



SMEs & ESA EO Exploitation Programmes

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Overview

- What are the ESA EO Exploitation Programmes?
- What level of SME participation has been achieved?
- Current status of the EO Service Industry – issues faced by SMEs
- GMES and SMEs
- New opportunities for SMEs in EO Exploitation Programmes
- Links between different ESA programmatic activities
- Conclusions



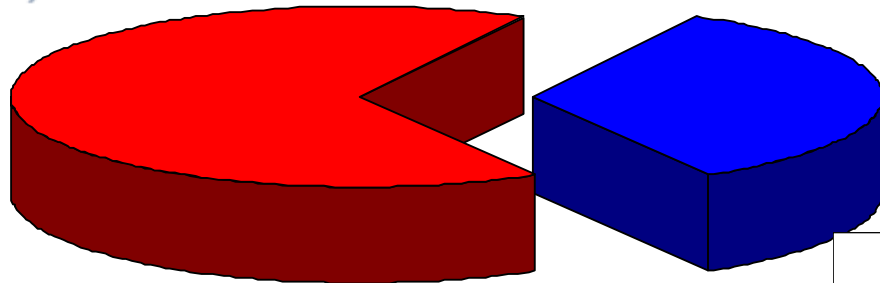
What are the ESA EO Exploitation Programmes?

- EO Envelope Programme:
 - Data User Element:
 - Focus on requirements of institutional users and science programmes
 - Generation and validation of integrated data sets
 - Additional dimension – integration of Earth Explorer data sets
 - EO Market Development/Value Added Service Element:
 - Focus on growing and strengthening the EO service industry
 - Building commercial partnerships
 - Additional dimension – commercial exploitation of new national missions
 - Support to Science Element
 - New for EOEP 3:
 - Studies to support preparation of future mission/instrument concepts
 - Development of new capabilities and EO data products from existing missions
- GMES:
 - GMES Services Element
 - GMES Space Component
- NB ESA not just exploitation – also space and ground segment design, development and operations



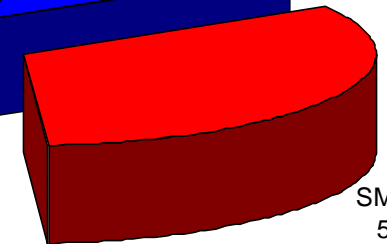
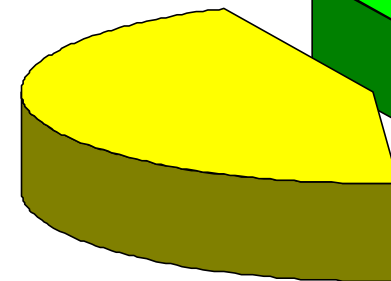
SMEs, 51

