



# Haiku

Human AI teaming Knowledge and  
Understanding for aviation safety

## THE EVOLVING AVIATION LANDSCAPE

**Vanessa Arrigoni, Roberto Venditti (Deep Blue)**

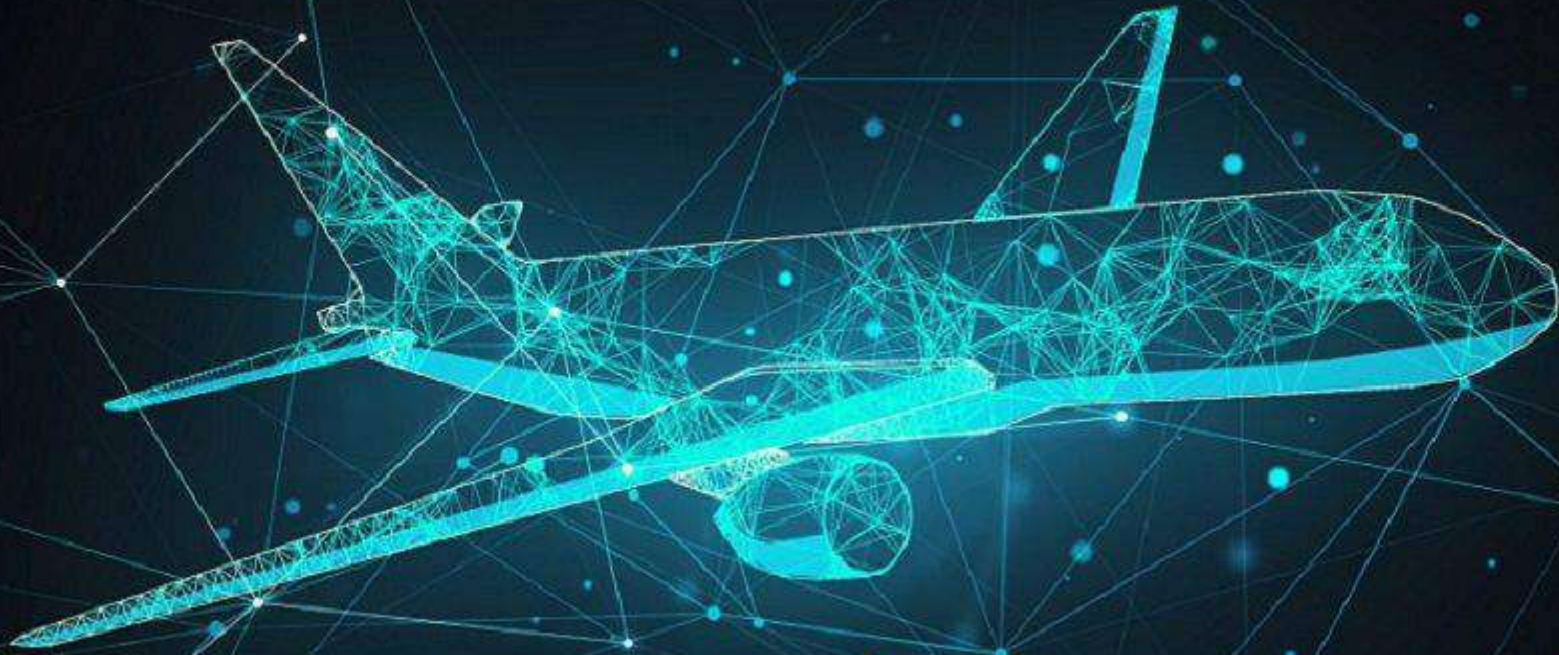
HAIKU 1st Dissemination Event (June 26th-27th, 2023 - EUROCONTROL Brussels)



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# AI in Aviation:

What can we expect **beyond 2020**  
for **COCKPIT, AIRPORT, ATM** and **UATM**?



*Imagining **future contexts**  
to design **future products and services!***

# How?

**40+**

**DOCUMENTS  
ANALYSED**

To explore the **vision** of aviation key players, tech and consulting companies, European bodies, research centres, and other research projects

**11**

**INTERVIEWS**

To understand the point of view of selected **aviation Subject Matter Experts**, mostly focusing on **key operational, technological and human** aspects

**2**

**WORKSHOPS**

To apply the findings to the **HAIKU use cases**, and identify the **future key challenges for aviation**





# The future of aviation *in keywords*



# The future of aviation

## 4 dominant features

# 1

### INCREASED & HETEROGENEOUS TRAFFIC

- 2030 vs 2019: **+50% of flights**
- **UATM operations** rapid increase
- From **segregation** to **integration**



