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# Optimised Real-time Yard and Network Management

## D7.1 Data Management Plan

Leader of this Deliverable: UIC

Reviewed: yes

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Dissemination Level		
PU	Public	X
CO	Confidential, restricted under conditions set out in Model Grant Agreement	
CI	Classified, information as referred to in Commission Decision 2001/844/EC	

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Duration: 24 months

## EXECUTIVE SUMMARY

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The aim of the Data Management Plan (DMP) is to manage data used and generated within the OptiYard project. It describes how data will be collected, processed, stored and managed from the perspective of external accessibility and long-term archiving.

More precisely, the DMP will address the following points:

1. Type of data that will be generated and utilised within OptiYard. This section identifies and describes:

- The input data that is utilised for modelling and simulation.
- The output data that is generated by the models and evaluations.

2. Standards used

3. How data is exploited and shared/accessed for their verification and reutilisation. The exploitation of data will follow the strategies of each partner concerning their business potential, in accordance to the exploitation plan produced in WP7, and in accordance to the access to data by the partners specified in the Consortium Agreement.

4. Data storage and conservation. An internal sharing IT tool called “Workflow Tool” is used by the project partners.

This tool will offer the possibility to allocate different rights to both the members and the deliverables or documents for a practical application of the DMP. The IT tool will provide access to project outcomes and documents according to the DMP policies established for each resource and target group.

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## LIST OF ABBREVIATIONS AND ACRONYMS

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ABBREVIATIONS AND ACRONYMS	DESCRIPTION
DMP	Data Management Plan
JU	Joint Undertaking
NA	Not Applicable
S2R	Shift2Rail
UIC	Union Internationale des Chemins de Fer
WP	Work Package

## 1. INTRODUCTION

The present Data Management Plan (DMP) details what data the project will generate, whether and how it will be exploited or made accessible for verification and re-use, and how it will be curated and preserved. This document is to be considered in combination with:

- Section 9 “Access Rights” and Attachment 1 “Background included” of the Consortium Agreement, dealing with access rights and the use of the Workflow Tool.
- Section 3 “Rights and obligations related to background and results” of the Grant Agreement No. 777594, dealing with rights and obligations related to background and results.

The DMP is organised per Work Package (WP) to concretely describe the contribution of each WP to the outcomes as well as the spin-off potential of each activity.

To understand the data that the project will generate, a brief overview of the project is given below:

To meet the needs of S2R and Horizon 2020, OptiYard will design optimised processes for managing marshalling yards and terminals, considering their interaction with the network. The processes considered are those that must be performed in real-time, to guarantee on-time delivery and operational efficiency, for single wagon transport.

OptiYard addresses critical operational points of the transport chain (both rail marshalling yards or as transfer points to other modes) to improve capacity and reliability. Most importantly, these improvements will enhance competitiveness whilst increasing service reliability and customer satisfaction by providing accurate and updated information. Real-time interaction between yard and relevant network IT systems will allow for software-based planning and ultimately optimisation of single wagonload and blocktrain operational processes.

The lack of full integration between yard and network is a current weakness, and one that increases as more real-time data becomes available, because we will miss the opportunities to realise the benefits of such improved data. Hence, there needs to be much more progress in developing the integration of information systems and control systems between the yard systems and the network systems. It is in this field where OptiYard offers the most exciting possibilities.

Large rail freight marshalling yards are complex operations which present major challenges to achieving operational efficiency, such that managing them effectively even in a stand-alone mode is a challenging task, for which sophisticated scheduling systems are required. The arrival and departure of freight trains to/from the yard are closely linked to the operations of the wider network eco system, making some of the yard operation processes (shunting, marshalling and departing train dispatches) more time-critical than others.

Thus, a key challenge to the future success of yard management lies in the real-time information exchange between the yard and the relevant network eco system, and the interactive responses between the yard

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and the network managements. With such information capabilities, yard operations could be rescheduled at short notice to take account of perturbations on the network, such as the delayed arrival of an incoming freight train, allowing rapid re-optimisation of yard operations. Real-time network information could also be used to identify more accurate departure times for trains leaving yards, again allowing for beneficial rescheduling of yard operations.

Hence, OptiYard develops a holistic approach to providing a real-time decision-making framework for optimising yard operations and the yard-network interface.

