



## Deliverable 4.9

### **Stakeholders Meetings: Discussions' Minutes and Notes 2**

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# 1. Introduction

## 1.1 Purpose

This document presents the second part of minutes and notes kept during meetings and discussions held between the members of the consortium of DESTINI and Cypriot industrial partners and stakeholders of the project for the period from August 2021 until the end of the project (September 2022). These discussions mainly focused on seeking ways to extend the collaboration with the partners based on the research outcomes obtained from the project thus far, through addressing research challenges, and pursuing national/EU-funded calls.

This deliverable is part of Work Package 4 (WP4) that describes the actions needed to be taken by the consortium to engage industrial and business stakeholders and establish direct communication channels for feedback and collection of real-world data that will facilitate experimentation and validation, as well as prepare the road for future piloting. Furthermore, WP4 suggests methods and actions followed by the consortium to extend the community and networks of strategic research collaborators, and support sustainability by attracting EU and national funding in the future.

The meetings were held mostly through teleconferencing means, while for each stakeholder several meetings were performed the number of which depended on the interest exhibited and the potentials of collaboration. This document does not report date/time information but instead it presents a summary of the most significant notes and minutes for each stakeholder.

## 1.2 Definitions, Acronyms, and Abbreviations

CUT: Cyprus University of Technology

CING: Cyprus Institute of Neurology and Genetics

CoE: Centre of Excellence

CYENS: Centre of Excellence (formerly known as RISE)

SBLA: Sewerage Board of Limassol

WBL: Waterboard of Limassol

DCH: Digital Cultural Heritage

## 1.3 Overview

The rest of the document is structured as follows: Sections 2 to 13 describe the major findings from online or physical meetings in the form of minutes and notes, structured around the different organizations-stakeholders. It should be noted that in some cases more than one meeting was performed as a follow up or continuation of the discussions. This deliverable summarizes for each stakeholder the most important findings from all meetings. Finally, Section 14 concludes this deliverable.

## 2. CYPRUS INSTITUTE OF NEUROLOGY AND GENETICS (CING)

Approximately 5 meetings were conducted from which the most significant notes and minutes of the meetings with CING are given below:

### 1. Profile

CING is a bi-communal, medical, research and academic center that combines education, services, and research activities. CING is dedicated to serve the society through preventing diseases and medical care, while offering research and educational programs on neurology and genetics. CING is dedicated to lessening the suffering of patients and their families and preventing diseases through patient care, research and educational programs on neurological and genetic conditions such as muscular dystrophy, multiple sclerosis, epilepsy, chromosomal abnormalities and all other aspects of molecular biology and genetics such as thalassaemia, molecular virology, mental retardation, cardiovascular disease, stroke, cystic fibrosis and neurogenetics. Moreover, CING plays a key role in the fight against crime by providing specialized DNA services to the police authorities and expert court testimony for criminal and civil investigations.

### 2. Subject

Open Discussion with CING for future collaboration on smart data processing for healthcare.

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- CING showed interest on combining smart data processing techniques into seeking ways to solving problems in the sectors of Proteomics and Genomics
- Upcoming European calls for proposals were discussed for possible future collaborations in the sector of combining health care with information technology in a way to make the health care smart
- Applications of Digital Twins, Business Process Mining, and blockchain in health care applications
- A brief introduction has been performed regarding the second school of DESTINI, where CING was invited as a presenter for the topic Complex Patterns of Biological Information Decoded with Network-based Bioinformatics.
- Additional discussions were held about a research project of an ESR at JADS, where in collaboration with CING, the ESR would conduct research about the bacteria in milk.



### 3. PARADISIOTIS GROUP

Approximately 10 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

#### 1. Profile

Paradisiotis is one of the most technologically advanced food production companies in Cyprus. It started in 1975 with one small center, and now it has 4 centers using the latest technology, to ensure the best service for the whole country. Paradisiotis Ltd is not only one of the largest and most accomplished companies in the field of chicken farming in Cyprus but ever since the company's inception in 1975, it has always looked to producing the best products for the Cypriot consumer. The company's mission has, and will always continue to be, to produce tasty, easy to prepare quality products to satisfy the pocket and the needs of every individual person in Cyprus. Paradisiotis Ltd holds approximately 25% of the food product market and thus is due to the fact that the company and its employees adhere values. This value includes teamwork, innovation, quality products, good service and the respect for the needs of the Cypriot consumer, always trying to improve the range of products and services to suits their needs.

