

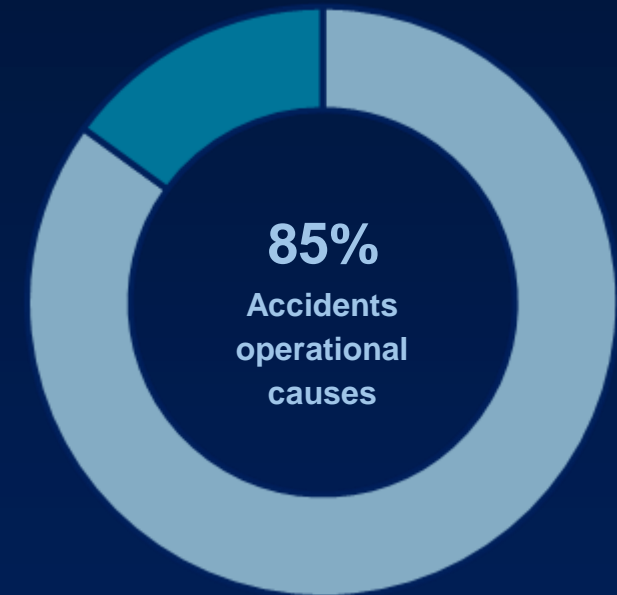
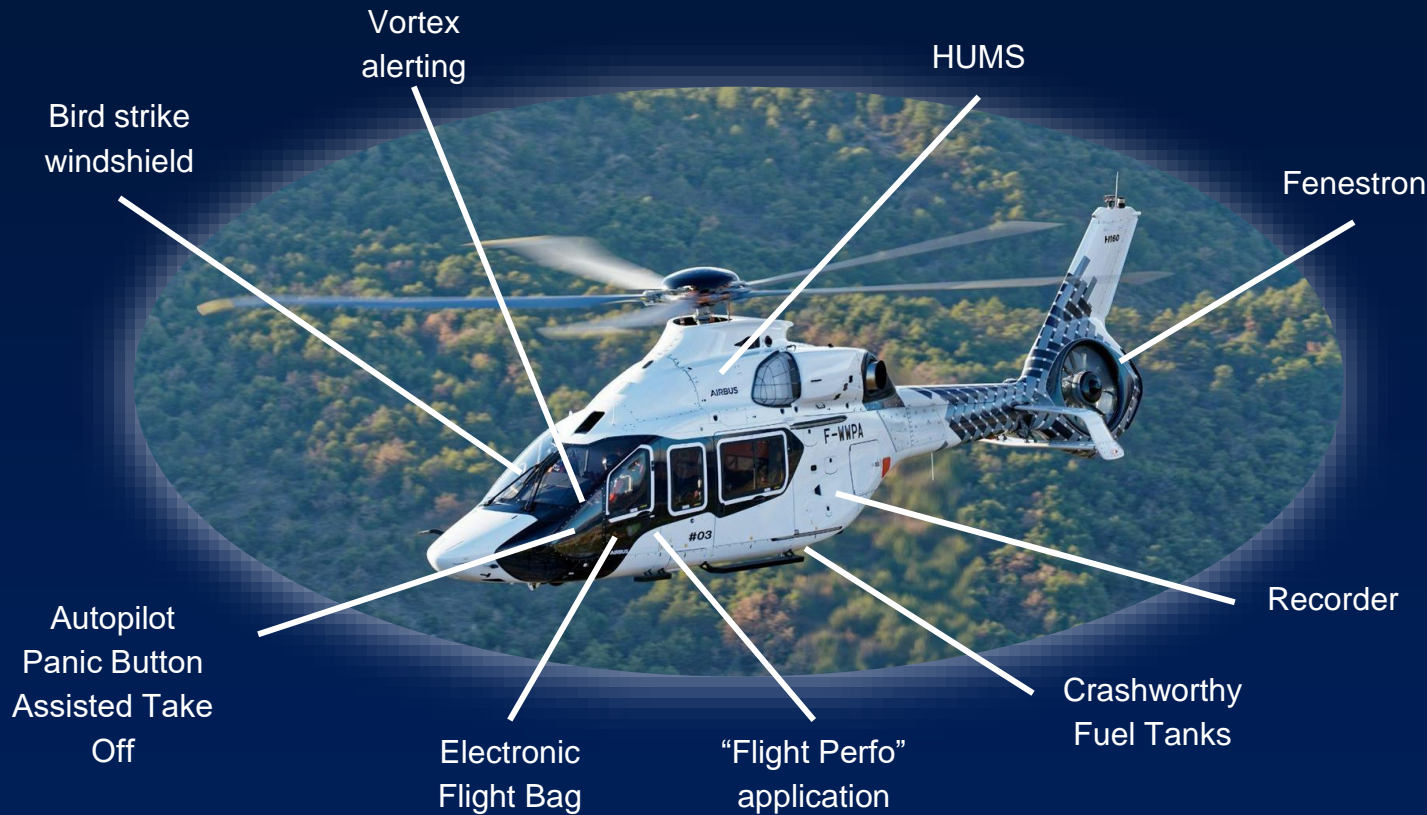
Building smart automation together



