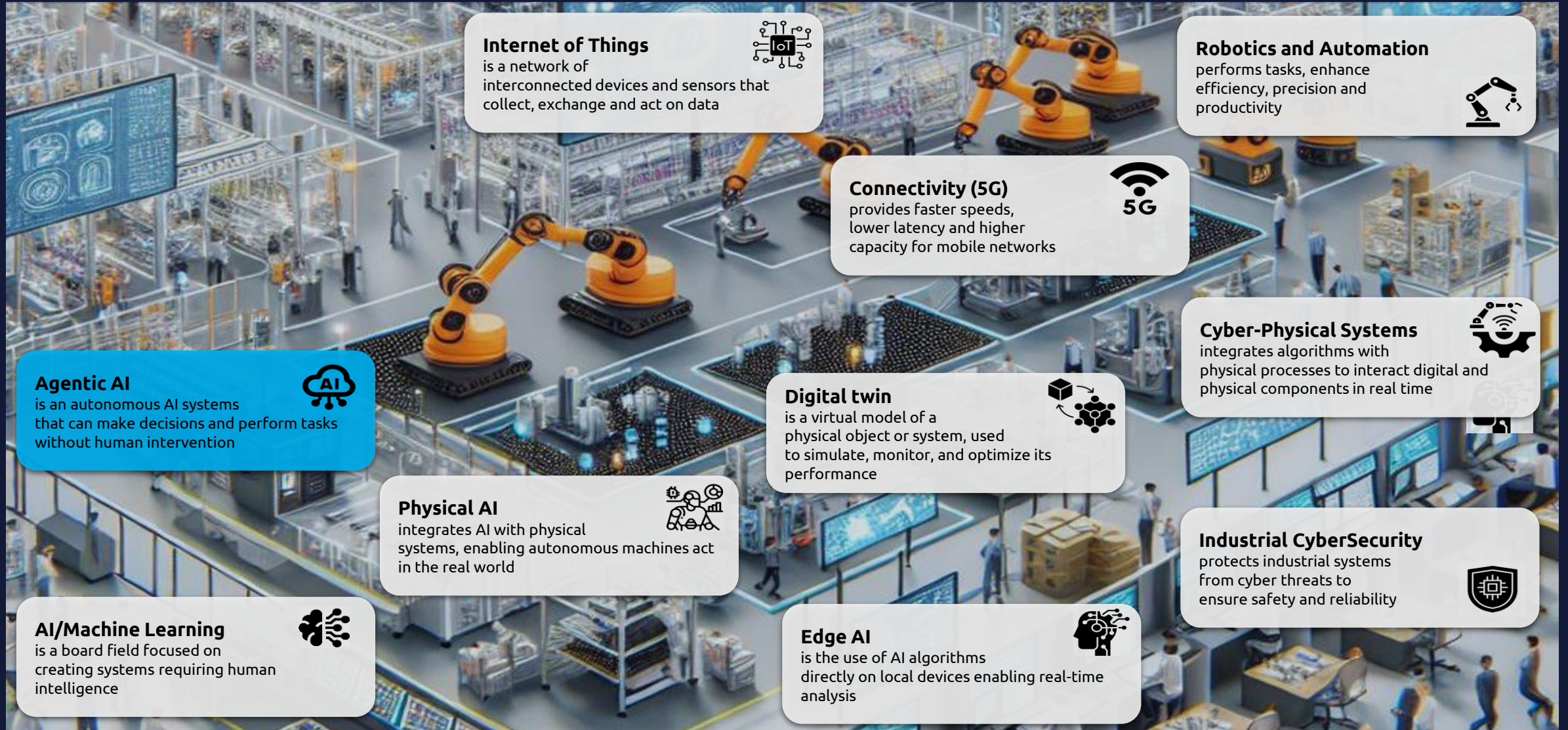


# Predictive performance and Supply Chain powered by (Gen)AI/ML

To improve process control, quality and adjustability

April 2026

# There are plenty of capabilities that will shape the future of manufacturing and supply chain. Today we will zoom into the potential of Agentic AI



## Internet of Things

is a network of interconnected devices and sensors that collect, exchange and act on data



## Robotics and Automation

performs tasks, enhance efficiency, precision and productivity



## Connectivity (5G)

provides faster speeds, lower latency and higher capacity for mobile networks



## Agentic AI

is an autonomous AI systems that can make decisions and perform tasks without human intervention



## Digital twin

is a virtual model of a physical object or system, used to simulate, monitor, and optimize its performance



## Cyber-Physical Systems

integrates algorithms with physical processes to interact digital and physical components in real time



