



**EARSC**

European Association  
of Remote Sensing  
Companies

# EO Services & AI for Business & Government

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# What is EARSC?

Trade (non-profit) association founded in 1989, dedicated to helping European companies: *providing services (including consultancy) or supplying equipment in the field of remote sensing*



Mission

- Foster the development of the European Geo-Information Service Industry
- Represent European geospatial-information providers, creating a sustainable network between industry, decision makers & users

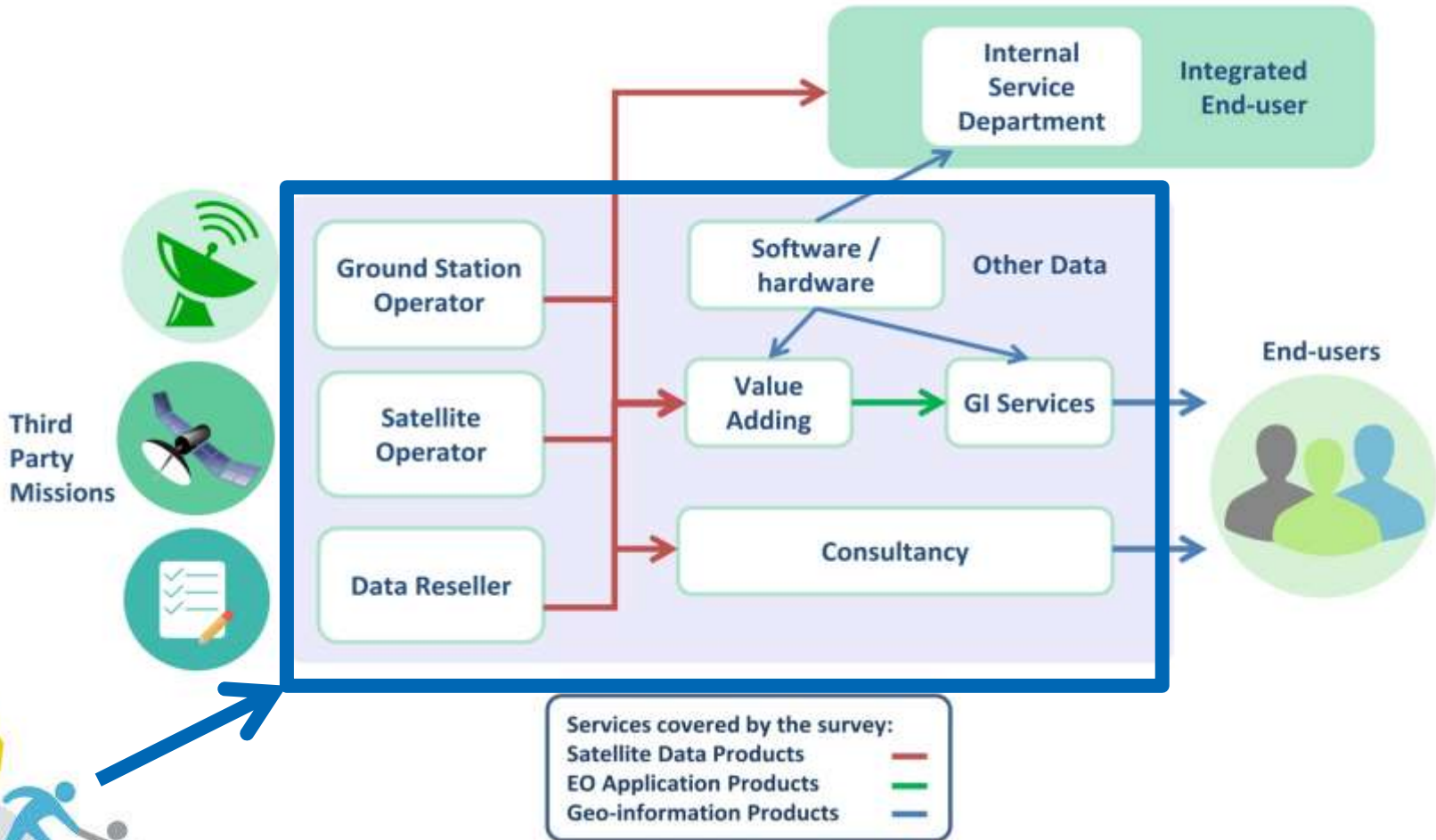
# EARSC's Members

102 members (92 full & 10 observers) from 22 countries in Europe





# EARSC EO Services Value Chain





EO services sector is evolving  
very rapidly



● ● ● | **Change is happening so fast.....**



....the real challenge is to adapt to the rate  
of change... !!

