

Contributo INGV ai servizi PNRR IRIDE

Bignami Christian, Tolomei Cristiano



ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA 

What is IRIDE?

- ★ IRIDE is the new Italian Earth Observation system which is currently being implemented in the framework of the NextGen EU fund and under a bilateral agreement between ESA and the Italian Government.
- ★ In particular, the objective of this activity is to design, develop, integrate, and deliver all the components of the IRIDE Service Segment, including Geospatial Products and software tools, and integration into the IRIDE Marketplace.

Which is the role of INGV?

- ★ The implementation of the IRIDE Service Segment will follow a user centric approach, leveraging the requirements, feedback and recommendations from entities that will use service outputs for their institutional activities and roles
- ★ INGV provided 3 support letters to e-GEOS to express *a strong interest in the project proposal to be submitted by e-GEOS in the ESA “IRIDE Service Segment Design Implementation and Deployment”*
- ★ in particular about:
 - Lot 1: supporting validation activities in the monitoring and assessement of volcanic pollutant emissions
 - Lot 2: delivering of Service Value Chains in the Thematic domains of Ground Motion - based on InSAR
 - Lot 4: delivering of Service Value Chains in the Thematic domains of Emergency and Security - Volcanic products

INGV Task involvement 1 di 3

We are a ***Pilot User (i.e. expert user)*** contributing on 3 tasks:

- Task 1 – Service Portfolio Design:

- Understanding of needs and current scenario, including also state-of-the-art analysis
- Definition of the Service Portfolio Specification and its evolution
- Identifying and describing the User Operational Systems where IRIDE SVCs products and tools will be exploited
- Supporting the investigation of new needs addressable by new services not yet exploited or updates of state-of-the-art services for addressing new Users with similar needs

