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Enhancing Copernicus Security Services – EU governmental crisis management hub for forced population displacement

Exploitation plan (Version 2), D13.5

WP13 – Communication, Dissemination, Training and Exploitation of initial project results - 2st period

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Executive Summary

The updated deliverable, D13.5 – "Exploitation Plan (Version 2)", builds on the initial exploitation framework developed under Task 13.2 – "Initial exploitation plans and activities preparation" and Task 13.3 – "Identification of IPR issues and patentable content" within WP13 – "Communication, Dissemination, Training and Exploitation of initial project results - 1st period". Version 2 reflects the consortium's strengthened, evidence-based approach to exploitation planning.

This version provides an enhanced and more operational exploitation strategy, detailing how THEIA's Key Exploitable Results (KERs) will be advanced towards sustainable uptake through structured market analysis, clarified ownership and IPR logic, and partner-level exploitation commitments. The deliverable expands the value narrative of THEIA's results in science, industry, and society, while also strengthening pathways to impact by distinguishing between short-term outcomes and long-term impacts and introducing a basis for measurable monitoring through indicators.

Key highlights include:

- Updated KER profiles, incorporating recent technical progress, TRL evolution, and refined impact framing for target users;
- KER-specific market analysis (SWOT, customer mapping, competitor landscape) to strengthen market positioning and adoption potential;
- Consolidated Individual Exploitation Plans, documenting partner roles, commitments, and exploitation pathways for each result;
- Strengthened IPR and access-rights logic, clarifying contribution-based ownership and exploitation conditions across technical results and data contributions;
- A structured plan for the use of Horizon Results Booster services, including the status of the project's application and planned actions to reinforce exploitation readiness, stakeholder mapping, and monetisation validation.

Overall, D13.5 Version 2 positions THEIA's exploitation planning as a living process supported by structured partner inputs and stakeholder feedback, ensuring that project outputs remain aligned with operational needs, market realities, and long-term sustainability objectives.

In response to the 1st Periodic Review recommendations, this version further strengthens the exploitation framework by introducing a clearer approach for consolidating the potential market of THEIA results, defining indicative post-project indicators for monitoring short-term outcomes and long-term impacts once the KERs are mature, and improving the traceability between the KERs and the Partner Individual Exploitation Plans.

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List of Acronyms / Abbreviations

Table 1. List of Acronyms/Abbreviations

Acronym / Abbreviation	Explanation
AI	Artificial Intelligence
AMSS	Advanced Monitoring & Surveillance System
API	Application Programming Interface
CCM	Copernicus Contributing Missions
CDO	Component Data Operator
CSS	Copernicus Security Services
EO	Earth Observation
EU	European Union
GDPR	General Data Protection Regulation
GA	Grant Agreement
GeoAI	Geospatial Artificial Intelligence
HRB	Horizon results booster
IPR	Intellectual Property Rights
ISR	Intelligence, Surveillance & Reconnaissance
KER	Key Exploitable Result
ML	Machine Learning
OSINT	Open-Source Intelligence
RBAC	Role-Based Access Control
RF	Radio Frequency
SWOT	Strengths Weakness Opportunity Threats
TRL	Technology Readiness Level
VHR	Very High Resolution
CS	Copernicus Services

1. Introduction

Addressing critical challenges such as population displacement due to conflicts, exacerbated by factors like climate change, extreme weather events, food shortages, and poverty, remains paramount. The implementation of THEIA, integrating data fusion, processing, and analysis, particularly leveraging Geospatial Artificial Intelligence (GeoAI) and Machine Learning (ML), is poised to enhance the efficacy of existing services significantly. Through the amalgamation of multitemporal data and diverse datasets, THEIA empowers better decision-making and adapts to evolving policy and user needs. This technological advancement, bolstered by GeoAI, augments detection capabilities and ensures timely access to crucial information, bridging the gap between capabilities and stringent security demands. By integrating non-space data and end-user intelligence, THEIA's supply chains add value not only at the operational level but also at regional and local levels, facilitating improved coordination. Furthermore, THEIA catalyses fostering EU-independent capabilities and technologies, thereby bolstering the European space ecosystem's consolidation and ensuring the sustainable coexistence of legacy and New-Space solutions. Its services cater to a wide array of end-users, including EU agencies such as SATCEN and Frontex, EMSA Member State Ministries of Defence, Intelligence Agencies, Police Forces, NATO, and potentially Extra-EU National and Supranational Entities such as the United Nations.

This document represents the second version of the report outlining all exploitation activities and IPR-related issues.

The WP13 consists of the following Tasks:

• Task 13.1: Dissemination and high-impact collateral plan (Leader: ICCS)

• Task 13.2: Initial exploitation plans and activities preparation (Leader: GSH)

• Task 13.3: Identification of IPR issues and patentable content (Leader: MPL)

This document is one of the outputs of Task 13.2 and Task 13.3 and represents the fifth deliverable of WP13. The following sub-sections present the scope and objectives, as well as the structure of the document.

1.1 Purpose and scope of the deliverable

The purpose of D13.5 is to present the updated exploitation framework of THEIA under Task 13.2, incorporating project progress, including output from T13.3 and refining the pathway from research results to operational and market uptake.

This deliverable:

- updates the exploitation strategy defined in Version 1

- aligns exploitation planning with the current maturity of the KERs
- strengthens the market positioning and competitive analysis
- introduces structured impact considerations and risk management
- clarifies partner-specific exploitation intentions

The scope of this report covers scientific, commercial, institutional and policy-oriented exploitation routes. Financial projections and quantified business planning are not introduced at this stage; instead, the focus remains on strategic readiness, structured positioning and realistic sustainability planning.

1.2 Structure of the deliverable

This deliverable is structured to move from strategic framing to practical exploitation planning, ensuring a clear link between technical progress, market positioning and sustainability actions.

Part 1 sets the context of Version 2 by defining the purpose and scope of the exploitation plan, highlighting the main updates since Version 1 and presenting how the document is organised.

Part 2 outlines THEIA's exploitation strategy, including the exploitation routes, the phased roadmap toward uptake, the overall monetisation approach and the alignment with the GA objectives and project milestones.

Part 3 provides the strategic and market context in which THEIA operates, describing the drivers and constraints affecting adoption in crisis monitoring, security and institutional environments. It also introduces a market consolidation and validation roadmap, recognising that the potential market for THEIA results is still under refinement and will be further validated through stakeholder engagement, demonstrations and Horizon Results Booster activities.

Part 4 presents the KERs in a structured manner, including updated descriptions, TRL and IPR positioning, exploitation type, SWOT assessment, customer and competitor perspectives, the overall short- and long-term impact outlook, a dedicated impact monitoring framework with indicators for measuring achieved effects and the consolidated risk management framework.

Parts 5-12 translate the strategy into operational exploitation planning, covering distribution channels, the Business Model Canvas, cost structure, revenue streams, sales strategy, partner individual exploitation plans, the IPR strategy and the planned use of Horizon Results Booster services. Chapter 10 also introduces a dedicated linkage between the KERs and the Partner Individual Exploitation Plans, strengthening traceability from project results to partner-specific exploitation pathways.

Finally, the deliverable concludes with the main exploitation conclusions and next steps, and includes an updated table of acronyms for reference.

1.3 Evolution Since Version 1

Since the submission of the initial Exploitation Plan (Version 1), THEIA has progressed from a primarily conceptual exploitation framework to a more operationally structured strategy. Technical components have matured, integration pathways have been clarified, and several KERs have advanced toward pilot validation environments.

Version 2 reflects:

- Consolidation of system architecture and runtime environment
- Implementation and testing of data ingestion and secure exchange mechanisms
- Clarification of partner-level exploitation roles
- Refinement of business model logic aligned with institutional procurement realities
- Structured market and competitor positioning per KER

This evolution demonstrates the transition from planning-oriented exploitation to structured deployment readiness and strategic sustainability positioning.

In addition, this version addresses the 1st Periodic Review recommendations by further consolidating the potential market analysis, introducing a flexible framework for monitoring the post-project effects of mature KERs, and strengthening the connection between each KER and the Partner Individual Exploitation Plans.

1.4 References

- Project GA with No. 101190051
- THEIA Partners CA
- “Your Guide to Intellectual Property Management in Horizon Europe”, EU IP Helpdesk
- Grant Agreement - GAP-101190051 for Amendment_Part A 18022026

2. THEIA Exploitation Strategy

THEIA's exploitation strategy is designed to translate its technical achievements into sustainable and usable outcomes for institutional stakeholders, industry actors and research communities. The strategy reflects the hybrid nature of the project: a research-driven initiative embedded within operational security and crisis-management ecosystems.

Version 1 established the strategic orientation and identified the KERs. Version 2 maintains this direction while providing clearer alignment between technological maturity, user needs and feasible adoption pathways. The strategy is structured around exploitation routes, phased development and realistic monetisation approaches.

2.1 Exploitation Routes

THEIA results will be advanced through three complementary routes that together maximise visibility, usability and sustainability.

2.1.1 Scientific Exploitation

Scientific exploitation ensures that the knowledge generated within THEIA contributes to continued research and innovation in GeoAI, multi-source data fusion and ethical displacement monitoring.

Activities include publications, participation in scientific and technical conferences, engagement in clustering initiatives and knowledge exchange with research institutions. Selected non-sensitive methodologies and evaluation approaches may be disseminated to strengthen benchmarking and foster further development.

This route reinforces credibility and long-term innovation potential while respecting confidentiality and security constraints for operational components.

2.1.2 Commercial Exploitation

THEIA aims to position its solutions for direct commercialisation via licensing models, service subscriptions, and consultancy packages tailored to the operational needs of end-users such as:

- **Public Sector Entities:** Border management authorities, emergency response units, and national crisis coordination centre.
- **Private Sector:** EO analytics firms, security infrastructure companies.

- **Multilateral Agencies:** EU institutions, UN bodies, and humanitarian organizations with strategic surveillance and monitoring needs.

