



invent baltics



BEAWARE - Bridging EAst West for Aerospace REsearch

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How BEAWARE idea was born?

- ▶ **FP7 AAT Call asked:** „to put in contact coordinators & partners“
- ▶ **Expected impact:** „increase involvement from regions, which have LOW PARTICIPATION in aeronautics“
- ▶ **Problem:** same players, 95% from West, only 5% from East?
- ▶ **Expectations:** do not produce „yet another book“, do not „sit around the table and ask, who wants to make a project“?
- ▶ **Our approach:** arrange well-focused events, let people discuss, meet "big players"ers ... without obsession of making a project
- ▶ ☺ **First ever FP7 Transport project coordinated by Estonian company.**

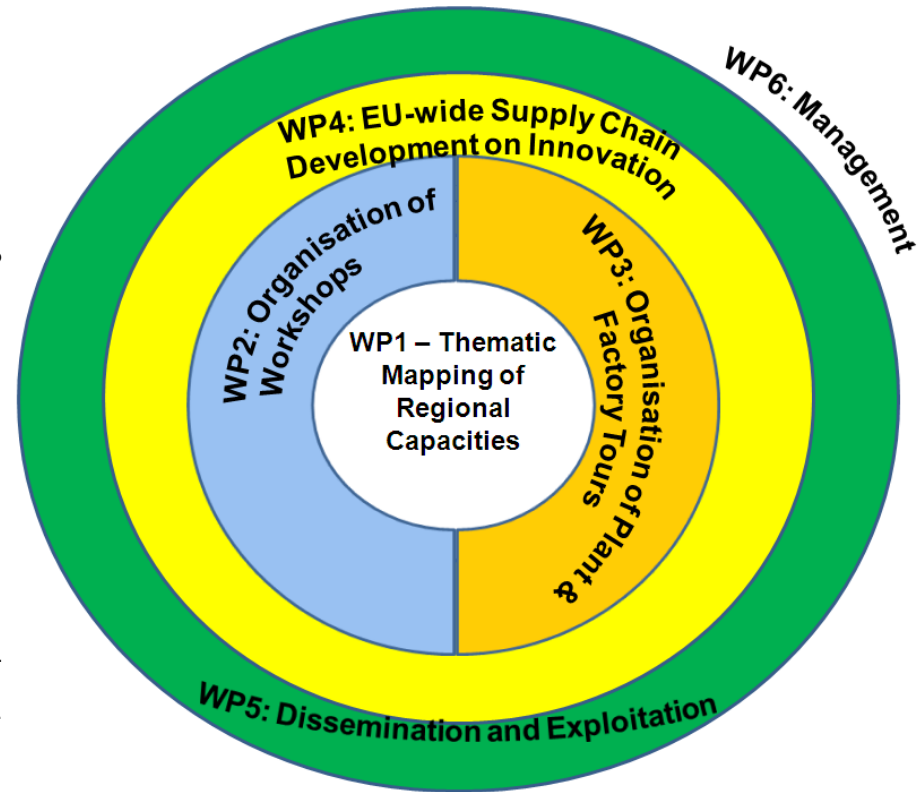
BEAWARE partners: 6+6 East & West



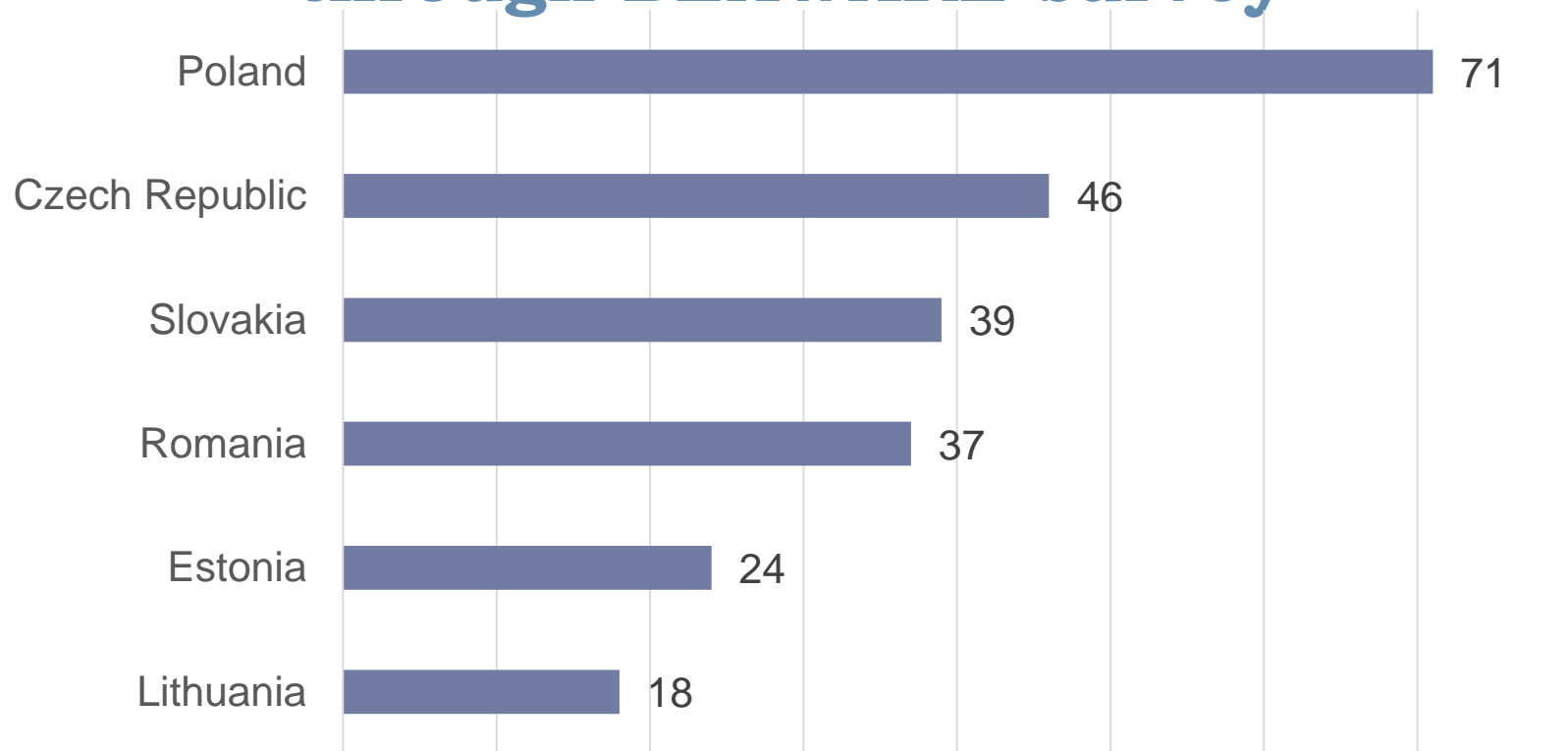
Invent Baltics (IB) – Estonia
Aerospace Valley (AV) – France
Hamburg Aviation (HAV) – Germany
Association of Polish Aviation Industry (APAI) – Poland
Agency For The Promotion of European Research (APRE) – Italy
Farnborough Aerospace Consortium (FAC) – United Kingdom
Fundacion Helice (FH) – Spain
Vilnius Gediminas Technical University (VGTU) – Lithuania
Moravian Aerospace Cluster (MLK) – Czech Republic
National Institute for Aerospace Research "ELIE CARAFOLI" (INCAS) – Romania
Pole Pegase (PP) – France
Zilina University (ZU) – Slovakia

