Mechanisms for regional and international cooperation: The example of ESA

UN/China/APSCO Space Law Workshop, Beijing, China

Tanja Masson-Zwaan
International Institute of Air and Space Law

19 Nov 2014

Universiteit Leiden
The Netherlands

Outer Space Treaty & Cooperation

- ‘Obligation’ to cooperate:
  - Preamble
  - Article I
  - Article III
  - Article IX

Working group COPUOS LSC

- Review of international mechanisms for cooperation in the peaceful exploration and use of outer space
- ESA submitted its response:
  - The European Space Agency as mechanism and actor of international cooperation
  - A/AC.105/C.2/2014/CRP.28
  - 28 March 2014

European Space Agency - ESA

- Regional, intergovernmental cooperation
- History:
- 1964
  - European Space Research Organisation (ESRO) & European Launcher Development Organisation (ELDO)
- 1975
  - Convention for the Establishment of a European Space Agency (in force 1980)
  - Then 11 member states

Purpose of ESA

"To provide for and promote, for exclusively peaceful purposes, cooperation among European states in space research and technology and their space applications"

- **Article 2 of the ESA Convention**

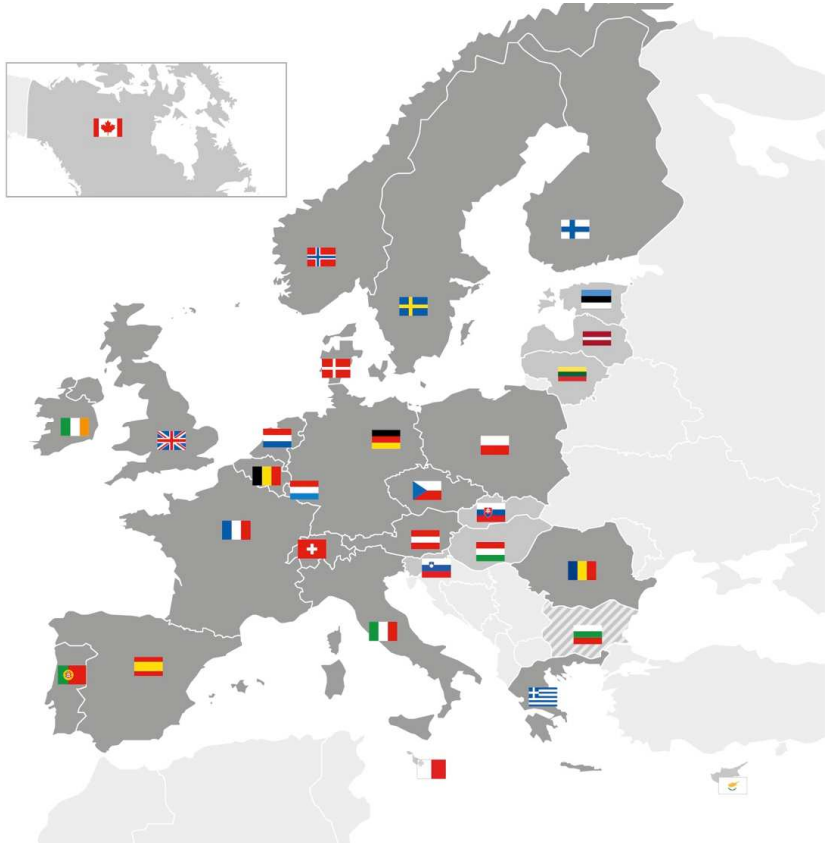
What and how?