Key commercial actions include (but are not limited to):

- Running focused marketing campaigns and live demonstrations to showcase THEIA's capabilities.
- Building strategic partnerships with technology providers and distributors to facilitate market entry.
- Designing and delivering specialised training programs to help institutional clients integrate and make full use of THEIA's solutions.
- Crafting clear value propositions and identifying unique selling points tailored to specific market sectors and regional needs.

2.1.3 Linkage to Grant Agreement Deliverables

The exploitation strategy outlined in this deliverable is closely aligned with the THEIA GA and is directly supported by key deliverables and milestones under WP13 as well as strategic contributions from other technical and coordination work packages. These references help contextualise the exploitation roadmap in terms of progress tracking and ensure coherence with the overall project implementation plan.

Relevant Deliverables:

- D13.1 – Website and Project Logo (M2): establishes the project's online presence and visual identity, supporting brand recognition, stakeholder engagement, and early visibility.
- D13.2 –Dissemination and Communication Plan (Version 1/1st-period) (M6): Provides input and feedback from early communication activities to the target audience.
- D13.3 – Exploitation Plan (Version 1) (M6): This deliverable, providing the first structured roadmap for KER valorisation, IP protection, stakeholder targeting, and market alignment.
- D13.4 – Dissemination and Communication Report (Version 1/1st-period results) (M15): documents the dissemination and communication actions implemented during the first period, providing evidence of outreach performance, stakeholder traction and channel effectiveness that informs exploitation prioritisation and go-to-market refinement.
- D13.5 – Exploitation plan (Version 2) (M15): This deliverable builds upon D13.3 by consolidating first-period exploitation progress (M6–M15), updating the exploitation

roadmap, and integrating lessons learned from stakeholder engagement and dissemination outcomes to prepare the ground for the next iteration.

- D14.2 “Exploitation plan (Version 3/2nd-period results)” (M30): D14.2 will finalise the exploitation strategy by incorporating second-period results and validating the exploitation pathways defined in D13.3 and D13.5, ensuring full alignment with final technical maturity and market readiness.

2.2 Exploitation Phases

THEIA’s exploitation roadmap follows three phases aligned with project maturity.

Phase A - Mapping and Initial Positioning

This phase focused on identifying the KERs, mapping potential users and outlining preliminary value propositions. Early stakeholder interactions and internal alignment of partner roles were conducted.

Phase B - Maturity and Preparation

At the current stage, emphasis is placed on consolidating technical maturity, validating use cases and clarifying exploitation roles per partner. The exploitation framework becomes more structured, linking technical readiness with feasible adoption scenarios.

Phase C - Uptake and Scaling

The final phase will concentrate on operational deployment pathways, strengthening procurement engagement and consolidating long-term sustainability mechanisms. This phased approach ensures that exploitation decisions are informed by demonstrated capability rather than assumptions.

2.3 Monetisation Strategies

- THEIA's exploitation framework incorporates multiple monetisation strategies aligned with its value propositions and user segments.
- Revenue models include: subscription-based access to platform services, pay-per-use models for data products or analytics, licensing of software modules, and consultancy services for custom deployments.
- Differentiated pricing strategies will be explored, offering tiered plans for public agencies, commercial users, and research institutions.

- For instance, humanitarian organisations may benefit from subsidised or open-access tiers, while private sector clients may be offered premium analytics through licensing or API access.
- These models will be refined based on market validation, partner input, and piloting during the second phase of the project.

3. Strategic Context and Market Positioning

THEIA operates in a rapidly evolving geopolitical, environmental and technological landscape. Understanding this context is essential for realistic exploitation planning.

3.1 Increasing Environmental and Hybrid Security Threats

Population displacement is increasingly driven by a combination of armed conflict, climate change, extreme weather events and socio-economic instability. These factors often interact, creating complex crisis scenarios where rapid situational awareness is critical.

Authorities require tools capable of detecting emerging patterns, assessing risk levels and supporting timely intervention. Traditional monitoring systems often struggle with fragmented data, delayed updates and limited predictive capabilities.

THEIA responds to this need by integrating heterogeneous data sources into a unified analytical framework, enabling earlier detection and more informed response planning.

3.2 Information Sharing and Cross-Sector Cooperation

Effective displacement monitoring depends on cooperation across agencies and sectors. However, institutional fragmentation and technical incompatibility frequently limit information sharing.

THEIA's architecture addresses this gap by enabling multi-source data ingestion and harmonisation while respecting security and privacy constraints. Secure data exchange mechanisms and interoperable design principles facilitate collaboration between agencies and operational units.

This positioning strengthens THEIA's relevance within EU-level coordination frameworks and institutional ecosystems.

3.3 Technological Capability Gaps

Despite advances in AI and EO analytics, operational environments often lack integrated tools that combine predictive analytics, real-time monitoring and user-friendly decision support.

Many existing solutions focus on isolated data streams rather than fused multi-source intelligence. Furthermore, usability barriers and limited integration capacity restrict practical deployment.

THEIA addresses these gaps through its integrated platform, GeoAI analytics toolkit and secure data exchange framework, designed to translate advanced analytics into operationally meaningful outputs.

3.4 Surveillance, Detection and Early Warning Needs

Early detection of displacement patterns and risk build-up is essential for crisis prevention and response. However, many monitoring systems provide retrospective analysis rather than proactive insight.

THEIA enhances early warning capability by combining satellite imagery, RF inputs, UAV data, ground-based sensor data and OSINT signals within a unified analytical environment. Automated detection models and structured dashboards support near-real-time situational awareness.

This capability strengthens institutional preparedness and contributes to more proactive crisis management.

3.5 Legal, Ethical and Political Considerations

The deployment of AI-enabled monitoring tools in sensitive contexts requires careful consideration of legal and ethical frameworks. Data protection regulations, responsible AI principles and dual-use concerns shape the operational environment.

THEIA integrates ethical and legal safeguards into its design, ensuring alignment with GDPR, EUI-DPR and broader human rights standards. Governance-oriented outputs and secure data exchange mechanisms reinforce trust and institutional acceptability.

By embedding compliance and transparency into its framework, THEIA enhances its long-term adoption prospects within highly regulated security and crisis-management ecosystems.

3.6 Market Consolidation and Validation Roadmap

At this stage of the project, the potential market for THEIA results is still under consolidation. Preliminary target groups have already been identified, including Copernicus Security Services (CSS) Entrusted Entities, EU agencies, national ministries, border management authorities, crisis management actors, civil protection authorities, EO service providers, security-oriented system integrators and selected international organisations. However, the final prioritisation of market segments will be refined as the KERs mature, are demonstrated in relevant environments and receive feedback from operational end users.

Market consolidation will therefore follow a progressive validation approach. During the next project phase, the consortium will collect additional evidence from technical demonstrations, stakeholder engagement activities, Horizon Results Booster support, validation feedback and partner-led exploitation activities. This will allow THEIA to move from preliminary market assumptions toward a more evidence-based understanding of which user groups, application domains and exploitation routes offer the strongest adoption potential.

The consolidation process will focus on four main dimensions: operational relevance, stakeholder willingness to engage, technical integration feasibility and long-term sustainability potential. These dimensions will help assess whether each KER is best positioned for institutional uptake, commercialisation, scientific reuse, policy exploitation or a combination of these routes.

The outcomes of this process will be further reflected in the final exploitation plan, where the market positioning of each KER will be updated based on validation results, stakeholder feedback, partner commitments and the maturity level achieved by the end of the project.

4. THEIA Key Exploitable Results (KERs)

The THEIA project has developed a structured portfolio of KERs representing its technological, operational and societal contributions. These KERs collectively form an integrated monitoring and decision-support ecosystem combining multi-source data fusion, AI-driven analytics, secure exchange mechanisms and governance frameworks.

Since the first version of the exploitation plan, technical maturity and architectural refinement have strengthened the readiness of several components, clarifying integration pathways and institutional uptake potential. Each KER below includes its exploitation positioning, TRL, IPR framework and strategic outlook.

4.1 The listed KER

The table below summarises THEIA's Key Exploitable Results (KERs) and their core purpose.

Table 2 Ker List of Theia Project

KER	Content
KER 1 – THEIA Integrated Platform	End-to-end integrated platform
KER 2 – Multi-Source Data Fusion	Cross-source data fusion
KER 3 – GeoAI Analytics Toolkit	GeoAI analytics toolkit
KER 4 – Surveillance System (AMSS)	Near-real-time surveillance alerts
KER 5 – Secure Data Exchange Framework	Secure information exchange layer
KER 6 – Crowdsourcing & OSINT Module	Crowdsourcing and OSINT analytics
KER 7 – Policy and Ethical Guidelines	Ethics and policy framework

4.1.1 KER 1 -THEIA Integrated Platform

The THEIA Integrated Platform constitutes the central operational environment of the project. It integrates multi-source data streams, satellite imagery, UAV inputs, ground-based sensor inputs, RF signals and OSINT feeds and combines them with GeoAI analytics to provide near-real-time situational awareness and decision-support in crisis response and displacement monitoring contexts.

During the reporting period, core system components have been deployed within the CREOTECH virtual runtime environment. A draft user interface and backend integration layer will be implemented to demonstrate algorithmic outputs. Structured data exchange protocols, JSON schemas and glossary standardisation have been defined to ensure interoperability across modules. Integration planning and testing specifications have been refined, strengthening technical coherence and deployment readiness.

Lead: GSH

Contributors: OHB DS, LUXSPACE SARL, SPACE-SI, AIT, ED, WTOC, CREO, C3I, ICCS

Expected TRL: 6

Exploitation Type: Commercial & Societal – positioned as managed service or institutional deployment

Impact

Short-Term

- Improved situational awareness
- Visualisation of fused analytics outputs

Long-Term

- Institutional adoption within EU monitoring ecosystems
- Establishment of a scalable EU-based GeoAI monitoring platform
- Reduced crisis response times and improved coordination

SWOT

- Strengths: Integrated multi-source system; modular system; institutional alignment; secure system; scalable system; maintainable system; resilient system
- Weaknesses: Multimodal data necessary for maximum operational utility
- Opportunities: Copernicus Security Services integration; expansion into climate-security monitoring
- Threats: Competing geospatial-intelligence platforms; procurement delays

Customers

Entrusted Entities of CSS EU agencies (SatCen, Frontex, EMSA), National ministries of defence/interior, National Security Services, Law Enforcement Authorities, Border Police, Coast Guard, Maritime Authorities, Civil protection authorities

Secondary:

International organisations (UN bodies), Civil protection authorities

Competitors

Palantir Gotham (integrated intelligence platform), Air Force Distributed Common Ground System, Distributed Common Ground System, Global Command and Control System

4.1.2 KER 2 - Multi-Source Data Fusion Capabilities

This KER delivers a containerised Data Cube and GeoAI framework enabling automated ingestion, harmonisation and fusion of heterogeneous EO and geospatial data streams. It supports Sentinel,

, VHR imagery, GIS layers and RF feeds, transforming them into harmonised data cubes ready for advanced analytics.