The technical WPs will address the following areas:

WP2 Data Analytics

WP3 Specification of the OptiYard Simulation Environment

WP4 Modelling

WP5 Process Optimisation

WP6 Business Cases - Feasibility & Simulation Tests

WP7 Dissemination, Communication and Results Exploitation



## 2. DATA MANAGEMENT AT PROJECT LEVEL

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### 2.1 DATA COLLECTION

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Data exchange is crucial in this project to allow an efficient and reliable connection between the yard and the surrounding network. For simulation purposes, data will be stored and used, which makes necessary to define the corresponding data management plan. In addition to this data used for the technical aspects of the project, there is also a need for defining the rules concerning data related to management and dissemination activities.

Each Work Package Leader is responsible for defining and describing all (non-generic) data sets specific to their individual work package.

The WP leaders shall formally review the data sets related to their WP when relevant and at least at time for first and second project periodic report to the European Commission.

All modifications and additions to the DMP shall be provided to the OptiYard Coordinator, UIC, for inclusion in the DMP.

### 2.2 DATA ARCHIVING & PRESERVATION

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A Workflow Tool platform was created to support the work of the consortium members. For access to the website, users can register to the tool with a valid e-mail address, need to choose a password and have then to validate a link received by e-mail. Once done, the administrator of the workflow tool has to validate the registration to the OPTIYARD workspace. Beneficiaries who do not have access to the website can ask the Coordinator to open an account.

OptiYard Partners are strongly suggested to use the website to share project information. The main functionality that should be used is the upload and download of documents (contact list, deliverables, minutes of meetings, agendas, presentations, Technical Annex of the Grant Agreement, etc.).

An instruction manual on how to use the Workflow Tool is circulated among beneficiaries; the document is also accessible on the website (Tutorial for all Project Members).

At the end of the project, when the OptiYard will be formally closed, all the data material that has been collated or generated within the project and registered on the Workflow Tool shall be copied and transferred to a digital archive.

#### 2.2.1 Data Security & Integrity

The OptiYard project will be subject to the same levels of data security as applied to normal operations for the Workflow Tool within UIC.

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All data types that are uploaded to the Workflow Tool shall not be encrypted, irrespective of whether these data items have been identified for future archiving or not.

Members are granted with access rights in the Workflow Tool according to their role in the project.

Rights apply to directories, calendars and documents. They define which parts can be seen and which actions can be done and by which group(s). Rights are therefore given to group(s) on objects like directories, calendars and documents.

Every rights settings interface looks the same. Only the list of rights is different. Below is an example of rights applied to directories. There are rights to “view” the directory, “modify” it, “export” it, “assign” or “unassign” a user to it. All members of the project have access to all documents and meetings in the tool.

All partners contributing in a work package are given rights to create new documents.

The Coordinator has overall project administration rights, enabling to administrate the complete project document database.

When the Coordinator intends to modify a WP domain, he has an obligation to inform relevant WP leaders about the changes he intends to bring to the document database.

### 2.2.2 Document Archiving

The document structure and type definition will be preserved as defined in the document breakdown structure and work package groupings specified for the Workflow Tool.

The process of archiving will be based on a data extract performed by UIC within 12 weeks of the formal closure of the OptiYard project.

## 2.3 FILE NAMING CONVENTIONS

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Whenever a new document is produced within the project, it must be uploaded on the Workflow Tool. Before a document is uploaded, a unique document code must be assigned according to the following subsections that describe how this identification code is structured and set up.

The identification code contains the six following sections:

**[Project] – [Domain] – [Type] – [Owner] – [Number] – [Filename]**

- [Project] is OptiYard for all OptiYard documents
- [Domain] is the relevant domain in the Workflow Tool (WP, Task or project body)
- [Type] is one letter defining the document category
- [Owner] is the trigram of the deliverable leader organisation

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- [Number] is an order number allocated by the publisher when the document is first created
- [Filename] is a short description of the document

Examples:

Project Code	Domain (3-4 characters)	Type (1 letter)	Owner (3 letters)	Number (3 digits)	Filename
OptiYard	TMC	B	UIC	001	qmlskq
OptiYard	SMC	T	UIC	002	Oslkqmlj
OptiYard	WP1	P	UIC	003	mlkjsql

For documents being circulated internally without having been uploaded on the Workflow Tool first, there should be significance in the filename as follows: the project name, WP name, type, partner sharing the document, and filename should be mentioned (i.e. OptiYard\_WP1\_A\_UIC\_001\_WBS).

