



Spatial Observation Information Technology

CAP post-2020: Utilisation of Earth Observation

Achievement and Challenges of a
Engineering and Big Data Service Provider

Workshop „EONext: Erdbeobachtung in Österreich“

28 February 2019, BMVIT, Vienna, Austria

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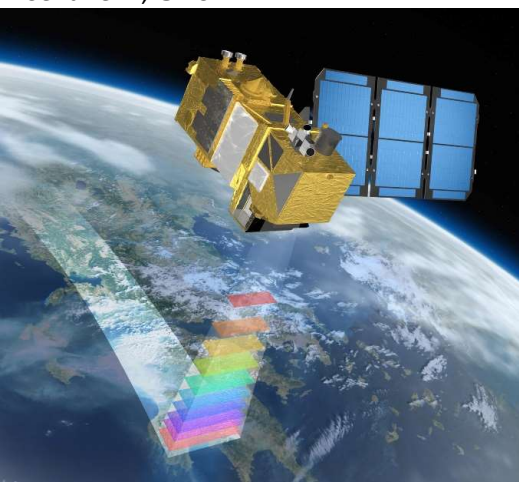


Content

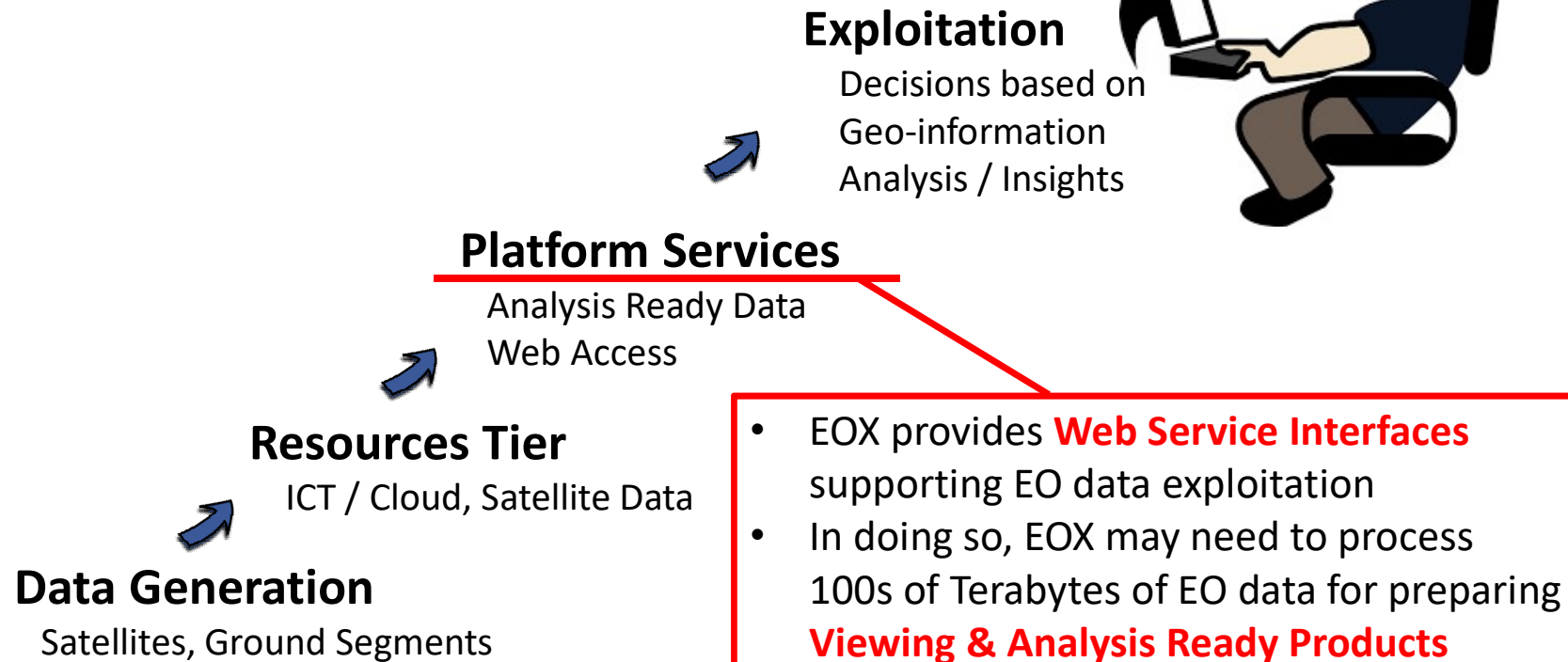
- EOX' Position in EO Ecosystem
- Copernicus Analysis Ready Data for CAP "Monitoring"
- EOX Flagship Product "EOxCloudless"
- Achievements and Challenges

