AGILE @ Scale

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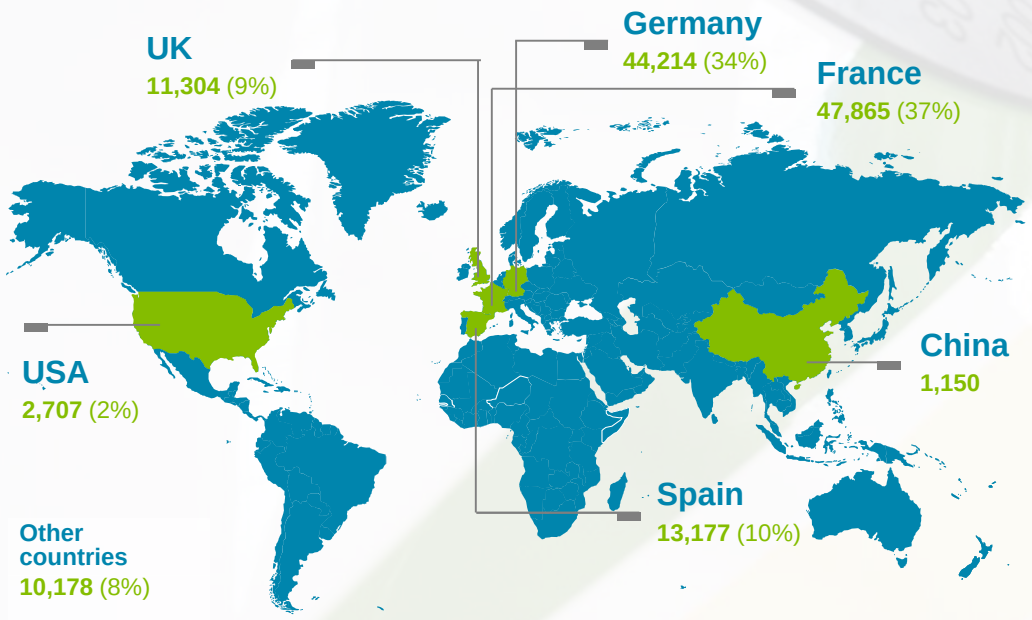
AIRBUS

