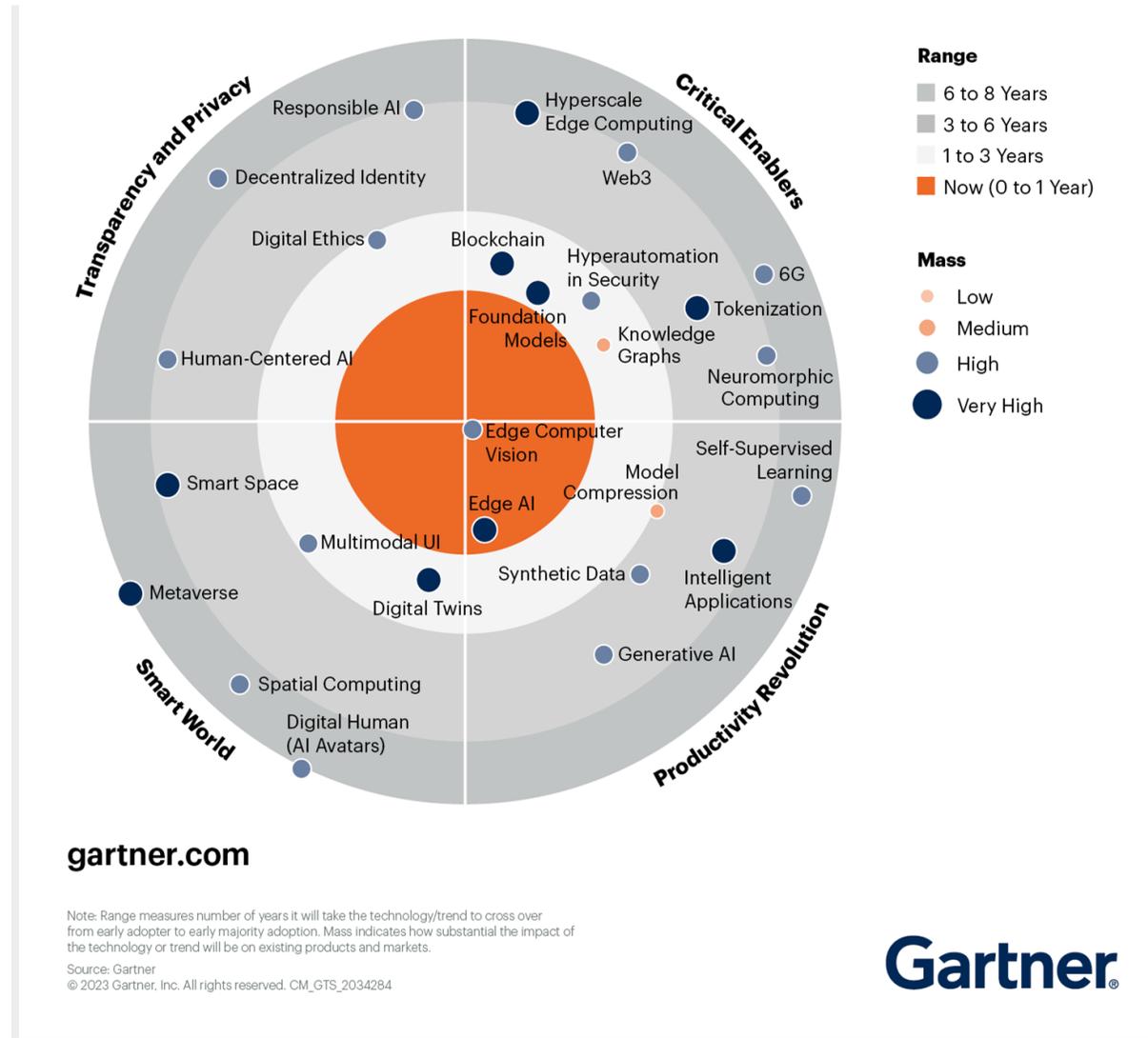
From enabling technologies to SW Tools ….

https://www.artbreeder.com/create/mixer

AI Tools to use in the classroom
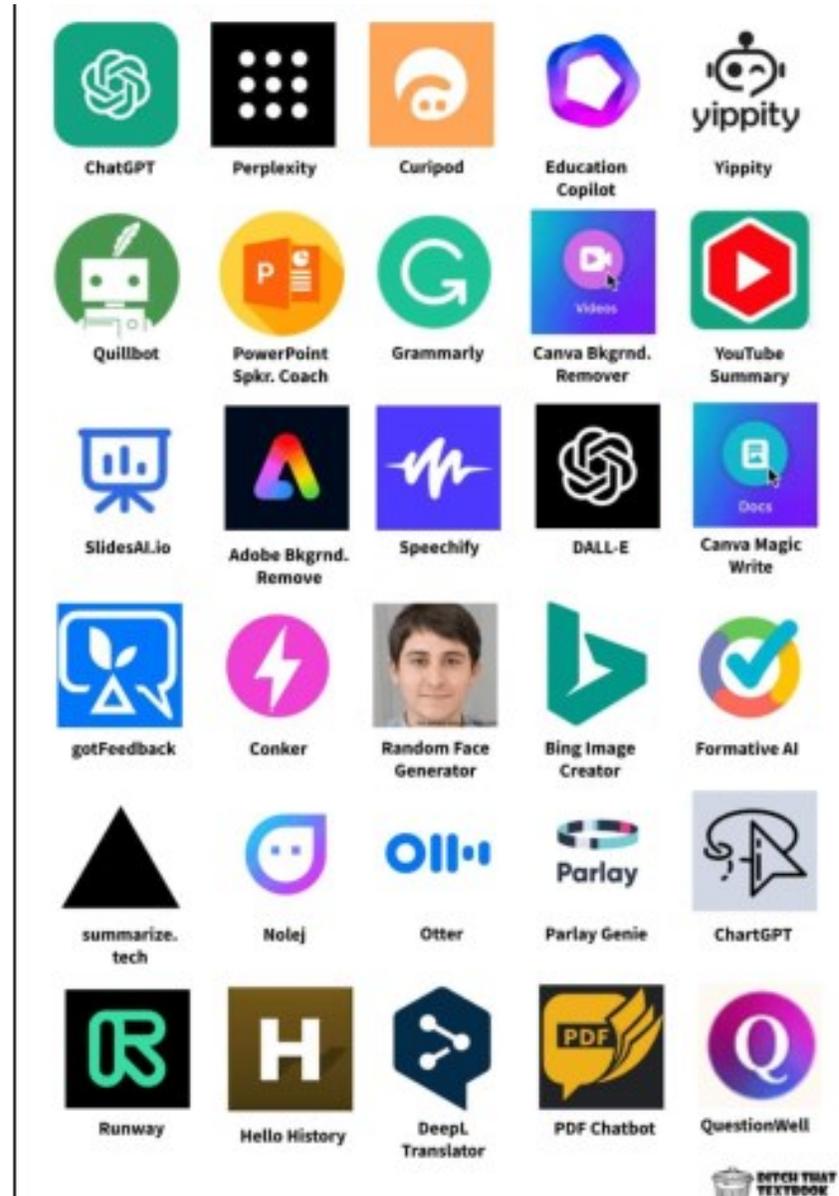
Digital revolution in industrial sectors

What happens when

2 BILIONS OF PEOPLE

Are connected to each other?

Digitalization of entertainment

Dynamic communications

Social collaboration platforms as mainstream

Emergence of Social marketing

Cloud IT infrastructure and exploding App market

Ecosystems dominated by a few emerging top players

What happes when

50 BILIONS OF MACHINES

Are connected to each other?

Dynamic maintenance and monitoring

Machines that adapt and self-correct automatically

Shared and dynamic problem-solving and continuous improvement

Predictive analytics

Cloud-based IT infrastructure

Booming market for industrial apps

Ecosystem building currently underway.

Survey

1. How many personal devices do you have interconnected (pc, phone, smart watch etc)?

2. How many devices are connected at your home (B2C)?

Mentimeters - results

https://www.mentimeter.com/app/presentation/deace56acbe1e94be9a9a4bc2f1a8a49/be503436a4fd/edit

Desi Index (for our international summer school)
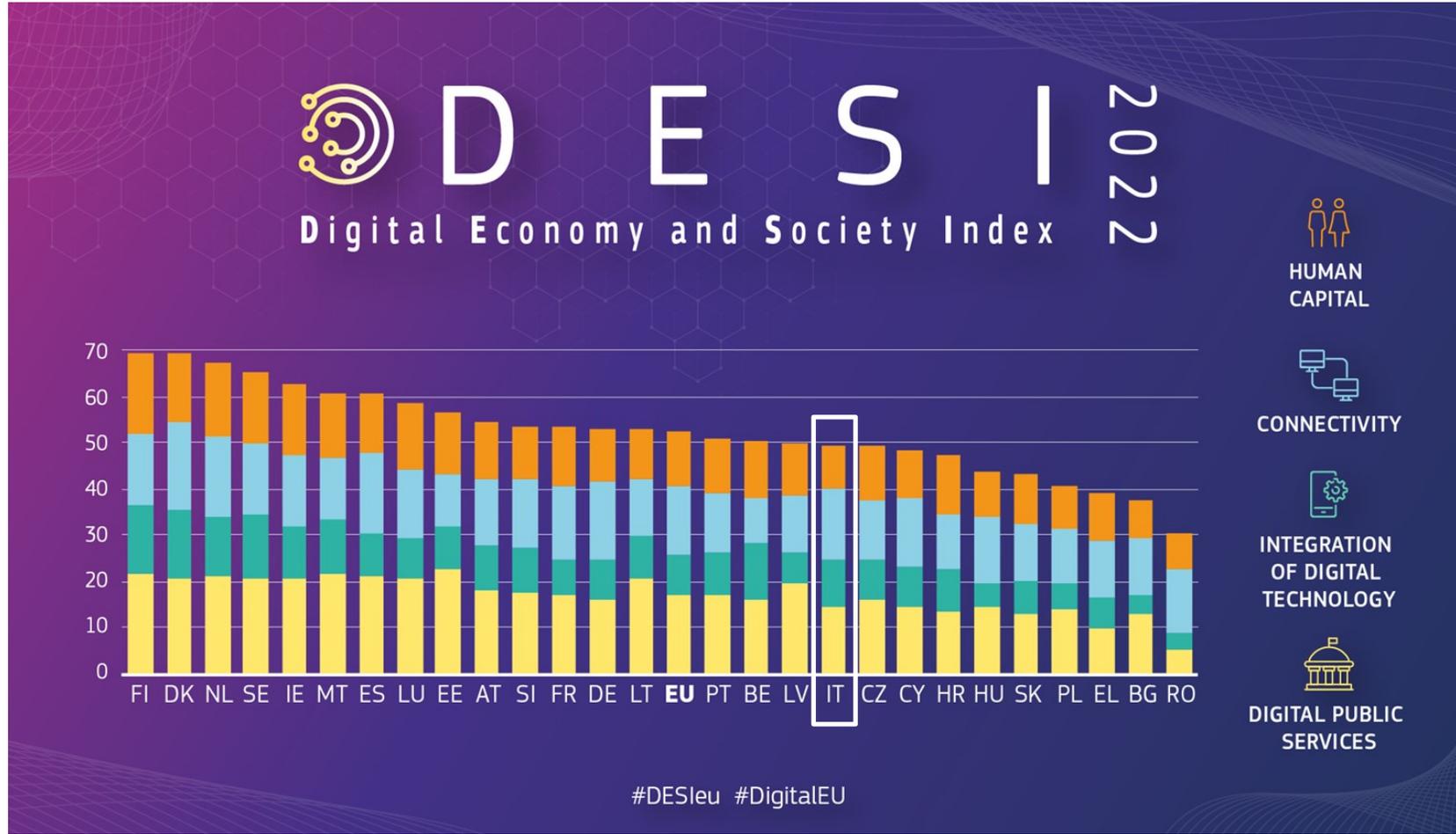
Source: Eurostat   (1). The data used for the compilation of DESI 2022 refers to 2021

