



# Beyond Efficiency

Transforming MRO with AI and Digitalization



# Today's Speakers



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Efficiency  
is **Stupid**

# Today's Flight Plan

## Agenda

01 The Real Problem  
Efficiency != Transformation

02 Change the Constraint  
Change the Process

03 The Elephant & The  
Torque Wrench  
How to think about AI

04 AI and Digitalization  
An Airworthiness Example

05 Where is this Going?  
Multi-agent Reasoning

06 Where do Humans Fit?  
Decision Authority, Safety,  
Regulatory fit

07 Conclusion  
Wrap-up

08 Q&A  
Your Questions

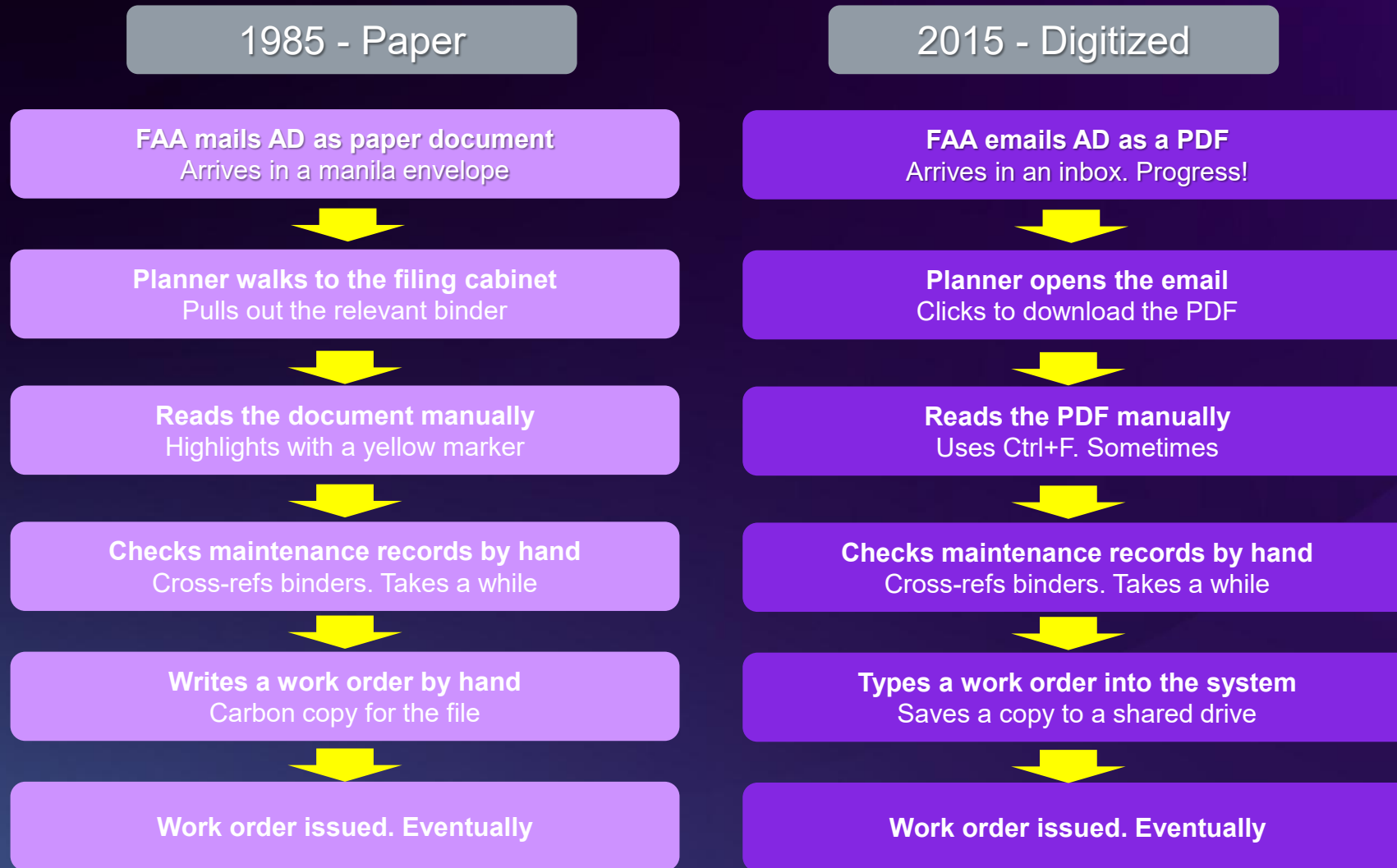
# The Real Problem

Efficiency  $\neq$  Transformation



# Efficiency wasn't really "transformational"

## Digitization



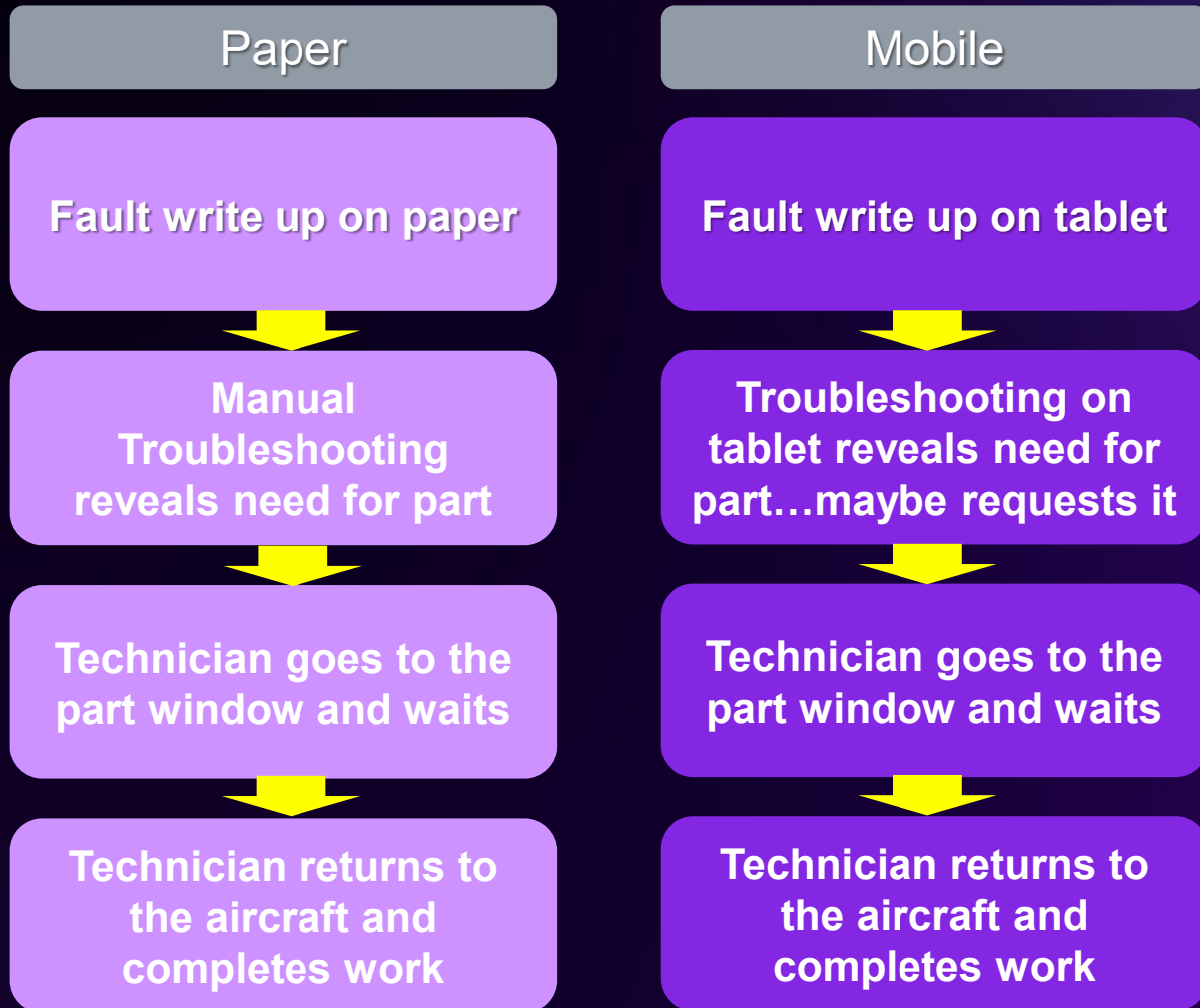
# Change the Constraint

Change the Process



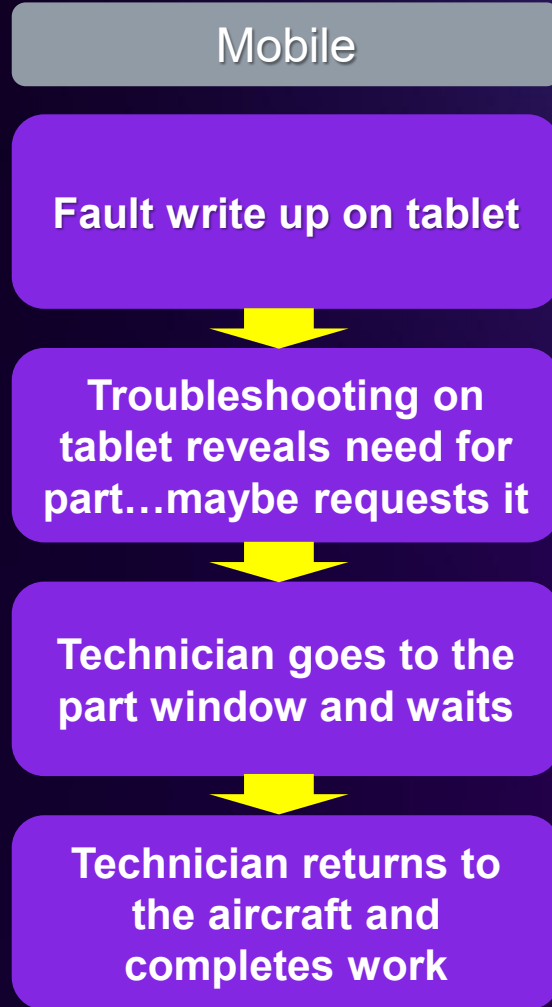
