openMDM®

Plan. Measure. Share

Open Source Platform for implementing Test Data Management

Peak Solution

Dr. Hans-Jörg Kremer

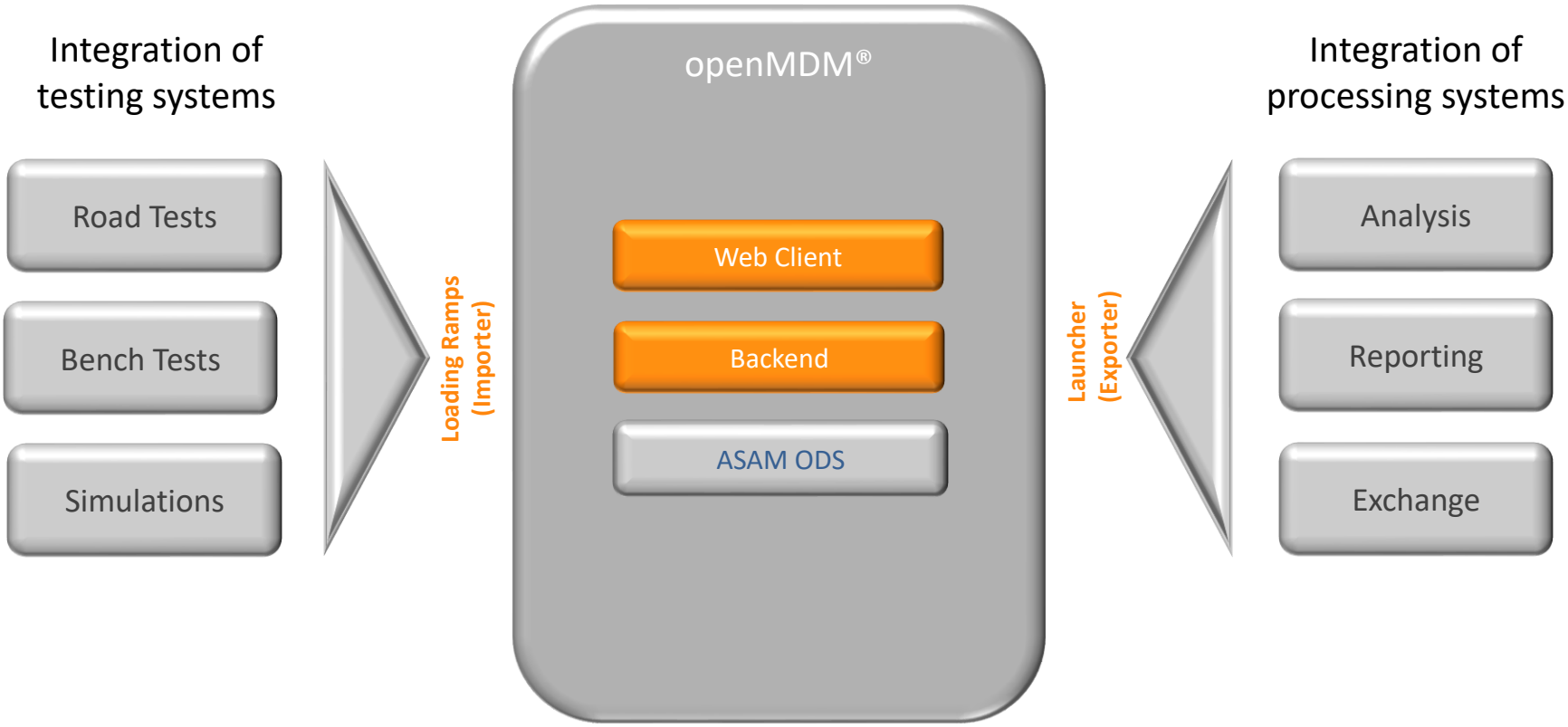
openMDM®

Features

- Independent from specific measurement and analysis tools (vendor-neutral)
- Flexible adaptable to different and changing requirements of varied test domains
- Scalable in terms of data volume, number of users and local use
- Capabilities to protect data from unauthorized access
- Reliable basis for fulfilling documentation and proof obligations