EOX in Earth Observation Ecosystem

Sentinel-2, © ESA



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Earth Observation Ecosystem

High Resolution (HR)

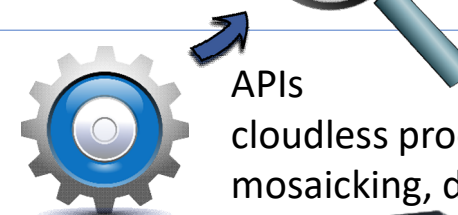
Exploitation

Farm Information Systems,
CAP Paying Agencies Systems, etc.



Land-use
monitoring

Platform Services



APIs
cloudless processing,
mosaicking, data cube services

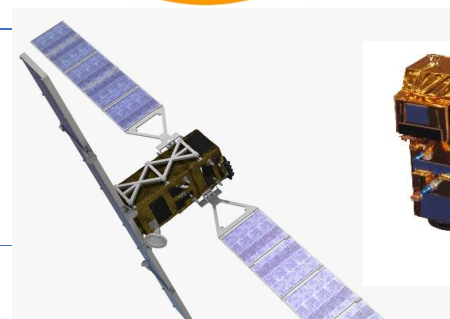
Resources Tier

ICT
Data



Data Generation

Ground Segment
Satellites



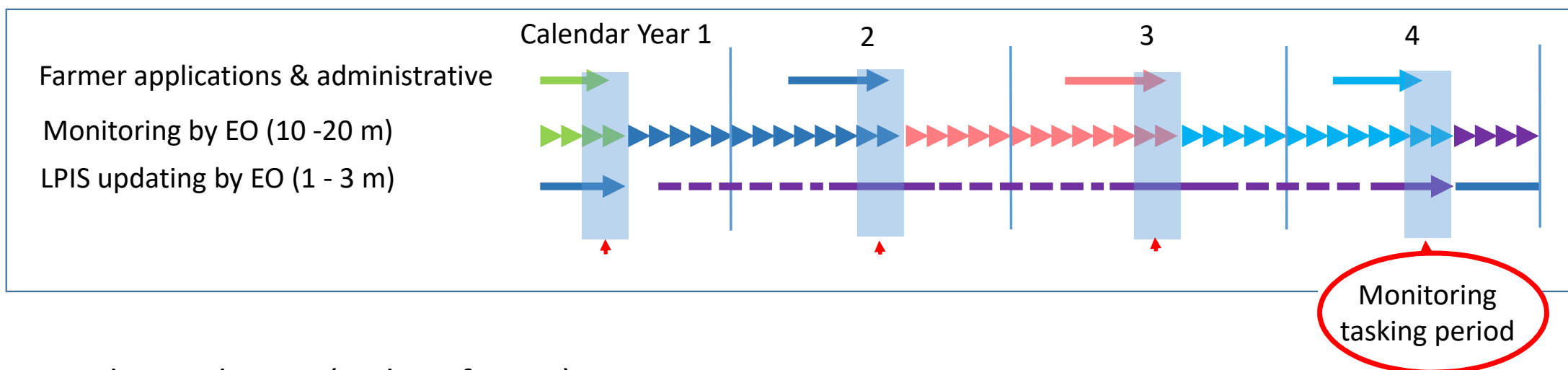
Sentinel-1 & -2 **HR**
(10m)

Copernicus Analysis Ready Data for CAP “Monitoring”

