Haiku

Human AI teaming Knowledge and Understanding for aviation safety

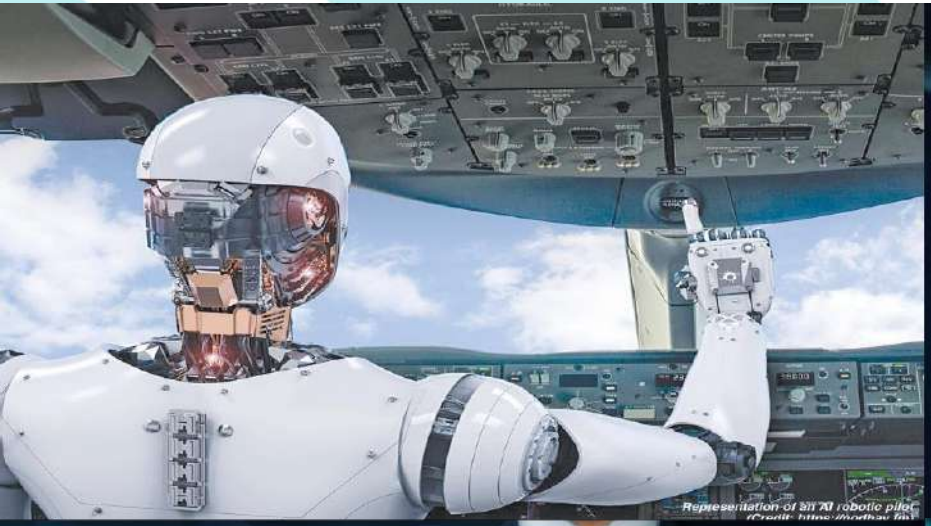
The HAIKU Project

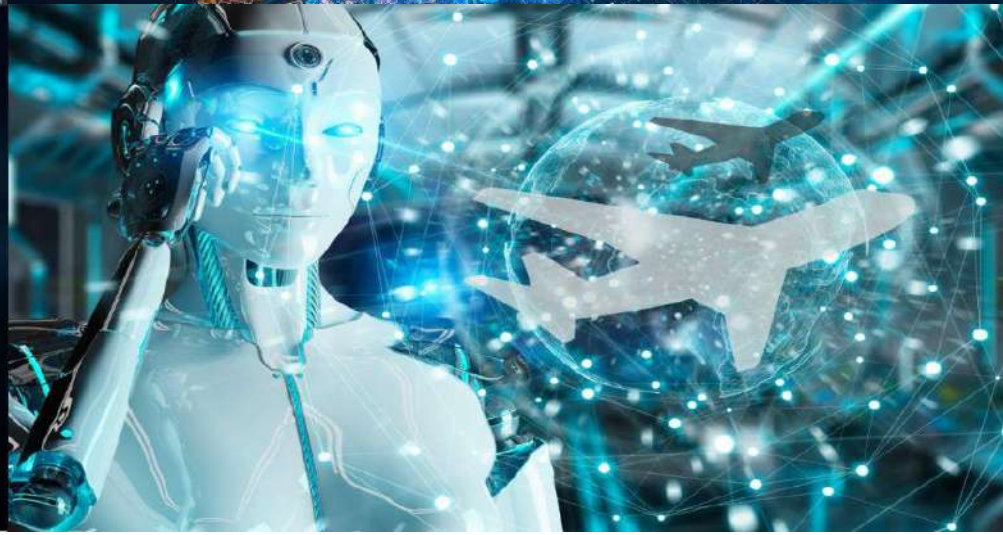
Vision & Goals

Simone Pozzi (DBL)

This project has received funding by the European Union's Horizon Europe research and innovation programme HORIZON-CL5-2021-D6-01-13 under Grant Agreement no 101075332

Vision of AI in aviation…


Representation of an AI robotic pilot



...in diverse aviation operations

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Our vision

Developing **Human-Centred AI-Based Intelligent Assistants** for **safe**, **secure**, **trustworthy** and **effective** **Human-AI partnerships** in **aviation** systems.

Key challenge: **human-centric Intelligent Assistant**, integrating **human values**, **needs**, **abilities** and **limitations**.

Our goal

is to pave the way for **human-centric AI** in the **aviation** domain.

Our challenge

is to deliver **truly human-centric Intelligent Assistant** prototypes, capable of integrating **human values**, **needs**, **abilities** and **limitations**.