# Digitalization not Digitization

## Change the Process



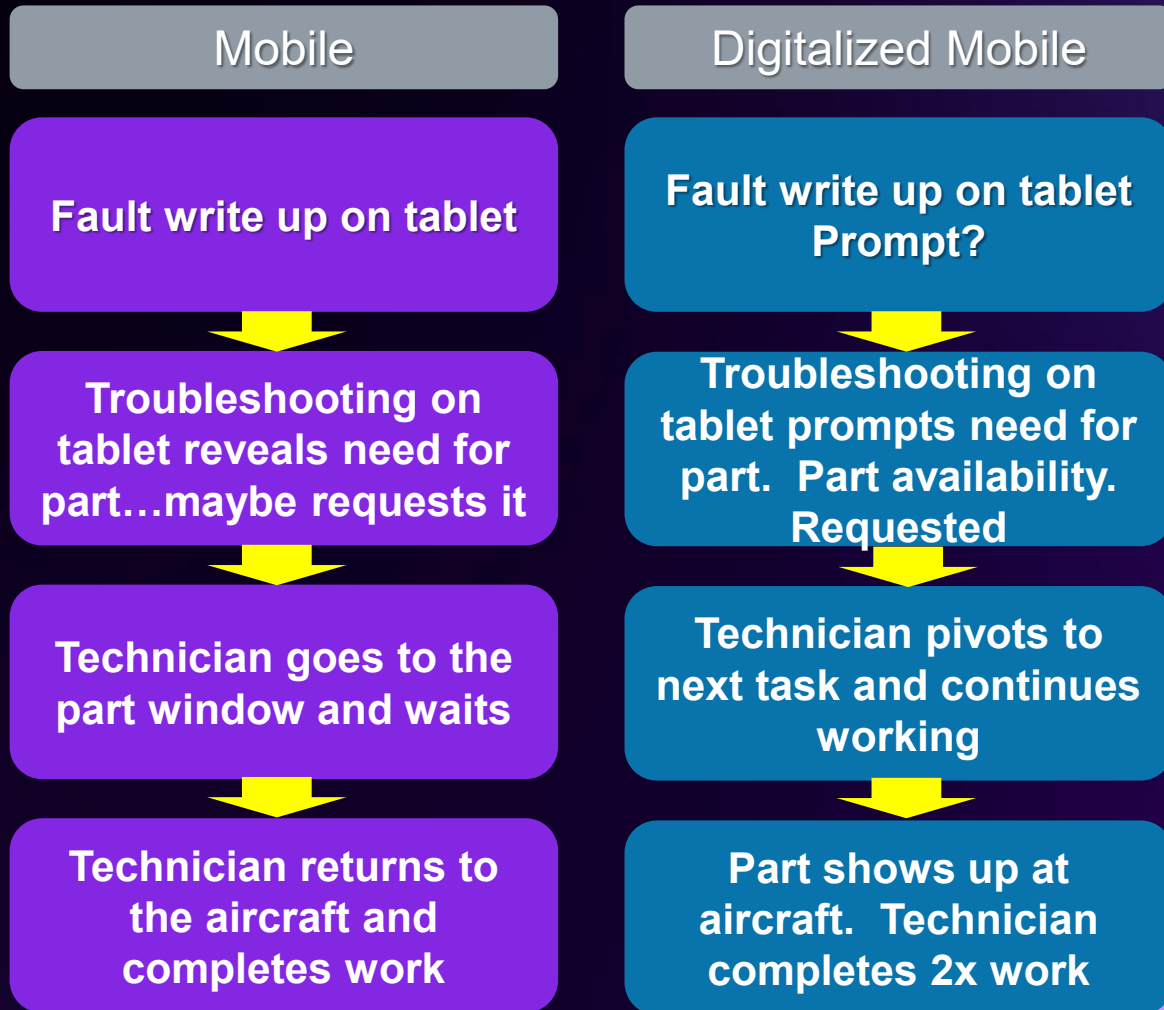
# Digitalization not Digitization

## Change the Process



# Digitalization not Digitization

## Change the Process



# How AI is different than efficiency

Effective. Not just efficient.

The Constraint has Changed

Paper-era workflows were built around the concept of **HUMAN-AS-PROCESSOR**