#### 2. Subject

Discussions with Paradisiotis Group towards the preparation of a proposal to be submitted in a national in collaboration with CUT, SAPIENZA

#### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Paradisiotis Group showed tremendous interest in submitting joint national proposals, in the context of DESTINI's new research areas
- A joint proposal was prepared and submitted in collaboration with CUT, Sapienza and Paradisiotis Group in the context of a national call CO-DEVELOP (Research and Innovation Foundation of Cyprus). The main objective of the proposal was to combine smart data processing, business process management and Blockchain in a modern technologically advanced industrial environment. The 3 critical targets of the proposal are:
  1. Reduction of energy consumption
  2. Enhancement of food quality produced by Paradisiotis Group
  3. Assurance of the security of important data
- Additionally, during the brainstorming sessions it has been revealed a great potential for addressing additional challenges in the line of business of Paradisiotis Group, specifically:
  - Enhanced monitoring, visualization, identification of bottlenecks for the process of breeding chickens, the slaughterhouse, packaging activities and preparation of food in a technologically modern mill
- The parties agreed to continue the collaboration after the conclusion of the DESTINI project and try to exploit synergies for promoting applied research and delivering solutions to the aforementioned challenges

## 4. CYPRUS SUBSEA CONSULTING & SERVICES

Approximately 3 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

Cyprus Subsea Consulting & Services was founded in 2012 blending academic and technical expertise with seagoing and survey experience. The organization's main mission is to operate, maintain, develop, and supply ocean gliders and other innovative marine monitoring products while delivering excellent marine services.

### 2. Subject

Open Discussion with Cyprus Subsea Consulting and Services for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Cyprus SUBSEA expressed its interest in techniques and technologies revolving around smart data processing, such as IoT, Blockchain, Digital Twins, which could possibly be used to tackle problems and challenges identified in underwater surveillance.
- Specific problems of interest are the measurement of water substances and evaluation of water pollution cases by nearby vessels
- In addition, the two parties established discussions for the development of a digital twin ecosystem, with the water being the area of interest. Visualization, monitoring of the vessels of the area, as well as the alerts for suspicious water substances were a part of the discussion.
- Lastly, the digital twin could be combined with blockchain technology to store the alerts or any other critical data of the digital twin, aiming to achieve irreversibility, security and scalability.

## 5. SEWERAGE BOARD OF LIMASSOL

Approximately 3 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The Sewerage Board of Limassol is responsible for the construction, operation, and maintenance of the central sewerage system for the collection and treatment of municipal wastewater of the central Limassol area, as well as the construction of the basic infrastructure of the stormwater drainage system.

### 2. Subject

Open Discussion with Sewerage Board of Limassol for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- The discussion revolved around problems that SBLA faces regarding the predictive maintenance strategies of the pipelines, and monitoring of the sewerage system as a whole. In this context, ideas for future collaboration have been expressed. Specifically, some issues that the organization faces could be tackled using technologies around smart data processing, such as:
  - IoT Devices
    - Get measurements of critical variables on the sewerage system
  - Digital Twins
    - Effective & efficient monitoring of the system, enhanced by predictive maintenance strategies
  - Smart Data Processing
    - Utilize the data efficiently, handle the data appropriately (data preparation, exploration, modeling, visualization)

## 6. LIMASSOL WATERBOARD

Approximately 4 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The Water Board of Lemesos is a Legal Entity under Public Law. It was established in 1951, operating under the Water Supply (Municipal and Other Areas) Law, Cap. 350. It is managed by a ten-member board, consisting of three members appointed by the Council of Ministers and seven members appointed by the local Municipalities that are supplied with water by the WBL.

