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# ICAS TECHNOLOGY LEADERSHIP FORUM

## **INTELLIGENT AND AUTONOMOUS** SYSTEMS

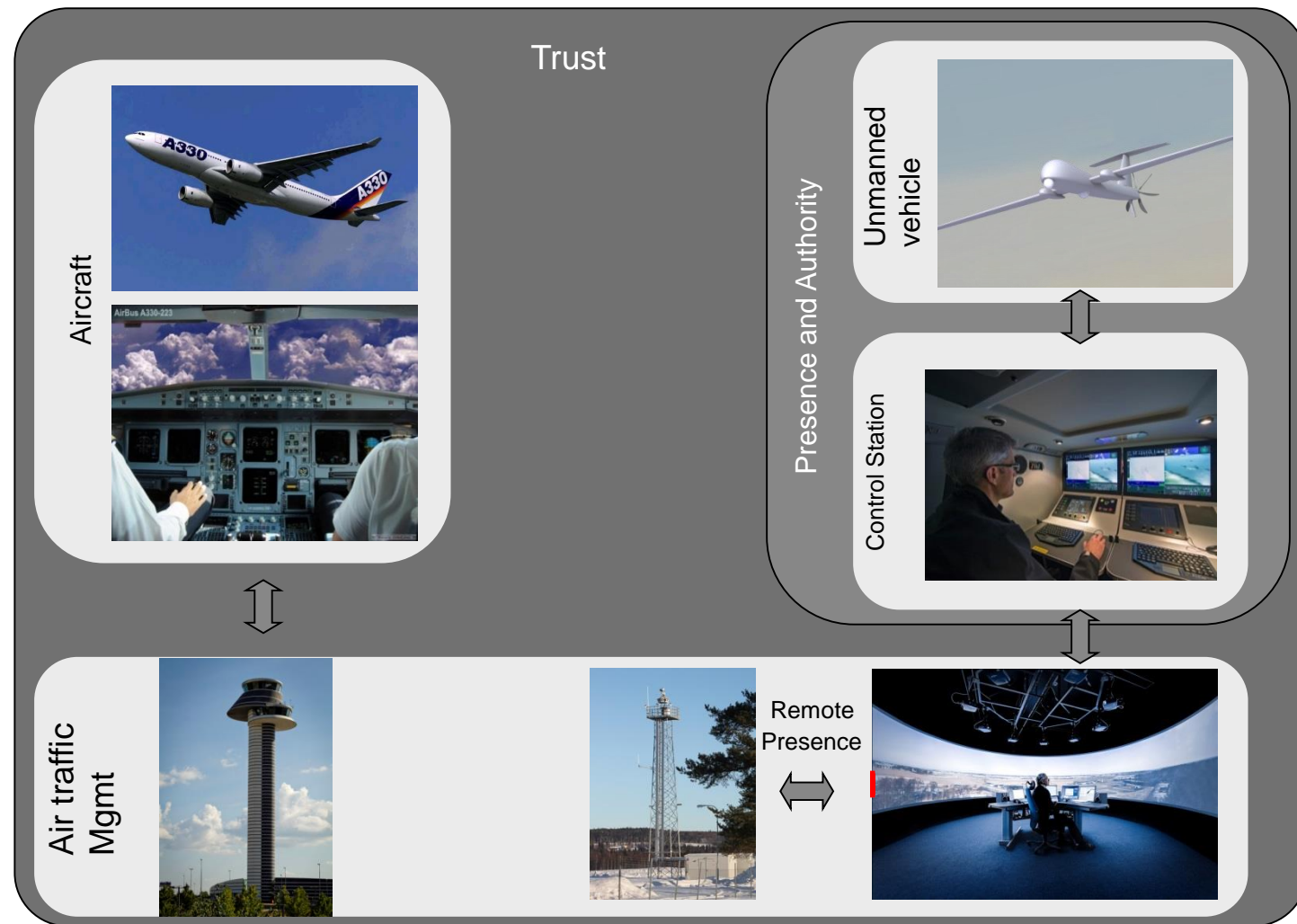
ICAS Belo Horizonte 10 September 2018

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# REMOTELY CONTROLLED VS. AUTONOMY

## SOME LESSONS LEARNED



Both manned and unmanned systems benefit from autonomy and decision support

Remotely operated systems could use remote presence together with various degree of autonomy support