The backend ingestion framework has been successfully implemented and validated across multiple satellite datasets. Automated metadata harmonisation and spatial alignment are operational. A secure API layer has been developed to enable integration with downstream analytics platforms, and cloud scalability testing has confirmed performance under increased data loads. Further optimisation of latency and additional feed integration is ongoing.

Lead: ICCS

Contributors: GSH, SPACE-SI, OHB DS, LUXSPACE, AIT

Expected TRL: 6

Exploitation Type: Commercial & Integration-Oriented

Impact

Short-Term

- Automated harmonisation of heterogeneous EO data
- Reduced analyst workload
- Improved detection accuracy through multi-sensor fusion

Long-Term

- Backbone for scalable EU monitoring infrastructure
- Strengthened European competitiveness in geospatial AI
- Reduced dependence on non-EU aggregation platforms

SWOT

- Strengths: Integrated cube architecture; cyber-secure containerisation; OGC-compliant framework
- Weaknesses: Infrastructure-intensive; advanced ML expertise required
- Opportunities: Licensing to EO service providers; EU digital infrastructure initiatives
- Threats: Big-tech AI ecosystems; regulatory constraints on dual-use analytics

Customers

EO analytics providers, defence integrators, crisis management authorities.

Competitors

Airbus geospatial fusion systems, Planet aggregation services.

4.1.3 KER 3 - GeoAI Analytics Toolkit

The GeoAI Analytics Toolkit comprises AI/ML models for automated detection, cloud removal, super-resolution enhancement, object identification across multiple modalities (satellites, UAVs, ground-based camera sensors) and displacement risk analytics. It extends the analytical depth of THEIA by enabling predictive modelling and enhanced EO interpretation.

During the reporting period, conceptual benchmarking and feasibility analysis of deep learning and generative architectures have been initiated. Architectural exploration focuses on object detection and segmentation-based models, language-vision models and diffusion-style generative approaches for cloud-gap filling and enhancement, while ensuring responsible AI integration and transparency considerations.

Leads: ICCS

Contributors: GSH, SPACE-SI, OHB DS, LUXSPACE, AIT

Expected TRL: 5–6

Exploitation Type: Research & Commercial

Impact

Short-Term

- Enhanced image clarity and object detection performance
- Improved predictive modelling capability
- Increased usability of optical EO data

Long-Term

- European leadership in GeoAI crisis monitoring
- Transferability to climate, infrastructure and resilience domains
- Scalable AI-enhancement services integrated into EU ecosystem

SWOT

- Strengths: Advanced AI methodologies; strong research expertise
- Weaknesses: Explainability challenges; computational cost
- Opportunities: AI licensing; CSS integration
- Threats: Rapid AI evolution; hyperscaler competition

Customers

EO analytics firms, government monitoring units, environmental agencies.

Competitors

Cloud-native AI geospatial providers.

4.1.4 KER 4 - Surveillance System (AMSS)

The AMSS is a near-real-time, surveillance module integrating satellite imagery, UAV data, RF signals, and additional sources to monitor migration routes and issue early displacement warnings. It operationalises THEIA analytics outputs into an actionable early-warning mechanism which can be integrated into operational workflows, especially within CSS.

The AMSS is essentially the operational, surveillance capability of THEIA: from the perspective of the Copernicus Services (CS) system, it functions as a module providing services which enhance CS-system operations. In particular, progress described under KER 1 (system integration based on the components) is also applicable here.

Leads: GSH (technical development), SATCEN (joint lead for validation only)

Contributors: OHB DS, LUXSPACE, SPACE-SI, AIT, ED, WTOC, CREO, C3I, ICCS

Expected TRL: 6

Exploitation Type: Societal & Commercial

Impact

Short-Term

- Early detection of displacement movements

Long-Term

- Institutionalised EU-level, early-warning capability
- Strengthened, crisis preparedness across security ecosystems

SWOT

- Strengths: Multi-sensor integration; institutional backing
- Weaknesses: Ethical scrutiny; sensitive operational context
- Opportunities: Border monitoring services; disaster early-warning markets
- Threats: Regulatory constraints; public-perception risks

Customers

Entrusted Entities of CSS (SatCen, Frontex, EMSA), National ministries of defence/interior, National Security Services, Law Enforcement Authorities, Border Police, Coast Guard, Maritime Authorities

Secondary:

International organisations (UN bodies), Civil protection authorities, Security-focused system integrators

Competitor List

Palantir Gotham, Air Force Distributed Common Ground System, Distributed Common Ground System, Global Command and Control System.

4.1.5 KER 5 - Secure Data Exchange Framework

The Secure Data Exchange Framework ensures cyber-secure, role-based and auditable data access.

Role-Based Access Control (RBAC) is operational and audit logging mechanisms are active. Production hardening and final enablement are ongoing, positioning the framework as a compliance-ready component for institutional use.

Lead: C3I

Contributors: GSH, CREO

Expected TRL: 7

Exploitation Type: Commercial (embedded security module)

Impact

Short-Term

- Controlled and auditable EO data access
- Reduced operational and compliance risk

Long-Term

- Trusted secure baseline for EU-based EO services
- Strengthened institutional confidence in data governance

Indicative Exploitation Indicators

- Number of access-control scenarios tested.
- Number of cybersecurity and audit logging checks completed.
- Number of compliance requirements addressed.
- Number of platform components connected through the secure exchange framework.
- Number of potential reuse cases identified in institutional EO environments.

SWOT

- Strengths: High TRL; compliance-ready
- Weaknesses: Limited visible value to end-users
- Opportunities: Standardised secure access approach
- Threats: Evolving cyber threats

Customers

Institutional EO operators.

Competitors

Generic cloud security frameworks.

4.1.6 KER 6 - Crowdsourcing & OSINT Analytics Module

This module harvests and analyses crowd-sourced content and OSINT signals to extract crisis-relevant alerts and situational indicators. It complements structured EO and risk analytics with open-source intelligence layers.

Core ingestion pipelines and dashboards have been implemented and aligned with platform architecture. Integration with high-velocity analytics workflows enables cross-signal fusion.

Lead: ED Luxembourg

Contributors: WTOC, GSH

Expected TRL: 6

Exploitation Type: Commercial & Academic

Impact

Short-Term

- Rapid detection of emerging crisis signals
- Complementary intelligence to structured datasets

Long-Term

- Integrated open-source intelligence layer in EU monitoring systems
- Strengthened early-warning and cross-validation capacity

SWOT

- Strengths: Complementary intelligence layer; platform integration
- Weaknesses: Data variability and noise
- Opportunities: Standalone OSINT services
- Threats: Regulatory tightening; specialised OSINT competitors

Customers

EU agencies, intelligence services, humanitarian organisations.

Competitors

Dataminr, Meltwater.

4.1.7 KER 7 - Policy and Ethical Guidelines

This KER delivers best-practice frameworks ensuring legally compliant and ethically responsible displacement monitoring aligned with EU data protection and human rights standards.

Drafting activities have been aligned with EU AI governance developments and data protection principles to ensure policy relevance and institutional applicability.

Lead: MPL Brussels

Exploitation Type: Societal & Academic

Impact

Short-Term

- Increased compliance awareness
- Structured governance reference for deployments

Long-Term

- Ethical standardisation in displacement monitoring
- Strengthened institutional trust

SWOT

- Strengths: Strong EU policy alignment
- Weaknesses: Non-commercial nature
- Opportunities: Adoption by EU institutions
- Threats: Regulatory evolution

Customers

EU institutions, policy makers, academic bodies.

Competitors

EU AI ethics frameworks; NGO data governance guidelines.

4.2 Overall Short-Term and Long-Term Impact of THEIA

Individually, each KER contributes technical or governance value. Collectively, THEIA delivers an integrated ecosystem combining data fusion, AI analytics, surveillance, secure exchange and ethical compliance.

Short-Term (Project-Level Outcomes)

THEIA delivers validated prototypes, harmonised data workflows, AI-enhanced analytics and early-warning functionalities. Institutional stakeholders benefit from improved interoperability, reduced data fragmentation and structured decision-support dashboards.

Long-Term (Strategic Impact)

THEIA contributes to strengthening European strategic autonomy in GeoAI-enabled monitoring. By integrating space and non-space data, secure exchange mechanisms and governance safeguards, THEIA establishes a scalable, ethically grounded and institution-ready monitoring solution. Over time, this integrated approach enhances EU resilience in climate-security, migration monitoring and crisis preparedness domains.

4.2.1 Impact Monitoring Framework

To strengthen the measurability of THEIA's exploitation pathway, the consortium introduces an impact monitoring framework focused on the expected effects of the KERs after they have reached sufficient maturity for operational, institutional, scientific or commercial uptake. The framework distinguishes between short-term outcomes and long-term impacts.

Short-term outcomes refer to the immediate effects expected after the project end, once the KERs are available for further use, testing, integration or deployment by relevant stakeholders. These outcomes relate to how THEIA results may improve stakeholder capacities, operational workflows, data interpretation, decision-support processes and exploitation readiness in the first phase after project completion.

Long-term impacts refer to the broader and more structural effects expected after sustained use, adoption or further development of THEIA results. These impacts concern institutional uptake, improved crisis preparedness, contribution to European strategic autonomy, reuse in future services or projects, market positioning, and societal value in the field of displacement and crisis monitoring.