The Chairman of the Board is appointed by the Council of Ministers. The Bo'rd's sole purpose is to provide sufficient quantity and quality of water in order to meet the domestic, commercial and industrial needs of its consumers.

Its main concern and focus is to provide the best possible services to its consumers.

This objective is achieved by :

- maintaining and expanding the water supply network;
- planning and implementing technical projects with full respect to the environment;
- imposing water rates to ensure the financing of development projects and the operation of the Board, on a non-profit-making basis;
- upgrading the quality of the services provided, as well as by modernizing its procedures.

### 2. Subject

Open Discussion with Limassol Waterboard for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Analysis of how research area of DESTINI can contribute to the solution of problems that the organization is currently facing
  - Predictive maintenance of the water network
    - Enhanced monitoring
    - Identification of problems
- Introduction to Digital Twins with IoT & Machine learning
- Application of IoT devices to the most important water pipelines of the water network, and ultimately develop a Digital Twin ecosystem that will be combined with machine learning and smart data processing, in order to provide predictive maintenance strategies, monitoring and real-time data visualization. The main issue is that the pipe network is vast, it covers long geographical distances and is located in difficult terrains and inaccessible areas. Therefore, technology for detecting early and accurately any damages or leakages to the network is of paramount importance.
- WBL and CUT agreed to continue discussions until the end of 2022 to be able to find a suitable call for a relevant proposal.

## 7. LIMASSOL MUNICIPALITY

Approximately 3 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

Limassol Municipality is a governmental entity which is responsible to provide public services within the geographic area of Limassol, such as law, cultural, traffic police, cleaning, etc., to the citizens of Limassol. Limassol is a city on the southern coast of Cyprus and capital of the district with the same name. Limassol is the second largest urban area in Cyprus after Nicosia, with an urban population of 183,658 and a metropolitan population of 239,842.

### 2. Subject / Short Description

Open Discussion with Limassol Municipality for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Some of the most important objectives of the municipality align perfectly to DESTINI's research interests
  - Transformation of the city of Limassol into a Smart City, using cutting edge technologies such as machine learning, blockchain, digital twins. All these combined with smart data processing and systems of deep insight. Each technology will contribute to the municipality's strategic plan and DESTINI's objectives as follows:
    - Digital Twins  
Monitor of the Smart City as an entity, using IoT devices for different sectors, such as traffic management, energy conservation, safety measures, etc.
    - Blockchain  
Using blockchain, the city of Limassol can assure the interoperability, immutability and security of crucial data. Blockchain layers can be applied to almost any developed software system.
    - Smart Data Processing  
Smart data processing techniques will be used where applicable, making the processing of the data more efficient, optimizing processes and reducing energy consumption of energy-intensive machinery or services. Special attention will be given to the environment as well. Indicative example is the routes and timetables of garbage collection to avoid causing traffic jam to the city center and optimize routes to save fuel.

## 8. MINISTRY OF ENERGY, COMMERCE AND INDUSTRY

Approximately 3 minutes were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The main objective of the Ministry of Energy, Commerce and Industry, is the development of Cyprus' economy, through the continuous support of the trade sectors, services, industry, energy, technology and tourism, as well as the strengthening of competition and the protection of consumers' interests. Among the Ministry's priorities, is the creation of the appropriate business environment, by implementing the legislation regarding the registration of companies, trademarks, business names and property rights.

### 2. Subject / Short Description

Open Discussion with Ministry of Energy, Commerce and Industry for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Ministry of Energy, Commerce and Industry has expressed its interest to follow the outcomes of DESTINI and invited members of the consortium to join workshops organized by the ministry every year revolving around smart manufacturing and Industry 4.0.
- Ministry of Energy, Commerce and Industry has been invited to the second school of DESTINI to present their mission, governmental strategy and vision towards smart industry

## 9. KPMG (Cyprus Branch)

Approximately 4 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

KPMG is a global network of independent member firms offering audit, tax and advisory services. The firms work closely with clients, helping them to mitigate risks and grasp opportunities. Member firms' clients include business corporations, governments and public sector agencies and not-for-profit organizations. They look to KPMG for a consistent standard of service based on high order professional capabilities, industry insight and local knowledge. KPMG member firms can be found in 153 countries and territories. Collectively they employ 207,000 people across a range of disciplines. Through helping other organizations mitigate risks and grasp opportunities, KPMG can drive positive, sustainable change for clients, KPMG's people and society at large. KPMG leads with a commitment to quality and integrity across the KPMG global organization, bringing a passion for client success and a purpose to serve and improve the communities in which KPMG firms operate.