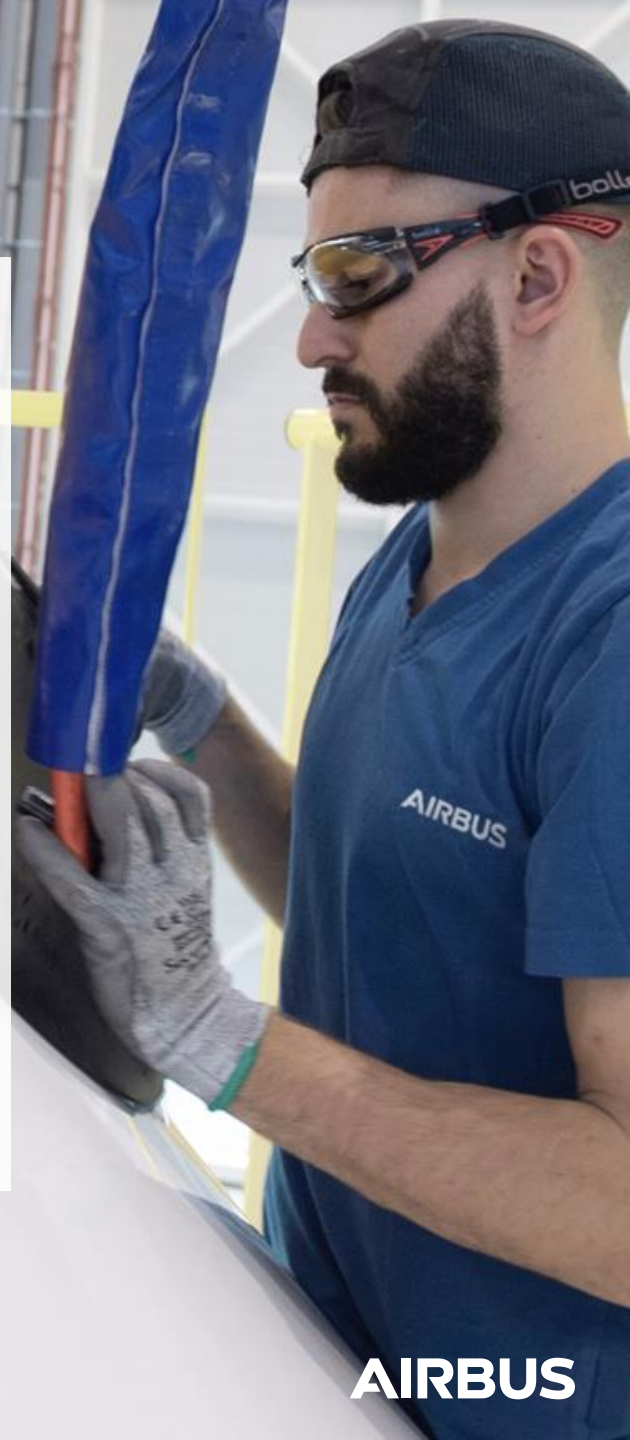
A Global Company



129,442 employees
from **135** nationalities

Located across **35** countries
on more than **180** sites

International Sales
31% Europe
69% Non-Europe



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A growth story

Airbus makes a vital and growing contribution to the economies of its home countries and the wider world – fuelling prosperity around the globe.

2017 Revenue

€59 bn*

12,000 Suppliers from more than **100** countries

2017 Ebit

€3.4 bn

* restated for IFRS 15

Order Book Growth

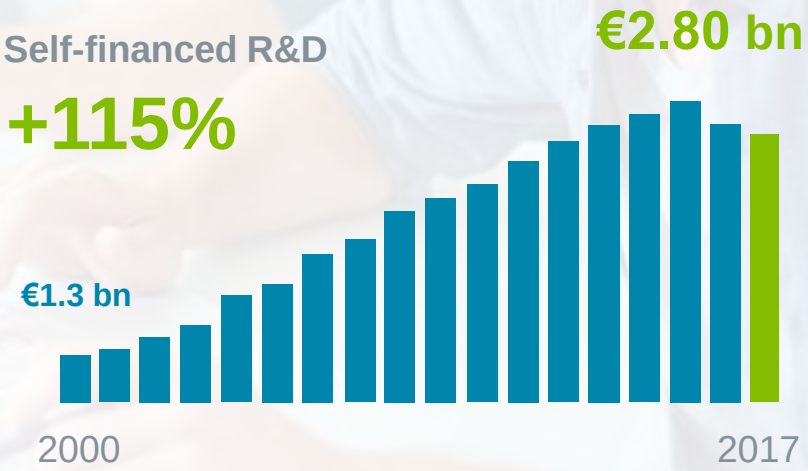
+650%

Order Intake

+220%

Self-financed R&D

+115%



Our strategy

Position as a leader

- **Strengthen market position** and profitability, while remaining a leader in Commercial Aeronautics.
- Preserve leading position in European Defence, Space and Government markets.

Utilise strategic levers

- Exploit **incremental innovation** potential within product programmes, while pioneering and fostering disruptions in our industry.
- Exploit **digitalisation** to enhance our products, services and operations, as well as pursue new business models.
- **Adapt** to a more global world and move closer to international markets.
- Focus **services** on and around platforms.
- Strengthen value chain position.