# 2

### SUSTAINABILITY

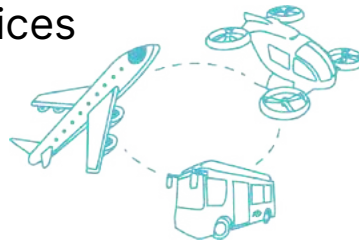
- 2050: **25% of global CO2 emissions** (if no actions taken)
- From “**aspiration**” to a “**given**”



# 3

### INTEGRATED MULTIMODAL TRANSPORT SYSTEM

- **User-centric** and **personalised** services



# 4

### DIGITISATION AND INTRODUCTION OF AI

- Progressive **digitisation** of the whole infrastructure
- More and more **AI-based operations** and **assistants**



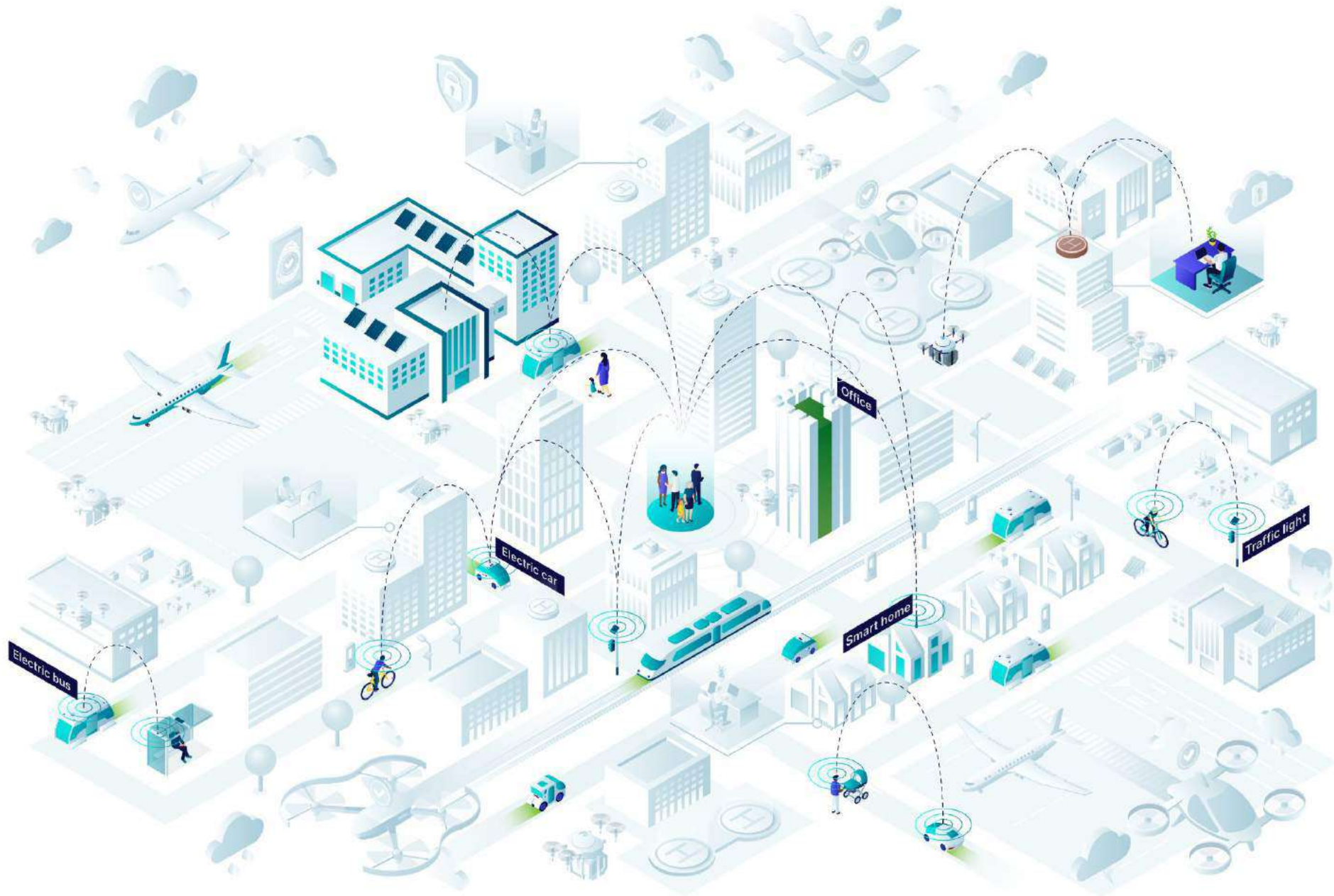


# The HAIKU Future Landscapes

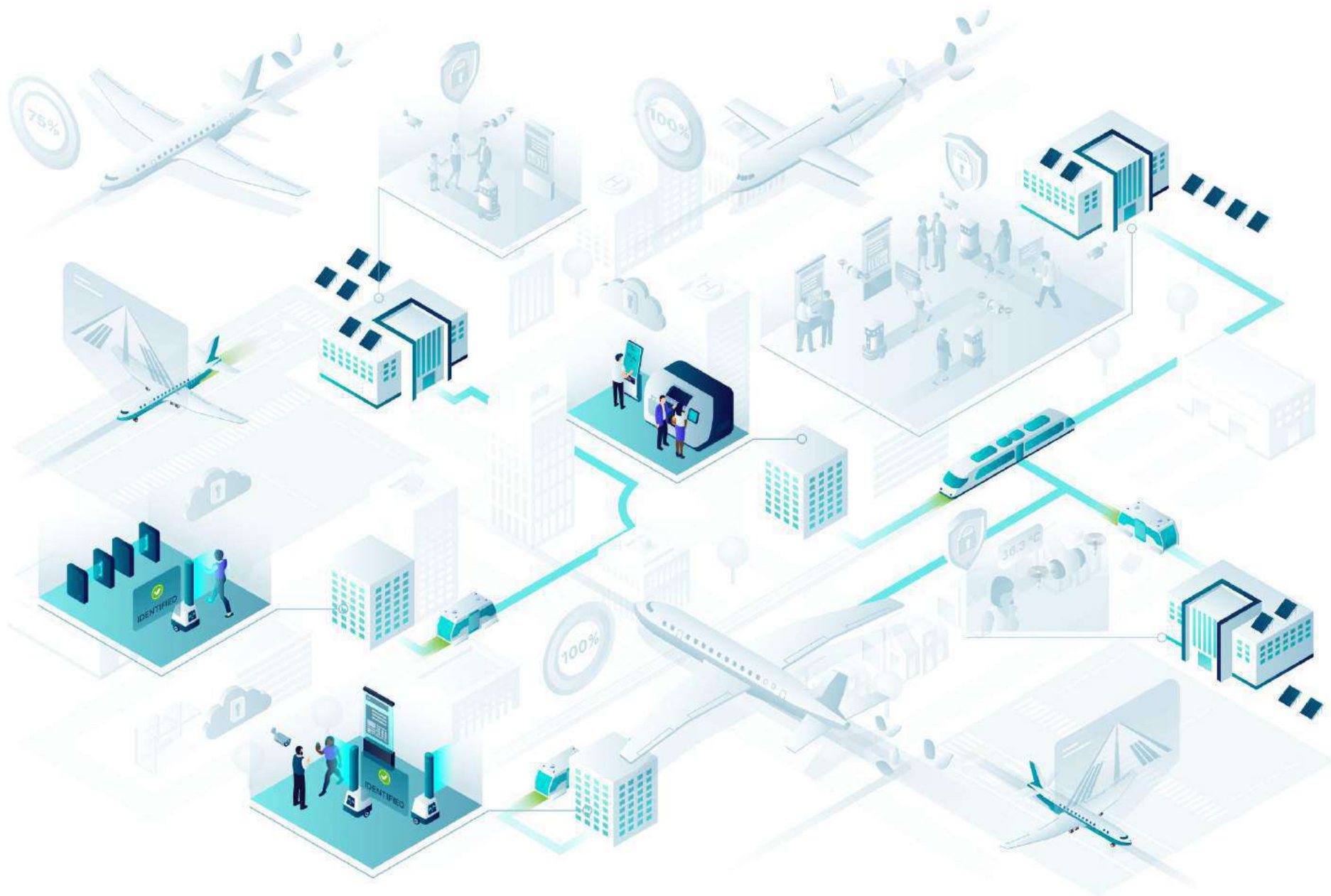
What will aviation look like in 2050?