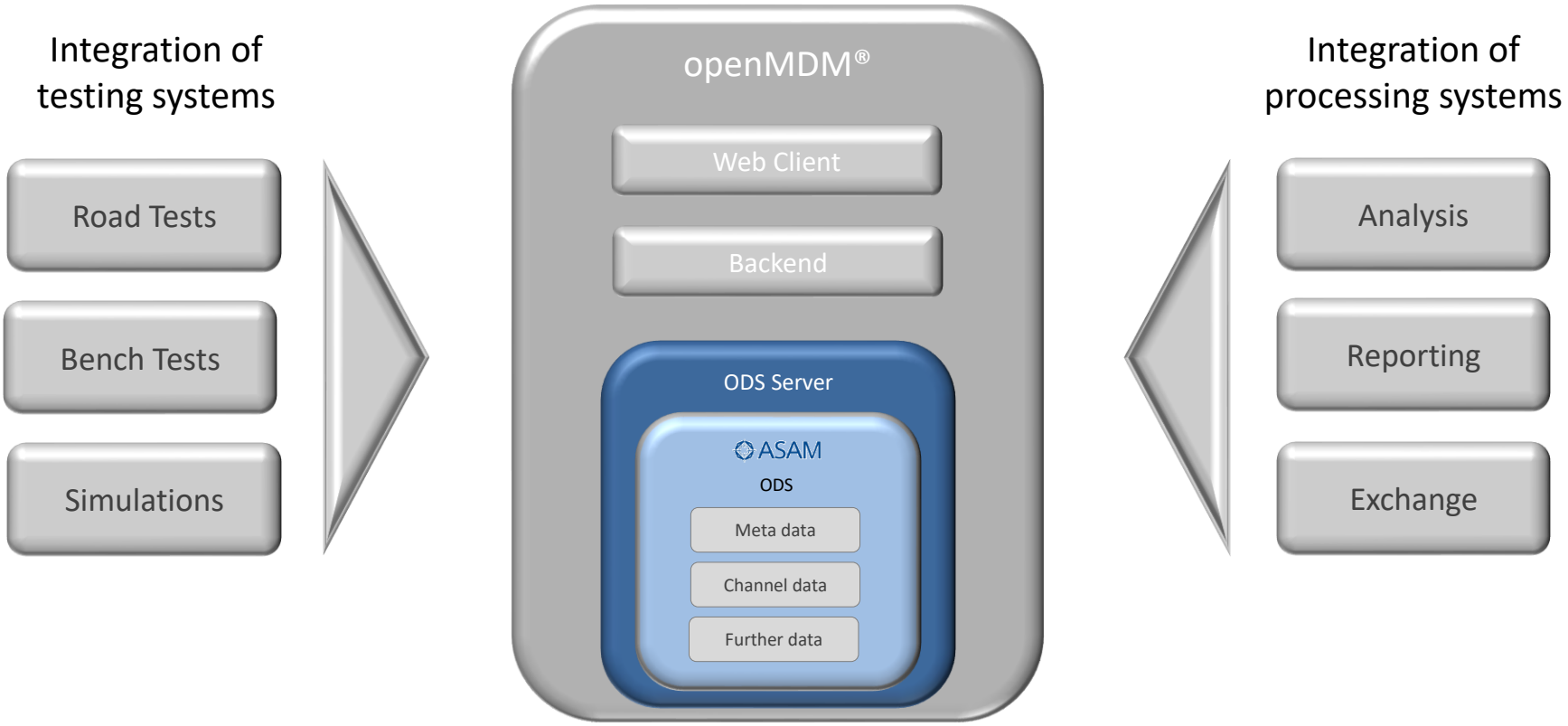
openMDM®

Platform for Test Data Management



openMDM®

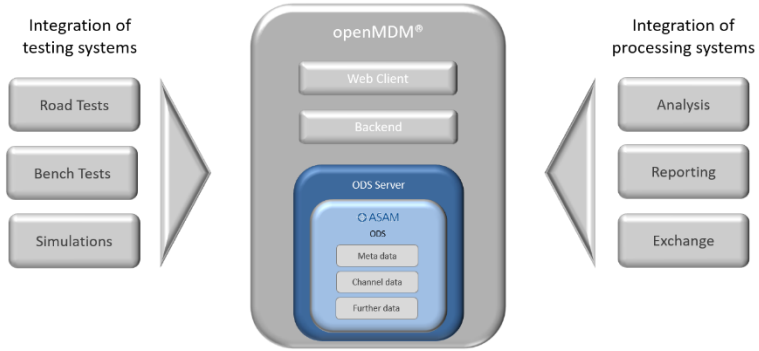
Test Data Management based on ASAM ODS



openMDM®

Test Data Management based on ASAM ODS

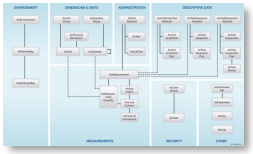
- Uniform storage of **test data** coming from different sources
- Comprehensive information regarding the test context (**meta data**)
- Semantically unambiguous interpretation of stored test data
- Supported by a variety of ODS-compliant software tools



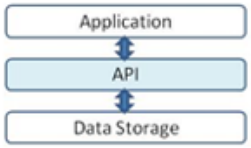
openMDM®

ASAM ODS – scope of the standard

- **Base Data Model**
  Well defined data elements with respect to syntax and semantics

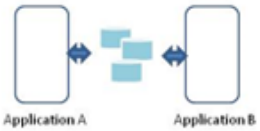


- **Application Programming Interface (API)**
  Standardized interface for storing and retrieving the database



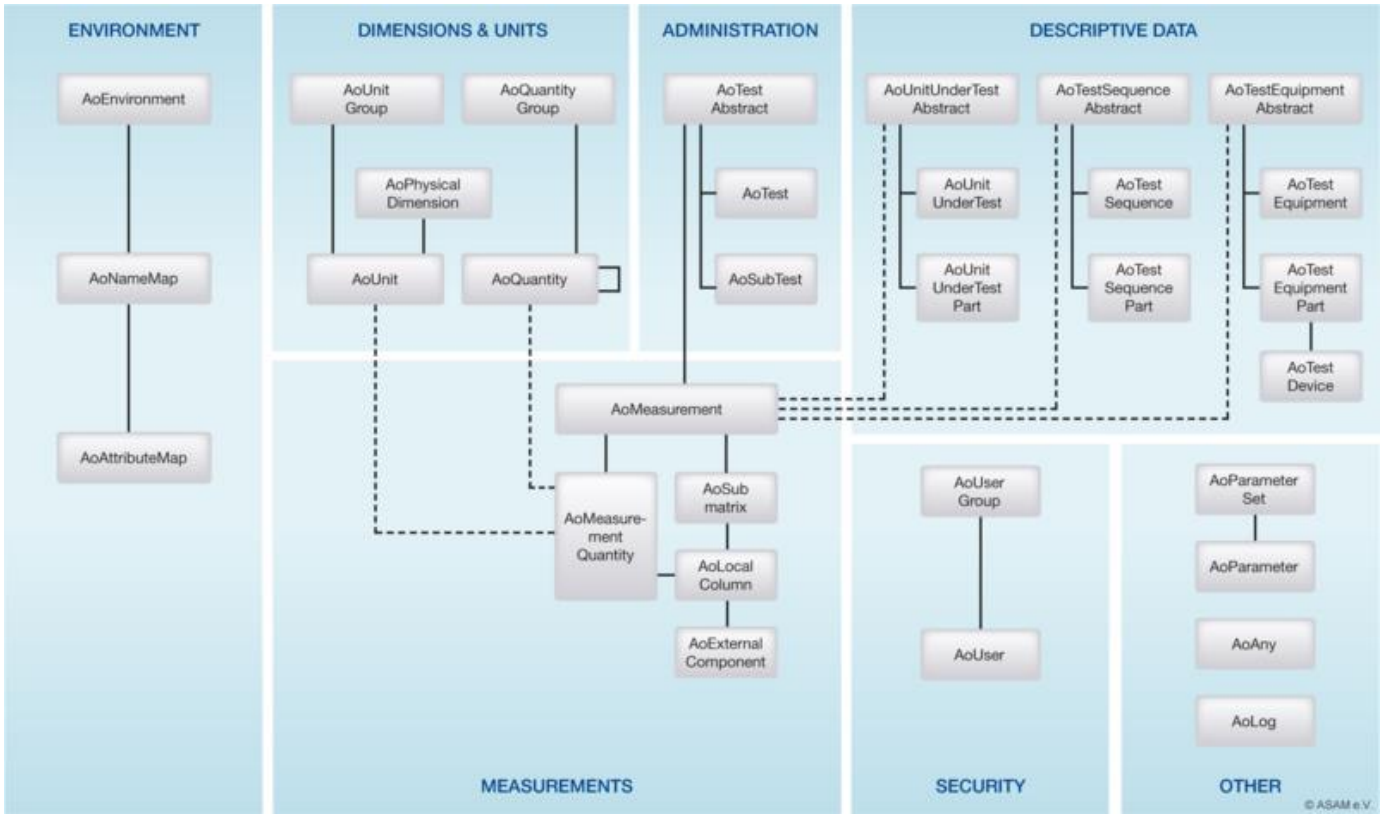
- **Physical Data Storage**
  Storage formats and schemes for storing measured data and meta data

