EuroGeographics: the importance of collaborating internationally

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Saudi Arabia
United Arab Emirates
Oman
Red Sea
Yemen
Eritrea
Gulf of Aden
Djibouti
Ethiopia

Location, it gives us our sense of place.

EuroGeographics – our organisation

- Set up by our members to:
  - *“to further the development of the European Spatial Data Infrastructure through collaboration in the area of geographic information, and the representation of the membership and its capabilities”.*
- Brussels based, governed under Belgian Law ***‘L’association internationale sans but lucratif’ -*** International **not-for-profit** Association
- Origins in the 1970’s CERCO and MEGRIN (Paris based); Formed in 2000 (Dublin General Assembly)
- Moved to Brussels in 2012
- Annual cost €1.5 m, paid for by membership subscriptions, plus some income from licensing of data, and EU project funds
- Our core role is to deliver value to members for the public good

EuroGeographics – our membership

- Covers the whole of geographical Europe
- At least one national authority in each country
- 90% of eligible organisations
- National (Government) bodies in geographic Europe responsible for:
    - Cadastre
    - Land registration
    - Geodetic surveying
    - Topographic mapping

EuroGeographics – Our Business

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Not just EU 28 – we cover the whole of geographic Europe

62 members

46 countries

from the whole of geographical Europe

Members invest over **€ 1.5 B** each year in the development of geo-information

Relied on by European Commission Businesses & Citizens

Share best practice through expert knowledge exchange networks

66,000 people and over are employed by EuroGeographics members

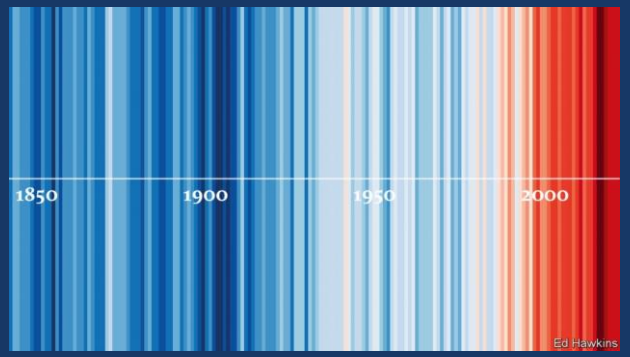
Change

"Turkeys get to vote for Christmas"

New European Parliament / Commission

Legislation

Open Data



The Environment – global warming

The Economy

Drones

Earth Observation and GNSS

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Things have changed

Bargaining power of users

European users are free to obtain data from any source;

No legal / and limited policy requirement to use national data at European level (although there is a weak political line).

New entrants

Over the last 10 years there has been an explosion of new entrants into the global geospatial 'market'

However:

- Need for authoritative data remains.
- Drive to open data continues:
  - "Open Data and Public Sector Information (PSI) Directive"

Globally competitive landscape

Substitute Products

New entrants have successfully introduced substitute products that are proxies for authoritative data,

Data supply side issues

Constrained to provide members only data

INSPIRE issues

Data coverage

Diverse policy, legal, financial landscape – multiple agreements required

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Society empowered by our members' authoritative geospatial data and services

We support the public good by representing our members' interests, maintaining networks that help our members improve their capabilities and role, and by facilitating access to and use of our members' geospatial services

Deliver Value to our Members

AIM

Promote the integration of our members authoritative data within the European and International systems

Promote the need for political or policy home for geospatial information in Europe

KNOWLEDGE EXCHANGE

Knowledge Exchange Networks General Assembly, Capacity Building

AIM

Authoritative national data is used for international policy and operational purposes

Work in partnership to achieve this, as it is in the public interest

The importance of collaboration

Because – “Together we are stronger”

Strategic Alliances

- Knowledge exchange with an external focus:
- Develop strategic alliances where
  - there is clear value to be gained to EuroGeographics and its members, and
  - in order to avoid duplication of effort
- The best strategic alliance are with organisations that don't overlap in membership or role
- For example : standards, earth observation, geology, national statistics (EFGS)

European Association of Aerial Survey Industries ?