EASA VTOL Symposium 2024

Caroline CANIVET
Thierry VANDENDORPE

Aviation safety, our chief priority for today and tomorrow



Already lots of safety improvements
in the past years

Next levers are about
ways of piloting & **automation**

Rotorcraft Automation today and tomorrow

- + Flight Control
- + External Environment
- + Vehicle Management
- + Mission Management

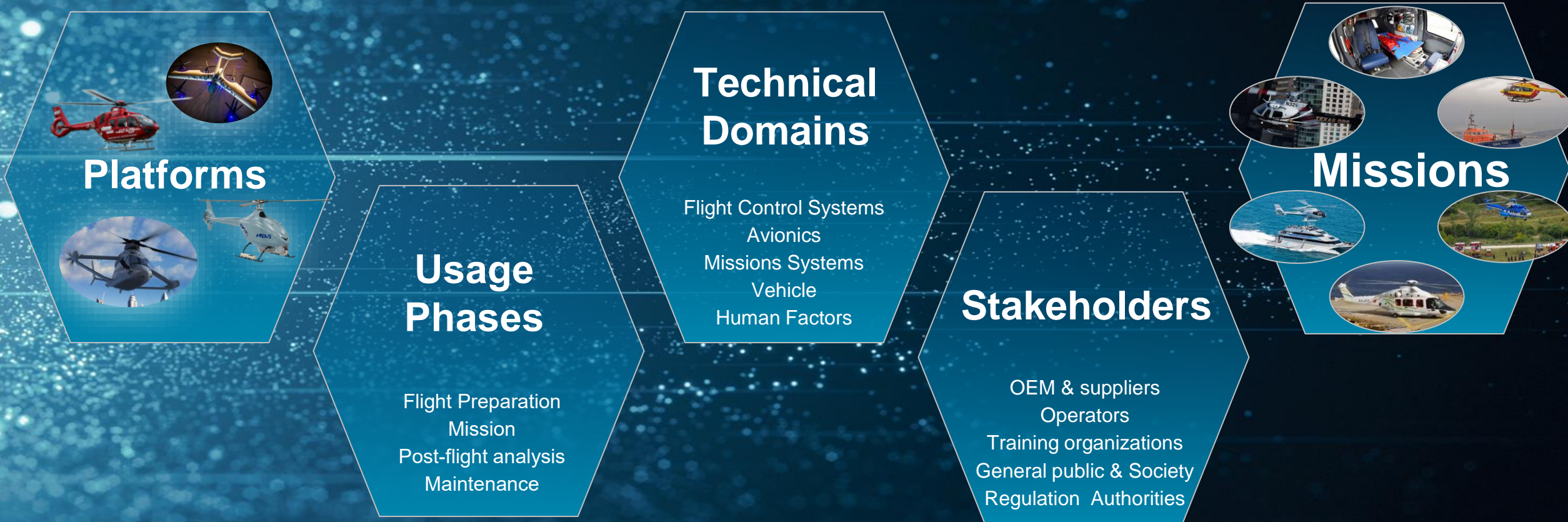
- 😊 Autopilot assistance
- ⚡ Continuous Pilot monitoring
Degraded modes
Failure management