**OUR CITIES in 2050**



# MULTIMODALITY & DIGITISATION





**BUSY SKIES**



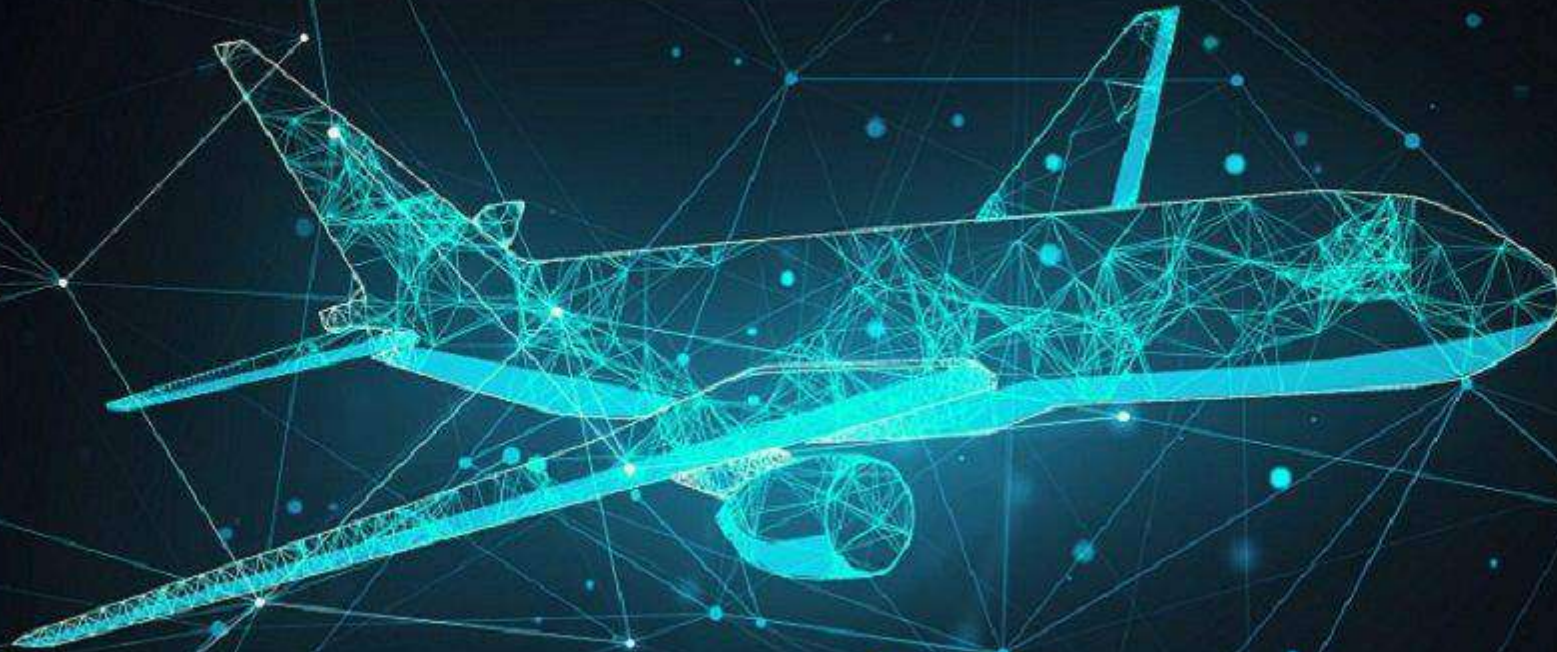
# HUMAN-AI TEAMING IN THE COCKPIT



# SUSTAINABLE OPERATIONS



**What are the main challenges the aviation industry is expected to face in the forthcoming years?**



**10 FUTURE CHALLENGES**

# 10 future challenges for aviation

- A** MAINTAIN **HIGH LEVEL SAFETY STANDARDS**
- B** MAINTAIN A **STRONG SAFETY CULTURE**
- C** ENABLING **ADAPTIVE REGULATION**
- D** ENABLING THE SHIFT **FROM SEGREGATION TO INTEGRATION**
- E** MINIMISE **CARBON FOOTPRINT**
- F** PRODUCE **SUSTAINABLE FUEL SOURCES**
- G** BE CAPABLE OF ADAPTING TO **EXTREME WEATHER EVENTS**
- H** ENABLING THE SHIFT TOWARDS **MULTIMODAL TRANSPORT SYSTEM**
- I** **INTEGRATE SYSTEMS**
- J** ENSURING **CYBER-RESILIENCE**



**LET'S PRIORITISE THEM TOGETHER!**

Grab your smartphone and go to [www.menti.com](https://www.menti.com)

Insert the code: **5473 7049**

Enter your priorities

*But changing the way aviation operates is not only a matter of **technology**...*

**... What do people desire?**

**... How will AI impact the workforce?**

**... How to extend Safety Culture to new AI team members?**

**... How to get ready for it?**







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## Thank you & Stay tuned!

**VANESSA ARRIGONI**

Deep Blue

*Lead Consultant*

[vanessa.arrigoni@dblue.it](mailto:vanessa.arrigoni@dblue.it)

**ROBERTO VENDITTI**

Deep Blue

*Consultant*

[roberto.venditti@dblue.it](mailto:roberto.venditti@dblue.it)

[www.dblue.it](http://www.dblue.it)



WEBSITE

<https://haikuproject.eu/>



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