- **ASAM Transport Format (ATFx)**
  XML based file format for the exchange of measured data and meta data



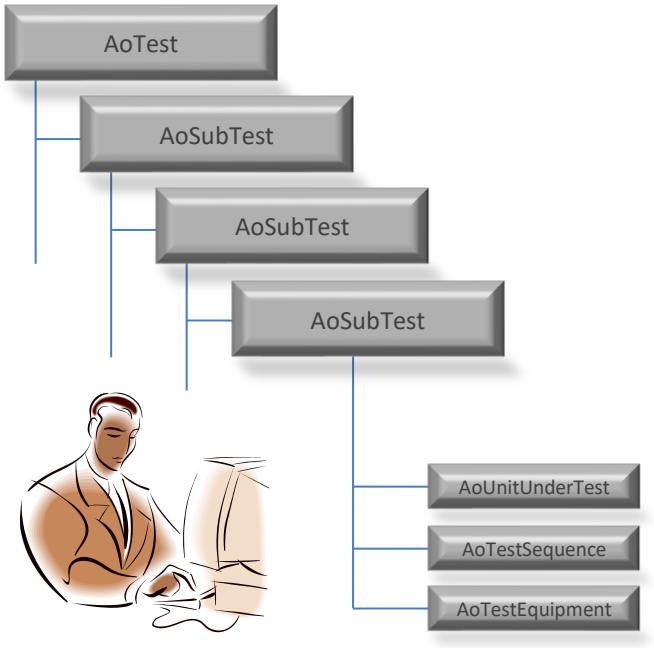
openMDM®

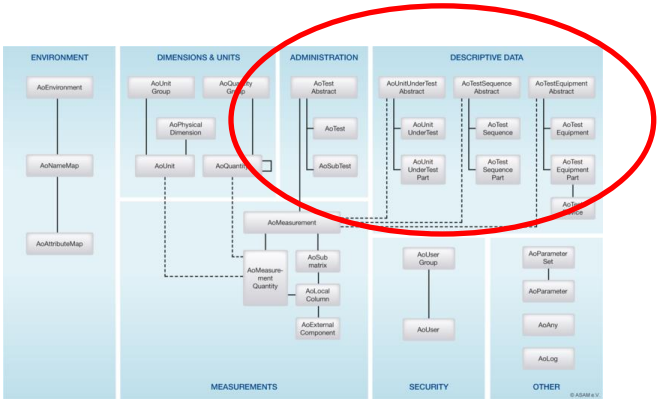
ASAM ODS – Base Data Model



openMDM®

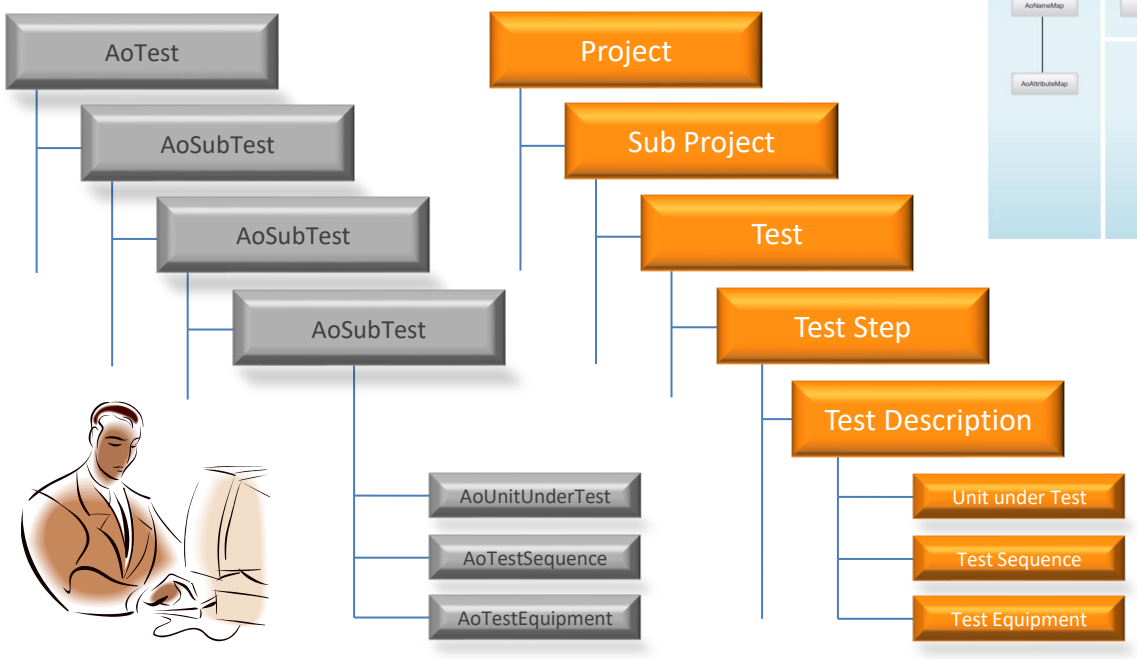
ASAM ODS – Use of the base data elements

