



Opportunities for the development of a European hyperspectral research infrastructure

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Exploratory Workshop, Davos, March 14-15 2007

HYRESSA - HYperspectral REMote Sensing in Europe specific Support Actions



Introduction



- *UoE will coordinate HYRESSA AM9 (principal partners Vito, DLR, INTA, ILE ASCR):*
- *Objective: To develop a plan for future collaboration related to a European hyperspectral remote sensing research infrastructure*
- *Deliverable: Future collaboration plan, due 31.12.2007*

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- *Key conclusions from the SWOT exercise were:*
 - *Standards*
 - *Transparency*
 - *Awareness raising – Education and training*
 - *European platform*
- *Key conclusions from the questionnaire exercise were:*
 - *Better service (data delivery and cost)*
 - *Reasonable pricing policies*
 - *Individual preferences*

- *Provides focus*
- *Establishes priorities for the future ('vision', 'roadmap')*
- *Improves coordination, allows EU-wide planning and development*
- *Reduces duplication of effort, optimises use of resources ('network of facilities')*
- *Provides platform for international leadership*



Should be...



- *Collaborative*
- *Non-exclusive*
- *Accessible on the basis of merit*
- *Encouraging to co-investment*
- *Providing a point of influence*
- *Innovative*
- *Cross disciplinary*

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Panel outcomes #1



- *Importance of cal/val*
- *Importance of standards and references, terminologies, protocols, documentation of practices, defined at the outset*
- *Value added products – geocorrected reflectance data product would be a good start!*
- *Value of add-on processing tools*
- *Need to generate an operational community – value of example L3 products, potential for science teams*

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Panel outcomes #2



- *Overcoming mistrust in data quality*
- *Plenty of models from which we can derive best practice (e.g. AERONET, Argofloat, GSDN, FluxNet, esa toolboxes...)*
- *Importance of education and training / outreach*
- *Importance of data delivery (timely, near real-time, from the outset)*
- *Open-ness, opening up of community, information, peer pressure*
- *Influence on future instrument developments*

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Developments



Examples of limited infrastructures:

EU-FAR, Eu – airborne sensors and craft

APEX – Belgian/Swiss – airborne sensor

ENMAP, Germany – spaceborne sensor

NCAVEO, UK – cal/val

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EUFAR



- *Funded under 6th Framework*
- *24 partners*
- *Roles:*
 - *Coordination*
 - *Knowledge sharing*
 - *Unified structure*
 - *Transnational access*
 - *Promoting and developing airborne research*

