



Deliverable D4.4

Stakeholders Training Material and Webinars

Document details:

Editor:	CUT
Contributors:	CUT, UNIROMA, ERISS/JADS
Date:	4 February 2022
Version:	6.0

Document history:

Version	Date	Contributor	Comments
1.0	22/10/2021	Stelios Mappouras Thomas Nikidiotis	Initial document, structure and content
2.0	27/10/2021	Panayiotis Christodoulou, Spyros Loizou, Michalis Pingos, Andreas Christoforou	Additions and corrections
3.0	10/11/2021	Andreas Andreou	First review
4.0	12/11/2021	Panayiotis Christodoulou, Spyros Loizou, Michalis Pingos, Andreas Christoforou, Stelios Mappouras	Corrections and additions
5.0	14/01/2022	Andreas Andreou	Final review
6.0	04/02/2022	Partners	Final review & approval

Contents

1. Introduction	4
1.1 Purpose	4
1.2 Definitions, Acronyms, and Abbreviations	4
1.3 Overview	4
2. Online Trainings and Webinars by Sapienza Università di Roma	5
2.1 First Online Training/Webinar	5
2.2 Second Online Training/Webinar	5
2.3 Third Online Training/Webinar	6
3. Online Training and Webinars by Tilburg University/JADS	7
3.1 First Online Training/Webinar	7
3.2 Second Online Training/Webinar	8
3.3 Third Online Training/Webinar	8
4. Online Training and Webinars by the Cyprus University of Technology	9
4.1 First Online Training/Webinar	9
4.2 Second Online Training/Webinar	9
4.3 Third Online Training/Webinar	10
4.4 Fourth Online Training/Webinar	10
5. Conclusion	11

1. Introduction

1.1 Purpose

The present deliverable is part of Work Package 4 (WP4) that describes the actions needed to be taken from 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, and prepare the road for future piloting.

This document describes mainly the presentations and any other supplementary content produced and delivered during online webinars on Smart Data that were created by the consortium mainly for training DESTINI's stakeholders and collaborators. These webinars were delivered by experts from the Sapienza Università di Roma, the Tilburg University, and the Cyprus University of Technology. The consortium decided to perform stakeholder trainings through webinars and recorded talks, as opposed to physical meetings, due to the constraints posed by the covid-19 virus outbreak. The webinars produced were communicated to DESTINI's stakeholders and collaborators, followed by a short introduction to the evolution of the project thus far through teleconferencing means. In certain cases, a follow up telco was performed which was mainly concentrated on answering potential questions and on seeking ways to collaborate further with a stakeholder via case-studies and pilot applications. These are described in other deliverables of WP6.

The material provided is accessible through the links provided under each topic. The online talk/webinar is provided through DESTINI's YouTube channel and can also be accessed by the general public.

1.2 Definitions, Acronyms, and Abbreviations

CUT: Cyprus University of Technology

BPM: Business Process Mining

1.3 Overview

The rest of the document is structured as follows: Sections 2, 3 and 4 include material from the online training webinars/workshops provided by the Sapienza Università di Roma, the Tilburg University, and the Cyprus University of Technology respectively. Section 5 concludes the deliverable.

2. Online Trainings and Webinars by Sapienza Università di Roma

2.1 First Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Business Process Management
Link:	https://youtu.be/utgqqEbfwVI
Facilitator/Presenter:	Francesca de Luzi (PhD candidate)

Subject / Short Description

In this webinar, a general introduction to BPM - Business process management, is presented. Business process management (BPM) is the discipline in which people use various methods to discover, model, analyze, measure, improve, optimize, and automate business processes.

2.2 Second Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Process Mining: Tools and Techniques
Link:	https://youtu.be/5mhiu95k20s
Facilitator/Presenter:	Dario Benvenuti (PhD candidate)

Subject / Short Description

In this webinar, a general introduction to Process mining, is provided. Process mining is a family of techniques relating the fields of data science and process management to support the analysis of operational processes based on event logs. The goal of process mining is to turn event data into insights and actions. Process mining is an integral part of data science, fueled by the availability of event data and the desire to improve processes.

2.3 Third Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Industry 4.0 – IoT Based Digital Twins
Link:	https://youtu.be/vpsS54YHpps
Facilitator/Presenter:	Dr. Massimo Mecella Dr. Francesco Leotta

Subject / Short Description

In this webinar, an introduction to Industry 4.0 is presented. Moreover, the concepts of Digital Twins, and how to build them, are also introduced, with some research insights. The webinar is based on a tutorial given at the Intelligent Environments 2021 conference, as part of the work of the DESTINI project.

