

Searchable multi-dimensional Data Lakes supporting Cognitive Film Production & Distribution for the Promotion of the of the European Cultural Heritage

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SCENE pilots setup & Validation plan

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Athens Development & Destination Management Agency (ADDMA)

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Abbreviations

Abbreviations	Full name
D	Deliverable
WP	Work Package
3D	3 dimensional
KPI	Key Performance Indicators
Recce	Visit that place in order to become familiar with it



Executive Summary

This deliverable defines the validation methodology for the SCENE outcomes and performs the setup of the pilot sites for testing and validation of SCENE results. It will follow the functional and non-functional properties already defined in WP2 and will ensure the installation of necessary software and hardware infrastructure so to set the scene for future deployments, operation and validation. Within the task activities a concrete evaluation and validation methodology with concrete steps will be created. Furthermore, this task will be responsible to check the pilot sites needs in terms of deployments, devices and processes will be need in order to setup the pilot cases of D5.3.

The whole process will be consisted of the following steps:

- Step 1: Creation of the pilot execution methodology
- Step 2: Create the Validation Protocol & Test Specifications regarding the processes that are being introduced in the platform
- Step 3: Utilize different stakeholders' experiences in the use of the platform and finally,
- Step 4: Revise the SCENE platform based on the collected feedback



1 Introduction

1.1 Purpose of the document

The purpose of this document is to describe the pilot plan for iteration 1 in the SCENE project, serving as the main output of Task 5.2. This deliverable, scheduled for submission by M20 (September 2024) and extended to September 30, 2024, will continue to evolve during the project, with potential updates as necessary. The SCENE pilots will be planned, executed, and evaluated by partners of WP5, primarily led by ADDMA as part of Deliverable 5.2 - "System Integration Evaluation Validation & Assessment of Prototypes in pilots". WP5 encompasses six tasks which include the preparation of pilots (T5.1 to T5.3), execution (T5.4 & T5.5), and evaluation (T5.6). The planning and validation of the pilot strategy form the core of T5.2, which is documented in this deliverable.

This document includes the following sections:

- **Guidelines of Coordination per Use Case:** This section outlines the coordination within the consortium and pilot-specific coordination structure, including personnel involved. It covers the overall planning of iteration 1, the methodology for pilot execution (including pre-pilot and pilot execution sub-phases), the engagement and cooperation plan, communication and training preparations, technology readiness and testing, ethical and legal requirements, support and how technology components are planned to be deployed in the pilots (D5.1).
- **Specification of Pilots' Experimentation:** This section provides a detailed breakdown of each pilot, including their requirements, associated stakeholder maps and the pilot execution plan.
- **Evaluation Approach and Organization:** This section details the objectives for the evaluation of iteration 1, the approach followed, the dimensions and constructs considered, and the qualitative and quantitative techniques used to collect results (e.g., questionnaires, interview guidelines). It also specifies the Key Performance Indicators (KPIs) for the evaluation framework and the associated technical components. For instance, evaluation data will be collected through surveys, interviews, and performance metrics related to cost efficiency and production quality improvements. Key performance indicators (KPIs) will measure the success of the pilots, such as reduced production costs, increased revenue from film distribution, and heightened visibility of cultural heritage sites through media content produced during the pilots. These results will guide further platform development and future iterations of the SCENE project.

This document is a critical part of WP5, as it contains the plans for the execution and evaluation of the pilots that will validate the SCENE platform, resulting from Task 5.2, through an evaluation cycle. This version of the deliverable focuses on the planning and organization of iteration 1, covering the period from June 2024 to September 2024. The second iteration of Deliverable D5.2, "SCENE Pilots setup and validation plan," will focus on refining the setup and validation methodologies for the SCENE pilot sites. The plan is scheduled for submission in M27, and it follows from the initial iteration in M18. The deliverable that will include the results of the second iteration is D5.3, titled "SCENE pilot trials & validation," is planned for submission by M35 according to the Grant Agreement.

1.2 Relationship with other deliverables

Deliverable D5.2 "Scene Pilots Setup and Validation Plan" plays a crucial role in the overall validation and implementation of the SCENE project by ensuring the proper setup and evaluation of pilots in different stages

of the filmmaking process. This deliverable has significant connections with other key deliverables and work packages.



Figure 1: Graph of the relationship of D5.2 with other deliverables

1. Relationship with D5.1 (SCENE Testing and System Integration)

Deliverable D5.2 is closely related to D5.1, as both deal with the testing and integration of SCENE systems. While D5.1 focuses on integrating and testing SCENE's technologies, D5.2 builds on this by setting up the necessary pilots for real-world testing and validation. The integration work done in D5.1 provides the foundation upon which the pilot sites are prepared, and D5.2 ensures that these sites are ready for validation and assessment according to defined methodologies.

2. Link to WP2 and D2.1, D2.2, and D2.5 (End-User Needs and System Specification)

The pilots in D5.2 are based on the functional and non-functional requirements defined in WP2. Deliverables like D2.1 (SCENE Use Case Definition and Application Scenarios) and D2.2 (End-User Needs and Requirements) provide critical inputs that influence the setup of the pilot cases in D5.2. The specifications outlined in D2.5 (SCENE Reference Architecture) further ensure that the technical structure is aligned with the project's overall goals, allowing D5.2 to implement relevant validation protocols and pilot setups.

3. Connection with WP3 and Deliverables in Data Management and 3D Reconstruction

Deliverables such as D3.3 (Media Asset Manager) and D3.4 (3D Model Reconstruction Methodology) contribute to the technical foundation of the SCENE project, which is essential for the validation in D5.2. The successful execution of pilots relies on the accurate integration of these systems, which are used during the setup and execution of the pilot sites.

4. Interrelation with WP4 (Pre-production, Production, Post-Production & Distribution Tools)

Deliverable D5.2 also interacts with WP4 deliverables, as the tools developed in this work package (e.g., location scouting tools, audience-building tools, and post-production effects) are deployed and



validated through the pilots. The pilots set up in D5.2 act as real-world testing grounds to evaluate the effectiveness of these tools in the production and post-production phases of filmmaking.

5. **Impact on D5.3 (SCENE Pilot Trials and Validation)**

D5.2 paves the way for D5.3, which deals with the actual execution of pilot trials and their validation. The setup plan and methodologies defined in D5.2 are implemented in D5.3 to ensure the pilot trials run smoothly and produce measurable results. D5.3 relies heavily on the validation methodologies and pilot configurations established in D5.2 to carry out its objectives.

This interconnected framework of deliverables highlights the pivotal role of D5.2 in ensuring the real-world applicability and effectiveness of the SCENE platform across multiple phases of the filmmaking process as it shows in the following graph.

1.3 Deliverable Structure

The structure of this deliverables is as follows. Chapter 2 includes the guidelines for the coordination of the pilots. It includes details such as the pilots' coordination structure, the overall pilots' planning, the methodology for pilot execution, the engagement and cooperation community building strategy, the technology to be tested or ethical and legal requirements.

Chapter 3 includes specification of the pilots' experimentations planned. Concretely, for each pilot site, it includes their high-level requirements, the stakeholders' map of the pilot, the two campaigns co-designed, the pilot execution plan or the community building plan.

Chapter 4 deals with the evaluation methodology that will be applied before, during and after pilots' iteration. It includes, the objectives, evaluation approach, evaluation dimensions and constructs, qualitative and quantitative measures and the assessment strategy, i.e., how to calculate the impact achieved by pilots' iteration 1. Finally, chapter 5 concludes the deliverable and proposes future work foreseen in the frame of Task 5.3.

2 Guidelines for coordination of the use cases

This section details the guidelines for the upcoming execution and validation of the SCENE pilots, focusing on the following aspects:

- Coordination structure: Defines the roles and responsibilities of participants in the pilot activities.
- Overall pilots' iteration planning: Outlines the timeline and major milestones for the pilots.
- Methodology for pilot execution: Provides a framework for conducting the pilots, including the necessary pre-execution phases.

2.1 Pilots' coordination structure

The coordination for the SCENE project's pilots as outlined in D5.2 "Scene Pilots Setup and Validation Plan" involves several critical tasks that include the validation, integration, and execution of the pilots in alignment with the overall project's objectives. This coordination is spread across multiple partners with specific roles and tasks defined under WP5.

Pilot Coordination Structure:

- Platform Integration (T5.1): This task involves defining the continuous integration methodology for the SCENE platform. It includes setting up tools and systems that integrate different components of



the platform. The coordinated effort ensures that various modules, including 3D reconstruction, audience-building tools, and blockchain-based preservation systems, are functional in real-world scenarios.

- **Pilots Planning and Validation Methodology Definition (T5.2):** This task involves the development of the validation methodology for SCENE outcomes. The task focuses on setting up pilot sites to test and validate the system. It ensures that the necessary software, hardware, and infrastructure are in place, laying the foundation for the subsequent execution of the pilots. This task directly connects with the scenarios defined per use case (T2.1), ensuring that the pilots align with functional and non-functional properties established earlier in the project.
- **Pilot Installation and Execution (T5.3):** This phase focuses on installing and validating three core use cases derived from the work conducted in WP2 (Use Cases Definition). Each pilot installation is executed based on the results from other technical work packages (WP3, WP4), ensuring that software modules are deployed on a cloud server and operational for stakeholders.
- **Connection to the New European Bauhaus Values (T5.4):** This task ensures that the pilots align with the values of sustainability, inclusivity, and aesthetic excellence promoted by the New European Bauhaus. It involves designing and implementing recommendations to integrate these values into pilot activities.
- **Performance Evaluation and User Experience Feedback (T5.5):** Performance and user experience feedback will be gathered and analyzed, focusing on validating the technical robustness and overall satisfaction of end-users in pilot environments. This process will also include cost-benefit and cost-effectiveness analyses to assess the overall impact of the pilot deployments.

In addition, the Pilots' coordination in the SCENE project involves three primary locations: Athens (Greece), Cyprus, and Italy. Each location operates as a distinct pilot site with its own specific objectives, stakeholders, and planned activities. Below is a summary of the coordination structure for these pilots:

1. Athens, Greece (ADDMA - Athens Development and Destination Management Agency)

- **Objective:** promote public city locations and cultural sites in Athens as filming locations for international productions.
- **Activities:** Utilize location scouting, post-production tools, and distribution channels. The pilot will produce short films showcasing various locations under different environmental conditions.
- **Key Stakeholders:**
 - Local government,
 - cultural heritage site managers,
 - film production companies.
- **KPIs:**
 - Reduction in production costs,
 - increased revenue from distribution channels,
 - enhanced economic activity in Athens.

In order to achieve these, ADDMA will utilize digital tools such as the Location Scouting Tool and Audio & Lighting Simulation tools during the pre-production and production phases, make use of the distribution engine and recommendation system as well as create new jobs and training as during the pilots local professionals in Athens will gain skills in digital filmmaking thus further supporting economic growth.

2. Cyprus (GOF - Green Olive Films)



- **Objective:** Increase the visibility of Cyprus's unique locations, cultural heritage, and Troodos ophiolite sites using advanced ICT technologies, including 3D modeling, for film production.
- **Activities:** Utilize fully developed 3D models of locations, simulate light and sound conditions, apply post-production audio and visual effects, and distribute the final products.
- **Key Stakeholders:**
 - Local film industry,
 - cultural heritage organizations,
 - technology providers.
- **KPIs:**
 - Reduction in pre-production costs, time, and environmental footprint,
 - enhanced promotion of filming locations,
 - contributing to long-term economic growth in Cyprus's film industry.

3. Italy (CETMA - Centro di Ricerche Europeo di Tecnologie Design e Materiali)

- **Objective:** Demonstrate the use of 3D models of cultural sites in the film industry, focusing on specific locations in Lecce, Italy.
- **Activities:** Improve and create new 3D models, produce virtual tours and short films, and distribute these products globally.
- **Key Stakeholders:**
 - Cultural heritage site managers,
 - film production companies,
 - local government.
- **KPIs:**
 - Cost reductions through advanced technologies,
 - increased revenues,
 - promotion of Italian cultural heritage sites.