TODAY, the crew workload is still high

TOMORROW, we'll progress towards
an enhanced human/machine teaming

Automation as transverse topic



New challenges : a changing environment

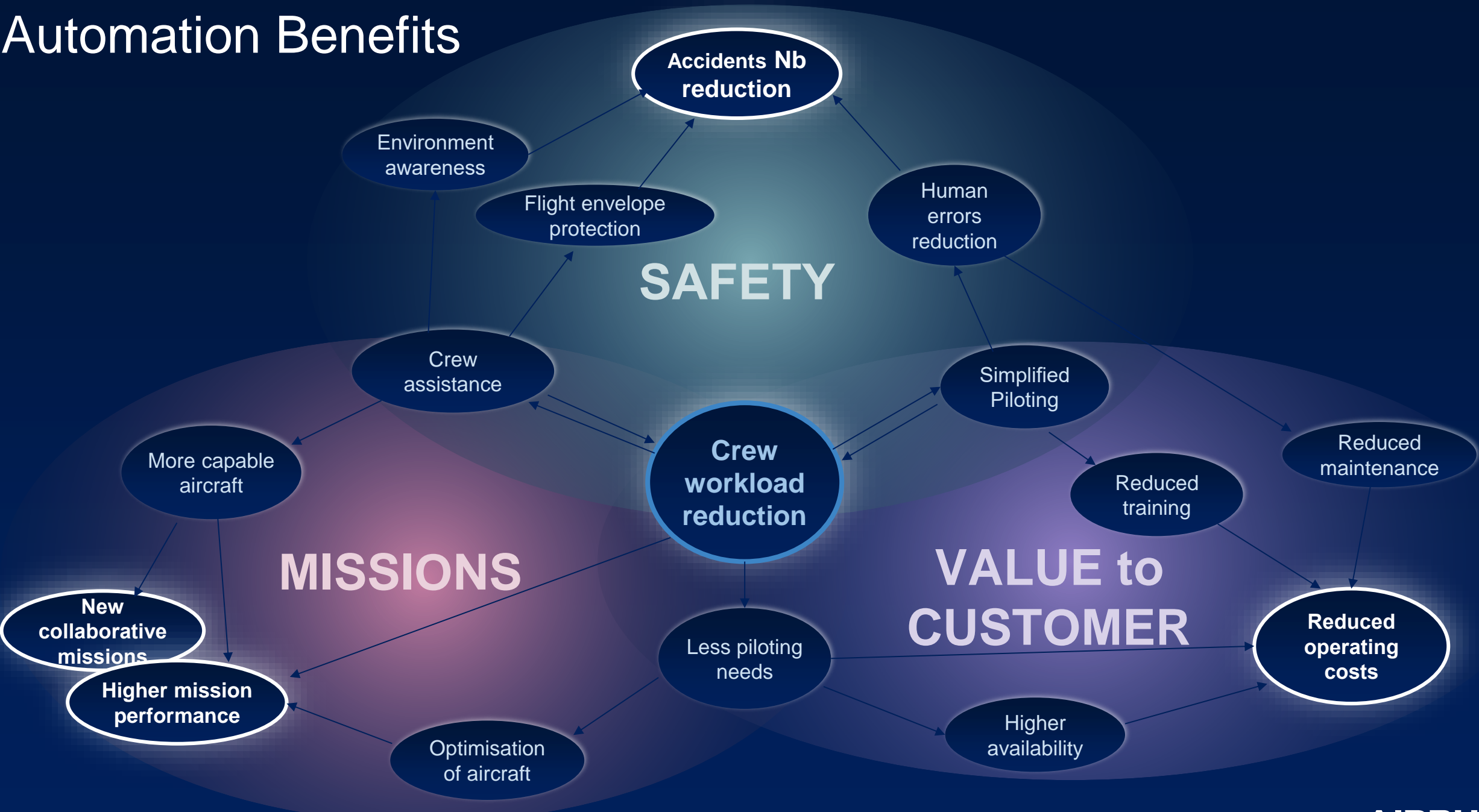


New missions
and increasing mission complexity

Simplify and secure
pilot qualification
in an evolving context

Increased Safety
expectations

Automation Benefits



Focus on Training Opportunities



To reduce trainings
footprint on manual skills



To reduce high risk
training operations



To create room
for new contents
(safety, mission, ...)