Deliver the results accordingly

- Focus on profitability, value creation, and market position – no need to chase growth at any cost; **actively manage portfolio.**

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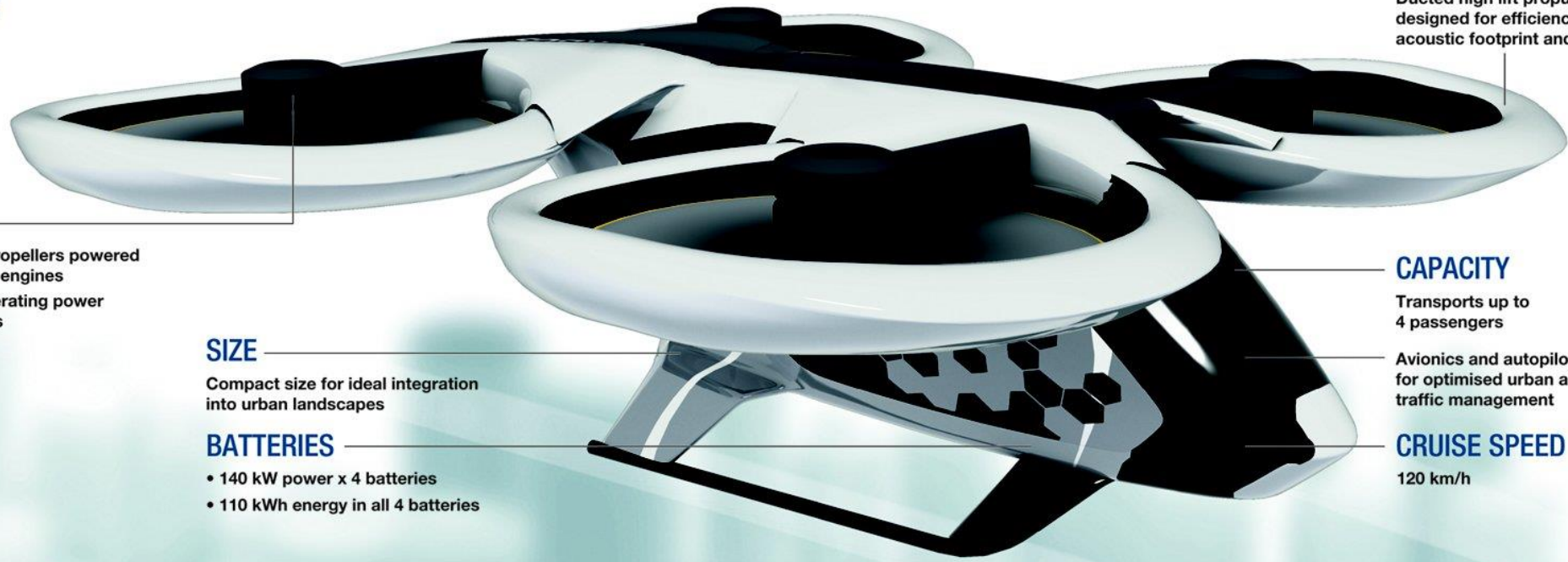
CityAirbus

A multi-passenger, self-piloted electric vertical takeoff and landing (VTOL) demonstrator designed for urban air mobility with cost efficiency, high-volume production and a low environmental footprint in mind.

AUTONOMY

15 minutes



Ducted high lift propulsion units designed for efficiency, low acoustic footprint and safety

ENGINES

- 8 fixed pitch propellers powered by direct drive engines
- 8 x 100 kW operating power electric motors

SIZE

Compact size for ideal integration into urban landscapes

BATTERIES

- 140 kW power x 4 batteries
- 110 kWh energy in all 4 batteries

CAPACITY

Transports up to 4 passengers

Avionics and autopilot built for optimised urban air traffic management

CRUISE SPEED

120 km/h

Making CityAirbus a reality

2015

Feasibility study

Study confirms that CityAirbus will meet operating cost targets and safety requirements to be certified for public use

2016

Full scale component testing

Key technologies demonstrated at full size

Flight testing with small scale drone

Control algorithms and flight mechanics developed

2017

Demonstrator team created

Collaborative team of highly dynamic and experienced engineers set up

2018

Full size demonstrator

Full-scale in-flight demonstration and verification of a full electric, RPM-controlled multi-propeller vertical takeoff and landing (VTOL)

2023

CityAirbus takes to the sky

Fully certified CityAirbus becomes part of public urban transport mix, in conjunction with upgraded urban air traffic management