Relevance

- Photogrammetry – remains a key data acquisition science and technology for NMCAs
- Critical for maintaining and managing our knowledge of a rapidly changing world
- High resolution capability not matched by other technologies - supports the level of detail needed for cadastral surveys
- Known methodology, with known precision and accuracies; heavily integrated with national production systems.
- Supports the generation of 3D objects

- Currently offers the only reliable source of data at an appropriate cost and volume to support the types of outputs that an NMCA is typically responsible.

- But this is changing ….

Challenges or Opportunities?

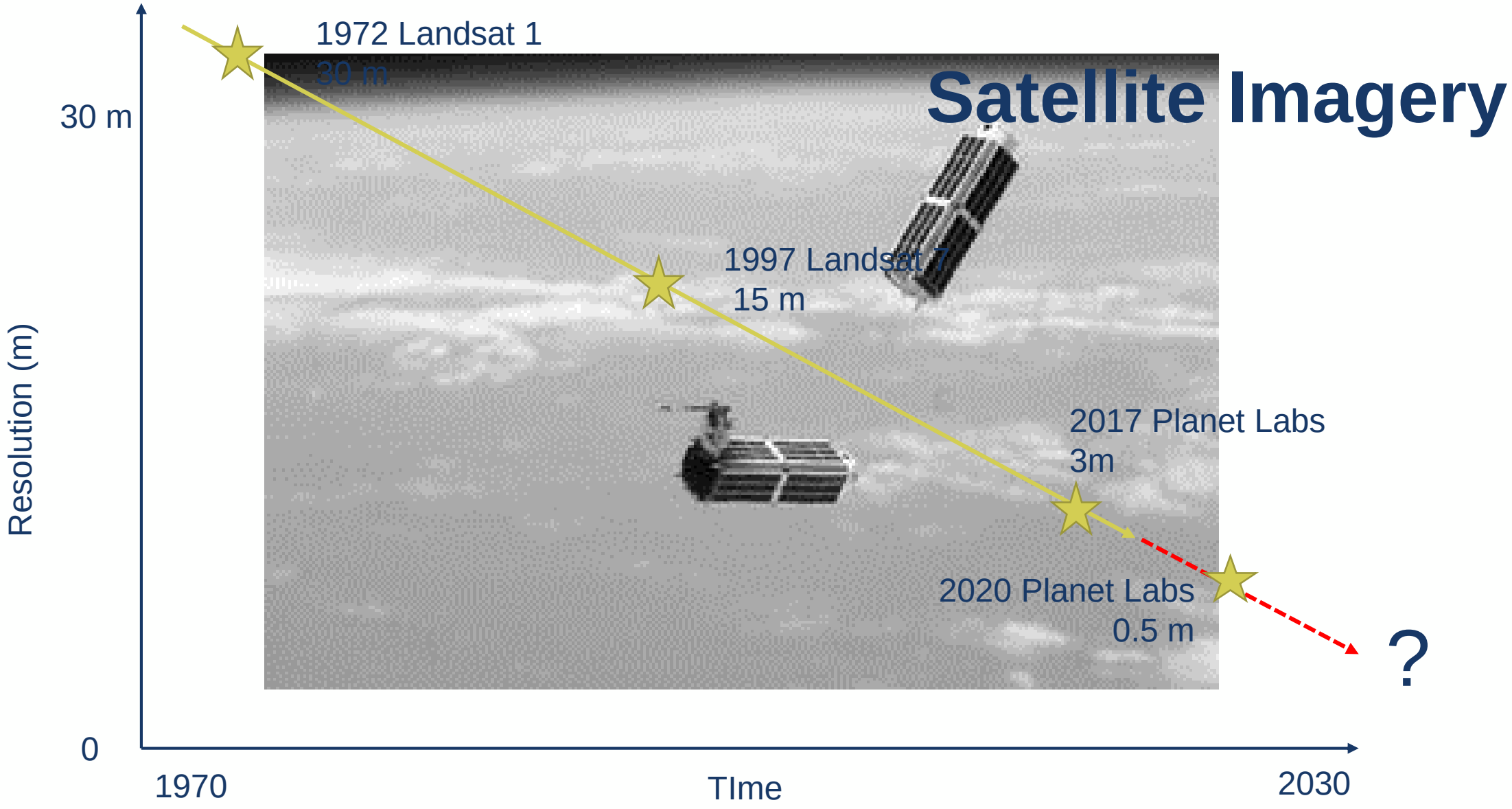
- Technological developments – drones, other sensor platforms – HAPS, earth observation platforms, etc
- Policy developments – Open data, European space policy and space regulation
- Pan-European opportunities