The coordination of pilots (T5.2) is closely linked to the use case scenarios developed under WP2 (D2.1). The pilots serve as real-world implementations of these scenarios, ensuring that the platform's functionality is thoroughly tested under conditions specific to each use case. The pilots cover a variety of real-world conditions and applications, helping validate the system's capabilities in diverse environments as outlined in the use case analysis. The technical work conducted in earlier work packages (e.g., 3D reconstruction in WP3, audience-building in WP4) is implemented and assessed during these pilots, forming a crucial part of SCENE's validation plan.

The structure mentioned above ensures that all partners collaborate seamlessly across tasks and that the platform meets its technical goals and contributes to European cultural heritage promotion through sustainable filmmaking technologies.

2.2 Pilot execution overall planning

The pilot execution phase, as mentioned, will be conducted in two iterations. The first iteration of pilots within the SCENE project aims to validate and refine the key technological components of the SCENE platform. The primary focus will be on testing the end-to-end workflow of the SCENE platform, including the tools for location scouting, audience building, audio and light simulation engines, recommendation systems, and distribution mechanisms across the three selected pilot sites.



The pilot tests will cover the following components:

- 1. Location Scouting Engine:** This tool will assist filmmakers, and location scouters in selecting suitable filming locations. The pilot will involve identifying and digitally modeling locations in Greece, Cyprus, and Lecce (Italy), followed by testing of the SCENE platform.
Stakeholders: Filmmakers, Location scouters, location managers and service providers will use the tool to select and evaluate potential filming locations. Additional deliverable is available in D4.1.
Feedback Collection: Feedback will be gathered from the stakeholders via questionnaires and interviews on the usability of the tool.
- 2. 3D Models and Audio and lighting Simulation Engines:** The pilots will evaluate the effectiveness of 3D models and simulation engines for audio and light during the pre-production phase. The testing will focus on the accuracy and usability of these simulations for preparing filming setups.
Stakeholders: Cinematographers and sound engineers will test the accuracy and usability of the audio and light simulation engines during pre-production planning.
Feedback Collection: Collected from cinematographers and sound engineers to assess the accuracy and practicality of the simulations in preparing real-world filming setups. Feedback will focus on how well the simulations match actual filming conditions.
- 3. Audience Building Tool:** This tool will be tested to assess their capability in capturing audience preferences and engaging potential users for the SCENE platform. The pilot will involve running campaigns and analyzing the feedback collected through social media integrations.
Stakeholders: Marketing teams will use the tools to run campaigns and analyze audience engagement.
Feedback Collection: Feedback will be gathered via questionnaire, to evaluate the effectiveness of the campaigns and tools in capturing audience preferences, and the usability of the tool.
- 4. Distribution Engine and Recommender System:** This will be evaluated for its ability to suggest appropriate distribution channels and target audiences.
Stakeholders: End users will use the engine to assess the efficiency and accuracy of content distribution and recommendations. Also, filmmakers will be able to review how well the recommendations align with their distribution goals.
Feedback Collection: Feedback will be collected by analyzing the success of simulated distribution campaigns, focusing on the appropriateness of the suggested channels and audiences. This could include metrics such as audience reach, engagement, and content views.

Pilot Sites:

- 1. City of Athens (Greece):** The pilot will focus on increasing the visibility of Greece as an international filming location, utilizing the location scouting and simulation tools. The pilot will also test the blockchain-enabled IPR management and distribution mechanisms.
- 2. Troodos Ophiolite Sites (Cyprus):** This pilot will emphasize the use of 3D models and simulation engines for planning and executing film productions in the Troodos mountains. It will assess how well these tools can streamline the production process.
- 3. Lecce (Italy):** The pilot will demonstrate the use of 3D models in film production by focusing on the Basilica of Santa Caterina d'Alessandria and De' Monti Castle. It will also explore the potential of the SCENE platform in distributing and promoting cultural heritage sites.

Methodology:

- **Preparation Phase (Duration: 1-2 months):** Detailed planning and setup of the pilot environments. This phase includes finalizing the selection of locations, preparing 3D models, and setting up the necessary technical infrastructure.
- **Execution Phase (Duration: 2 months):** Running the pilots at the selected sites. This phase involves real-time testing of the SCENE platform’s tools, gathering data on their performance, and collecting feedback from end-users.
- **Evaluation Phase (Duration: 1 month):** Analyzing the results of the pilots, identifying any issues or areas for improvement, and documenting the findings in the D5.2 deliverable. This phase will also involve refining the tools and platform based on pilot feedback.

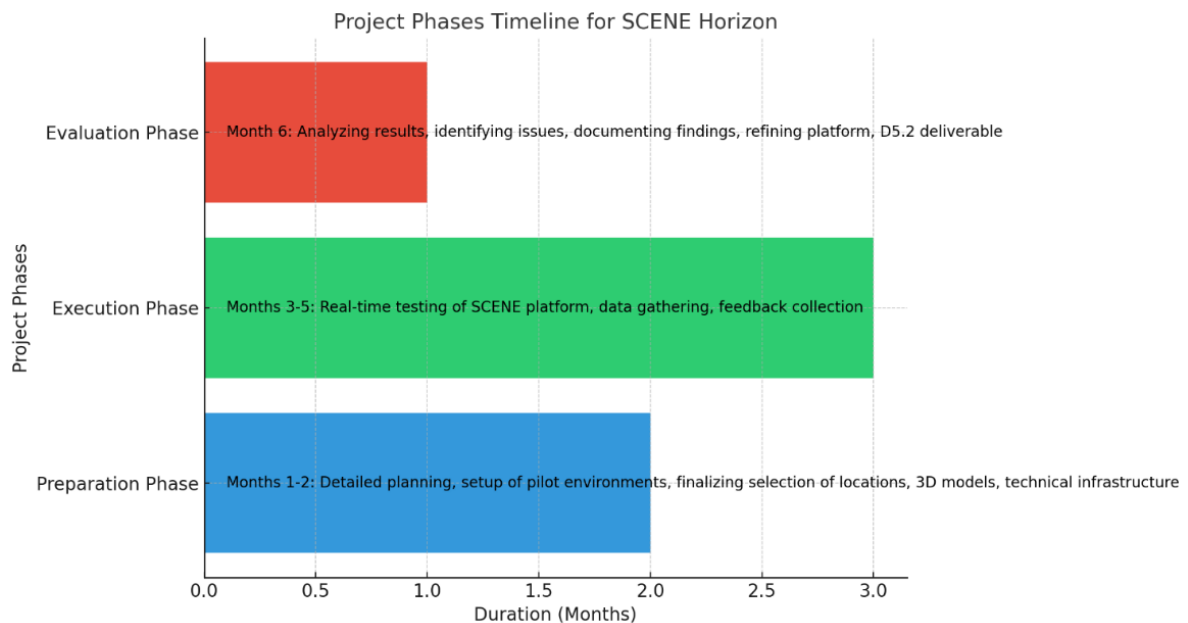


Figure 2: Timeline of phases in graph form

Expected Outcomes:

- Successful integration and real-world validation of the SCENE platform’s key components.
- Identification of potential improvements to enhance the usability and functionality of the platform.
- Data and insights for the subsequent iterations of the pilot tests, contributing to the overall success of the SCENE project.

2.3 Methodology for pilot execution

The methodology for pilot execution within the SCENE project is designed to ensure a structured and systematic approach of testing and validating the project’s technological solution. This methodology is divided into distinct sub-phases, each serving specific functions to ensure the pilots’ success and alignment with project objectives. The methodology is applicable to the deliverable D5.2, focusing on the initial iteration of the pilot execution.

2.4 Pre-pilot execution sub-phase

This sub-phase serves as the foundation for a successful pilot by preparing the environment, tools, and participants. Key activities include:



- **Internal Release and Alpha Testing:** The SCENE platform is released internally in an alpha version for consortium members. This step is crucial to identify and address any major issues before wider pilot deployment.
- **Communication and engagement:** Consortium members, particularly those involved in public administration, initiate internal communication campaigns to recruit alpha testers. These campaigns are aimed at raising awareness about the SCENE platform and its objectives.
- **Training and Onboarding:** Testers, selected from within the consortium and stakeholders related to each pilot, are provided with comprehensive training on the SCENE tools and methodologies. Training workshops are conducted to ensure that participants are well-prepared to use the platform.
- **Monitoring and Feedback Collection:** Monitoring of the feedback from testers with the platform will be carried out, with detailed logs and feedback collected. This data is essential for making necessary adjustments before moving to the pilot execution phase.

2.4.1 Pilot execution sub-phase

This sub-phase marks the formal launch of the pilot tests, expanding the scope of participants and focusing on real-world validation of the SCENE platform. Key activities include:

- **Beta Release and Public Deployment:** Following adjustments from the pre-pilot phase, the SCENE platform is deployed in a beta version to a broader group of users, including external stakeholders and target communities.
- **Communication and Engagement:** Intensive communication efforts are launched to engage the broader community. This includes public announcements on the pages of the project, workshops, and promotional activities aimed at encouraging participation in the pilot tests.
- **Pilot Testing and Data Collection:** Participants use the SCENE platform to test its functionalities. Data is collected continuously, focusing on both the technical performance of the platform and the user experience.
- **Support and Troubleshooting:** The support systems established during the pre-pilot phase remain active, with an emphasis on quickly resolving any technical or usability issues that arise during the pilot execution.
- **Monitoring and Evaluation:** Detailed monitoring is conducted to track the progress of the pilot tests. This includes the collection of usage statistics, participant feedback, and the collection of certain key performance indicators (KPIs) for each use case.
- **Iterative Improvements:** Based on the data collected, iterative improvements are made to the SCENE platform. This ensures that the platform evolves in response to real-world testing, leading to a more refined and effective solution.

2.4.2 Pre-requisites for pilot launch

Before launching the pilot, several prerequisites must be met to ensure readiness:

- **Finalization of Training Materials:** All training materials must be finalized and translated into the local languages of the pilot sites. This ensures that all participants can fully engage with the platform.
- **Completion of Ethical Approvals:** Ethical approvals for data collection, as defined in D1.3, and participant involvement must be secured. This includes obtaining informed consent from all participants, in line with GDPR and other relevant regulations.
- **Platform Stability:** The SCENE platform must be stable and free from critical bugs. This is verified through thorough testing during the pre-pilot phase.



- **Community Engagement Strategy:** A user engagement strategy and recruiting participants should be set. This includes preparing communication materials and planning engagement activities.

2.4.3 Pilot work plan definition

A detailed work plan is developed for each pilot site, outlining the specific tasks and timelines for the pilot execution. The work plan includes:

- **Milestone Definition:** Key milestones are defined for each phase of the pilot, including pre-pilot launch, pilot execution, and post-pilot evaluation.
- **Task Allocation:** Specific tasks are assigned to consortium members and local stakeholders, ensuring that all aspects of the pilot are covered.
- **Gantt Chart Development:** A Gantt chart is developed to visually represent the timeline of the pilot, ensuring that all tasks are completed on schedule.

1. Milestone Definition

More specifically, for each pilot, the following milestones should be included:

- **Pre-Pilot Launch:**
 - **M1.1:** Pilot site setup and preparation (Week 1-4)
 - **M1.2:** Recruitment and training of stakeholders (Week 5-8)
 - **M1.3:** Validation of technologies and data integration (Week 9-12)
- **Pilot Execution:**
 - **M2.1:** Initiation of pilot activities and data collection (Week 13-16)
 - **M2.2:** Mid-term review and data analysis (Week 17-20)
 - **M2.3:** Refinement and adjustment of technologies (Week 21-24)
- **Post-Pilot Evaluation:**
 - **M3.1:** Final data collection and analysis (Week 25-28)
 - **M3.2:** Evaluation report and lessons learned (Week 29-32)
 - **M3.3:** Stakeholder debrief and dissemination of results (Week 33-36)

2. Task Allocation

This paragraph outlines the division of responsibilities among the project's partners, focusing on their key roles in the development and implementation of the project. Here each partner's contributions are highlighted, 3D reconstruction, stakeholder interaction, training coordination. Furthermore, the engagement of local stakeholders in site preparation, data collection, and system refinement during the pilot phase ensures a collaborative and adaptive approach to the project's development and execution. This structure sets the stage for an organized and efficient execution of the SCENE project.

