



Innovation in Action

Dr. Kyle Ellis – NASA

Tzvetomir Blajev – Flight Safety Foundation

Jodi Baker – Federal Aviation Administration

Alan Sternberg – Beams Safety AI

IATA World Safety and Operations Conference

3 October 2024

Innovating the Future of Aviation

Human-Centric Capabilities

Safety + Density

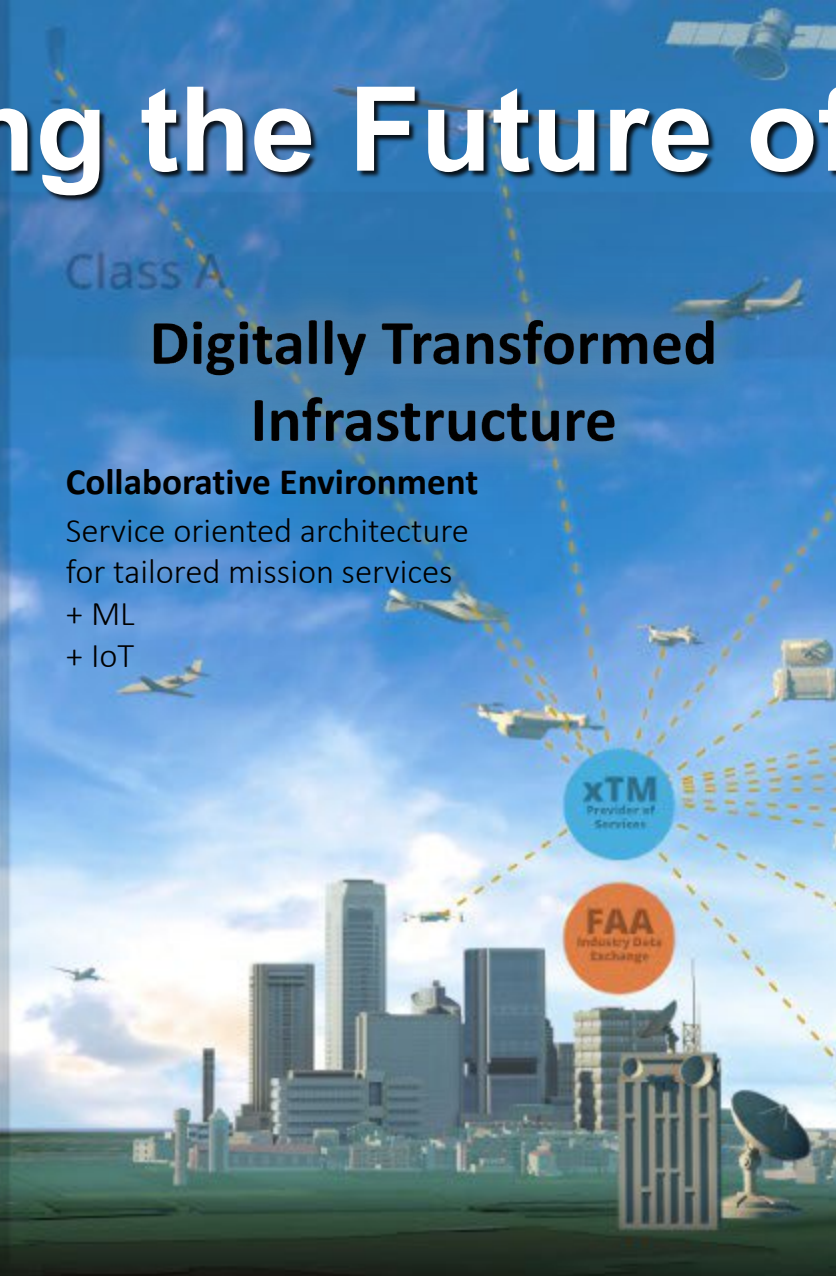
Human centered traffic &
Safety management