## Physical AI

integrates AI with physical systems, enabling autonomous machines act in the real world



## Industrial CyberSecurity

protects industrial systems from cyber threats to ensure safety and reliability



## AI/Machine Learning

is a board field focused on creating systems requiring human intelligence

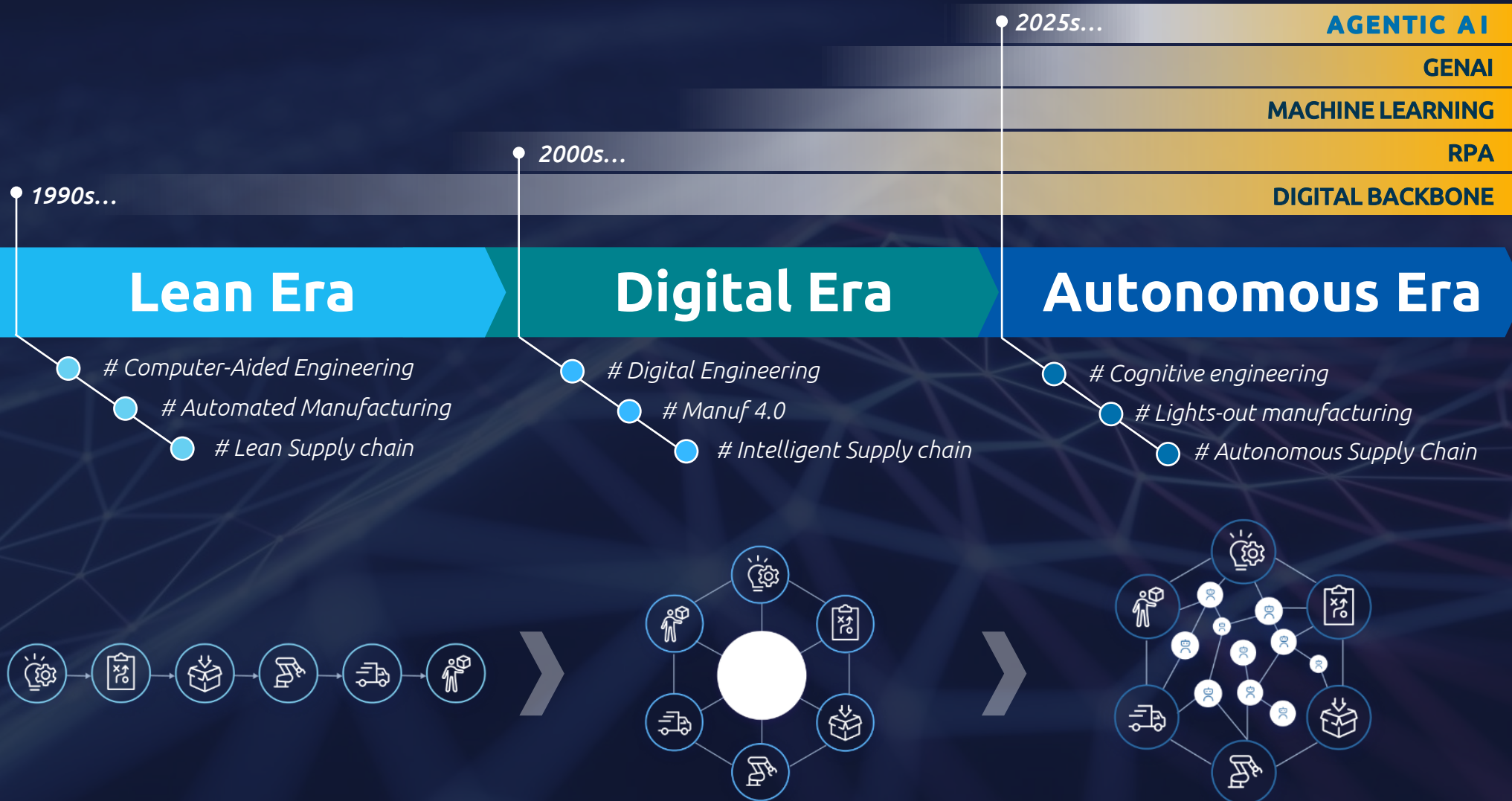


## Edge AI

is the use of AI algorithms directly on local devices enabling real-time analysis



# Agentic AI brings game changer capabilities unlocking unseen opportunities through more autonomous & goal-oriented systems.



Are you ready for the leapfrog to the Autonomous era ?