2.4.4 Technology to be tested: SCENE platform

In Deliverable 5.2, the SCENE project outlines the various technologies to be tested across its three pilot sites: Greece, Cyprus, and Italy. These technologies, which span the entire film production pipeline—from pre-production to distribution—are designed to enhance and streamline the filmmaking process using innovative tools such as 3D modeling, blockchain integration, and AI-based audience insights. Each pilot site focuses on specific tools that suit the location's unique context and requirements.

The table presented in Figure 3 was co-created with all three pilot partners (ADDMA, CERTH & GOF) and outlines the specific technological tools that will be tested in the various pilots of the SCENE platform, across three locations: Greece, Cyprus, and Italy. These tools are categorized by different production phases,

including pre-production, production, post-production, and distribution. Each pilot will focus on testing different technologies, such as 3D modeling, location scouting, and blockchain-based NFTs during pre-production. The production phase involves tools like UWB-tracking, while post-production tests include quality assessment and post-production effects. Throughout the entire process, tools like the media asset manager and blockchain technology will be employed, culminating in the use of a distribution engine and a recommendation system during the distribution phase. The table visually indicates which tools will be tested at each site, demonstrating the broad range of technologies that SCENE aims to integrate into its filmmaking process.

PHASE	TOOLS	PILOT 1. ATHENS	PILOT 2. CYPRUS	PILOT 3. ITALY
PRE - PRODUCTION	3D Modeling	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Location Scouting	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Audio Simultaion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Lighting Simulation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	AI - based Audience Reference Scouting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Blockchain NFTs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Audience Building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PRODUCTION	UWB-Tracking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
POST- PRODUCTION	Post Production Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Quality Assesment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
THROUGH OUT	Media Asset Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Blockchain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DISTRIBUTION	Distribution Engine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Recomendation System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 3: Technology Used in the three Pilots of SCENE project

2.4.4.1 Pilot 1 in Athens, Greece

The Athens pilot will test a range of tools, with a significant focus on pre-production technologies. One of the key tools being deployed is 3D modeling, which will be used to create digital replicas of the filming locations. This allows directors and cinematographers to visualize and plan their shoots more effectively. Additionally, location scouting will be enhanced through a digital tool that helps teams select ideal shooting sites based on logistical, aesthetic, and technical criteria. Alongside these tools, audio simulation and lighting simulation will allow the crew to experiment with sound and light conditions digitally before actual filming begins, ensuring optimal production quality.

The Athens pilot will also integrate blockchain NFTs, which serve a dual purpose. They not only protect intellectual property rights (IPR) but also enable the monetization of unique content, such as behind-the-scenes footage, through non-fungible tokens (NFTs). Furthermore, the use of AI-based audience reference scouting will allow the production team to gauge audience preferences before filming begins. This AI tool will provide insights into potential audience reactions, guiding the narrative and creative choices during the production phase.



During production, UWB-tracking technology will be tested. This system provides precise real-time tracking of actors and objects, which can be used for creating detailed 3D models of scenes and ensuring accurate scene planning. In the post-production phase, post-production effects will enhance the visual and audio output, while quality assessment tools will ensure that the final product meets the highest technical standards. Throughout the entire process, blockchain technology will ensure the secure management of IPR and content licensing, while a media asset manager will oversee the organization and control of digital assets.

As the production transitions to the distribution phase, a distribution engine will be employed to recommend the best platforms for content dissemination. Additionally, a recommendation system will assist in targeting the most suitable audience for the film, ensuring effective outreach and engagement.

2.4.4.2 Pilot 2 in Cyprus

The Cyprus pilot will concentrate on the filmmaking side of the SCENE platform, focusing on testing from the perspective of various film industry professionals. The pilot will simulate the production of a short film, with key crew members using SCENE platform tools to streamline the process, making it faster, more cost-efficient, and reducing the environmental footprint. The pre-production phase will be the primary focus for evaluation and optimization.

During pre-production, the platform's location scouting tool and 3D modeling capabilities will be employed to create digital representations of key historical sites, particularly the Troodos ophiolite—a unique geological formation. This digital tool allows filmmakers to visualize their shooting environments in detail, enabling them to complete this part of pre-production entirely remotely. Additionally, lighting and audio simulation technologies will enable the crew to test different lighting setups and acoustic environments digitally, ensuring that the actual shoot will occur under optimal conditions.

In the distribution phase, the SCENE platform's recommendation system will identify the best partners and buyers for content release, facilitating this through automated, decentralized contracts. Simultaneously, the system will provide filmmakers with data-driven insights into the most effective target audiences and strategies for engagement, optimizing the film's reach and impact.

2.4.4.3 Pilot 3 in Italy

The Italy pilot mirrors many of the technologies tested in Athens, with a particular emphasis on pre-production and distribution. 3D modeling will be a crucial tool for replicating historically significant filming locations. This digital modeling capability will be paired with location scouting tools to identify and assess potential filming sites, ensuring they meet both creative and logistical needs.

As in the Athens pilot, blockchain NFTs will be used to protect IPR and facilitate the trading of unique behind-the-scenes content. The AI-based audience reference scouting technology will also be employed to gather insights on audience preferences before filming, helping guide production choices and tailor the narrative to the target demographic.

During production, UWB-tracking will support the 3D mapping of scenes, providing accurate positioning for actors and objects, which is especially valuable for visual effects and scene composition. In the post-production phase, post-production effects will enhance the final output through the application of lighting and audio effects, while quality assessment tools will ensure that all aspects of the production meet predefined standards.

As in the other pilots, the blockchain technology will be used to manage IPR and oversee the distribution of digital assets throughout the entire production process. The media asset manager will ensure that all assets



are efficiently stored, categorized, and accessible across the various stages of production. Finally, the distribution engine and recommendation system will guide the filmmakers in selecting the most appropriate platforms for content release and ensure that the film reaches its intended audience.

Each of the three pilot sites in the SCENE EU project focuses on specific technologies that cater to the unique needs of the location and the production. By testing tools like 3D modeling, blockchain integration, AI-based scouting, and UWB-tracking, SCENE aims to revolutionize the film production process. The integration of these technologies across different stages—from pre-production through to distribution—demonstrates the project's holistic approach to modernizing filmmaking through digital innovation. This comprehensive strategy not only streamlines the production process but also opens new avenues for creative expression and audience engagement.

3 Specification of pilots' experimentation

In the "Specification of pilots' experimentation" chapter for Pilot 1 in Athens, the chapter will describe the process of integrating digital tools for location scouting, post-production, and IPR management into the audiovisual industry of Athens, with the objective of promoting the city as an international filming destination. The focus will be on optimizing the current location management process, addressing challenges related to crew capacity and regulatory inefficiencies, and proposing a streamlined system for filming permits and location promotion. The experimentation will provide a demonstration of how state-of-the-art digital content, in the form of location databases, will be utilized to promote Athens's cultural heritage sites, alongside film industry-supporting tools designed to enhance production efficiency. This chapter will also detail how the pilot aims to engage stakeholders and leverage Athens' strategic value as a city that supports diverse location requirements. Moreover, it will introduce the evaluation methods to monitor the effectiveness of these new tools and strategies.

The Key Performance Indicators (KPIs) for Pilot 1 in Greece include the following:

- The number of cultural sites digitally cataloged and promoted for filming purposes (100 filming locations integrated into the system)
- Efficiency improvements in location scouting and permit processes, measured by reduced time to complete location approvals.
- Audience engagement with the SCENE platform, monitored through platform analytics such as the number of filmmakers, location providers, and audience users actively using the tools.
- Feedback and satisfaction rates from filmmakers, local authorities, and location managers on the usability and effectiveness of the platform
- Contribution to local tourism through increased visibility of Athens as a filming destination, measured by collaboration with tourism agencies and an increase in site visits post-production.
- 10% reduction in production costs
- 30% increase in revenue from distribution

The KPIs for Pilot 2 in Cyprus include the following:

- 20% reduction in production costs due to the use of the Location Scouting Engine and the Light/Audio Simulation Engines.
- 30% increase in revenue from the use of the Distribution Engine and sales through the data lake.
- Increased economic activity in Cyprus from new film productions.
- Increased awareness for Cyprus cultural heritage sites (i.e., of Troodos sites).



The KPIs for Pilot 3 in Italy include the following:

- 10% reduction in production costs due to the use of the Location Scouting Engine and Light/Audio Simulation Engines.
- 30% increase in revenue from the use of the Distribution Engine and sales through the data lake.
- Increased economic activity in Italy from new film productions.
- Use of 3D models for virtual cultural tours and increased engagement with heritage sites like the Basilica of Santa Caterina d'Alessandria

3.1 High level requirements of Pilot 1 (Greece)

The SCENE pilot in Athens focuses on increasing the visibility of public city locations and cultural sites within the greater Athens area as prime filming locations for international productions. The overall objective of this pilot is to integrate SCENE platform into the filmmaking process to enhance pre-production, post-production, intellectual property rights (IPR) management, and distribution channels.

Location Scouting & Management:

One of the primary high-level requirements of the Athens pilot is the development and application of the location scouting tool. This tool will be used by location scouters, and producers to select the most suitable filming sites based on various criteria, helping to streamline the selection process, while having the support of location managers and service providers for each of the available locations. The Athens Development and Destination Management Agency (ADDMA) will provide detailed information about several sites within Athens to extend the location scouting tool's database.

The city of Athens offers diverse cultural heritage sites that will support a variety of location requirements. By leveraging the location scouting tool, the pilot seeks to catalog and promote 100 locations within Athens as internationally recognized filming sites, providing filmmakers with easy access to potential shooting environments.

Light & Audio simulations:

During post-production, the Athens pilot will utilize advanced audio and visual effects modules to apply light and sound effects that enhance the film's quality (i.e., Audio Simulation Engine, Lighting Simulation Engine, Audio Effect Engine and Lighting Effect Engine). These digital tools will allow filmmakers to experiment with various environmental conditions in selected locations, ensuring optimal output for each scene.

Blockchain & Intellectual Property Management:

A key aspect of the Athens pilot is the integration of blockchain technology to ensure the security and management of intellectual property rights (IPR). The blockchain system will also facilitate the trade of Non-Fungible Tokens (NFTs), which include behind-the-scenes content such as photos and video clips from the filming locations. This mechanism will not only protect the ownership of digital content but also open new avenues for monetization, particularly for rare and exclusive content related to the production. Also, this mechanism will be accessible through the Media Asset Manager (MAM) component described in D3.3.

Distribution & Audience Targeting:

The Athens pilot will employ a distribution engine and a recommendation system designed to identify the best channels and platforms for distributing the film. The recommendation system will analyze both the content of the film (e.g., genre, cast, director) and audience data (e.g., previous viewing preferences and demographics) to propose suitable audiences and platforms, and others. By using this system, the production is expected to increase its revenue by 30%, while also expanding its reach to the most relevant audiences.

The pilot's ultimate goal is to drive increased economic activity within Athens by positioning the city as a desirable filming location for international film productions.