OBJECTIVES

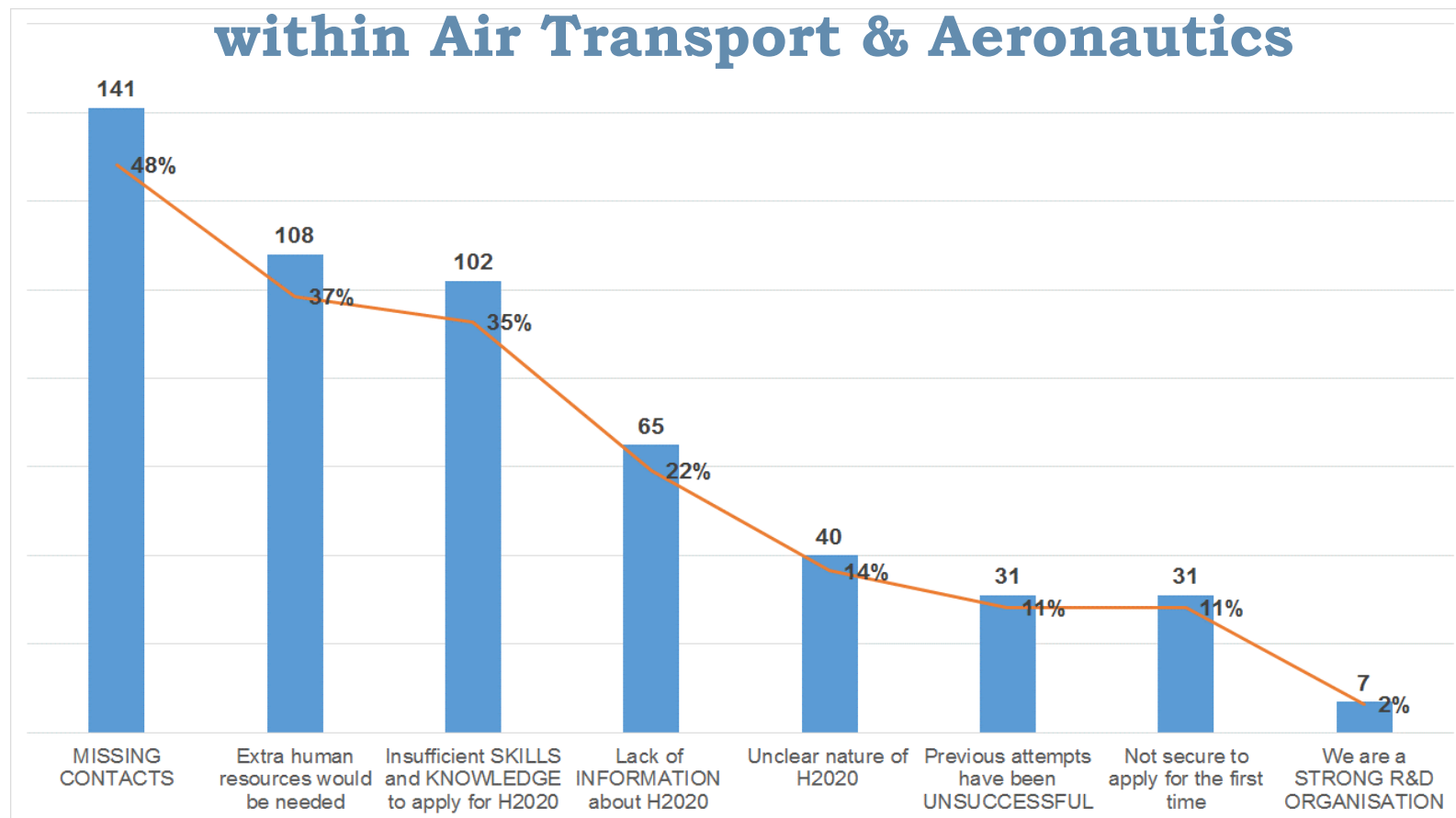
- ▶ To map 300 organisations in 10 aerospace regions
- ▶ To organize 6 Factory tours & Workshops
- ▶ To structure innovation chains, which links aero-SME`s
- ▶ To identify at least 5 potential project consortias in aeronautics)



Mapped aerospace potential in East through BEAWARE survey



Main barriers for Eastern actors for participation within Air Transport & Aeronautics



Prague event April 23rd 2014



- ▶ 40 participants from 7 BEAWARE partner countries took part in Workshop
- ▶ Company tour at Prague-Letnany:
 - Aeronautical Research & Test Institute (VZLU),
 - GE Aviation's Czech turboprop aero engines producer
 - AVIA Propeller - aero engines' propellers producer





Marseille event June 16th-18th 2014



The Eurocopter Global Logistics Center: Eurocopter's global integrated support network for customers a « *fully automatic wareroom* »



ONERA the French Aerospace Lab (BUSARD a motorglider research platform and SETHI and RAMSES-NG airborne experimental platforms)

Bucharest event September 16th-18th



- ▶ **INCAS:** National Institute for Aerospace Research
- ▶ **COMOTI:** Romanian R&D Institute for Gas Turbines