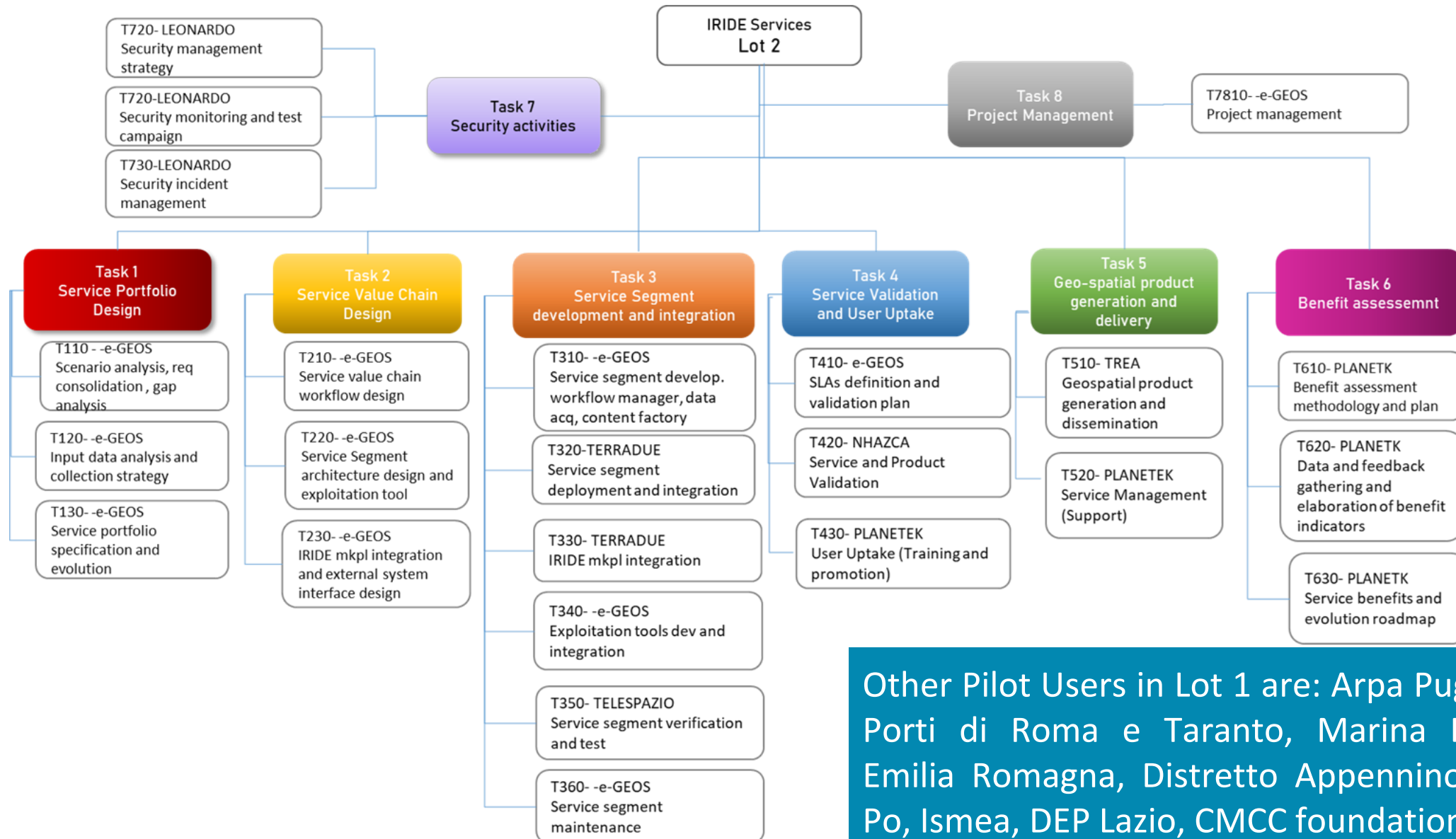
INGV Task involvement 2 di 3

- Task 4 - Service Validation and User Uptake
 - Contributing to the definition of the SLA for the SVCs represented, e.g., by providing inputs about expected performances, formats of data, access rules, etc
 - Providing inputs and/or reviewing the proposed SVCs validation plan
 - Supporting the organization and execution of the training (and promotion) session, including identification of key end users to involve and related training needs, also being testimonial during the training session if it is appropriate
 - **Supporting validation activities**

INGV Task involvement 3 di 3

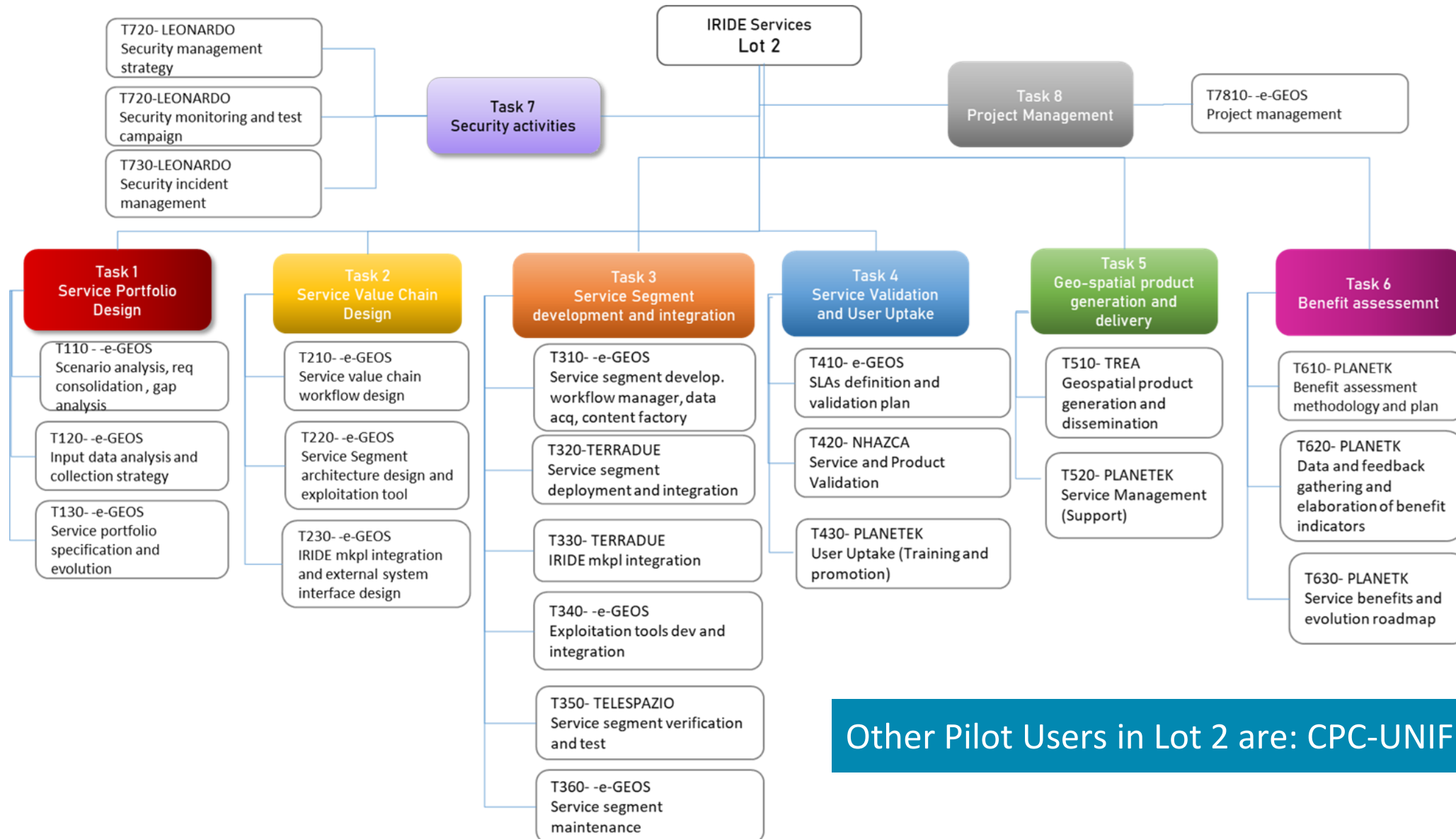
- Task 6 - Benefits Assessment and Service Segment Evolution:
 - Identifying suitable indicators for assessing the trend of SVCs adoption and related KPIs to be used for Service Validation purposes
 - Supporting validation activities and benefit analysis
 - Supporting the interface of IRIDE Service Value Chains within their User Operational Systems
 - Fostering the uptake of the Services within their organizations, promoting the training activities and the integration of the services within their workflows and duties
 - Contributing to the definition of the SLA for each SVC
 - Supporting benefit analysis