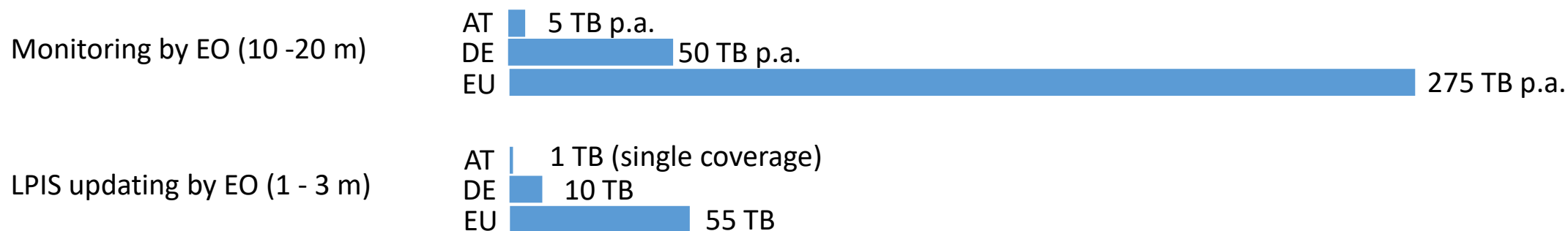
- 👁️ EU-wide availability of Sentinel-1 and -2 data combined with mature, high quality land parcel identification systems (LPIS), allow new sampling approaches
- 👁️ Full country high resolution (10-20m), high density (5-6 days) EO time series with 100K-5M parcels per “Paying Agency”, requires **Big Data Analytics**
- 👁️ ESA, EU and some Member States are currently involving EO data service suppliers in demonstrations of related provisioning capacities

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CAP data collection periods



CAP data volumes (order of mag.)



EOxCloudless

Exploitation-ready satellite imagery - Source Data for Viewing and Analysis



Sentinel-2 L2A
NDVI

Sentinel-2 L1C Cloudless
Viewing Product

Sentinel-1 GRD
Gamma-0 terrain flattened

Contains modified Copernicus Sentinel data 2017 & 2018

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EOxCloudless

VIEWING PRODUCTS DATA PRODUCTS EXAMPLES

Viewing Products

Get our prerendered Sentinel-2 cloudless as map cache or create your own layer using our mapping optimized source mosaics for web maps or desktop GIS tools.

Sentinel-2 cloudless 2018 single-file 5.000 € ^


DESCRIPTION

Viewing Ready - Get the prerendered map used at s2maps.eu (mosaic combined with bathymetry and ocean mask) both as GeoPackage and MapCache SQLite file for self-hosting or offline usage.

+ View Details

• Get Product Samples and Documentation

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Sentinel-2 cloudless 2016 single-file 1.500 € v

Sentinel-2 cloudless 2018 GeoTIFFs 5.000 € v

VIEWING PRODUCTS DATA PRODUCTS EXAMPLES

Data Products

Get off-the-shelf multispectral mosaic data from Sentinel-2 or define a custom mosaic tailored for your needs for further analysis and processing.

