MARKET STATUS

EMERGENCY MANAGEMENT AND HUMANITARIAN AID
User Needs and Requirements

EU Space User Consultation Platform 2022

3 October 2022

Emergency Management and Humanitarian Aid
The clusters

06 Humanitarian Aid

05 Post-event Recovery

04 Search and Rescue

EO GNSS

01

02

03

04

05

06

Prevention and Mitigation **01**

Preparedness **02**

Response **03**

Emergency Management and Humanitarian Aid
Example of applications

Humanitarian Aid — 06

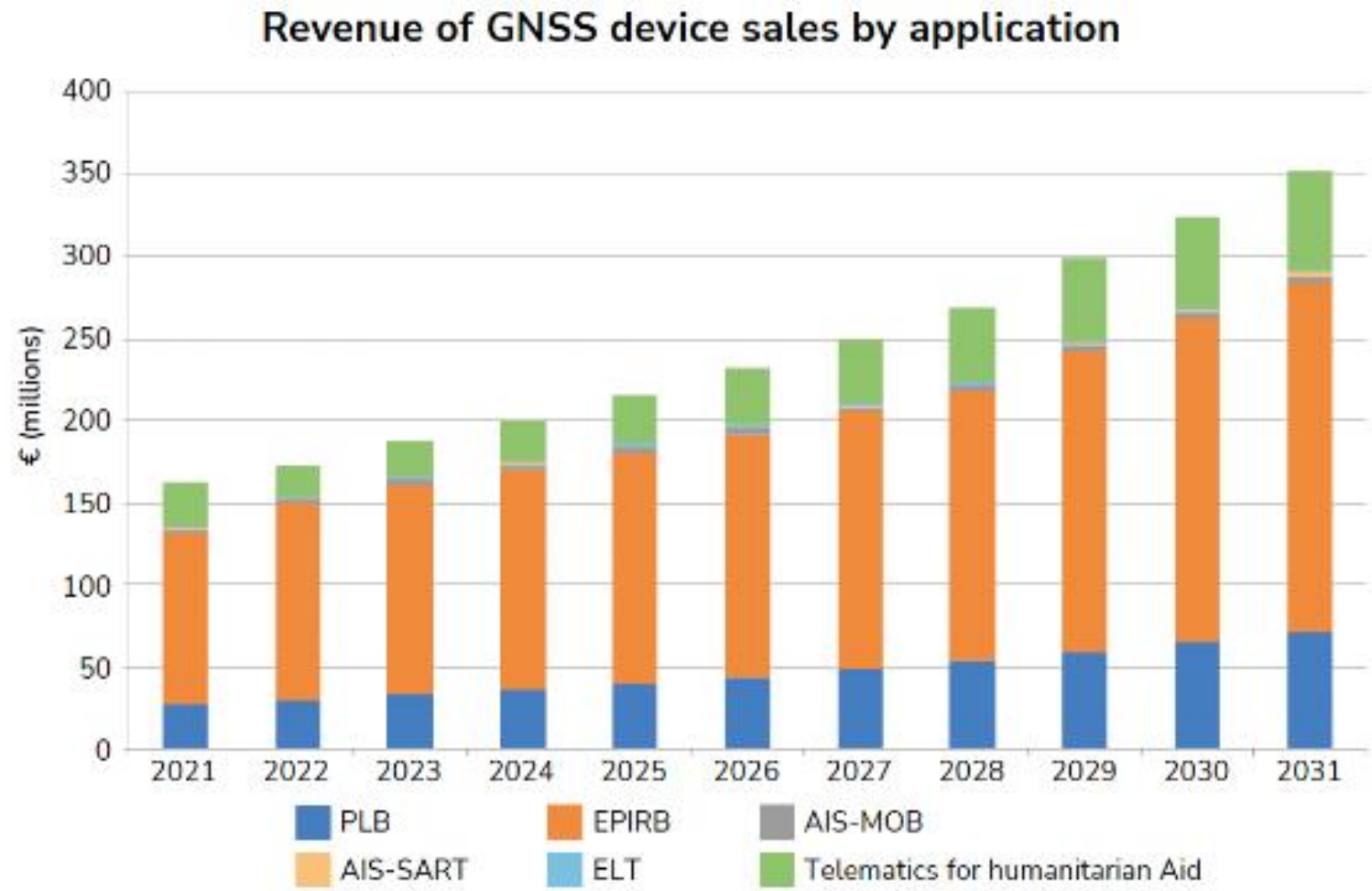**Post-event Recovery** — 05