- ▶ **ROMAERO:** the largest company in Romanian Aerospace Industry

Secure and Wireless Governance of Smart UAV-Fleets

Draft for the Horizon 2020 call ICT 30-2015 (6-8 mio Euros for 4 years)

► **Objective:**

- To design smart UAVs, which operate with low-power computing
- To develop new business models using agent-based simulations

► **Consortia:**

- Established as a result of meetings during the BEAWARE
- Fraunhofer wants to come on board
- Dependant on the strong industry case from Airbus/Thales/any other
-

► **Proposal:**

- Looking for a realistic business case and strong industry partner(s)
- Industry partner(s) are under screening



Hamburg event November 24-25/2014

- ▶ **Green Mobility Conference – starting point for future EU projects**
 - ❖ interface with aerospace and logistics topics
 - ❖ meet cooperation partners in matchmaking sessions register free of charge:
<http://greenmobilityconference.talkb2b.net/>
- ▶ **Factory Tour to 3 outstanding members of Hamburg Aviation**
 - ❖ BEAWARE consortia will reimburse travel (flight) costs – local partner takes care of all the organization
 - ❖ Eastern participants only need to cover costs for their accommodation
 - ❖ No registration fee for the Conference and Factory Tour.



▶ beware-aero.eu



BEAWARE events

Time	Event	Side event	Venue	Partner involved
23.04.2014	Factory Tour and Workshop on technology areas of potential development for East and West	ASD convention 2014	Prague, Czech Republic	MLK, PP, HAV
16-18.06.2014	Factory Tour and Workshop on Horizon2020	na	Marseille, France	PP, APRE
16-17.09.2014	Factory Tour and Workshop	AEROSPATIAL 2014	Bucharest, Romania	INCAS
24-25.11.2014	Factory Tour and Workshop	Green Mobility Conference	Hamburg, Germany	HAV
Feb 2015	Factory Tour and Workshop on Aerospace clusters innovation and development policies	na	Italy	APRE
May 2015	Factory Tour and Workshop on Aerospace clusters innovation and development policies	AeroNet	Rzeszow, Poland	APAI, HAV

To be confirmed

Now, about clusters ... and Estonia

- ▶ We're in a **race with other regions** ... around the world to see who can be the **most productive place** and the **most innovative place** to do business (Prof. Michael Porter)
- ▶ A **geographical concentration** of companies from the same sector, related companies, R&D and finance institutions, public actors, and with **relations and cooperation's** between these actors (Prof. Michael Porter)
- ▶ **Cluster** – a group of things of the same kind that are very closed together (according to Longman dictionary)
- ▶ **Cooperation + Competition = Co-competition**

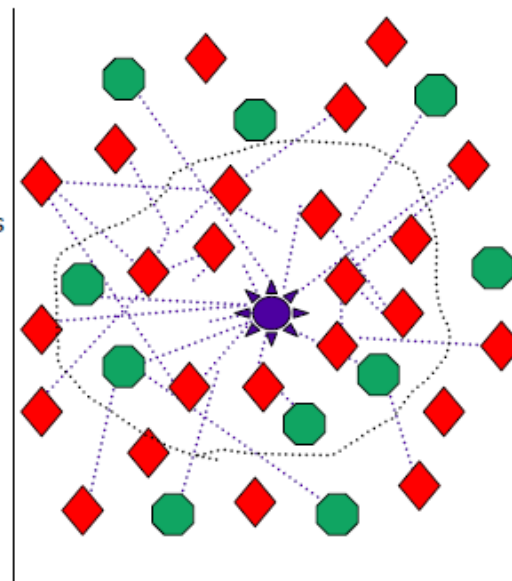
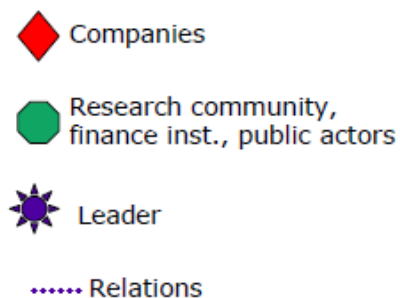
Clusters are everywhere