IRIDE service segment WBS - Lot 1



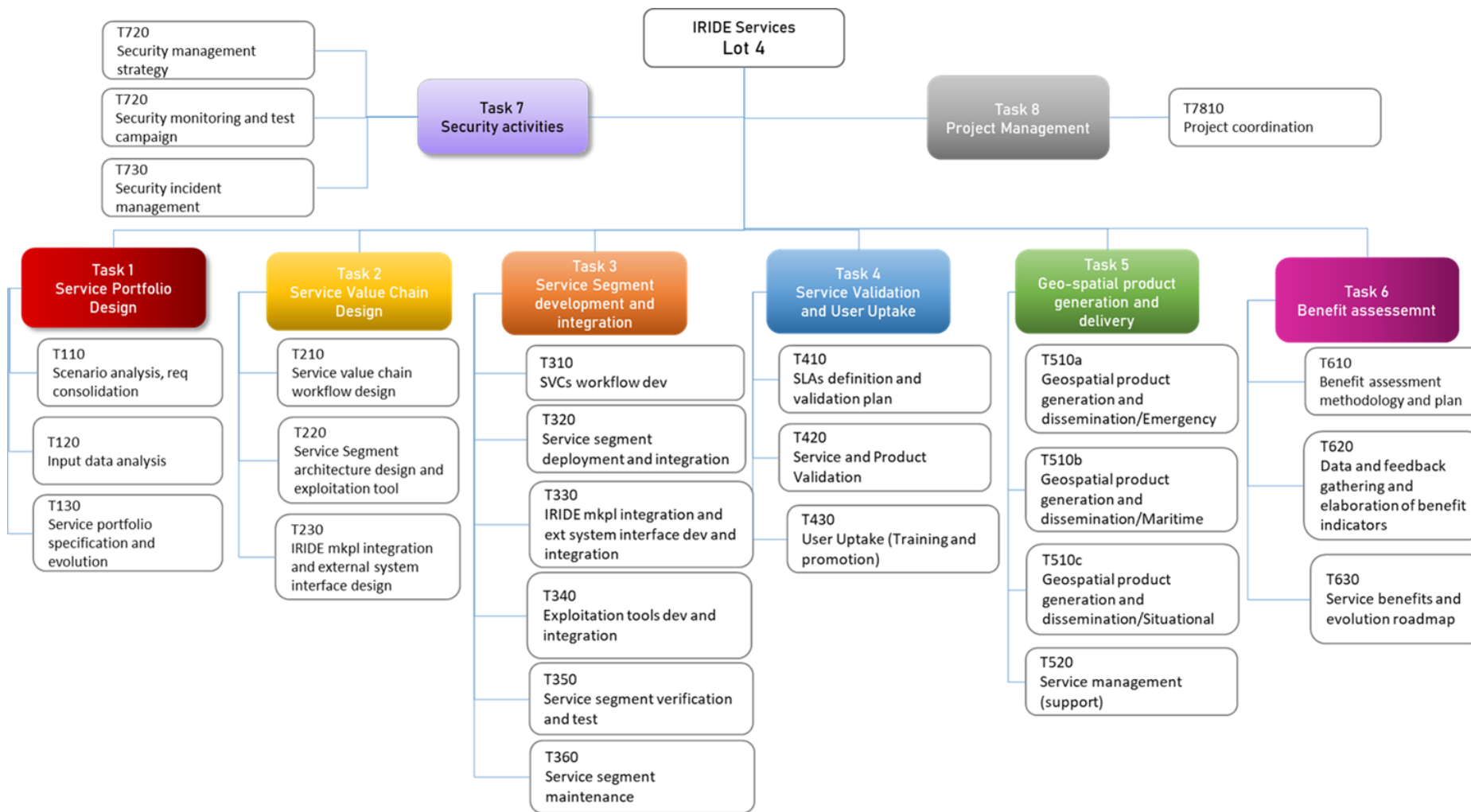
Other Pilot Users in Lot 1 are: Arpa Puglia e FVG, OGS, Porti di Roma e Taranto, Marina Difesa, Regione Emilia Romagna, Distretto Appennino Meridionale e Po, Ismea, DEP Lazio, CMCC foundation