The indicators below are proposed as indicative post-project monitoring dimensions that can be refined in the final exploitation plan and by the exploiting partners, according to the maturity, ownership, access conditions and uptake route of each KER.

Table 3 Impact Monitoring Framework

Impact Area	Short-Term Outcome After Project End	Long-Term Impact After Wider Uptake	Indicative Monitoring Evidence
Stakeholder operational capacity	Stakeholders have access to more integrated, structured and actionable information from THEIA KERs	Improved capacity of authorities and operational actors to monitor displacement-related crises and respond in a more coordinated way	Stakeholder feedback, post-project pilot use, adoption discussions, operational assessments
Situational awareness	Users can interpret multi-source data more efficiently through fused outputs, dashboards or analytical modules	More systematic use of GeoAI-enabled situational awareness in crisis monitoring and early-warning environments	User feedback, operational case examples, institutional references
Decision-support processes	THEIA outputs support more informed analysis of displacement risks, movements or crisis developments	Integration of THEIA-based methods or tools into regular decision-support workflows of institutions or service providers	Follow-up deployments, workflow integration evidence, service documentation
Interoperability and technical uptake	Selected KERs can be reused, integrated or further developed by partners, system integrators or institutional users	THEIA components contribute to scalable European monitoring infrastructures or related EO/security service ecosystems	Integration cases, partner exploitation reports, technical reuse evidence
Market and exploitation potential	Partners identify clearer exploitation routes for mature KERs, such as service provision, licensing, integration or consultancy	Sustainable exploitation of KERs through institutional uptake, commercial services, follow-up projects or strategic partnerships	Partner exploitation updates, HRB feedback, commercial/institutional discussions
Scientific and methodological value	Research partners reuse methods, models, datasets or technical knowledge generated by THEIA	THEIA contributes to further R&I activities, scientific publications, technical standards or new project proposals	Publications, follow-up projects, clustering activities, methodological reuse
Policy, ethics and governance value	Ethical and policy guidelines support responsible use of THEIA outputs after project completion	Contribution to more trustworthy, legally compliant and ethically grounded monitoring practices in sensitive crisis contexts	References in policy-oriented outputs, partner use, institutional feedback
Societal value	THEIA results support improved understanding of displacement dynamics and crisis-related vulnerabilities	Contribution to better preparedness, more informed response planning and improved protection of vulnerable populations affected by conflict, climate or crisis pressures	Long-term user feedback, institutional uptake, policy references, societal impact narratives

4.3 Risk Management Framework

The exploitation and long-term sustainability of THEIA depend not only on technological maturity but also on the ability to anticipate and mitigate strategic, regulatory and operational risks. While SWOT analysis per KER highlights component-level considerations, this section consolidates project-level risks which may influence exploitation pathways and institutional uptake.

The table below summarises key risks, their estimated likelihood and impact, and the corresponding mitigation measures.

Table 4 Risk management table

Risk Category	Description	Likelihood	Impact	Mitigation Measures
Institutional Procurement Delays	Slow or complex public procurement processes may delay adoption of THEIA solutions.	Medium	High	Early engagement with authorities; modular packaging; alignment with framework agreements.
Regulatory Evolution (AI / Data)	Changes in EU AI regulation or data governance may affect deployment conditions.	Medium	Medium	Continuous monitoring of AI Act developments; integration of ethical/legal guidance (KER 7).
Integration Complexity	Technical complexity when integrating THEIA modules into legacy institutional systems.	High	Medium	Modular architecture; API-based integration; interoperability testing.
Cybersecurity Threats	Evolving cyber threats may target secure data exchange and system infrastructure.	Medium	High	RBAC implementation; audit logging; continuous hardening of secure exchange framework (KER 5).
Competition from Large Tech Providers	Hyperscalers or large defence systems may offer competing AI-enabled monitoring services.	Medium	Medium	Focus on EU sovereignty positioning; institutional alignment; niche specialisation in displacement monitoring.
Data Access Restrictions	Changes in access to OSINT platforms or RF/VHR data sources.	Medium	Medium	Diversified data sourcing; flexible ingestion pipelines; compliance-based design.

5. IPR Strategy

5.1 IPR Management During and After the Project

Effective management of IPR is critical to enable the above exploitation activities. THEIA's IPR management approach is based on the definitions and principles laid out in the GA and the CA, ensuring that all partners have clarity on ownership and usage rights of both background knowledge and results. The following key aspects govern IPR management in THEIA:

- **Background IP:** Each partner has identified any **background IP** (pre-existing know-how, data, software, patents, etc.) that they are contributing to the project and that is needed for carrying out project tasks. Such background assets (for example, CREO's data federation technology or ICCS's existing AI models) remain the property of the original partner. CA provisions ensure that partners give each other **necessary access rights to background** on a **royalty-free basis for research use within the project**. This enables the team to integrate existing technologies without IP roadblocks. Any restrictions or special conditions on background use have been documented upfront to avoid conflicts. Throughout the project, if new background needs arise, they will be handled through the agreed procedures (amending the background list or negotiating access as needed).
- **Results Ownership (Foreground): Foreground IP** (project results) is owned by the partner(s) generating the result, in accordance with EU rules. Where a result is created by a single partner (e.g. a specific software module or algorithm), that partner is the sole owner. For **joint results** involving multiple contributors – for instance, the integrated platform or the AMSS which integrate components from several partners – **joint ownership** arrangements are in place. Joint owners will either establish a specific joint ownership agreement (defining shares, licensing rights, revenue split, etc.) or, by default, will **each have equal undivided shares** of the result and the right to use it (with fairness obligations to compensate co-owners if exploiting commercially). The CA outlines default joint ownership provisions aligned with Horizon Europe Model Grant rules, ensuring no result is left in legal uncertainty. All partners have agreed to **promptly disclose any significant result** they produce to the consortium so that ownership can be correctly attributed and protection steps taken in time.
- **Access Rights during the Project:** To achieve the project objectives, partners grant each other **access rights** to both background and foreground as needed for research and development tasks. These rights are provided on a royalty-free basis for project implementation. For example, Space-SI grants access to its NEMO-HD imagery; ICCS and AIT share their intermediate AI models with other partners for integration; C3I provides access to its security tools for platform testing. This collaborative sharing is fundamental to building the integrated THEIA system. All access is managed under confidentiality and

with respect for the owners' IP (only used for the agreed tasks). If a partner needs to extend use of another's asset beyond the project scope, this would be separately negotiated.

- **Access Rights for Exploitation:** After the project, partners may also need access to each other's results to exploit their own outcomes (for research or commercial use). The consortium follows standard Horizon Europe practices: **royalty-free access for internal research and education**, and **fair and reasonable conditions for commercial exploitation** of a needed result owned by another partner, unless otherwise agreed. For instance, if GSH (platform owner) needs continued use of ICCS's analytics algorithms to offer the service to clients, or if ICCS wishes to use the integrated platform to run further experiments – such cases will be accommodated through bilateral agreements consistent with the CA terms. This ensures that **no partner is hindered from exploiting its own results** due to lack of IP access from another, while also protecting the legitimate interests of the IP owners.
- **Protection of Results (IPR Protection Routes):** Each partner must examine the possibility of protecting their results that show potential for commercial or industrial exploitation. The consortium is committed to adequately **protecting all valuable results** for an appropriate duration and scope, provided that protection is **feasible, reasonable, and justified** given the nature of the result and the exploitation strategy. A range of **IPR protection routes** are being employed, tailored to each KER's characteristics:
    - *Copyright:* Software and documentation developed in THEIA are automatically protected by copyright. For most software results (e.g. the platform code, data fusion tools, AI models), copyright will be the primary form of protection. The owners will decide on the licensing model: some software will remain **proprietary (closed-source)** with all rights reserved by the consortium or owner (appropriate when commercialization as a product/service is intended), whereas other components may be released under **open-source licenses** (e.g. MIT or EU Public License) to encourage wide uptake and standardization. The choice is made case-by-case, balancing market advantages and the benefits of openness. We have indicated initial plans (e.g. an MIT license is considered for parts of the GeoAI toolkit to foster adoption by researchers, while core platform code will likely remain closed-source). All open-source releases will be reviewed to avoid inadvertently disclosing sensitive or high-value IP. In regards to open access to scientific publications as well as research data management, the beneficiaries must comply with the "Specific Rules", which are pertained in the Annex 5 of the Grant Agreement.

- *Patents:* If any project invention meets the criteria (novelty, inventiveness, industrial applicability) and has clear market potential, the relevant partner(s) will pursue patent protection. Patents would grant the right to exclude others from exploiting the invention and thus provide a competitive edge. As of this first version of the plan, no specific result is definitively slated for patenting (the geospatial analytics methods are largely based on research and existing algorithms). However, the consortium is monitoring developments – for example, if the **vessel detection algorithm** or **data fusion technique** developed is truly unique and valuable, a patent application may be filed before public disclosure. Partners have been briefed that patenting is a **means to protect commercial exploitation**, not an end in itself and must be weighed against other options like trade secrets. Any patent filings will be coordinated so as not to violate any partner's background IP and to ensure inventorship is correctly attributed.
- *Trade Secrets:* In cases where an invention or know-how is not easily patentable or where public disclosure is not desirable, partners may opt for **trade secret** protection. This involves keeping the information confidential (through internal measures and agreements) to maintain a competitive advantage. For instance, certain data fusion algorithms or system configurations might be kept as confidential know-how within a company (especially if they are complex to reverse-engineer). Trade secrets can effectively protect IP without time limit, provided secrecy is maintained. The consortium has in place policies (e.g. internal confidentiality agreements, secure repositories) to guard any such proprietary know-how. Choosing trade secret vs. patent is done carefully: while trade secrets avoid disclosure and registration costs, they offer no protection if the secret is independently discovered or leaked. Thus, the decision hinges on whether the knowledge can be kept secret and how critical it is to competitive advantage.
- *Trademarks and Designs:* As THEIA moves towards deployment, it should be considered protecting the **branding** and interface designs of key outputs. For example, the name of the platform or specific modules could be trademarked to secure brand identity in the market. Any unique visual interfaces or logos may be considered for design rights or trademarks as well. While these IP forms do not protect functionality, they are important for commercial exploitation in distinguishing the project's solutions in the marketplace.
- *Licensing Agreements:* Beyond protection, a crucial aspect is how the IP will be **licensed or made available** to users. The exploitation plan includes developing suitable licensing models for each result in line with its IPR strategy. Some results will be **licensed to end-users or clients** (e.g. platform as a service under

subscription, or software under a fee-based license), while others will be **made available freely** (e.g. open data or open-source tools) to stimulate adoption. For joint results, any licensing to third parties will be done with consent of all co-owners, and any revenue sharing will follow the terms agreed in the joint ownership or consortium agreements. The partners will ensure that any exploitation or licensing of results **acknowledges EU funding** and respects obligations to the EU (such as reporting exploitation outcomes in project reports and beyond).

