

## EPOS WP 7 - Dissemination

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Course & manual for Osmose & EPOS tools 1

D 7.2

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## Summary

Deliverable D7.2 *Course & manual for Osmose & EPOS tools I* disseminates the basics of installing Osmose software and using it to create integrated system models for optimising process systems.

Installation guides are provided for the three most common operating systems of Windows, Mac OS, and Linux and provide stepwise instructions for installation. An introduction to Osmose, its capabilities and theory of operation are presented to understand the basic concepts of utilisation.

An in-depth tutorial is provided to guide new users through the steps of creating the elements described in the manual in order to provide a basis for completing and understanding the different parts of the Osmose platform. Links to university lectures are provided which describe the theoretical background for optimisation and system modelling/integration for users who require a deeper understanding of the principles underlying the Osmose language and methodology.

The front end interface of Osmose is where users interact to set up the integration scenario with respect to interaction between different facilities, data to be loaded and what technologies are to be used in the scenario. Commonly-used options for completing the calculations and optimisation are described with as part of this first user-facing construction. The necessary aspects for completing a meaningful and powerful optimisation are described in detail as to the main functions and the construction of the script using the Osmose language.

Engineering technologies define the different processes to be used for the calculation scenarios and operate at the core of Osmose. They are comprised of layers, units, streams, inputs and outputs. Each of these nomenclatures is thoroughly described with the functions, options and specific syntax required for constructing ET models.

Additional computations and interaction with additional software packages and the detailed aspects of interacting with each respective portion of Osmose are covered in detail. This allows the user to conduct a thorough analysis of a system and its interactions to identify targets for optimal integration. Some insights to interpreting the results of an Osmose simulation are presented to guide the user through the final stages of the study.

These elements, combined, yield a comprehensive and detailed user manual for installation and use of the Osmose platform for integrated system optimisation.