**20 %**

of all processes will be automated by semi-autonomous AI agents in the next 3 years <sup>(1)</sup>

**75 %**

of executives believe AI agents will reshape the workplace more than the internet did <sup>(1)</sup>

**44 %**

of executives plan to implement AI agents within the next 12 month <sup>(1)</sup>

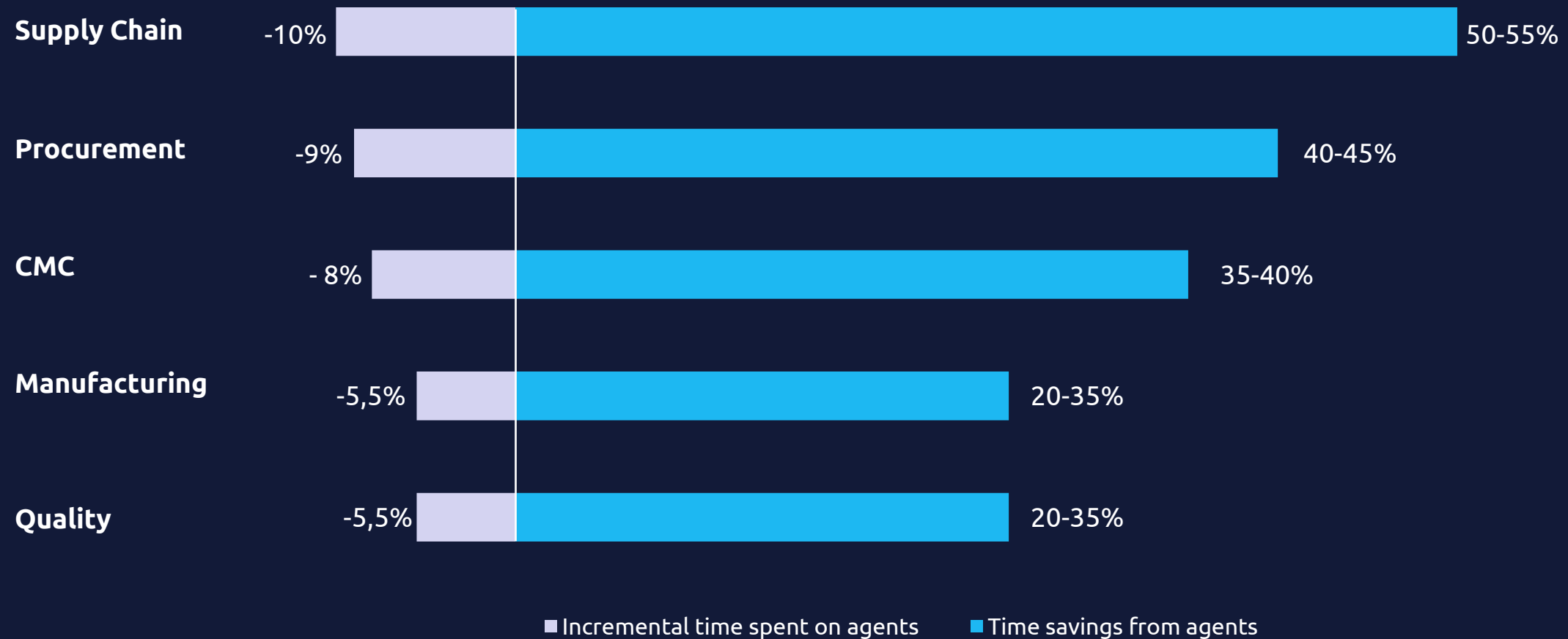
(1) Capgemini Research Institute



# Agentic AI is expected to reduce the time required for key tasks in supply chain and manufacturing with up to 55% and 35% respectively