Search and Rescue — 04

Prevention and Mitigation — 01

Preparedness — 02

Response — 03

UKRAINE
NATIONAL HIGHWAY H20, DONETSKA OBLAST
IMAGERY ANALYSIS: 23 & 26 March 2022 PUBLISHED: 03 April 2022 V1

2,3% | 336km2

Revenue of GNSS device sales by application

Revenue from EO data & services sales by cluster

Legend: Preparedness · Response · Search and Rescue · Post-event recovery · Humanitarian aid
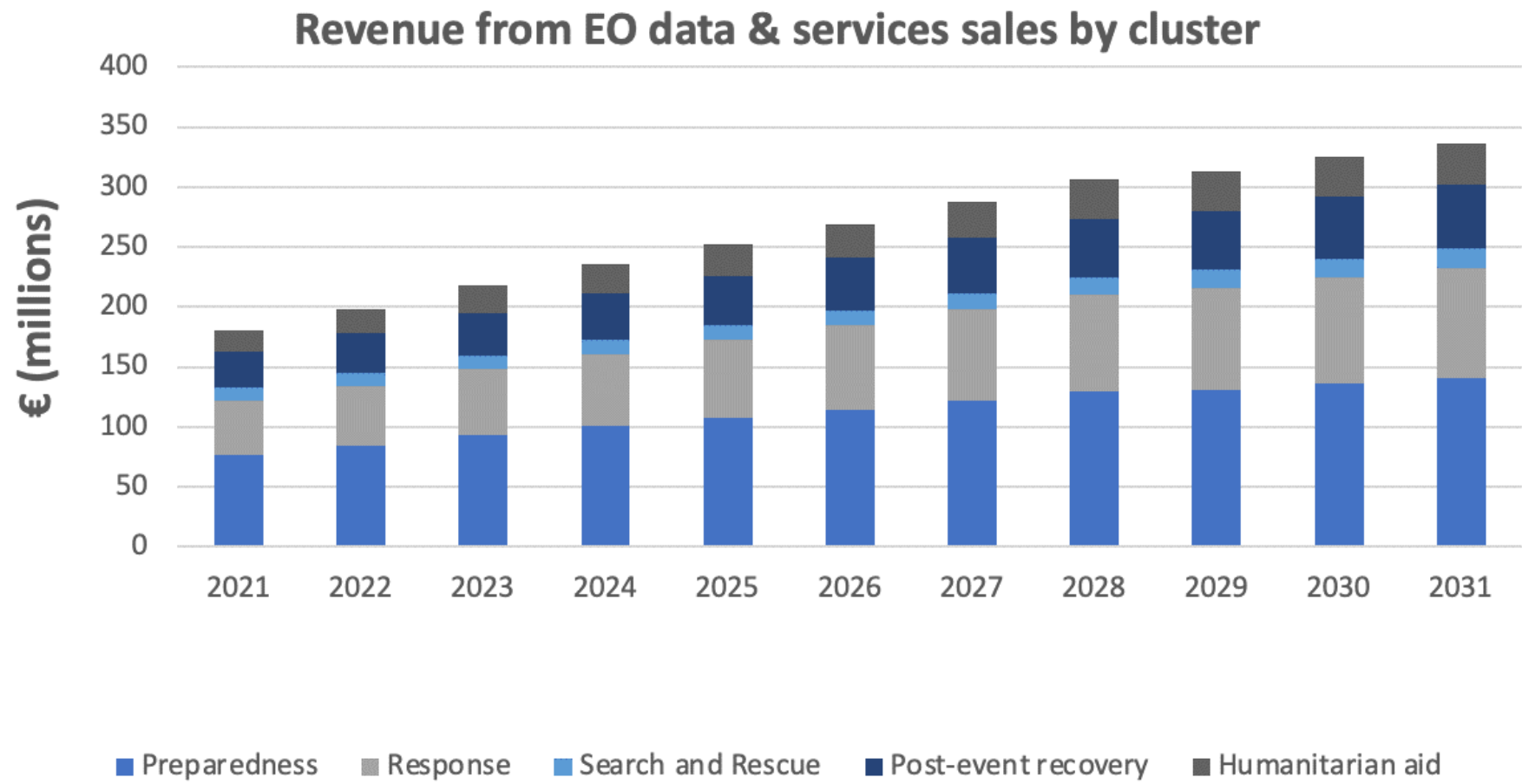
Different levels of investigation for different applications