Benefits of adding the third dimension to urban transport networks

1 URBAN DEVELOPMENT

The third dimension increases the geographic accessibility to remote and underserved areas of the city

2 HIGHER SPEED AND RANGE

Self-piloted flying vehicles can operate at three times the speed of the average road vehicle and extend commuters' geographical reach by tenfold

3 ENVIRONMENTAL FOOTPRINT

Self-piloted flying vehicles are fueled by electricity and are energy efficient

Our Projects landscape

Project types	*Project Management Stakes*
Flying products Programmes	• Technical complexity • Hundreds of teams to coordinate • Stretch schedule with impacts on Corporate Strategy
IS Projects	• Reliability of the delivery model • Reactivity to secure business continuity • Size of deployment (often thousands of users)
Business Improvement Projects or Portfolio	• Business operations understanding • Change Management • Benefits realisation
Research & Technology	• Long lasting projects (>10 years) • Coordination with external partners – Universities…
Buildings & Infrastructure	• CAPEX Projects on critical path for Airbus Strategy (industrial ramp-up)

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Our foundations P&PM Center of Competences …. Setting standards

“Enhance our P&PM Culture to deliver on current/future programme commitments”

In 2008

“Operations keeps the lights on, strategy provides a light at the end of the tunnel, but project management is the train engine that moves the organization forward.”

— Joy Gumz

From a “process minded” to “Lean & Agile” Projects, Programme, Portfolio management

Over the last years, pressure has continuously increased on all projects…

Manage the unexpected in an organisation built on predictability

Reduce cycles & improve Time to Market

Transform Business models & solutions, delivery mode

Secure ramp-up up to +800 A/C per year

… leading to necessary adaptation of Project Management Methods

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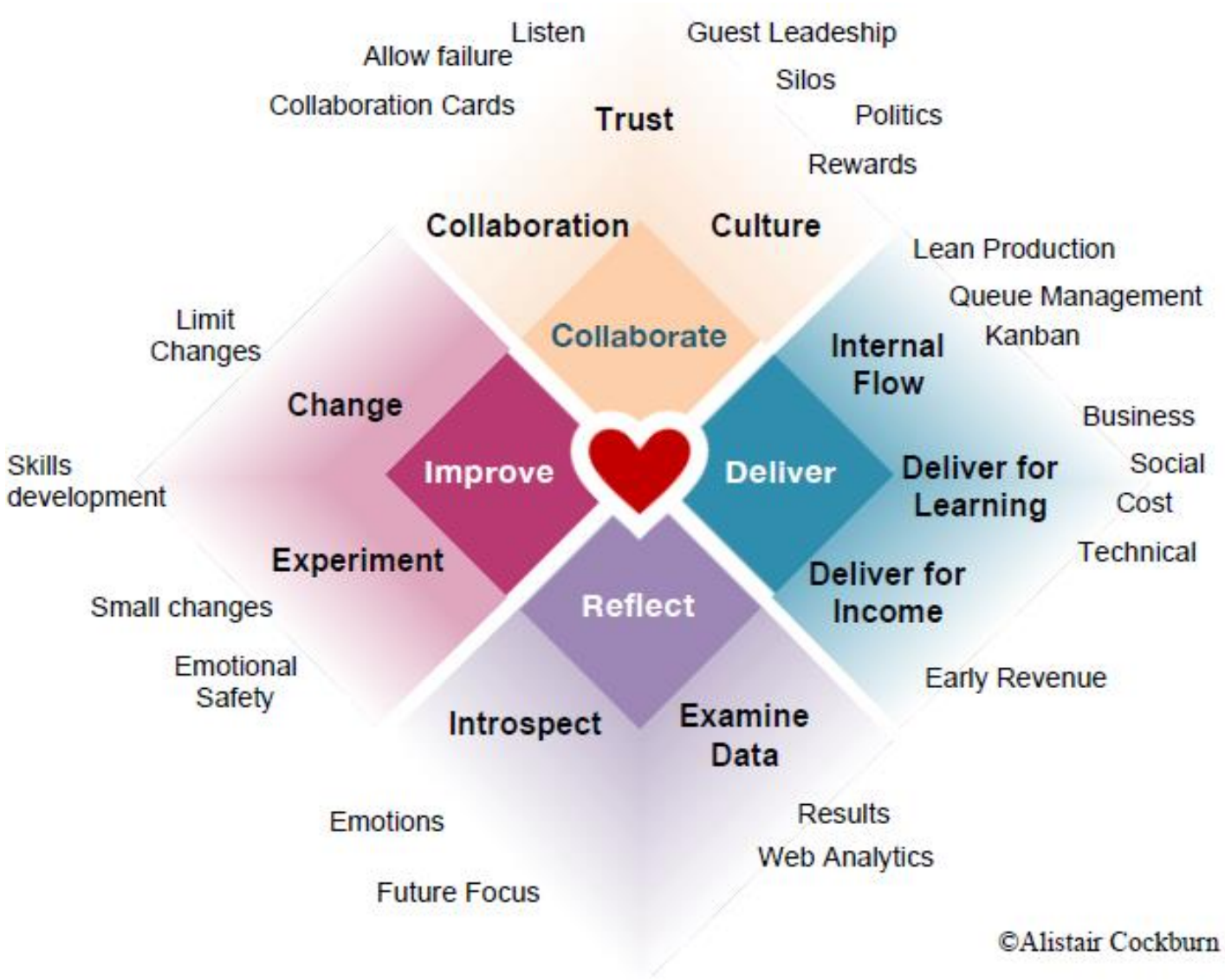
One of Our inspiration - The Heart of Agile – by Alistair Cockburn