These savings do come at a cost of additional time required to manage agents

## Time savings from Agentic AI in Life Science companies, across functions<sup>(1)</sup>



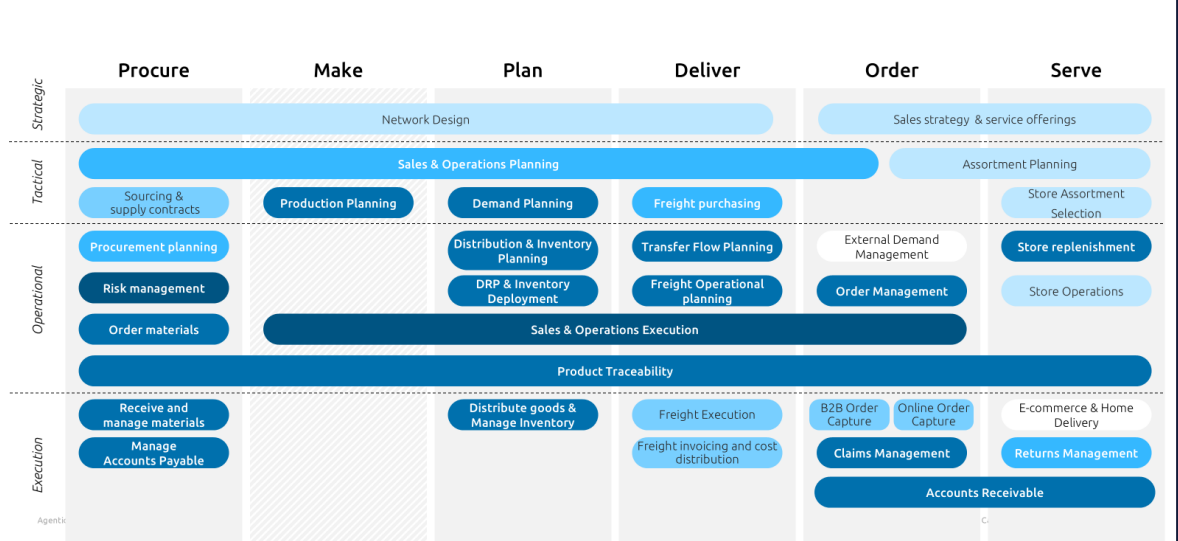
(1) McKinsey & Company



# We already identified the high potential processes for “Agentification” across supply chain and manufacturing, based on benefits and feasibility

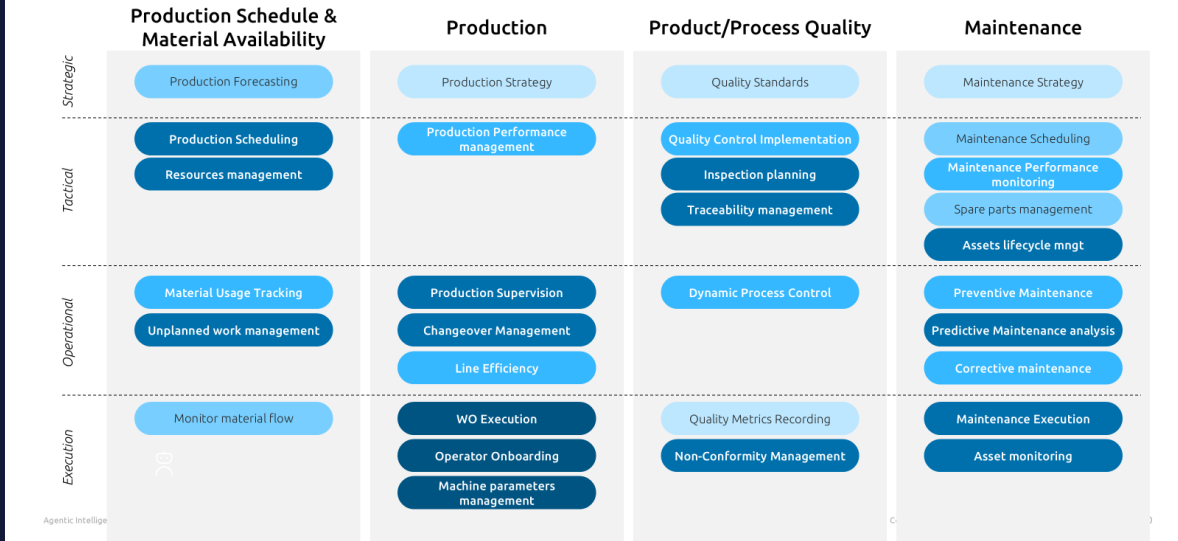
## SUPPLY CHAIN PROCESSES

The “Agentification” potential of Supply Chain processes based on the potential benefits and feasibility



## MANUFACTURING PROCESSES

The “Agentification” potential of Manufacturing processes based on the potential benefits and feasibility



**Life Sciences**

Accelerate leadership reporting with intelligent prototypes and consolidated supply chain insights  
# Planning



**Automotive**

Accelerate the assessment of supply chain risks thanks to an Agentic AI solution  
# Risk Management



**Life Sciences**

Accelerate QC method analysis in the labs by analyzing past LIRs to summarize trends and root causes  
# Quality Control



**Steel & metals**

Decreased LNG consumption by ~2% by combining machine learning and scenario analysis capabilities into an AI agent  
# Process Control

