Space Technology for competitiveness, non-dependence and innovation in space

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INDUSTRIAL PERSPECTIVE

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The Space group in ASD

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Industry Expectations

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- Industry wants H2020 to be useful
- Industry is mature and knows what it needs
  - Natural point of convergence of all needs
    - civil, military, commercial, institutional
- Lessons learnt from FP7
  - High TRLs and IOD
- Issue of prioritization of objectives
  - Political (EU)
  - Programmatic (Agencies/Science)
  - Competitiveness (Industry)

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Technology Plan

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- Building up a Technology Plan is a long process
  - Strong focus of industry on the content
- ESA: Focus on the content / EC: Focus on the process
- Some opinions about industry inputs
  - "I don't care about what industry needs"
  - "I know what industry needs"
  - "Industry is unable to define priorities"
  - "Industry is unable to comply with political objectives"
- The "Industrial leadership" objective of H2020 will be implemented gradually
- Implementation phase
  - Importance of a customer/provider relationship
  - High TRLs and IOD impact procurement process
    - Delegation to ESA (or other, in specific areas) would bring required expertise

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What industry needs

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- Ideally: Complement ESA/MS support
  - Not in line with EC political objectives
  - No interference with ESA and MS activities
- In Practice: 2 different fields of action
  - This is a limitation for industry
  - Not up to industry to decide who does what
- The main stakes:
  - Support readiness for industry competitiveness
  - Support readiness for institutional programmes

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Workplan Reminder: 2 Steps approach

from Dec 12 to May 13

- Phase 1: Identify and select potential SRC candidates:
  - Top down approach driven by high level objectives
  - Mapping of possible SRCs in line with stakeholders perspectives and strategy
  - Propose a selection/consolidation
- Phase 2: Populate the selected Clusters with technology roadmaps
  - Bottom up approach satisfying stakeholders needs in the context of H2020

è Eurospace approach is to provide an overall consistency of all SRC R&T actions, ensuring they will support industrial competitiveness

è To seek a large consensus within the community of stakeholders (ESA/MS, Scientific community, Innovative SMEs, ESOA....)

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Areas to be covered

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Answering to Societal Challenges

	EU flagship Programmes		Security	Space Telecoms		Access to Space	Science and Exploration		Exploitation of Data
	Galileo	Copernicus	SSA	Air Trafic Management	Competitiveness	Alternative Access to Space	Science	Exploration	
Space Systems Enablers	Data Security / Integrity					Alternative Propulsion (Storable Cryo. ...)	Madrid Workshop		Integration Multisensors Long Term Preservation
	High Speed Data Processing / Transmission								
	Simulation and Engineering Tools								
	Autonomy								
Spacecraft Technologies	Clocks	ESA EOEP	Specs TBD	SESAR	ESA ARTES				
	Advanced Propulsion								
	Power & Thermal								
High Performance and Dependence Reduction	REACH Impact								
	EEE Components / Materials								
	Environment Models								
	Advanced Manufacturing Processes								
Ground Systems	Application Driven								

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- Vertical
  - Next generation of EU flagship programmes (existing framework with ESA)
    - EO new applications, competitiveness, multisensors intergration...
  - SSA: Need to define requirements
  - Telecommunications Satellites and Payload:
    - Air Traffic Management
    - Digital Agenda, Competitiveness (not covered by ARTES)
  - Next to next generation launch/transportation systems (Alternative access to Space)
  - Enabling technologies for Exploration and Space science (Madrid workshop)
- Horizontal
  - Technologies for High Performance and dependence reduction
    - EEE components and materials,
    - REACH impact,
    - advanced manufacturing processes, ...
  - Space systems enablers: End to End, Data security/integrity, design tools and environment models, ground systems (application driven)
  - Advanced Spacecraft technologies: Propulsion, Power... (not covered by GSTP)

Nota: Support of space-derived downstream applications not covered by Eurospace

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Conclusions

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- Space technologies
  - Focus on transverse technologies not addressed by ESA programmes (ARTES, EOEP, launchers)
  - Many needs for advanced spacecraft platforms subsystems and generic technologies to be coordinated with TRP/GSTP
  - IOD of new technologies
- Activities for international partnerships
  - Achieve excellent position for participating in partnerships
  - Anticipate international roadmaps

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