Large companies, 26



non-profit organisations
15

large companies
21

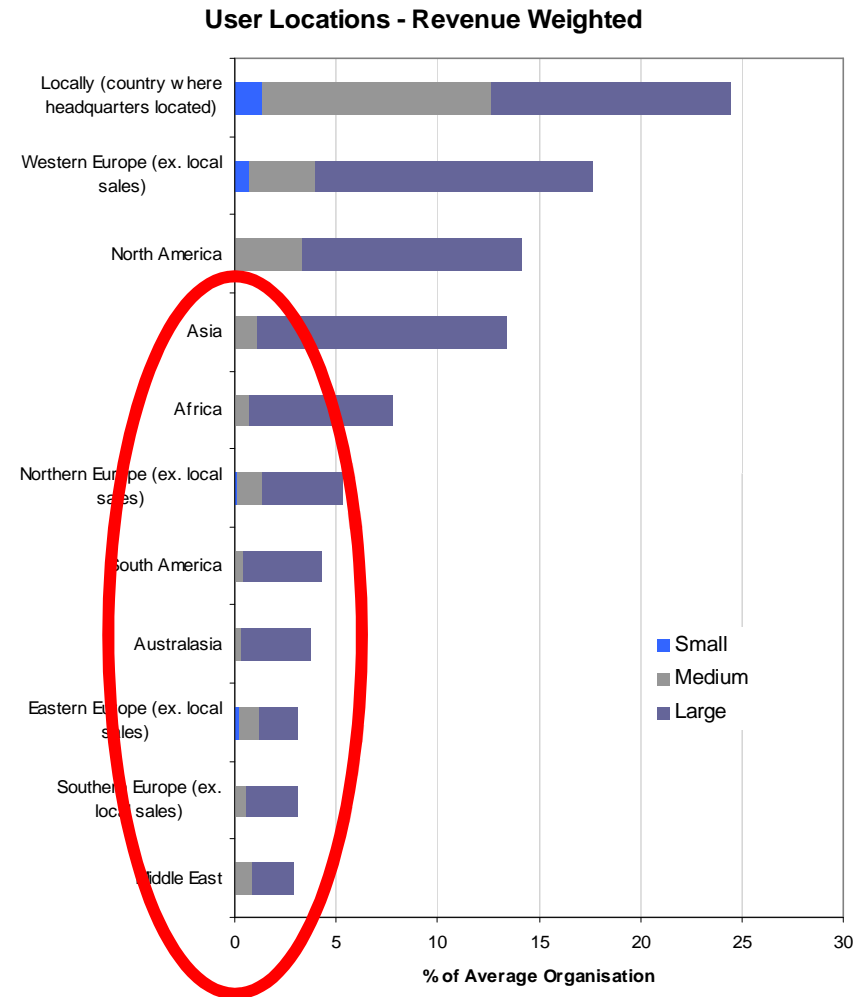
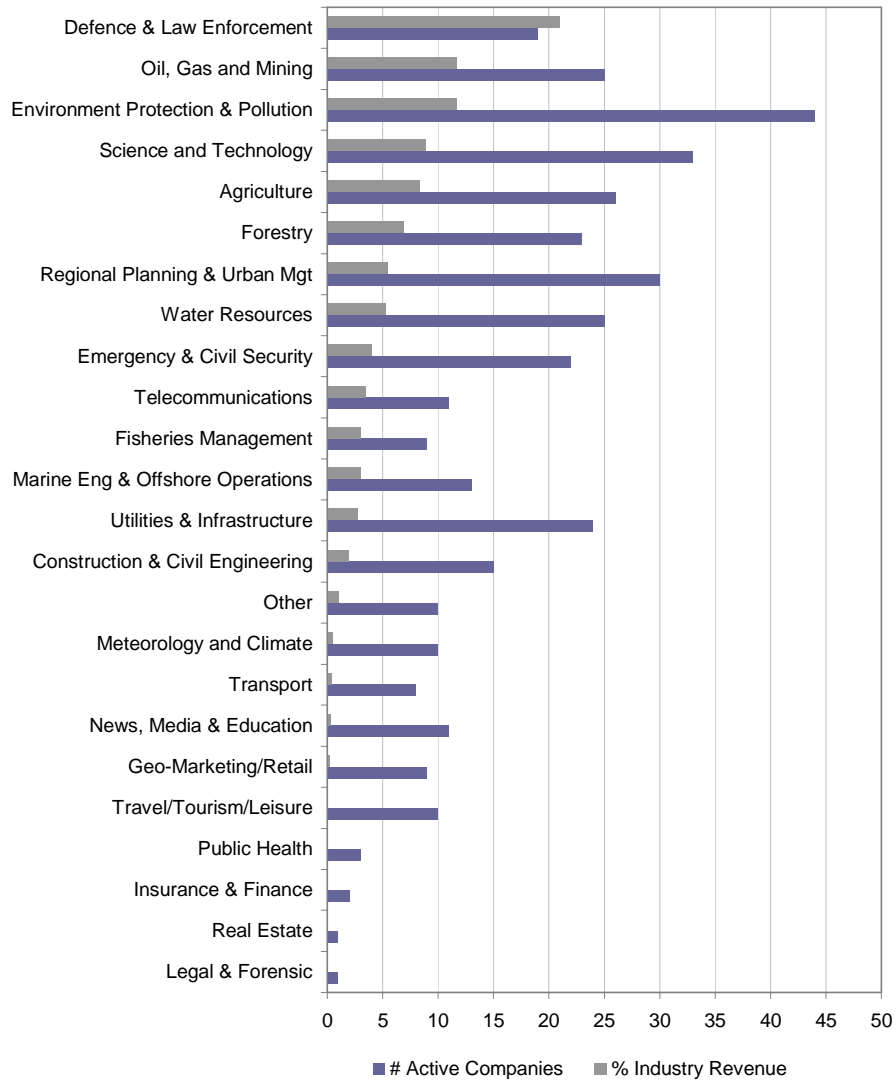