EOxCloudless Sentinel-2 2018 8bit 10.000 € v

EOxCloudless Sentinel-2 2018 16bit v

EOxCloudless Custom ^

DESCRIPTION

Exploitation Custom - Tell us your needs and we produce to your specification

+ View Details

• Get Product Samples and Documentation

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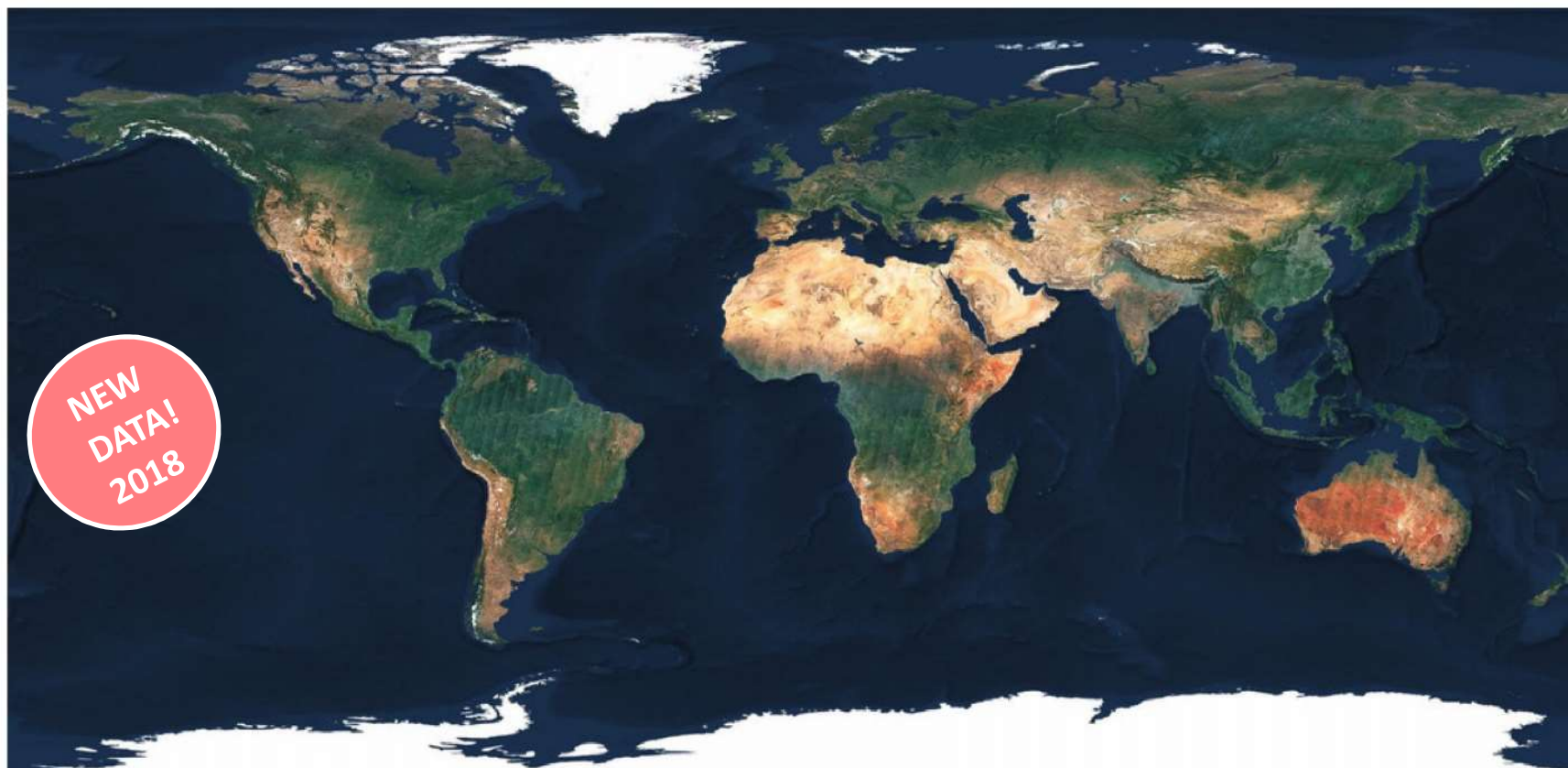
<https://cloudless.eox.at>

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CARD for CAP Monitoring

Sentinel-2 cloudless

Tailored Cloudless Mosaics - Adding Value to Sentinel-2 Data



Sentinel-2 cloudless - <https://s2maps.eu> by EOX IT Services GmbH (Contains modified Copernicus Sentinel data 2017 & 2018)

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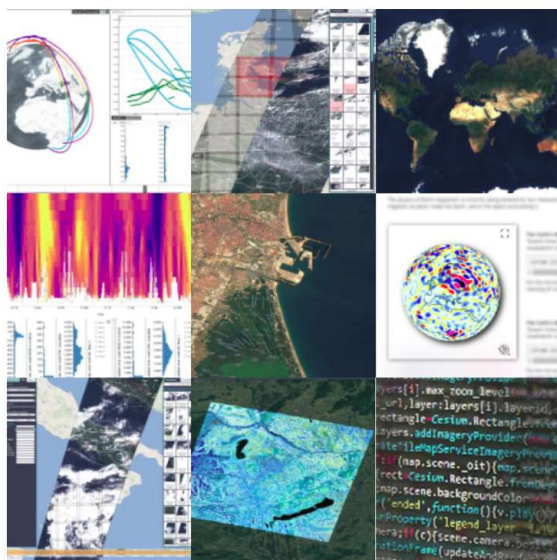
Achievements

- 👁 Customer intimacy
 - 👁 First-hand requirements (e.g. via Panta Rhei; JRC MARS)
- 👁 High-throughput production & service delivery
 - 👁 EOX home-brewn workflow software
 - 👁 Self-service Web shop for EO products
 - 👁 Complex legals e.g. of product licensing
- 👁 Operational excellency
 - 👁 Best familiarity with cloud platforms/infrastructures (DIAS Mundi, AWS, Creodias)
 - 👁 Platform cost optimization

Challenges ahead

- 👁 Floating, non-consolidated requirements of Paying Agencies
- 👁 Yet undefined procurement approaches/conditions
- 👁 Data analytics tools satisfying:
 - 👁 Performance-based CAP
 - 👁 Agri-env-climate policies
- 👁 Integration with commercial VHR EO provider platforms for more automated LPIS updating
- 👁 Market penetration

EOX company info <https://eox.at>



VIEW THE WORLD THROUGH OUR EYES

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