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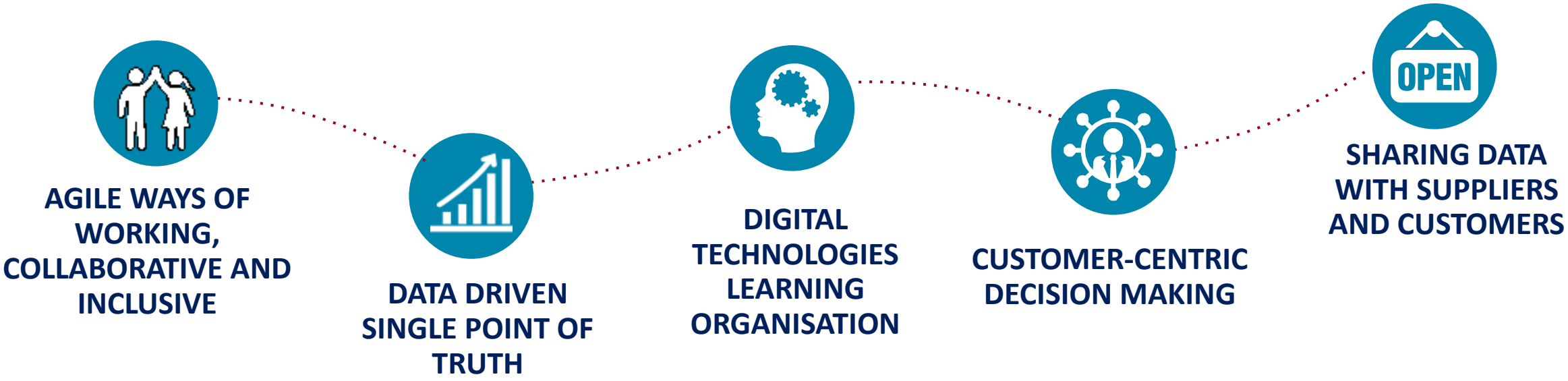
Agile Transformation – People are at the heart of the Transformation