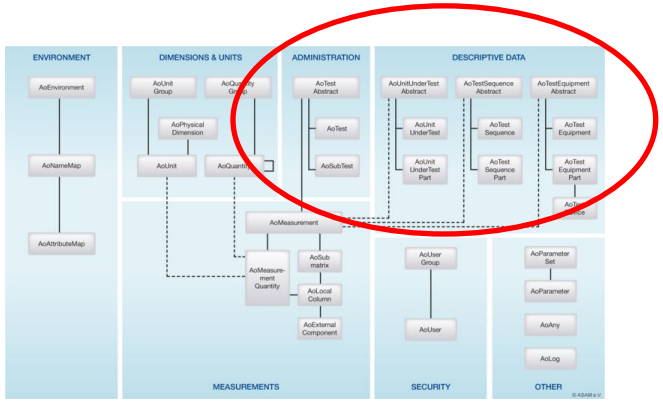




openMDM®

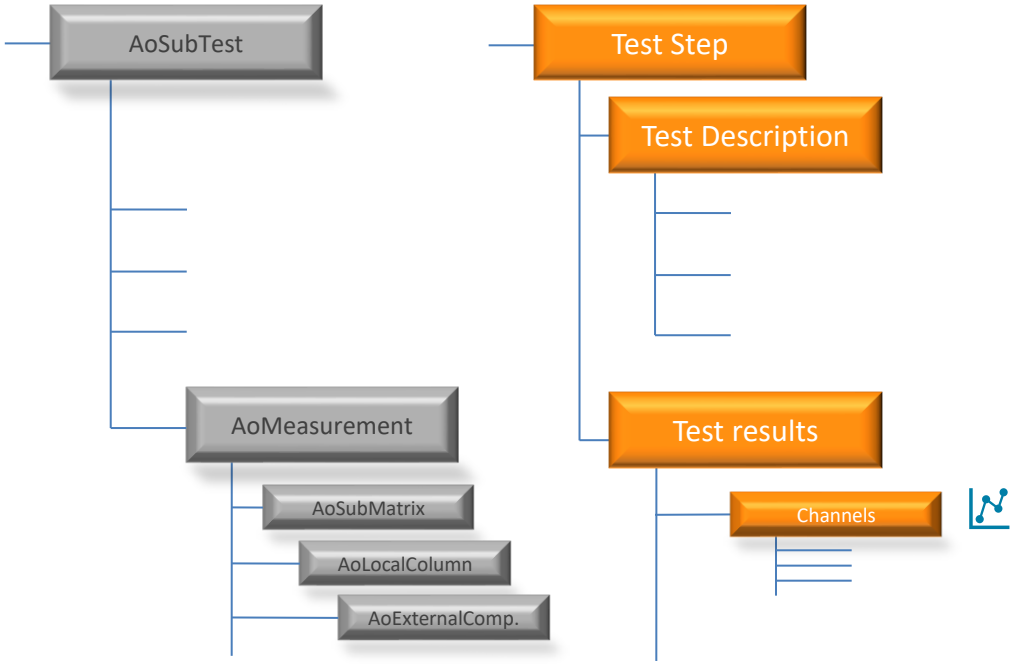
ASAM ODS – Derivation of the application model

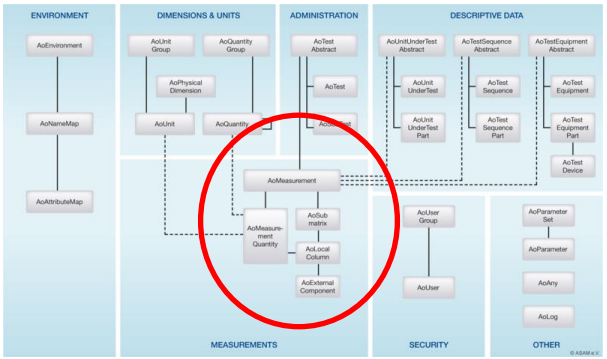




openMDM®

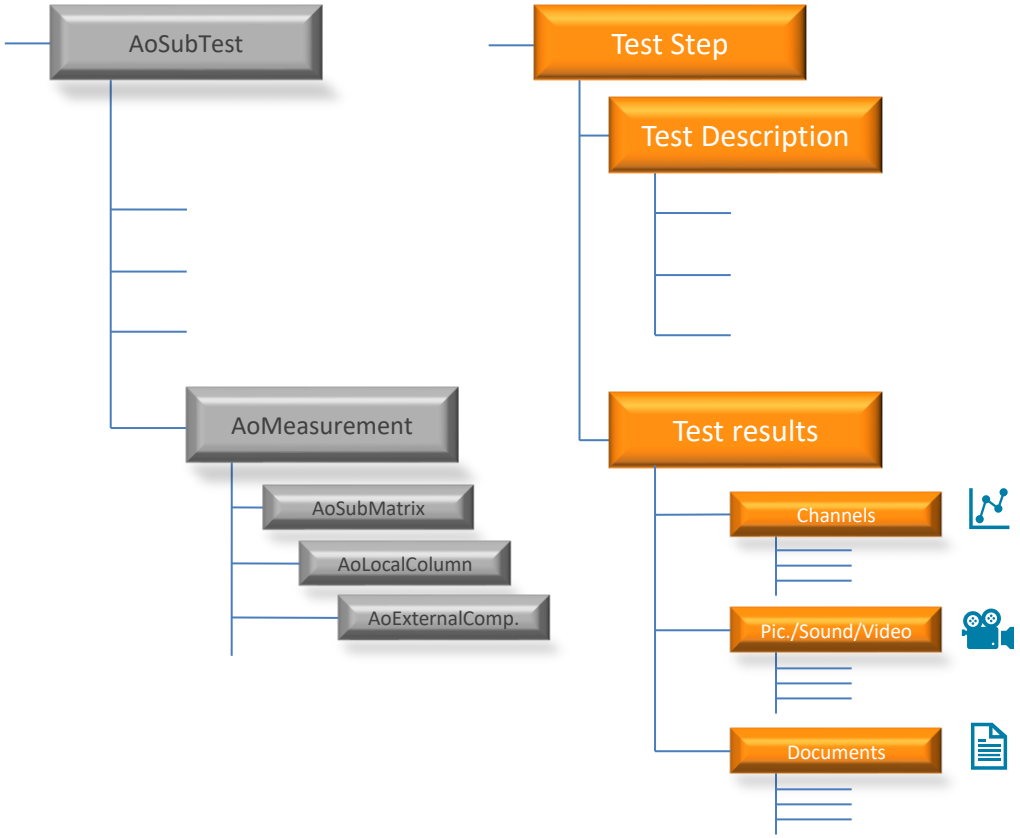
ASAM ODS – Derivation of the application model