- Pool material & technical resources of member states at national level
- Integrate national space programmes as much as possible at European level
- Strengthen European space efforts for exclusively peaceful purposes at global level

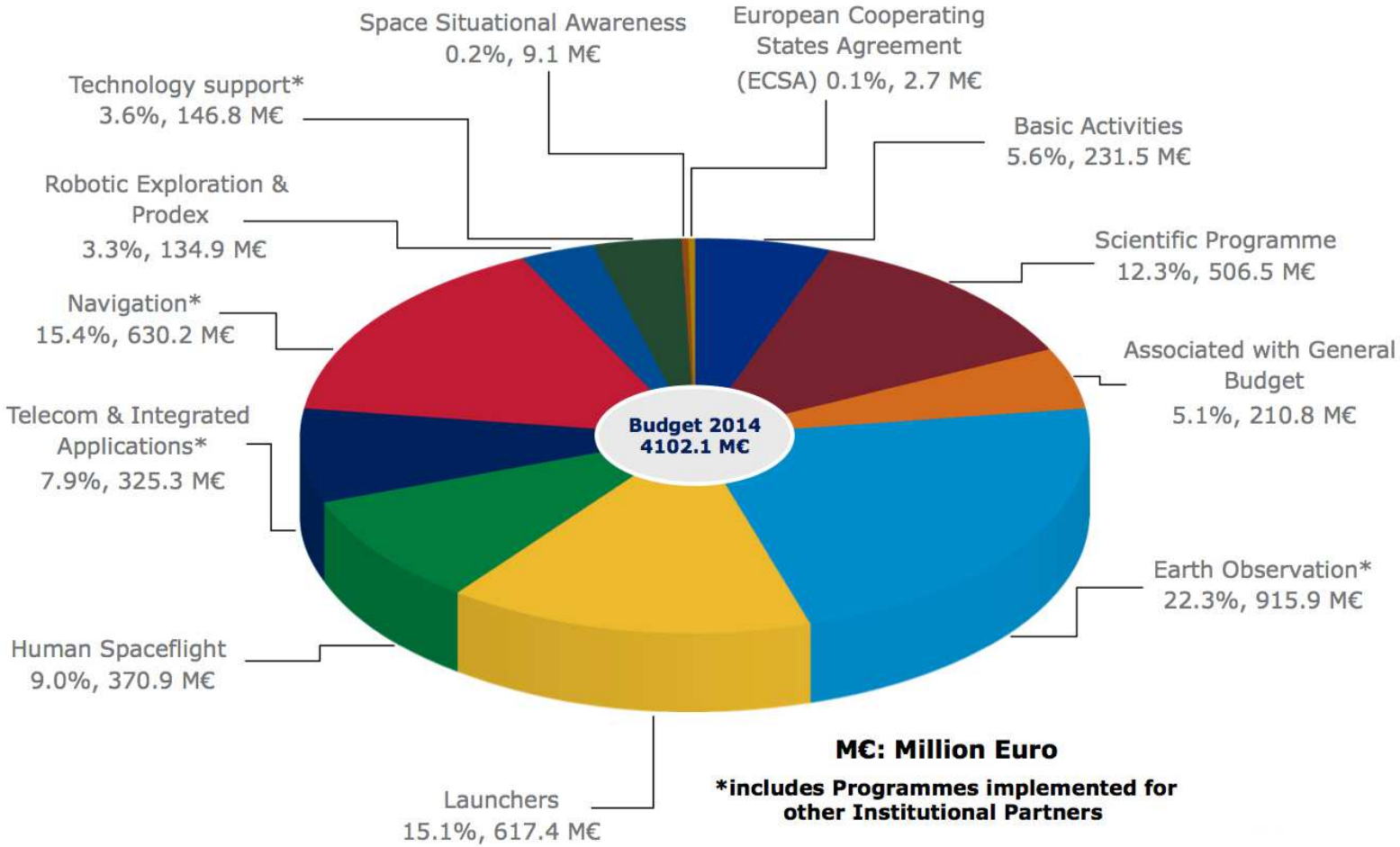
- By means of:
  - European space policy (EU)
  - Activities & programmes (ESA & member states)
  - Industrial policy (ESA & member states)

Member States

- Austria, Belgium, Czech Rep., Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Norway, Netherlands, Poland, Portugal, Romania, Spain, Sweden, Switzerland, UK
- Canada: cooperating state
- Cooperation agreements: Estonia, Slovenia, Hungary, Cyprus, Latvia, Lithuania, Malta, Slovakia
- Negotiating: Bulgaria