The 4° Industrial Revolution....
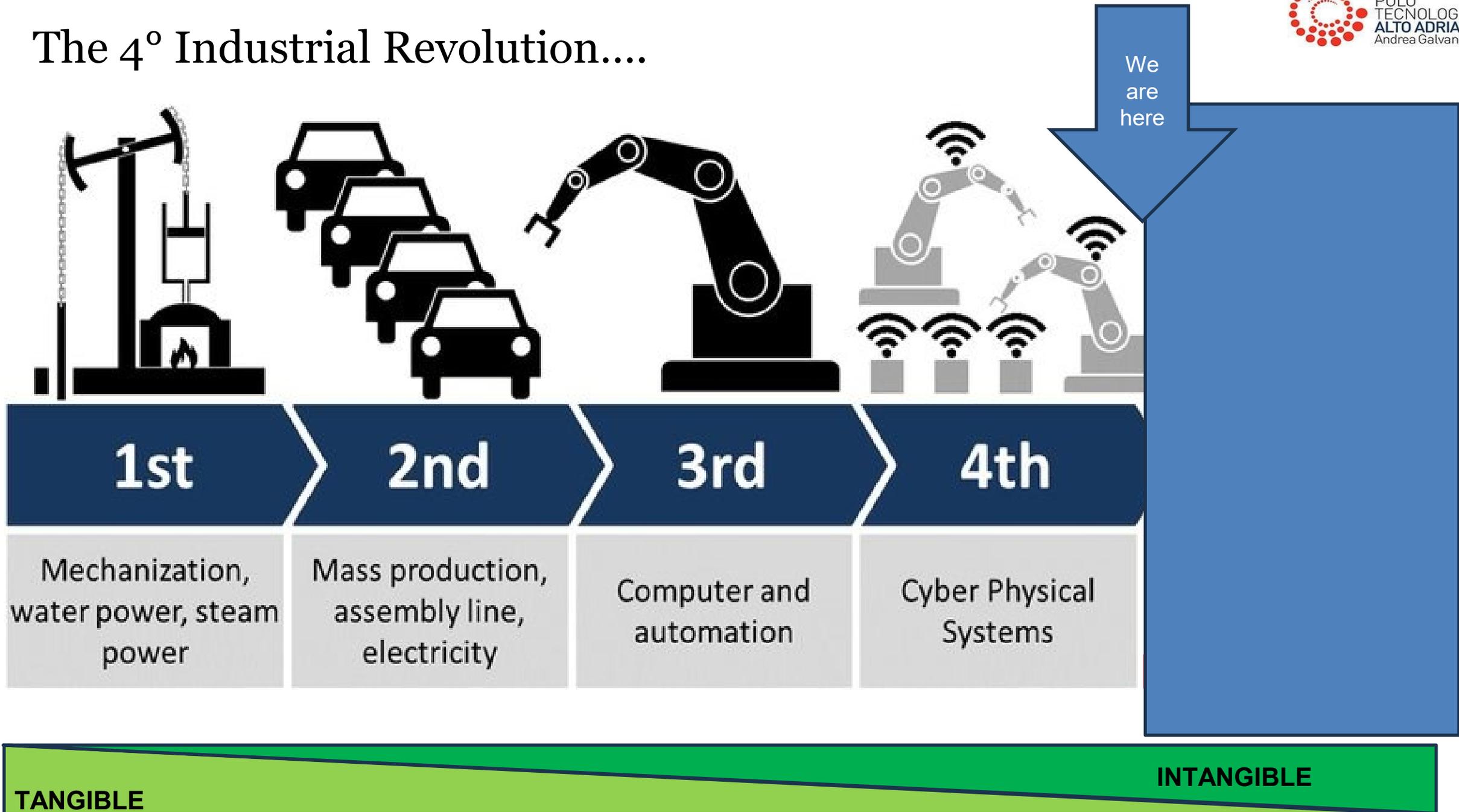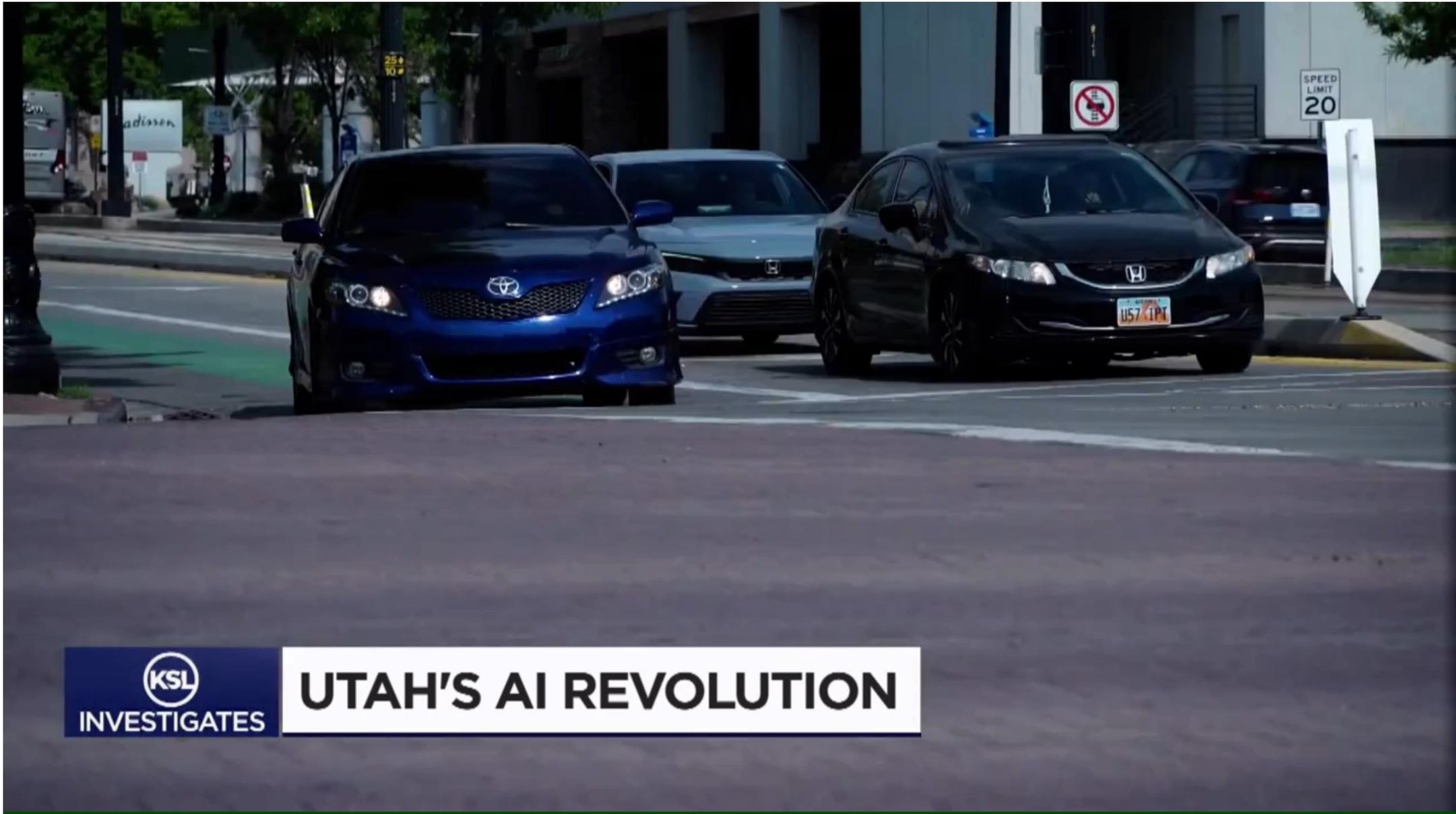
We are here

1st	2nd	3rd	4th
Mechanization, water power, steam power	Mass production, assembly line, electricity	Computer and automation	Cyber Physical Systems

TANGIBLE

INTANGIBLE

Video AI

Source: https://www.youtube.com/watch?v=aOHgk2HHzJU

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3. **Digital Transformation Projects: evidences from the FVG firms**

A reference model for digital transformation
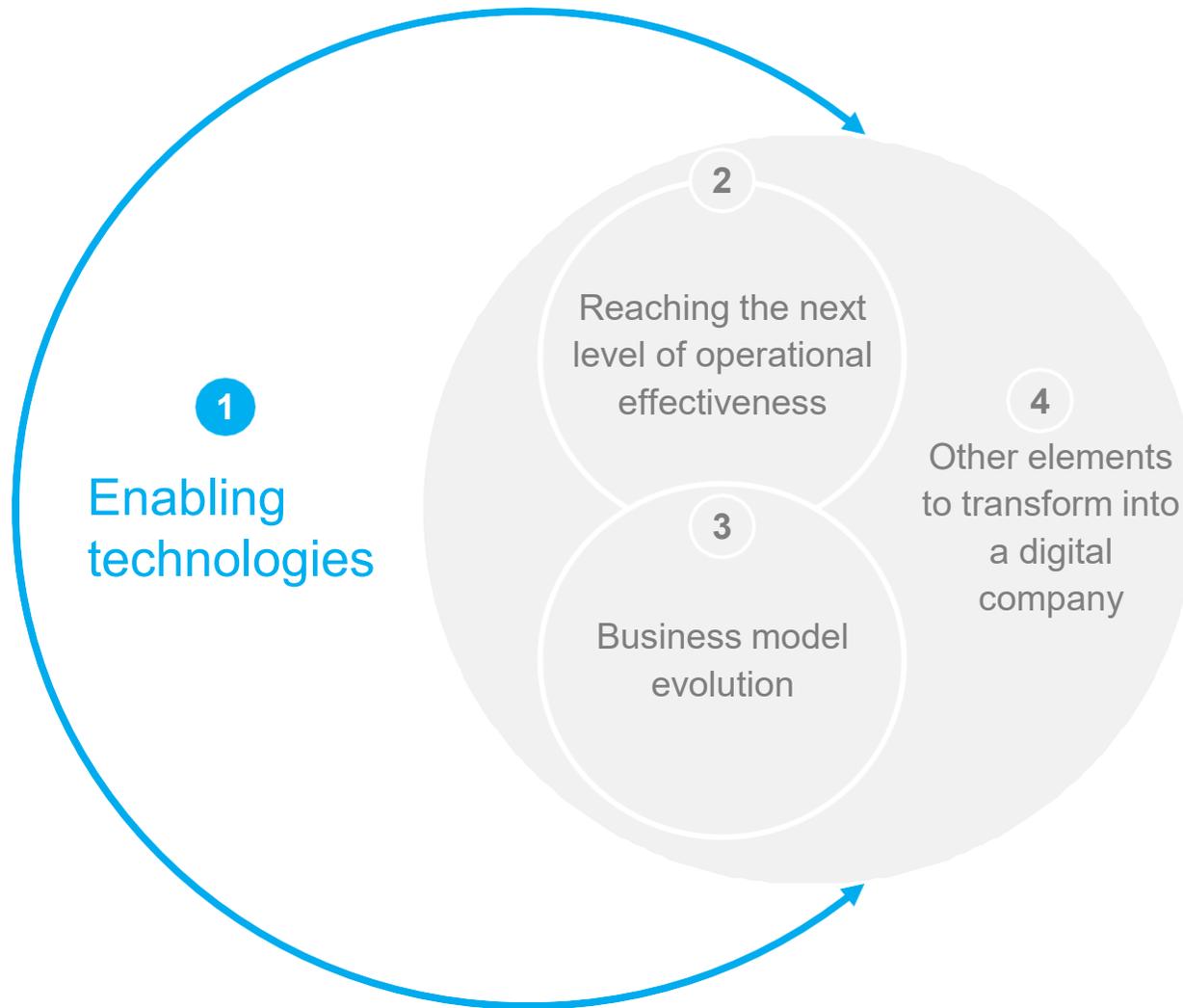
1 Enabling technologies

2 Reaching the next level of operational effectiveness

3 Business model evolution

4 Other elements to transform into a digital company

- **Change** is **evolutionary** rather than revolutionary and will occur at a slow pace

- Experts predict that **machinery replacement** will be around **40-50%** compared to the installed machinery fleet within the next 10 years.

1. Enabling technologies

1	Advanced Manufact. Solutions	Interconnected collaborative robots that can be quickly programmed
2	Additive Manufacturing	3D printers connected to development software
3	Augmented Reality	Augmented reality to support traditional production processes
4	Simulation	Simulation of interconnected machines to optimize processes
5	Horizontal/ Vertical Integration	Integration of information along the value chain from supplier to consumer
6	Industrial Internet	Communication between production processes and products thanks to IoT devices
7	Cloud	Easy access to a large quantity of data on open systems
8	Cyber-security	Open systems introduce new risk (attacks, ecc).
9	Big Data and Analytics	Analysis of a large database to optimize products and manufacturing processes.