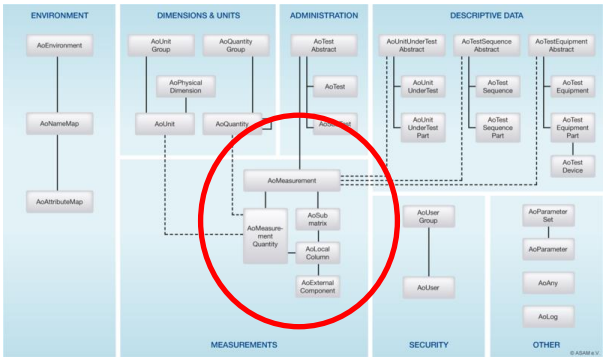




openMDM®

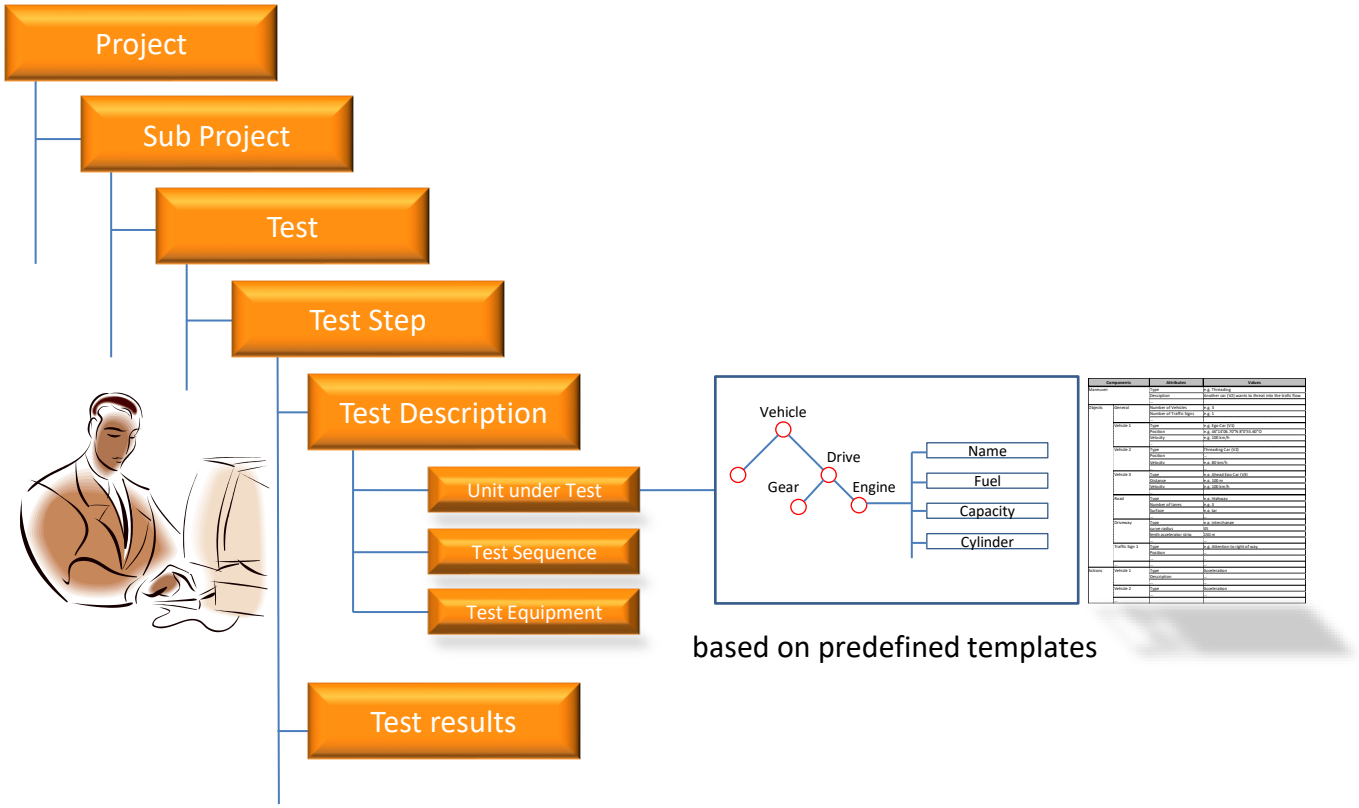
ASAM ODS – Derivation of the application model





