Tenth Session of the South-East European Climate Outlook Forum SEECOF-10

Belgrade, Serbia, November 20-21, 2013

IGIS solutions

Geo-Information Capacity Building

November 21st 2013



The Power of the EADS Group



€ 56.5 billion revenue 140,000 people







MAIRBUS



6 CASSIDIAN



EUROCOPTER

€ 5.8 billion revenue 18,000 people



Astrium Services



Astrium Satellites



Astrium Space Transportation

Business Communications Services

Government Communications Services

GEO-Information Services

2012 Information

A Legacy of Expertise



SPOT 6 & 7 2012 & 2014: launch of





SPOT 1

Launch of SPOT 1

TerraSAR-X & TanDEM-X

2007: launch of TerraSAR-X radar satellite

2011: launch of TanDEM-X, for

WorldDEM™

A Unique Satellite Fleet 0.25m ground resolution TerraSAR-Xr improved **PAZ** Accurate change detection Next Generationaunch Ideal for ship detection over large formation **FORMOSAT-2** Daily revisit capacity reason the same viewing oud-free guarantee conditions olutions [1m | 3m | 18.5m] & scerie Change detection and rapid coverages Pléiades 1B **FORMOSAT-2** SPOT 5 **PAZ** SPOT 6 **DEIMOS-1** TerraSAR-X SPOT 7 TanDEM-X Twin satellites with high resolution [1.5m products] **SPOT 6 & 7** Secure data continuity for SPOT mission (since 1986) 60km swath for large-area coverage as a standard Constellation for daily revisit anywhere on Earth **Highly reactive system**



Astrium Services at a Glance

100 5

Astrium Services serves customers in more than 100 countries



Astrium Services, GEO-Information accesses 6 Earth observation satellites, 2 radar and 4 optical

100 billion km²

Over 100 billion square kilometres of satellite imagery, archived since 1986

1.5 billion

Number of people using our imagery worldwide every year

3

Number of direct reception station partners worldwide

110 🚹

110 resellers worldwide

April 2013 Information

Purpose of the IGIS solution

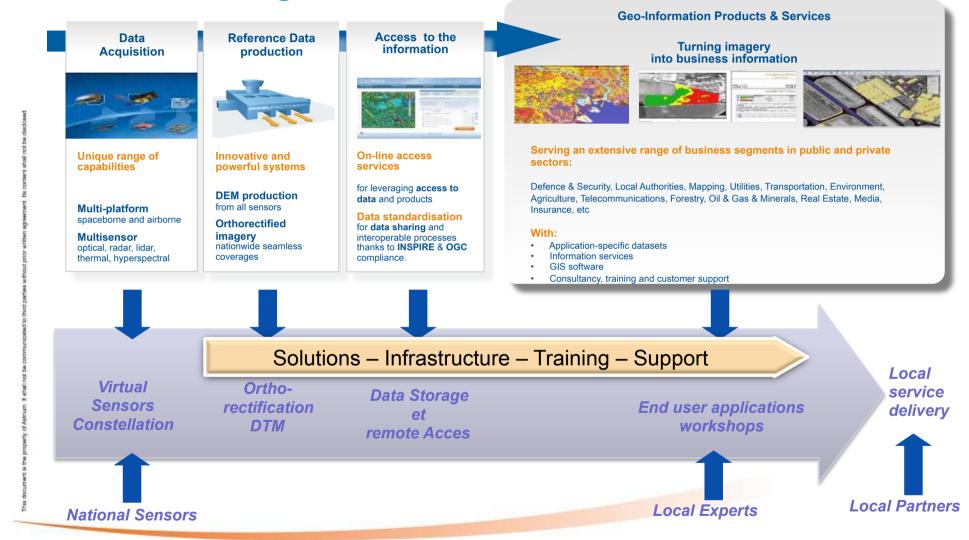
- "For institutions aiming at e-governance, geo-spatial policies & data infrastructures become key assets to be carefully designed, implemented and operated for the benefit of the country."
- The program is setting-up Geo-Information capability and provides high technology components with full support and transfer of expertise.
- If you are an institution willing to establish Geo-Information capability:
 - Generic (for example multi-purpose National program)
 - Thematic (Cartography, Agri-SDI, Water-SDI, Defence-SDI...)
 - Through public procurement or public/private initiative