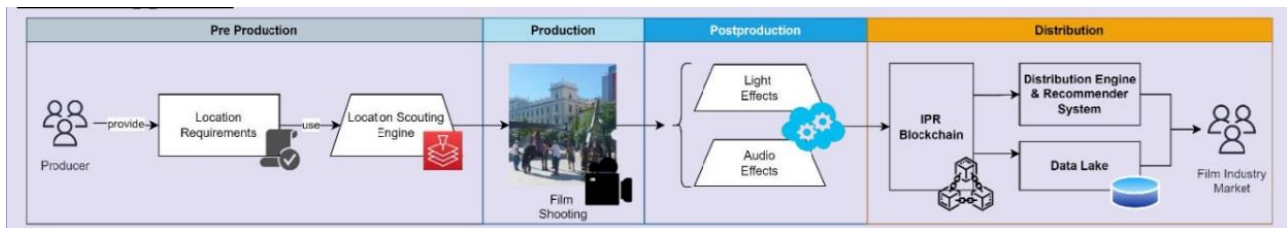


Figure 4: Workflow for film production in the Pilot1, Athens City (GA, SCENE PROJECT)

In the SCENE project's Pilot 1 in Athens, the main goal is to create a short film that showcases selected filming locations within the city using SCENE platform throughout various stages of production. This pilot aims to increase the visibility of Athens as an attractive filming destination by promoting its cultural and historical sites for international productions. By leveraging advanced digital technologies, such as a location scouting engine, blockchain for IPR management, and innovative post-production tools, this initiative addresses the growing demand for diverse shooting environments worldwide.

The SCENE platform's location scouting engine will play a critical role in identifying suitable filming locations within Athens, ensuring that the most visually and logistically advantageous sites are chosen for the short film. The Athens Development and Destination Management Agency (ADDMA) will provide location data for several sites to test this functionality. The short film will highlight four specific locations: Athens City Hall, the National Garden, the First Cemetery of Athens, and the Olympia Municipal Music Theatre "Maria Callas". These sites will play a crucial role in illustrating the city's rich cultural and historical tapestry, while the SCENE tools will be integrated into various production stages to optimize the filmmaking process.

More specifically, Athens City Hall, a landmark of neoclassical architecture, stands at the heart of the city and serves as a symbol of Athens' rich historical and political heritage. Its grand façade and stately columns provide a visually striking backdrop, perfect for scenes that emphasize elegance, tradition, and authority. As a central figure in Athenian public life, the City Hall has witnessed significant historical events, making it an ideal location for film sequences that require an atmosphere of civic importance or official gatherings. Its well-preserved architecture adds authenticity and gravitas to any production.

The National Garden of Athens, located next to the Greek Parliament, offers a lush, green oasis in the midst of the bustling city. This verdant space, filled with ancient ruins, exotic plants, and tranquil paths, is a versatile location for films requiring natural beauty and serenity. The Garden's winding walkways and quiet corners provide the perfect setting for romantic, reflective, or peaceful scenes. Its combination of manicured landscapes and historic relics offers a unique blend of Athens' past and present, making it a valuable asset for productions that want to capture the city's multifaceted identity.

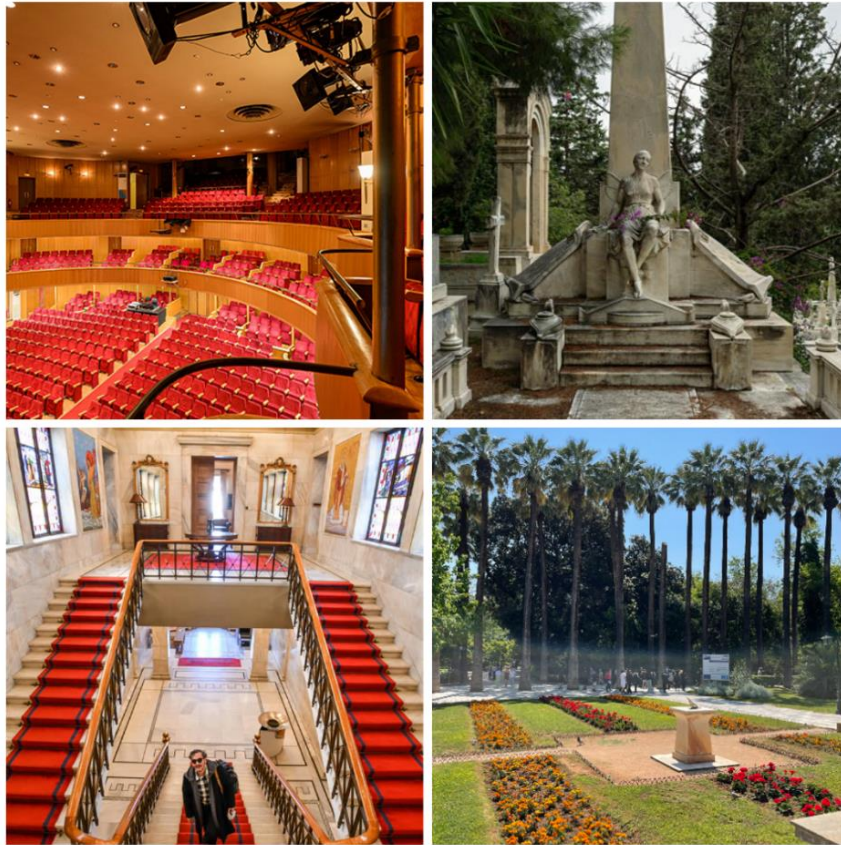


Figure 5: Four locations of Athen’s pilot locations 9Athens City Hall, the National Garden, the First Cemetery of Athens, and the Olympia Municipal Music Theatre "Maria Callas")

The First Cemetery of Athens is a place of deep historical and cultural significance, renowned for its intricate sculptures, mausoleums, and monuments. As the resting place for many of Greece's most famous figures, including artists, politicians, and poets, it exudes a solemn and contemplative atmosphere. The Cemetery's serene environment, combined with its ornate tombstones and shaded paths, offers a profound and artistic backdrop for scenes dealing with themes of memory, legacy, and reflection. Its peaceful ambiance contrasts beautifully with the liveliness of the city, adding depth and emotion to any film production.

Finally, named in honor of the legendary opera singer, the Olympia Municipal Music Theatre "Maria Callas" is a cultural gem in Athens, known for its impressive acoustics and elegant interior design. The theatre's grand auditorium and refined architecture make it a fitting location for performances and dramatic scenes, while its association with Maria Callas lends an air of sophistication and high culture. Whether showcasing a musical performance or a formal event, the theatre's ambiance captures the essence of classical artistry, making it an ideal location for films centered around music, drama, and the performing arts.

Pre-Production Phase:

The film's director and production team will begin by utilizing the Location Scouting Tool. This tool helps them assess each location's suitability, ensuring that logistical concerns, such as accessibility and lighting conditions, are considered. For instance, Athens City Hall is chosen as a backdrop for its neoclassical architecture, while the National Garden provides natural settings to contrast with the urban scenes. The First Cemetery of Athens, with its historical significance and serene atmosphere, is selected for emotionally charged scenes, and the Olympia Municipal Music Theatre "Maria Callas" becomes the ideal spot for musical and dramatic sequences. The tool allows the team to efficiently plan their shooting schedule while addressing any potential challenges related to permissions or crowd control.



In parallel, the Audience Building Tool is employed by the marketing team to generate early interest in the film. Teaser content featuring the four locations is created and shared across social media platforms, showcasing the unique beauty and atmosphere of each site. Through partnerships with local cultural institutions, including museums and tourist agencies, the film gains momentum within both local and international markets, creating anticipation and drawing in a broad audience. For the video purpose, not toll is going to be used during production phase.

Post-Production Phase:

Once the footage has been captured, the focus shifts to refining the visual and auditory aspects of the film. The Light and Audio Effects tool is used during post-production to adjust lighting conditions, creating mood and enhancing the aesthetic appeal of each location. For instance, the lighting at the Olympia Municipal Music Theatre is fine-tuned to emphasize the grandeur of the venue, while the sound design in the First Cemetery of Athens is enhanced to evoke a more solemn and contemplative tone. These post-production tools ensure that each location is depicted with the highest quality, capturing the essence of Athens' unique urban and natural environments.

Distribution Phase:

Upon completion, the film is ready for distribution. The Distribution Engine (DE) plays a vital role in managing the release strategy. The DE tracks the film's performance across various platforms, including streaming services and cinemas, both in Greece and internationally. By analyzing data on viewer demographics and engagement, the DE provides insights that inform future marketing efforts. Additionally, the film's success in showcasing Athens as a prime filming destination is measured, with the expectation that this will lead to increased economic activity in the city from new productions attracted by the availability of such visually rich locations. This distribution phase solidifies the film's reach, promoting Athens as a key hub for global filmmaking locations such as the Athens City Hall, the National Garden, the First Cemetery of Athens, and the Olympia Municipal Music Theatre "Maria Callas".

In accordance with the objectives outlined in the original proposal, the SCENE project aimed to provide a comprehensive list of 100 locations in Athens, Greece, to be integrated into the platform. However, due to the need to deliver this document within the required timeframe, and to ensure the manageability of the task in terms of data collection and verification, the number of locations has been adjusted to 80. This reduction allows for a more focused and efficient approach to compiling detailed information about each site, ensuring the accuracy and quality of the data provided.

As a result, this adjustment reflects a modification in the KPI related to the number of locations, without compromising the overall objectives of the project. The additional 20 locations will be explored and integrated in subsequent project phases, ensuring that the target of 100 locations is met. This adjustment has been made to maintain the high standard of deliverables while adhering to project deadlines. Table 1 presents a summary of 80 recommended locations that can be integrated into the SCENE platform, each with a brief description and address to aid the production teams in their location scouting.

Table 1: List of places included in pilot 1 of Greece



1. Acropolis of Athens – Dionysiou Areopagitou St.	A world-renowned historical site, offering stunning views and ancient architecture, perfect for historical and cultural scenes.
2. Parthenon – Acropolis Hill	A symbol of ancient Greece, suitable for scenes requiring majestic, historic backdrops.
3. Odeon of Herodes Atticus – Dionysiou Areopagitou St.	An ancient stone theatre still in use today, offering a dramatic setting for performances or historical re-enactments.
4. Temple of Olympian Zeus – Ardittou St.	A monumental structure with massive columns, perfect for ancient-themed productions.
5. Panathenaic Stadium (Kallimarmaro) – Vasileos Konstantinou Ave.	An all-marble stadium, ideal for sporting or historical event recreations.
6. Zappeion Megaron – National Garden	A neoclassical building within the National Garden, perfect for formal or ceremonial scenes.
7. National Garden of Athens – Amalias Ave.	A lush, green escape in the heart of Athens, suitable for peaceful, romantic, or contemplative scenes.
8. Athens City Hall – Athinas St.	The administrative center of Athens with neoclassical architecture, ideal for political or formal scenes.
9. Syntagma Square – Leoforos Vasilisis Amalias	A bustling city square, great for modern urban scenes involving public gatherings or protests.
10. The Hellenic Parliament – Syntagma Square	A seat of government, ideal for scenes involving politics, protests, or state affairs.
11. National Library of Greece – Panepistimiou St.	A majestic neoclassical building, perfect for intellectual, scholarly, or historical scenes.
12. Athens Academy – Panepistimiou St.	One of the city's most beautiful neoclassical buildings, ideal for intellectual or ceremonial settings.
13. University of Athens – Panepistimiou St.	A neoclassical academic institution, perfect for educational or political scenes.
14. Monastiraki Square – Ifestou St.	A vibrant, bustling square with flea markets, offering an ideal backdrop for energetic, urban scenes.
15. Plaka Neighborhood – Adrianou St.	A picturesque neighborhood with narrow streets and neoclassical houses, great for intimate, romantic scenes.
16. Anafiotika – Acropolis	A small neighborhood with Cycladic architecture, ideal for peaceful, quiet scenes or scenes set in a remote location.
17. Psiri District – Karaiskaki St.	An artistic, bohemian neighborhood known for its street art and vibrant nightlife, perfect for modern, urban stories.