Technological Developments

Drones

- Not useful yet for national scale, ok for smaller areas - for example: flying with drone small urban areas, industrial zones or protected areas with higher density, resolution and frequency.
- Example - Cyprus prefers regular (3-4 year) complete aerial survey – economies of scale possible.
- Drones are simply one other form of sensor. Equally can add street-scanners, HAPS, IoT etc. Each will have an appropriate sphere of application that makes them more useful than others, but the real value will come from ensuring that the data from them is simple and cheap to integrate with data from other sensors.
- NMCA’s are not looking to support multiple work-flows. Bespoke processing software is not an option.

Technological Developments



Other capture technologies

Satellite

- Classical photogrammetry and earth observation are converging.
- Many NMCAs use general satellite imagery for detecting and monitoring change.
- NMCAs keep an eye on the cross-over between airborne sensors and the usability of satellite imagery, i.e. seeing if satellite imagery could be used in rural areas and airborne imagery in built up / urban / suburban areas.
- Trends are interesting - Planet Labs is experimenting with 50cm imagery from SkySat. That is a very significant step up from their 5m original capability (in a short time). This is not to say that EO is a current replacement – but the trend is there to suggest that it will be very possible in the not too distant future.

Technological Developments

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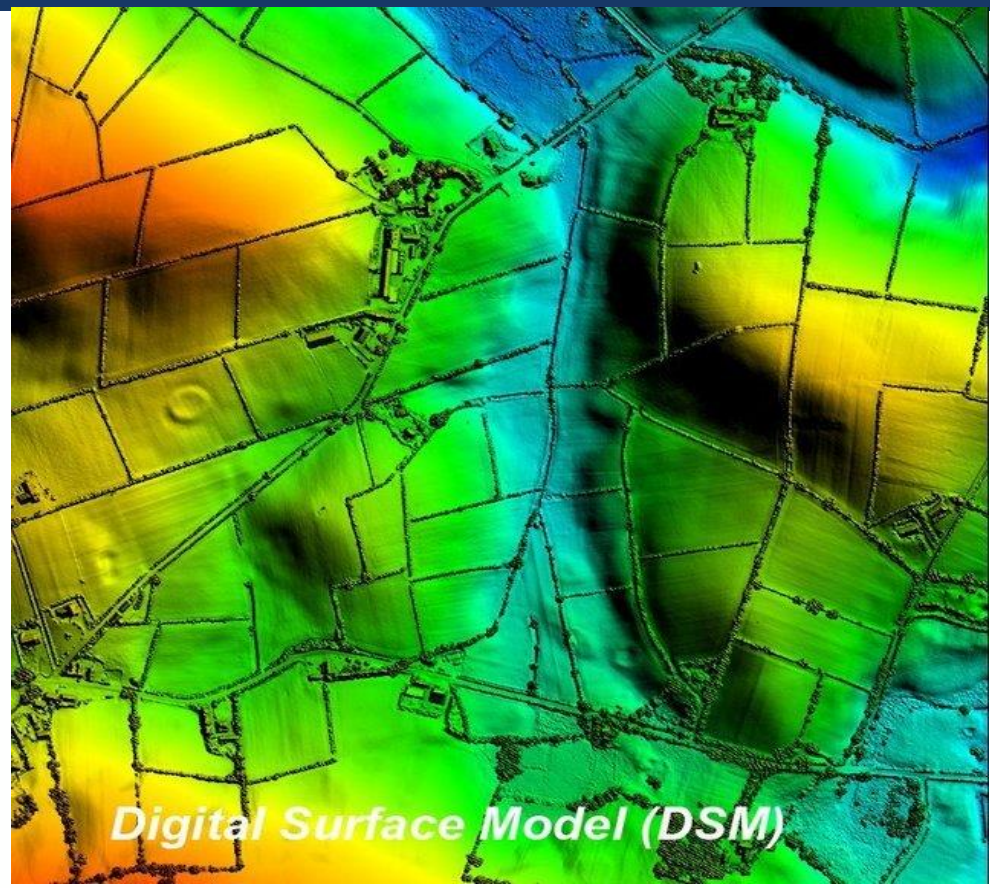
LIDAR