3D Printing Machines – Benchmark Price

$ per machine

14,000
12,000
10,000
8,000
6,000

Year 07 09 11 13 15 17 19

SOURCE: IBISWorld

Professional 3D printers:

from 14.000 $ to 6.000 $ in a decade

Source: MISE, Italy

Industry 4.0 challenges companies to rethink their business approach

1 Enabling technologies

2 Reaching the next level of operational effectiveness

3 Business model evolution

4 Transformation into a digital company
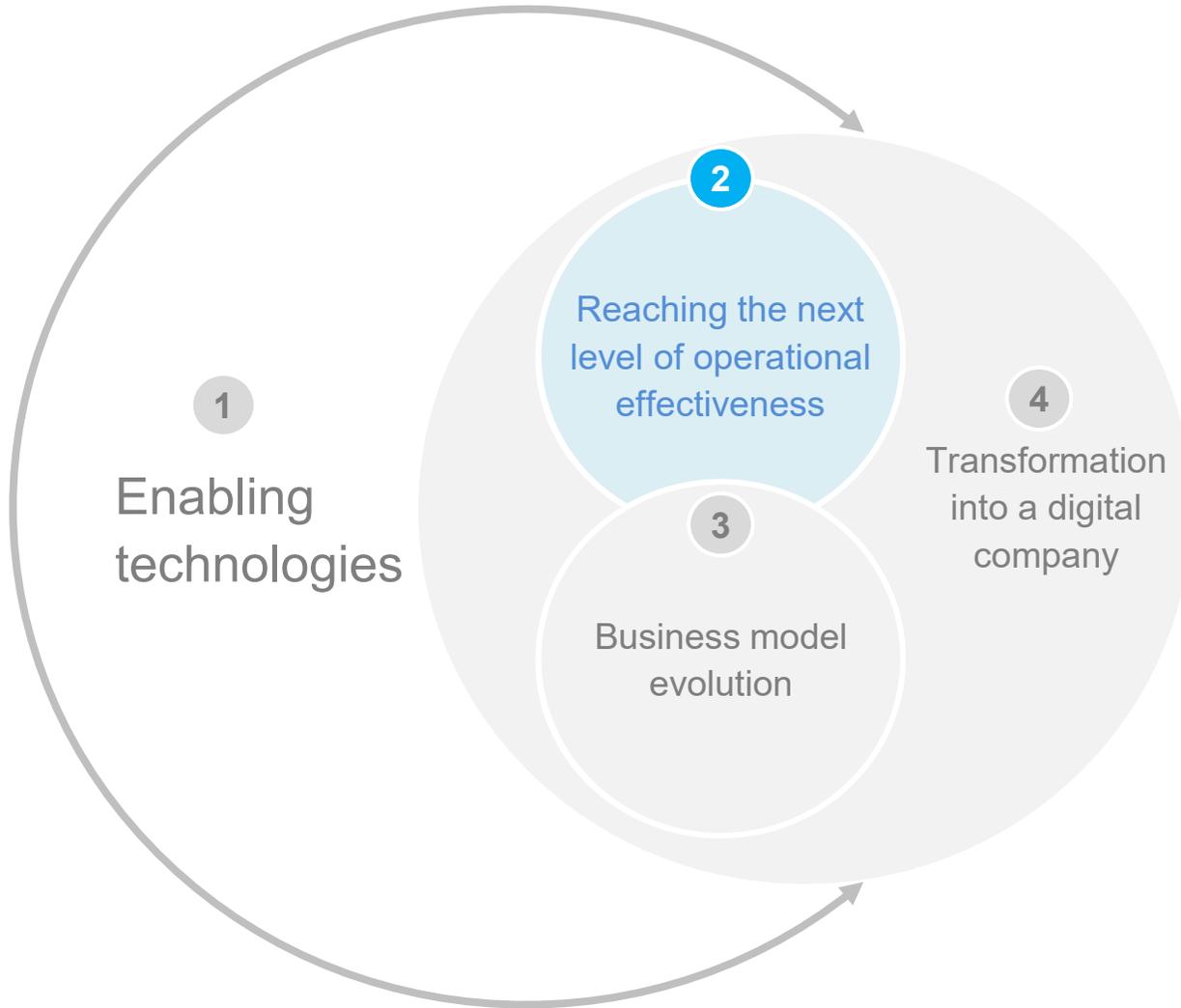
2. How digitalization is changing ROCE

ROCE evolution per lever for an average Tier-1 Auto supplier [%]

	Before Industry 4.0	Virtual industrialization	Automated flows	Smart machines	Predictive maintenance	Cyber-production system	After Industry 4.0
% Profit (EBIT)	6.0%	1.2%	0.9%	4.6%	0.8%	-0,4%	13.1%
Asset rotation (*)	2,5	0.1	- 0.1	- 0.2	0.1	0.5	3.1
Overall Effectiveness	65%	+6%	0,1%	+9%	+3%	+7%	90%

Machine park: -30% less
Direct Labor: -50% less
Indirect Labor: -30%
Total : -45%
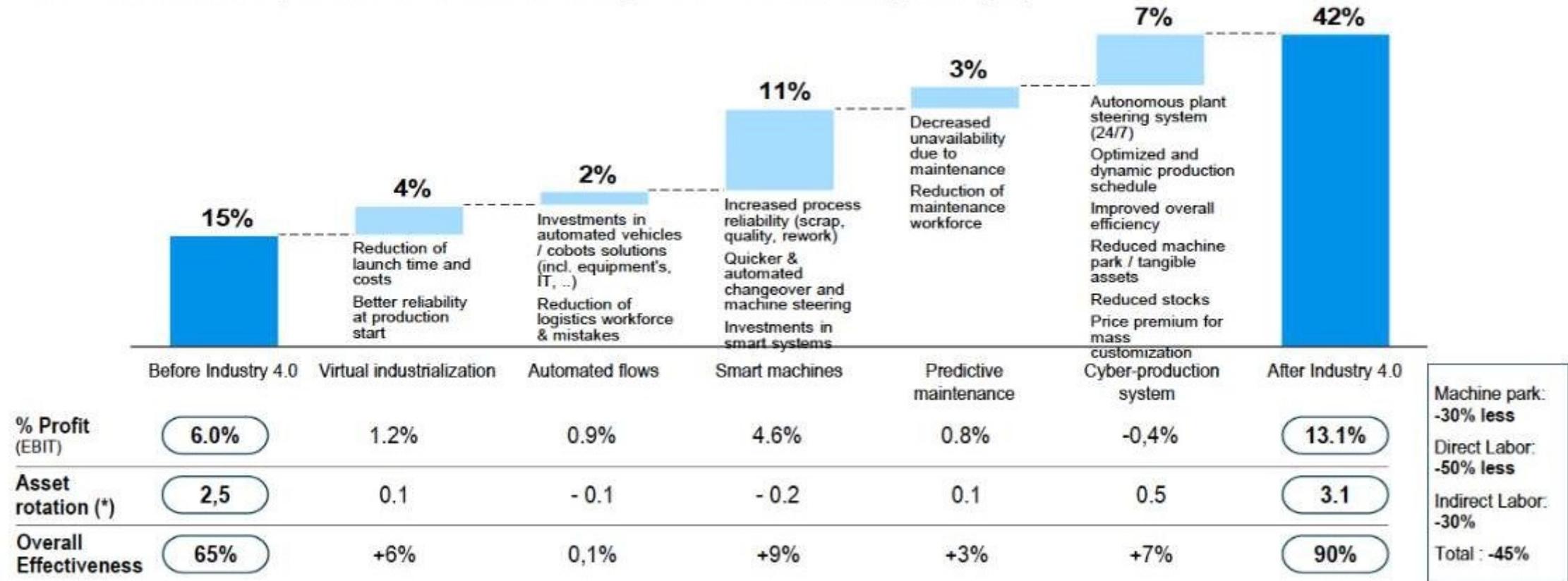
Roland Berger

ROCE: Return of capital employed

2. Focus on the 8 digital levers to increase operational efficiency

Digitalization and automation

Automation and/or support of manual labor
e.g., cobots, exoskeletons, human-machin collaboration, automatic guided vehicles (AGVs)

Digital Workflow
e.g., barcode, radio frequency identifier tags (RFID), tracking locations

M2M/P2M[1] Communications
e.g., Communication of parameters from the product to the machines, in-line quality control.

Information for operators and managers
e.g., pick-to-light, smart glasses (AR/VR[2]), digital SOP[3] on tablets, digital performance management/dashboards

Data & Analytics

Sensors and automated data collection
e.g., machine tracking, cycle time collection, field-collected quality data

Big data / advanced analytics to understand correlations
e.g. condition-based maintenance, improved root-cause problem solving.

Automated process variations
e.g., optimized production planning, predictive maintenance, and machine self-calibration

Integrated IT infrastructure
e.g., data security, end-to-end IT integration

1 Machine to machine, product to machine reality   2 Augmented reality / virtual   3 Standard operating procedures

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FONTE: McKinsey
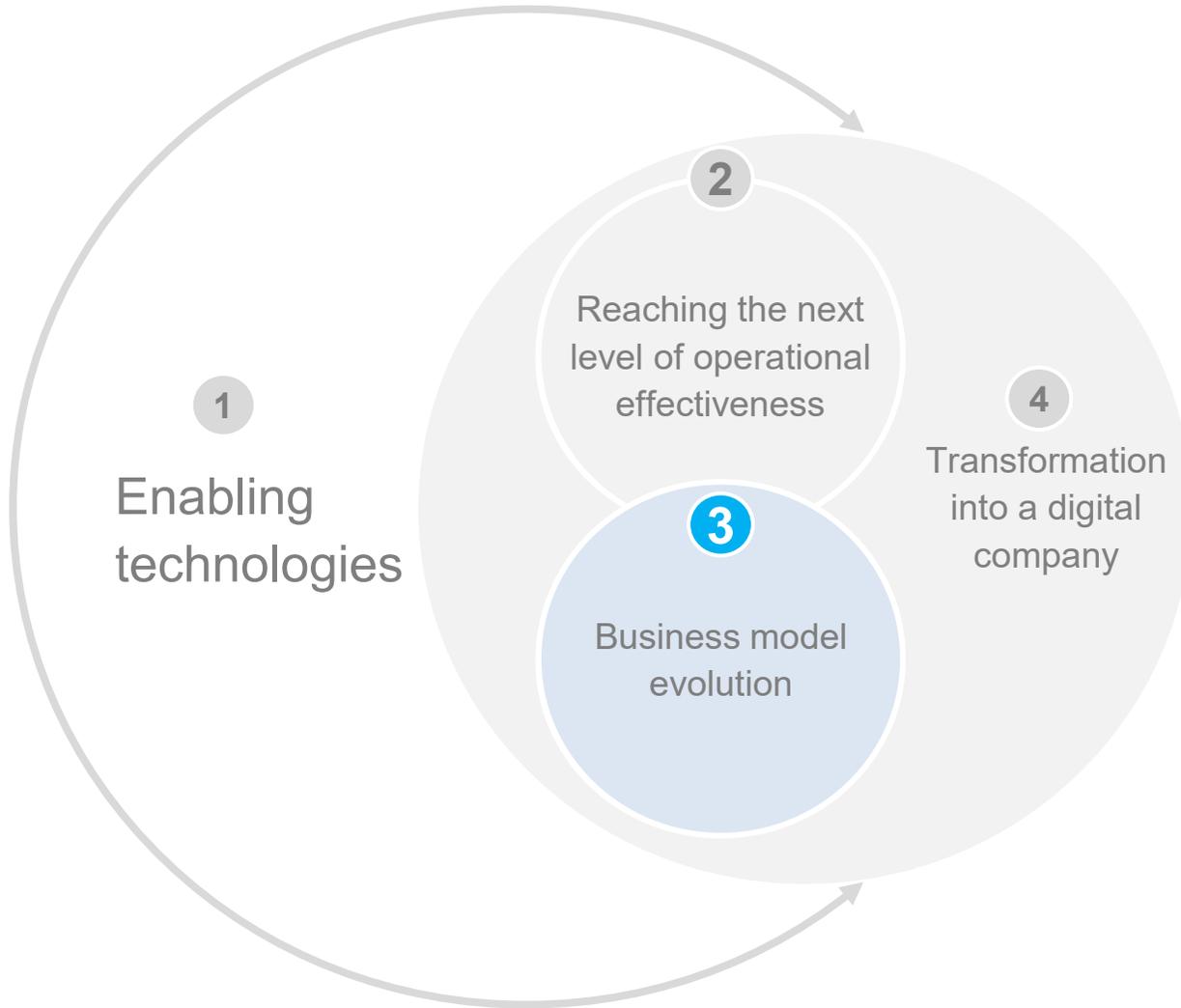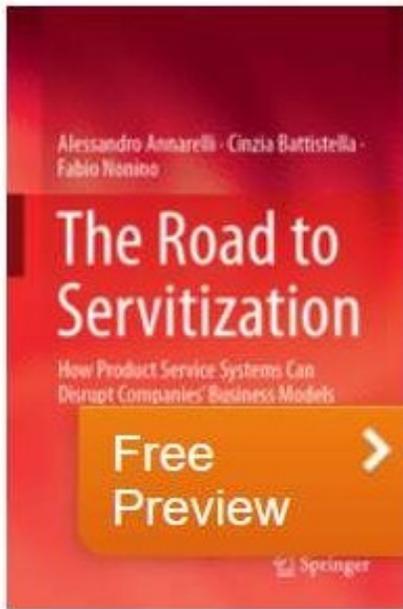
© 2019