- MRO workflows were designed around a constraint: **PAPER**
- The constraint was **REMOVED**. The workflow **REMAINED**.
- AI doesn't just accelerate steps - it **REMOVES** them
- What remains is what always mattered: **THE HUMAN**



# The Elephant & The Torque Wrench

How to Think About AI



# The Elephant in the Room

But wait....

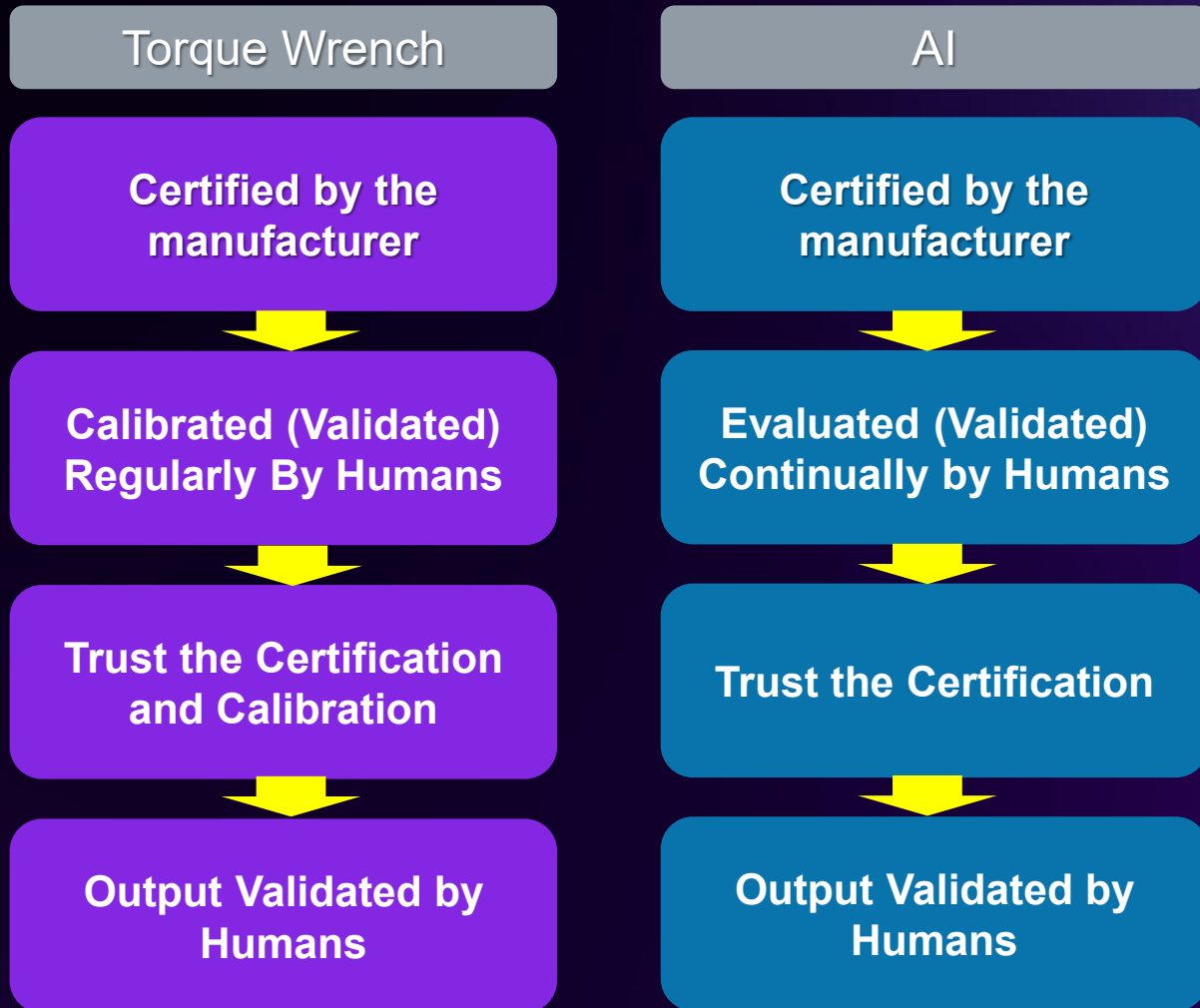
Ok, but this is  
Aviation...safety is  
paramount!  
Regulation is real!