- Aerial LiDAR is used more and more
- A wide range of applications, high resolution DSM, detailed railway surveys etc.

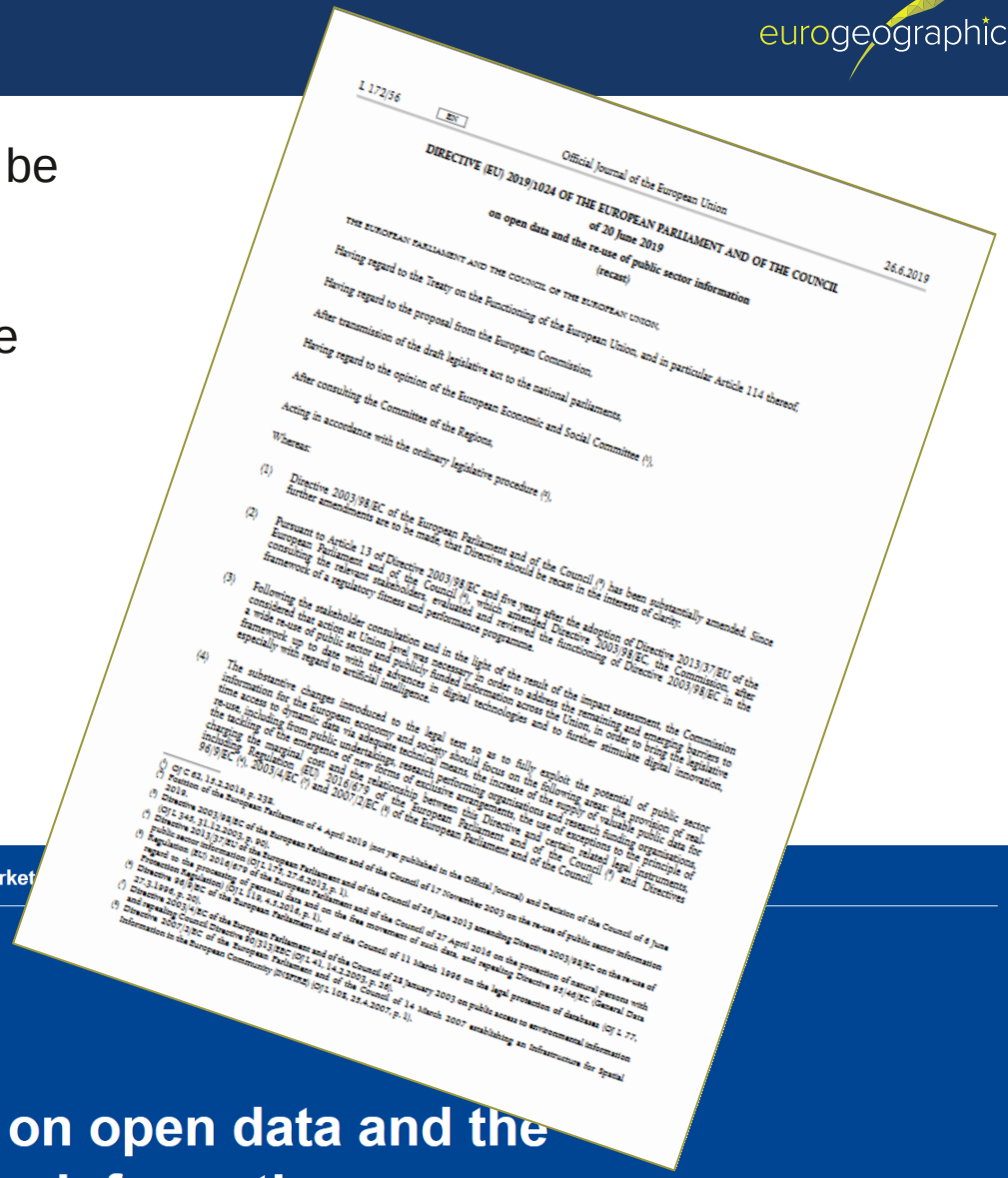


HAPS

Interesting developments in sub-orbital Earth Observation High-Altitude Pseudo Satellites (HAPS).

Policy Developments

- There is the expectation and potential that public data must be OPEN
- Open Data and PSI Directive – within 2 years Directive to be enacted in each EU Member State
- Geospatial data one ‘High Value’ data theme
- OPEN is inevitable and therefore must be taken seriously
- EuroGeographics is guided by our members who are bound to their national legislation and government policy
- We are currently looking at how to make our pan-European data open



L 172/56 EN Official Journal of the European Union 26.6.2019

DIRECTIVE (EU) 2019/1024 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on open data and the re-use of public sector information (recast)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee (1),

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure (2),

Whereas:

(1) Directive 2003/98/EC of the European Parliament and of the Council (3) has been substantially amended. Since further amendments are to be made, that Directive should be recast in the interests of clarity.

(2) Pursuant to Article 13 of Directive 2003/98/EC and five years after the adoption of Directive 2013/37/EU of the European Parliament and of the Council (4), which amended Directive 2003/98/EC, the Commission, after consulting the relevant stakeholders, evaluated and reviewed the functioning of Directive 2003/98/EC in the framework of a regulatory fitness and performance programme.

(3) Following the stakeholder consultation and in the light of the result of the impact assessment, the Commission considered that action at Union level was necessary in order to address the remaining and emerging barriers to a wide re-use of public sector and publicly funded information across the Union, in order to bring the legislative framework up to date with the advances in digital technologies and to further stimulate digital innovation, especially with regard to artificial intelligence.

