



DELIVERABLE 2.2

GUIDELINE AND PROTOCOL DOCUMENT FOR THE BUILDING BLOCK “ROMs”

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¹ **Types. R:** Document, report (excluding the periodic and final reports); **DEM:** Demonstrator, pilot, prototype, plan designs; **DEC:** Websites, patents filing, press & media actions, videos, etc.; **OTHER:** Software, technical diagram, etc.

² **Dissemination levels. PU:** Public, fully open, e.g. web; **CO:** Confidential, restricted under conditions set out in Model Grant Agreement; **CI:** Classified, information as referred to in Commission Decision 2001/844/EC.

Executive Summary

This deliverable describes the guidelines and protocols that must be followed to deploy the second building block of the STREAM-OD service. The STREAM-OD turn-key service will consist of a collection of protocols and methodologies to be implemented in production lines (particularized to each production line) with the aim to convert said lines into zero-defect production lines.

The STREAM-OD solution will generally consist of five building blocks: i) Industrial requirements; ii) Reduced Order Models; iii) Online data gathering and data analysis; iv) Adaptive control and v) Integration.

The second block “Reduced Order Modelling” consists in: i) the identification of the essential KPIs to be predicted by the simulation model and the critical input parameters that influence the KPIs; ii) the identification, development and validation of the base simulation model that will predict the KPIs as a function of the values of the critical input parameters; and iii) the development and verification of the ROM that will be able to predict the KPIs in real time as the values of the input parameters change at the pace of the production line.