18. Thiseio – Apostolou Pavlou St.	A scenic area with views of the Acropolis, perfect for outdoor, contemplative, or romantic scenes.
19. Kerameikos Archaeological Site – Ermou St.	An ancient cemetery and city gate area, ideal for historical or introspective scenes.
20. Benaki Museum – Koumpari St.	An art museum housed in a neoclassical mansion, perfect for intellectual or artistic scenes.
21. First Cemetery of Athens – Anapafseos St.	The resting place of many Greek luminaries, offering a solemn and reflective atmosphere.
22. Mount Lycabettus – Lycabettus Hill	A panoramic view of Athens, perfect for establishing shots or dramatic moments.
23. Philopappos Hill – Philopappos Hill	Offers views of the Acropolis and the Athenian Agora, ideal for historical or contemplative scenes.
24. Agora of Athens – Adrianou St.	The ancient marketplace of Athens, great for historical re-enactments or documentary scenes.
25. Roman Agora – Pelopida St.	An ancient Roman market, providing a stunning backdrop for scenes set in antiquity.
26. Stoa of Attalos – Adrianou St.	A reconstructed ancient Greek stoa, ideal for historical and educational scenes.
27. Temple of Hephaestus – Adrianou St.	A well-preserved ancient temple, perfect for scenes of classical grandeur.
28. Pnyx Hill – Philopappos Hill	The site of ancient Athenian democratic gatherings, perfect for political or historical scenes.
29. Athens Riviera – Poseidonos Ave.	A scenic coastal area, ideal for romantic, leisure, or modern urban life scenes.
30. Flisvos Marina – Poseidonos Ave.	A luxurious marina with yachts, ideal for high-end, modern, or leisure scenes.
31. Stavros Niarchos Foundation Cultural Center – Syngrou Ave.	A modern architectural marvel, perfect for futuristic, cultural, or high-tech scenes.
32. Olympic Stadium (OAKA) – Kifisias Ave.	A large sports complex, ideal for sporting events or large-scale productions.
33. Gazi Technopolis – Pireos St.	A former gas factory turned cultural hub, perfect for artistic or modern urban stories.
34. The Athens Concert Hall (Megaron) – Vasileos Konstantinou Ave.	A modern performance space, perfect for high-society or artistic scenes.
35. Byzantine and Christian Museum – Vassilissis Sofias Ave.	A museum offering a historical religious setting, ideal for spiritual or scholarly scenes.
36. Numismatic Museum of Athens – Panepistimiou St.	Housed in a historic building, perfect for scenes involving wealth, history, or intellectual pursuits.

37. Philothei Neighborhood – Philothei	– A quiet, upscale residential area, ideal for modern, high-society scenes.
38. Kifisia Neighborhood – Kifisia	An affluent suburb with beautiful gardens and mansions, perfect for luxury or family-oriented scenes.
39. Kolonaki Neighborhood – Kolonaki Square	– An upscale district with boutiques and cafés, ideal for scenes of wealth and sophistication.
40. Pedion tou Areos Park – Evelpidon St.	– A large urban park, ideal for outdoor scenes, leisure, or sports activities.
41. Athens War Museum – Rizari St.	A military museum with historic exhibits, ideal for war-related or educational scenes.
42. National Archaeological Museum – Patission St.	The largest archaeological museum in Greece, ideal for scholarly, cultural, or educational scenes.
43. Museum of Cycladic Art – Neofytou Douka St.	– Focused on ancient Cycladic culture, perfect for educational or cultural scenes.
44. Hymettus Mountain – Hymettus Mountain	A mountain range offering natural settings, ideal for hiking, nature, or adventure scenes.
45. Dionysus Theatre – Acropolis	An ancient Greek theatre, perfect for historical re-enactments or classical performances.
46. Eleftherios Venizelos Airport – Spata	A modern airport setting, perfect for travel or espionage-related scenes.
47. Athens Central Market (Varvakeios) – Athinas St.	A bustling marketplace, ideal for energetic, urban, or culinary scenes.
48. Port of Piraeus – Akti Miaouli	One of the largest ports in Europe, ideal for maritime, travel, or adventure scenes.
49. Athens Planetarium – Andrea Syngrou Ave.	One of the largest digital planetariums in the world, ideal for scientific, futuristic, or educational scenes.
50. Lycabettus Theatre – Lycabettus Hill	An open-air theatre located at the top of Lycabettus Hill, perfect for cultural performances or panoramic shots of Athens.
51. Piraeus Archaeological Museum – Harilaou Trikoupi St.	A museum showcasing the rich archaeological history of the Piraeus area, ideal for historical and educational scenes.
52. Areopagus Hill – Acropolis	A historic rock outcropping with panoramic views of Athens, suitable for reflective or historical moments.
53. Temple of Poseidon, Sounio – Sounio	– Located at the tip of Cape Sounio, this ancient temple offers stunning seaside views and is perfect for historical or mythological scenes.
54. Vouliagmeni Lake – Vouliagmeni	A natural hot spring lake surrounded by cliffs, ideal for tranquil, romantic, or nature scenes.

55. Athens International Conference Center (Megaron) – Vassilissis Sofias Ave.	A modern facility suitable for formal events, conferences, and high-society scenes.
56. Ilias Lalaounis Jewelry Museum – Kallisperi St.	A museum dedicated to jewelry and decorative arts, perfect for scenes involving luxury, fashion, or craftsmanship.
57. Gennadius Library – Souidias St.	A research library with an extensive collection of books and manuscripts, ideal for academic or intellectual scenes.
58. Technis Theatre – Karolos Koun – Frinichou St.	A prominent theatre in Plaka, great for dramatic or cultural performances.
59. Alimos Marina – Alimos	One of the largest marinas in Athens, ideal for maritime, leisure, or luxury-related scenes.
60. Ancient Agora Museum – Stoa of Attalos, Adrianou St.	A museum located in the restored Stoa of Attalos, suitable for educational or historical scenes.
61. Hadrian's Arch – Leoforos Vasilissis Amalias	A monumental arch built in honor of the Roman Emperor Hadrian, ideal for historical or tourist-related scenes.
62. Philopappos Monument – Philopappos Hill	A tomb and monument dedicated to the Roman benefactor Philopappos, perfect for historical scenes.
63. Byron's Monument – Zappeion Gardens	A tribute to the poet Lord Byron, located in a serene park, ideal for reflective or artistic scenes.
64. Museum of Greek Folk Musical Instruments – Diogenous St.	A museum showcasing traditional Greek musical instruments, perfect for cultural or music-related scenes.
65. National Observatory of Athens – Hill of the Nymphs	One of the oldest research institutions in Greece, ideal for scientific or historical scenes.
66. Eleusis Archaeological Site – Elefsina	An ancient religious site linked to the Eleusinian Mysteries, suitable for mystical or historical productions.
67. Schinias Beach – Marathon	A long, sandy beach surrounded by pine trees, ideal for beach, nature, or outdoor scenes.
68. Goulandris Museum of Cycladic Art – Neofytou Douka St.	A museum focusing on Cycladic culture, ideal for art, educational, or historical films.
69. Athens Metro Stations (Syntagma, Acropolis) – Various Locations	Modern underground stations with art installations, great for urban, transport, or futuristic scenes.
70. Exarcheia District – Exarcheia	Known for its alternative culture and street art, perfect for youth, activism, or counterculture-themed productions.
71. Villa Ilissia (Byzantine Museum Gardens) – Vassilissis Sofias Ave.	A historic villa surrounded by gardens, ideal for luxurious, romantic, or historical settings.
72. Filopappou Hill Pathways – Philopappos Hill	A scenic walking area with views of the Acropolis, perfect for outdoor, reflective, or historical scenes.

73. Kolonaki Square – Kolonaki	An upscale shopping district with cafés and boutiques, ideal for modern urban or high-society scenes.
74. Kaisariani Monastery – Hymettus	A Byzantine-era monastery in a forested area, perfect for spiritual, historical, or nature scenes.
75. Penteli Cave (Davelis Cave) – Penteli Mountain	A mysterious cave with historical significance, ideal for adventure, mystery, or mythological scenes.
76. Dionysiou Areopagitou Street – Acropolis Area	A pedestrianized street offering views of the Acropolis, perfect for establishing shots or leisurely stroll scenes.
77. Mikrolimano – Piraeus	A scenic harbor lined with seafood restaurants, ideal for maritime, culinary, or leisure-related scenes.
78. Tatoi Royal Estate – Dekeleia	A former royal estate with forests and historic buildings, perfect for period dramas, nature, or luxury settings.
79. Archaeological Museum of Piraeus – Charilaou Trikoupi St.	A museum showcasing the history of Piraeus, ideal for educational or historical productions.
80. Faliro Olympic Complex – Faliro	A modern sports complex used for the 2004 Olympics, great for large-scale sports or contemporary urban scenes.

3.1.1 Stakeholders' map of Pilot 1

In the context of the SCENE project's Pilot 1 in Athens, a wide range of stakeholders play essential roles in the successful execution of the pilot, contributing expertise, resources, and support to various phases of the filmmaking process. These stakeholders span public administration, cultural institutions, local media, tourism agencies, and other vital sectors. Each stakeholder brings unique contributions to ensure the pilot aligns with the project's objectives of showcasing Athens as an international filming hub while promoting local cultural heritage.

One of the key stakeholders is the Athens City Hall Administration, which is responsible for granting filming permissions and facilitating the necessary logistics for the production teams. Their role is crucial in ensuring that all legal and bureaucratic processes are streamlined, enabling a smooth execution of the pilot's filming activities in public spaces.

Local Cultural Institutions and Museums also serve as important partners in the pilot. Their role extends beyond simply allowing access to historical sites; they actively promote the film and engage the local community through events and exhibits that highlight the cultural significance of the shooting locations. This engagement fosters a deeper connection between the project and Athens' cultural heritage, ensuring that the film production benefits both filmmakers and the local community.

Media presence is another vital component, with Local Media and Press covering the development and release of the film. Their involvement helps build anticipation and public interest, both locally and internationally. By generating buzz around the film, local media plays a role in enhancing Athens' image as a prime location for filmmaking, attracting further interest from the global film industry.

Tourism Agencies are instrumental in highlighting Athens as a top-tier filming location. Their contributions include promoting the city to filmmakers and tourists alike, creating a dual impact of increasing Athens' visibility as a cultural hub and attracting tourists who are eager to visit the locations showcased in the film.

From a technical perspective, Local Lighting and Sound Equipment Suppliers and Freelance Sound and Lighting Technicians play crucial roles in the production phase. Equipment suppliers provide essential tools and technologies for lighting and audio effects, while freelance technicians offer their expertise in ensuring that the technical aspects of the production are of the highest quality. This collaboration not only guarantees the film’s technical excellence but also contributes to local employment and skill development, providing economic benefits to the community.

In addition, Local Performing Arts Schools and Academies offer valuable contributions by providing students and professionals for roles in the film and for technical support. This involvement offers students real-world experience and exposure to the international filmmaking industry, enhancing their professional skills and career prospects.

Local screening and promotion are facilitated by Local Cinemas and Theatres, which showcase the film to local audiences, further integrating the project into Athens’ cultural fabric. Similarly, Film Festivals and Cultural Events play a significant role in elevating the film’s profile, drawing attention to Athens as a hub for creative storytelling and international film production.

Once the film is ready for distribution, Streaming Platforms play a pivotal role in ensuring that the film reaches global audiences. These platforms not only help distribute the film but also highlight Athens’ cultural heritage to a broader audience, increasing tourism interest and enhancing the city’s international profile.

Finally, the Local Community stands to benefit from the entire process, as the pilot will bring an economic boost through increased tourism and the promotion of local culture and history. By involving a wide array of stakeholders, the SCENE project ensures that the Athens pilot supports both the local film industry and the broader community, fostering cultural exchange and economic growth.

The following image illustrates the key stakeholders involved in the SCENE Horizon project's pilot in Athens, along with their roles and contributions to the film production process.