# Meet Shopfloor Fellow

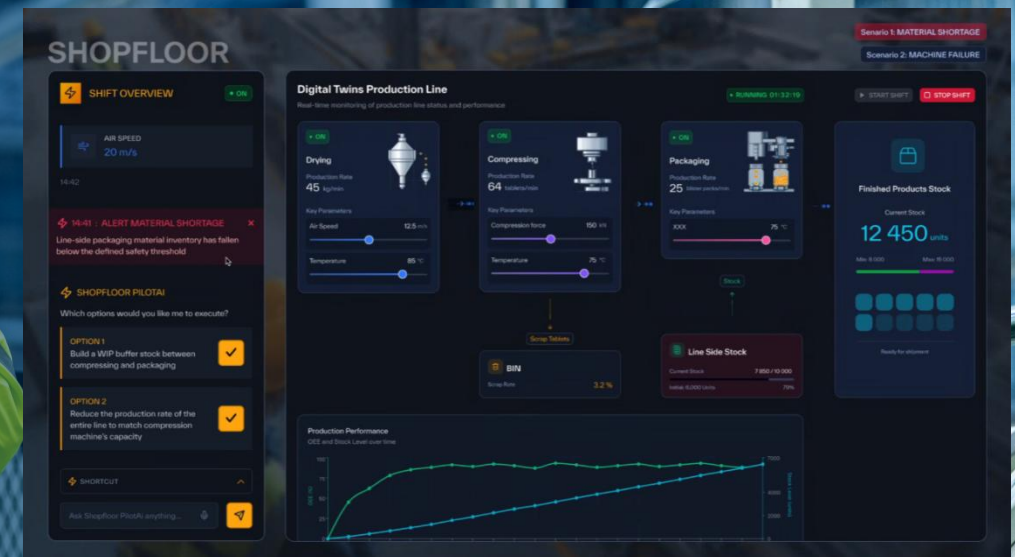
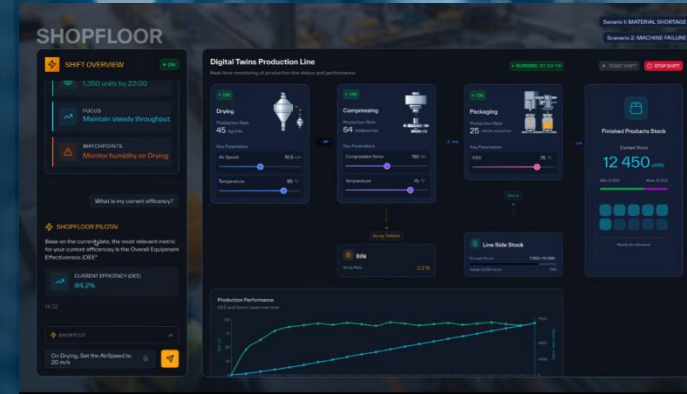
## What if line managers had the power to make decisions faster, with more confidence?

Shopfloor Fellow is a solution that detects OEE losses, performs root-cause analysis, and can adjust selected process & production parameters.

Its role is to act as an operational co-pilot for production teams. The companion synthesizes shopfloor data, generates clear insights and reports, and proposes mitigation plans with full impact analysis. It also ensures seamless dissemination of managerial decisions, enabling line managers to steer operations more efficiently allowing them to focus on their core levers: team development, performance drivers, and non-quality root-cause elimination.

The outcome?

- Enhanced operational efficiency and speed
- Reduced expertise loss as experienced workers retire
- Future-ready workforce.



# Case study: EGA's Shopfloor Fellow combines descriptive, predictive, and prescriptive power to support frontline managers



The Shopfloor Fellow **transforms the frontline manager's daily workflow.**

Frontline manager interact with the Fellow using **natural language**, either through text or voice commands.