(4) The substantive changes introduced to the legal text so as to fully exploit the potential of public sector information for the European economy and society should focus on the following areas: the provision of real-time access to dynamic data via adequate technical means; the increase of the supply of the provision of real-time access to dynamic data via adequate technical means; the increase of the supply of valuable public data for re-use, including dynamic data, from public undertakings; research performing organisations and research funding public data for the tackling of the emergence of new forms of exclusive arrangements, the use of exceptions to the requirements, charging of the marginal cost of dissemination, the use of certain related legal instruments, including the principle of transparency, and the relationship between this Directive and certain related legal instruments, including Regulation (EU) 2016/679 of the European Parliament and of the Council (5) and Directives 96/9/EC (6), 2003/4/EC (7) and 2007/2/EC (8) of the European Parliament and of the Council (7) and Directives

European Commission > Strategy > Digital Single Market

Digital Single Market

POLICY

European legislation on open data and the re-use of public sector information

The GSA, to be renamed the 'EU Agency for the Space Programme'

European
Global Navigation
Satellite Systems
Agency

EUROPEAN COMMISSION

Brussels, 6.6.2018
COM(2018) 447 final
2018/0236 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
establishing the space programme of the Union and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013, (EU) No 377/2014 and Decision 541/2014/EU

(Text with EEA relevance)

{SWD(2018) 327 final} - {SWD(2018) 328 final}

EN

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ISSUES to be resolved

Legal

- Multiple legal jurisdictions
- Centralised licensing framework vs national requirements
- Multiple agreements required
- Impact of Open Data Psi Directive?

Policy

- Different National data policy regimes
- Different interpretations of privacy
- Government data policy differs (eg Open Data)
- Impact of Open data PSI Directive?