research institutes, 68

SMEs
50



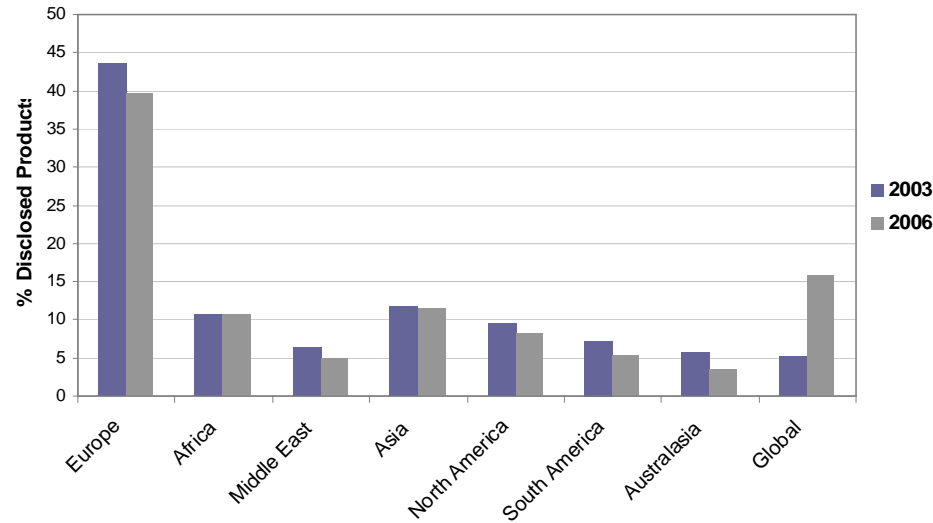
Issues faced by SMEs : consultation and industry survey 1



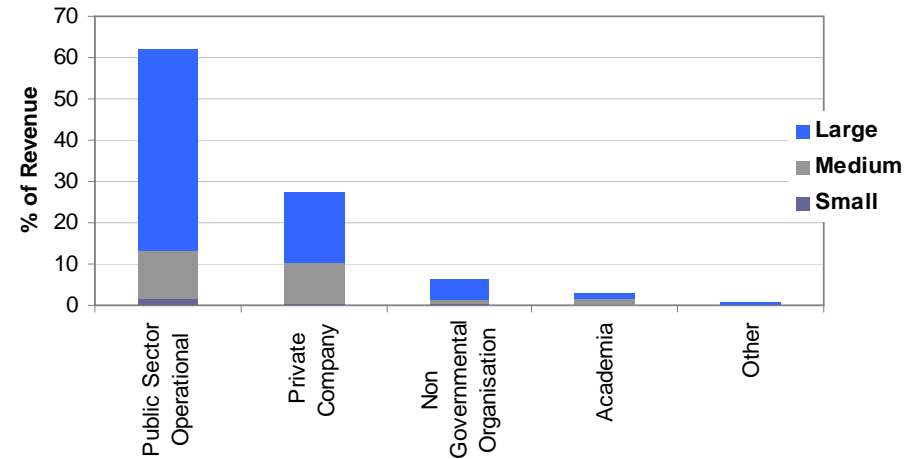
Access for SMEs?