### 2. Subject / Short Description

Open Discussion with KPMG for future collaboration on BPM

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Discussions revealed a common interest between KPMG Cyprus and DESTINI's consortium to pursue jointly the development of useful and open-source tools that may be adopted by SMEs for their daily business processes analysis. The two parties agreed to explore the possibility of writing and submitting proposals for attracting national or EU finding, which will have as their core approach Process Mining techniques and algorithms, combined with AI and Machine Learning capabilities
- The meetings were also attended by faculty of the Aristotle University of Thessaloniki, Dept. of Computer Science, who have also interest in process mining and supervise a member of KPMG Cyprus for her PhD thesis.
- Synergies were also identified with the faculty of the Aristotle University of Thessaloniki, Dept. of Computer Science, with whom the partners of DESTINI will seek collaboration in the future, research wise and for participating in proposals for attracting external research funding.
- KPMG has been invited to the second school of DESTINI to present "The Art of Process Mining".
- Following up of second school, a short discussion was held around the subject of BPM, regarding various use cases, tools, models and algorithms for BPM

## 10. SOFTONE

Approximately 7 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

SOFTONE is a leading group of business software companies, focused on the development, provision and support of ERP & CRM solutions, Cloud & Mobility services, Professional Accounting solutions, Electronic Invoicing & EDI services. Today, SOFTONE GROUP employs 320 technology experts and industry professionals. The company's award-winning applications and solutions are used by more than 47,000 businesses and are supported through a Network of 600 partners in five European countries. Being one of the first software vendors in Europe to offer its ERP solution as a cloud service (SaaS), SOFTONE GROUP is the undisputed leader of the Greek Cloud ERP market and a decisive player in Southeast Europe with more than 4,500 Software as a Service installations. SOFTONE has a subsidiary in Cyprus.

### 2. Subject / Short Description

Open Discussion with SOFTONE for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- SOFTONE have been invited to the second school of DESTINI to present their presence in the market and how the technologies they use align with DESTINI's JRAs.
- Recently, a memorandum of understanding was signed between CUT and SOFTONE, aiming to bridge the gap between academia and industry. With that being said, the company and CUT will have close and frequent collaboration, on submitting national or EU-funded proposals, or investigating research areas together, placement or internship of students, applied research, processing of ERP data, etc.
- Additionally, recent on-going collaborations with the company have already been established with the consortium of DESTINI, in the area of Business Process Mining.
  - Analysis of the business processes of certain sectors of SOFTONE's clients, using event logs and perform process discovery, leading to BPM model creation. Perform conformance checking to identify bottlenecks in the processes, and define goals for the optimization of the process. Process evolution, enhancements of the business process using machine learning.

## 11. CYENS – CENTER OF EXCELLENCE

Approximately 6 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The Research and Innovation Centre on Interactive Media, Smart System and Emerging Technologies – CYENS Centre of Excellence (formerly known as RISE), empowers knowledge and technology transfer in the region. CYENS CoE is supported by the European Commission, the Republic of Cyprus and its founding Partners, the Municipality of Nicosia, the Max Planck Institute for Informatics (MPI), University College London, the University of Cyprus, the Cyprus University of Technology and the Open University of Cyprus. CYENS, as a Centre of Excellence, cultivates a culture of innovation and creativity in an inspiring environment filled with academics, researchers, creative and onward-looking people, innovators, entrepreneurs, and practitioners. The Centre operates under the moto “Inspired by Humans Designed for Humans” with the vision to produce world class research that drives innovation towards social and economic benefit while conducting excellent, internationally competitive scientific research in the areas of visual sciences, human factors and design, communication, and artificial intelligence. It sets out to meet the challenge with a total potential funding of more than 30 million Euros for the first 7 years, from a Horizon 2020 Teaming Action and multiple other sources, and a business plan for long-term sustainability and growth.

