

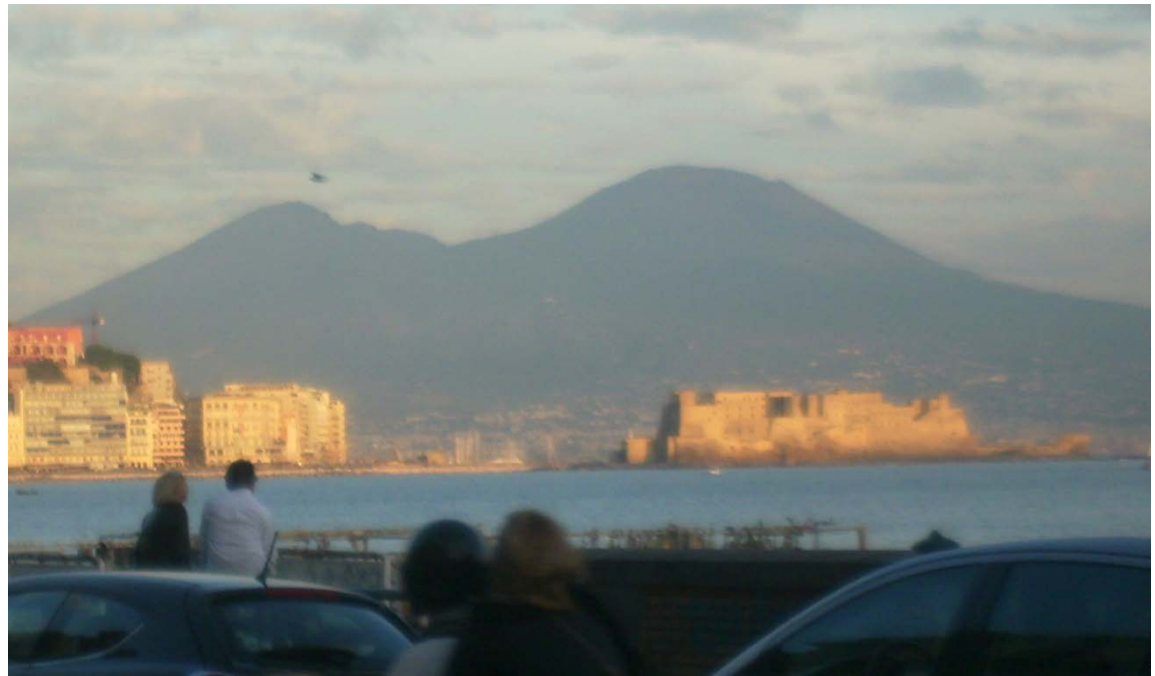


3rd ASDA Seminar

20 June 2012

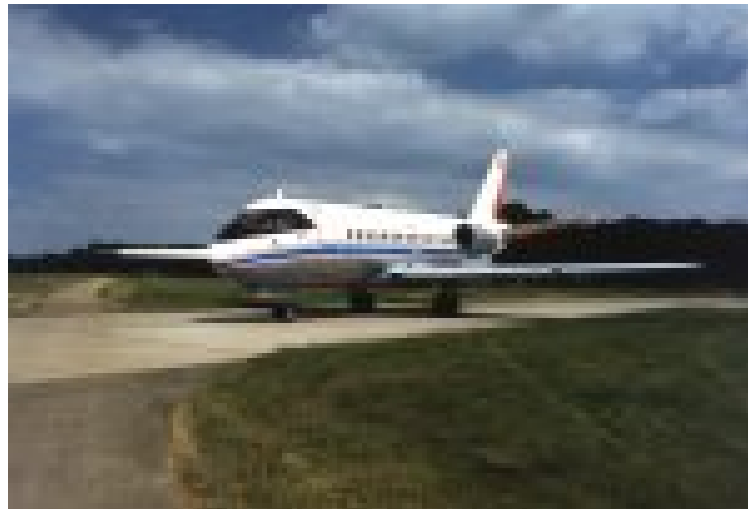
Kurt Klein (Chairman)

- The Association
- ATM Research Future
- This Seminar



The Association

- ASDA is an European association
 - founded in February 2007 and registered in Germany
 - bringing together **independent** research institutes based in Europe and universities with activities in Air Traffic Management Research and Development (ATM R&D) (full member)
 - plus individuals working in the field (associate member)