Stakeholder	Role/Contribution
Athens City Hall Administration	Grant filming permissions, facilitate logistics.
Local Cultural Institutions and Museums	Partner to promote the film, engage the community through events and exhibits.
Local Media and Press	Cover the film's development and release, build anticipation and interest.
Tourism Agencies	Highlight Athens as a filming location, attract filmmakers and tourists.
Local Lighting and Sound Equipment Suppliers	Provide equipment and technical support for lighting and audio effects.
Freelance Sound and Lighting Technicians	Offer expertise to ensure technical quality, contribute to local employment and skill development.
Local Performing Arts Schools and Academies	Provide students and professionals for roles and technical support, enhance real-world experience.
Local Cinemas and Theatres	Screen the film, attract local audiences, contribute to cultural life.
Film Festivals and Cultural Events	Showcase the film, draw attention to Athens as a hub for creative storytelling.
Streaming Platforms	Distribute the film globally, highlight Athens’ cultural heritage, increase tourism interest.
Local Community	Benefit from economic boost, promotion of local culture and history.

Figure 6: Stakeholders engaged for pilot 1



3.1.2 Pilot execution plan

The execution of Pilot 1 in Athens, as part of the SCENE project, is designed to systematically validate and refine the SCENE platform through a structured series of stages. The pilot aims to showcase Athens' cultural and historical sites as prime international filming locations, leveraging advanced digital tools to streamline production processes and engage global audiences. The pilot execution will proceed through distinct phases, starting with the Pre-Pilot Execution phase, which focuses on site preparation, stakeholder training, and securing necessary permissions. This will be followed by the Pilot Execution phase, where real-world data collection and SCENE platform testing will take place during the film production at selected locations across Athens. The Post-Production & Evaluation phase will refine the final output and assess the success of the pilot based on key performance indicators (KPIs) set. Finally, the Post-Pilot Evaluation phase will analyze the results and provide insights for future iterations, ensuring that the pilot not only promotes Athens as a filming destination but also advances the SCENE platform's capabilities.

Pre-Pilot Execution (Preparation Phase):

Before the formal execution of the pilot begins, several preparatory steps will be completed to ensure that the necessary infrastructure and tools are in place. This phase includes comprehensive training and onboarding sessions for production teams and stakeholders, where workshops will introduce participants to the SCENE platform. During this phase, the location scouting tool will be used for site.

Additionally, community engagement efforts will begin by launching early promotional campaigns through social media, designed to build anticipation for the film. A support mechanism will be established, including a help desk to provide technical assistance throughout the pilot, ensuring smooth operation. Ethical and legal compliance, including GDPR considerations, will be ensured before the launch, with all filming permissions secured in advance.

Pilot Execution (Filming & Data Collection):

The main phase of the pilot will involve the real-time application of SCENE tools during film production. The location scouting tool in production process will be used to manage the selection of the locations, while 3D simulations of light and sound conditions will be used to optimize shooting environments. Additionally, blockchain technology will be integrated to secure intellectual property through the creation of NFTs that capture behind-the-scenes content and other exclusive materials, allowing for the monetization of these assets.

Throughout this phase, audience engagement campaigns will continue, using SCENE's audience-building tools to promote the film across social media platforms. These campaigns will be vital for gathering real-time data on audience engagement and preferences. Data collection during filming will focus on gathering feedback from users and stakeholders regarding the technical performance of the SCENE platform and the overall production experience. This feedback will be crucial for refining the platform's functionality in later phases.

Post-Production & Evaluation:

After filming concludes, the post-production phase will involve the use of SCENE's advanced audio and visual effects tools to enhance the quality of the footage. Lighting and sound conditions will be adjusted to ensure that each scene is optimized for maximum visual and auditory impact. The Distribution Engine will then guide the marketing and release of the film, analyzing audience demographics to recommend the best platforms for distribution.



The pilot will also undergo a thorough evaluation process to assess its success against key performance indicators (KPIs). These include a 10% reduction in production costs through the use of digital tools, a 30% increase in revenue from improved audience targeting and distribution strategies, and the effective use of NFTs to secure intellectual property and monetize exclusive content. The pilot's success will be measured both qualitatively and quantitatively, based on feedback from stakeholders, technical data on tool performance, and audience engagement levels.

Evaluation and Reporting (Post-Pilot Phase):

The final phase of Pilot 1 involves a complete evaluation and reporting of the pilot's outcomes. Data collected throughout the production and post-production processes will be analyzed to provide insights into the effectiveness of the SCENE platform. A final evaluation report will be produced, documenting the lessons learned, areas for improvement, and stakeholder feedback. This report will serve as a foundation for the refinement of SCENE platform and their future applications in other pilots or commercial productions.

The evaluation phase will ensure that the pilot not only meets its immediate goals of promoting Athens as a premier filming destination but also contributes to the broader objectives of the SCENE project. By showcasing Athens through the lens of international filmmakers and integrating cutting-edge technology, this pilot is expected to boost the city's appeal, attract more international productions, and generate positive economic and cultural impacts for the region.

3.2 High-Level Requirements of Pilot 2 (Cyprus)

The SCENE project pilot in Cyprus aims to increase economic activity in Cyprus from new film productions in the country and awareness for Cyprus cultural heritage sites.

The main objective of this pilot is to integrate advanced digital tools into the filmmaking process, reducing production cost and environment impact from the use of the Location Scouting Engine, 3D Location Modeling with Lighting and Audio Simulations as well as tool for Distribution.

Location Scouting & Management:

A key high-level requirement of the Cyprus pilot is the development and application of the location scouting engine. This tool will be utilized to identify the most suitable filming locations based on various criteria, streamlining the selection process. Four locations have been 3D scanned using visual and audio tools to support the testing of this engine. The aim of this tool is to reduce pre-production costs by 10-20% through efficient remote location scouting, leading to faster and more effective planning for international productions.

Cyprus offers a diverse range of cultural heritage, historical, archaeological, and unique film sites, making it an ideal location for film and exploration. By leveraging the scouting engine, the pilot will promote a more cost-effective, sustainable approach to pre-production, particularly in location scouting and approval, providing filmmakers with easy access to potential shooting environments.

Lighting & Audio Simulation Tools

The further application of the audio and lighting simulation modules will enable a more in-depth exploration of location potential, allowing for the simulation of various scenarios to meet specific filming requirements. In particular, the audio simulation module will create an interactive environment for each 3D location, enabling the auralization of spaces based on room acoustic simulation models. Meanwhile, the lighting simulation module will offer an interactive environment where different lighting scenarios can be applied to scenes. These tools will provide a strong foundation for better production schedule planning and determining

the necessary lighting equipment before the recce and actual production, allowing several key pre-production processes to be conducted remotely.

Post-Production Enhancements

In the post-production phase, the Cyprus pilot will employ advanced audio and visual effects modules to enhance the film's variety and appeal (Audio Effect Engine and Lighting Effect Engine). These digital tools will enable filmmakers to apply additional effects to both visual and audio elements during the editing and special effects stages of post-production.

Blockchain & Intellectual Property Management

A crucial component of the Cyprus pilot is the integration of blockchain technology to ensure the security and management of intellectual property rights (IPR). This approach will safeguard the ownership of digital content and open new avenues for monetization, particularly for rare and exclusive content related to the production. It also offers smaller productions with limited revenue streams the opportunity to generate income, for example through the trade of Non-Fungible Tokens (NFTs), which could include behind-the-scenes content like photos and video clips from filming locations.

Distribution & Audience Targeting

The Cyprus pilot will employ a distribution engine and a recommendation system designed to identify the most effective distribution options, whether targeting specific countries, festivals, events, or local channels, or as part of a larger production. The recommendation system will analyze both the content of the film (e.g., genre, cast, director) and audience data (e.g., previous viewing preferences and demographics) to suggest suitable audiences and platforms.

The aim is to create a marketplace-like distribution platform tailored for smaller independent productions and content seekers, providing essential tools for distributing and monetizing content.

The pilot's ultimate goal is to offer smaller productions more alternative, and potentially new, distribution options, monetization streams, and opportunities for EU co-productions. By closing the existing distribution gap on major platforms like Netflix, Amazon, and other major channels, the pilot will help to support and develop the European film scene.

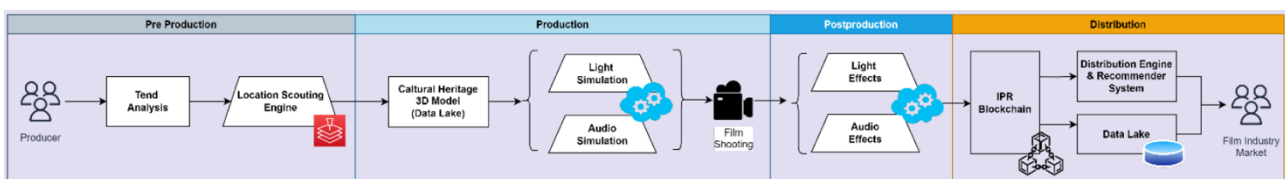


Figure 7: Workflow for film production in the Pilot2, Cyprus (GA, SCENE PROJECT)

In Pilot 2 in Cyprus, the primary goal is to produce a short film from the ideation phase through to distribution, utilizing the SCENE platform and its tools. The objective is to significantly reduce the budget, time, environmental footprint, and effort typically required for these production processes, all while maintaining a high standard of quality. The result will be a film that is not only festival-ready but also suitable for distribution across European channels.

The short film will feature one or several of the following unique locations in Cyprus: Klirou Bridge, Foinikas Village, Panagia Asinou church, and the Panagia Tou Sinti Monastery. These sites showcase the diversity of film locations in Cyprus, ranging from UNESCO cultural heritage sites to deserted villages and ancient archaeological ophiolite formations millions of years old.

3.2.1.1 Klirou Bridge

This site is part of the Troodos ophiolite, a 90-million-year-old fragment of exceptionally well-preserved oceanic crust. It stands as one of the few outstanding examples of how a very ancient section of oceanic crust was uplifted to its current position due to the collision of the African and Eurasian Tectonic Plates and the subduction of the former beneath the latter. The Troodos ophiolite is considered the most complete and best-studied example of its kind in the world.

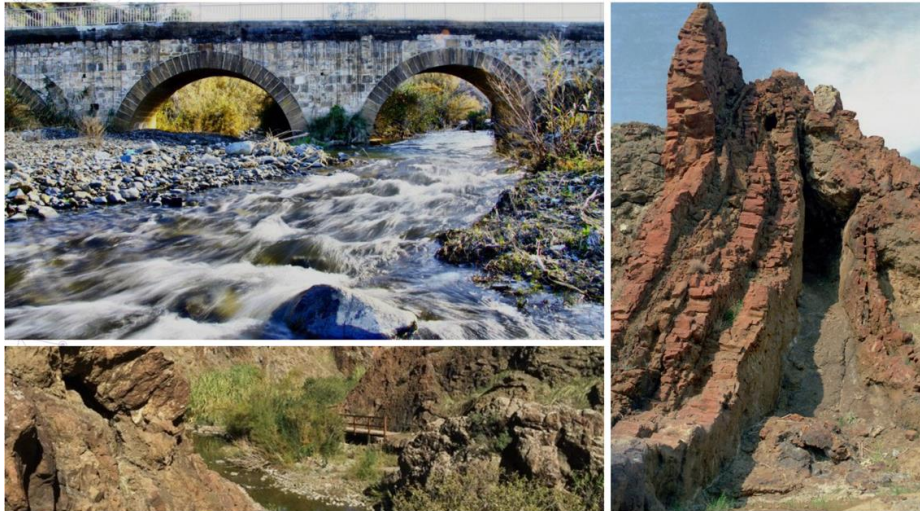


Figure 8: Klirou Bridge

3.2.1.2 Foinikas Village

The abandoned village of Foinikas (Phoenix) is in Paphos. Richard the Lionheart, who captured Cyprus in 1191 AD after defeating the Byzantines, sold the island to the Knights Templar, who used it as a base for their operations. Until 1974, the village was inhabited by Turkish Cypriots who fled after the invasion, leaving it deserted. Since then, Foinikas has become an iconic film destination, serving as a backdrop for a variety of scripts, including those depicting war zones.