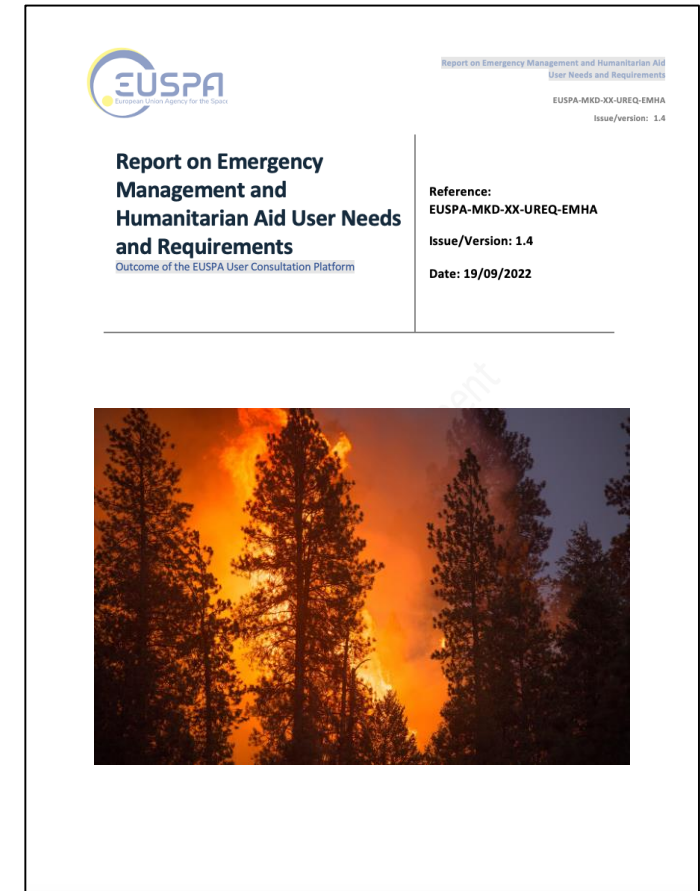**TYPE A:** In-depth investigation of application needs and requirements for EO

TYPE B: GNSS applications for which requirements exist (and are listed), but no further analysis is made

TYPE C: EO applications for which no in-depth analysis is performed, at this stage

Comments?

Use the WEBEX chat

APPLICATIONS

Legend

EO only application

GNSS only application

Hybrid/synergetic application (combined use of EO and GNSS)

Cluster	Application	Type of application / Analysis Level	
Response	Crisis area assessment (EO and GNSS)	C	◯
	Operational wildfires modelling (EO)	C	◯
Search and Rescue	SAR operations: at sea (GNSS)	B	◑
	SAR operations: aviation (GNSS)	B	◑
	SAR operations: land (GNSS)	B	◑
	Situational awareness supporting SAR (EO)	C	◯
Post-event Recovery	**Post-crisis damage assessment and building inspection (EO and GNSS)**	A	●

Snapshot of the applications

Comments?

Use the WEBEX chat

OVERVIEW USER NEEDS AND REQUIREMENTS RELATED TO EO
(GATHERED FOR **TYPE A** APPLICATIONS)

ID	Identifier
Application	Application covered.
Users	Common users of the product/service.
User Needs	
Operational scenario	Describes the operational scenario faced by the user, which requires a solution.
Size of area of interest	Describes the area of interest (e.g. civil protection needs to assess damages on a city of 20Km^2).
Scale	Describes the scale of interest (e.g. a laboratory is interested to measure at mm level the ground motion for landslides detection).
Frequency of information	How often the user requires the information.
Other (if applicable)	Other user needs such as contextual information (weather data) or file formatting requirements.
Service Provider Offer	
What the service does	Description of the service that satisfies the user's needs.
How does the service work	(Technical) description of how the service works.
Service Provider Satellite EO Requirements	
Spatial resolution	Spatial resolution of the satellite imagery/data required by the service provider to realise the service
Temporal resolution	Frequency of satellite data (revisit time) over the area of interest.
Data type / Spectral range	Type of data (e.g. RGB, SAR) and spectral range (if relevant).
Other (if applicable)	Other data requirements.
Service Inputs	
Satellite data sources	Type of required data and examples of operational satellites that can provide these data.
Other data sources	Other sources of data that the service provider uses to realise the service (drones, crowdsourcing..)

OVERVIEW USER NEEDS AND REQUIREMENTS RELATED TO GNSS
(GATHERED FOR **TYPE A** APPLICATIONS)

GNSS user requirements for a specific application		
Accuracy	Horizontal	m / cm / mm-level
	Vertical	m / cm / mm-level
Availability	Canopy	Must work under canopies
	Better than 95%	Yes/No
	Better than 99%	Yes/No
Robustness		Low/High
Integrity and reliability		Low/High
Size, weight, autonomy	Relevance	Yes/No
	Time a device can run in the field	Days/Months/Years
	Other requirements	Size/Weight constraint, security
TTFF (Time To First Fix)		Minutes / Seconds
Service area	Geographical coverage	Global / Regional / Local

BREAK
(10 minutes)

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