The Association

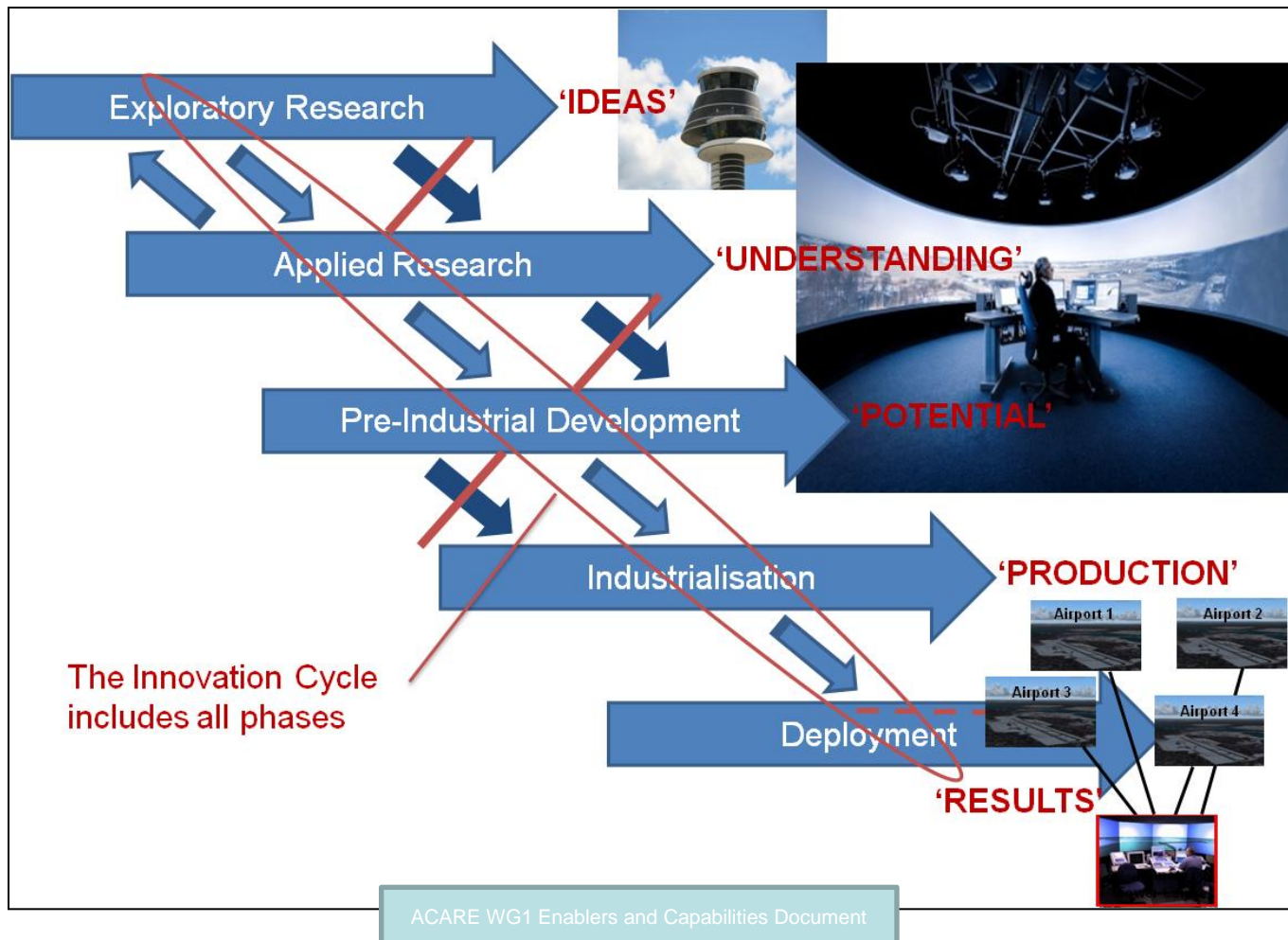
- Motivation for forming ASDA:
 - Covering a lack of representation in Europe beside Manufacturer- and Service-Industry. The need for a scientific and independent voice in the international ATM domain representing “open thinking brains”
 - To increase the visibility of ATM charm in the Academia and collect new young researchers
 - The need for much more attention in long term research in ATM.
 - The need for better coordination and support of the academia and the research institutes (facilitator).