Issues faced by SMEs : consultation and industry survey 2

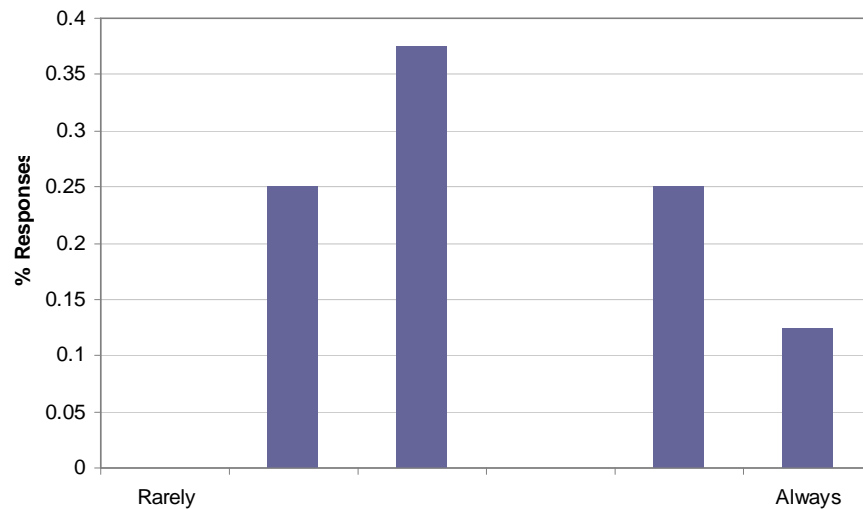
Historical Comparison of Geographic Locations of Customers



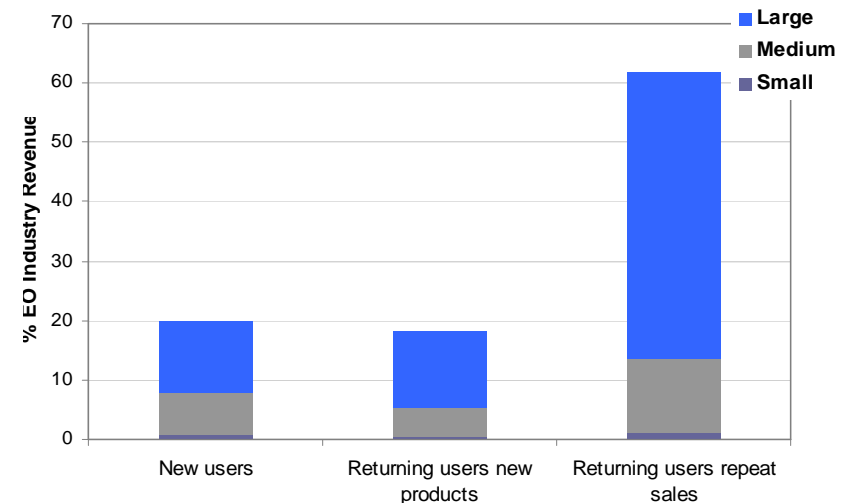
Organisation Types Served by the EO Sector by Revenue



Do Suppliers Deliver When they Promise?



New and Returning Users Weighted by Revenue



Issues faced by SMEs : consultation and industry survey 3

- Messages from industry consultation:
 - **Broader Market access is the single most important barrier to be addressed.**
 - Take what has been successfully delivered to one customer and roll-out to multiple customers,
 - Access new markets (Climate change, Asia / Latin America / Africa, International development banks),
 - Exploit new technologies (New VHR Terrasar, Pleiades, Cosmo, Rapideye, and set up EO 'quality stamp' scheme for voluntary participation),
 - Develop key stakeholders (EO SMEs as engines of innovation & employment, EARSC to present industry in a customer-oriented manner),
 - Barriers to be jointly addressed by ESA & Industry

Future Activities in VAE

Longer-Term Perspective, EOEP-3 (2008 – 2012)

2 Main Axes of activity (EOEP-3 program proposal)

Axis 1 : Develop Service Prospects

- integrate new techniques / technologies
- address new and evolving opportunities

Axis 2 : Expand Market Access

- structure industrial demand
- explore growing non-EU markets
- raise awareness of EO Service Industry offerings

Axis 1 : **Develop Service Prospects**

- **integrate new techniques / technologies**
- address new and evolving opportunities

Axis 2 : **Expand Market Access**

- structure industrial demand
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- Small (< 100 K€, < 1 year) contracts,
- Via Single Call for Ideas, In competition (best ideas selected).
- **Exploit new EO Data sources**

Rapid assessment of improvements brought to existing services and test market prospects.
2008 : TerraSar-X, CosmoSkyMed, MetOp, ALOS; 2009 : Pleiades, R-Sat2, RapidEye
- **Exploit new R&D techniques**

Focus on new results from Explorers :
2008 : GOCE + SMOS, 2009 : Aeolus + CryoSat; 2010 SWARM.
- **Exploit new technologies**

Customising models/forecasting to meet local/regional industrial needs, using new technologies (eg. GRID computing, storage) to improve automation and access to data (EO archives).