openMDM®

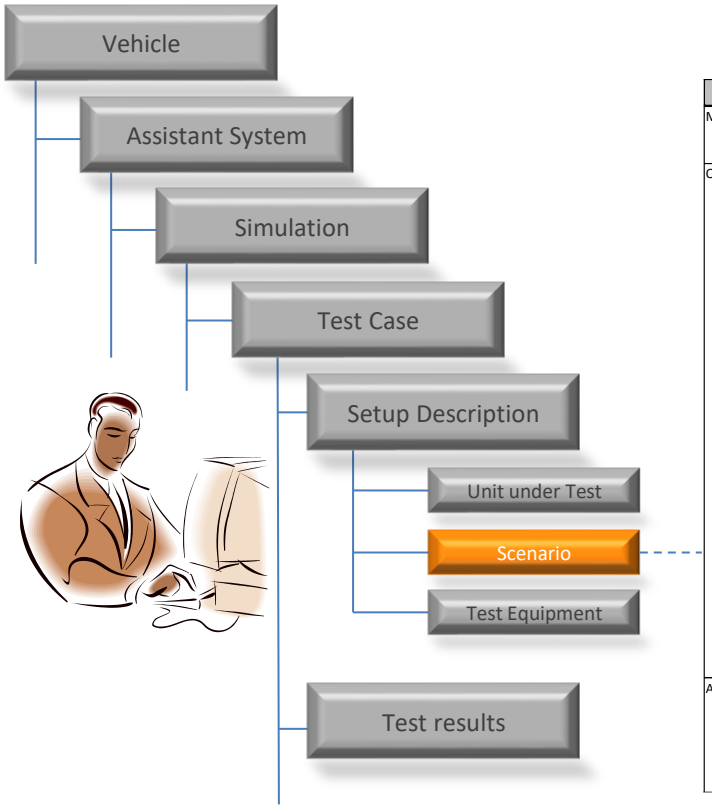
Description of the test context



based on predefined templates

openMDM®

Example: Describing traffic scenarios

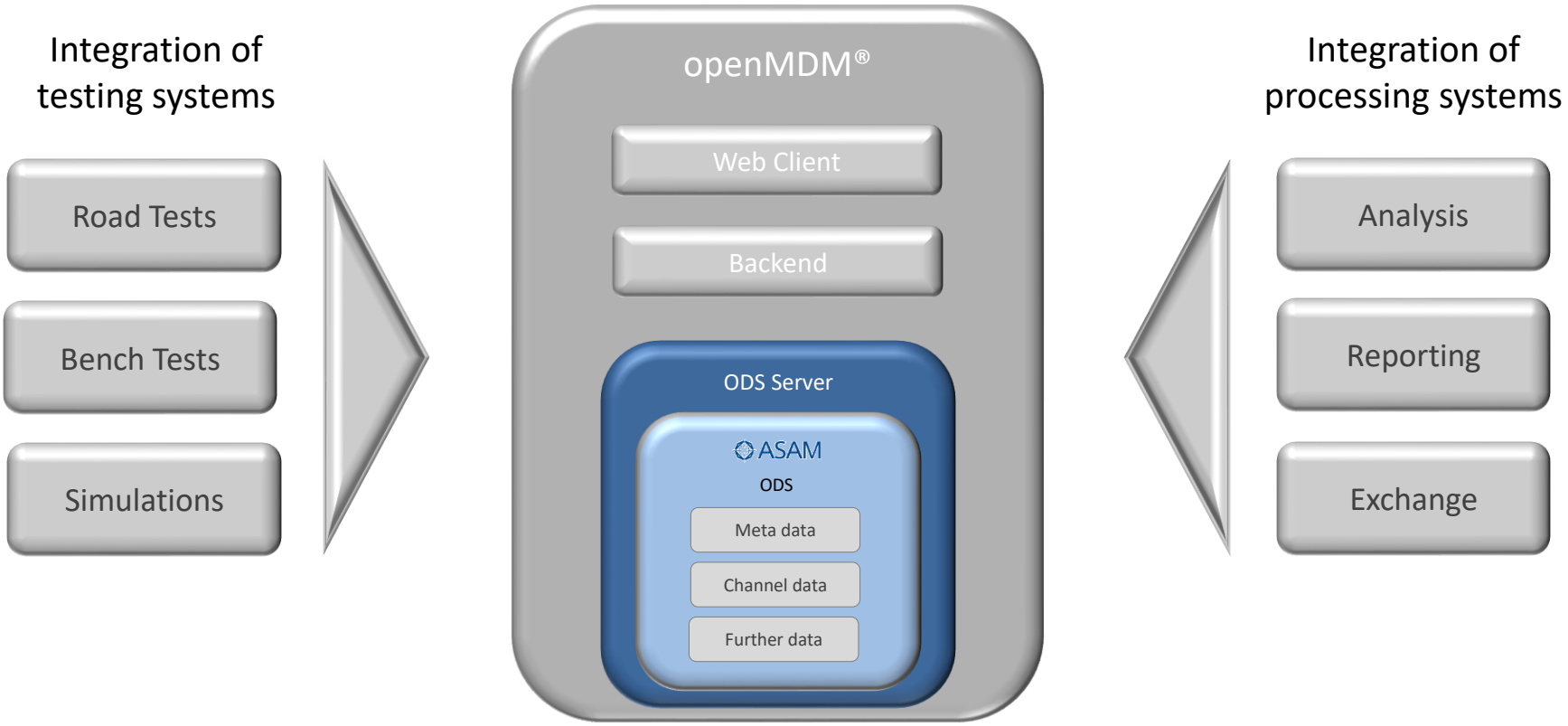


ADAS Model

Components		Attributes	Values
Maneuver		Type	e.g. Threading
		Desciption	Another car (V2) wants to threat into the trafic flow
		...	
Objects	General	Number of Vehicles	e.g. 3
		Number of Traffic Signs	e.g. 1
		...	
	Vehicle 1	Type	e.g. Ego Car (V1)
		Position	e.g. 46°14'06.70"N 8°0'55.60"O
		Velocity	e.g. 100 km/h
		..	
	Vehicle 2	Type	Threading Car (V2)
		Position	...
		Velocity	e.g. 80 km/h
		..	...
	Vehicle 3	Type	e.g. Ahead Ego Car (V3)
		Distance	e.g. 100 m
		Velocity	e.g. 100 km/h
		..	
	Road	Type	e.g. Highway
		Number of lanes	e.g. 3
		Surface	e.g. tar
		...	...
	Driveway	Type	e.g. interchange
		curve radius	45
		lenth accelerator strip	150 m
		...	...
	Traffic Sign 1	Type	e.g. Attention to right of way
		Position	...
		...	..
	...	...	...
Actions	Vehicle 1	Type	Acceleration
		Description	...
		...	...
	Vehicle 2	Type	Acceleration
		...	...
	...		