The Road to Servitization

How Product Service Systems Can Disrupt Companies' Business Models

Authors: **Annarelli**, Alessandro, **Battistella**, Cinzia, **Nonino**, Fabio
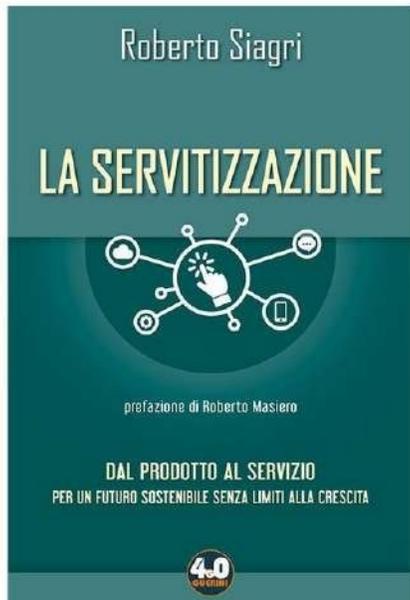
Servitization. From product to service.
For a sustainable future without limits to growth.

di **Roberto Siagri** (Autore)
Guerini e Associati, 2021

★ ★ ★ ★ ★ (0) ✏

LIBRO ✔ disp. immediata ⓘ		
18,52 € 19,50 €		190 punti Effe
1 ⌄	Aggiungi al carrello	♡
Venditore: IBS		Altri 3 venditori (da 19,50 €)
🏷 2 Promozioni attive		📍 Trova in negozio Verifica disponibilità

The marginal cost in the digital world is negligible.

For servitization, there is the need to control the product. Real-time data is essential. If you have a digital copy, you can make changes to the future.

The issue of ownership transfer implies the change in the product's responsibility and effectiveness.
Data is crucial for the transition towards servitization.

Siagri Interview (Italian language):
https://youtu.be/91gGUqIuEq8

Industry 4.0 challenges companies to rethink their business approach
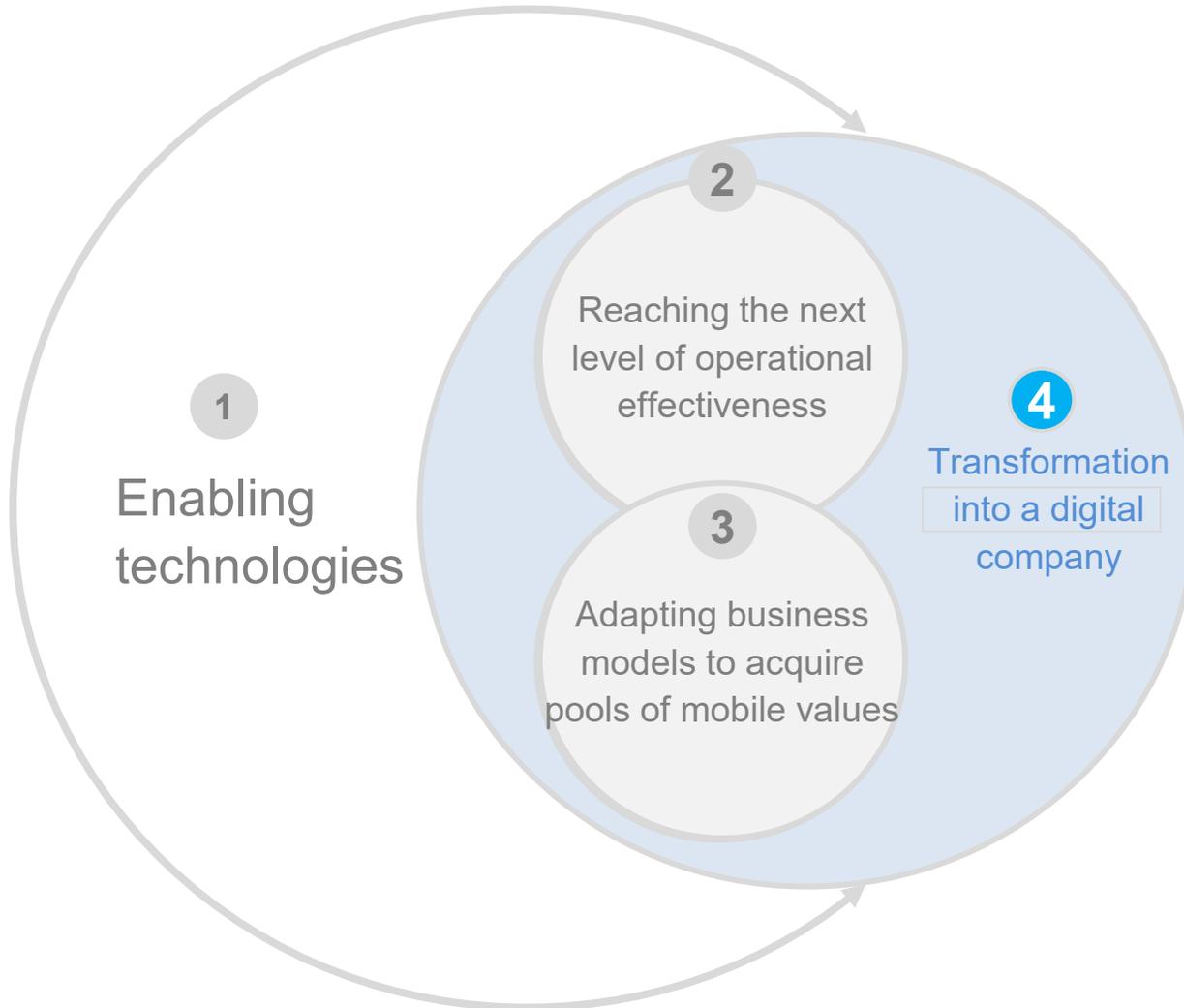
Digital Transformation

- For a successful transformation, companies must establish 4 digital foundations:
  - Building **digital skills**
  - Enable **necessary collaborations** in the ecosystem
  - **Manage data** as an added value resource
  - Manage **cybersecurity**
- Digital transformation should be initiated considering short, medium, and long-term initiatives.

Diagram labels:
- 1 — Enabling technologies
- 2 — Reaching the next level of operational effectiveness
- 3 — Adapting business models to acquire pools of mobile values
- 4 — Transformation into a digital company

A reference model for digital transformation

1

Enabling
technologies

2

Reaching the next
level of operational
effectiveness

3

Business model
evolution

4

Other elements
to transform into
a digital
company
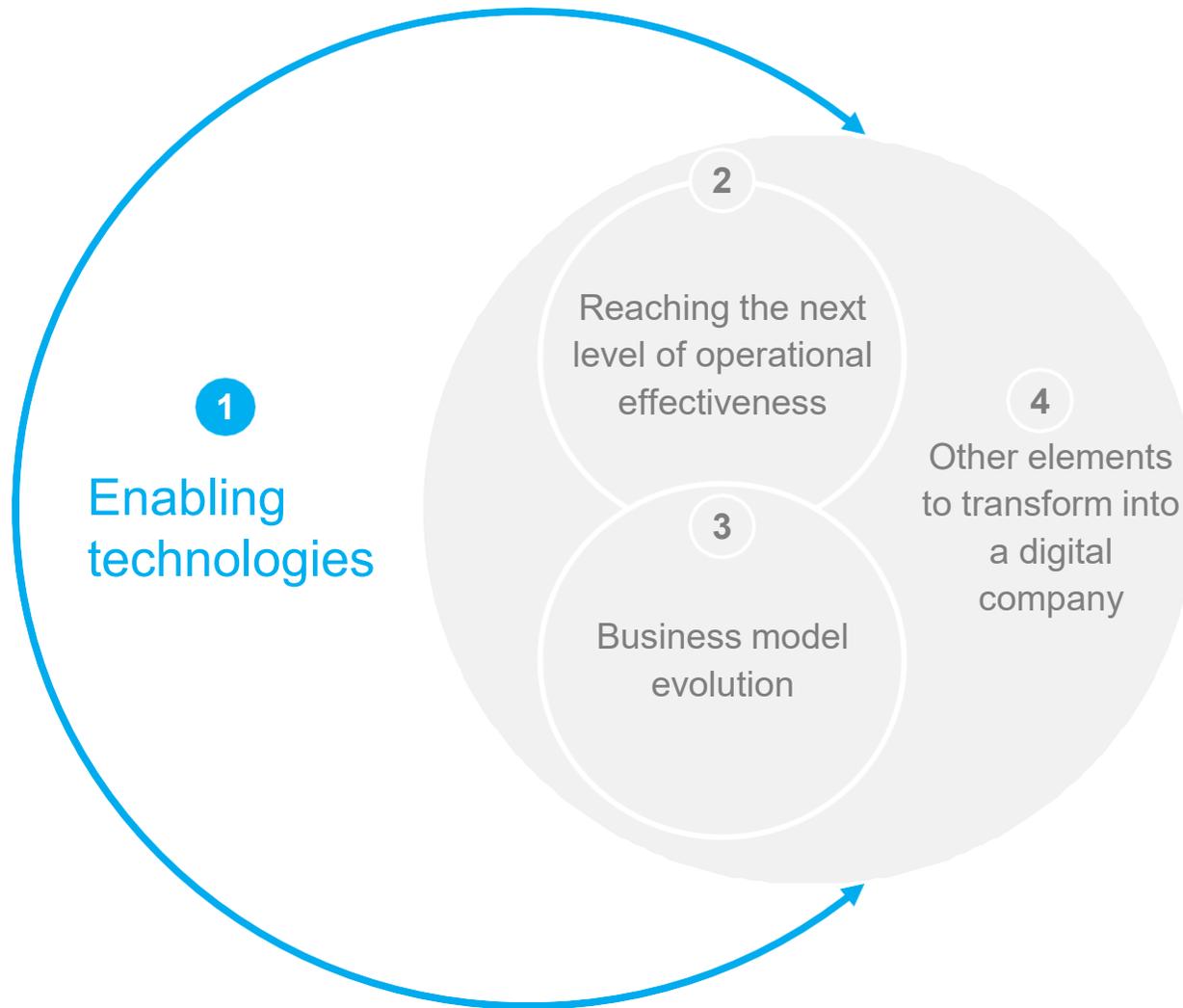
- **Change** is **evolutionary** rather than revolutionary and will occur at a slow pace

- Experts predict that **machinery replacement** will be around **40-50%** compared to the installed machinery fleet within the next 10 years.

Other models to implement a digital transformation (1-2)

BCG Enables and Empowers Clients to Deliver Digital Transformation at Scale

4–12 weeks		Typically 6–24 months	
Assess where you stand on			
Strategy and aspiration	**Implement outcomes and deliver value**	Innovate → Incubate → Scale and industrialize	
Prioritized outcomes			
People/skills/culture gap assessment	**Manage talent and build digital skills**	Talent platforms	Digital skill builder
Operating and governance principles	**Transform ways of working and operating model**	Agile ways of working	Platform-driven operating model
Technology and data assets	**Drive technology transformation to generate rapid value**	Data and digital platform	Specific technologies (e.g.,IoT)

Govern for value
Program steering, control tower, OKRs, and value measurement framework

Source: BCG analysis.