Axis 1 : Develop Service Prospects

- integrate new techniques / technologies
- **address new and evolving opportunities**

Axis 2 : Expand Market Access

- structure industrial demand
- explore growing non-EU markets
- raise awareness of EO Service Industry offerings

- Medium (250 K€, 2 year) contracts,
- 2-3 contracts for each new industry area,
- Areas with little (or no) established EO business now,
- Via Single Call for Ideas, In competition (best ideas selected),
- Based on Industrial interest, Market intelligence,
- Small EO service team, 1-2 industry partners,
- Execute service trials, demonstrate service value

- **Potential new industrial areas**
 - **Climate change and Industry**
(Corporate asset exposure to extreme events, atmospheric pollutants, carbon trading, risk re-insurance)
 - **Transport : Shipping / Ports**
(e-maritime, Intelligent Transport Systems, Short Sea Shipping, metocean, atmospheric emissions, coastal environment, impact assessment)
 - **Geo-Marketing / Retail**
(Improved intelligence, population, infrastructure, land-cover/use, VHRO)
 - **Tourism**
(Tour operators & regulatory bodies (IATA), coastal environment & health, water quality, UV)
 - **Agro-Chemicals**
(test-site characteristics, land-cover + in-situ + weather)
 - **Media/Communications**
(Documentaries, knowledge channels, land cover change, forests, ocean, atmosphere, arctic)
 - **Waste Management**
(waste management companies, landfill site monitoring, illegal site detection, impact assessment)
 - **Defence & Intelligence sector**

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Axis 1 : **Develop Service Prospects**

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Axis 2 : **Expand Market Access**

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- **explore growing non-EU markets**
- **raise awareness of EO Service Industry offerings**

Explore growing non-EU Markets

- Medium (250 K€, 2 year) contracts,
- Via specific ITTs
- **Follow-up opportunities in Central / Latin America**
Build on results to date, Develop partnerships between European EO service suppliers and local re-sellers / marketing networks, Expand service demonstrations
- **Explore new non-European Markets**
Begin ground-work (as per Latin America), Focus on SE Asia, China, N. Africa Med basin.