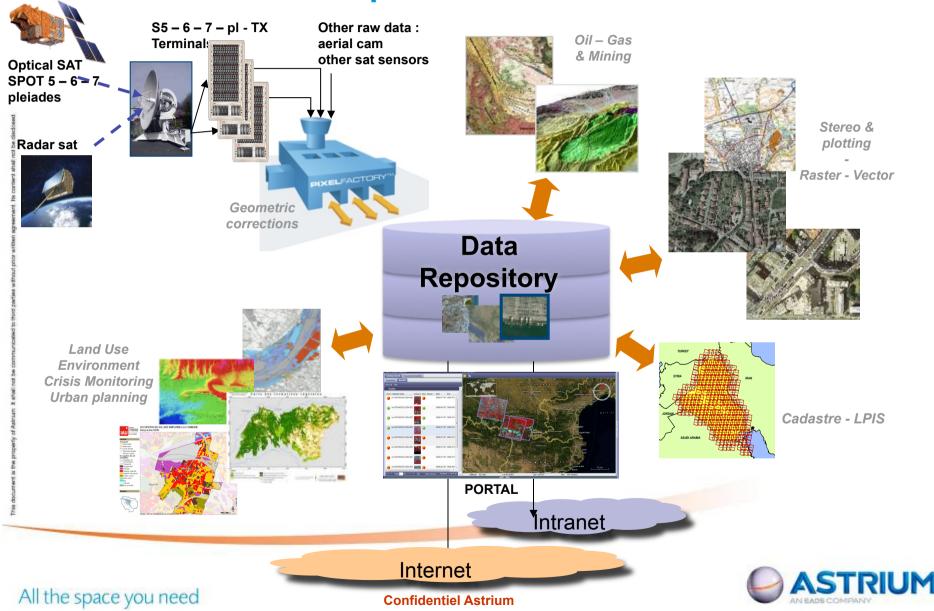


Benefiting from Geo-Information Services covering the whole value chain

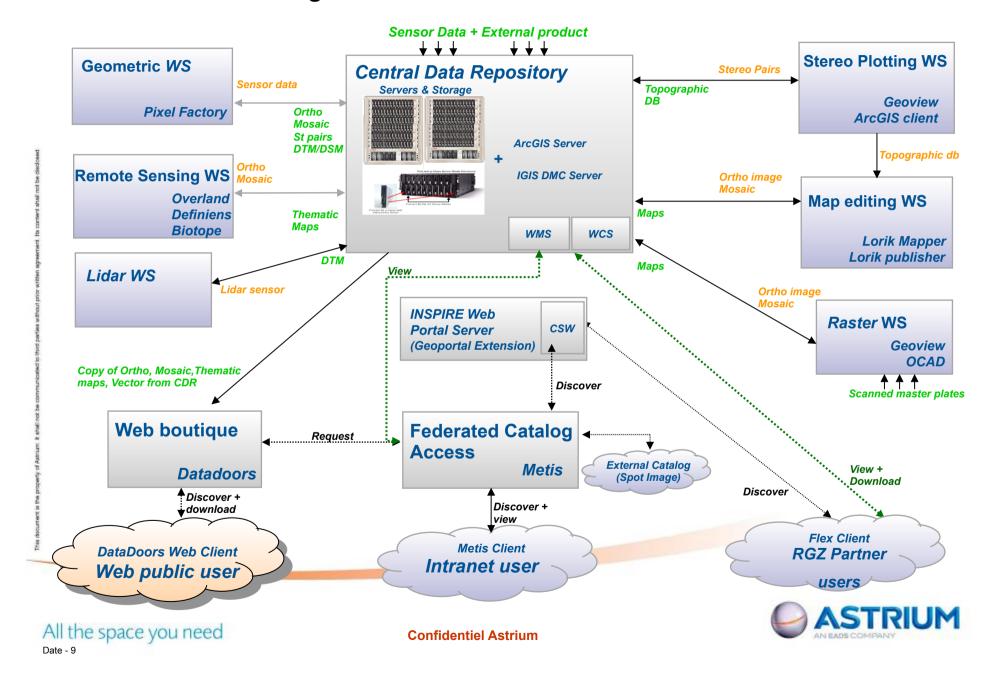




Typical SDI infrastructure for capability building: flexible and open



Overall logical architecture



IGIS: GEO comprehensive SDI framework

Capability building



Assistance & support

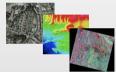






Data access

- Legacy data import & connection
- GEO imagery & products store



Acquisition program



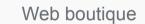
Direct Receiving Station



Production workshops

- Geometric
 - **DEM & Orthos**
- Mapping
 - 3D stereo plotting
 - 2D vector updating
 - Final map edition
- Remote sensing
 - Thematic maps
- GeoInt
 - Intelligence analytics
- Customer-specific
 - Tools & Process