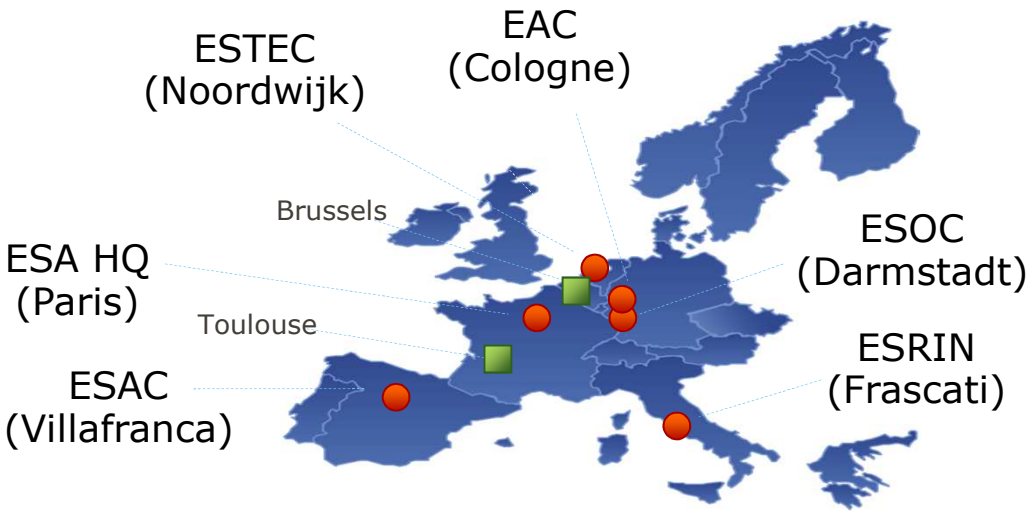
Budget 2014


Space Situational Awareness
0.2%, 9.1 M€
European Cooperating States Agreement (ECSA) 0.1%, 2.7 M€
Technology support*
3.6%, 146.8 M€
Basic Activities
5.6%, 231.5 M€
Robotic Exploration & Prodex
3.3%, 134.9 M€
Scientific Programme
12.3%, 506.5 M€
Navigation*
15.4%, 630.2 M€
Associated with General Budget
5.1%, 210.8 M€
Telecom & Integrated Applications*
7.9%, 325.3 M€
Budget 2014
4102.1 M€
Earth Observation*
22.3%, 915.9 M€
Human Spaceflight
9.0%, 370.9 M€
Launchers
15.1%, 617.4 M€
M€: Million Euro
*includes Programmes implemented for other Institutional Partners

ESA Establishments

Establishments & Centres

Offices



Institutional structure

- Two main organs:
  - Council of member states
  - Director General, assisted by staff

Council of member states

- Governing body of ESA
  - 1 state, 1 vote, regardless of size / contribution
  - Meetings at ministerial / delegate level
  - Ministerial Council: key decisions on new /continuing programs & budget, every 3 years

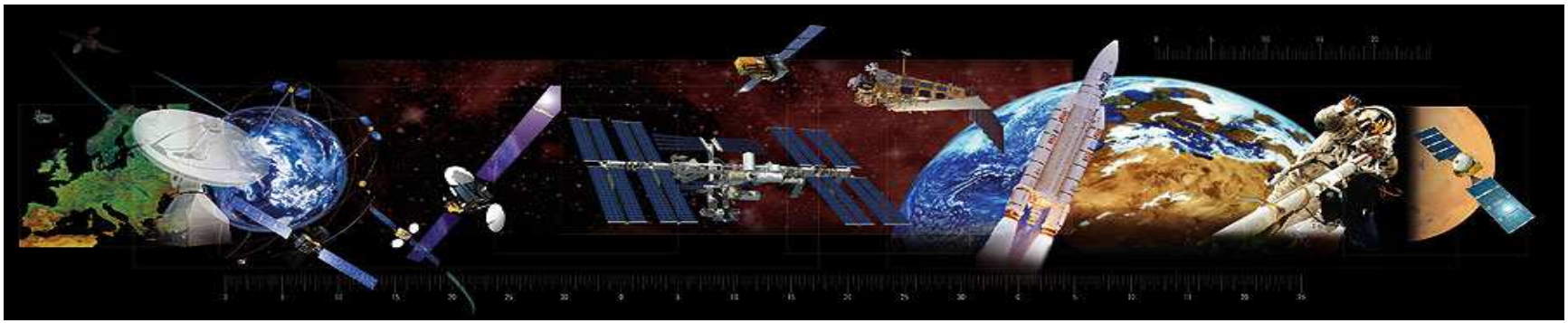
- Creates subordinate bodies:
  - Financial and administrative
  - Industrial policy and procurement
  - International relations
  - Security and Technology transfer
  - One per programmatic area: Programme Boards