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Our approach

- **A truly human-centred approach**
  starting from users' needs and pain points
- **Analysis of how technology changes human activity**
  doing the same job with a digital assistant is not "doing the same job"
- **The Swiss knife of intelligent assistants**
  different assistants for different tasks

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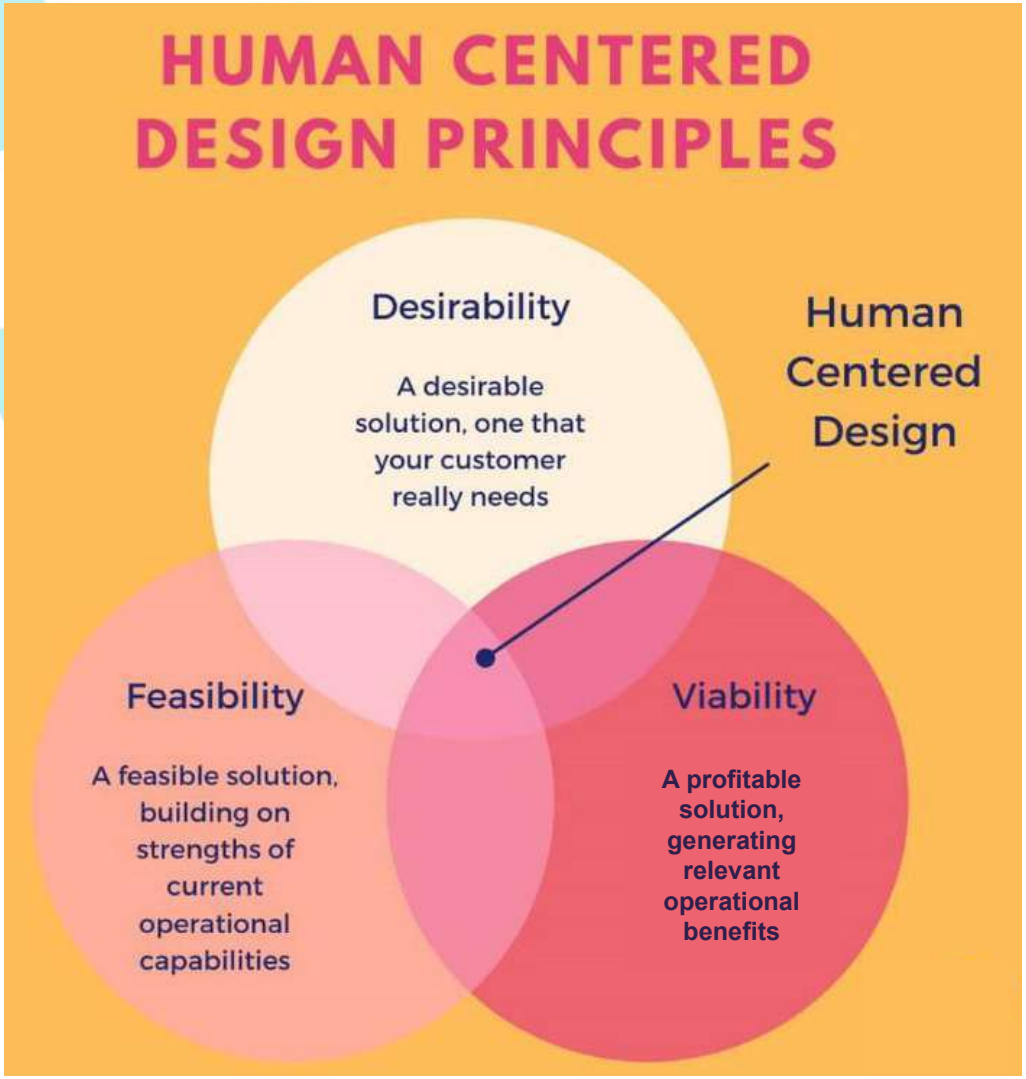
A truly human-centred approach