Update

- 3rd Seminar in Delft
- Position on future ATM Research requirements
- Facilitate further discussion on that
- Offer to decision makers to involve ASDA in organisation of the research
- Representing ATM science community in
 - SESAR Joint Undertaking administration Board
 - Eurocontrol ART (Agency Research Team)
 - More to become
- Plan for next year

Innovation Cycle



Horizon 2020 (FP8) impressions

- Commission preference lies on higher TRL (i.e. JTI, public private partnerships)
 - Short and mid-term innovation has highest priority (i.e. SESAR + extension)
 - Re-inventing the organisation and administration
 - Trend to “No major changes in the complex ATM system”, as this questions the current way of interest balance
 - >> for small units too much effort needed
 - >> Difficult for the academia (at least in the beginning)
 - >> As well for research establishments

Other Programmes

- National programmes are currently the backbone for the funding of academia and research institutes
 - Big differences between countries
 - Focus on national (industry) needs
 - Less pan-European view / fits not to FAB approach
 - Financial crisis reduced combination of education and research

More sufficient fundamental research

- Innovations of the future depend on fundamental, low TRL, out-of-the box research of today
- Focussing only on high TRL will create a gap in technology capabilities and operations in the future

Main role of industry promotes conservative approach



- Industry wants to adapt and sell existing equipment
 - Service providers don't want to upset their organisations
 - New concepts not welcome, no paradigm change, only short term fixes
- >>> Contributing and advising role of industry is needed for the low TRL

What is the way forward ?

How to set-up future ATM Research in Europe?

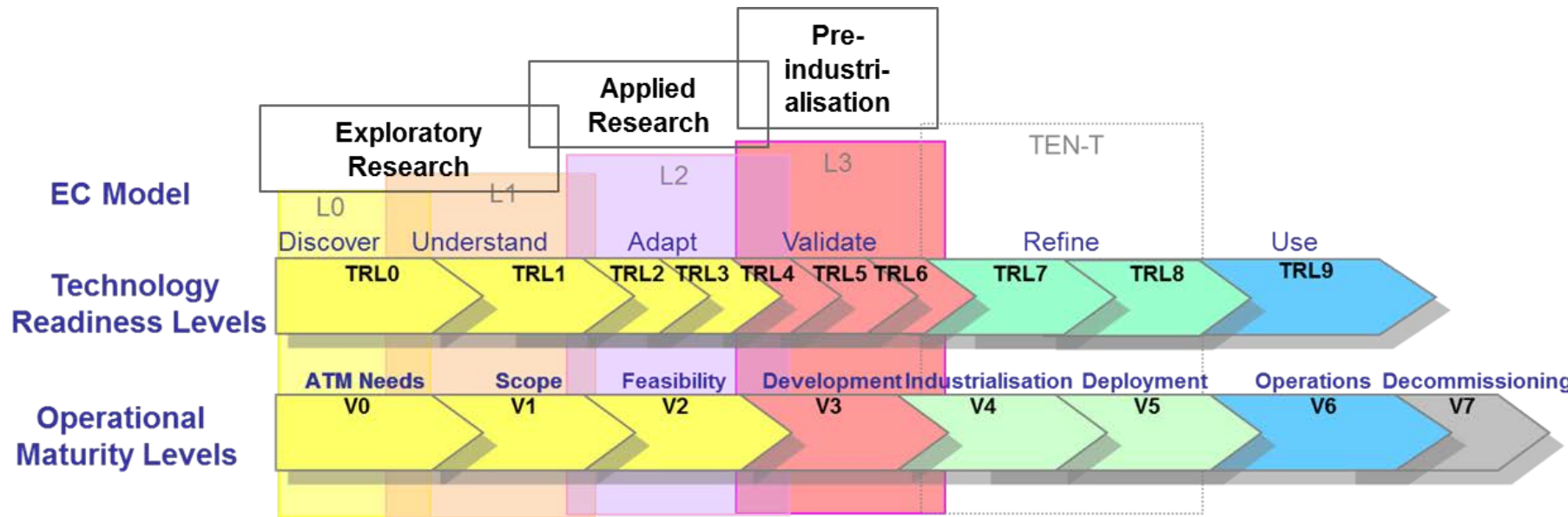
- Needs:
 - Adequate resources
 - Combination of national, European, industry, and user funding
 - Well educated scientists & technicians
 - From institutional funding (TRL 0), grants to contracts (TRL 6/7 or even 8/9)
 - Facilitate a „competition of best ideas“
 - Support the evolution of the strategy (Masterplan, etc.)
 - Adequate management of research
 - Separation of R&D and deployment
 - Minimum of administration
 - Research performance assessment via programme and organisation evaluation
 - Apply state-of-the-art management skills (ISO9001, etc.)