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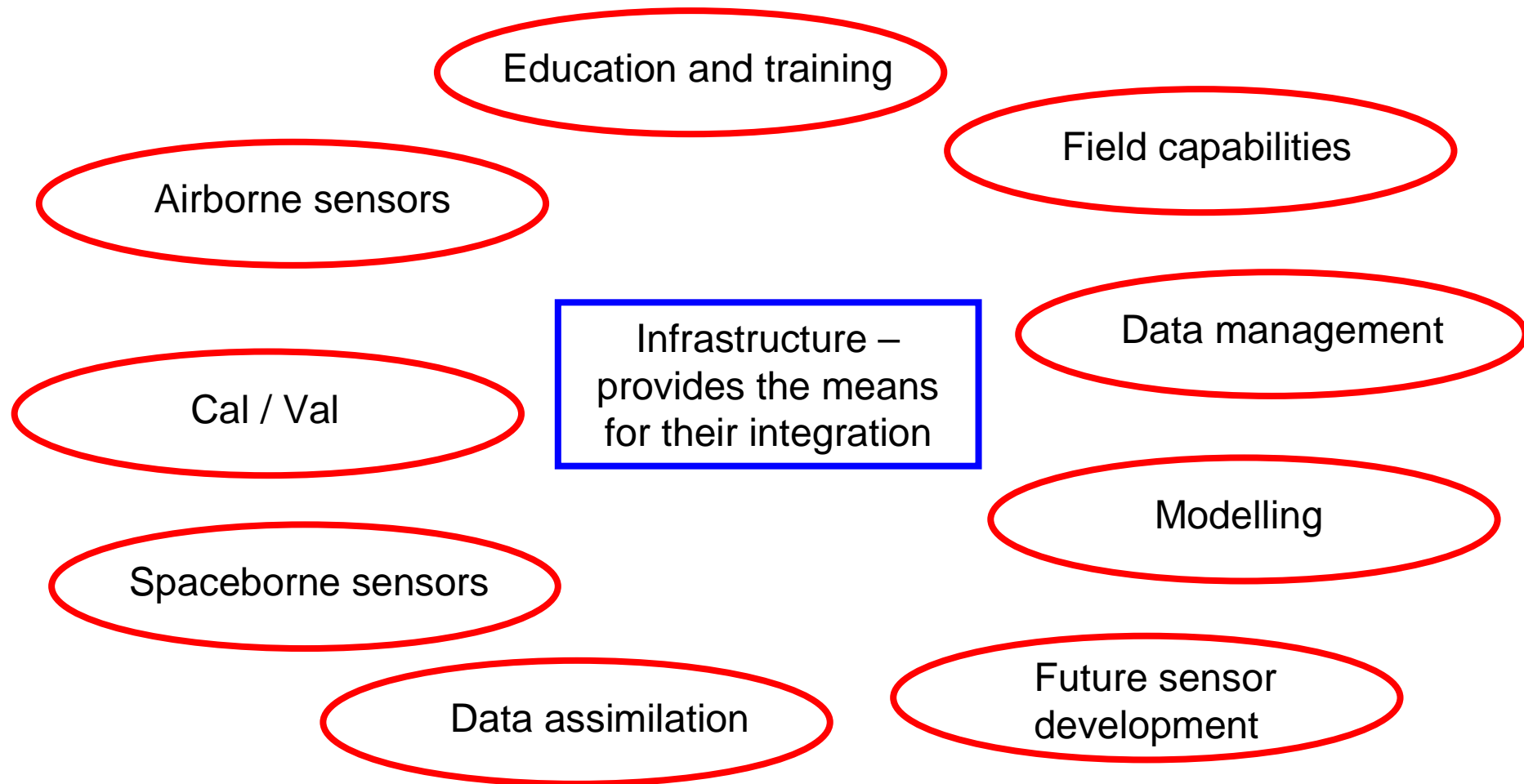
What do we need?



- *To examine the role of existing facilities and infrastructure (exploratory HYRESSA workshop)*
- *To establish priorities, vision, structure*
- *To develop a sustainable management and governance structure*
- *Develop communication structure - advocacy and promotion of hyperspectral RS*
- *Define critical success factors*

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Possible structure



- **Core purpose** - *the reason for being*
- **Core values** - *essential and enduring principles*
- **Envisioned future** - *What is it we want to see in the future?*
- **The ‘big audacious goal’** - *a clear and compelling catalyst that serves as a focal point for effort*
 - *e.g. a spaceborne mission? a european-wide research initiative?*
- **Vivid description** - *description of what it will be like to achieve the big audacious goal*
- **Proposed structure** – *collaborative mechanisms to achieve goals*
- **Strategic objectives and planning horizon**
- **Communication plan**

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Benefiting Europe



- *Must link itself with the overarching themes of Framework 7 (Cooperation, Ideas, People, Capacities)*
 - *Climate change*
 - *Sustainability*
 - *Environmental technologies*
 - *Earth observation and assessment tools*
- *Exploiting outcomes of other programs*
 - *Grid technologies*
 - *Storage, management*
 - *High performance computing*
 - *High capacity networks*
- *Exploits what already exists, better utilises it*

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- *Is an infrastructure necessary?*
- *What model should it take?*
- *How will it relate to existing global, Eu, national infrastructures in the field of EO?*
- *Should it have a 'big audacious goal' – what might that be?*
- *What structure might it take?*
- *What management and communication structure might it adopt?*
- *What is the key factor(s) for a successful EO infrastructure?*
- *How does it fit the FP7 program?*