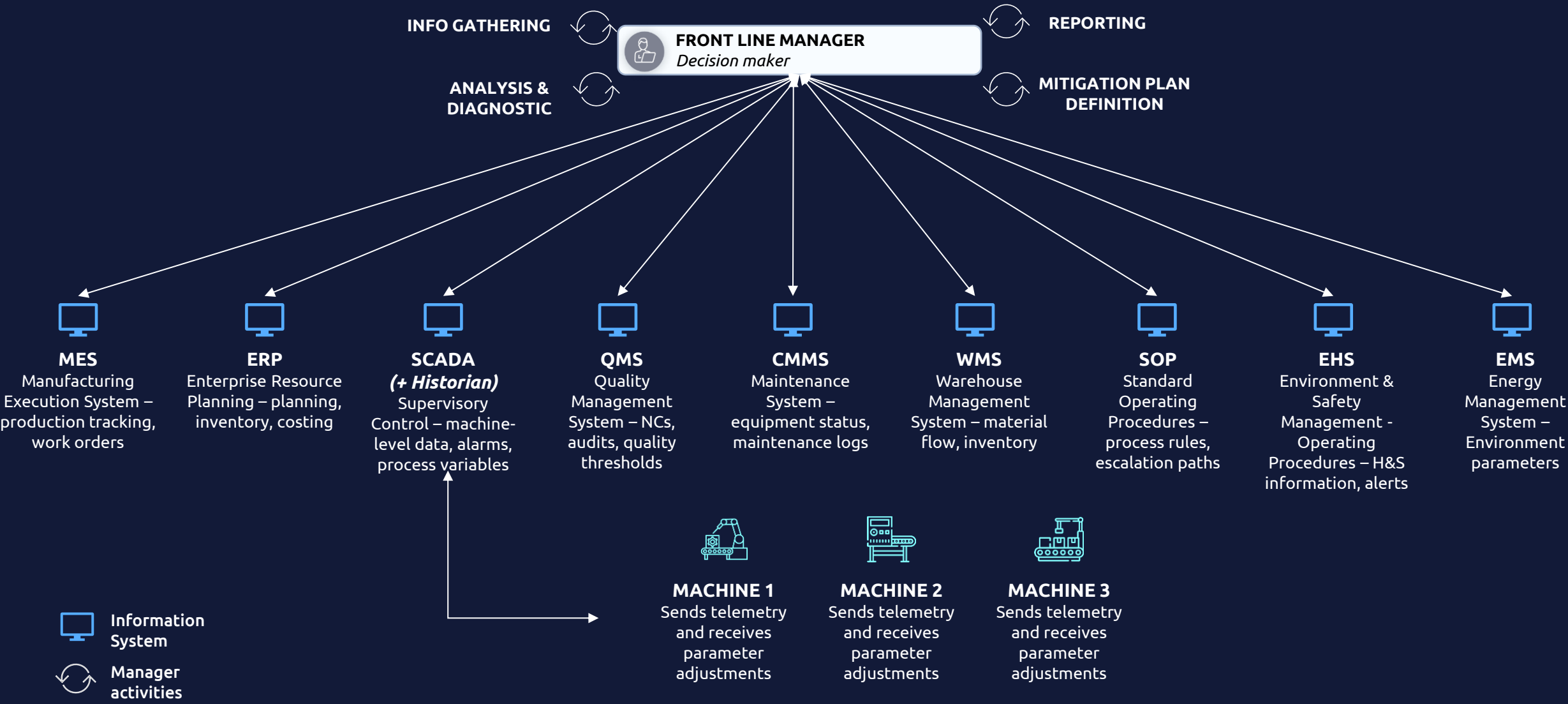
The assistant not only responds to manager requests but also proactively addresses alerts and provides **guidance on decision making** by connecting to production data and other systems.

This solution, modular by design, can be adapted to each industry specific production process.