If AI changes  
workflow...  
how do we trust it?



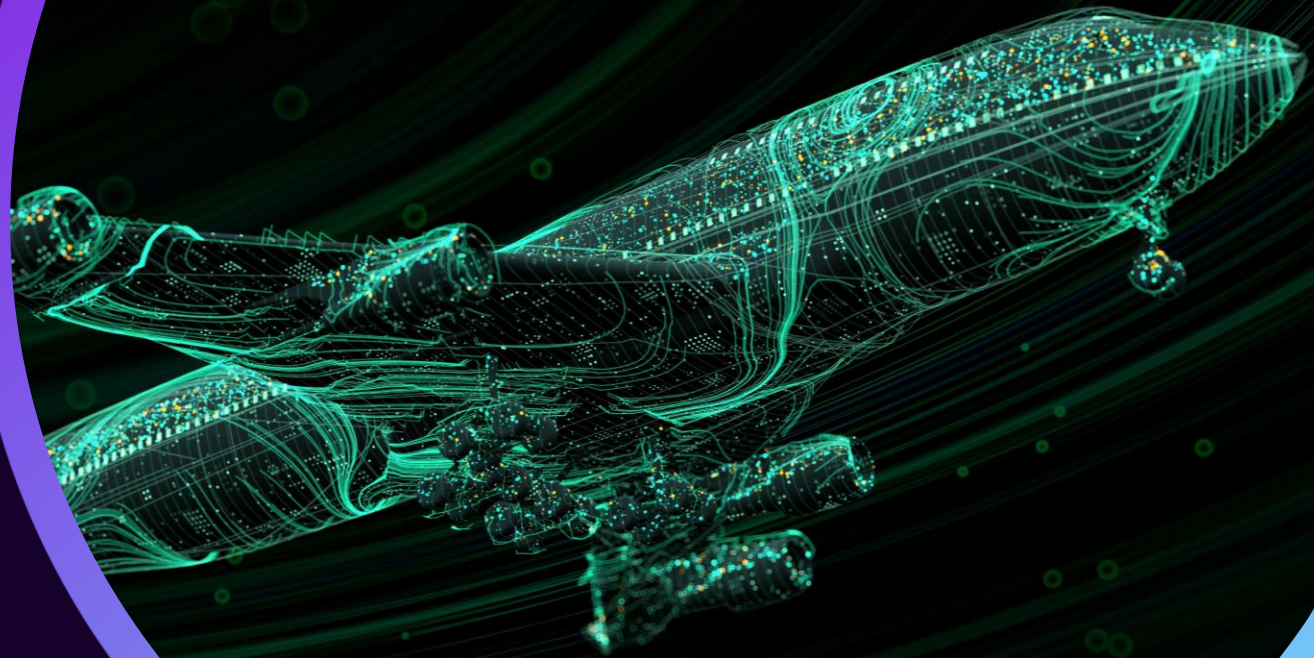
# The Torque Wrench – How should we think about AI?