Other models to implement a digital transformation (2-2)

The Bridge
See the future and plan with purpose

The engine room
Orchestrate and accelerate like a market leader

Innovation
Disrupt and create like a start-up

Design, test and iteration
Design, build and test like a scale up

Deployment hub
Plan, invest and scale up like a venture capitalist

Digital factory
Accelerate and industrialise transformation
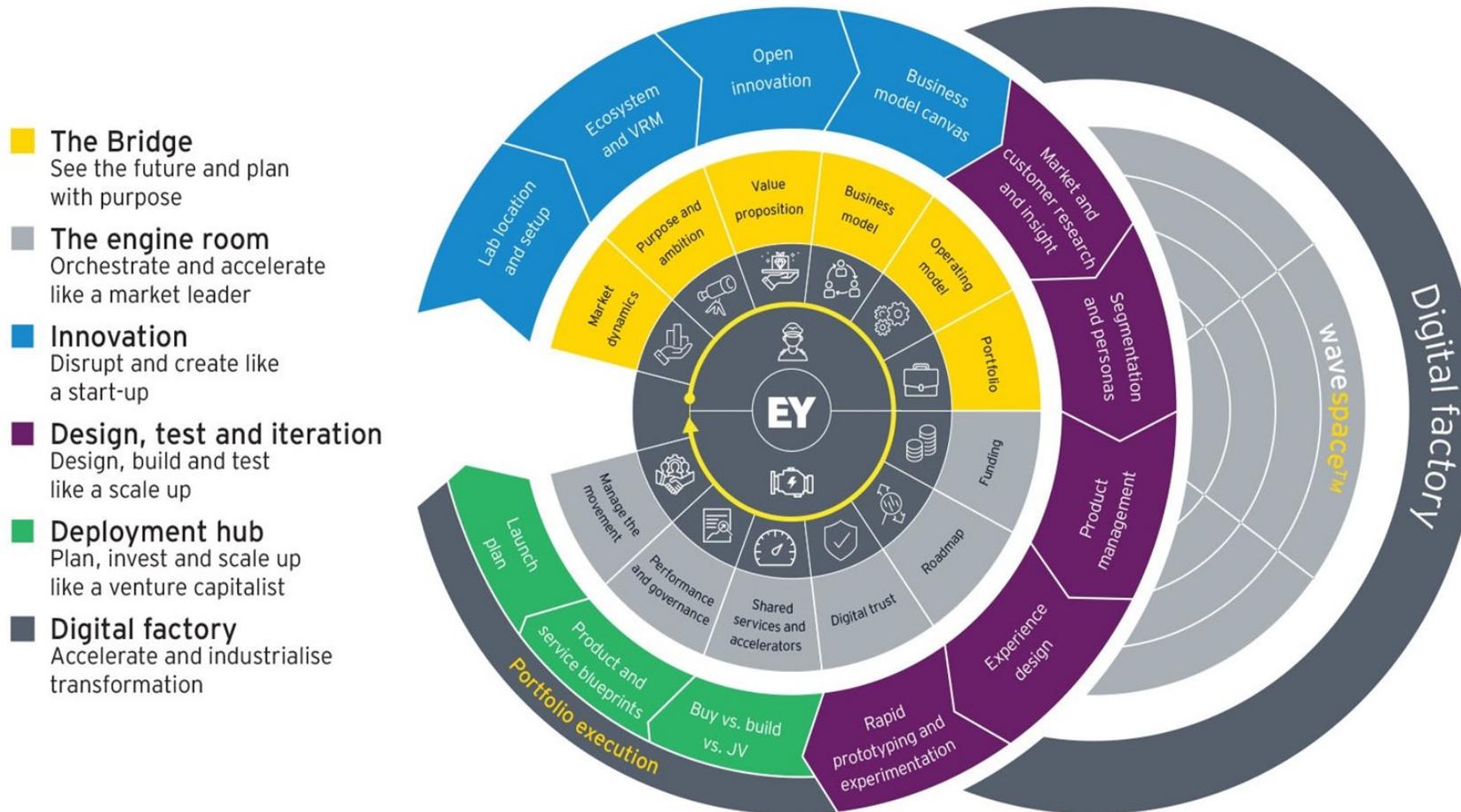
How do we support enterprises to speed up their digitalization process?

Assessment – Model introduction

Digital assessment provides an initial indication of the digital maturity of a company, with the intention of capturing its position in relation to the opportunities offered by Industry 4.0 and suggesting possible solutions to improve competitiveness.

The maturity of the company is measured respect to each of the **8 process areas** that make up the value chain:

- Design and Engineering;
- Production;
- Quality;
- Maintenance;
- Logistics;
- Supply Chain;
- Smart Product;
- Human Resources.

In addition, **4 dimensions** of analysis are considered:

- Execution;
- Monitoring and Control;
- Technologies;
- Organization.
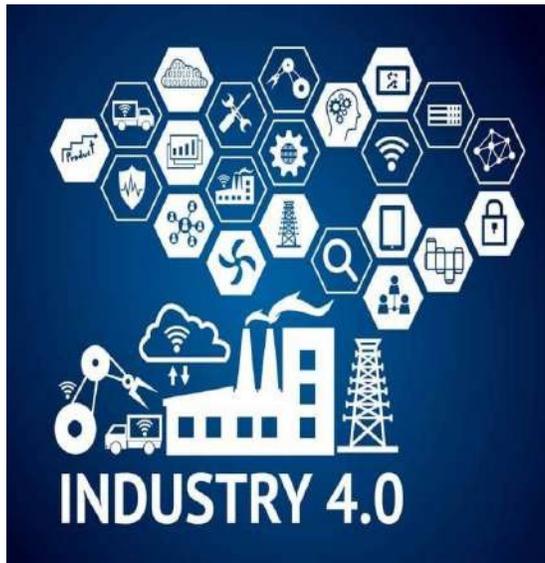
Methodology – main principles

Every process is evaluated in terms of digital maturity through the analysis of different elements (items) with a scale from 1 to 6. In particular, the following criteria are applied:

1-3 Non-digital
The activity is still based on traditional methods. Company experience is not encoded with digital tools.

4 – 'Digital ready'
The activity is based on the digital definition of the data that qualify it and is therefore managed entirely digitally.

5 – 'Digital connected'
The digitalized data of the activity are made transparent in the organization, involving the functions interested in the activity, which cooperate in the management of the activity using digital tools.

6 – 'Digital intelligent'
There are artificial intelligence tools operating on the digitalized data of the activity and contributing to the decision-making process related to the activity itself.

Assessment Report

Processes

■ **DIGITAL ASSESSMENT - Digital Readiness**

⬤ Investigated areas
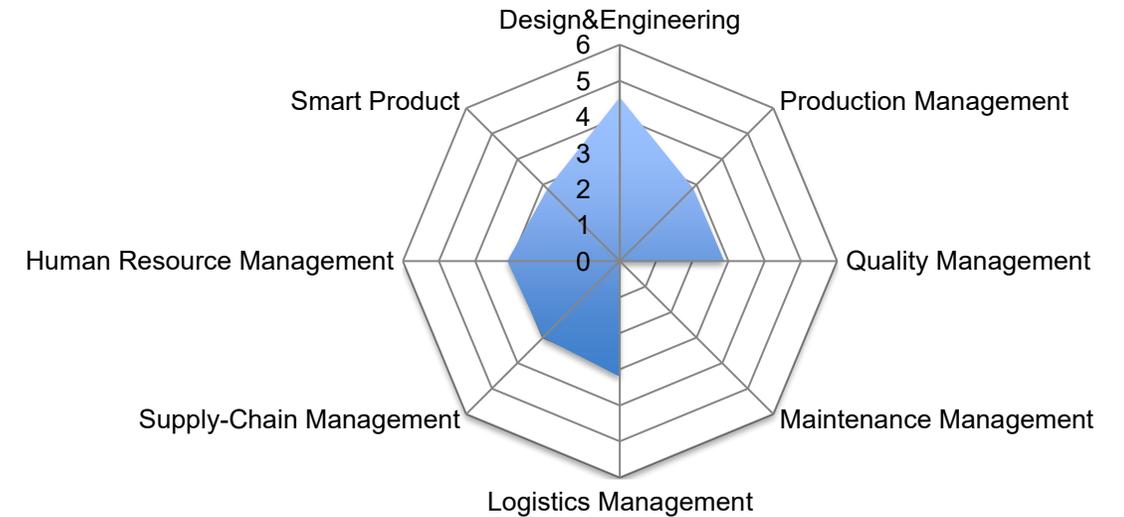
PROCESSI									Average	
Progettazione ingegneria	Produzione	Qualità	Manutenzione	Logistica	Supply Chain	Risorse Umane	Smart Product			
4,5	2,9	2,9	-	3,2	3,0	3,1	2,8		**3,00**	

Assessment for Macroprocesses and digitalization level

■ **DIGITAL ASSESSMENT - Digital Ready, Connected & Intelligent**

Processi

Legend: Traditional · Digital ready · Digital connected · Digital Intelligent

Recommendations

Production

P1 - QUANTITATIVE assessment and start of first efficiency work sites (including production of electronic boards)

P2 - Operations dashboard (Performance Operations Measurement System)

P3 - Introduction of MES (Manufacturing Execution System)

Logistic management

L1 - (Re) Introduction of acceptance department - coding system (possible initial analysis)

L2 - Improving warehouse management

Quality management

Q1 – Reduce scarps and warehousing dimensions

Supply Chain

SC1 - Adopt e-supply chain solutions for managing different production sites (such as electronic Kanban)

Smart Product

SP1 - Support for business model evolution (from product to service, including post-sales)

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EXPECTED BENEFIT

FASE 1   FASE 2   FASE 3

SP1

P3

Q1   P2   SC1

L2

P1   L1

RU1

Azioni Pre Digital   Azioni Digital Readiness   Azioni Digital Connectivity   Azioni Digital Intelligence

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Andrea Galvani

Impact of digital projects (draft-first evaluation)

DIGITAL ASSESSMENT - Digital Ready, Connected & Intelligent

Processi

Legend: Traditional — Digital ready — Digital connected — Digital Intelligent

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How to start a transformation… (1/2)