ASDA Thoughts

- R&D leads to best results by applying adequate guidance
 - **Exploratory research**, facilitate „competition of best ideas“ based on a broad range of sources (skills, organisations, disciplines)
 - **Applied research**, solid R&D (reliable = scientific rules, independent, all KPA tackled, goal driven)
 - **Pre-industrial developments**, close to operations, pre-operational trials and demonstrations and enablers in the different phases:

ASDA Thoughts

What is the way forward ?



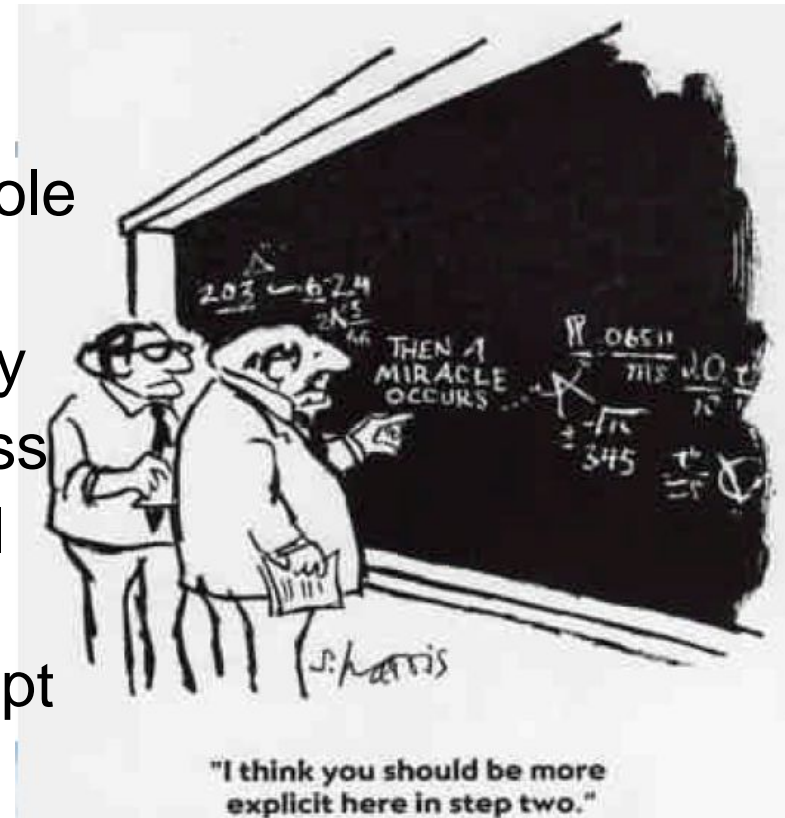
ASDA Thoughts



- Improve the WORKING TOGETHER, by
 - Less bureaucratic management of research
 - Better chances for academia for involvement
 - Adequate budget for all phases
 - Better “flow of knowledge” in the innovation cycle
 - Make best use of Knowledge, validation infrastructure, and national resources in Europe
 - Bringing talents into research via PHD studies inside ATM research
 - Facilitate best quality of research (apply scientific standards, independent validation, consider all KPA, evaluate side effects)