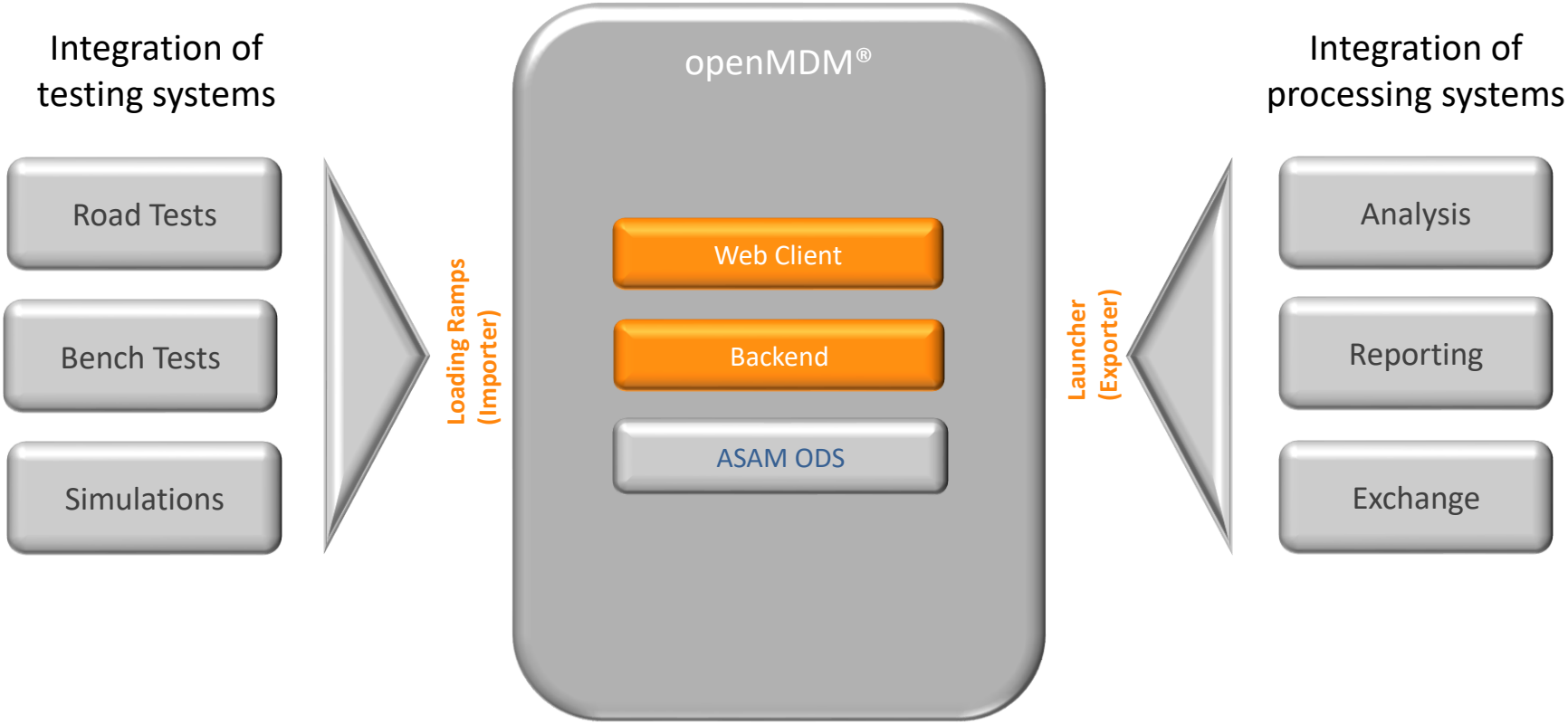
openMDM®

Test Data Management based on ASAM ODS



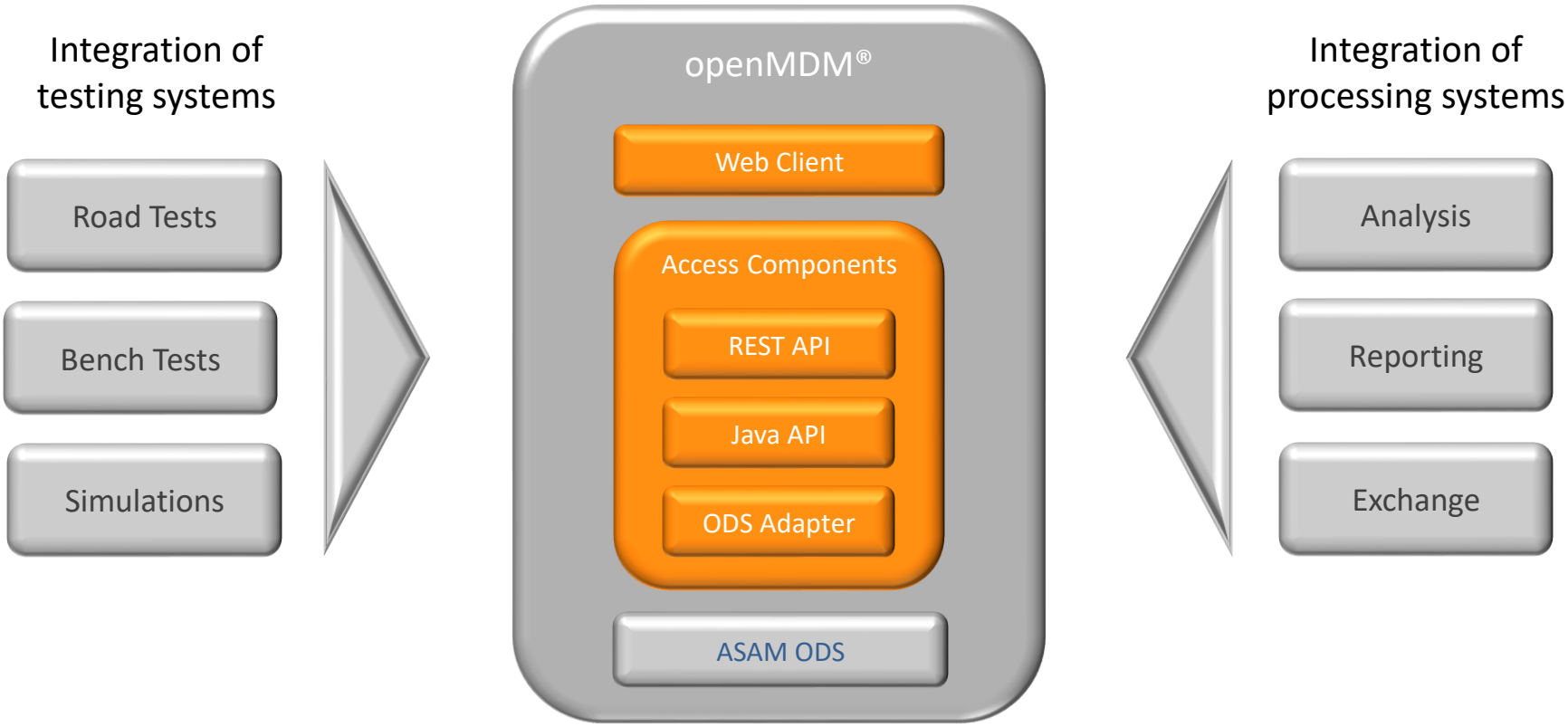
openMDM®

Platform for Test Data Management



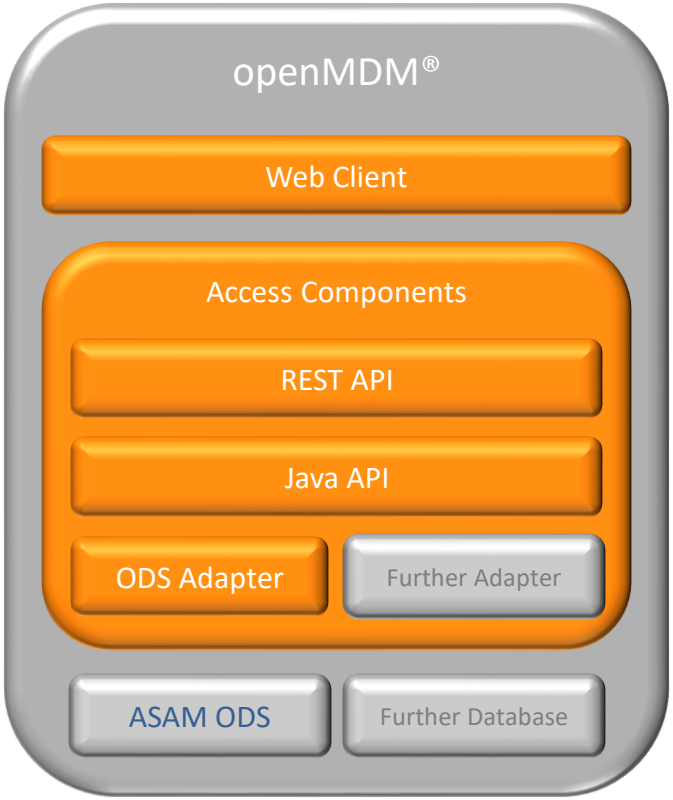
openMDM®

Backend Components



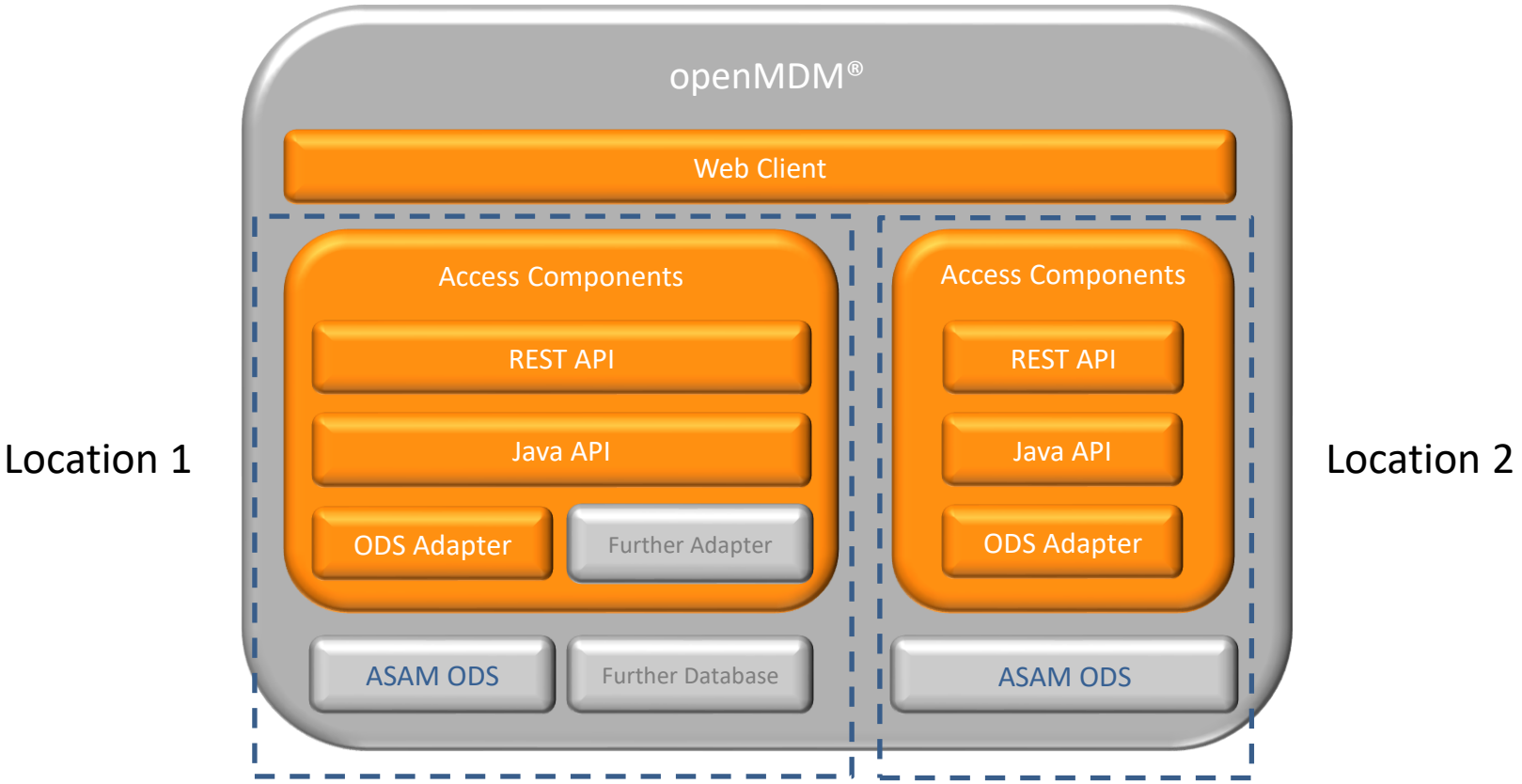