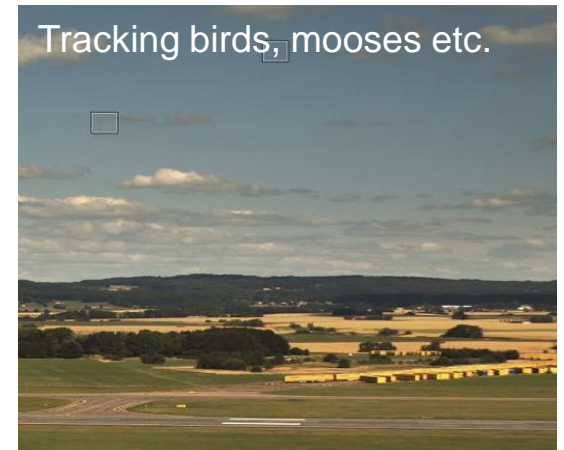
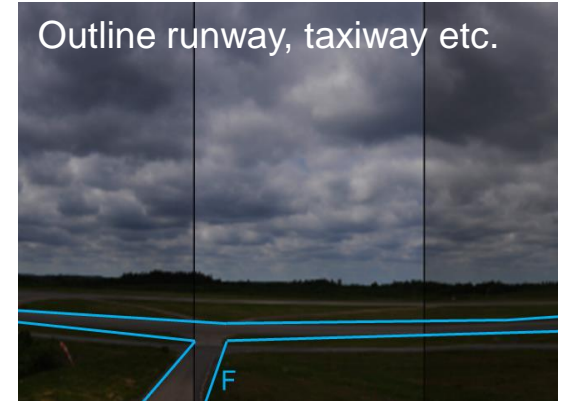
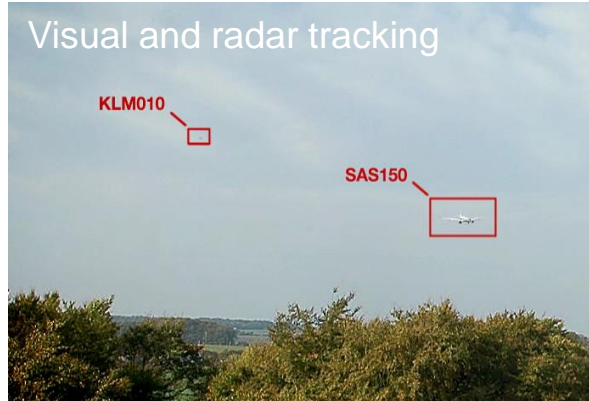
Regulatory Aspects often defining the pace

Key aspects include:

- Trust, Presence, Authority
- Safety, Security
- Liability

# REMOTE TOWER

Enables air traffic services to be provided more efficiently for any airport, from any location. Initial application in sparsely populated areas and as backup solution.

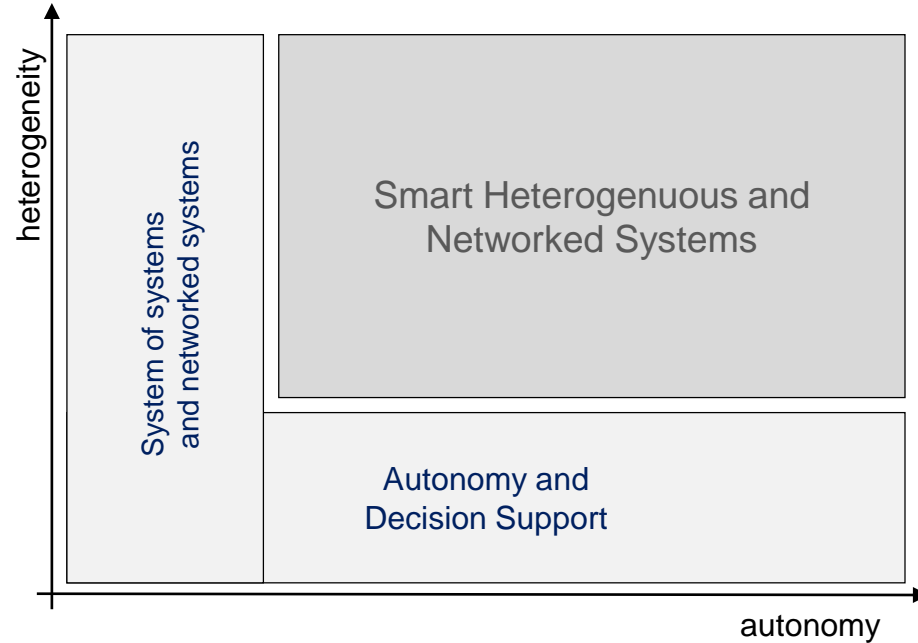


# AUTONOMY IN FUTURE **SECURITY AND DEFENCE SYSTEMS**

- Intelligent systems with a high degree of autonomy **interacting** with humans
- A mix of **heterogeneous** manned and unmanned systems
- Situation awareness and readiness based on **networking systems**
- Challenge to master **complexity** of systems of systems and **diversity** of potential missions



# ASPECTS ON AUTONOMY: **AUTONOMY AND HETEROGENEITY**



Explaining

Adapting

Reasoning

Incomplete training  
and data sets

Critical and Generative

# MANY DIVERSE APPLICATIONS- WHO/WHAT IS IN THE DRIVING SEAT?



## The New York Times

### Would You Buy a Self-Driving Future From These Guys?

By The Editorial Board  
Oct. 14, 2017