- Pursuant to Article 16.3 of the GA, the granting authority has the right to use non-sensitive information relating to the action and materials/documents received from beneficiaries (including summaries, deliverables, and audio-visual material) for EU policy, communication, dissemination and publicity purposes, during and after the action. This right is granted as a royalty-free, non-exclusive, and irrevocable licence and includes rights to reproduce, distribute, edit, translate, store, archive, and authorise third-party use for EU information activities. The consortium will ensure that all public deliverables and outputs comply with these obligations while safeguarding legitimate interests regarding confidentiality, security, and IPR protection.
- **Post-Project Exploitation and Sustainability:** IPR management extends beyond the project's end date. Each partner is committed to **continuing exploitation of results after project completion**, using all the above mechanisms to achieve sustainability. This includes seeking follow-up funding or investment to bring results from the achieved TRLs to full market readiness (e.g. moving from TRL6 prototype to TRL8+ operational system), engaging in standardization or certification processes if relevant, and maintaining the collaborative relationships formed during THEIA for joint exploitation opportunities. The consortium will monitor and report exploitation progress for several years post-project, as per EC guidelines, ensuring that the knowledge generated does translate into actual impact. If any partner decides not to pursue further use of a particular result, the CA provides provisions (in line with Horizon Europe rules) for possibly transferring the ownership or offering licenses to other interested partners or third parties, so that valuable IP does not remain unutilized. In summary, the IPR management strategy put in place, from careful identification of background, through protection of new results, to clear frameworks for access and ownership, underpins the successful exploitation of THEIA outcomes and safeguards the interests of all participants. It creates a **structured yet flexible framework** where innovation can be protected and shared appropriately, conflicts over IP are avoided or resolved, and each result can find the most suitable path to real-world application.

- Inclusion of Granting Authority's Rights: In accordance with **Article 16.3 of the GA**, the granting authority (EC or its delegated Agency) retains the **right to use the materials, documents, and information** produced within the scope of the action for **its own policy, information, communication, dissemination, and publicity purposes**, provided that this does not affect the consortium's legitimate interests. This includes rights to reproduce, use, and publicly disseminate project results and related outputs (such as public deliverables, publications, and promotional material) that are submitted through the Funding & Tenders Portal or communicated by the beneficiaries. The consortium recognises this right and commits to providing such outputs in formats and under conditions that facilitate appropriate reuse by the granting authority, subject to confidentiality, security, and personal data protection considerations. This right exists independently of the exploitation and protection measures defined for each KER.

Overall, this combined exploitation and IPR plan ensures that THEIA's innovations are not only developed within the project but are primed for uptake thereafter. It balances openness and protection – leveraging open science where it accelerates impact and securing intellectual property where it underpins competitive advantage, in line with European best practices for research exploitation. The plan will be revisited and refined in the next iterations (Deliverables D13.5 and D14.2) as the project matures, to update the status of each KER (e.g. actual TRLs reached, new IP filings, license deals, etc.) and to adjust strategies in response to any new IPR issues or exploitation opportunities that arise by M15 and M30. This living strategy guarantees that by the end of THEIA, all partners are equipped and aligned to carry forward the results – whether through commercial ventures, continued research, or public-sector deployment – thus maximizing the project's overall impact and return on investment for European society.

In accordance with GA Annex 5 'Results free from restrictions' and 'Background free from restrictions', the consortium confirms that: (i) all background identified and used in THEIA is free from control or restrictions by non-eligible countries that would affect the exploitation of results; (ii) the results of the action are not subject to control or other restrictions by countries outside the eligible/target countries specified in the call; and (iii) cooperation with any entities from non-eligible countries (where permitted) does not compromise the strategic autonomy or security interests of the EU and its Member States. This ensures THEIA's compliance with HORIZON-CL4-2024-SPACE-01 security and autonomy requirements.

5.2 Assessment of Patentability and Protection Planning

In line with Annex 5 of the GA, the consortium is committed to examining the possibility of protecting results through patents or other appropriate means where commercial or industrial exploitation is feasible. While no definitive patent applications have been filed at this stage (M6),

several technical developments within THEIA, including the GeoAI analytics toolkit, multi-source data fusion architecture, and components of the AMSS, are considered potentially patentable, subject to novelty and inventiveness assessments. Each beneficiary generating such results will be responsible for conducting an internal patentability evaluation, including freedom-to-operate (FTO) and prior art searches. The consortium will coordinate to ensure that any results with potential for patent protection are adequately safeguarded before public disclosure, in line with Horizon Europe obligations. A preliminary patentability screening was conducted during M12-M15 in coordination with Task T13.3. As of M15, no definitive patent applications have been filed. Each lead beneficiary will continue FTO and prior art assessments through M30, and any patent filings will be coordinated to ensure timely protection before public disclosure, as documented in D14.2. This proactive approach ensures that valuable innovations developed in THEIA are not only protected but also positioned for sustainable exploitation beyond the project.

5.3 IPR and Open Science Compliance

THEIA balances IPR protection with Open Science obligations as follows:

- Scientific Publications: All peer-reviewed publications will be deposited in open-access repositories (e.g., Zenodo) under CC BY licenses, ensuring compliance with GA Annex 5.
- Research Data: Non-sensitive datasets (e.g., anonymised analytics outputs, benchmark datasets) will be deposited under FAIR principles and made available under CC BY or CC 0 licenses. Sensitive or commercially valuable datasets will be subject to justified restrictions documented in the DMP (D1.5, D2.2).

Software: The consortium distinguishes between:

- Components where open-source licensing (e.g., MIT, EUPL) supports wider adoption and standardization (e.g., selected GeoAI modules, interoperability tools);
- Core commercial components (e.g., THEIA platform, AMSS) retained as proprietary (copyright-protected, closed-source) to support commercial exploitation and competitive advantage.

All decisions balancing openness and protection will be documented per KER and reviewed by the exploitation team to ensure alignment with both GA obligations and exploitation strategy.

6. Distribution Channels for THEIA Project (Updated - Version 2)

For THEIA to achieve sustainable uptake and long-term operational relevance, a structured and stakeholder-oriented distribution strategy is essential. Version 1 described the main channels at a conceptual level. In Version 2, the distribution approach is refined to reflect increased project maturity, clearer stakeholder targeting, and the practical realities of adoption in security and crisis-management contexts. In particular, the updated approach emphasises institutional trust-building, integration readiness, and procurement-compatible pathways.

THEIA adopts a multi-channel distribution model tailored to public authorities, institutional bodies, industry actors and research organisations. The objective is not rapid standalone product rollout, but progressive operational embedding and scalable deployment through a combination of direct engagement and partnerships.

Direct Engagement with Government and Crisis Management Authorities

Direct engagement with government agencies and crisis management authorities remains the primary distribution pathway for THEIA. Target stakeholders include EEs of CSS, EU agencies, national ministries, border management authorities, civil protection bodies and humanitarian coordination structures.

The THEIA system as a whole, and its modules, individually, provide operational monitoring, cross-border movement assessment and decision support. In Version 2, this channel is strengthened through a clearer focus on demonstration-to-adoption progression. Engagement is structured around operational showcases, validation activities, and preparation for procurement-aligned follow-up actions. This approach supports both acceptance and long-term continuity, recognising that institutional adoption requires reliability, compliance assurance and ongoing support.

Partnerships with System Integrators and Security Solution Providers

Collaboration with system integrators and established security solution providers remains a key route for scaling. THEIA's modular architecture enables selected components to be integrated into broader operational systems such as command-and-control infrastructures, maritime surveillance platforms and smart border solutions.

Compared to Version 1, Version 2 places greater emphasis on interoperability. This channel accelerates entry into existing operational environments and leverages trusted-vendor relationships, reducing adoption barriers and supporting wider-adoption potential.

Institutional Collaboration with EU and International Bodies

THEIA is aligned with EU and international organisations engaged in crisis response, border surveillance and humanitarian monitoring. Engagement with bodies such as Frontex, EMSA,

SATCEN, and relevant international coordination actors supports institutional positioning and long-term embedment.

Version 2 reinforces this channel as a pathway for sustained operational uptake rather than only dissemination. Collaboration through relevant EU frameworks and capability-building initiatives supports the gradual transition of validated components into institutional workflows. In parallel, governance-oriented outputs, including ethical and legal guidelines, strengthen THEIA's credibility as a legally compliant innovation supporting responsible deployment.

Presence at Industry Conferences, Exhibitions and User Forums

Participation in relevant defence, EO, AI and crisis-management events continue to support awareness, stakeholder engagement and partnership-building.

These events provide opportunities to present validated capabilities, exchange with operational stakeholders and track evolving requirements. The focus is not only visibility, but also creating structured follow-up discussions that support pilots, partnerships and procurement-oriented engagement.

Collaboration with Research Institutions and Academia

Scientific and research-oriented distribution remains important for continued innovation and credibility. Collaboration with universities and research centres supports benchmarking of methods, follow-on R&D initiatives, and long-term refinement of GeoAI and multi-sensor analytics approaches.

This channel contributes to sustainability through knowledge reuse and supports follow-up funding opportunities, while remaining aligned with IPR and security constraints regarding what can be openly shared.