3. Online Training and Webinars by Tilburg University/JADS

3.1 First Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Big Data Processing with Apache Spark
Link:	https://youtu.be/y6cCempZPNY
Facilitator/Presenter:	Dr. Indika Kumara

Subject / Short Description
<p>Big data processing systems provide programming models to access large-scale data to extract useful information for supporting and providing business decisions. Apache Spark is one of the most popular big data processing systems. It provides a unified framework and a programming model for batch and real-time stream data processing. Spark is built on top of the MapReduce model, one of the most popular programming models for big data processing. This webinar first provides an introduction to the architecture and programming models of Spark. Next, it discusses the batch data processing with Spark, including data frame APIs, data sources, and data sinks. Finally, the webinar presents Spark's support for stream data processing, including window-based even processing.</p>

3.2 Second Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Sodalite Use Cases and Tools
Link:	https://youtu.be/GWvKjkbzuis
Facilitator/Presenter:	Dr. Indika Kumara

Subject / Short Description

Many enterprise applications need to utilize ad-hoc and optimized infrastructures to efficiently execute specific categories of jobs or components, for example, big data processing jobs or deep learning model training jobs. With the aim of simplifying the adoption of heterogeneous infrastructures ensuring the possibility to fine-tune performance, the SODALITE (Software Defined Application Infrastructures management and Engineering) framework offers modeling and runtime features to simplify the creation, the deployment, and operation of complex applications that require the adoption of heterogeneous computational environments. This webinar first provides an overview of the SODALITE framework and then present and demonstrates there use cases of the SODALITE, namely, snow use case, clinical trials use case and vehicle IoT use case. The focus is on the realization of the use cases using the SODALITE framework.

3.3 Third Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Community Smells 101
Link:	https://youtu.be/80C-xGb9QaY
Facilitator/Presenter:	Dr. Gemma Catolino

Subject / Short Description

This webinar presents recent work about community smells, including some background information about Community Smells. Community Smells is a set of socio-technical characteristics and patterns, which may lead to the emergence of social debt, which can lead to the increase of the project cost.

4. Online Training and Webinars by the Cyprus University of Technology

4.1 First Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Automated Machine Learning (AutoML): A practical Approach
Link:	https://youtu.be/Sut-oc6IbAs
Facilitator/Presenter:	Thomas Nikidiotis (Msc. candidate)

Subject / Short Description

The webinar is presenting a system tries to automatize Machine Learning process: After the cleaning and training of the data, the system trains some appropriate models and algorithms, in order to find the optimal algorithm and visualize it to the user. Also, the system supports parallel predictions, it receives a csv the features we want to predict, and it returns a new csv with the predicted results.

4.2 Second Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Smart Data Processing for Public Safety Through Image and Video Analysis
Link:	https://youtu.be/1gFACnsYt5U
Facilitator/Presenter:	Kyriakos Aristidou (Bsc)

Subject / Short Description

The webinar described a final year thesis project for obtaining bachelor's degree and is entitled "Smart Data Processing for Public Safety Through Image and Video Analysis". The project's purpose is to create an application to detect hazards in public places, such as fire, theft, fights, etc., with the use of Artificial Intelligence and Computer Vision. The presentation explains the methodology followed in this project, describes the violation rules that the application can detect and presents case study results of certain hazards detection.

4.3 Third Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Extraction of useful Information for Business and Organizations using Web Scraping
Link:	https://www.youtube.com/watch?v=KzGIGqz5-IQ
Facilitator/Presenter:	Timoleon Charilaou (Msc. candidate)

Subject / Short Description

The webinar describes the creation of a Web Application for the Extraction of Useful information for Businesses and organizations using Web Scraping technique, specifically in the fields of Cryptocurrency and Forex. Using the Web Application, the user can create and use their own web scrapers, that will scrape data from the provided sources and visualize the results. Furthermore, they can compare sources and view charts based on Forex and Cryptocurrency data.

4.4 Fourth Online Training/Webinar

Workpackage:	WP4 – Team Building and Engagement of Stakeholders
Training Topic:	Smart Health Record Based on Digital Twins
Link:	https://youtu.be/NjWoYI2qieQ
Facilitator/Presenter:	Stelios Mappouras (Msc. candidate)

Subject / Short Description

This webinar presents the 4th year thesis project of bachelor's degree students namely "Smart Health Record Based on Digital Twins". Smart Health Record Digital Twin consists of a Digital Twin that represents the data of a patient's health file and a Web Application to manipulate the data. It aims to make diagnosis and therapy of patients more effective, as well as to minimize the error factor on drug prescription

5. Conclusion

In the context of Work Package 4, a number of online training talks and webinars were prepared and published by the consortium of DESTINI. The aim of this material is to transfer scientific knowledge on a number of relevant topics in the area of Smart data processing to a group of stakeholders and collaborators of the project. In this context, Sapienza di Roma delivered three webinars related to BPM and digital twins, Tilburg University/JADS delivered three webinars related to smart data processing, and the Cyprus University of Technology delivered four webinars on topics covering the contribution of machine learning to smart data processing, digital twins and web scraping.

The online talks are accessible through DESTINI's YouTube channel and are open not only to the project's group of stakeholders and collaborators but also to the general public. This material is anticipated to support the consortium's effort to disseminate the scientific results of the project and to identify potential areas to develop case-studies and experimental setups, and thus facilitate real-world applied research.