IRIDE service segment WBS - Lot 2



Other Pilot Users in Lot 2 are: CPC-UNIFI, ENEA, ANAS

IRIDE service segment WBS - Lot 4



Other Pilot Users in Lot 4 are: CIMA, UNI FI, EUCENTRE, Arpa Puglia, Regione Campania, Marina Militare, Istituto Idrografico della Marina Militare, Vigili del Fuoco, ANAS

Services we are contributing to

★ Lot 1

- SE-S2-02: Monitoring and assessment of pollutant emissions (*Scollo, Corradini*)

★ Lot 2

- SE-S3-03: Cultural Heritage Areas Monitoring (*Bignami, Tolomei*)
- SE-S3-04: Critical Infrastructure Monitoring (*Polcari, Bignami*)
- SE-S3-05: Monitoring of seismic wide areas during inter-seismic phase (*Tolomei, Atzori*)
- SE-S3-06: Volcanic areas Monitoring (*Guglielmino*)
- SE-S3-07: On-demand monitoring - real time monitoring for landslides and Volcanic areas (*Polcari, Guglielmino*)

★ Lot 4

- SE-S7-03: Rapid Damage Mapping / Delineation - *Volcanic eruption* (*Bignami, Ganci*)
- SE-S7-10: Detailed Damage Mapping / Grading - *Volcanic eruption* (*Bignami, Ganci*)