Digital and Service-Based Delivery Channels

Digital delivery mechanisms complement the channels above and support scalable adoption models. Controlled platform access, web-based interfaces and API-based services can enable subscription-style or usage-based delivery for selected functionalities, depending on sensitivity and deployment context.

Version 2 strengthens the link between digital delivery and operational feasibility. Digital channels are framed as part of a controlled service model, where access levels, compliance requirements and support mechanisms can be defined according to user category and deployment scenario.

Spin-Off and Modular Exploitation Opportunities

As THEIA solutions mature, modular exploitation and targeted spin-off opportunities become more relevant. Beyond the integrated platform pathway, specific technical assets can be packaged for independent uptake, depending on partner strategy and validation outcomes.

Indicative opportunities include:

- modular GeoAI analytics components that can be embedded into third-party geospatial workflows
- OSINT and crowdsourcing modules supporting situational awareness services
- secure data exchange services for compliant multi-actor collaboration
- UAV, ground-based sensors and satellite integration packages supporting tailored deployments

6.1 Implemented Distribution and Stakeholder Engagement Actions

While Version 1 focused primarily on conceptual distribution pathways, the first reporting period included concrete stakeholder engagement and visibility actions contributing to exploitation readiness.

The following activities have been implemented during M6–M15:

- Presentation of THEIA objectives and preliminary architecture at scientific and security-oriented conferences by consortium partners (e.g., EO, AI and security-related events).
- Participation in EU clustering and networking activities relevant to CSS and crisis monitoring ecosystems.
- Bilateral discussions with institutional stakeholders (including potential end-users and integrators) to introduce THEIA capabilities and gather feedback on operational requirements.
- Online dissemination through the project website and LinkedIn presence to increase visibility within the relevant professional communities.

Internal exploitation workshop (February 2026) to align partners on KER positioning, IPR logic and market targeting.

These actions primarily supported:

- Awareness building
- Early stakeholder mapping
- Validation of user needs

- Positioning within EU institutional ecosystems

While no formal procurement engagement or commercial contracts have yet been initiated, the above activities represent the first structured steps toward institutional uptake and market positioning.

Further distribution actions in the next phase will increasingly focus on pilot-oriented engagement, targeted demonstrations and procurement-aligned dialogue.

7. Business Model Canvas

This section presents the Business Model Canvas for THEIA, describing how value is created, delivered, and sustained through practical uptake pathways. The canvas reflects a modular and service-oriented logic that is compatible with institutional environments, integration-driven deployment, and procurement-based adoption. Compared to Version 1, the business model has been further refined to reflect the institutional and procurement-driven characteristics of the target market. The current approach emphasises integration-ready modular components, service-based deployment models and long-term institutional alignment rather than standalone product commercialisation. This refinement strengthens the feasibility and sustainability of post-project exploitation.

Value Proposition

THEIA delivers integrated multi-source situational awareness for displacement and crisis-monitoring contexts by combining GeoAI analytics, multi-sensor data fusion, and secure data exchange within an interoperable environment. Its value lies in enabling earlier detection of emerging situations, improving analytical consistency across fragmented data sources, and supporting operational decision-making through structured outputs and dashboards.

- Improved early detection and monitoring of displacement-related developments
- Enhanced decision support through actionable analytics and visualisation
- Interoperable integration with existing institutional infrastructures and workflows
- Secure and legally compliant handling of sensitive information

Rather than replacing existing systems, THEIA is designed to reinforce them by providing advanced capabilities that can be embedded into established operational processes.

Customer Segments

THEIA targets stakeholder groups with clear operational needs for crisis intelligence, monitoring and cross-domain situational awareness. Customer segmentation supports differentiated deployment models, support levels, and engagement pathways.

- Entrusted Entities of CSS
- Public authorities and EU institutions (border management, crisis coordination, humanitarian response, security agencies)

- System integrators and specialised security / EO solution providers (embedding THEIA modules into wider systems)
- Research and innovation stakeholders (methodological use, benchmarking, follow-on R&D and capability development)

Channels

Channels describe how THEIA reaches users and how access is provided, from first engagement to operational use. Distribution is designed to support both direct institutional uptake and scalable deployment through integration.

- Direct engagement with authorities through demonstrations, pilots, and procurement-aligned follow-up
- Partnerships with system integrators and solution providers for embedded deployment
- Participation in EU and international ecosystems and relevant user communities to enable institutional reach
- Digital delivery through controlled platform access and API-based service provision where appropriate

Customer Relationships

THEIA's customer relationships are long-term and support-intensive, reflecting the reliability and compliance expectations of security and crisis-management environments. Relationships are based on sustained engagement rather than one-off transactions.

- Institutional users require onboarding, training, compliance assurance, and continuous support
- Industry and integration partners require technical alignment, integration assistance, and structured collaboration frameworks
- Research stakeholders engage through knowledge exchange, testing, and follow-on cooperation pathways

Key Activities

Key activities represent what is required to keep THEIA usable, trustworthy and adoption-ready. These activities link technology delivery with operational readiness and user acceptance.

- Development, refinement, and validation of GeoAI analytics and fusion workflows
- Maintenance of the integrated platform and its interoperability components

- Integration support for deployment in institutional and partner infrastructures
- Cybersecurity management and compliance monitoring (privacy, access control, governance)
- Stakeholder engagement activities, demonstrations, and operational feedback incorporation

Key Resources

Key resources are the assets that enable THEIA to deliver its value proposition and maintain competitiveness. They include technical components, expert capacity, and institutional networks.

- GeoAI algorithms, models and analytical workflows
- Multi-source data fusion mechanisms and integration architecture
- Secure data exchange framework and access-control components
- Consortium expertise across EO, AI, cybersecurity, governance, and crisis-domain operations
- Validation access and stakeholder relationships within institutional ecosystems

Key Partners

Key partners are essential for deployment, scaling, and trust-building. They support access to data sources, integration into operational environments, and alignment with institutional frameworks.

- EO data providers and satellite operators
- UAV / RF and complementary sensor providers
- System integrators and security solution providers
- Institutional stakeholders supporting validation and operational alignment

Policy and regulatory stakeholders supporting governance compatibility

8. Cost Structure

The cost structure of THEIA reflects the effort required to develop, deploy and sustain advanced monitoring and decision-support capabilities in institutional and security-relevant contexts. Costs are driven less by mass-market product distribution and more by technical maturity, integration readiness, secure operation, and long-term service support.

A primary cost driver is the continuous development and maintenance of the THEIA technical components, including the integrated platform, GeoAI analytics and multi-source data fusion workflows. Even as components mature, ongoing effort is required for software maintenance, model updates, performance optimisation, and adaptation to evolving operational requirements and user feedback.

Infrastructure and data processing constitute a second major cost area. Operating THEIA requires computational resources for data ingestion, processing, storage and analytics execution. These costs depend on service intensity and deployment scale, and may vary according to the chosen delivery model (cloud-based, hybrid, or on-premise environments). Where premium or specialised data sources are required, additional data access and handling costs may also apply.

A third major cost driver concerns integration and interoperability engineering. Institutional users typically operate within complex IT environments and established workflows, which require configuration, interface development, and integration support to ensure THEIA outputs are usable in practice. This includes technical effort for connecting THEIA modules to client systems, ensuring compatibility, and supporting deployment within operational infrastructures.

Finally, cybersecurity and compliance requirements represent a core cost driver, not an optional add-on. Ensuring secure access, controlled data exchange and alignment with legal and regulatory obligations requires dedicated effort for security engineering, monitoring and governance processes. In addition, service delivery costs emerge when supporting end users, including onboarding, troubleshooting, and continuous operational maintenance.

Overall, the cost structure of THEIA is shaped by the need to combine technical performance with reliability, security and integration readiness. This supports sustainable adoption and positions THEIA results for longer-term institutional use beyond the project duration.

Summary of Main Cost Drivers

- Platform development and maintenance
- GeoAI model development and updates
- Cloud infrastructure and data processing
- Data acquisition (where applicable)

- Integration and interoperability engineering
- Cybersecurity and compliance management
- Technical support and operational maintenance

9. Revenue Streams

THEIA's revenue streams are defined in line with its target market characteristics: strong involvement of public authorities, procurement-driven adoption cycles, and the need for integration into established institutional systems. Revenue generation is therefore expected to be grounded primarily in service and integration-based models rather than high-volume product sales.

A key revenue pathway is the provision of service-based contracts to public authorities and institutional stakeholders. In this model, THEIA capabilities are delivered as an operational service, such as monitoring, analytics provision, reporting, or decision-support outputs. Such contracts typically include defined service conditions and ongoing support, which aligns with institutional expectations and operational continuity requirements.

A second revenue pathway is the licensing of selected modules or APIs to system integrators and specialised solution providers. This enables third parties to embed THEIA capabilities—such as analytics components or secure exchange functionalities—within broader platforms and service offerings. Licensing supports scalability by allowing adoption through indirect distribution channels that already operational within relevant markets.

Integration and deployment contracts represent an additional revenue stream, particularly in institutional contexts where deployment requires configuration, interoperability work, and operational tailoring. This includes professional services for integration with client environments, deployment support, and adaptation of workflows to ensure practical operational use.

Finally, long-term institutional service agreements under procurement frameworks can provide sustained revenue and continuity beyond initial adoption. Framework agreements and multi-year service arrangements support stable exploitation, especially for authorities requiring ongoing monitoring capabilities and continuous updates aligned with evolving needs.

Overall, these revenue streams provide a realistic and diversified sustainability basis while remaining compatible with the procurement, compliance and operational constraints of THEIA's target environment.

Summary of Revenue Streams

- Service-based contracts with public authorities (monitoring, analytics provision)
- Licensing of selected modules or APIs to integrators
- Integration and deployment contracts
- Long-term institutional service agreements under procurement frameworks

10. Partner Individual Exploitation Plans

This section presents individual exploitation plans per partner in a harmonised structure. Each plan reflects the partner's profile, role in THEIA, intended results to be exploited, target stakeholders and foreseen exploitation actions. The plans will be further refined as THEIA results mature and validation activities progress.