Documents are classified among the following types:

Letter	Name	Description
A	Administrative	Any administrative document except contractual documents
B	Meeting Agenda, Presentation or Minutes	Meeting Agenda, Presentation or Minutes
C	Contractual document	Consortium Agreement, Grant Agreement and their approved amendments
D	Deliverable	Deliverable identified as such under the Grant Agreement
E	EC document	Document provided by EC (general rules, guidelines or EC experts documents)
M	Model (template)	MS-Office document templates including OptiYard visual identity
P	Periodic Report	All intermediate/periodic reports except those listed as deliverables. May be a WP intermediate report or a project intermediate report requested by the Grant Agreement but not listed as deliverable.
R	Deliverable Review Sheet	Filled review sheet used to gather peer review comments on a deliverable. It can be also used to comment any other internal document when explicitly agreed or requested by its owner.
S	Risk Sheet	Filled risk sheet
T	Technical contribution	Technical document contributing to a task/deliverable but not part of the deliverable
W	Proposal	Proposal for changes to the Consortium Agreement or Grant Agreement
X	External document	Document produced by non-members of the project (e.g. papers, reports, external public deliverables...) that, upon authorisation of the author(s), are shared with the project due to its relevancy.

## **2.4 DATA & SHIFT2RAIL**

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The OptiYard deliverables and all other related generated data are fundamentally linked to the future planned Shift2Rail project activity.

The data requirements of this DMP have been developed with the objective of providing data structures that are uniform and not subject to possible future ambiguous interpretation that will facilitate synergies.

Data shall be specifically selected for archiving based on the criteria that it will be likely to be useful for future Shift2Rail activities.

### 3. DMP OF WP1: MANAGEMENT

#### 3.1 DATA TYPES

Existing data used in this WP include the following data types:

Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
OptiYard-1.1	Database of consortium partners: this database contains data such as name, e-mail, company, telephone.	.xls	Evolutionary depending on the updates of the mailing list.	The data will be kept in the UIC servers in accordance with the provisions of Regulation (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

**Table 1: Existing Data used in WP1**

No additional data are planned to be generated in this WP.

#### 3.2 STANDARDS, METADATA AND QUALITY ISSUES

No specific standards and metadata are planned to be used for data related to WP1.

#### 3.3 DATA SHARING

Code	Data Sharing
OptiYard-1.2	This data is confidential and only the consortium partners will have access to it.

**Table 2: Data Sharing in WP1**

#### 3.4 ARCHIVING AND PRESERVATION

Code	Archiving and preservation
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OptiYard-1.1	Data will be stored on the UIC server.
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**Table 3: Archiving and preservation of the data in WP1**

### **3.5 DATA MANAGEMENT RESPONSIBILITIES**

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<b>Code</b>	<b>Name of Responsible</b>	<b>Description</b>
OptiYard-1.1	Giancarlo DE MARCO TELESE (UIC)	Update and maintenance of the data

**Table 4: Data Management Responsibilities in WP1**

## 4. DMP OF WP2: DATA ANALYTICS

### 4.1 DATA TYPES

Existing data used in this WP include the following data types:

Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
RailData ISR	ISR, the IT service used by railway undertakings to exchange information about wagons' movements	Data are used to enrich the movement information with the consignment data (transport description)	Large	<a href="http://www.raildata.coop/isr">http://www.raildata.coop/isr</a>
RNE (TIS)	The Train Information System is a web-based application that supports international Train Management by delivering real-time train data concerning international (partly national) passenger and freight trains. The relevant data is obtained directly from the Infrastructure Managers' systems.	Fully TAF/TAP TSI-compliant	Large	<a href="http://tis.rne.eu/">http://tis.rne.eu/</a>
XML files	For data exchange in marshalling facilities. XML is a file extension for an Extensible Mark-up Language (XML) file format used to create common information formats and share both the format and the data on the World Wide Web, intranets, and elsewhere	XML is similar to HTML. Some marshalling yards use this format for data exchange.	Large	A Marshalling yard/facility

	using standard ASCII text.			
XSD Schema file;	To keep file of operating processes with freight trains. A file with the XSD file extension is most likely an XML Schema file;	A text-based file format that defines validation rules for an XML file and explains the XML form. XML files can reference an XSD file with the schema - Location attribute.	Large	MYS, RUs and IMs
railML	<p>railML is published as a series of XML schemas holding subschemas, each of which encompasses a particular field of railway application:</p> <ul style="list-style-type: none"> <li>• Common concepts and objects, sometimes not mentioned separately;</li> <li>• Timetable (TT);</li> <li>• Rolling stock (RS);</li> <li>• Infrastructure (IS), both macroscopic and microscopic;</li> <li>• Interlocking, from railML 3 on.</li> </ul>	railML is a data exchange format developed by a consortium of railway companies, academic institutions and consultancy firms.	Large	railML.org

**Table 5: Existing Data used in WP2**

No data are planned to be generated in this WP.