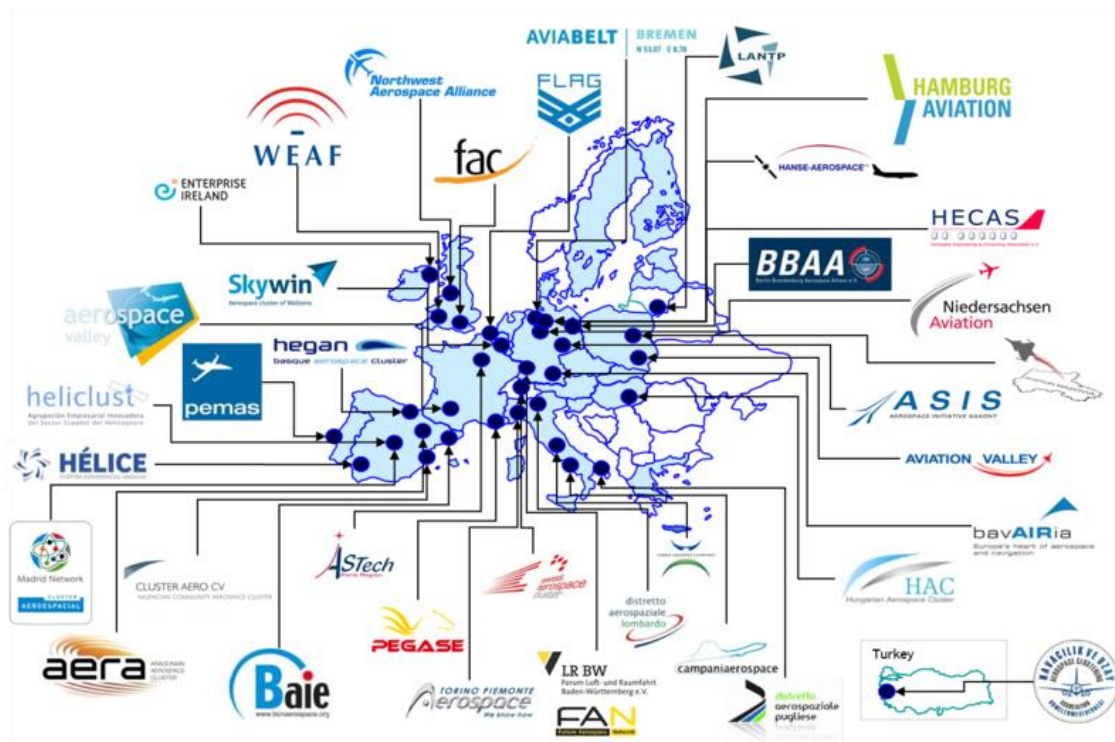
cluster of cottages



cluster of stars



European Aerospace Cluster Partnership (EACP) - 39 members from 14 countries (2013)



- To strengthen Europe's position in the global aerospace
- To push innovation through cluster cooperation
- To exchange knowledge about cluster policy and the aerospace sector

What EACP „cluster of clusters“ does for members?

- Screening EU calls and initiating new projects
- Realizing the exchange of best practices
- Organizing annual General Partner Meeting as well as additional meetings at International events
- Maintaining communication, distribution of information and proposition and push of actions
- Networking, partnering, memberships
- Collaboration with other orgs: i.e. ASD

What Hamburg Aviation does to its members?

- The driving force of innovation is **ZAL, the Center of Applied Aeronautical Research** is to initiate joint projects and translating new technologies into innovative products.
- **Hamburg Centre of Aviation Training (HCAT)**, an inter-campus cooperative project in which the industry, universities and trade schools network to secure needs-based training of specialist personnel.
- Creates **a room for open talks** between research, big companies, SMEs, and politics through the Hamburg Aviation Forum
- Fosters **cross-cluster collaboration**
- Tries to find gaps which local actors in the aviation industry can benefit from, since especially SMEs need to diversify their business opportunities in the future