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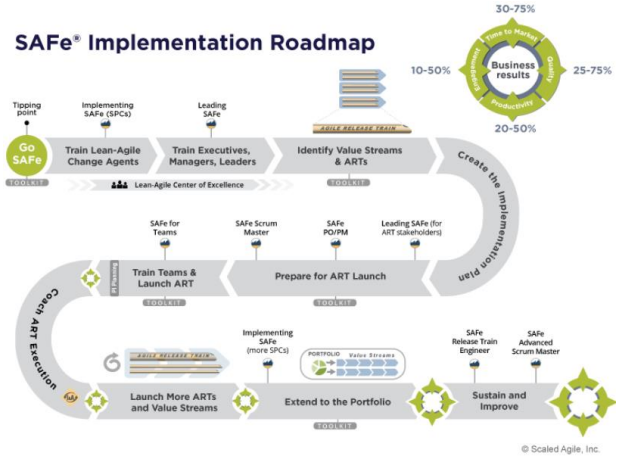
SAFe in Airbus….Where are we today in Engineering and R&T?



Fuselage of Tomorrow (FoT) 1st PI Planning

Sep

2019

Jan

Maintenance of tomorrow 1st PI Planning

Propulsion of Tomorrow (PoT) 1st PI Planning

Feb

2020

InCube Studio 1st PI Planning

Jul

VersionOne for SAFe portfolio

Jun

Tail Centric 1st PI Planning

Electrification 1st PI Planning

Jun

May

R&T RMO 1st PI Planning

Feb

2018

. DISCO 1st PI Planning.
. 7 VS launched un E2E PLM & Eng. Toolset.

Nov

Cabin & Cargo 1st PI Planning

Oct

SkyWise 1st PI Planning

1st ART in E2E Eng. Toolset (DMU)

Feb

2017

May

Apr

1st Portfolio 'E2E PLM & Engineering toolset'

GO SAFe decision for Engineering Toolset (PLM)

Fast growing-up

SAFe in Numbers

Domain	ART	Large Sol.	Portfolio
Engineering Toolset	12	7	1
Skywise	4	1	
ARP	2		
R&T	3		
Air Supply	1		
Transformation	3	1	1

Benefits of Agile and Agile @ scale
Return on Experience on first implementation areas

People engagement

Method based on “information sharing” and **multifunctional teams** creates envy and quick adoption

10 to 50% motivation increase

Value to Business

Stronger **collaboration between Teams**

Time to get end user feedback **from 12 months to 2 to 10 weeks**

Fast Delivery

From 18 months (full result at risk) **to 3/6 months** for a Minimal Viable Product (MVP) for new solutions

Flexibility and reactivity

Regular revision of the backlog to face **evolving business needs**

From 1 year decision cycle to **3 months**

Quality

Demo sessions as cornerstone of project governance

25-75% defect reduction

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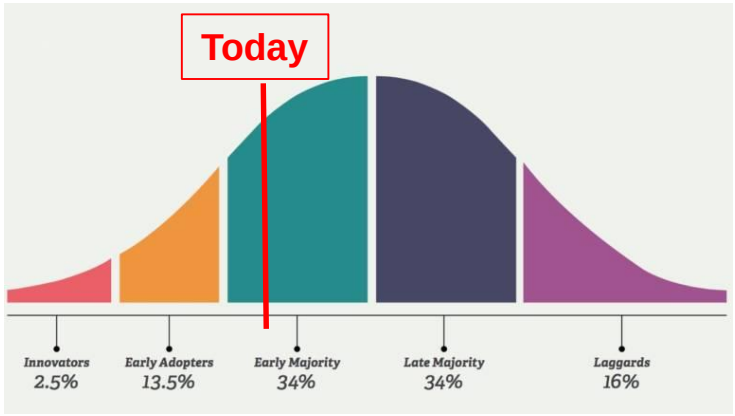
Our deployment philosophy….

Agile Global Squad

Network – all AIRBUS Divisions



- Agile coaches close to Agile teams (IS, Engineering, Operations, Transfo)
- All PMOs also Scrum Masters
- Each new project checks if Agile can bring benefits during set-up

- Next steps
  - Develop Hybrid Agile Framework for non-IT projects
  - Massive Agile Scrum awareness campaign
  - Impediments removal projects (HR, Finance, Procurement)

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Thank you

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