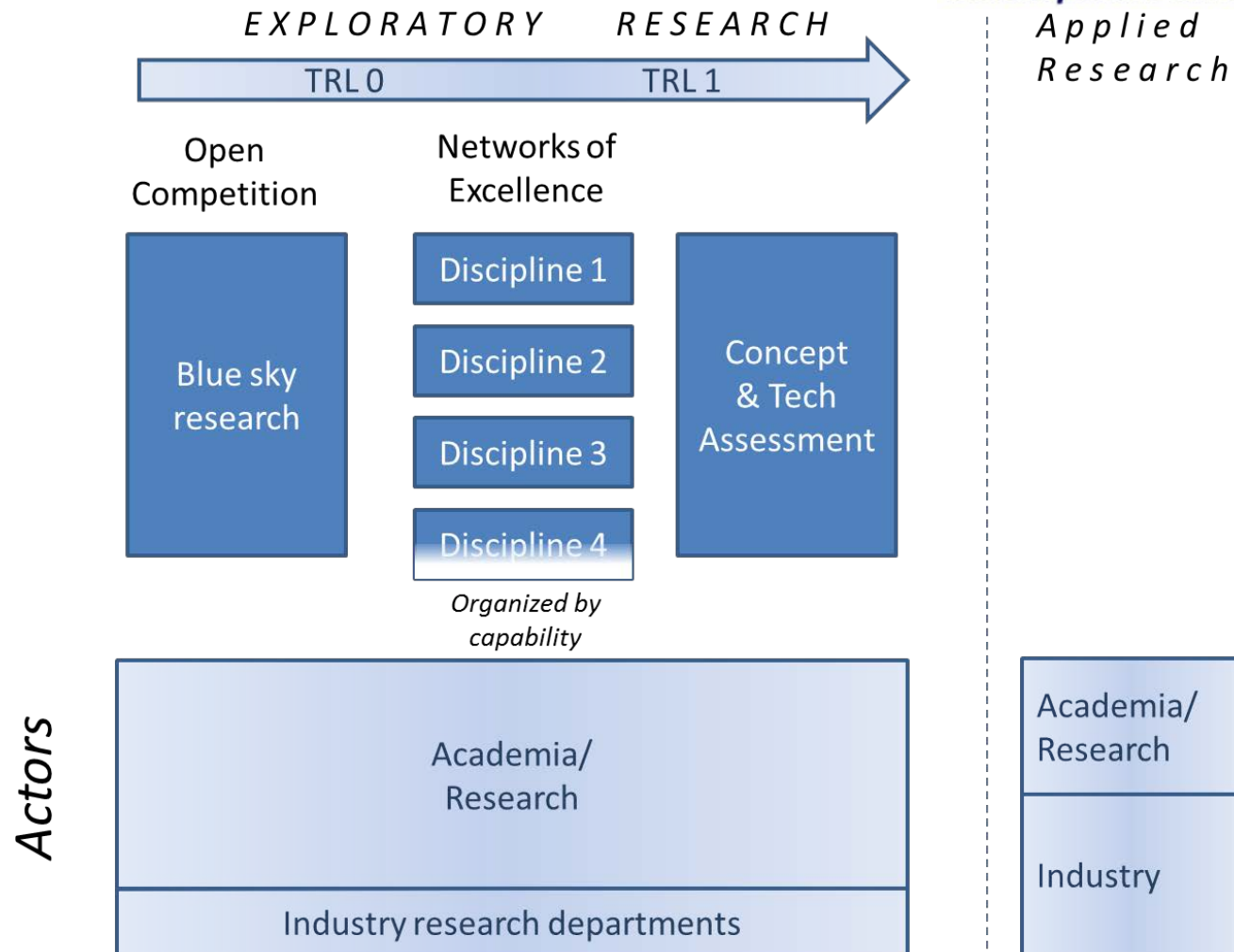
ASDA Thoughts

- **Governance in Exploratory Research**
 - Academia & Research Establishments play a major role
 - Open Calls
 - Selection of topics by creativity
 - Transparent evaluation process
 - Make best use of the potential in all European countries
 - Transfer of results after concept and technology assessment



ASDA Thoughts

ASDA
*Association for the Scientific
Development of ATM in Europe*
*Applied
Research*



What is the way forward ?

ASDA Thoughts

- **Governance in Applied Research**
 - Involvement & Governance shared between Academia & Research Establishments and Industry (Service & Manufacturer)
 - Open Calls
 - Selection of topics by feasibility, Market pull
 - Larger scale requires more management of work, quality assurance and risk assessment
 - Transparent evaluation process
 - Make best use of the potential (incl. test facilities) in all European countries
 - Transfer of results after concept and technology assessment

ASDA Thoughts

- **Governance in Pre-Industrialisation (Research)**

- Academia & Research Establishments play a minor role, Service industry and manufacturers are the important actors
- Transition & Standardisation & Training to be considered



ASDA Thoughts

• Budget

- ARDEP lesson: before 2009: ~220 M€ per year
public money from EC, Eurocontrol, Stakeholders
>>> 130M€ from European money for the R&D Phases
- Distribution:
 - 30% for exploratory research
 - 30% for applied research
 - 30% for pre-industrial development
 - 10% for the concept and technology assessment to govern the transfers between the 3 phases

This Seminar

- 3rd ASDA Seminar
- In combination with ATOS, IMAPP, and Complex World conference
- Topic: „COST & BENEFITS OF AIR TRAFFIC MANAGEMENT RESEARCH AND DEVELOPMENT“

This Seminar: Sessions



- Keynote from the European Commission (DG MOVE)
- 1st Session: EARPG [10:10]
Chair: Werner Kleine-Beeck (EASA)
- 2nd Session: Analysis and Plan Optimisation [11:30]
Chair: Kurt Klein (ASDA Board)
- ASDA Panel Discussion [14:10]
„How to organise ATM research in Europe: Next steps“
- 3rd Session: Airport 3 [15:45] (ATOS+ASDA)
Chair: Jacco Hoekstra (ASDA Board)
- Conference Closing Ceremony