10.1 GSH – Geosystems Hellas (GSH)

Organisational background & role in THEIA

GEOSYSTEMS HELLAS S.A. (GSH), headquartered in Athens, is a Greek SME specialized in advanced geospatial software solutions, remote sensing, earth observation, data analysis and artificial intelligence (AI). GSH provides innovative solutions across diverse industries such as safety, security, built environment/critical infrastructures and climate change. In THEIA, GSH coordinates the project and leads exploitation planning while performing system-level and component-level integration, providing operational capability. GSH designs and implements the User Interface of the THEIA system, exposing the system services to the end users. Lastly, the company coordinates and takes part in the implementation of the satellite-based, object-detection-and-identification module.

Links, networks & collaboration channels

GSH leverages participation in EU-funded projects and established links with public-sector and operational stakeholders relevant to crisis management and situational awareness.

Results to be exploited (planned, indicative)

GSH's primary exploitation interest is the integrated THEIA platform capabilities and associated monitoring/decision-support functions, including integration assets, operational workflows and deployment concepts.

Target sectors and stakeholders

Public authorities and institutional actors in crisis management, border monitoring, humanitarian preparedness and security-relevant situational awareness.

Exploitation channels / actions (future-oriented)

Positioning of THEIA as an operational platform/service; engagement with institutional stakeholders through demonstrations and procurement-oriented dialogue; partner coordination to ensure coherent packaging of exploitable assets.

Expected value for the organisation

Strengthened service portfolio in EO/AI-enabled situational awareness, improved operational references, and expanded institutional visibility for follow-on deployments and projects.

10.2 SATCEN – European Union Satellite Centre

Organisational background & role in THEIA

SATCEN supports EU decision-making with geospatial intelligence and contributes an operational/end-user perspective. In THEIA, it supports validation and requirements alignment for surveillance and analytics outputs.

Links, networks & collaboration channels

EU institutional ecosystem and operational user communities relevant to security-oriented geospatial intelligence.

Results to be exploited (planned, indicative)

Operational uptake of relevant THEIA outputs within institutional workflows, particularly analytics/surveillance components where they support situational awareness.

Target sectors and stakeholders

EU institutional stakeholders and operational users in security and crisis response.

Exploitation channels / actions (future-oriented)

Operational assessment, feedback loops, and contribution to institutional embedding of mature outputs through validation pathways.

Expected value for the organisation

Improved operational workflows and access to validated methodological/technical advances relevant to institutional mission needs.

10.3 OHB DS

Organisational background & role in THEIA

OHB DS is an industrial actor in space/EO systems and contributes to technical development activities related to EO integration and multi-source capabilities.

Links, networks & collaboration channels

Industrial and institutional networks in EO and security-related solution ecosystems.

Results to be exploited (planned, indicative)

Reuse and integration of multi-source fusion and analytics approaches developed in THEIA within broader industrial solution stacks.

Target sectors and stakeholders

Industrial EO/security solution environments, integrators, and institutional users adopting integrated monitoring capabilities.

Exploitation channels / actions (future-oriented)

Integration-oriented exploitation through partner ecosystems, module packaging for interoperability, and reuse in future industrial activities.

Expected value for the organisation

Enhanced capabilities and reusable integration know-how applicable to future solution development and collaborations.

10.4 LUXSPACE SARL

Organisational background & role in THEIA

LUXSPACE contributes to EO-related integration and multi-source workflows relevant to THEIA's fusion and monitoring objectives.

Links, networks & collaboration channels

EO downstream service ecosystems and industrial collaboration channels.

Results to be exploited (planned, indicative)

Reuse of data integration, fusion workflows and operational monitoring contributions within downstream EO service contexts.

Target sectors and stakeholders

Institutional monitoring users and downstream EO service ecosystems requiring multi-source situational awareness.

Exploitation channels / actions (future-oriented)

Integration-based exploitation, technical reuse in service offerings, and collaboration through industrial ecosystems.

Expected value for the organisation

Strengthened capabilities in multi-source integration and improved positioning in advanced EO service contexts.

10.5 ICCS

Organisational background & role in THEIA

ICCS is a research and innovation actor with expertise in AI/ML and contributes to the development and validation of analytics components in THEIA.

Links, networks & collaboration channels

Academic and applied research networks across AI/EO domains and EU R&I ecosystems.

Results to be exploited (planned, indicative)

GeoAI methods, analytics components and validated methodological assets suitable for reuse in follow-up research and applied collaborations.

Target sectors and stakeholders

Research organisations and, where appropriate, applied users benefiting from validated AI-based analytics.

Exploitation channels / actions (future-oriented)

Scientific dissemination, contribution to integration-ready analytics, and participation in follow-on proposals aligned with THEIA themes.

Expected value for the organisation

Publications, strengthened technical assets, and reusable knowledge supporting future research and innovation activities.

10.6 SPACE-SI

Organisational background & role in THEIA

SPACE-SI is a Slovenian center of excellence for space technologies and EO applications, operating EO processing capabilities and related infrastructure. Within THEIA, SPACE-SI contributes EO/video-related capabilities and associated processing scenarios.

Links, networks & collaboration channels

SPACE-SI has contacts with Slovenian civil protection and relevant ministries, providing potential channels for outreach and uptake.

Results to be exploited (planned, indicative)

Implementation of customised observation scenarios and EO processing capabilities relevant to THEIA use cases.

Target sectors and stakeholders

National/EU-level public administrations and agencies, including civil protection and related services.

Exploitation channels / actions (future-oriented)

Presentation of THEIA results to authorities through existing cooperation channels and targeted engagement with relevant stakeholders.

Expected value for the organisation

Reference for future projects, enhanced know-how, and expanded partner network for further cooperation.

10.7 AIT – Austrian Institute of Technology

Organisational background & role in THEIA

AIT is Austria's largest non-university research institution, focusing on applied research and innovation. In THEIA, AIT contributes AI/computer vision and sensing-related expertise relevant to analytics development and evaluation.

Links, networks & collaboration channels

AIT leverages research networks and channels relevant to border/security applications and Copernicus-related communities.

Results to be exploited (planned, indicative)

Methodologies and research outputs generated within THEIA, especially AI processing approaches and related innovation results.

Target sectors and stakeholders

Research organisations and academia for scientific exploitation; end-users (e.g., operational users such as border/security stakeholders) for feedback and integration-oriented refinement.

Exploitation channels / actions (future-oriented)

Publications and follow-up proposals; showcasing developments in industrial/testing environments when relevant; engagement with potential end-users for feedback.

Expected value for the organisation

Publications, improved/new technologies, knowledge generation and exchange.

10.8 ED Luxembourg – European Dynamics

Organisational background & role in THEIA

European Dynamics is an international IT services and software engineering company delivering large-scale digital solutions for public administrations and international organisations. Within THEIA, ED contributes secure platforms, integration and interoperability, data management/analytics and dashboard-oriented components.

Links, networks & collaboration channels

ED maintains established cooperation with EU institutions, agencies and national ministries through large-scale digital and research projects, including links to Copernicus and security-related communities.

Results to be exploited (planned, indicative)

Indicative assets include: Displacement Risk Index methodology; harmonised datasets and composite indicators; high-velocity data collection/fusion services; AI-enabled analytics components; APIs/backend services; dashboards and visual analytics tools.

Target sectors and stakeholders

EU agencies, national ministries (migration, interior, civil protection, defence), border/migration authorities, disaster risk management bodies, and related institutional stakeholders.

Exploitation channels / actions (future-oriented)

Integration of relevant components into ED's service portfolio; demonstrations to institutional clients; joint pilots where feasible; participation in relevant working groups; follow-up proposals.

Expected value for the organisation

Strengthened portfolio in AI-enabled risk analytics and geospatial decision-support; increased visibility in displacement/climate-risk monitoring; access to institutional user communities.

10.9 CREO – Creotech Instruments S.A.

Organisational background & role in THEIA

Creotech Instruments is a Polish space-sector company active in satellites, scientific electronics and advanced EO data use/processing. As leader of the CREODIAS platform consortium, Creotech has strong focus on value-adding EO services and integration of diverse data sources.

Links, networks & collaboration channels

Copernicus/DIAS ecosystems, federations of space-sector companies and EO projects/initiatives relevant to dissemination and uptake.

Results to be exploited (planned, indicative)

Exploitation interest centres on integration of THEIA products/services on the platform and on advanced data merging/value creation approaches aligned with DIAS strategy and sustainability objectives.

Target sectors and stakeholders

Scientific/research organisations, public sector users and commercial entities interested in advanced EO services and multi-source integration.

Exploitation channels / actions (future-oriented)

Promotion and visibility of THEIA products on CREODIAS; initiatives/campaigns addressing different recipient groups; strengthening technical expertise and capability for multi-source service integration.

Expected value for the organisation

Support to platform sustainability, strengthened market positioning of CREODIAS services, and increased technical advantage in multi-source integration and AI-enabled value creation.

10.10 C3I

Organisational background & role in THEIA

C3I contributes security-oriented and platform-related expertise, with focus on controlled information sharing, secure architecture elements, and the secure integration and governance of UAV-derived data and UAV-related processing workflows within institutional platform environments*Links, networks & collaboration channels*

Security and institutional ecosystems relevant to secure platforms and controlled data exchange environments.

Results to be exploited (planned, indicative)

Secure data exchange concepts, access control/governance mechanisms, and reusable security-by-design components supporting institutional deployments.

Target sectors and stakeholders

Public authorities and institutional users with strong security requirements; integrators embedding secure exchange components into wider systems.

Exploitation channels / actions (future-oriented)

Integration readiness of secure exchange components; alignment with compliance requirements; collaboration with platform/integration stakeholders for reuse beyond the project.

Expected value for the organisation

Reusable security components and strengthened positioning in secure platform architectures and institutional deployments.

10.11 WTOC

Organisational background & role in THEIA

WTOC focuses on the impacts of climate change on people and contributes expertise in analysing open and social data sources relevant to crisis contexts.

Links, networks & collaboration channels

Networks relevant to climate-security, open-data analytics and humanitarian/crisis monitoring communities.