Assessement 2022

www.farimanifatturieri.it

	Mese		ATECO			Azienda	Classe Dip	Analisti	Analista 1	Analista 2	Fonte	Data Assess	Status Report
1	Gennaio		C	26.13.11	Fabbricazione di ute	Archman	0-25	**Fornasier**	**Fornasier**		CAA	14/01/2022	Consegnato
2			H	52.29.22	Servizi logistici relati	Apm Components	25-50	**Fornasier - Marin**	**Fornasier**	Marin	CAA	25/01/2022	Consegnato
3			F	43.21.01	Installazione di impia	Presotto Ennio	25-50	Marin - Fornasier	Marin	Fornasier	POLO	25/01/2022	Consegnato
4	Febbraio		Q	88.10.00	ASSISTENZA SOCIA	Cooperativa Nuovi Vicini	0-25	Iuliano - Marin	Iuliano	Marin	POLO	17/02/2022	Consegnato
5			C	25.62	Lavori di meccanica	Sultan	25-50	Fornasier - Bertetti	Fornasier	**Bertetti**	POLO	15/02/2022	Consegnato
6			C	29.2	Fabbricazione di car	xDea	0-25	Fornasier - Marin	**Fornasier**	Marin	CAA	21/02/2022	Consegnato
7	Marzo		C	26.11.09	FABBRICAZIONE D	ATEX	25-50	Bertetti-Fornasier	**Bertetti**	Fornasier	LEF	22/02/2022	Consegnato
8			C	22.2	Fabbricazione di arti	EPS	100-250	Biotto-Fornasier	Biotto	Fornasier	POLO	28/02/2022	Consegnato
9			C	24.33.02	PROFILATURA MED	Buttignol Diego Srl	0-25	Fornasier - Marin	Fornasier	Marin	POLO	18/03/2022	Consegnato
10	Aprile		C	27.52	FABBRICAZIONE D	Palazzetti Lelio SpA	250-500	Fornasier	Fornasier		Polo	25/03/2022	Consegnato
11			C	25.5	FUCINATURA, IMB	Tesolin	25-50	Biotto-Fornasier	Biotto	**Fornasier**	Polo	20/04/2022	Consegnato
12			F	43.22.01	INSTALLAZIONE DI	Idrotermica Buttrio	25-50	Fornasier	**Fornasier**		Hidra	12/04/2022	Consegnato
13	Maggio		A	01.63	Attività successive a	Friulfruct SCA	25-50	Fornasier - Miotti	Fornasier	Miotti	Polo	13/04/2022	Consegnato
14			C	32.2	FABBRICAZIONE D	Fazioli	100-250	Fornasier - Vezil	**Fornasier**	Vezil	Polo	?	Consegnato
15			C	31.01.10	FABBRICAZIONE D	Concepts	0-25	Fornasier	Fornasier		Hidra	03/05/2022	Consegnato
16	Giugno		C	33.12.59	RIPARAZIONE E M	Maschietto	0-25	Marin - Fornasier	Marin	**Fornasier**	Polo	17/05/2022	Consegnato
17			C	28.30.90	FABBRICAZIONE D	AgricolMeccanica	25-50	Fornasier-Miotti	**Fornasier**	Miotti	Polo	22/04/2022	Consegnato
18			C	27.90.09	Produzione e vendita	Startec	0-25	Bertetti-Fornasier	Bertetti	**Fornasier**	Polo	23/05/2022	Consegnato
19	Luglio		H	49.41	TRASPORTO DI ME	Assisped	0-25	Bertetti-Fornasier	Bertetti	**Fornasier**	Hidra	16-05-2022	Consegnato
20			G	46.73.2	Commercio all'ingros	MEC Store	0-25	Marin - Fornasier	**Marin**	Fornasier	Polo	24-05-2022	Consegnato
21			Q	88.10.00	Assistenza sociale n	Futura (approfondimento 2021)	0-25	Iuliano-Marin	Iuliano	Marin	Polo	09-05-2022	Consegnato
22	Agosto		E	39.09.00	Altre attività d	Geostream	50-100	Fornasier - Bertetti	Fornasier	**Bertetti**	Hidra	10/06/2022	Consegnato
23		0,5	C	29.33.00	FABBRICAZIO	Tuper	0-25	Fanizza-Fornasier	Fanizza	**Fornasier**	CAA	13/06/2022	Consegnato
24			C	26.02.00	Lavori di mec	Piccolo Principe (approfondimento 20	50-100	Iuliano-Marin	Iuliano	Marin	Polo		Consegnato
25	Settembre		C	23.70.3	FRANTUMAZ	Alfamicron	0-25	Marin-Miotti	**Marin**	Miotti	Polo	6/7/2022	Consegnato
26		0,5	C	25.61	Trattamento e	Bravin		Fornasier-Lupi	**Fornasier**	Lupi	CAA	19/7/2022	Consegnato
27		0,5	C	25.73.20	FABBRICAZIO	BBT	0-25	Fanizza-Fornasier	Fanizza	**Fornasier**	CAA	18/7/2022	Consegnato
28	Ottobre	0,5	C	31.09.03	Fabbricazione	Felis		Fornasier	**Fornasier**		CAA	19/07/2022	Consegnato
29			C	25.5	Fucinatura, im	Color Print SpA		Fornasier-Miotti	**Fornasier**	Miotti	Polo	07/10/2022	Consegnato
30			C	25.11	Fabbricazione	Officine GSP	25-50	Fornasier - Bertetti	Fornasier	Bertetti	LEF	03/10/2022	Consegnato
31	Novembre		C	23.70.2	Lavorazione a	FriulMosaic		Marin-Bertetti	Marin	Bertetti	ConfAPI	6/9/2022	Consegnato
32			C	26.30.29	Fabbricazione	Solari	100-250	Fornasier - Bertetti	**Fornasier**	Bertetti	ConfAPI	26/9/2022	Consegnato
33		0,5	C	28.49.09	Fabbricazione	Boss Technology	0-25	Fornasier-Lupi	**Fornasier**	Lupi	ConfAPI	11/10/2022	Consegnato
34	Dicembre		C	25.62	Lavori di mec	Sti Lualdi	25-50	Fornasier - Bertetti	**Fornasier**	Bertetti	CAA	24/10/2022	Consegnato
35			A	01.21	Coltivazione d	Vistorta	0-25	Bertetti - Fornasier	**Bertetti**	Fornasier	Hidra	03/10/2022	Consegnato

How to start a transformation... (2/2)

Assessement 2023

|	Mese	Azienda	Sede	Cognome	Nome	e-mail	sse Dip (20	Analista 1	Analista 2	Fonte	Data Asses	Status Report
1	Gennaio	Domus Line Srl	Porcia	Venier	Alberto		53	Fornasier	Marin	Hidra	20/01/2023	Consegnato
2		Jecko Racing Seats Snc Di	Fiume Veneto	Pizzato	Andrea		0-10	**Marin**	Fornasier	PoloAA	24/01/2023	Consegnato
3		Quattrin Srl	Zoppola	Quattrin	Massimo		20-49	**Fornasier**	Marin	PoloAA	26/01/2023	Consegnato
4	Fabbraio	Idealservice		Picco	Laura			**Fornasier**	Marin	PoloAA	02/02/2023	Consegnato
5		FCF Fontanafredda	Fontanafredda	Rigato	Zeno			**Berttetti**	Fornasier	PoloAA	08/02/2023	Consegnato
6		Gielle Plast		Lucchetta	Marco			**Fornasier**	Berttetti	CAA	14/02/2023	Consegnato
7	Marzo	Perin						Biotto	Berttetti	PoloAA	24/02/2023	Consegnato
8		Nuert	Cusano di Zoppola	Quattrin	Matteo			Marin	**Fornasier**	PoloAA	01/03/2023	Nuesegnato
9		EPS						Iuliano	Lo sardo	PoloAA	03/03/2023	Consegnato
10	Aprile	Omnia Energy		Moretti	Nicolas			**Fornasier**	Marin	PoloAA	23/02/2023	Consegnato
11		Topazzini		D'Andrea	Gianluca			Marin	Fornasier	LEF	29/03/2023	Incontro prog
12		Numafa		Biscontin	Igor			**Fornasier**	Berttetti	CAA	21/03/2023	*Da consegna*
13	Maggio	Videomobile	Azzano Decimo	De re	Francesco			Biotto	**Berttetti**	PoloAA	07/03/2023	Consegnato
14		SIOM		Sist	Alessandro			**Fornasier**	-	Hidra	21/03/2023	In elaborazior
15		UGS						**Fornasier**	-	CAA	04/04/2023	Consegnato
16	Giugno	Serimark		Anna				**Marin**	Fornasier	PoloAA	26/04/2023	*Da consegna*
17		Flex						Efficienta	-	PoloAA		Incontro prog
18		Savio		D'Agnolo	Fabio			Amaduzzi	-	PoloAA	04/05/2023	Incontro prog
19	Luglio	ZIPR	CER					Efficienta	-	PoloAA		
20		VMI						**Biotto**	Fornasier	PoloAA	24/04/2023	Consegnato
21		Sovipre						**Fornasier**	Marin	LEF	09/05/2023	Consegnato
22	Agosto	Assilab (cybersec)						Giacomini	Fornasier	PoloAA	18/05/2023	Consegnato

Summary

1. **Introduction to Industry 4.0**

2. **How to guide a Digital Transformation Project**

3. **Digital Transformation Project: evidences from the FVG firms Assessment and Projects**

Impact of digital projects (draft-first evaluation)

DIGITAL ASSESSMENT - Digital Ready, Connected & Intelligent

Processi

Production

P1 - QUANTITATIVE assessment and start of first efficiency work sites (including production of electronic boards)

P2 - Operations dashboard (Performance Operations Measurement System)

P3 - Introduction of MES (Manufacturing Execution System)

Logistic management

L1 - (Re) Introduction of acceptance department - coding system (possible initial analysis)

L2 - Improving warehouse management

Quality management

Q1 – Reduce scarps and warehousing dimensions

Supply Chain

SC1 - Adopt e-supply chain solutions for managing different production sites (such as electronic Kanban)

Smart Product

SP1 - Support for business model evolution (from product to service, including post-sales)

Main (Digital) Project focus on Areas

FOCUS

1. Production-Logistic

2. Quality

3. Focus SP

Areas

QUANTITATIVE assessment and start of first project

Production

Logistic

BENEFITS:
- *Waste reduction*
- *Process streamlining*
- *Data certainty with guided choices*

Scrapping Analysis and Reduction Action

Quality

Production

BENEFITS:
- *Orders progress control*
- *Load capacity update*

Business Model Evolution

SP

Design/Engineering

BENEFITS:
- *Guided evolution from tangible to intangible*
- *After-sales service as a revenue stream*

Actions

- 10 man days - consulting
- 10 gg corporate effort

- 5 man days - consulting
- 10 gg corporate effort

- 10 man days - consulting
- 10gg corporate effort

BUDGET HYPOTHESIS Total of 3 PROJECTS (reduction of about 50% of the cost)
+10 man days [financed by L.R. 27] for each form with 5000€ Project financing

5 MONTH

Meaning of Digital Project (Cantiere - Worksite)

As is

To be

Tech Provider → Company

Cost of consulting for the company:
8 k €

Cost of expensed consultancy:
5k€

Polo Tecnologico

Tech Provider → Company

Acceleration of the digital introduction in the company
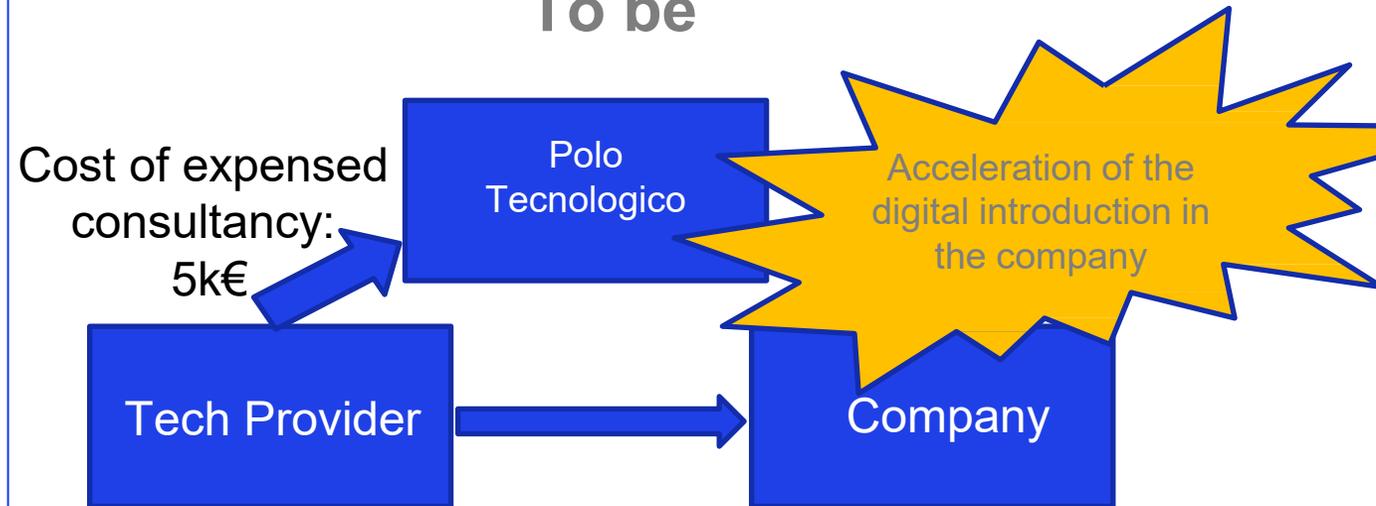
Cost of the consulting for the company:
3 k €

- Operational Contract between Polo Tecnologico and Company, with identification of project phases
- Covering approximately 50%-70% of the consulting fees of the contract

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Most relevant Digital Projects completed (2022)

Id	Description
22c01	Software selection for the new production process advancement management system
22c02	Data collection of machines and monitoring of plant performance
22c03	MES Introduction
22c04	WMS implementation
22c05	Accompanying adoption of quality control system along the supply chain
22c06	Digital Dashboard Design
22c07	Improving office processes through Lean&Digital adoption (introduction to automation tools, RPA, etc.)
22c08	Designing Introduction to Vehicle Fleet Monitoring Solution
22c09	Evaluation of wearable solutions for remote maintenance support
22c10	Warehouse encoding in order to improve/automate site reporting
22c11	Lean construction site for quality control improvement in order to introduce automation control solutions
22c12	Introduction to a solution to improve visibility of orders to clients and improve job account tracking
22c13	Introduction to the solution for WMS and sales document management from a portable terminal
22c14	Software selection support for integration of information systems (ERP, MES, WMS)
22c15	Monitoring of plants with IoT sensorization
22c16	Implementation of Maintenance 4.0
22c17	Design of an automated production island
.....	......
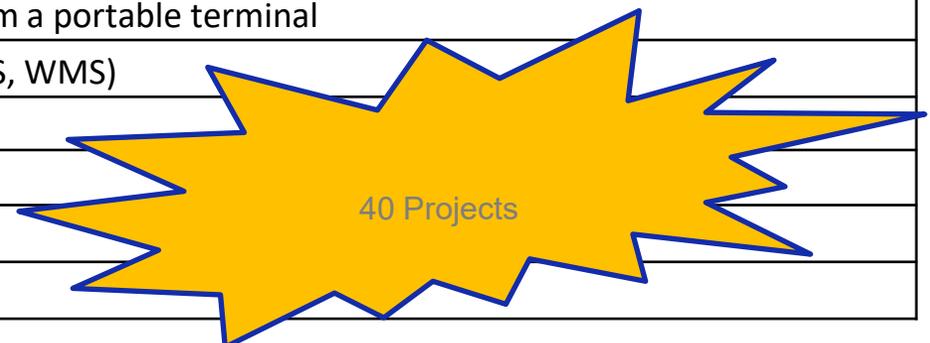
40 Projects