### 2. Subject / Short Description

Open Discussion with CYENS for future collaboration

### 3. Attendees

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#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- CUT in collaboration with CYENS agreed and are currently pursuing a project with the Ministry of Transport, Communications and Works of Cyprus, regarding a driving simulator which will be used along with the traditional driving test examinations, aiming to enhance road awareness, ensure that the drivers acknowledge and follow the traffic rules, and ultimately reduce road accidents caused by human fault
- CYENS will undertake the graphical requirements for the project whereas CUT will undertake the software development part of the project, data visualization and analytics
- The aforesaid project is expected to run after the conclusion of DESTINI
- Further discussions with CYENS revealed many synergies with DESTINI and its areas of interest, mostly on the topic of Digital Twins and the use of such models for decision support.
- The two parties agreed to continue collaboration and frequent communication for brainstorming and sharing of ideas and results achieved by the two groups to explore further the ways for exploiting them.

## 12. ERATOSTHENES CENTER OF EXCELLENCE (CoE)

Approximately 9 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

A new, autonomous, and self-sustained Centre of Excellence, namely ERATOSTHENES Centre of Excellence of the Cyprus University of Technology has been established through the ‘EXCELSIOR’, H2020 Widespread Teaming Phase 2 project. The newly established center has been created as a result of upgrading the existing Remote Sensing and Geo-Environment Lab, which has been operating within the Department of Civil Engineering and Geomatics of the Cyprus University of Technology since 2007. The vision of the ERATOSTHENES Centre of Excellence is to become a world-class Digital Innovation Hub for Earth Observation, space technology and Geospatial Information and to be the reference Centre in the Eastern Mediterranean, Middle East, and North Africa. The Digital Innovation Hub will create an ecosystem which combines state-of-the-art remote sensing, data management and processing technologies, cutting – edge research opportunities, targeted education services and promotion of entrepreneurship. In order to be dynamic and innovative, the Digital Innovation Hub will be based on two major infrastructures, which are a Satellite Ground Receiving Station and a Ground-based atmospheric remote sensing station. ERATOSTHENES Centre of excellence is paving the way for Cyprus to enter the space arena.

### 2. Subject / Short Description

Open Discussion with Eratosthenes Centre of Excellence (CoE) for future collaboration

### 3. Attendees

Name	Department /Division	E-mail
Prof. Andreas Andreou	CUT / Cyprus	<a href="mailto:andreas.andreou@cut.ac.cy">andreas.andreou@cut.ac.cy</a>
Andreas Christoforou, PhD	CUT / Cyprus	andreas.christoforou@cut.ac.cy

Panagiotis Christodoulou, PhD	CUT / Cyprus	paa.christodoulou@edu.cut.ac.cy
Spyros Loizou, PhD Candidate	CUT / Cyprus	spyros.loizou@cut.ac.cy
Michalis Pingos, PhD Candidate	CUT / Cyprus	michalis.pingos@cut.ac.cy
Prof. Diofantos Chadjimitsis	Director, Eratosthenes CoE	phaedon.kyriakidis@cut.ac.cy
Prof. Phaedon Kyriakidis	Eratosthenes CoE	d.hadjimitsis@cut.ac.cy
Prof. Christos Danezis	Eratosthenes CoE	chris.danezis@cut.ac.cy

#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- Teams are trying to pursue collaboration on common interests such as Digital Twins, Earth/Satellite data combining smart data processing and systems of deep insight
- Eratosthenes showed high interest in utilizing methods and approaches of the project, such as Data Lakes, data visualization & analytics, AI-based data processing.
- Members of the DESTINI consortium presented the project to the international consortium of Eratosthenes and ways to combine applied research conducted in both projects were discussed.
- The two parties agreed to continue collaborating and brainstorming in the future, while possible new proposals were identified in the fields of geoinformatics, digital cultural heritage and agricultural, environments and biological sector.