To standardize
operations for all H/C

Success Criteria

End to End

solutions operator really uses

right level of Automation

Availability

Simplify

rather than complexify

Secure

complex decisions making

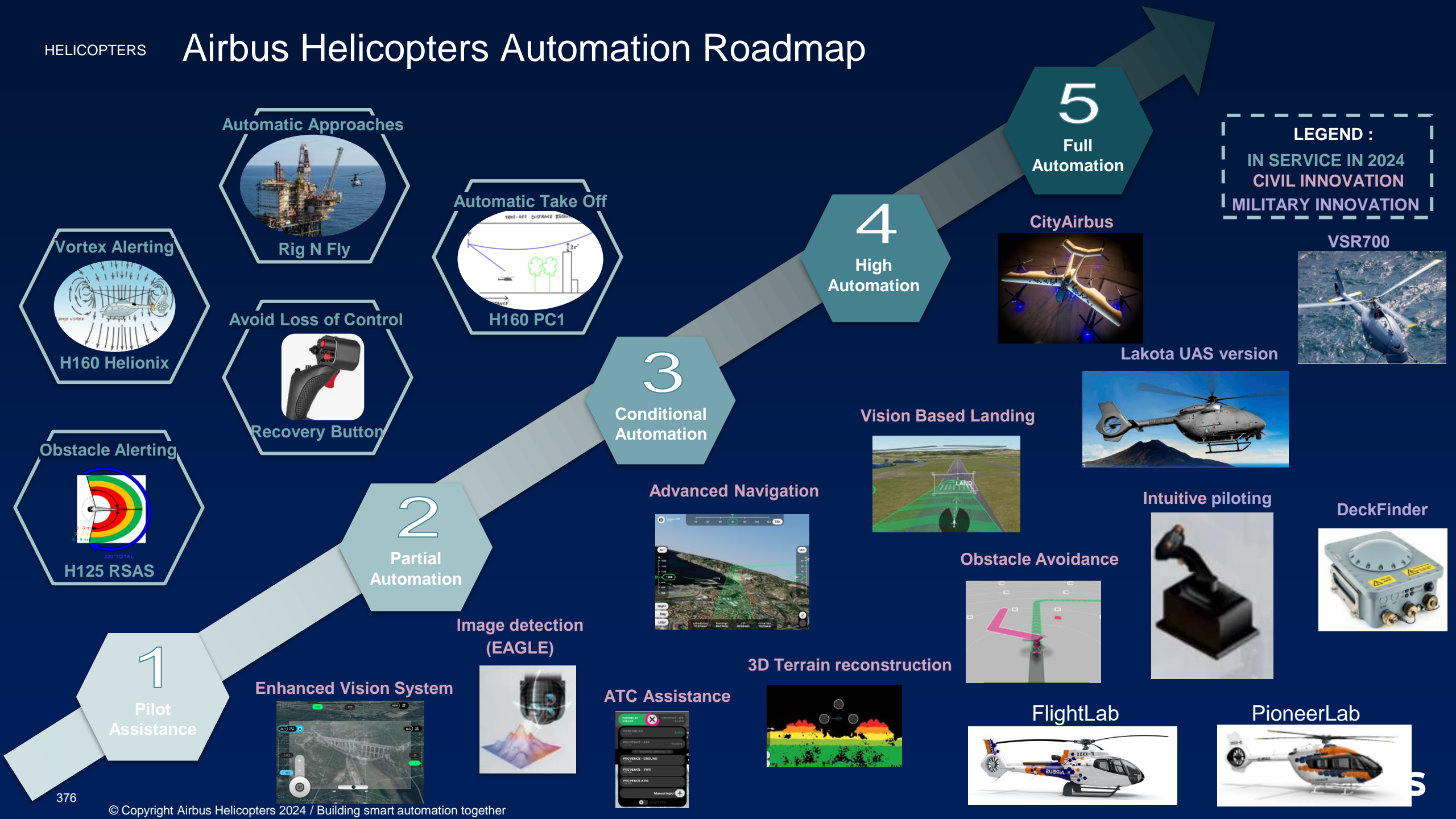


Fleet concept

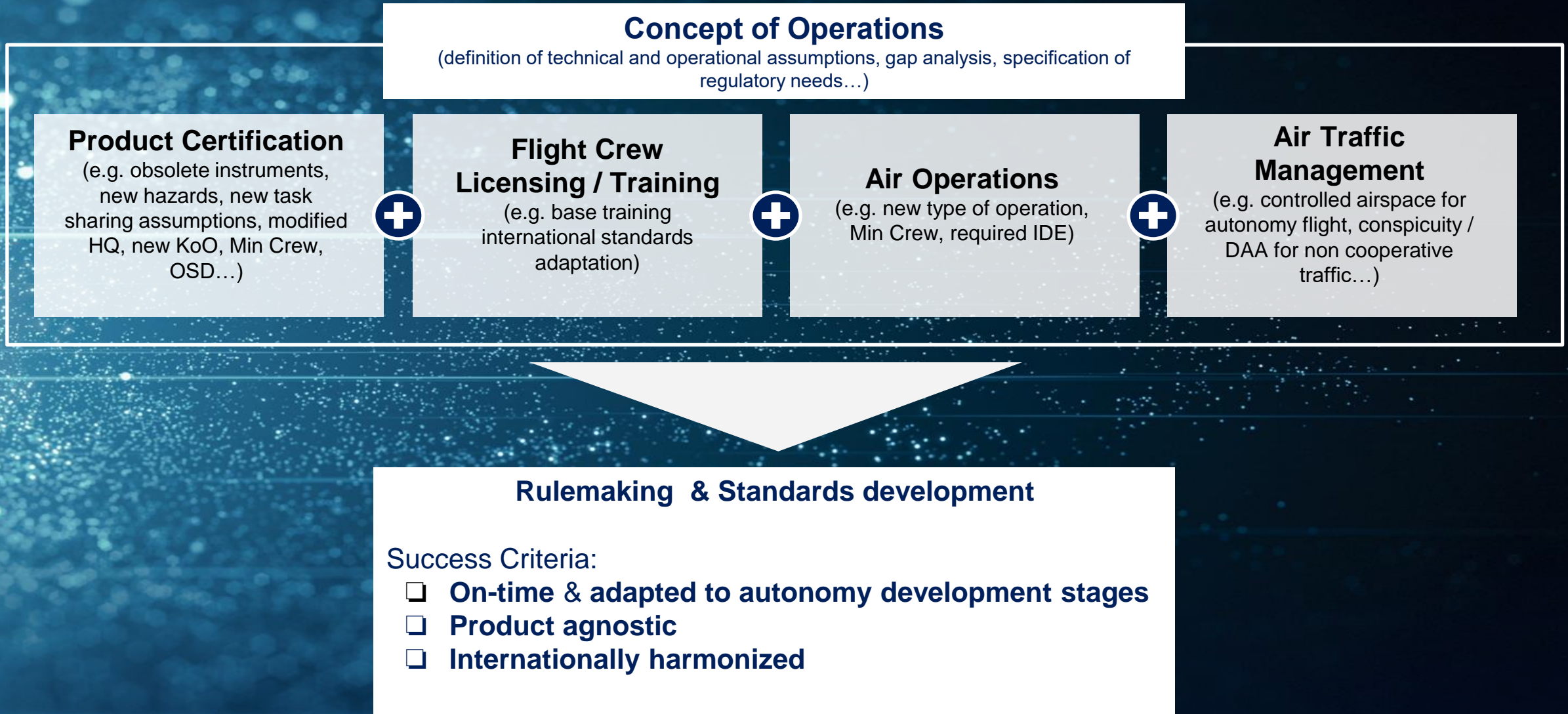
ensuring operators acceptance

SMART AUTOMATION

Airbus Helicopters Automation Roadmap



The regulations and standards challenge

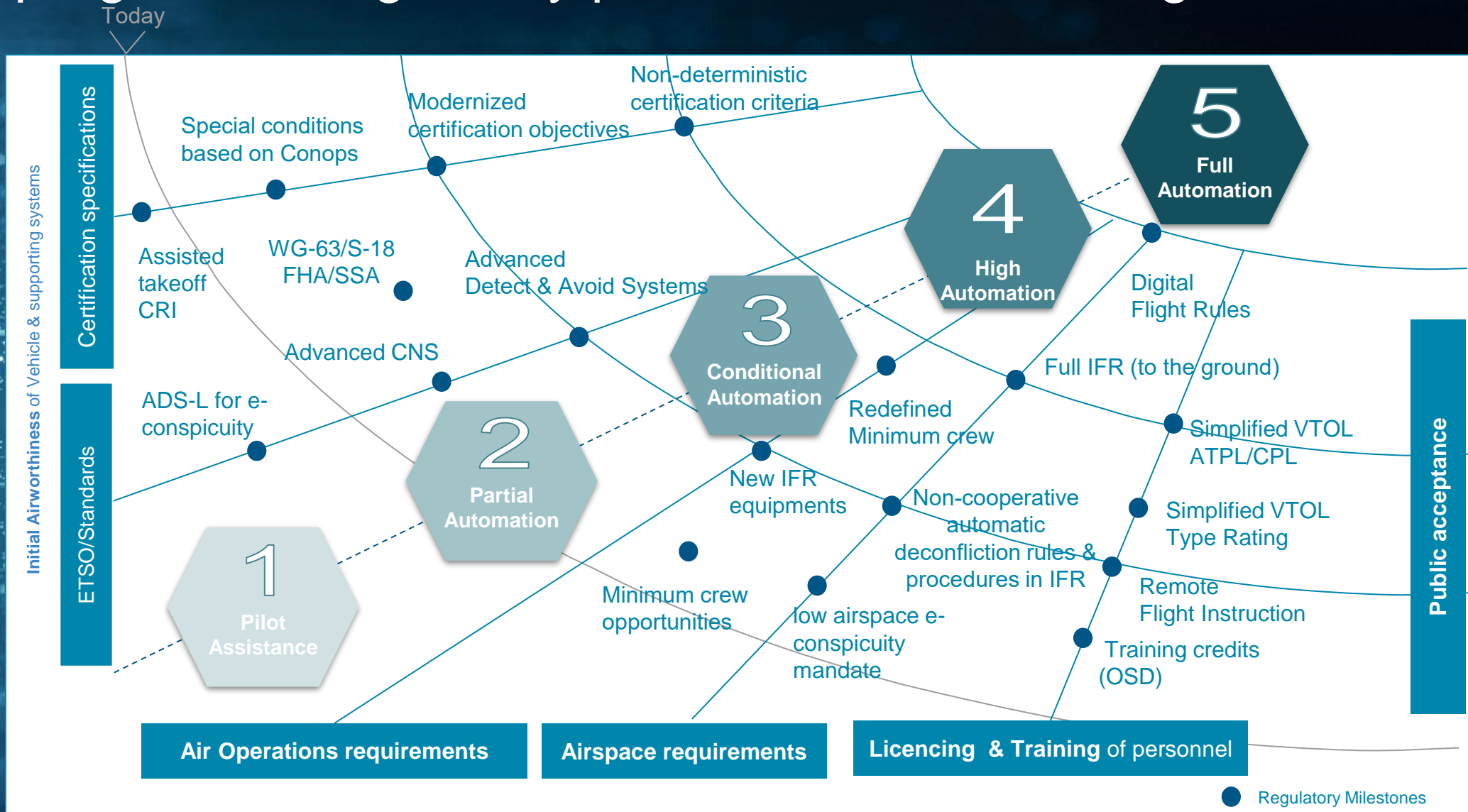


