D1.2 SMARTHANDLE – Data Management Plan 1

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Abstract

As Industry 4.0 paradigm introduces interconnectivity between production resources, the fields of Artificial Intelligence (AI) and Big Data are finding applicable scenarios into the production shopfloor. This introduces an exponential increase on the amount and type of data required to be maintained for a functional production integration system. SMARTHANDLE utilizes the fields of AI and Big Data to facilitate Human-Robot-Collaboration (HRC) in diverse production environments followed by different type and amount of data, thus emerging the need of constructing a Data Management Plan (DMP). This document serves as the initial version of DMP with the goal to perceive the lifecycle of collected/generated data, describe the methodology of keeping these data safe, define the accessibility and reusability of data, describe how data will be used through the lifespan of the project and address the compliance of maintained data to Findable-Accessible-Interoperable-Reusable (FAIR) principles. Additionally, this document provides an initial insight into applicable Ethics during the handling of personal data in the lifespan of the project. Data Management Plan is open to facilitate changes during the entire project's duration. Therefore, as this document is the initial version the DMP delivered in M06, two more DMP versions will be provided during the SMARTHANDLE project. In particular, D1.3, D1.4 which are due on M18, M36 respectively. The goal is to provide up-to-date versions adhering and adapting to changes in the data needs.

Executive summary

This document outlines the data management methodology to be utilized in the SMARTHANDLE project. The methodology aims to ensure the proper handling of data collected and generated during the project's activities throughout its lifecycle. The DMP also identifies the steps needed to make data Findable, Accessible, Interoperable and Re-usable, properties commonly abbreviated as FAIR. Also, the document outlines security measures, and addresses ethical considerations surrounding data collection/generation.

The DMP is a constantly evolving document within the SMARTHANDLE project and will be updated as necessary throughout the project's progression, taking into account its advancements and results. Updates are going to be documented in two versions of this document D1.3, D1.4 which are due on M18, M36 respectively. This first version of DMP is submitted in M06 of the project and is based on the most recent information available at the time of delivery.

The DMP is structured in the following sections:

- Section 1 provides introductory information about the DMP, the context in which it has been elaborated as well as about its objectives and structure.
- Section 2 presents a summary of the data to be collected or/and generated during the activities of SMARTHANDLE including the purpose of its collection/generation as well as its types and formats. Additionally, it outlines its origin, expected volume and the stakeholders that may find it useful.
- Section 3 describes the methodology that is applied in the framework of SMARTHANDLE in order to safeguard the effective management of data across their entire lifecycle, making it FAIR.
- Chapter 4 estimates the resources required for making the project's data FAIR, while also identifying data management responsibilities.
- Chapter 5 outlines the data security strategy applied within the context of SMARTHANDLE along with the respective secure storage solutions employed.
- Chapter 6 addresses ethical aspects as well as other relevant considerations pertaining to the data collected/generated during the implementation of the project.
- Chapter 7 concludes on the next steps foreseen in the framework of the project with respect to its data management plan.