## 4.2 STANDARDS, METADATA AND QUALITY ISSUES

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Data sources have been identified. For the purposes of WP 2 data has not been generated.



### 4.3 DATA SHARING

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Code	Data Sharing
OptiYard-2.1	Information collected from public sources; used for the purposes of D2.1

**Table 6: Data Sharing in WP2**

### 4.4 ARCHIVING AND PRESERVATION

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Code	Archiving and preservation
OptiYard-2.1	For internal use and the purposes of D2.1

**Table 7: Archiving and preservation of the data in WP2**

### 4.5 DATA MANAGEMENT RESPONSIBILITIES

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Code	Name of Responsible	Description
OptiYard-2.1	Marin Marinov, UNEW	Data identified is not confidential

**Table 8: Data Management Responsibilities in WP2**

## **5. DMP OF WP3: SPECIFICATION OF THE OPTIYARD SIMULATION ENVIRONMENT**

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### **5.1 DATA TYPES**

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WP3 sets out and describes the technical and functional specifications of the models for yards and networks, and as such does not utilise formal data sets, or produce formal datasets for subsequent work packages.

### **5.2 STANDARDS, METADATA AND QUALITY ISSUES**

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WP3 discussed issues to address in developing a data management interface for real-time yard and network management system. The key elements identified are summarised below:

- Real-time animation facilitated by flexible simulation tools
- Clear specification of metadata sets
- Online reporting on the productivity of the rail freight system
- IT security in accordance with ISO 27001:2013
- Documentation of performance monitoring and updates
- Search facilities for metadata inspection and interrogation
- Common data structure and interface, for data portability
- Common specification for real time management interface

### **5.3 DATA SHARING**

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Any identified data will be shared via the UIC server.

### **5.4 ARCHIVING AND PRESERVATION**

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Any identified data will be stored via the UIC server.

### **5.5 DATA MANAGEMENT RESPONSIBILITIES**

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Not applicable.

## 6. DMP OF WP4: MODELLING

### 6.1 DATA TYPES

Existing data used in this WP include the following data types:

Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
OptiYard-4.1	Trieste Campo Marzio terminal track layouts	jpeg pdf dwg	10 MB	Adriafer Confidential
OptiYard-4.2	Trieste Campo Marzio schematic track diagrams with signalling	Tiff pdf	10 MB	Adriafer
OptiYard-4.3	Trieste Campo Marzio CAD drawing	dwg	2 MB	Adriafer Confidential
OptiYard-4.4	Trieste Campo Marzio surrounding railway network maps	pdf	10 MB	Adriafer
OptiYard-4.5	Trieste Campo Marzio anonymised train schedules	pdf	100 kB	Adriafer
OptiYard-4.6	Ceska Trebova terminal track layouts	dwg	500 kB	CD Cargo/Oltis confidential
OptiYard-4.7	Ceska Trebova schematic track diagrams with signalling	xlsx	1.5 MB	CD Cargo
OptiYard-4.8	Ceska Trebova CAD drawing	dwg	500 kB	CD Cargo/Oltis confidential
OptiYard-4.9	Ceska Trebova surrounding railway network maps	various formats	10 MB	CD Cargo
OptiYard-4.10	Ceska Trebova anonymised train schedules	various formats	1 MB	CD Cargo
OptiYard-4.11	Ceska Trebova anonymised wagon lists for inbound trains	xlsx	1 MB	CD Cargo/Oltis confidential

**Table 9: Existing Data used in WP4**

Data generated in this WP include the following types:

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Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
OptiYard-4.12	Ceska Trebova Yard Model (non-optimized operation)	Executable (installation package)	50 MB	SIMCON
OptiYard-4.13	Ceska Trebova Yard simulation results (non-optimized operation)	Results are part of the simulation model with stored simulation protocol from simulation run (included in installation package)	see executable with yard model	SIMCON/CD Cargo confidential
OptiYard-4.14	Trieste Yard Model (non-optimized operation)	Executable (installation package)	50 MB	SIMCON
OptiYard-4.15	Trieste Yard simulation results (non-optimized operation)	Results are part of the simulation model with stored simulation protocol from simulation run (included in installation package)	see executable with yard model	SIMCON/Adriafer confidential
OptiYard-4.16	Ceska Trebova Network Model	executable	1 MB	LEEDS
OptiYard-4.17	Ceska Trebova Network simulation results	various formats	50 MB	LEEDS
OptiYard-4.18	Trieste Network Model	executable	1 MB	LEEDS
OptiYard-4.19	Trieste Network simulation results	various formats	50 MB	LEEDS

**Table 10: Data Generated in WP4**

## 6.2 STANDARDS, METADATA AND QUALITY ISSUES

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All the data produced within this work package will following the rules set in chapters 2.2 and 2.3.

### 6.3 DATA SHARING

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Code	Data Sharing
OptiYard-4.20	The identified data is shared via the UIC server.

Table 11: Data Sharing in WP4

### 6.4 ARCHIVING AND PRESERVATION

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Code	Archiving and preservation
OptiYard-4.21	Data is stored on the UIC server.

Table 12: Archiving and preservation of the data in WP4

### 6.5 DATA MANAGEMENT RESPONSIBILITIES

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Code	Name of Responsible	Description
OptiYard-4.22	Miloš Zařko (SIMCON)	Update and maintenance of non-optimized yard simulation models

Table 13: Data Management Responsibilities in WP4

## 7. DMP OF WP5: PROCESS OPTIMISATION

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### 7.1 DATA TYPES

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Data generated in this WP include the following types:

Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
OptiYard-5.x	Ceska Trebova Yard Model with interface to optimization module	Executable (installation package)	50 MB	SIMCON
OptiYard-5.x	Trieste Yard Model with interface to optimization module	Executable (installation package)	50 MB	SIMCON

### 7.2 STANDARDS, METADATA AND QUALITY ISSUES

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We use the XML standard fixed by the following (and typical) code:

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
```

All the data of our XML data model follows the W3C standard.

We use two categories of files. The metadata of the first one gathers the static data (e.g., yard layout, signals, available operations). The second file groups the data which can change over time (e.g., trains/cars, yard locomotive).

The following quality issues will be handled:

We obtain a standardized XML model with the software Oxygen XML Editor. This editor integrates the latest version of the Xerces-J XML parser to validate documents against XML Schemas, i.e., the documents are "Well-Formed", and also conform to the rules of a Document Type Definition (DTD), XML Schema, or other type of schema that defines the structure of an XML document.

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We declare all the types and structures data through the software (lists, lists of lists etc.). As a result, we obtain a normalized schema, saved in a '.xsd file". The same software generates automatically all the documentation explaining in detail the different metadata used for the two types of file.

### **7.3 DATA SHARING**

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<b>Code</b>	<b>Data Sharing</b>
OptiYard-5.x	The identified data is shared via the UIC server.

### **7.4 ARCHIVING AND PRESERVATION**

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<b>Code</b>	<b>Archiving and preservation</b>
OptiYard-5.x	Data is stored on the UIC server.

### **7.5 DATA MANAGEMENT RESPONSIBILITIES**

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<b>Code</b>	<b>Name of Responsible</b>	<b>Description</b>
OptiYard-5.x	Miloš Zařko (SIMCON)	Update and maintenance of yard simulation models with interface to optimization module

## 8. DMP OF WP6: BUSINESS CASES - FEASIBILITY & SIMULATION TESTS

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### 8.1 DATA TYPES

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Existing data used in this WP include the following data types:

Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
Optiyard-6.1	Mainly input from the other WP	Mainly Word and Excel files	Variable	Respective WP leaders
OptiYard-6.2	Mainly input from the other WP	Mainly Word and Excel files	Variable	Respective WP leaders
OptiYard 6.3	Mainly input from the other WP	Mainly Word and Excel files	Variable	Respective WP leaders

**Table 14: Existing Data used in WP6**

Data generated in this WP include the following types:

Code	Description of Dataset / Digital Output	Units and Format	Size	Ownership
Optiyard-6.1	Agenda, minutes, reports, slides...	Word, Excel and PPT files	Variable	WP leader (UIRR°)
OptiYard-6.2	Agenda, minutes, reports, slides...	Word, Excel and PPT files	Variable	WP leader (UIRR)
OptiYard 6.3	Agenda, minutes, reports, slides...	Word, Excel and PPT files	Variable	WP leader (UIRR)

**Table 15: Data Generated in WP6**

## 8.2 STANDARDS, METADATA AND QUALITY ISSUES

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All the data produced within this work package will following the rules set in chapters 2.2 and 2.3.

## 8.3 DATA SHARING

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Code	Data Sharing
Optiyard-6.1	Data will only be shared with the project partners. Sharing with third parties will only be possible with prior consent of the SMC.
OptiYard-6.2	Sharing with third parties will only be possible with prior consent of the SMC.
OptiYard 6.3	Sharing with third parties will only be possible with prior consent of the SMC.

**Table 16: Data Sharing in WP6**

## 8.4 ARCHIVING AND PRESERVATION

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Code	Archiving and preservation
Optiyard-6.1	Stored and archived until the end of the project on the UIC server – after the project lifetime: at least until the official end of the period of an internal/external audit
OptiYard-6.2	Stored and archived until the end of the project on the UIC server – after the project lifetime: at least until the official end of the period of an internal/external audit
OptiYard 6.3	Stored and archived until the end of the project on the UIC server – after the project lifetime: at least until the official end of the period of an internal/external audit

**Table 17: Archiving and preservation of the data in WP6**

## 8.5 DATA MANAGEMENT RESPONSIBILITIES

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Code	Name of Responsible	Description
Optiyard-6.1	Eric FEYEN (UIRR)	Storage and maintenance of all related data for task 6.1
OptiYard-6.2	Eric FEYEN (UIRR)	Storage and maintenance of all related data for task 6.2
OptiYard 6.3	Armand CARILLO (EURNEX)	Storage and maintenance of all related data for task 6.3

**Table 18: Data Management Responsibilities in WP6**

## 9. DMP OF WP7: DISSEMINATION, COMMUNICATION AND RESULTS EXPLOITATION

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### 9.1 DATA TYPES

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Existing data used in this WP include the following data types:

Code	Description of Dataset/Digital Output	Units and Format	Size	Ownership
OptiYard-7.1	Images: Images and logos from partners participating in the project.	.eps, .ai, .png, .jpeg	Variable	The owner gives permission to UIC to use images for dissemination purposes of OptiYard.
OptiYard-7.2	Database of Advisory Board: this database contains data such as name, e-mail, company, telephone and field of expertise of the partners participating in the Advisory Board.	.xls	Evolutionary depending on the updates of the mailing list.	The data will be kept in the UIC servers in accordance with the provisions of Regulation (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

**Table 19: Existing Data used in WP7**

No specific data is planned to be generated in this work package.

## 9.2 STANDARDS, METADATA AND QUALITY ISSUES

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The pictures and logos are stored in common formats: vector image formats and picture compression standards.

## 9.3 DATA SHARING

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Code	Data Sharing
OptiYard-7.1	The data will not be shared but some of the image database will be used for dissemination purposes and therefore will become public.
OptiYard-7.2	This data is confidential and only the consortium partners will have access to it.

**Table 20: Data Sharing in WP7**

## **9.4 ARCHIVING AND PRESERVATION**

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Code	Archiving and preservation
OptiYard-7.1 and 7.2	Data will be stored on the UIC server.

**Table 21: Archiving and preservation of the data in WP7**

## **9.5 DATA MANAGEMENT RESPONSIBILITIES**

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Code	Name of Responsible	Description
OptiYard-7.1 and 7.2	Giancarlo DE MARCO TELESE (UIC)	Update and maintenance of the data

**Table 22: Data Management Responsibilities in WP7**

## **10. CONCLUSION**

The purpose of the Data Management Plan is to support the data management life cycle for all data that will be collected, processed or generated by the OptiYard project. The DMP is not a fixed document but evolves during the lifespan of the project. This document is expected to mature during the project; more developed versions of the plan could be included as additional revision of this deliverable at later stages. The DMP will be updated at least after the mid-term and final reviews to fine-tune it to the data generated and the uses identified by the consortium since not all data or potential uses are defined at this stage of the project.