

Open Digital Twin Platform for Research on Mobility

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1 Background and motivation

The project aims to create a platform that allows the community to more efficiently share, interconnect and enrich their models and data. This should then facilitate the process of gaining knowledge and finding solutions towards achieving a sustainable and efficient transportation system:

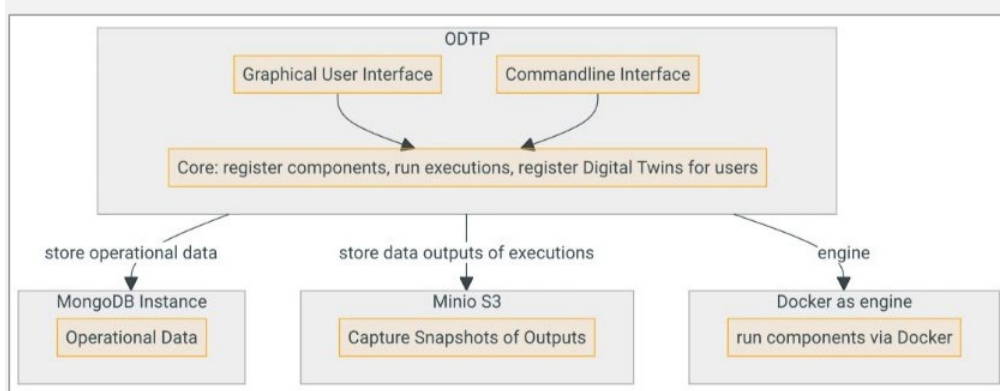
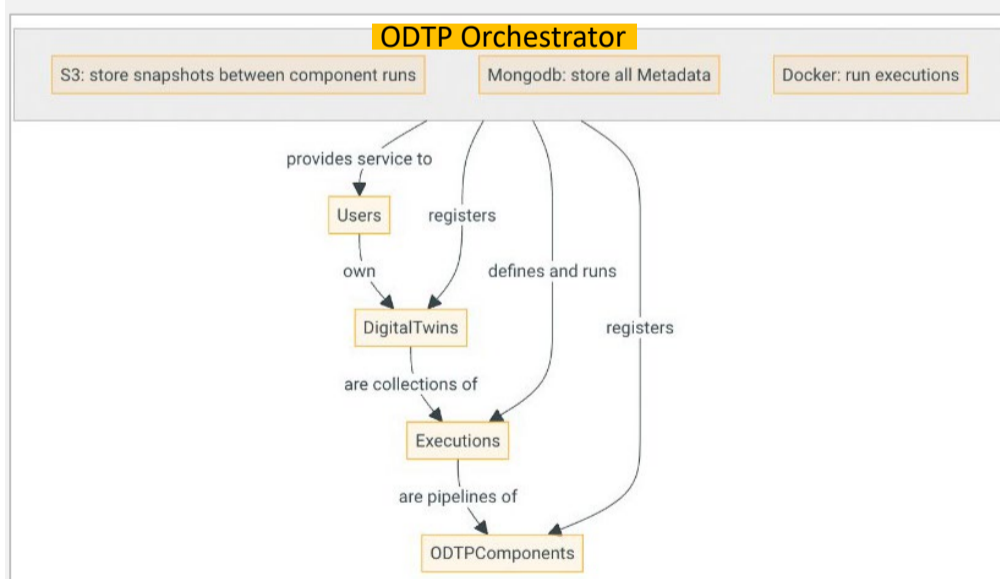
- Building on high quality data sets and models available to the CSFM community.
- Allow exploring possible transformation paths of the Swiss mobility systems.