Raise awareness of EO service Industry offerings

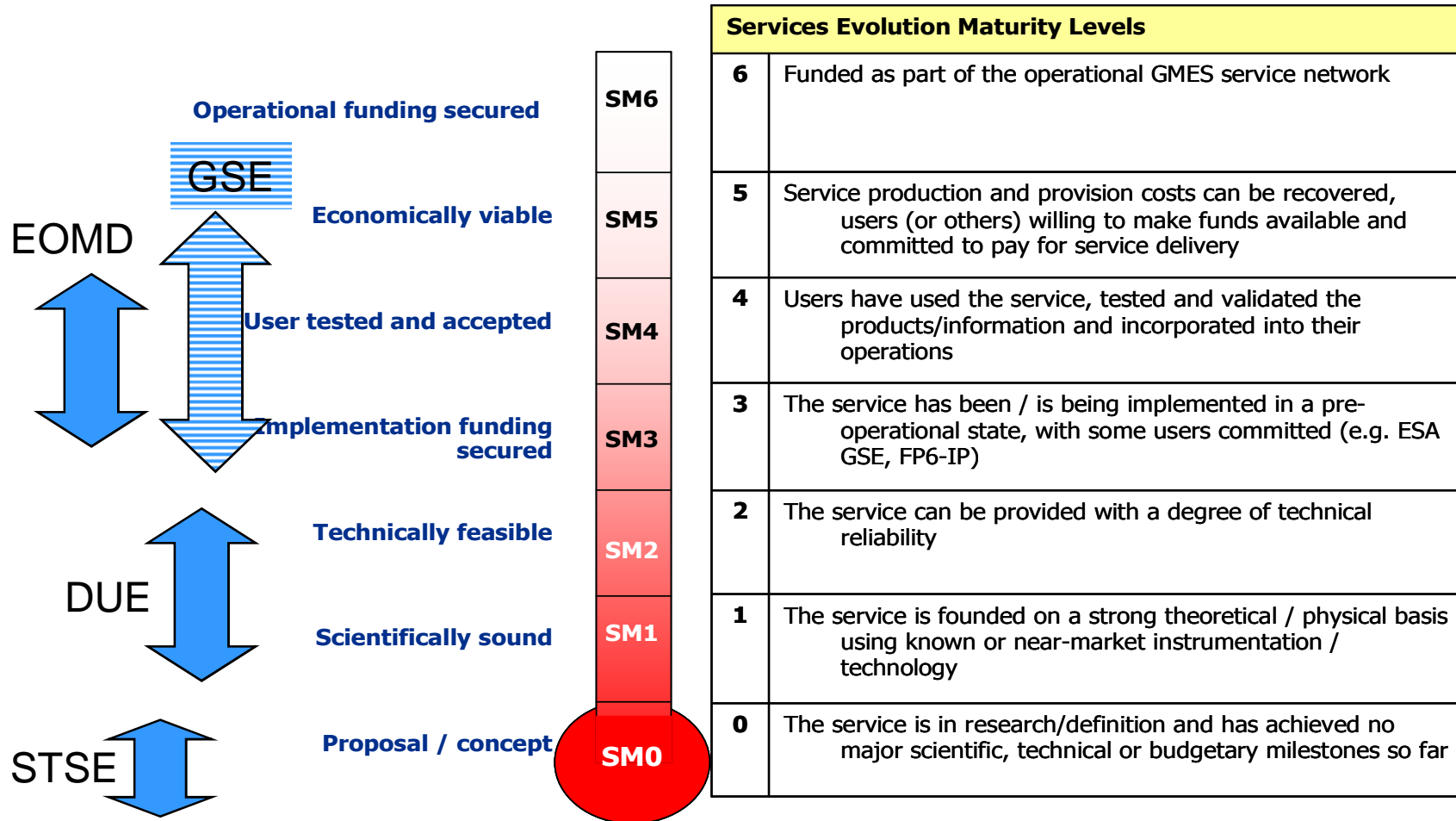
- 1 Medium (250 K€, 2 year) contract,
- Via specific ITT

Where could this take Industry in 5 years' time ?

- Growing business revenue from Private Sector (new markets, new industries, how much growth is realistic ?),
- Consolidated Private sector requirements and specifications for geo-information, EO services validated against these specs,
- Established best practices for EO services production, independent accreditation (?),
- A professional services industry that communicates convincingly the benefits of what it can offer,
- Preparing markets for spin-off commercial business with GMES

Or.....Out of GMES; Going out of business ??

Application of Technology Levels to EO based services



Links between programmes

- No opportunity for top-down coordination between programmes of interest:
 - ARTES
 - EOEP/GMES
 - GSTP/TRP
 - Additional elements becoming available:
 - Integrated Applications (proposed as part of ARTES)
 - Incubators...
- However each programme has strong focus and clear scope
- Creates conditions for natural separation of responsibilities:
 - GSTP/TRP = basic underlying technology and capability development
 - ARTES = developments focussed on telecomms capabilities and services
- Main assumption – responsibility of individual company how to make best use of the different programmes

Conclusions

- ESA EO exploitation programmes are intended to support SMEs
- Since 2000, SMEs have participated heavily in these programmes
- EO Exploitation Programmes are still necessary for SMEs
- EO Exploitation is not the only option available:
 - Technology programmes
 - Space and ground segment activities
 - Non-EO – eg incubators, TRP/GSTP etc
- SMEs have the opportunity to use different ESA programme elements to respond to the main issues faced and opportunities to be exploited
- If in doubt....ask. We're from ESA and we're here to help.

And finally....

DON'T FORGET THE UPCOMING INVITATIONS TO TENDER

- **EOMD/VAS:**
 - New Market Sector Opportunities
 - New Geographic Markets
 - New techniques, issues and opportunities
- **DUE:**
 - Globwave
 - Urban Heat Island
 - Permafrost
 - Innovators (2009)