Figure 9: Foinikas Village

3.2.1.3 Panagia Asinou church

It is a UNESCO World Heritage Site and features some of the finest Byzantine wall paintings on the island, dating from the 12th to the 17th century. To date, only ten of these churches have been granted World Cultural Heritage status by UNESCO making this location a hidden gem and a beautiful unique filming site.

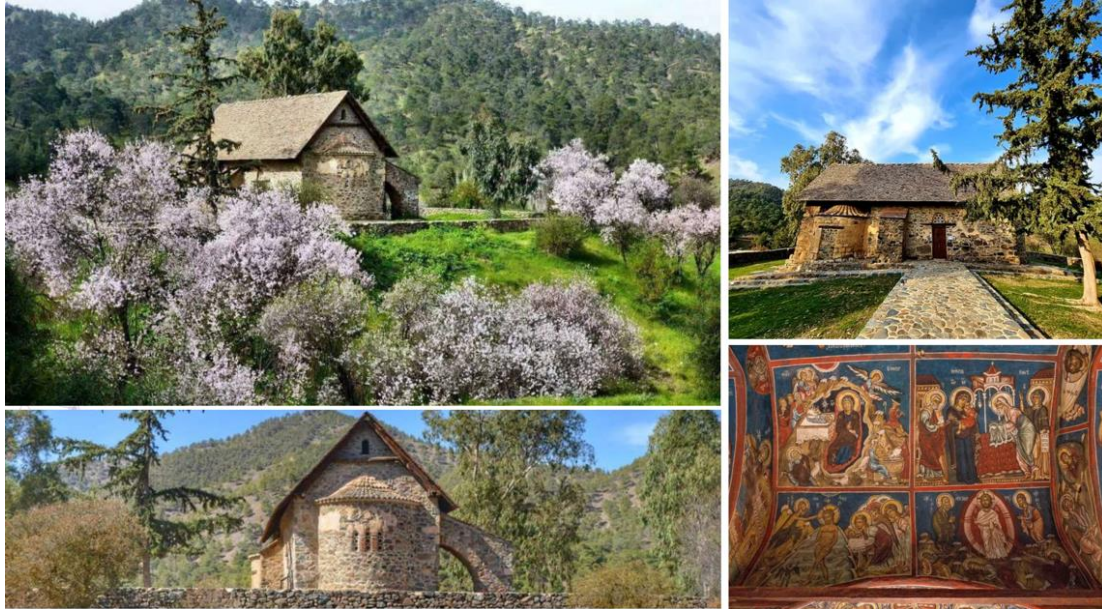


Figure 10: Panagia Asinou church

3.2.1.4 Panagia Tou Sinti Monastery

The abandoned monastery of Panagia tou Sinti is located on the banks of the Xeros River in Pentalia and is dedicated to the Virgin Mary (Panagia) of Sinti. The church, dating back to the first half of the 16th century, features an octagonal dome with four windows and has a well-preserved central nave. It is considered one of the most important buildings from the Venetian period and offers a unique filming site in a picturesque location near Paphos.



Figure 11: Panagia Tou Sinti Monastery

Pre-Production Phase:



For the Cyprus pilot, the pre-production phase is crucial in demonstrating the potential of the SCENE platform for independent and international productions in terms of convenience, time efficiency, budget optimization, and environmental impact.

We begin by developing a script for a short film, complete with synopses and a pitch deck. Simultaneously, we register the project on the SCENE platform to start generating interest from potential viewers, supporters, and buyers, with the assistance of our partners at White Research. At this stage, the producer can also leverage the platform to connect with co-production partners, funding bodies, and independent distribution channels to attract interest and secure financial support.

Once the script is approved and funding is secured, we fully engage with the platform during the pre-production phase. Using the location scouting tool, we identify suitable filming locations and explore their potential using 3D environments with lighting and audio simulations. Once the director pre-approves the locations, key crew members will join in to explore the 3D space and assess their specific needs. Together, they will utilize visuals from the SCENE platform to create a unified storyboard for filming—remotely and in a synchronized flow.

The director will create a detailed storyboard, outlining each shot according to the script and actor placement. The director of photography will test various lenses and framing options for each shot, using lighting simulations to estimate the required equipment and determine the best time of day for shooting. Meanwhile, the art director will evaluate the space and prepare mood boards based on frames from the storyboard. This process is dynamic and iterative, allowing for ongoing adjustments.

Once the detailed storyboard is finalized, all departments will proceed with their preparations: ordering lighting and camera equipment, sourcing or creating props, and finalizing the schedule to move into the production stage, where filming will take place outside the SCENE platform.

Post-Production Phase:

After filming is complete, we transition into the post-production phase, which encompasses key steps such as editing, special effects, sound design, and color grading. During this phase, the Light and Audio Effects tools may be utilized to adjust lighting conditions or add special effects, enhancing both the visual and auditory elements of the film.

Distribution Phase:

Once the final edit is complete, the film is ready for distribution and will be uploaded to the SCENE platform. The Distribution Engine (DE) plays a crucial role in managing the release strategy and providing insights to guide future marketing efforts. The DE monitors the performance of the film's trailer and additional content across various platforms, including social media, analyzing data on viewer demographics and engagement. Moreover, registered buyers and interested parties will have access to the film's teaser and synopsis, allowing them to request a full viewing. If approved, a contract will be automatically generated and decentralized as a license with pre-selected terms, using a smart contract between the producer and the distributor.

The KPIs (Key Performance Indicators) for Pilot 2 in Cyprus include the following:

- Introduce and showcase a new way to do pre-production and location scouting
- Time spent on pre-production and recce
- Costs spent on location scouting and recce
- Ecological footprint during the pre-production
- The number of cultural, historical, and archaeological sites digitally cataloged and promoted for filming purposes



- Audience engagement with the SCENE platform, monitored through platform analytics such as the number of filmmakers, location providers, and audience users actively using the tools.
- Feedback and satisfaction rates from filmmakers, local authorities, and location managers on the usability and effectiveness of the platform

3.2.2 Stakeholders' map of pilot 2

In the context of the SCENE project's Pilot 2 in Cyprus, a diverse array of stakeholders plays vital roles in ensuring the pilot's success, providing expertise, resources, and support throughout various stages of the filmmaking process. These stakeholders include the local film office, the national investment authority, cultural heritage and other unique location owners and, most importantly, local production companies and film professionals.

Their collective objective is to promote Cyprus as a prime film destination, attract more international productions, and continuously develop a more professional infrastructure and talent pool within the country.

3.2.3 Pilot execution plan

The pilot will be executed in distinct phases:

1. **Pre-Pilot Execution Phase:** This phase will focus on site preparation, crew formation, and training, securing necessary permits, and setting up measurement and documentation tools.
2. **Pilot Execution Phase:** During this phase, real-world data collection and tool testing will take place as part of the film production on selected locations across Cyprus.
3. **Post-Pilot & Evaluation Phase:** In this final phase, the results will be analyzed, providing insights for future iterations, and ensuring the continued advancement of the SCENE platform's capabilities.

Pre-Pilot Execution (Preparation Phase)

Before the formal execution of the pilot begins, several preparatory steps will be undertaken to ensure that the necessary infrastructure and tools are in place, particularly those that will be used during the pilot. This includes having the four pre-selected locations from Cyprus ready and uploaded to the platform.

Additionally, this phase involves the pre-selection of the filming crew and the script that aligns with the pilot's preconditions. Finalizing methods to document the workflow and key milestones when using the platform will also be crucial, along with determining how to measure key performance indicators like cost and time reductions for specific phases. These preparations will serve as a foundation for the final report and deliverables, including behind-the-scenes video recordings of the process.

Finally, ensuring ethical and legal compliance, including GDPR considerations, will be a priority before the launch, with all necessary filming permissions secured in advance.

Pilot Execution (Pilot Phase)

The main phase of the pilot will involve the real-time application of SCENE tools during film production. A step-by-step documented process of creating a film from the script to the final edit ready to be distributed with a centralized license type for local screening or festival.

Evaluation & Reporting (Post-Pilot Phase)

Data collection during filming will focus on gathering feedback from users and stakeholders regarding the technical performance of the SCENE tools and the overall production experience. This feedback will be crucial for refining the platform's functionality in later phases.



3.3 High level requirements of Pilot #3 (Italy)

The requirements for the Italian pilot within the SCENE project focus on demonstrating the use of 3D models of cultural sites in the film industry. Specifically, the pilot will need to utilize and enhance existing 3D models of the Basilica of Santa Caterina d'Alessandria in Galatina and develop a new 3D model for De' Monti Castle in Corigliano d'Otranto. The main technical requirements include the production of accurate 3D models, compatible with SCENE's light and audio simulation engines, to facilitate both pre-production planning and actual shooting. Additionally, the creation of digital interactive models and virtual tours of these sites will be essential for promoting cultural heritage to global audiences. The pilot also requires blockchain-based IP protection mechanisms and NFT integration for the commercialization of behind-the-scenes content. The final outputs (i.e., short films, 3D models) must be distributed through SCENE's platform, ensuring accessibility and reusability for future film productions.

3.3.1 Stakeholders' map of pilot 3

The Italian pilot will involve a diverse group of stakeholders, each playing a key role in ensuring its success. The primary stakeholders include cultural heritage managers at the Basilica of Santa Caterina d'Alessandria and De' Monti Castle, who are responsible for granting access to these historical sites and ensuring compliance with local regulations. Film production companies will utilize the 3D models and simulation engines during pre-production and actual filming phases. Additionally, local government authorities in Lecce will be involved to support cultural and economic activities, promoting the sites as prime film locations. The technical teams from CETMA, responsible for 3D modeling and virtual tour production, are crucial in providing the necessary expertise. Moreover, marketing and distribution professionals will manage the global dissemination of the short films and digital content. Finally, the audience, including global film viewers and tourists, represents an indirect but vital stakeholder group, as their engagement and feedback will help validate the pilot's success.

3.3.2 Pilot execution plan

The execution of the Italian pilot will follow a structured, three-phase approach. In the Pre-Pilot Phase, the CETMA team will enhance the existing 3D model of the Basilica of Santa Caterina d'Alessandria and create a new 3D model for De' Monti Castle. This phase also includes setting up SCENE's simulation engines for light and sound, ensuring they are ready for real-world film production applications. In the Pilot Execution Phase, the film production teams will use the SCENE tools to conduct the actual filming at both cultural sites, applying the 3D models to optimize lighting and audio conditions during shooting. Alongside the filming, virtual tours will be created, and blockchain technology will be integrated to secure intellectual property. In the Post-Pilot Evaluation Phase, CETMA will focus on post-production activities, such as applying visual and audio effects, and the use of SCENE's distribution engine to promote the films globally. Feedback from filmmakers and other stakeholders will be collected and analyzed to assess the pilot's performance and refine SCENE tools for future use.

4 Users' Engagement Strategy

One of the pilot process's main foundations is the plan for user engagement. Before the pilot process begins, the stakeholders associated with each pilot, use case and scenario must be identified and contacted. Once

the target users have been selected, a communication plan must be established, explained, and implemented in order to obtain better outcomes and gather relevant input throughout the pilots.

This section presents the list of the strategy that will be followed for the participant's recruitment along with the material that will be developed for the training of the recruited participants.