Ongoing Projects (2023)

Id	Description
23cc01	Pre-feasibility analysis for Big Data Analytics Adoption
23cc02	Quality Maintenance
23cc03	Digital Industrial Plan
23cc04	Preliminary analysis for a new Human Machine Interface (HMI) for vending machines
23cc05	Adoption Building Information Modeling
23cc06	Robotic Process Automation
23cc07	Introduction of Digital Marketing
23cc08	Software selection for ERP introduction
23cc09	Data Exploitation
23cc10	Product Configurator
23cc11	Market analysis and evolution of the digital business model
23cc12	Creation of a new digitalization service
23cc13	Redesign the information flow thanks to Industry 4.0 (data)
23cc14	Implementation and integration (process)
23cc15	Cybersecurity implementation support

23cc16	......
23cc17	
23cc18	
23cc19	
23cc20	
23cc21	
23cc22	
23cc23	
23cc24	
23cc25	
23cc26	
23cc27	
23cc28	
23cc29	
23cc30	

Digital Project: the model for accelerating digital transformation

Home > Esperti E Analisti

Condividi questo articolo

Best practices in digital transformation: the experience of the projets at the Alto Adriatico Technology Park.

Pubblicato il 08 Set 2022

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https://www.industry4business.it/esperti-e-analisti/cantiere-digitale-il- modello-per-accelerare-i- progetti-di-digital- transformation/

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Proposed solutions Map and zooming on some proposals

Number of solutions proposed for each macroprocess.	Design & Engineering	Production	Quality	Logistic	Maintenance	Marketing & Sales	Smart Product	Supply Chain	Human Resources
	10	46	17	41	14	10	18	13	23

Columns: Classification of practices and tools for macroprocesses.

Rows: List of practices and tools for digital introduction.

Solutions

Estensione delle funzionalità del CAD 3D e sfruttare	Tecnologia
Digitalizzazione delle comunicazioni	Tecnologia
Coinvolgimento del personale e cantieri di	Metodologia-Formazione
Comprensione dell'attuale stato di software, supporto	Tecnologia
Introduzione/sviluppo MES	Introduzione/sviluppo MES
Interconnessione di tutte le macchine al fine di	Introduzione/sviluppo MES
Aggiornamento JMES	Introduzione/sviluppo MES

Clustering

- Total solutions: **182**
- Average number of proposed solutions per company: **8**

Mapping of proposed solutions and zooming in on some proposals

Id.	Cluster	Number of proposals
14	Introduction/Development of Manufacturing Execution System (MES)	17
5	Dashboard Key Performance Indicators	14
1	Creation of a lean and digital-based corporate culture	12
18	Warehouse Management System (WMS) + Tracking	10
24	Smart Product/Other	8
16	Technology	8
10	Encoding articles and labeling	7
19	e-Supply Chain Collaboration (eSCC)	7
9	Improving planning/scheduling, also through software	7
8	Digital Standard Operating Procedures (SOP)	6
15	Introduction/evolution CRM	6
6	Office Automation	6
23	Data Analytics	5
4	Lean tools	5
12	Analysis of production process mapping and optimization.	4

7	Document management software	4
13	Introduction to digital solutions for improving project management contracts	4
3	Programming	4
11	Reporting industrial accounting	4
22	Business Intelligence (BI)	2
17	Digital Fleet Management	2
21	Digital Twin	2
20	e-kanban	2
2	Methodology - Training	2
Not reported in the matrix	Office process mapping analysis	1
	Production analytics	1
	APP	1
	Cyber security	1
	Bill of Materials (BOM)	1
	PDM/PLM	1
	Customer portal	1
	Other	27
	Total	**182**

Positioning matrix of proposed solutions

A
1. Creation of a lean and digital-based corporate culture
2. Methodology - Training
3. Programming
4. Lean
B
5. Dashboard Key Performance Indicators
6. Office Automation
7. Document management software
8. Digital SOP
9. Improving planning/scheduling, also through software
C
10. Encoding articles and labeling
11. Reporting industrial accounting
12. Analysis of production process mapping and optimization
13. Introduction to digital solutions for improving project management contracts
D
14. Introduction/Development of Manufacturing Execution System (MES)
15. Introduction/evolution CRM
16. Technology
17. Digital fleet management
18. WMS + tracking
19. eSCC
20. e-kanban
21. Digital twin
22. Business Intelligence
23. Data Analytics
24. Smart Product

= Number of proposed solutions
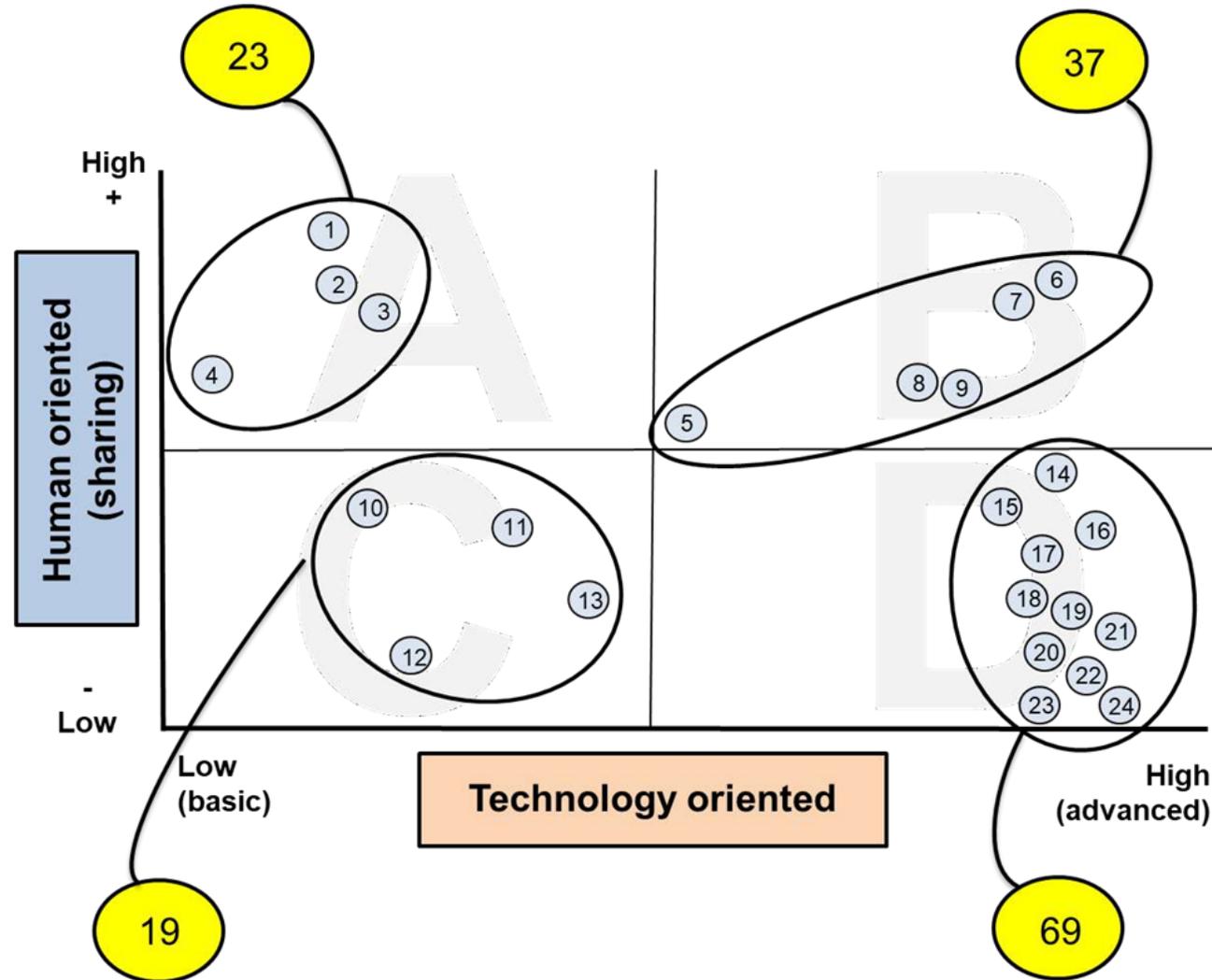
Some photos and video – Automation in a washing machine production plant

3° industrial revolution

# Some photos and video – Final quality control

3°- 4° industrial revolution

# Some photos and video – «Kindle» in the production plant

4° industrial revolution

Some photos and video – Integration in the production line

3°- 4° industrial revolution

Some photos and video– Performance Board
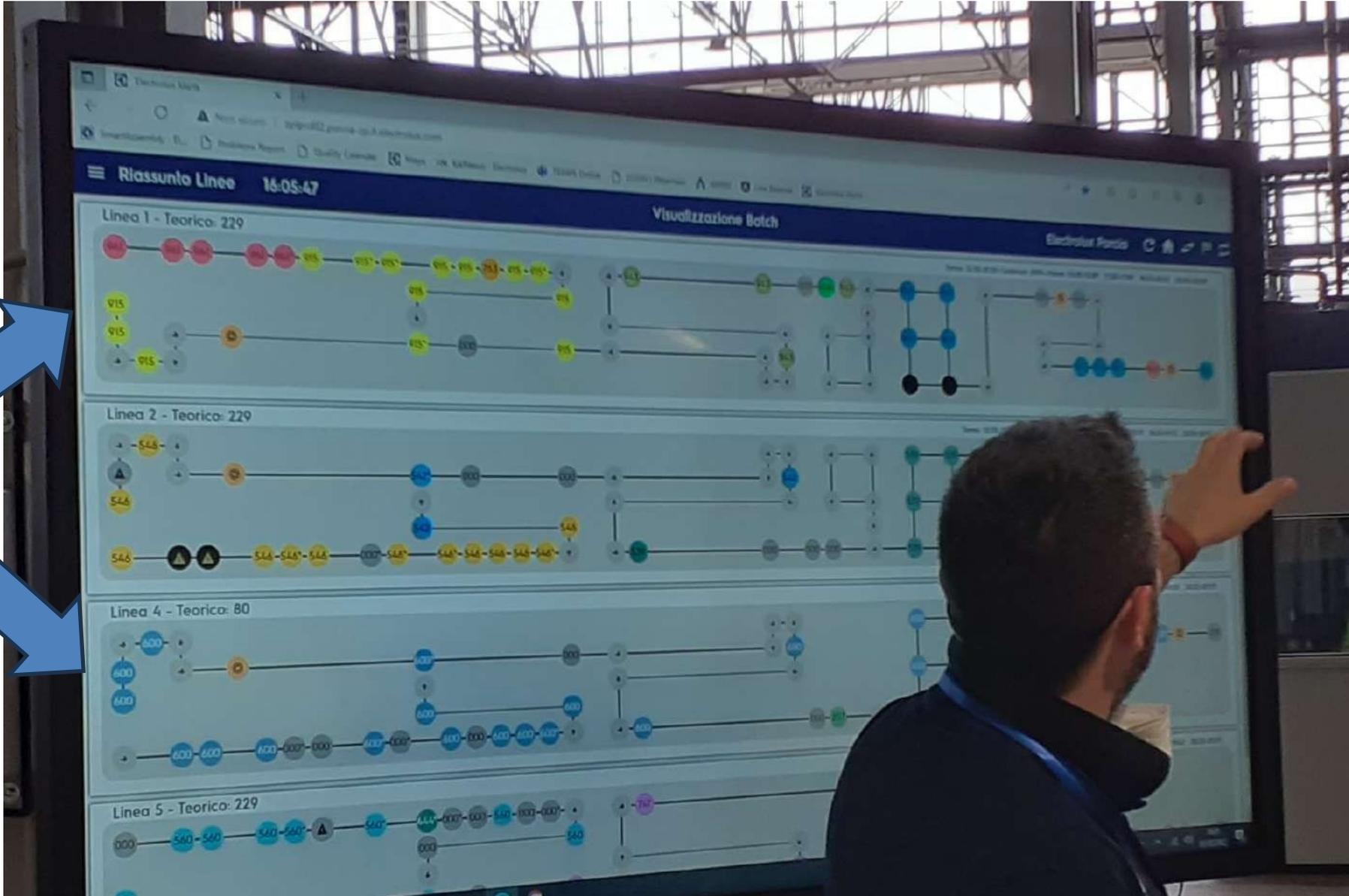
Lines – status of each phase