ESA Director General

- Appointed by Council by 2/3 majority of member states
  - J.J. Dordain (2003)
- CEO & legal representative of the Agency
- Responsible exclusively to the Agency – not to any member state

ESA Directorates

- Technical & Quality Management
- Human Spaceflight & Operations
- Industry, Procurement & Legal Services
- Launchers
- Earth Observation
- Galileo & Navigation-related Activities
- Science & Robotic Exploration
- Telecommunications & Integrated Applications



ESA programmes: mandatory

- All Member States participate (on GNP basis) in activities related to Space Science & a common set of programmes
  - Council approves programmes, determines level of resources
  - Members contribute per pre-set scale

- e.g. science, budget, facilities, education

ESA programmes: optional

- Members choose level of participation
- Practical nature
  - Council accepts programmes
  - Members may opt out, contribute à la carte

- About 80% of ESA budget = optional

- e.g. human spaceflight, EO, navigation, launchers, telecom

Industrial policy

- Generally
  - Promoting cost-effectiveness
  - Improving world-wide competitive industry
  - Using existing industrial potential Europe
  - Preference for European industry
  - Equitable member state participation
  - Exploit advantages competitive bidding

- Fair return principle
  - ←→ EU principle of free competition

Space: a key asset for Europe

- Principles subscribed by ESA & EU:
  - Social, economic, strategic interests
  - Space is an ‘enabling tool’:
  - Response to critical challenges (climate change, global security,…)
  - Growth & employment
  - Technologies for knowledge-based society
  - Security interests
  - Understanding of planet, Universe
  - European identity, cohesion, inspiration

- EU space competence since 2007 (Lisbon)

ESA, EU & space treaties

- ESA declared acceptance of 3 treaties:
  - Rescue agreement, Liability Convention, Registration Agreement
- EU has not (RIO argument)
- All EU members ratified OST, except 3:
  - Latvia, Malta (RA, LIAB), Slovenia (RA, LIAB (Lithuania ratified in 2014)
- Only 6 EU member states have space law
  - SE, UK, BE, NL, FR, AT
  - NO (ESA member/non EU) the oldest one

ESA-EU Cooperation

- Since 2000
- Space Councils since 2004
- Space Policy 2007
- Distinct roles:
  - EU: regulatory
  - ESA: technical
- Now also coop. with
  - EDA
  - EMSA
  - EUROCONTROL
  - EP

Next Ministerial Conference

- 2 Dec 2014, Luxembourg
- Topics on the agenda:
  - Launchers
  - ISS
  - ESA-EU
  - Announcement new DG?

ESA and EU – Issues

- EU as owner of space assets could be held liable for damage under the space treaties
  - EU needs to declare acceptance of UN treaties
- Some member states have not ratified UN treaties but may participate in space activity through EU
  - States need to be encouraged to ratify treaties
- Most member states have not enacted national space legislation, although space activity exists
  - States need to be encouraged to enact NSL
  - Harmonization by EU not allowed (Art.189 TFEU)
- ESA-EU evolution
  - ESA space agency of EU, or EU member of ESA?

Conclusion: a useful model?

- Yes
  - ESA allowed Europe to become a strong actor in the global playing field
  - Small states developed space capability
  - Possibility of joint positions, e.g. in COPUOS
- But
  - Need to take into account different space capabilities / politics / needs, ambitions / legal systems

Questions?

Thank you!

t.l.masson@law.leidenuniv.nl - www.iiasl.aero - www.iislweb.org

Universiteit Leiden
The Netherlands