The progressive regulatory path towards increasing automation

Inputs from Industry and **collaboration with the Regulators** is key for the development of the regulations necessary to reach full autonomy.

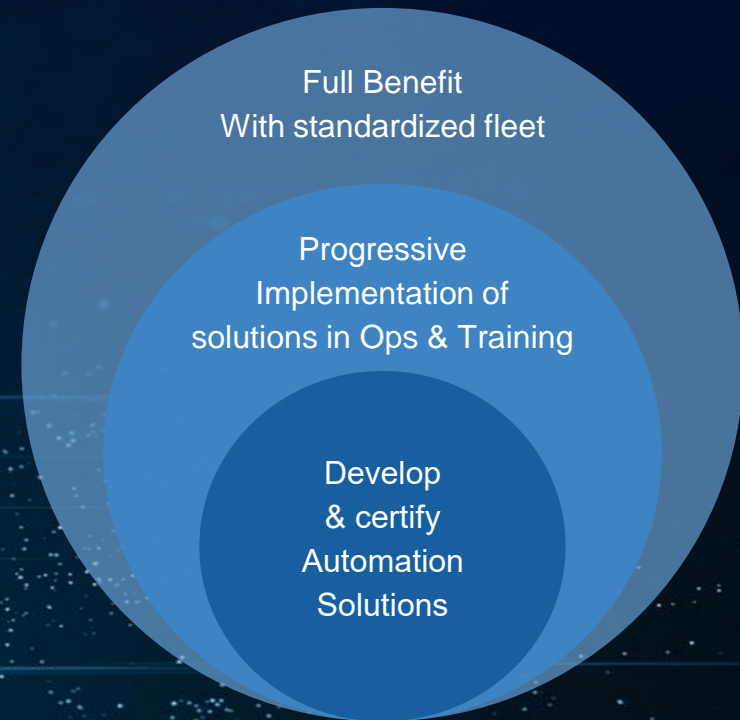
Still in early stages with uncertainties on both the regulatory items and timelines

Advanced Air Mobility **UAS & eVTOL** developments to serve as a **catalyst**



CRI: Certification Review Item, WG-63 & S-18 are EUROCAE & SAE standardization working groups, ADS-L: Automatic Dependent Surveillance Light, CNS : Communication Navigation Surveillance, OSD = Operational Suitability Data, ATPL = Air Transport Pilot License, CPL = Commercial Pilot License.

Take Away



Rotorcraft smart automation designed as **safety enhancer**

Stepwise approach with **Tailored regulatory** framework

Right balance between:

- Safety & Operational Benefits
- Business sustainability

to **secure effective implementation**