**Empowering frontline manager with seamless, intuitive interactions for enhanced productivity and decision making**

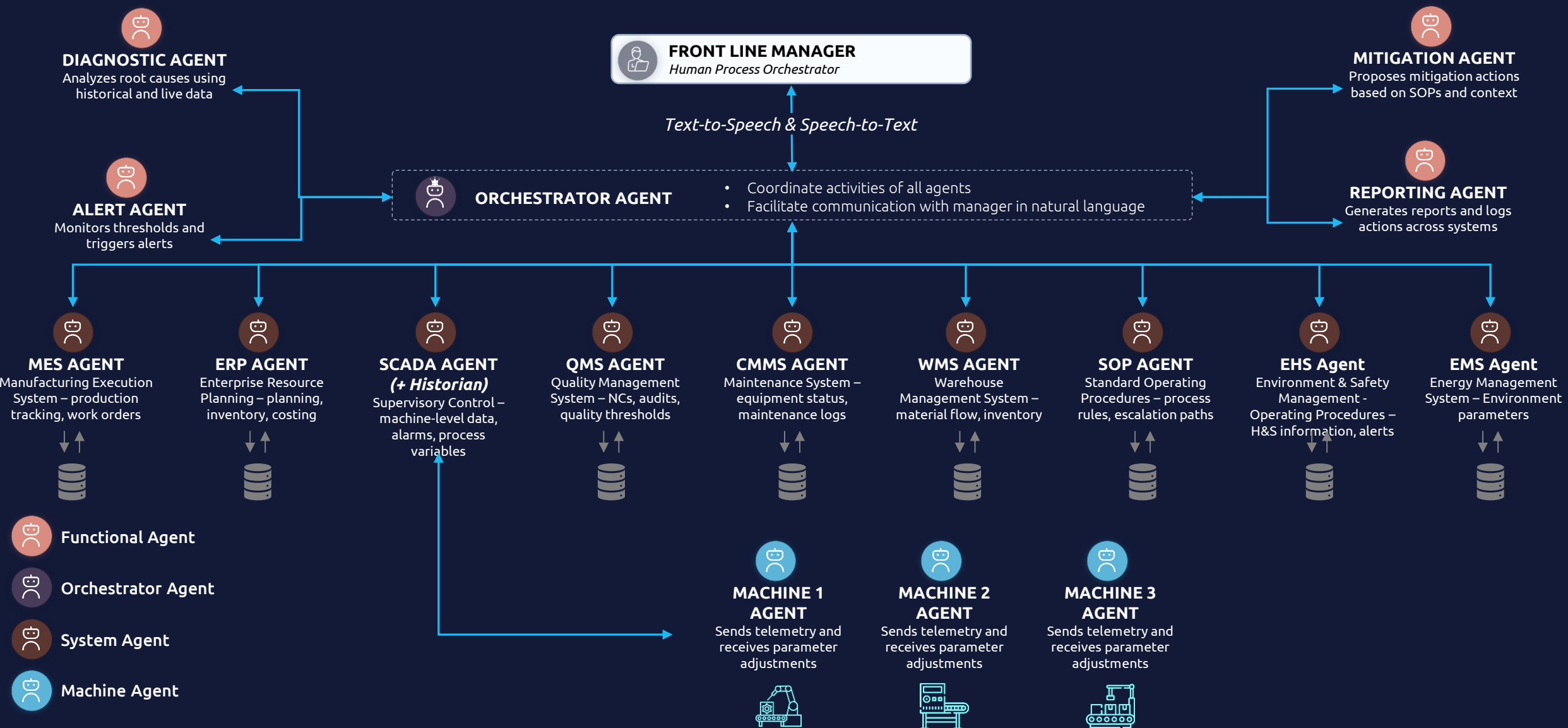


# In doing so, Shopfloor Fellow addresses the complex AS-IS decision ecosystem that front line managers need to master





# To do so, it leverages a multi-agent ecosystem to streamline decision making



# Shopfloor Fellow demo



Capgemini

08:01 Tue, Feb 3

SHOPFLOOR FELLOW

SHIFT BRIEFING 882u prev 0s down ACTIVE

Trigger Packaging Material Shortage Trigger Compressing Machine Error

### Digital Twins Production Line

Real-time monitoring - Shift: USER-TJFBVB95\_SHIFT1 Tue, Feb 3 · 08:01:19

x1 x10 x60 RUNNING START PAUSE STOP INFO

Production Line CMMS

**Running**

#### Drying

Production Rate  
**0.880 kg/min**

Key Parameters

Air Speed **2.1 m/s**

Temperature **59.9 °C**

**Running**

#### Compressing

Production Rate  
**775 tablets/min**

Key Parameters

Compression Force **10.0 kN**

**Running**

#### Packaging

Production Rate  
**77.5 bottles/min**

Key Parameters

Tablets per Pack **10**

#### Finished Products Stock

Current Stock  
**102 units**

Min: 8,000 Max: 15,000

Below threshold - build more stock

**Bin**

Scrap Rate **11.0 %**

#### Line Side Stock

Current Stock **3,898 / 10,000**

Initial: 4,000 Units 39%

#### Production Performance

OEE and Stock Level over time

Time	OEE (%)	Stock
08:00:00	~75	~4,000
08:00:20	~75	~4,000
08:00:40	~75	~4,000
08:01:00	~75	~4,000
08:01:19	~75	~4,000