Data distribution



- E-commerce solution
- Web services





- Geoportals
 - Customised
 - Federated catalog (3rd party layers)
 - 3D globe



- Maps
 - Printed
 - CD-Rom

Decision-making platform

Applications

- Crisis management
- · Agri-env monitoring





- Professional apps
 - Routing
 - Gazeteer
 - On-demand processing



- Customer-specific
 - Applicative package

Administration



Platform IT



Archiving & Storage



User management



Security

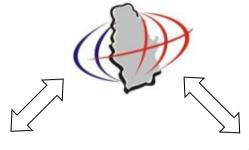


Operational organisation



IGIS Project for Serbia

Partnership programme with RGA











- French authorities (special french lown)
- Serbian authorities (1/3 of the budget)
- Contract signed in « Le bourget air show » in Paris in june 2009. Implementation started in September 23th 2010 for 3 years duration (+2 years maintenance)
 - Base data acquisition : Satellite, aerial & lidar
 - Production Workshops & Infrastructure for data management and Dissemination
 - Large phase training Know how Transfer
 - END NOVEMBER 20th 2013





GIS Global Planning

- Start: 23/09/2010
- Space & aerial data over 5 years (Spot 4, Spot5, Geoeye, ADS80
 UCXp aerial cameras, LIDAR, other Sat ...)
- Infrastructure delivery in Nov 2011
- Large phase of training/know-how transfer over 3 years
- 2 years of maintenance : 2014, 2015
 - ·System design
 - Site recommendations
 - Infrastructure Customization
 - Training planning
 - Data delivery planning

- •First Dataset deliveries
- Parameter setting
- Adaptations
- Tests & assembly
- Validation

- Following Data sets delivery
- Maintenance
- Support
- •Training & know how transfer

IGIS Design and Customization

Factory integration

Operational deployment

T0 + 14 months

Year 2

Year 3

3 years project





Large phase of training & know how transfer

Smooth handover towards RGA staff

 Advanced users are the privileged point of contact with consortium experts all along the project timeline

300h at factory training

 Advanced users set up adequate working procedures & policies in close cooperation with consortium experts
 1200 h on site training

 Target data & final system are used on most training sessions 3000h on the job training

All the spaand support

+ several highly skilled operators (tbc) AT FACTORY TRAINING ON SITE TRAINING Advanced users & Operators On the JOB TRAINING Advanced users & Operators At factory Training On site Training On the Job Trainina Data RGA furnished item LORIENNE LORIENNE DEM OCAD workshop Workshops GEOVIEW Raster workshop BASICS Full Operational capability Raster Worksho GIS GEOVIEW MAC Intoch dministration PIXEL Stereo/plotting **FACTORY DEFINIENS** Spot5 Data **OVERLAND** Other Sat Data PIXEL FACTORY Geometric workshop Spot2-4 Orth NSDI Basics **DEFINIENS** OVERLAND NSDI Admin WFR NSDI administration Portal NSDI Basics WEB portal On site operational support (Astrium+ IGN) Confideration Astronomy



IGIS Serbia: Key figures

- Know how transfer
 - 300 h factory training
 - 1200 h on site training
 - 3000 h on the job training and support
 - Site support until fully operational productions

SDI System

- 52 workstations, more than 60 operators
- 25 Servers & computing nodes
- 60TB of central digital storage space
- 2 Interoperable web Portals
- 2 A0 Ploters / 2 A3 printers

Data provision

- Aerial camera UCXp 10cm GSD over 92 cities
- Aerial camera ADS80 40cm GSD over 77 000 sqm2
- Aerial Lidar camera over 1870 sqm2
- Full country coverage HR satellite cSpot5 over 3y
- 4500 sq.m2 Satellite VHR
- Various sites HR multi-temporal scenes for over 2y





