WELCOME ADDRESS

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New UAS capabilities, towards new applications

ESA – EDA workshop, May 11th – 12th 2010
• 2007 European Space Policy, outlining strategic objectives for Europe:
  – Develop and exploit space applications for public policy objectives and needs of European enterprises and citizens
  – Meet Europe’s security and defence needs
  – Secure unrestricted access to new and critical technologies, systems and capabilities
  – Ensure a strong and competitive space industry and delivery of sustainable and cost-effective services

• The ESP recognizes that:
  – Space technologies are often common between civilian/defence applications
  – Europe can, in a user-driven approach, improve coordination between defence and civilian space programmes, pursuing in particular the synergies in the domain of security.
• **Legal base:** Art. 2 of the ESA Convention on the Agency’s activities for ‘exclusively peaceful purposes’ covers all ‘non-aggressive’ activities

• **Security-related activities:** Development on a European level of technologies and infrastructures in support of security-related applications, by taking into account security and defence requirements

• **ESA participating in the ‘Structured Dialogue’** with EC, EU Council, EDA and Member States with the aim of achieving a substantial increase in the coordination of space, security and defence related activities

• **EDA** as the natural interface to the military community
New UAS capabilities, towards new applications

EDA and ESA

United States

Norway *

France
Germany
Belgium
Greece
Luxembourg
United Kingdom
Italy
Netherlands
Portugal
Spain

Hungary
Poland
Romania
Czech Republic

Denmark
Canada

Switzerland

Sweden
Austria
Finland
Ireland

Malta
Cyprus

* Norway has a 3rd party with EDA
UAS services are an emerging market, at today mainly military dominated.

ESA believes that civilian/security UAS sustainable services can be developed.

Many of these services are enabled and supported by integrated space systems such as navigation, communication, and earth observation.

The ARTES 20 Integrated Application Promotion programme is the ideal programme to promote UAS based services.
### Civil & Security
- Earth Observation & Remote Sensing
- Civil Security & Law Enforcement
- Security Border Surveillance
- Surveillance Coastguard
- Monitoring Fire Fighting
- Monitoring Energy Sector
- Monitoring Agriculture Forestry Fisheries
- Communications & Broadcasting

### Defence
- Intelligence Reconnaissance Surveillance
- Electro- Optical/ Infra- Red
- Synthetic Aperture Radar
- SIGINT & EW Systems
- ELINT
- COMINT
- C4I Systems
- CBRN Detection and Monitoring

Several commonalities between Civil Security and Defence
Two on-going studies are exploring the feasibility of a demonstration mission in the timeframe 2010/2011

- Study 1 is funded by EDA and carried by an EADS Astrium led consortium

- Study 2 is funded by ESA under the integrated application programme and carried by an INDRA led consortium,
Salient objectives of the studies: investigate….

- The feasibility and the overall planning for a UAS mission demonstration
- The viability of UAS services supported by space assets
- The investments necessary to develop such services
- The roadmap for civilian and security services development

Desired outcome: Green light for an IAP demonstration project(s)
The UAS activities of IAP…

✓ … illustrate how integration of space assets into other systems can be used in order to respond to and fulfil actual user needs

✓ … are a powerful example demonstrating the use of space-based services to a wealth of new user communities outside the traditional space domain.
A very pertinent opportunity…
Why take action to enable new UAV capabilities?

e.g. **Volcanic ash cloud crisis**

- 100,000 flights cancelled
- 10 million passengers affected
- 1.7 billion USD of loss in airline revenue
NEED

Quality data support to enable risk assessment and adequate decisions.

SOLUTION (elements of ~)

Improve modelling capabilities and data collection methods, e.g.

- satellite imagery
- atmospheric in-situ measurements, in particular using UAVs
“The European Commission will create a crisis coordination cell, that could decide to launch UAV needed to collect data. Before the summer 2010 the commission will make proposals to enable the UAV to be operated in the Single European Sky”.

EC report, 27 April 2010

ESA – EDA endeavours are critical and timely
WELCOME

my wishes for…

fruitful discussions

&

the emergence of new collaboration opportunities for you with ESA