Digitally Transformed Infrastructure

Collaborative Environment

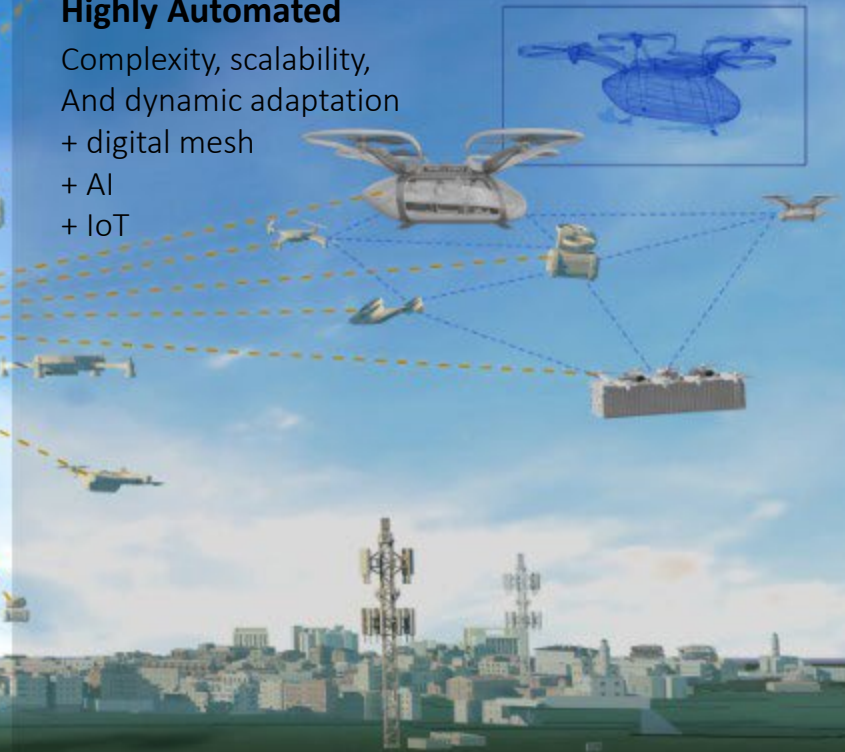
Service oriented architecture
for tailored mission services
+ ML
+ IoT