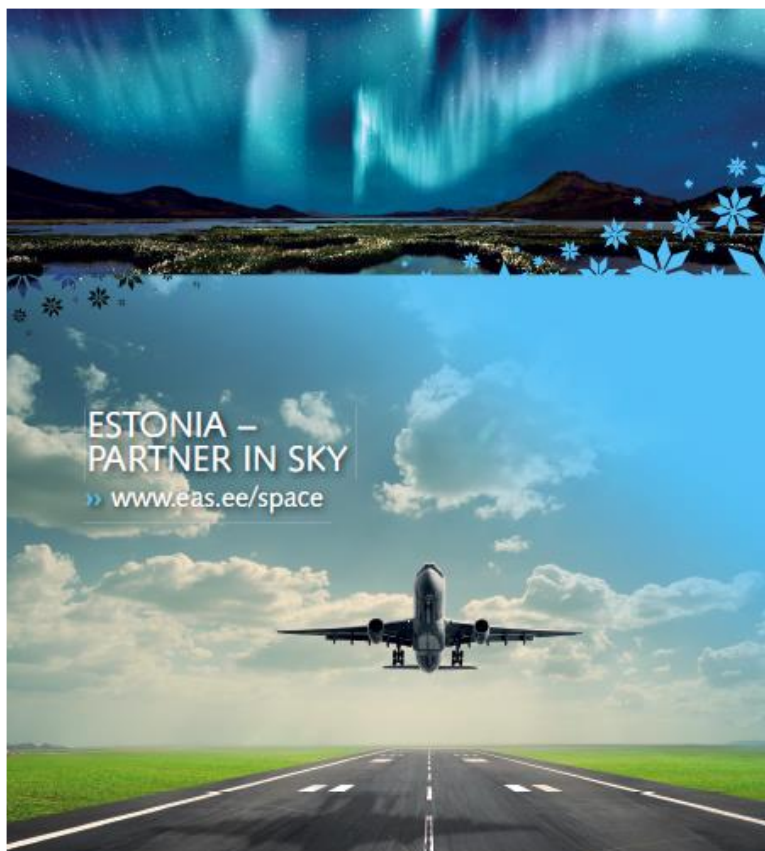
What Hamburg Aviation does to support next generation?

- **"Technology for Kids – The fascination of flying"** was developed together with the HAW and companies from the aviation industry. In illustrative lectures 8 - to 12-year olds learn why an airplane flies and much more.
- **The "FOLLOW ME BOX!"** Teachers of grades 4 through 10 may borrow a free FOLLOW ME BOX on aeronautical engineering at the State Institute for Teacher Training and School Development. The boxes contain practical aerospace materials to six different topic areas.
- **"PRO TECHNICAL"**: offers young women in a 10-month course between school and study, the opportunity to develop deep technical skills in focusing aerospace and renewable energy, to build a network in business and science and develop their own personality.

Main objectives of Aviation Valley - aviation cluster from south-eastern Poland

- Support regional aerospace industry
- Attract new investors
- Develop supply chain
- Influence education system
- Build relationship with academia
- Influence government policy to support aerospace growth
- Develop relationship with other centers of the aerospace industry

ILA 2012 – birth of Estonian Aerospace Cluster?



Questions to be answered before thinking about founding Estonian Aerospace Cluster

- If single companies have marginal overlapping of competences and joint interests, maybe **we shall look things „outside of the box“**
- Given the fact that the centre of gravity will move to Asia within next 20 years, **Estonia will become as a crossroad from Europe to Asia northwards – do we have any advantage in that regard?**
- **How to change mindset of people** (because in aviation industry quick wins are very rare)?
- How Estonia could apply its strengths in areas, where others are not that innovative and **we have already proven knowledge, which could be applied in aerospace industry (IT, software)?**

Areas of opportunity for Estonian Aerospace Cluster

- Geopolitical location (MRO – crossroads EU-Asia)
- Skilled workforce – lower wages (still)
- Ideal platform to work with neighbours – becoming part of EACP!
- Looking for state support (holistic strategy) or stop being blue-eyed
- Finding enthusiastic leader – cluster spokesman
- Defining service (or functions) which makes cluster unique
- Investigating business opportunities, which are ideal for SME's
- What about new fields of activity like in-flight entertainment?
- Applying for EE grant from the Call of Clusters Development from 2015 Q1

Potential members of Estonian Aerospace Cluster – open-ended list

- **Magnetic MRO** (aircraft maintenance services provider)
- **Estonian Air** (national airline carrier)
- **Tallinn Airport GH**
- **Estonian Air Navigation Services**
- **Pakker Avio**
- **Panaviatic** (business jet company)
- **Axinom** (software solution provider, particular focus on in-flight entertainment systems)
- **IB Krates** (the only open source software code generator qualifiable according to aerospace standards)
- **Subcontractors for primes e.g. Ionix Systems** (produces wiring harnesses for electrical systems)



Thank you !



Questions ?