2 Open Digital Twin Platform

- **Orchestrator:** The application behind ODTP, it can be installed and run in a server or locally.
- **Components:** Tools made available to be run and combined in ODTP
- **Workflows:** combination of components into pipelines
- **Zoo:** a collection of ODTP validated Components

3 Orchestrator

- The application behind ODTP



4 Components

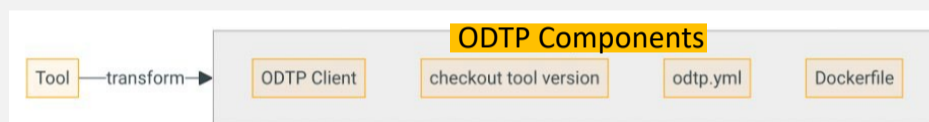
Components are **tools** made available in ODTP. They should include:

A Dockerfile: that builds the Component as Docker image, so that it can be run by the ODTP Orchestrator

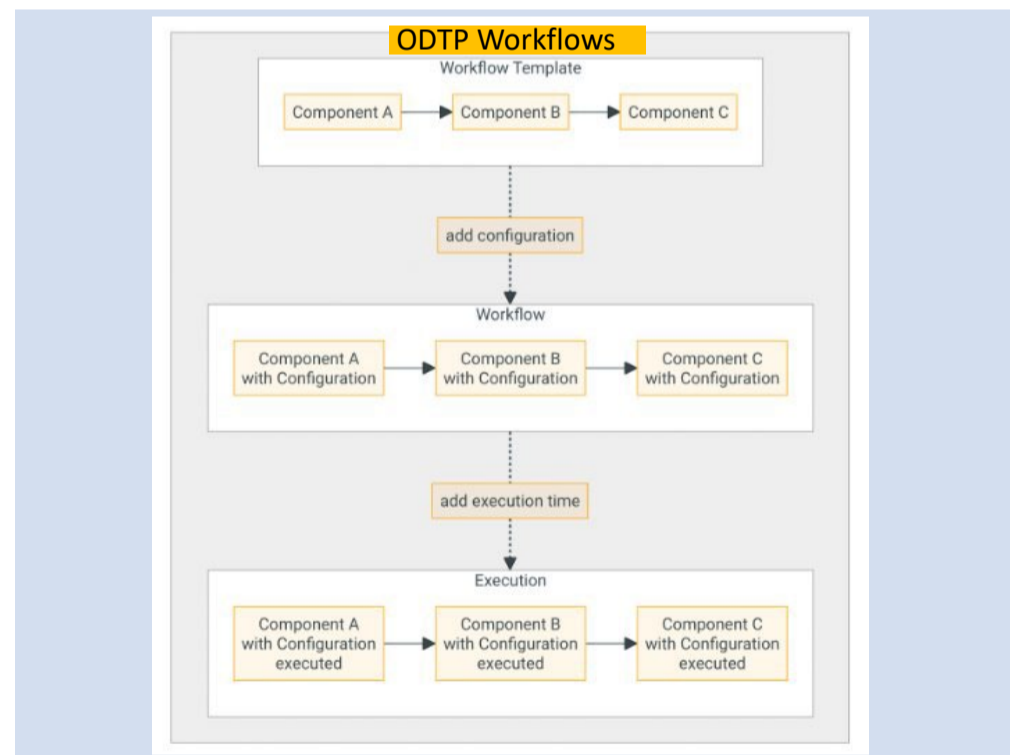
An App script: that will be started in the Docker container. It runs the tool and communicates its outputs, results and logs to the ODTP orchestrator

An ODTP client library is installed in the Dockerfile, so that the App script can use predefined functions to communicate with the ODTP orchestrator data)

odtp.yml file: The documentation file for the component



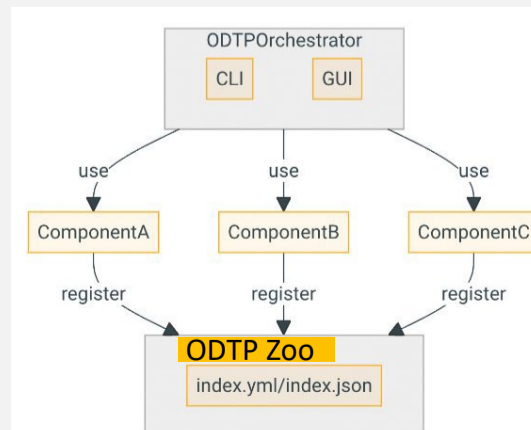
5 Workflow



6 Zoo

A ODTP zoo is a **collection of ODTP Components** that have been validated and can therefore be used by the ODTP Orchestrator to build Executions.

<https://github.com/odtp-org>



Funded by:

swissuniversities