## 13. DIGITAL HERITAGE RESEARCH LABORATORY

Approximately 10 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The Digital Heritage Research Lab was established in 2013 at the Department of Electrical Engineering and Information Technology of the Cyprus University of Technology. The lab is devoted to research on the digitization, documentation, archiving, preservation, protection and promotion of the tangible and intangible Cultural Heritage remains of our past.

### 2. Subject / Short Description

Open Discussion with Digital Heritage Research Laboratory for future collaboration

### 3. Attendees

Name	Department/Division	E-mail
Prof. Andreas Andreou	CUT / Cyprus	andreas.andreou@cut.ac.cy
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Panagiotis Christodoulou, PhD	CUT / Cyprus	paa.christodoulou@edu.cut.ac.cy
Spyros Loizou, PhD Candidate	CUT / Cyprus	spyros.loizou@cut.ac.cy
Michalis Pingos, PhD Candidate	CUT / Cyprus	michalis.pingos@cut.ac.cy

Prof. Marinos Ioannides	CUT -DCH / Cyprus	marinos.ioannides@cut.ac.cy
Prof. Kyriakos Efstathiou	CUT -DCH / Cyprus	kyriakos.efstathiou@cut.ac.cy
Stelios Mappouras	CUT / Cyprus	sm.mappouras@edu.cut.ac.cy

#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- The two teams had discussions regarding EU-funded proposals in the context of creating a cloud-based infrastructure for storing digital cultural heritage
- Additionally, the teams elaborated on storing cultural heritage data into a data lake, blockchain, creating NFTs of the digital heritage items.
- Currently discussions led to the development of a special repository in the form of a data lake for storing digital cultural heritage data. This data consists of structured, semi- structured and unstructured information, such as textual descriptions, ontologies, photographs and videos.
- The two parties went ahead and discussed the potential of a new proposal for tackling trafficking and looting of cultural artifacts. A new proposal was indeed prepared and submitted under the call HORIZON-CL3-2021-FCT-01 - Fighting Crime and Terrorism 2021 with the title Smart and operational platform and tools enabling collective and actionable Insights to jointly fight illegal trafficking of cultural goods (acronym SOTERIA)
- New ways will also be explored in the future for continuing collaboration in the field of smart digital cultural heritage through the engagement of Early-Stage Researchers from the two other countries.

## 14. WATER DEVELOPMENT DEPARTMENT (Lemesos District Office)

Approximately 3 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The Water Development Department is responsible for the protection and sustainable development as well as the rational management of the water resources of Cyprus, in accordance with European and National legislation and within the framework of the Government water policy in force from time to time. The Department is invited to fulfil a number of objectives covering a wide spectrum of actions whose main axes are the following: ensure the maximum possible satisfaction of water requirements for all uses; encourage the effective use of water resources and secure the quality and protection of water sources and the water environment.

The duties and responsibilities of the Department are summarized as follows:

- The planning, study, construction and operation of waterworks such as dams, reservoirs, water conveyance projects, irrigation and water supply networks and water treatment plants.
- Obtaining the necessary quantities of desalinated water through relevant contracts.
- Managing and supplying water from Government Waterworks for various uses.
- Monitoring the water status and the water balance and the preparation and implementation of plans to manage the effects of droughts.
- The Implementation of the national programme for the implementation of European Directive on the Treatment of Urban Waste Water with actions relating to the planning and construction of relevant waste water collection and treatment works.
- The implementation of actions for the protection of surface and ground water bodies.
- The monitoring and assessment of the qualitative and quantitative status of groundwater and surface waters.
- The collection and treatment of hydrological, hydrogeological, geotechnical and other data for the study, maintenance and safety of development works and the protection and management of water.
- The implementation of the provisions of the Evaluation, Management and Handling of Flood Risks legislation.
- The development of a water conscience for the rational use and saving of water
- The management of solid wastes (this field was assigned to the WDD in 2016).