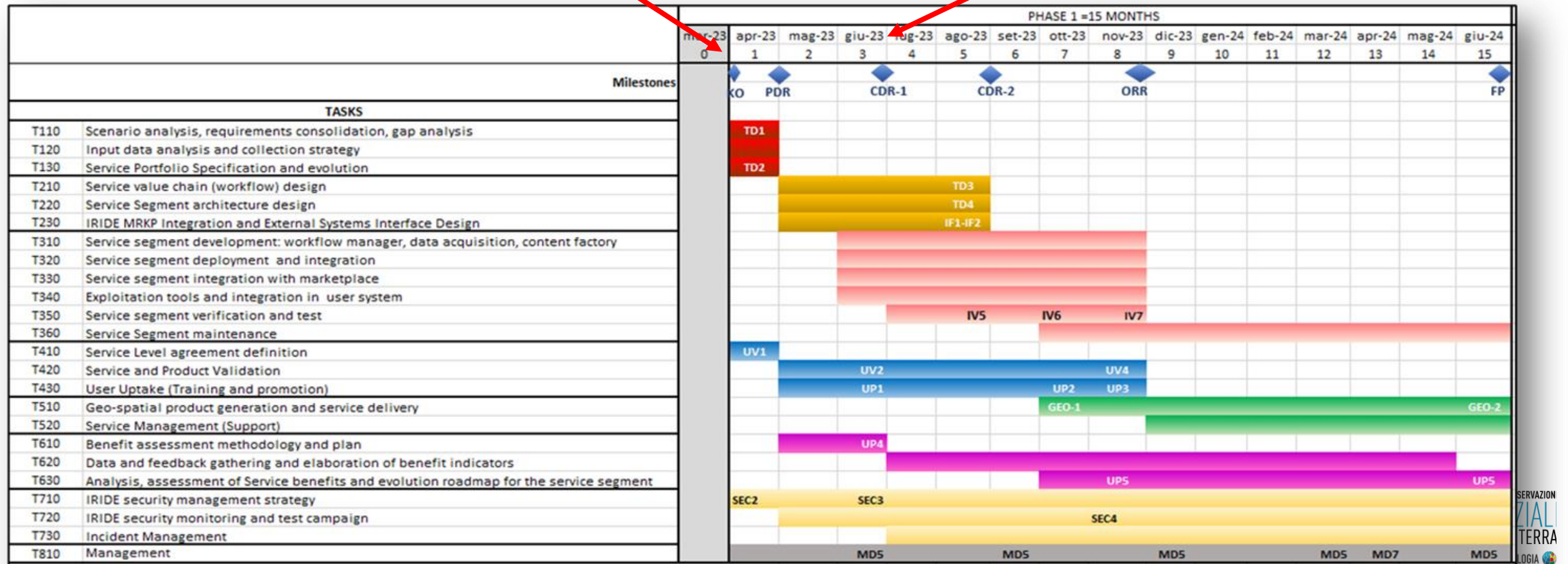
Project Objectives

	15 months Phase 1 Precursor	13 months Phase 2 v1	10 months Phase 2 v2
• Obj1 SVCs Implementation	✓		
• Obj2 Operational Service Delivery	✓	✓	✓
• Obj3 Leverage IRIDE data		✓	✓
• Obj4 and Obj 5 Integration in users system, in IRIDE Marketplace		✓	✓
• Obj6, Obj7, Obj8 Users Engagement , Training, Promotion	✓	✓	✓
• Obj9 IRIDE Service Adoption			✓
• Obj 10 Services Operational Deployment			✓

Phase 1 schedule

Kick-off Meeting: 30.03.2023

INGV already supported 3 deliverables and several meetings to discuss about our activities and provide some feedbacks



Milestones & Deliverables

Milestone Type	Description	Event(s)	Time	Proposed Date	Deliverables
KO	Kick off	Start of phase 1	T0	29/03/2023	MD1 (including MD2-MD4), MD3 SEC1 (draft)
PDR	Preliminary Design Review	End of task 1	T0+1	02/05/2023	TD1, TD2 UV1 SEC1, SEC2
CDR-1	Critical Design Review- First	Middle Task 2	T0+3	30/06/2023	UP1- UP4 UV2 SEC3
CDR-2	Critical Design Review- Second	End of task 2	T0+5	06/09/2023	TD3- TD4 (Draft) IF1 (draft)- IF2 (draft) IV5(draft)
ORR	Operational Readiness Review	End of task 4	T0+8	30/11/2023	UP2-UP3 IV6 (draft)-IV7 (draft) GEO1 UV4 UP5 SEC4
FP	Final Presentation	End of all task	End of cycle	26/06/2023	GEO2 UP5 (updating)

Code	Description	TASK
TD1	Understanding of needs and current scenario	T110
TD2	Service Portfolio Specifications and evolution	T130
TD3	Service Value Chains Design	T210
TD4	Service Segment Design	T220
IF1	External ICDs	T230
IF2	Contribution to IRIDE Marketplace ICD	T230
IV5	Interface and Acceptance Test Plan	T350
IV6	Interface Test Procedure	T350
IV7	Interface and Acceptance Test Report(s)	T350
UV1	Service Level Agreements	T410
UV2	Service Validation Plan	T420
UP1	Services Training Plan	T430
UP2	Services Training Material	T430
UP3	Services Training Report	T430
UV4	Service Validation Report	T420
GEO1	Service Delivery Plan	T510
GEO2	Service Delivery Report	T510
UP4	Benefit Assessment Plan	T610
UP5	Benefit Assessment Report	T630
SEC1	Security Management Plan	T710
SEC2	Security Risk Assessment Report	T710
SEC3	Service Segment Security Requirements	T710
SEC4	Security Test Report	T720
MD1	Project Management Plan	T810
MD2 *	Implementation Plan	T810
MD3	User Engagement Plan	T810
MD4 *	Configuration and Document Management Plan	T810
MD5	Progress Reports	T810
MD6	Minutes of Meetings	T810
MD7	Phase 2 Detailed Work Plan	T810
MD8	Proposal fo Service Segment Operations, Mainten	T810
*	included in MD1	