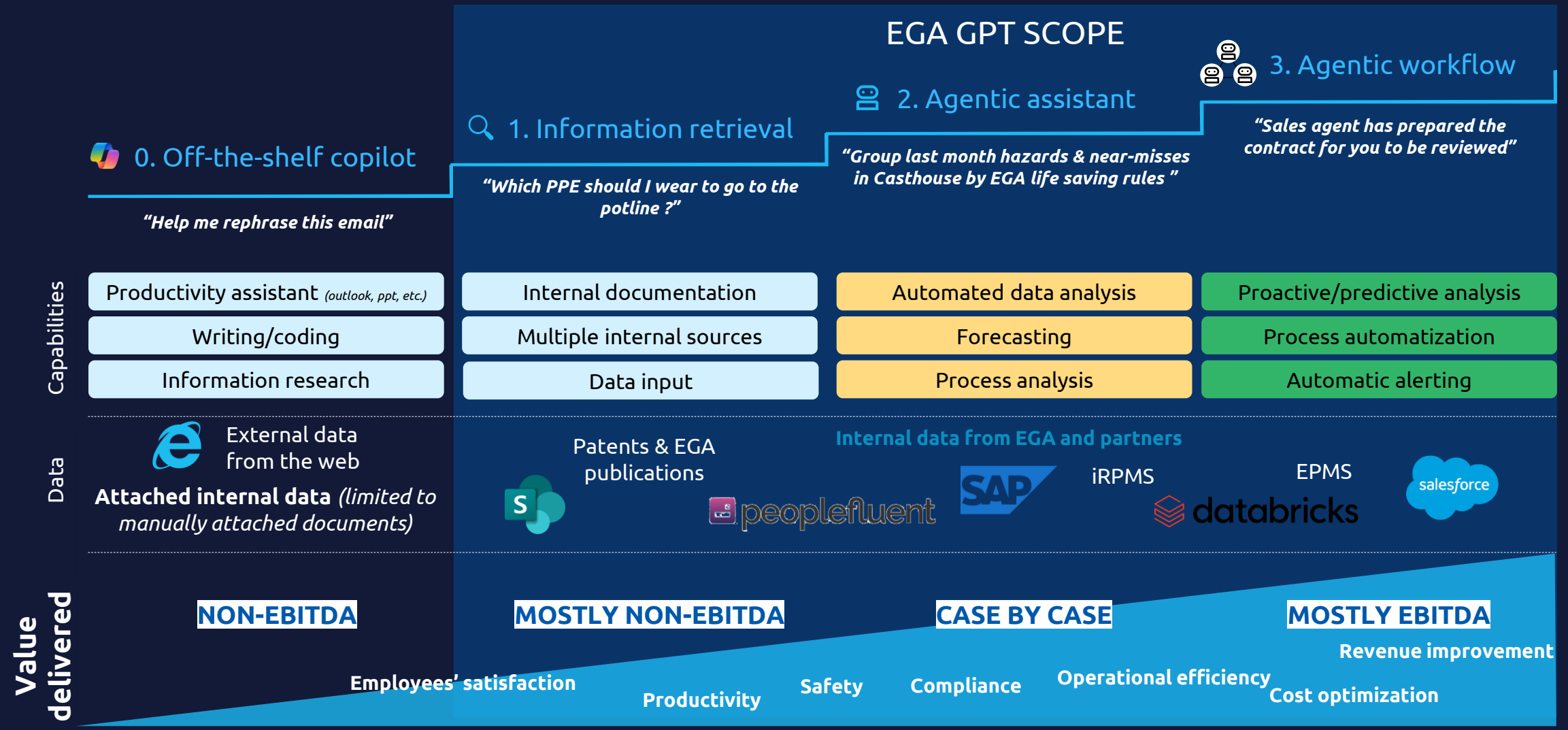


# EGA's Shopfloor Fellow is an ongoing project that is scaling over time. Here is what we achieved in 12 months so far:

<b>1</b> Business impact	<b>6</b> departments involved: <i>Corporate &amp; Operations from upstream to downstream</i>	<b>150+</b> users of the beta version <i>from Safety, Reduction, Human Capital, Carbon &amp; Port</i>	<b>6</b> business workflows being tested in beta
<b>2</b> Agentic orchestration	<b>20+</b> agents delivered <b>6+</b> agentic orchestration	<b>12</b> MCP agentic tools <i>(data analysis, data query, summarizing, orchestration, intent detection, etc.)</i>	<b>3</b> types of agent orchestrators
<b>3</b> Data	<b>7</b> enterprise connectors <i>(SAP BO, Databricks, Sharepoint, Azure SQL, AI Search, Blob Storage)</i>	<b>2 500</b> policies & procedures in beta version <i>from DMS</i>	<b>10+</b> source data connected through Databricks <i>(incidents, hazards, inspections, potlines, etc.)</i>
<b>4</b> State-of-the-art architecture	<b>2</b> services approved by EGA Design Authority	<b>1</b> unique and scalable architecture for all	<b>3</b> separated environments from dev to production



# It's been an incremental journey which started with GenAI, moved to Agentic Assistants, and is now aiming for Agentic Workflows to deliver tangible value



# Experts



**Reinout Mensaert**  
Data & AI Senior Manager

[reinout.mensaert@capgemini.com](mailto:reinout.mensaert@capgemini.com)



Let's connect!



**Nitany Gueyes**  
Smart Plant & Operations Director

[nitany.gueyes@capgemini.com](mailto:nitany.gueyes@capgemini.com)



Let's connect!



Thank  
you.

Make it *real.*