## 2. Subject / Short Description

Open Discussion with the Water Development Department for future collaboration

## 3. Attendees

Name	Department/Division	E-mail
Prof. Andreas Andreou	CUT / Cyprus	andreas.andreou@cut.ac.cy
Prof. Savvas Chatzichristofis	CUT, Neapolis / Cyprus	s.chatzichristofis@nup.ac.cy
Spyros Loizou, PhD Candidate	CUT / Cyprus	spyros.loizou@cut.ac.cy
Stelios Mappouras	CUT / Cyprus	sm.mappouras@edu.cut.ac.cy
Evagoras Evagorou	CUT-Excelsior / Cyprus	evagoras.evagorou@cut.ac.cy
Eliana Tofa Christidou	Director, Water Development Department (Lemesos District Office)	wddlim@wdd.moa.gov.cy
Tsichritzis Dimitrios	Officer, Water Development Department (Lemesos District Office)	wddlim@wdd.moa.gov.cy

#### 4. Discussion notes

- Members of CUT presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- The two teams had discussions regarding EU-funded proposals in the context of addressing the issue of water leakage in the pipe networks of the Water Development Department
- This pipe network has significant characteristics, such as age, type, placement (in cases pipes are found in canyons or other rural areas with very difficult human access).
- The Water Development Department is interested in optimizing its processes and their ability to monitor more efficiently their network.
- Special interest in predictive maintenance for the pipes to avoid loss of large quantity of potable water
- Digital Twins were discussed as a possible solution backbone to addressing the aforementioned challenges.
- New ways will also be explored in the future for continuing collaboration in the field of smart data processing for water leakage detection based on geographical information systems, geolocation, AI and machine learning.

## 15. ARATOS GROUP (Greece)

Approximately 11 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

The Aratos Group of Companies was founded in 2003 in Greece, and was among the first companies in Europe to introduce value-added downstream services to every day people, by delivering tailor made products, designed on user needs and specifications.

### 2. Subject / Short Description

Open Discussion with ARATOS for future collaboration

### 3. Attendees

Name	Department/Division	E-mail
Prof. Andreas Andreou	CUT / Cyprus	andreas.andreou@cut.ac.cy
Prof. Andreas Andreou	CUT / Cyprus	andreas.andreou@cut.ac.cy
Prof. Andreas Andreou	CUT / Cyprus	andreas.andreou@cut.ac.cy
Andreas Christoforou, PhD	CUT / Cyprus	andreas.christoforou@cut.ac.cy
Panagiotis Christodoulou, PhD	CUT / Cyprus	paa.christodoulou@edu.cut.ac.cy
Spyros Loizou, PhD Candidate	CUT / Cyprus	spyros.loizou@cut.ac.cy

Michalis Pingos, PhD Candidate	CUT / Cyprus	michalis.pingos@cut.ac.cy
Stelios Mappouras	CUT / Cyprus	sm.mappouras@edu.cut.ac.cy
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Enrti Metai	CTO ARATOS	emetai@aratos.io
Yannis Dontas	ARATOS	idontas@aratos.io

#### 4. Discussion notes

- Prof. Andreou presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- The two teams had discussions regarding EU-funded proposals in the context of addressing issues of utilizing smart data processing and/or the Blockchain technology for developing intelligent systems to tackle problems in areas pertaining the interests of both parties.
- Particular interest was expressed on applying outcomes of the project in Maritime processes, predictive maintenance and analytics, and the bunkering processes, as well as the broader area of distributed systems and Blockchain.
- New ways were also explored for submitting new proposals for securing funding. In this context three proposals were prepared and submitted as follows:
  - (a) PNYX back to the origins and, (b) Media and Democracy at AGORA2. Both submitted under HORIZON-CL2-2022-DEMOCRACY-01-0
  - Blockchain Enabled Digital Logbooks for Buildings, submitted under HORIZON-CL4-2022-TWIN-TRANSITION-01-09
- In the future, collaboration will be continued in the field of smart data processing for developing practical applications to be adopted in the Maritime sector integrating also smart data processing with AI and machine learning techniques.