4.1 User Engagement Strategy

The successive outcome of a pilot is strongly connected to the sufficient participation of the stakeholders. Therefore, it is important to design an engagement strategy to engage the proper stakeholders through the pilot phase. A successful engagement strategy will provide targeted groups of users that will be invited to use the SCENE platform developed in the project and provide feedback. The minimum number of stakeholders that we aim to engage is 50, including producers, location managers and scouters, directors and distributors, and also public administrations, Local Cultural Institutions and museums from around Europe. The first stage in an engagement strategy is to reach out to stakeholders. Contacting stakeholders is critical for gaining valuable feedback on the SCENE platform, including issues that might be raised during its use, or new ideas about extensions that could be made in the platform to cover additional business requirements. The communication and enrollment of the stakeholders can be accomplished through personalized outreach, in which key decision-makers are informed about the pilot's goals, progress, and the project's objectives. Involving them in the feedback process, giving data-driven insights from the pilot, and demonstrating how the SCENE platform may help them during the film making process, will guarantee ongoing involvement and support.

More specifically, each pilot site will engage different types of stakeholders related to the film making industry from different sectors, as producers, film makers, public administrations, Local Cultural Institutions and museums, etc. as presented in section 3. In the first part of the engagement strategy, the leaders of each pilot will gather information and contact numbers for their respective stakeholders, and the consortium's partner contacts, with whom they have been interacted or collaborated in the past. With these stakeholders they will contact and share material about the SCENE project, explaining the project's aim and objectives, as well as the use of the SCENE platform. By following this communication approach, stakeholders will be able to make their initial contact with the project, grasp its scope, and then start a communication funnel with the pilot site leaders about their involvement.

The second step of the user engagement strategy includes the enrollment of the stakeholders. The enrolment process should be simple, with a personalized strategy that includes direct invites, a quick onboarding procedure, and tutorials or webinars to walk customers through their first experiences with the SCENE platform. To achieve this, the following activities will be planned to be performed before the pilot execution phase:

- Organisation of a workshop for the presentation of the SCENE project and demonstration of the SCENE platform
- Distribution of training material

In all of the aforementioned actions, the stakeholders of the first step will be invited to participate. The following section explains the training methodology that will be followed for the stakeholders who will participate in pilots, and the training material that will be prepared.

4.2 Training Methodology – The steps to implement the training strategy

Prior to performing the training within the individual subjects, training material needs to be prepared, where the primary content that needs to be covered shall answer in the following questions:

- What are the prerequisites for performing the training sessions?
- For which stakeholder is this relevant for?



- What am I supposed to learn?
- Which user stories are covered?
- What have I learned?
- What other options could there be? Alternative solutions?

To provide the user with an overview of how to perform the training an initial overview has to be provided. Training material below should provide the user with the possibility to perform the sessions at their own pace and convenience and revisit them whenever needed. Access to material should be granted centrally and the material will be generic to ensure it can cover different use cases.

The initial steps in the training methodology include the following activities:

- Definition of work flows
- Identification of use case needs and scenarios specifications
- Design of training material

This will improve the targeting and tailoring of the pilots to the needs of the stakeholders. Following this initial analysis, the overall design of the training material will be prepared using input from the pilot leaders participating in order to prepare user guides for the SCENE platform. Furthermore, additional training material, as it is described in the next sub-section, will be created.

4.3 Training Material

Initially future users need to have some kind of navigation about how to accomplish the training to be prepared to use the system. Therefore, some initial overview of all training sessions should be provided which shows a learning path and shortly introduces the session's subject.

The following training material should be included within each training session within a given subject area:

- **Introductory Presentations**
- **Short how-to-use Videos** presenting a collection of user stories showing how SCENE platform is used
- **Documentation** with guidelines on how to use each tool of the SCENE platform

New users will then have the possibility to read the introduction at first, and then see the video to familiarize themselves with the use of SCENE platform and its tools.

Due to the differentiation of each use case's scope, each one of them will tailor the tactics to their individual needs. Training can therefore be conducted to support all use cases at the same time. The summarization of the engagement activities that will be organized from the project partners and also the involved organizations and users is presented in the following table.

Table 2: Training and Engagement Activities for the SCENE pilots

Engagement Activities	Training material	Timeplan
SCENE platform Introductory Presentation	<ul style="list-style-type: none"> • Videos • Presentations 	Before pilot execution
SCENE platform demonstration	<ul style="list-style-type: none"> • Presentations • Videos 	Before pilot execution
Use cases platform/ services demonstration	<ul style="list-style-type: none"> • Videos • Presentations • Document – guidelines 	Before pilot execution and during pilot execution (if needed)
Organisation of workshop with pilot actors	<ul style="list-style-type: none"> • Presentations 	During pilot execution
Distribution of training material	<ul style="list-style-type: none"> • Videos • Presentations • Document – guidelines 	Before pilot execution



The training material will be developed and delivered in a variety of formats. The training material will include training elements in the form of documents including guidelines and manuals, videos and presentations (slide sets) for vocational training. Short videos with training context will also be developed as supporting material. To ensure user engagement, training will be divided into the following subjects, and the created material will follow these aspects:

- The SCENE Platform concept and the different tools of the platform
- Accessing of the platform, showing the end users how to get started

Training will be performed based on the scenarios requested per use case. Secondly, training will be performed in a way that makes it possible to perform the training independently afterwards.

According to the needs of the end users, face to face engagement tactics may be employed in each pilot. These tactics are time-consuming, but they are thought to be the most effective approach to impart knowledge to end users. In addition, dedicated workshops per pilot scenario are planned, in which the involved pilot organisations should demonstrate the use of the SCENE platform and the platform/service implemented within each use case. The workshops should be organised in a way that the relevant stakeholders are introduced to the SCENE platform and tools and the benefits arising from their use in the specific pilot scenario.

5 Evaluation methodology

The Evaluation Methodology chapter outlines the structured approach for assessing the SCENE project's pilots across multiple dimensions, including both qualitative and quantitative measures. The chapter will cover the objectives of the evaluation, focusing on the effectiveness of SCENE platform. It will also detail the dimensions of the evaluation, which include user adoption, user perception, economic and cultural impacts, and environmental sustainability. Additionally, it will describe the methods for data collection, including surveys, interviews, and user feedback, as well as the key performance indicators (KPIs) that will be used to measure success. This methodology ensures a comprehensive assessment of the SCENE platform's real-world performance, guiding future refinements.

The evaluation methodology for the SCENE project pilots in Greece, Cyprus, and Italy is grounded in a structured approach that integrates both quantitative and qualitative assessment tools. This approach focuses on measuring the success and impact of the project's innovative use of ICT technologies in the film industry, particularly with respect to cultural heritage, cost efficiency, and public engagement.

Objectives & Key Evaluation Dimensions

The primary objective of the evaluation methodology is to validate the technological tools and approaches implemented in the three pilot locations. The evaluation will focus on several dimensions:

1. **Usage:** The level of adoption and use of SCENE platform and services by filmmakers, cultural site managers, and distribution platforms. Key metrics include the number of locations scouted, the degree of user interaction with the platform, and the efficiency gains in production costs. For instance, in Greece, the goal is to reduce production costs by 10%, while Cyprus aims for a 20% reduction.
2. **User Perception:** The satisfaction and acceptance of SCENE platform by its users. User feedback will be collected to evaluate the ease of use, accessibility, and overall value of the platform. High levels of user satisfaction (>80%) are a key performance indicator across all pilots.
3. **Impact on Cultural Heritage:** One of the core aims is to increase the visibility and awareness of cultural heritage sites in the pilot locations. For example, in Italy, the use of 3D models of the Basilica of Santa Caterina d'Alessandria and De' Monti Castle in Lecce will provide immersive virtual tours



and new content for the film industry. In Cyprus, the project seeks to promote the Troodos ophiolite sites, enhancing their global profile as filming locations.

4. **Economic Impact:** Evaluating the economic benefits that result from the SCENE project is critical. This includes measuring the increase in revenue for the local filmmaking industry, tourism, and related sectors. For Greece and Cyprus, the goal is a 30% increase in revenue from the use of the SCENE platform's distribution engine.
5. **Environmental and Social Impact:** The SCENE project aims to promote sustainable filmmaking practices. Reducing the number of on-site visits through the use of 3D models is expected to lower carbon emissions, contributing to environmental sustainability goals.

Methodology for Data Collection

A combination of formative and summative evaluations will be conducted throughout the project. Formative evaluation focuses on usability and robustness, with key data collection mechanisms including:

- **Heuristic Evaluation and Usability Testing:** Conducted during pre-pilot phases to ensure the platform's tools meet user needs and function effectively.
- **User Acceptance Testing:** To be carried out during the pilot execution, with users providing feedback on the system's functionality and ease of use.

In the summative phase, the following data collection methods will be used:

- **Interviews and Focus Groups:** Collecting qualitative data on user experiences, challenges, and the perceived value of SCENE tools.
- **Questionnaires and Surveys:** Used to gather quantitative feedback on user satisfaction, engagement levels, and the impact on production efficiency and cost.
- **Data Logs and Behavioral Analysis:** Analysis of usage patterns, interaction logs, and the effectiveness of the distribution and recommendation engines.

6 Conclusion & next steps

The SCENE project has made significant progress in setting up and validating its innovative tools aimed at enhancing cultural heritage and film production. This deliverable, D5.2, lays the foundation for effective system integration and testing through structured pilot planning and validation methodologies, taking into account the specific needs and contexts of the different pilot locations: Greece, Cyprus, and Italy.

More specifically, the conclusion and key achievements of the D5.2, demonstrate the successful development of a comprehensive framework for the SCENE project's pilot deployments and validation. This plan outlines structured methodologies for testing and assessing the SCENE platform across various real-world environments, ensuring that the innovative tools and technologies are rigorously evaluated for their functionality, usability, and impact.

Key achievements include the identification of relevant evaluation metrics and pilot scenarios, covering the full spectrum of the film-making pipeline, from planning to distribution. The validation framework integrates diverse data collection methods, such as user feedback, technical performance indicators, and economic impact assessments, to ensure a thorough evaluation of the SCENE platform's tools. These tools include advanced location scouting, 3D modeling, and privacy-preserving audience engagement systems, all designed to support the cognitive film production and promotion of European cultural heritage.

By aligning with the goals outlined in the SCENE project proposal, the D5.2 plan ensures that the pilot validation process effectively measures the platform's performance in real-world conditions. This approach guarantees that the results of the pilot tests will contribute to the ongoing refinement and enhancement of the SCENE platform, supporting its long-term success in the European film-making industry



The next steps involve further refinement of the SCENE platform based on the results from the first round of pilots. The feedback collected during the pilot evaluations will be critical for addressing any usability issues, enhancing technical features, and improving user satisfaction. Specific areas of focus for further work include:

1. **Platform Enhancements:** Refining the tools for greater scalability and adaptability to different film production environments. This includes improving the accuracy and usability of the 3D modeling tools and the efficiency of the location scouting engine.
2. **Expanded Audience Engagement:** Enhancing the audience-building tools by incorporating more sophisticated analytics to capture audience preferences and behaviors more accurately. The integration of real-time social media data and advanced AI-driven recommendation engines will be a key area of development.
3. **IPR and Monetization Mechanisms:** Further exploration of blockchain technology for IPR protection and monetization. The next phase involves fine-tuning the NFT-based IPR mechanisms, ensuring that filmmakers can securely and effectively monetize exclusive behind-the-scenes content.
4. **Sustainability and Economic Impact:** The SCENE project aims to promote environmentally sustainable practices in filmmaking. The further reduction of on-site visits through the use of virtual tools, alongside the measurement of economic impacts on local tourism and the film industry, will be key focuses moving forward.

A second iteration of the pilots will be conducted to further test and validate the improvements made to the platform. This will include:

- Broader engagement with more diverse stakeholders across the cultural heritage, film production, and technology sectors.
- Expanding the geographical scope of the pilots to test the scalability of the SCENE platform in different cultural and environmental contexts.
- Continuous monitoring of key performance indicators (KPIs) to ensure that the platform's economic, cultural, and environmental objectives are met.

The insights gained from these future iterations will inform the final version of the SCENE platform, ensuring it is a robust, user-friendly tool for filmmakers and cultural heritage managers. This will also contribute to the broader goal of enhancing the global visibility of European cultural heritage sites through innovative film production and distribution techniques.