Automation-Enabled Diversity

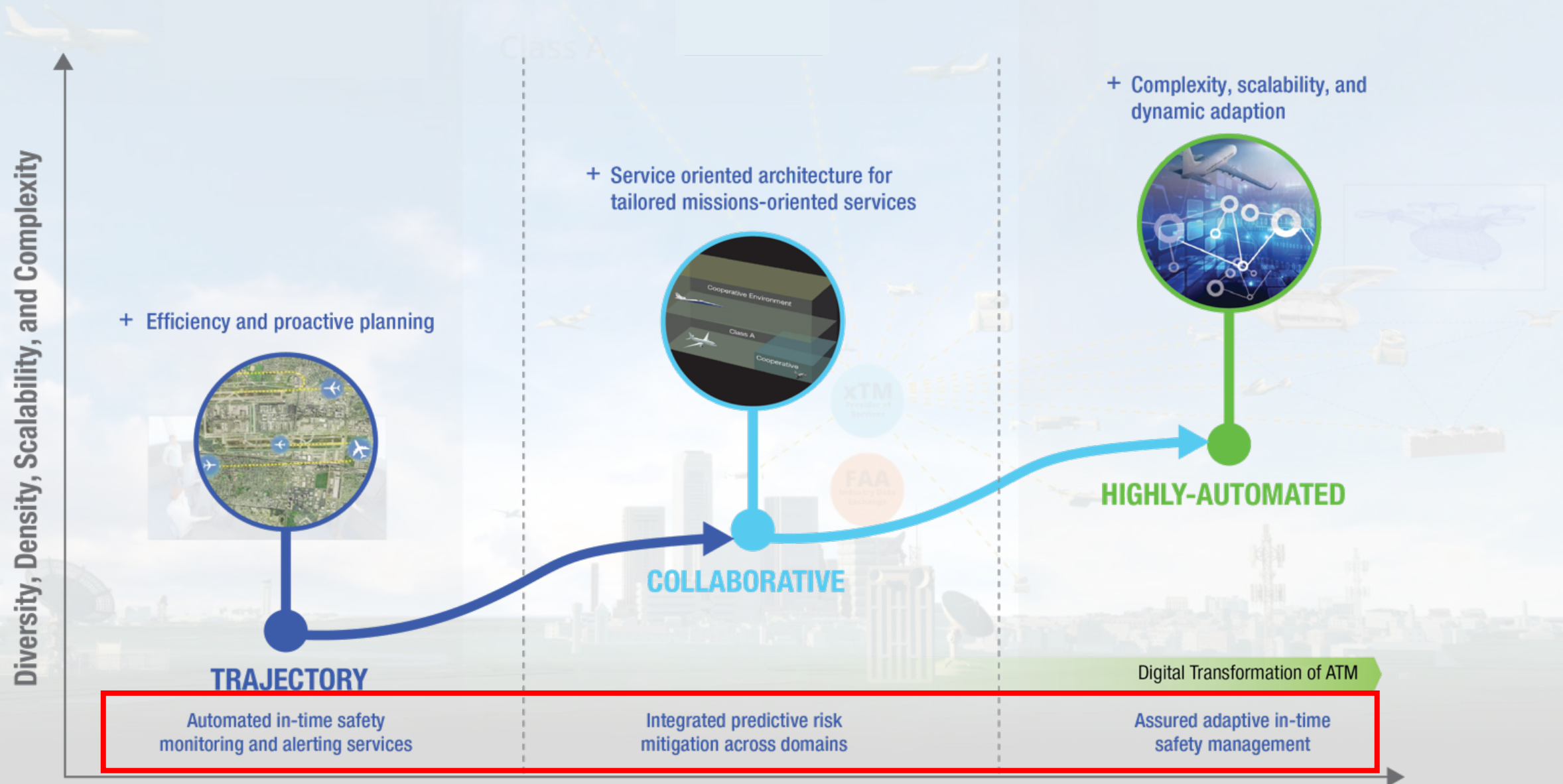
Highly Automated

Complexity, scalability,
And dynamic adaptation
+ digital mesh
+ AI
+ IoT



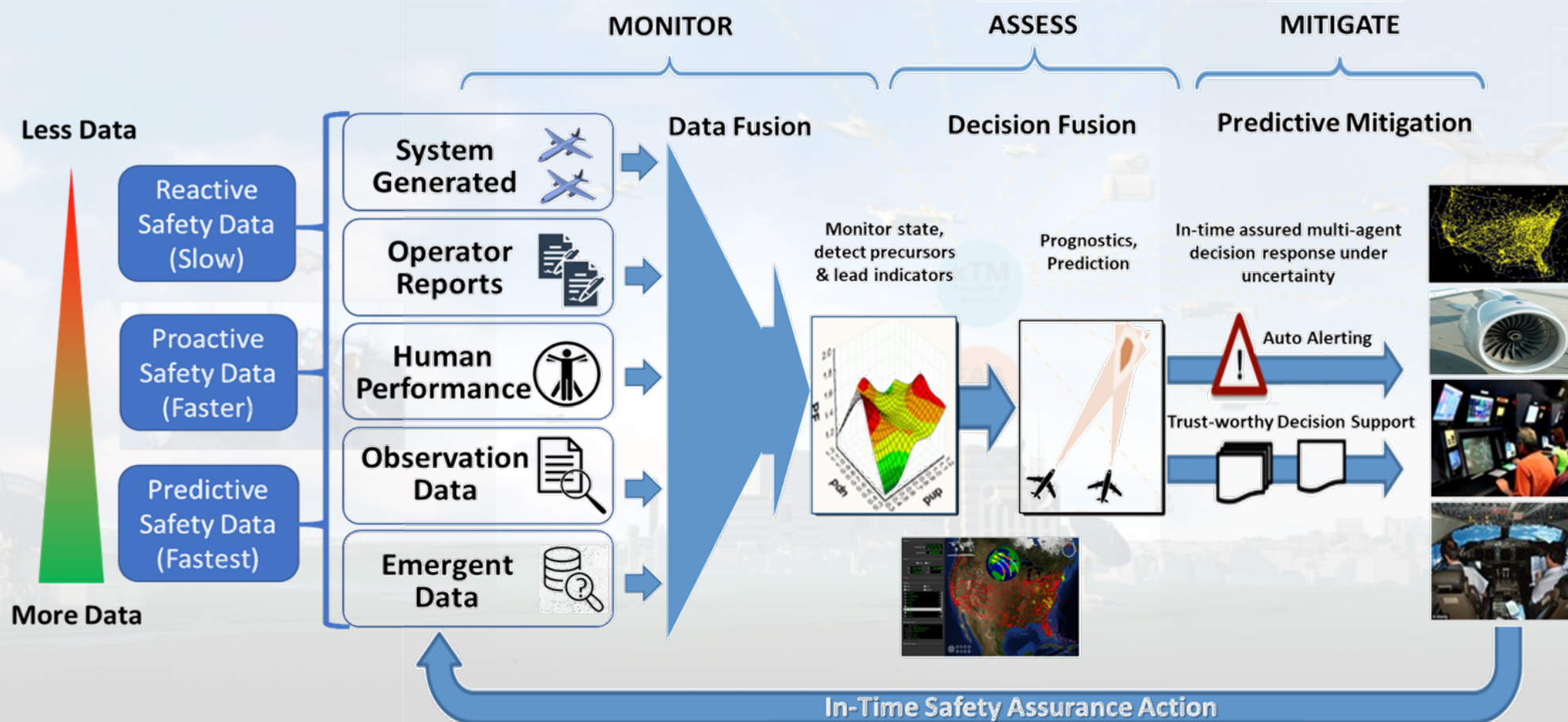
Evolution of Aviation

Future Airspace and Safety



System-Wide Safety Assurance

Operational Needs	→	Improve in-time safety	Improve scalability	Improve accessibility	Increase participation
Transformation Goals	→	In-time Safety Assurance	Tailored Safety	Interoperability	



DATA COLLECTION &
AGGREGATION

FUSION OF BIG
DATA SETS

RISK MITIGATION



Monitor – Assess - Mitigate



**CONTINUOUS
DATA
EXCHANGE**



**MACHINE
LEARNING**



**AUTOMATED
MONITORING**



**PROGNOSTIC
RISK MODELING**



**ALERTING
AND
RESPONSE**



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Panel Discussion

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