- Various meetings were also held for collaboration on specific topics employing blockchain and smart data processing, such as fuel & oil sampling for vessels and issuance of certificates, smart cities, healthcare and tourism.

## 16. BLOCKCHAIN2050 BV (Netherlands)

Approximately 5 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

Blockchain2050 BV is a dynamic SME that implements the latest improvements in Blockchain technology developing secure and innovative blockchain solutions that use standard open-source implementations and provide the much needed transparency.

Based in CIC Rotterdam, the heart of the MIT business ecosystem, blockchain2050 also operates through offices in Athens, Greece and Sofia, Bulgaria.

### 2. Subject / Short Description

Open Discussion with Blockchain2050 BV for future collaboration

### 3. Attendees

Name	Department/Division	E-mail
Prof. Andreas Andreou	CUT / Cyprus	andreas.andreou@cut.ac.cy
Peter Tija	Director, Blockchain2050 BV	info@blockchain2050.io

### 4. Discussion notes

- Prof. Andreou presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel

- The two teams had discussions regarding EU-funded proposals in the context of addressing issues of utilizing Blockchain technology for developing intelligent systems to tackle real-world problems
- Particular interest was expressed on applying this technology on two sectors, Space and Maritime
- New ways will also be explored in the future for continuing collaboration in the field of smart data processing for space applications and integration with Blockchain to offer solutions for the Maritime sector based on AI and machine learning.

## 17. FORCEAPP BV (Netherlands)

Approximately 6 meetings were conducted from which the most significant notes and minutes of the meetings are given below:

### 1. Profile

ForceApp BV is a dynamic SME that implements leading-edge technologies aiming at providing effective homeland security & defense solutions. ForceApp BV main areas of expertise are: Space for Defense, Blockchain for Defense, Counter-Drone Systems, Simulation, as well as Special Solutions and Services designed for Armed Forces applications. ForceApp BV focuses also its activities on Research & Development aiming at leading the technological developments in security and defense sectors. Furthermore, it is official (technical) partner of the Defense Innovation Greenhouse (DIG) which is a non-profit, international innovation, collaboration, and best practice center that aims to accelerate the delivery of the latest technologies into the hands of our crisis responders. In addition, ForceApp BV is partner of the Hague Security Delta (HSD), the Dutch security cluster consisting of over 275 companies, governmental organizations, and knowledge institutions. Last but not least, ForceApp BV has been appointed as member of EDF MIRICLE project consortium that aims at achieving a European and sovereign capacity in the future mine warfare and creating a path for the next generation 'made in Europe' countermeasure solutions.

### 2. Subject / Short Description

Open Discussion with ForceApp BV for future collaboration

### 3. Attendees

Name	Department/Division	E-mail
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#### 4. Discussion notes

- Prof. Andreou presented the project's outcomes thus far along with the new research areas to the stakeholder's personnel
- The two teams had discussions regarding EU-funded proposals in the context of addressing issues of utilizing smart data processing and/or the Blockchain technology for developing intelligent systems to tackle problems in the maritime and military (peace & security) sector
- Particular interest was expressed on applying this technology on port security and Maritime bunkering processes
- New ways will also be explored in the future for continuing collaboration in the field of smart data processing for developing practical applications to be adopted in the Maritime sector integrating also smart data processing with AI and machine learning techniques.

## 18. Conclusions

This deliverable is part of work package 4, and the second and last deliverable including minutes and notes from meetings that took place between the consortium of DESTINI and stakeholders of the project. In total, seventeen (17) companies and (semi)governmental organizations from Cyprus, Greece and Netherlands participated in the meetings, usually on a one-to-one basis and mainly through teleconferencing due to the COVID-19 restrictions. The purpose of the meetings was to discuss about the progress of the project, its research outcomes and their applicability in real world applications of mutual interest. In addition, the parties involved and DESTINI investigated the potential of future collaboration through tackling of research challenges, and/or the submission of proposals for attracting further funding through national or European calls.