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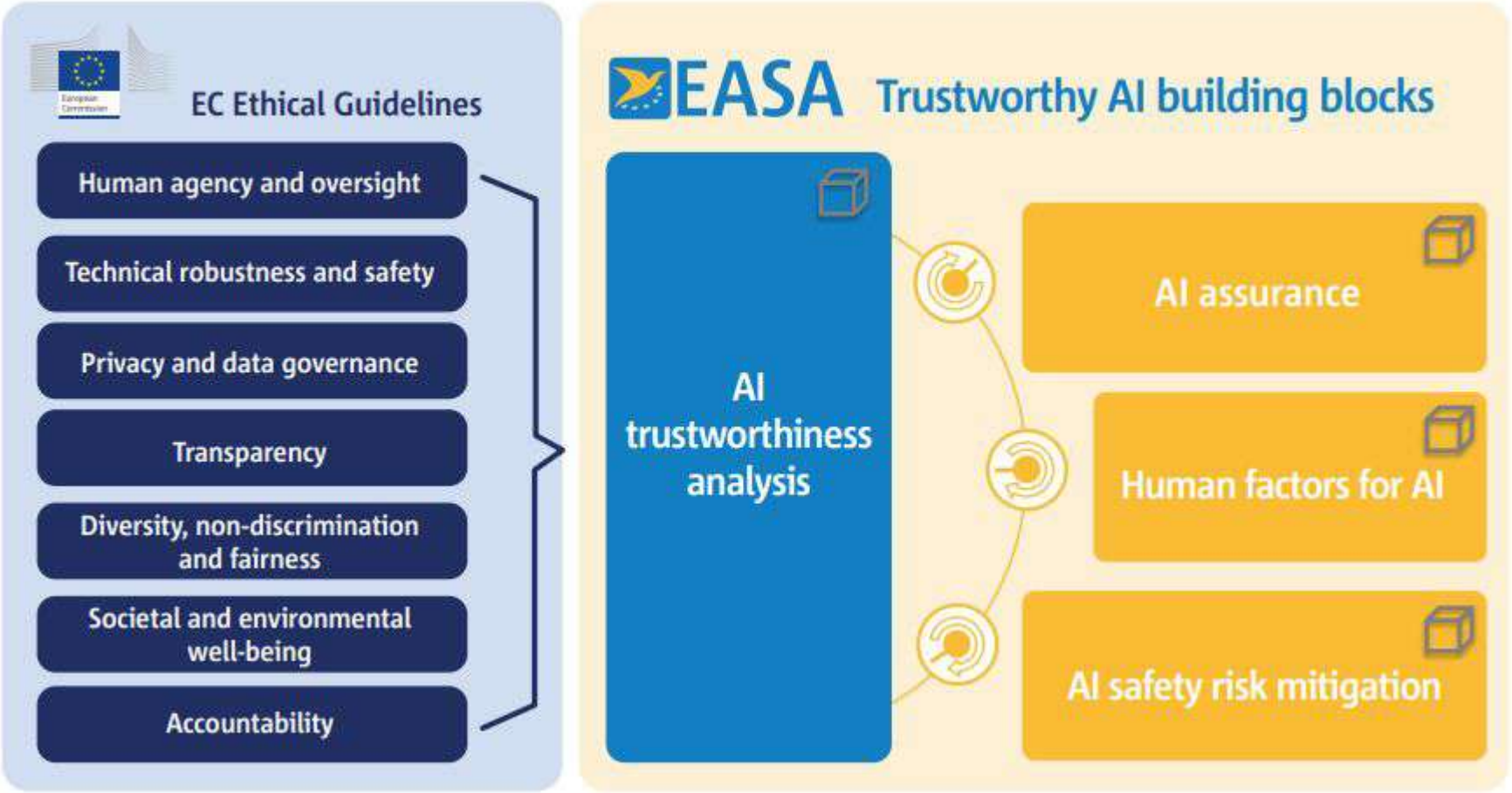
A truly human-centred approach

EASA "characterisation of the AI application"



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Balance of competencies

Horizon Europe R&I Program (September 2022 - August 2025)

15 Partners from 10 different countries, bringing together **Human Factors expertise**, domain's key **end-users** and **technology** suppliers of excellence

deepblue PROJECT COORDINATOR

EUROCONTROL

CHPR

EMBRAER

ENAC

LFV

LINKÖPING UNIVERSITY

skyway

THALES

BORDEAUX INP

CATIE

Suite5 We Deliver Intelligence

DFKI

ENGINEERING THE DIGITAL TRANSFORMATION COMPANY

CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

END-USERS

London Luton Airport

TUI

ADVISOR

EASA European Aviation Safety Agency

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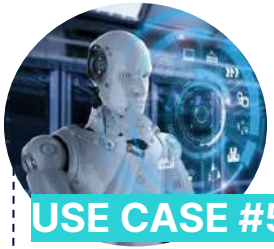
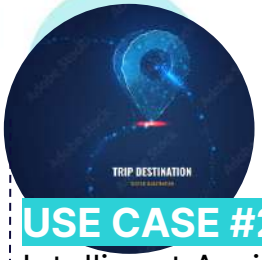
The HAIKU Swiss knife: 6 use cases

USE CASE #1
Intelligent Assistant in the cockpit to assist in "**startle response**" adverse events
Led by ENAC

USE CASE #3
Intelligent Assistant for **Urban Air Mobility** coordinator to assist in traffic management
Lead by LiU & LFV



USE CASE #5
Intelligent 'Overwatch' to improve **airport day-to-day safety** through dynamic **data analysis**
Lead by Engineering



USE CASE #2
Intelligent Assistant in the cockpit to assist in **route planning/replanning**
Lead by Thales

USE CASE #4
Intelligent Assistant for **tower** controllers to assist in **routine and repetitive tasks for aircraft on approach**
Lead by SkyWAY

USE CASE #6
Airport Intelligent Assistant to monitor **risk** factor conditions associated with **indoor spread of infectious diseases**
Lead by CERTH

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Thank you!

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