Results to be exploited (planned, indicative)

OSINT/crowdsourcing analytical approaches and associated know-how supporting situational awareness, trend detection and complementary indicators.

Target sectors and stakeholders

Institutional stakeholders seeking complementary open-data indicators; research and innovation communities working on ethically compliant use of citizen/open data.

Exploitation channels / actions (future-oriented)

Method reuse in future services/projects, contribution to responsible-use framing, and targeted engagement with stakeholders interested in OSINT-supported monitoring.

Expected value for the organisation

Enhanced methodological capacity, new collaborations, and stronger positioning in climate/security analytics applications.

10.12 MPL Brussels

Organisational background & role in THEIA

MPL is a legal firm specialising in personal data protection and related digital regulation topics, including cybersecurity and governance aspects relevant to sensitive data contexts.

Links, networks & collaboration channels

Policy and legal communities, compliance ecosystems and institutional stakeholders requiring guidance on responsible data use.

Results to be exploited (planned, indicative)

Policy and ethical guidance assets, compliance-oriented frameworks and best-practice elements supporting responsible deployment of monitoring and analytics solutions.

Target sectors and stakeholders

Public authorities, EU-level bodies, and organisations requiring legally grounded governance for data use in crisis contexts.

Exploitation channels / actions (future-oriented)

Dissemination and uptake of guidelines through policy-facing engagement; support to consortium exploitation by ensuring compliance-aligned positioning.

Expected value for the organisation

Strengthened expertise and reusable governance frameworks applicable to future advisory work and policy engagements.

10.12 Linkage Between KERs and Partner Individual Exploitation Plans

The Partner Individual Exploitation Plans represent an important step toward translating THEIA's project-level exploitation strategy into concrete partner-specific pathways. As the KERs progress and their stakeholder relevance, application potential and technical maturity become clearer, it is important to strengthen the relationship between each KER and the partners that are expected to develop, validate, integrate, promote, commercialise or otherwise exploit the result.

The matrix below provides a consolidated view of this relationship. It links each KER to its main technical owner or lead partner, contributing partners, potential exploiting partners and expected exploitation pathway. This supports better traceability between the KER portfolio and the individual exploitation intentions of the consortium partners, while also reinforcing the adoption, scalability and long-term value of THEIA outcomes.

Table 5 Kers and linked partners

KER	Main Lead/Owner	Contributing Partners	Potential Exploiting Partners	Main Exploitation Pathway
KER 1 - THEIA Integrated Platform	GSH	OHB DS, LUXSPACE, SPACE-SI, AIT, ED, WTOC, CREO, C3I, ICCS	GSH, SATCEN, CREO, ED, C3I	Institutional deployment, managed service, integration into EU monitoring workflows
KER 2 - Multi-Source Data Fusion Capabilities	ICCS	GSH, SPACE-SI, OHB DS, LUXSPACE, AIT	ICCS, GSH, AIT, CREO, OHB DS	Licensing, integration into EO analytics workflows, research exploitation
KER 3 - GeoAI Analytics Toolkit	ICCS	GSH, SPACE-SI, OHB DS, LUXSPACE, AIT	ICCS, AIT, GSH	AI module reuse, research exploitation, commercial analytics services
KER 4 - Surveillance System/AMSS	GSH; SATCEN for validation	OHB DS, LUXSPACE, SPACE-SI, AIT, ED, WTOC, CREO, C3I, ICCS	GSH, SATCEN, OHB DS, SPACE-SI, C3I	Operational validation, institutional service integration, security-market positioning
KER 5 - Secure Data Exchange Framework	C3I	GSH, CREO	C3I, CREO, GSH	Secure module licensing, institutional deployment, embedded security services
KER 6 - Crowdsourcing and OSINT Analytics Module	ED Luxembourg	WTOC, GSH	ED, WTOC, GSH	OSINT service, dashboard integration, research and commercial exploitation
KER 7 - Policy and Ethical Guidelines	MPL Brussels	GSH, SATCEN, WTOC, all partners indirectly	MPL Brussels, GSH, SATCEN, all partners indirectly	Policy uptake, compliance framework, legal/ethical consultancy

11. First Exploitation Workshop - Summary of Implementation and Outcomes

The first THEIA Exploitation Workshop was conducted on the 11/2/2026 to consolidate the exploitation framework introduced in the initial exploitation plan and to address the improvement points identified during the review of Deliverables D13.2/D13.3. The workshop provided a structured setting for aligning the consortium on the KERs, clarifying partner roles in exploitation, and defining the data collection process required to strengthen the next version of the exploitation strategy with measurable, evidence-based content.

Workshop implementation and key activities

The workshop activities focused on the following critical areas:

Validation of the KER portfolio and responsibilities: The consortium reviewed the set of THEIA KERs and confirmed the need for clear assignment of KER leads and contributing partners. The workshop established that KER leads are responsible for coordinating and consolidating exploitation inputs for their respective results, while contributing partners are responsible for supplying updates and relevant evidence.

Clarification of ownership and IPR contribution principles: The workshop emphasised the need to document, per KER, the relationship between partner contributions (e.g., software components, models, datasets, know-how) and exploitation rights. This includes distinguishing background assets from foreground developments and ensuring that access rights and exploitation possibilities are transparently reflected in the updated exploitation documentation.

KER progress reporting and maturity monitoring: Partners agreed to provide structured updates for each KER capturing technical progress, integration status, validation activities, and maturity evolution, including the reporting of current and expected TRL levels. This approach supports traceability from development activities to exploitation readiness.

Impact framing for outcomes and long-term changes: The workshop established a shared interpretation of the distinction between short-term outcomes (post-project effects) and long-term impacts (structural changes beyond the project). Partners were informed that these elements must be formulated per KER in a manner suitable for measurable assessment and future monitoring.

Market-oriented enrichment of KER documentation: The workshop confirmed that each KER will be complemented with market analysis elements, including a KER-specific SWOT analysis, customer mapping, and competitor identification. This ensures consistent positioning of THEIA results with respect to adoption potential and market/operational relevance.

Added value for exploitation planning

The workshop delivered the following benefits for the exploitation planning process:

- It ensured common understanding and alignment across partners regarding exploitation objectives, responsibilities, and required updates.
- It established a standardised and traceable mechanism for collecting KER-specific exploitation inputs, enabling consolidation into a more robust and evidence-based exploitation plan.
- It strengthened the exploitation logic by linking KERs to impact pathways, market relevance, and uptake conditions, rather than remaining at a descriptive level.
- It prepared the ground for improved measurability of exploitation by enabling the integration of outcome impacts, TRL progression, and subsequently indicators for monitoring uptake and longer-term change.

Feedback collection and planned updates to exploitation documentation

Following the workshop, KER-specific online documents are distributed to the technical partners to review, modify, and enrich the exploitation content. The purpose of this step is to ensure that the exploitation plan reflects the most recent project progress, realistic uptake pathways, and credible market positioning for each KER.

In parallel, the workshop confirmed the need to collect Individual Exploitation Plans from all partners. These inputs provide partner-level exploitation strategies, roles, and commitments, ensuring that exploitation is evidenced not only at consortium level but also through concrete partner intentions and pathways to impact. The consolidation of KER updates and individual exploitation plans will directly support the preparation of the updated exploitation strategy in the next version of the deliverable.

12.Horizon Results Booster Services

The Horizon Results Booster (HRB) is a European Commission initiative supporting EU-funded projects in strengthening exploitation strategies and accelerating market and institutional uptake of results.

As of M15, no HRB service has yet been implemented. The consortium has initiated the process by preparing and submitting a preliminary application to the Horizon Results Booster programme. This represents a first exploratory step toward structured external support in the next phase of the project.

No HRB module (A, B or C) has been activated during the current reporting period. Therefore, this version of the deliverable does not include outcomes from HRB advisory services.

Planned Next Phase (for next version – D14.2)

- The consortium intends to activate HRB services during the second project period. The next version of the exploitation plan (D14.2) will:
- Report on the outcome of the HRB application process
- Specify the selected module(s), if approved
- Document advisory sessions and recommendations received
- Integrate HRB feedback into refined exploitation pathways
- Strengthen monetisation validation and stakeholder mapping

This phased approach ensures that HRB input will meaningfully support the consolidation of THEIA's market positioning and long-term sustainability strategy in the final exploitation deliverable.

Status and next steps

THEIA has submitted an application to the HRB programme and is currently in the phase of coordinating the first HRB interaction workshop. The next version of the exploitation plan will include a brief overview of the additional HRB services to be considered and a concise plan for how these services will be utilised to further strengthen exploitation, stakeholder engagement, and long-term sustainability of the project results.

13. Conclusion

THEIA has progressed from a conceptual innovation framework to a technically consolidated and strategically positioned monitoring ecosystem. The project has delivered a portfolio of interoperable and scalable Key Exploitable Results, combining multi-source data fusion, AI-driven analytics, surveillance capabilities, secure data exchange mechanisms and ethical governance frameworks.

Version 2 of the Exploitation Plan reflects this maturity. Exploitation pathways have been clarified, business logic has been structured, partner-level responsibilities have been consolidated, and market positioning has been refined to align with institutional procurement environments.

In the short term, THEIA strengthens situational awareness and operational validation capacities. In the long term, it contributes to European strategic autonomy in GeoAI-enabled crisis monitoring, reinforcing institutional resilience in climate-security, migration and humanitarian response contexts.

Through coordinated partner engagement, structured IPR management and realistic revenue pathways, THEIA establishes the foundation for sustainable post-project exploitation.

The exploitation framework will continue to evolve as THEIA progresses toward demonstration, validation and final technical maturity. In response to the 1st Periodic Review recommendations, the consortium will further consolidate the potential market for the KERs, and strengthen the connection between the KERs and the Partner Individual Exploitation Plans. This will ensure that exploitation planning remains evidence-based, partner-driven and aligned with realistic adoption, scalability and sustainability pathways.

The final exploitation plan will therefore provide an updated view of market validation, impact measurement, cost-benefit considerations, revenue model maturity and partner-specific exploitation commitments, reflecting the progress achieved during the second project period.

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