## Certified AI



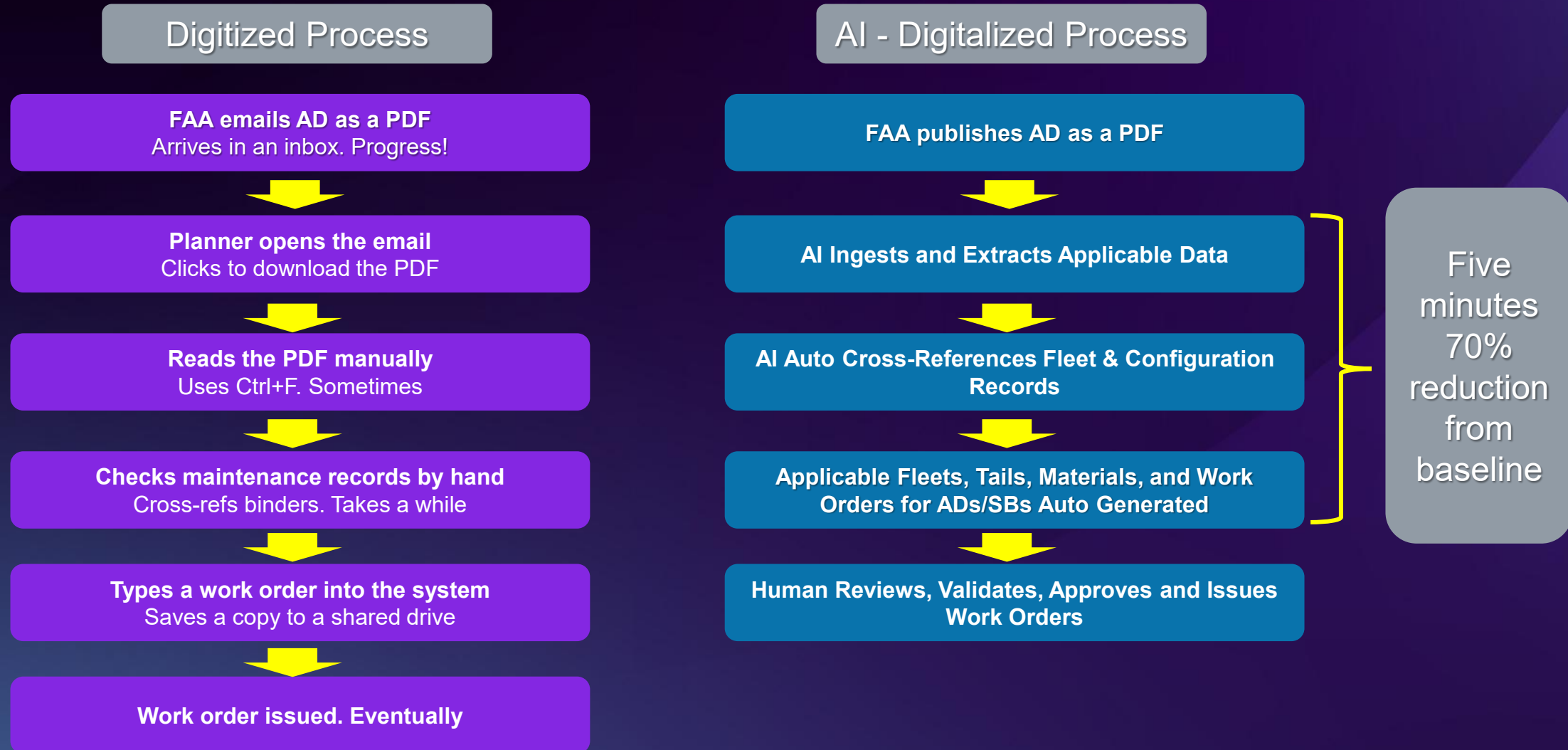
# AI and Digitalization

An Airworthiness Example



# AI In Action – a use case with ADs and SBs

## Airworthiness – Beyond Efficiency to “Digitalization”



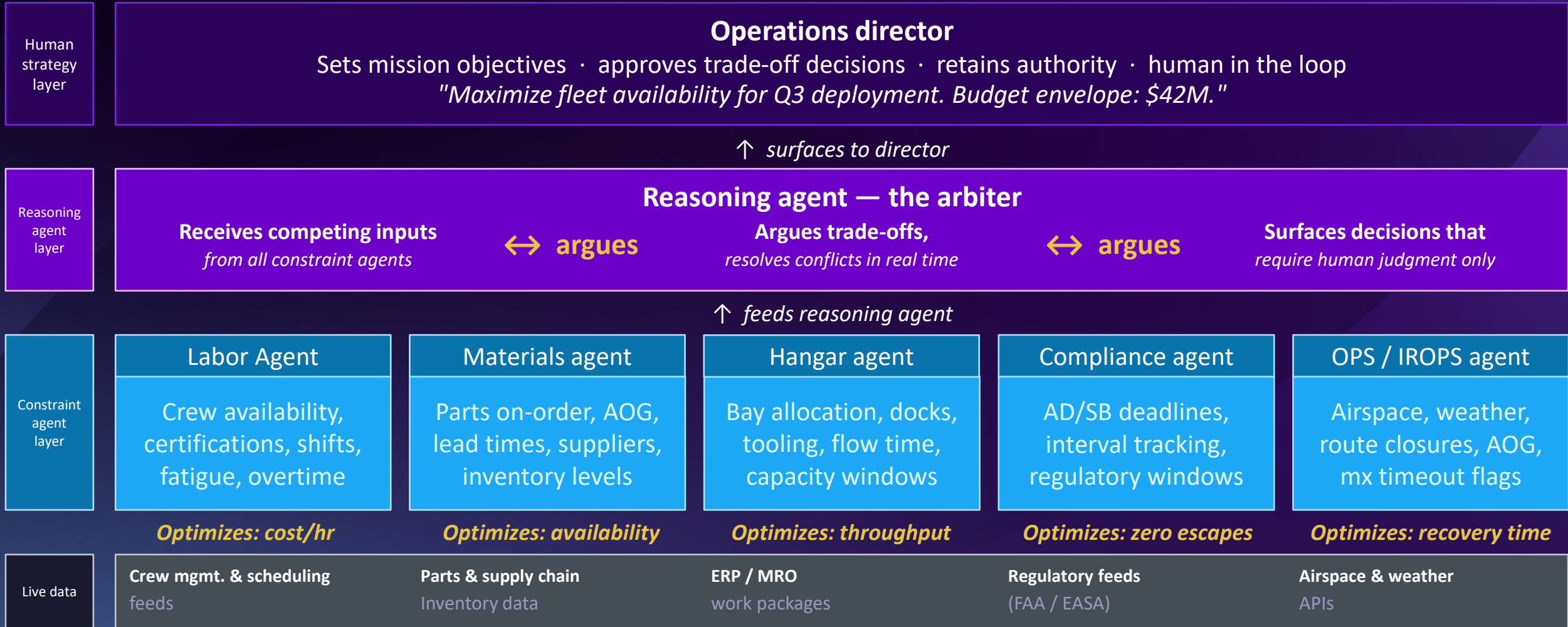
# Where is This Going?

Multi-agent Reasoning



# Where is this all going?

## Multi-Agent Reasoning Architecture



# Where do Humans Fit?

Decision Authority, Safety,  
Regulatory fit



# Human Judgement is Integral to Leveraging AI Beyond Efficiency

## Safety Culture



Aviation has a deeply rooted culture of safety. AI must EARN its way into that culture – not disrupt it.

## Decision Authority



Certificated authorities remain. AI recommendations are inputs into a decision, not instructions.

## Regulatory Fit



FAA/EASA/military airworthiness frameworks require documented oversight – AI must work within these parameters.

## Human Judgement



AI is good at things that are dull, deterministic, & data-intensive. Humans are best at judgement.

# Conclusion

Wrap-up



# Conclusion

## Go Beyond Efficiency

- Digitization alone is **NOT TRANSFORMATIONAL**
- AI represents a paradigm shift: **IMPROVED OUTCOMES**
- AI is powerful. **HUMANS ARE STILL ESSENTIAL**



# Questions?

Questions!





# IFS

NEXT-LEVEL SOLUTIONS FOR  
ALL LEVELS OF MAINTENANCE

Thank you!