# Current Situation...



- Copernicus (€7b EU investment): NEW ERA in EO
- Sentinel data: “free & open data” policy
- New & innovative satellite operators
- New data sources are emerging: eg. UAV, crowdsourcing
- Large IT companies (eg. Google, Amazon) entering
- Digital technology = potential revolution

**DATA**  
**Many potential opportunities  
to exploit it**



# Changes in the Space Frame



- Satellites deliver multiple types of data/services & are increasingly connected:
  - More constellations of satellites of different types: EO (optical, radar, hyperspectral), navigation, communication, AIS (automatic Identification system), occultation, video, etc.
- Connectivity (oneweb)
- Inter-satellite communications (laser)
- On-board analytics
- Sophisticated sensors & data capture



**Satellites are clearly part of the IoT!!!**



# Change in the Digital frame



- Digital game changers:
  - Big data technology
  - Cloud storage & processing (algorithm to data)
  - Connectivity – including inter-satellite laser communications
  - Artificial intelligence, machine learning , deep learning
  - Blockchain
  - .....

**Not just in space but on the ground**



**Digital technology is disrupting the space value chain!!!**

# Change in the Value frame



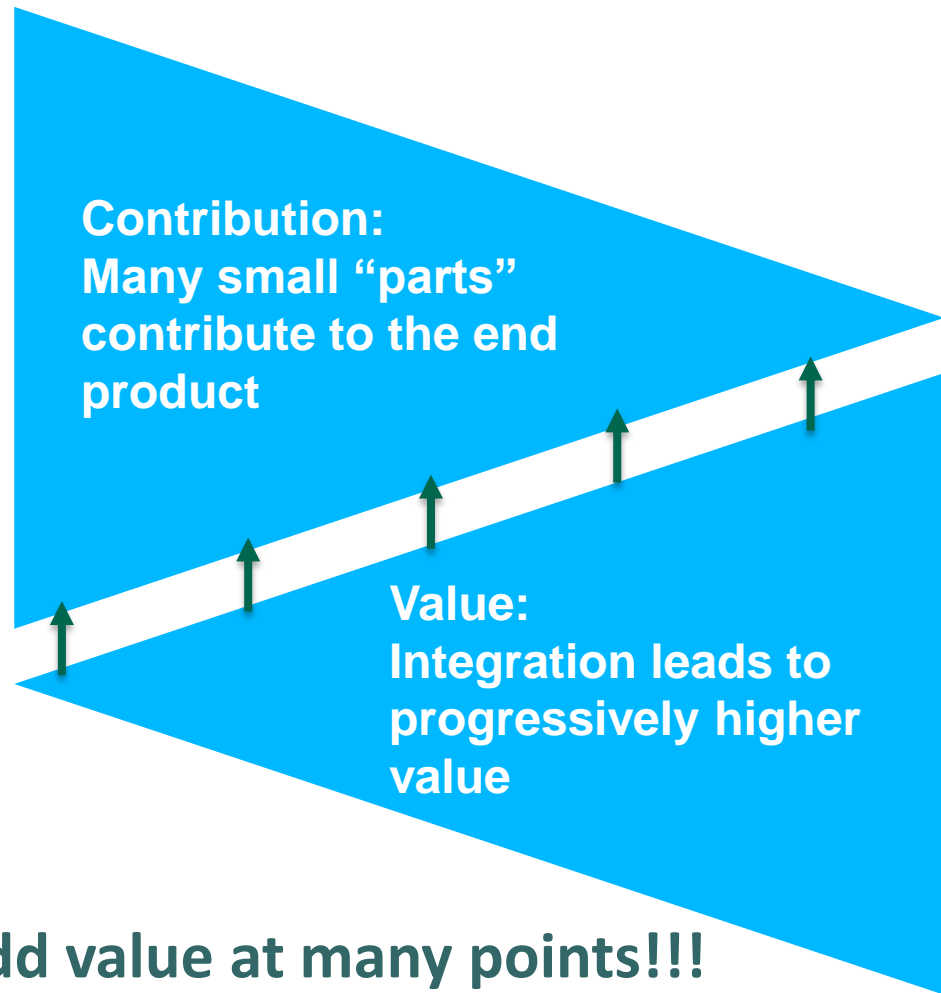
- Satellite EO geospatial is an inherent part of the IoT:
  - Application of Big Data tools to satellite data - which is big!!
  - Convergence of data analytics know-how with EO
  - Satellite data is a fundamental tool to understand the world & human activity
  - Volumes too large for human interpretation; need for “AI” to extract information from the Tbytes of data
- Consequence:
  - Leading to on-line services
  - Disrupting value chains