Financial

- Sustainability

Technical

Data model interpretation

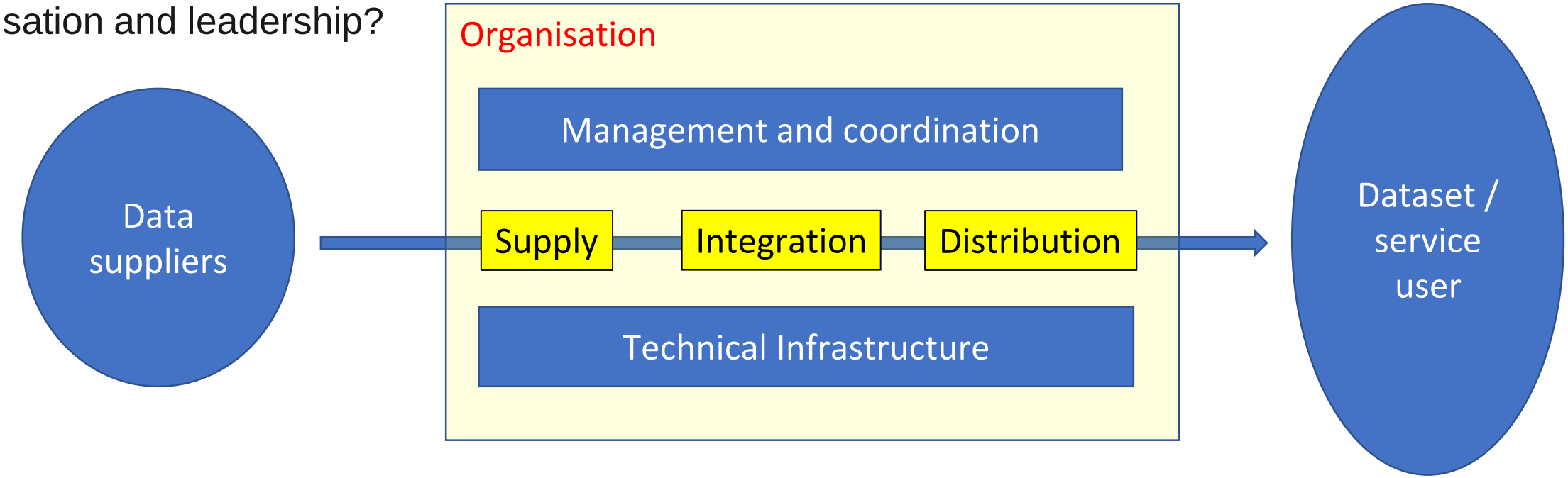
- Complex data schema
- Client software issues
- Version control
- Infrastructure (Centralised vs distributed)
- Data Content!

Sustainability

Who pays?

Who manages / coordinates?

Organisation and leadership?



Leadership needed! A coherent approach to European geospatial policy?

- INSPIRE is now 15 years old
- Things have moved on; technically and politically
- New entrants, new data; AI, big data, earth observations, new technologies
- UN GGIM policy framework – global sustainable development goals
- Integrated geospatial implementation framework

- Who will take this lead in Europe?

Pan European Data

- Pan-European data projects currently for Satellite sensors – to support lower resolution environmental applications – driven by European Space policy
- As resolution improves, better spectral range, faster processing, more up-to-date – market may be limited.
- Aerial survey needs to develop greater vertical diversity and to drive greater horizontal diversity – complement Satellite imagery, develop new service delivery models, new applications and uses: 3D, oblique, improved back-end processing (automation)
- Complementary to satellite imagery (not competitive) - Two possibilities:
  - Satellite images are not yet sufficient for cadastral purposes and large scale mapping where high resolution and accuracy are expected.
  - An accurate Pan-European high-res DTM can not be fully satisfied with satellite imagery since in forestry areas imagery is not accurate for DTM purposes. For a high resolution Pan-European DTM airborne LiDAR acquisition would be needed.

Conclusions

Significant change affecting us all, and our business area

No sign that the pace of change will slow down

There are big geo-political shifts happening, populism and its effects will filter down to our industry too

Policy and legislative change also impacts on us – open data, European space policy in particular

Technological changes continue at pace - of course

This underlines the importance of co-operation and collaboration – with each other, and externally

Need for strong leadership in Europe

www.eurogeographics.org

A society empowered by our members authoritative geospatial information and services