4° industrial Revolution (advanced)

# Some photos and video– Performance Board/data anlytics
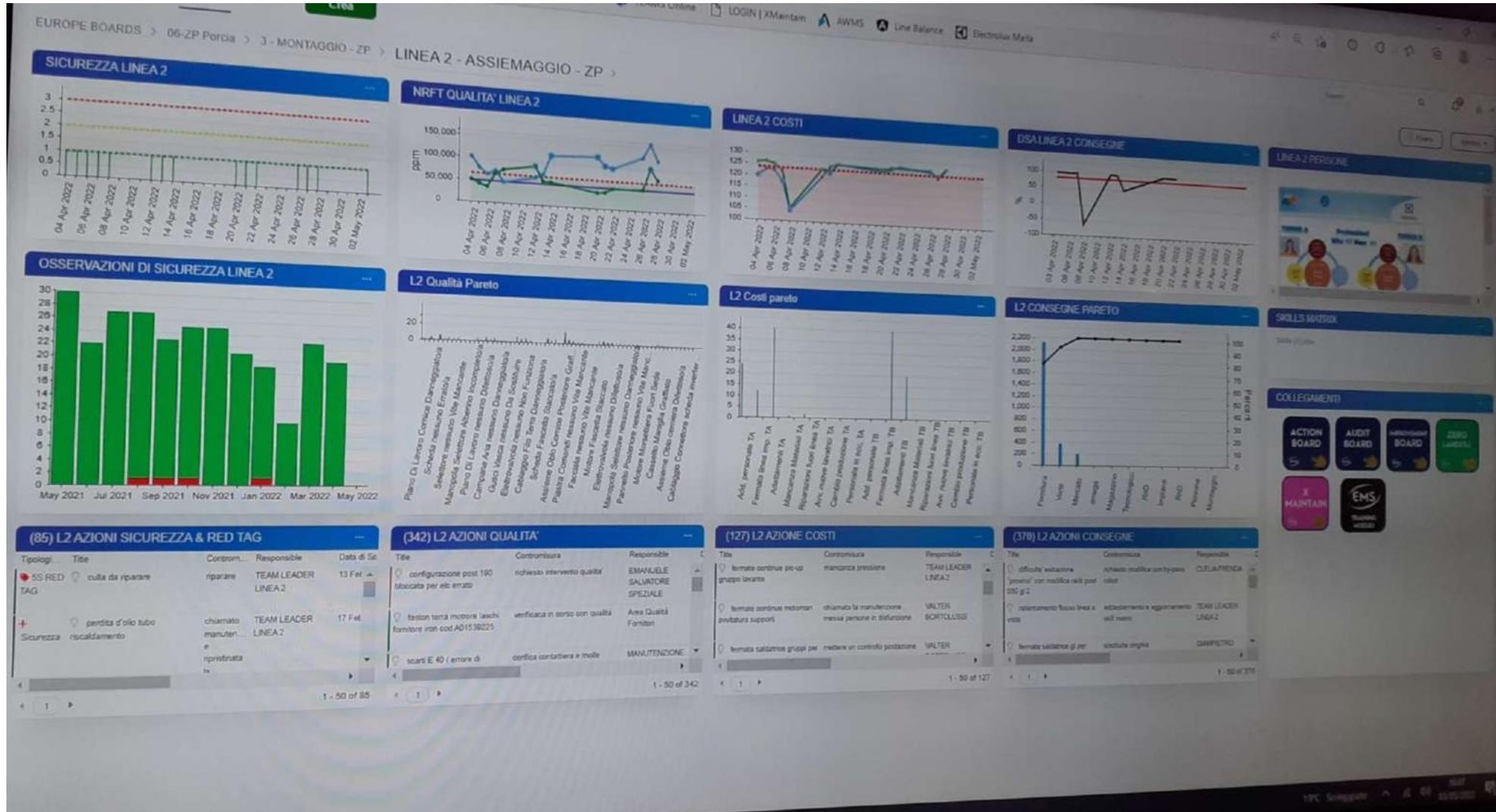
4° industrial Revolution (advanced)

Some photos and video– AGV in the warehouse (like Amazon)

4° industrial revolution
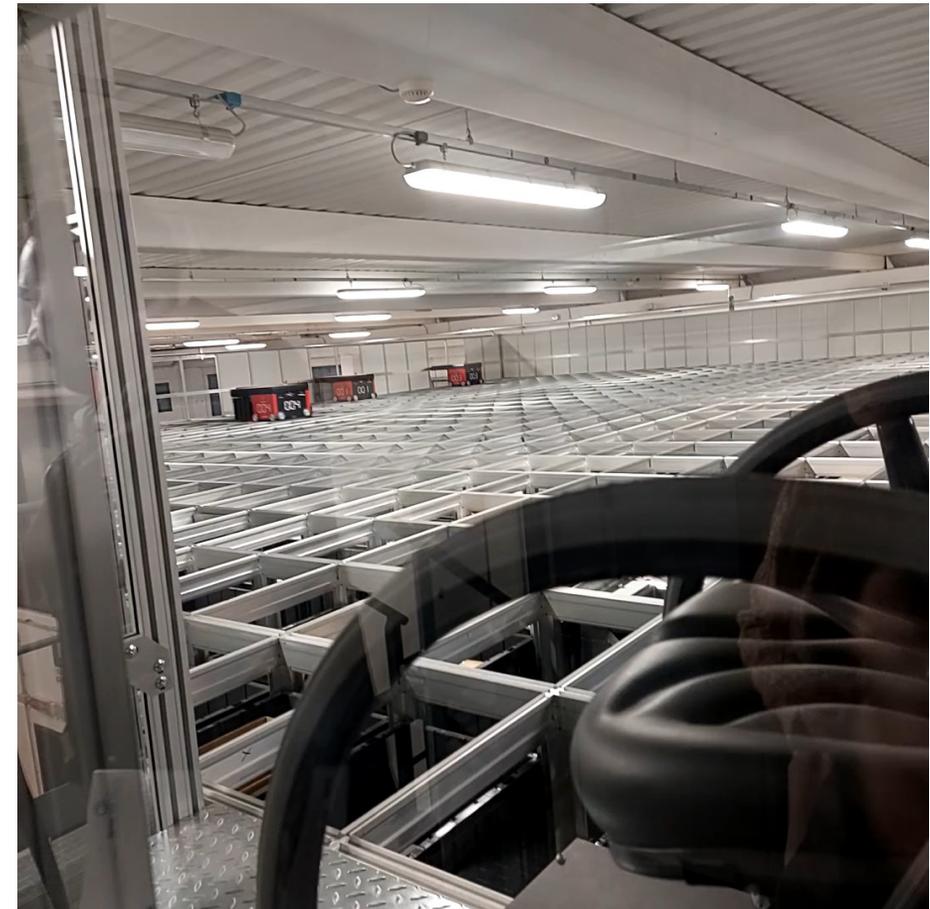
Machine monitoring – digital shadow
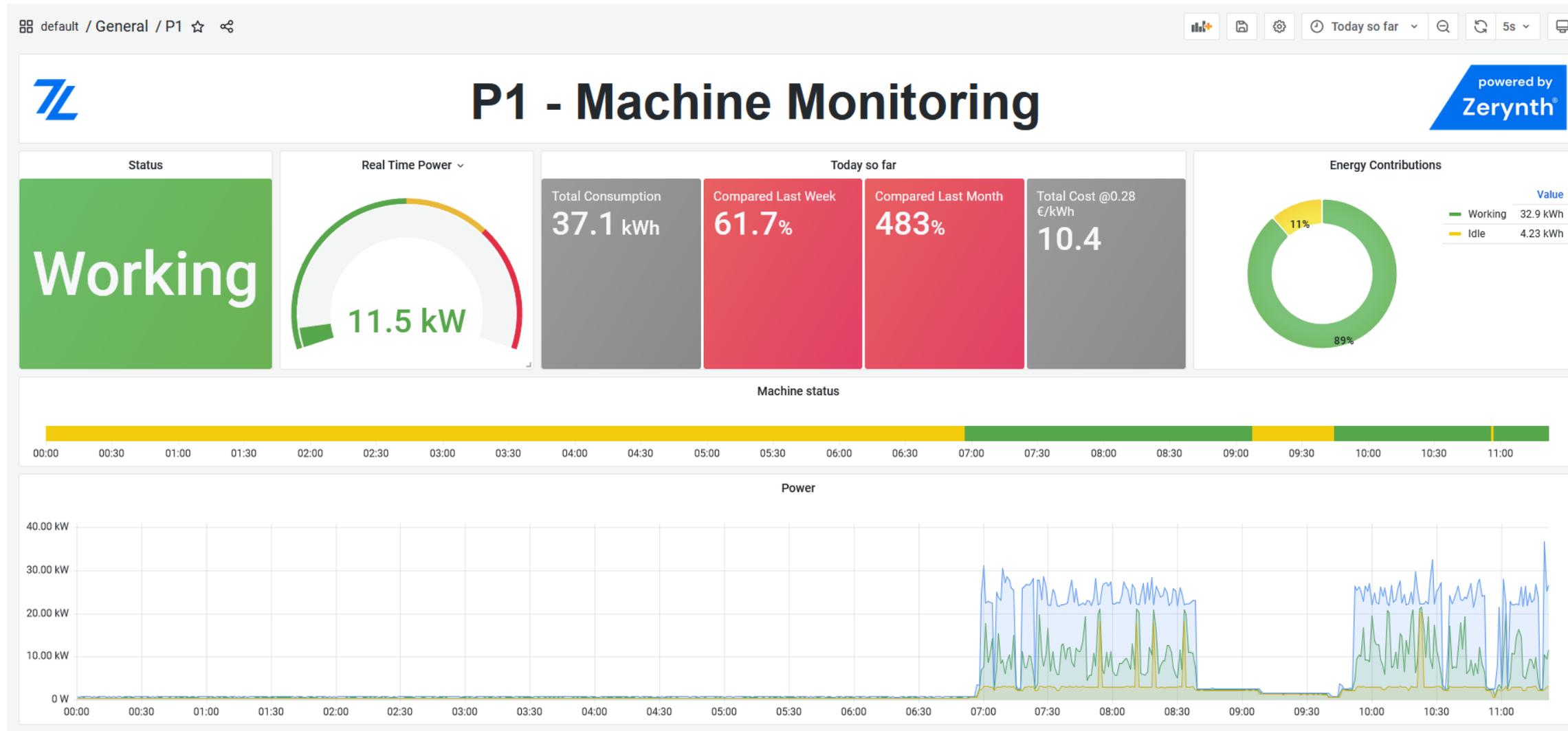
Agenda

1. **Introduction to Industry 4.0**

2. **How to guide a Digital Transformation Project**

3. **Digital Transformation Projects: evidences from the FVG firms**

4. **Conclusions + Q&A**

Conclusions

- Digitization is an opportunity to increase the competitive advantage of businesses.

- An important ecosystem to support digitization has been developed (especially in FVG), and companies are continuously seeking professional figures in this field.

- There is a latent need for technology implementation that must be rapidly transferred from universities and tech providers to businesses, and the Technology Hub is an accelerator of this transfer!

Digital Bibliography Fornasier – Industry4business.it

Focus Articoli	Link riferimento
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Lean and Digital	https://www.industry4business.it/industria-4-0/lean-e-digital-motori-dellefficienza-operativa-aziendale/
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Digital Transformation Journey – Q&A

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QR Code Linkedin
profile

**THANKS FOR
YOUR ATTENTION**

*"Computers are incredibly fast, accurate, and stupid.
Men are incredibly slow, inaccurate, and intelligent.
The combination of the two constitutes an incomprehensible force."*
Albert Einstein