- Building and Developing a Safe and Competitive Society

Training is foundation of safe RPAS operations

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WHY:
• Making unmanned aviation safe for all of us
• Enabling sustainable operations and business

HOW:
• promotion of safe aviation culture among RPAS operators
• Education of unmanned aviation

WHAT:
• E-learning courses for introduction and safe operation of RPAS
• On-site training and practise
• Advanced courses of application domains
What is wrong with unmanned aviation in Finland?

- Legislation requires knowledge of aviation, operating skills, and safe procedures
- Training is **not required**, but it **is needed**
- Reasons for not seeking training?
  - Unawareness of acts and regulation
  - Lack of aviation safety culture – flying a manned aircraft presents the fear of own death. In case of RPAS the 3\(^{rd}\) party is in danger.
  - Small business -> lack of interest and money?
  - People don’t read the terms and conditions of their liability insurance?
  - Technology makes flying easy and marketing promotes the “Just fly it!” culture.
- Multiple dangerous incidents between RPAS and manned aircraft.
- Other world sees the RPAS aviation differently => liberal rules have also negative effects on business opportunities abroad.
Large amount of legislation affects RPAS operations

- Aviation Act and aviation regulations (including OPS M1-32)
- EC regulation on insurance requirements for air carriers and aircraft operators
- Occupational Safety and Health Act
- Territorial Surveillance Act
- Decree on prohibited and restricted airspace (930/2014)
- Act on plant protection (airborne spreading)
- Acts and decrees handling privacy issues

Change is coming...

- EASA has published prototype rules for RPAS (22.8.2016)
  - Brings training requirements from category Open A3 upwards
- Rules to be published in spring 2017?
What new rules will bring and what we need?

• In 2017 EASA will most likely set clear certification requirements for manufacturing, operation and maintenance.
• Effective In 2019 but no engineering programs of the area exists at the moment.
• To support industry and business, Finland needs good engineering training on RPAS for different roles and different levels (vocational college, univ. of applied science, technical universities)
• Lack of academic recognition of manned pilot training. Maybe RPAS could make things better?
• Insta Airhow supports the academia in the development of such programs.
Insta RPAS training program

Mission level civil modules
(media production, mapping, BVLOS, SAR)

Practical RPAS-training

Integrated RPAS type training + practical training
(e-learning + on site training)

RPAS type training by manufacturer

Principles and safe operation of RPAS (e-learning)

Governmental tactical RPAS training
e-learning & simulation

Insta's own product
Insta with partners
RPAS manufacturer

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Observations of RPAS training

- Survey: more than 50% wanted to learn about current legislation.
- Largest practical problems are the risk assessment and proper flight planning using aeronautical information services (AIS).
- People with prior aviation experience are most interested to acquire training on RPAS operations. Indicates the different safety culture.
- Lately, several companies have started to provide RPAS training, in some cases the training content and used terminology is not convincing.
- EASA: Qualified Entity -> training permissions?
Demonstration of E-learning system

- Giving general introduction and guidance several types of RPA systems – small and big / Fixed wing and rotary wing.
- Promotes the general understanding of the RPAS domain, meaning of different system components and their properties.
- Gives accurate and up-to-date information of the legislation.
- Provides procedures and examples of safe operation of RPAS.
- Introduces and promotes the flight safety
Thank you!