# Contribution of EO Services

**Traditional manufacturing:**  
Integration creates value

**Services:**  
Transformation of the  
product at each step of the  
value chain

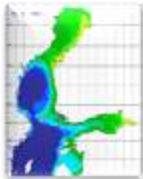


**Geospatial services can add value at many points!!!**

# From Satellites to Supermarkets

## The Economic Benefits

Finnish & Swedish economies benefit from the use of satellite imagery by between **€24m - €116m each year!**



Icebreakers use imagery to find the best routes through the ice

**€2.3m pa**



Ships save fuel and time

**€2.1-€3.3m pa**



Ports are able to operate more efficiently

**€5.8-€9.4m pa**



Factories are able to operate all year round

Citizens can be sure that the supermarkets/  
petrol stations /pharmacies are stocked

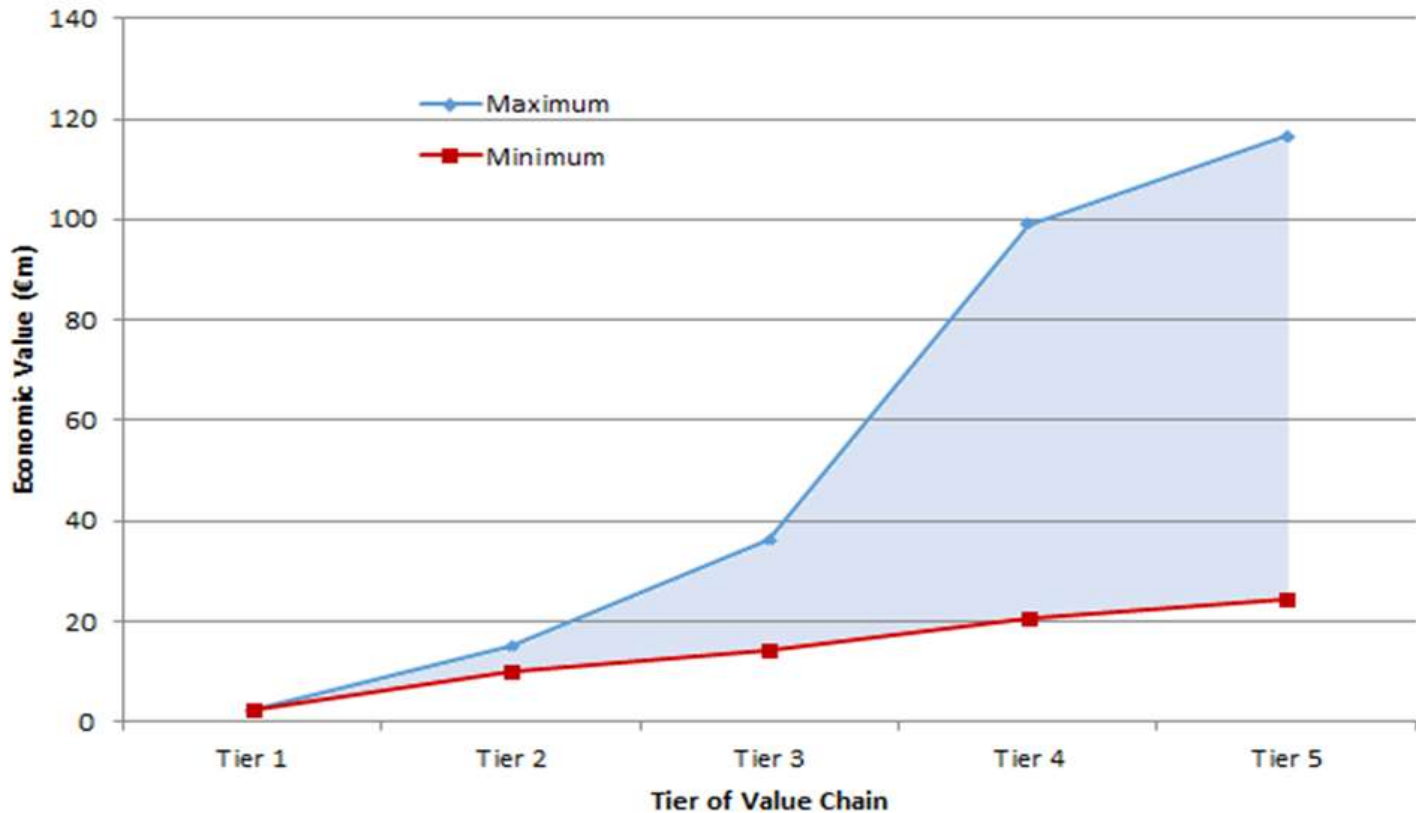
**€6.3-€63m pa**



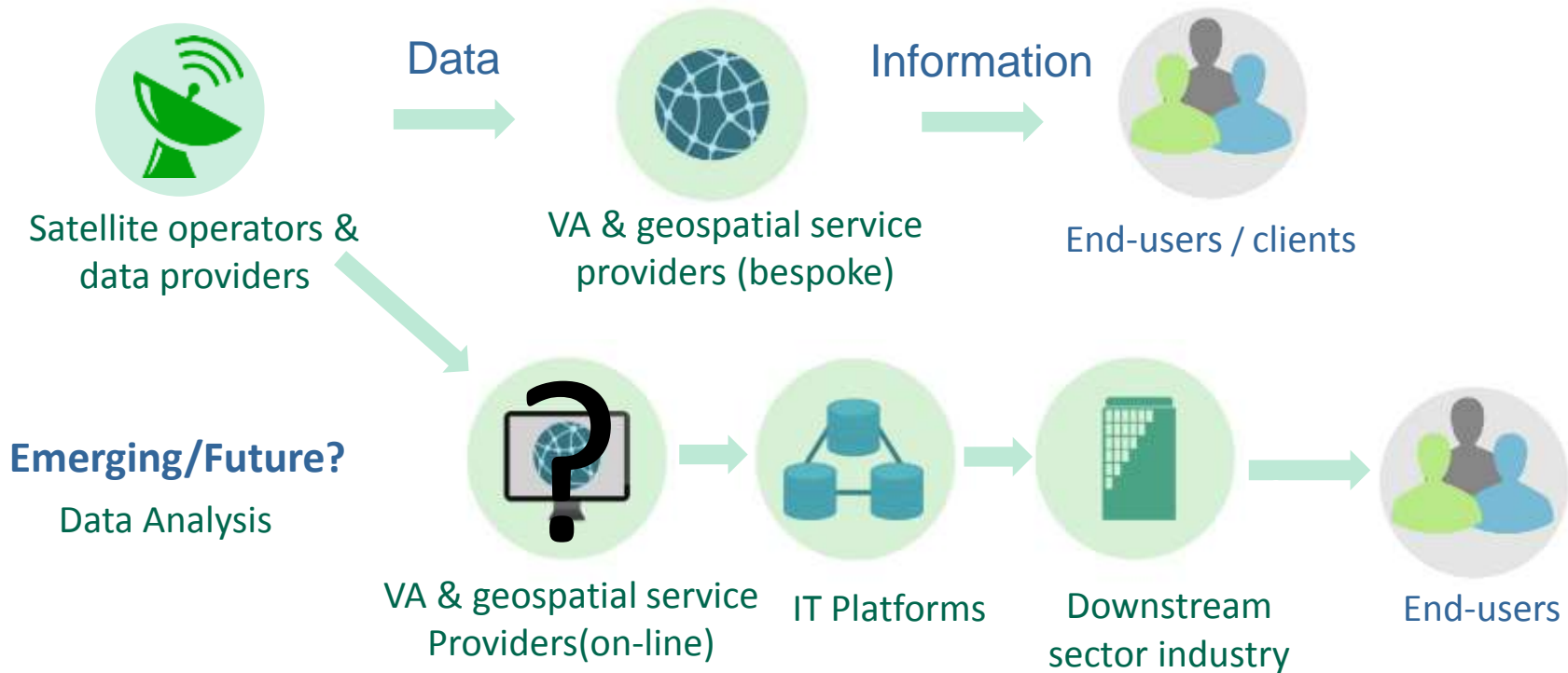
**€3.5-€17.5m pa**



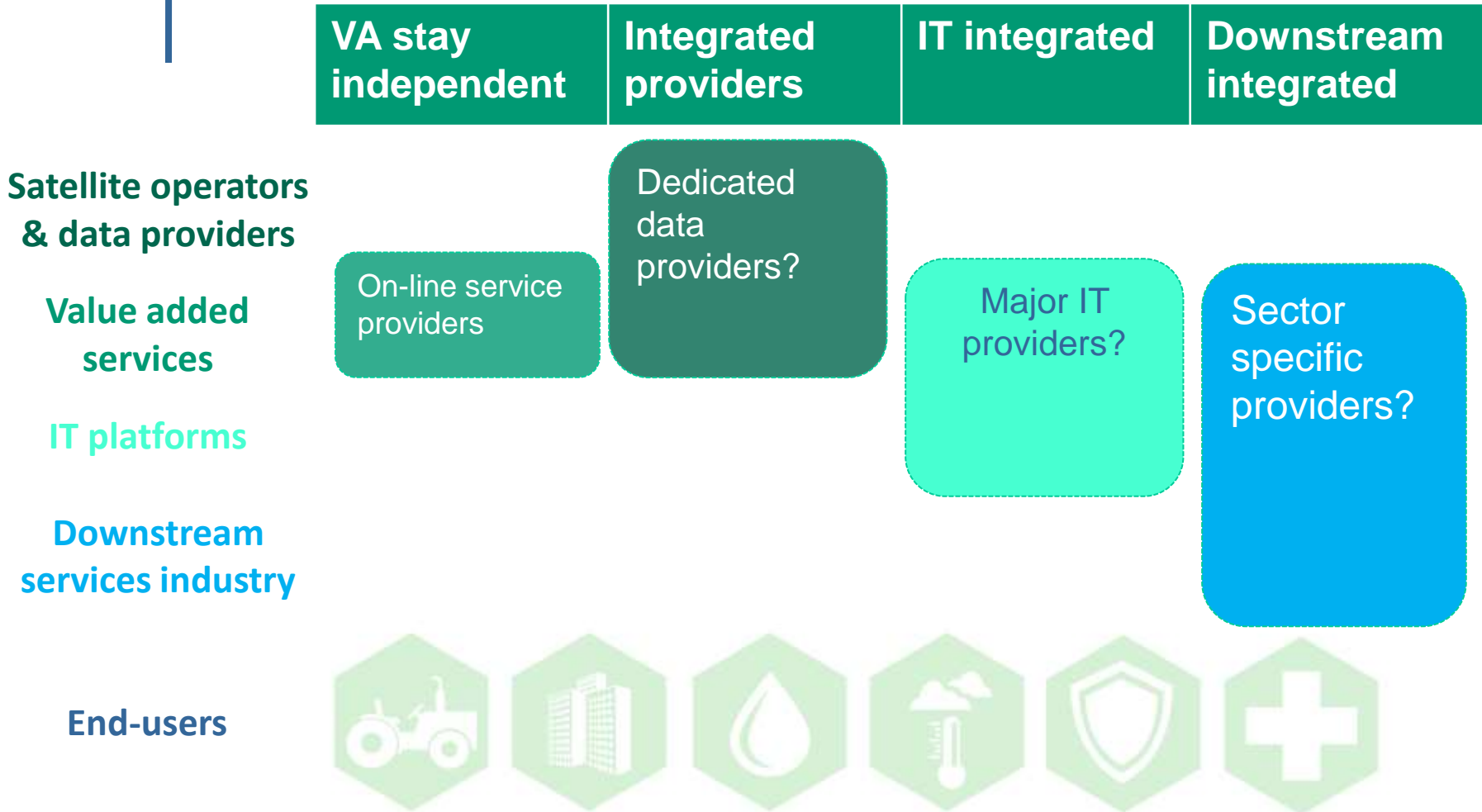
# Cumulative Benefits in Economic terms



# EO Services Value Chain Disruption



# Different scenarios





# EARSC Response

## On-line Services

- EARSC has established a Marketplace Alliance
  - A co-operative approach for mutual benefit
  - EO companies; coming together to create a common platform
  - Promotion of their on-line services
  - Leaving each company in control of its sales & promotional process

## Bespoke (traditional) business

- EARSC Market Development programme for industry
  - Strong internationalisation effort to develop export opportunities
  - Leverage Copernicus using EC Economic Diplomacy



# Knowledge Tier: European Marketplace for EO services

**Global buyers can find easily European EO services, data & products**



facilitating the European marketplace for **eo**services

# eoMALL...





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**Thank You  
for your  
Attention!!!**



**EARSC:**

[www.earsc.eu](http://www.earsc.eu)

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