openMDM®

Extensibility



openMDM®

Scalability



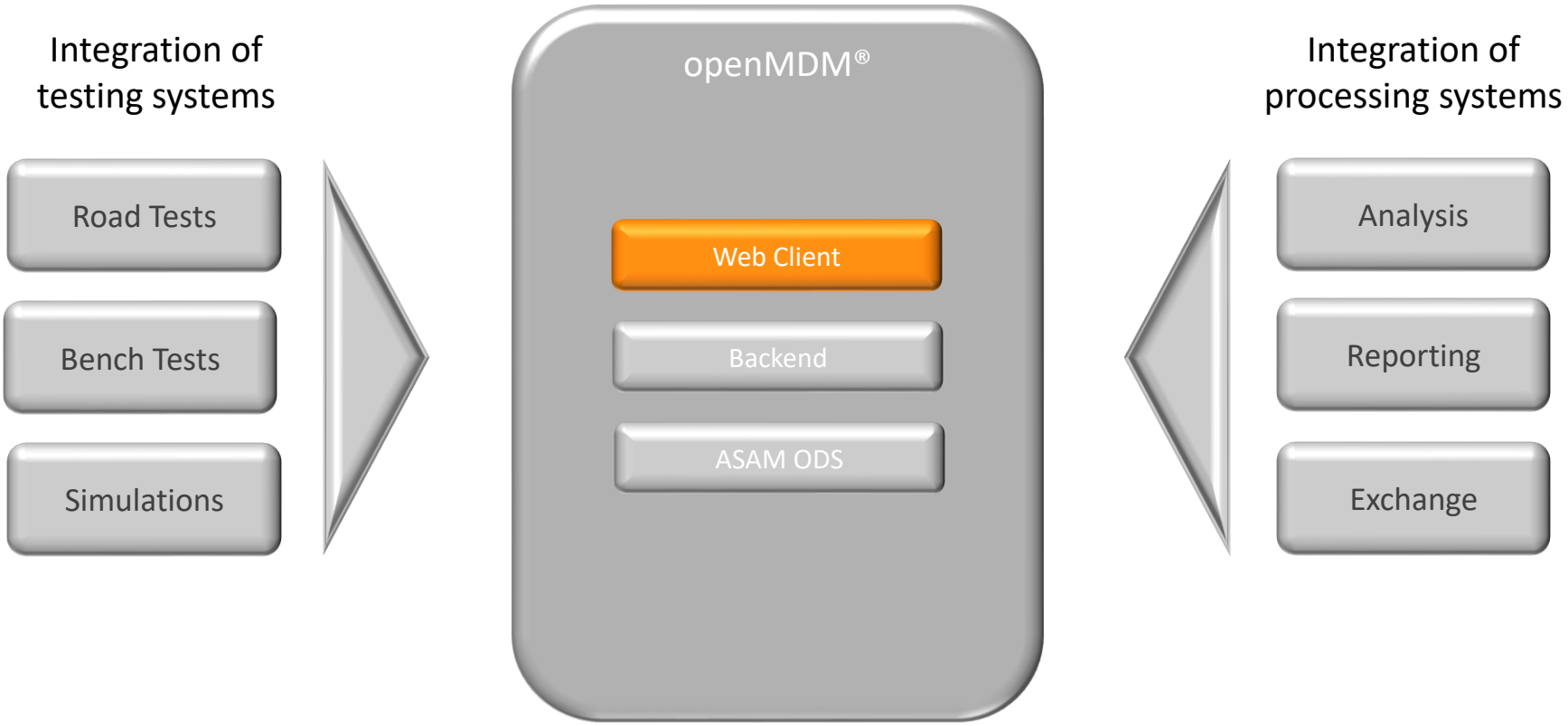
openMDM®

Backend Components

- Databases Access Components
- Full-text Search
- Services for authentication, monitoring, logging and internationalization
- Services used to instantiate and manage components

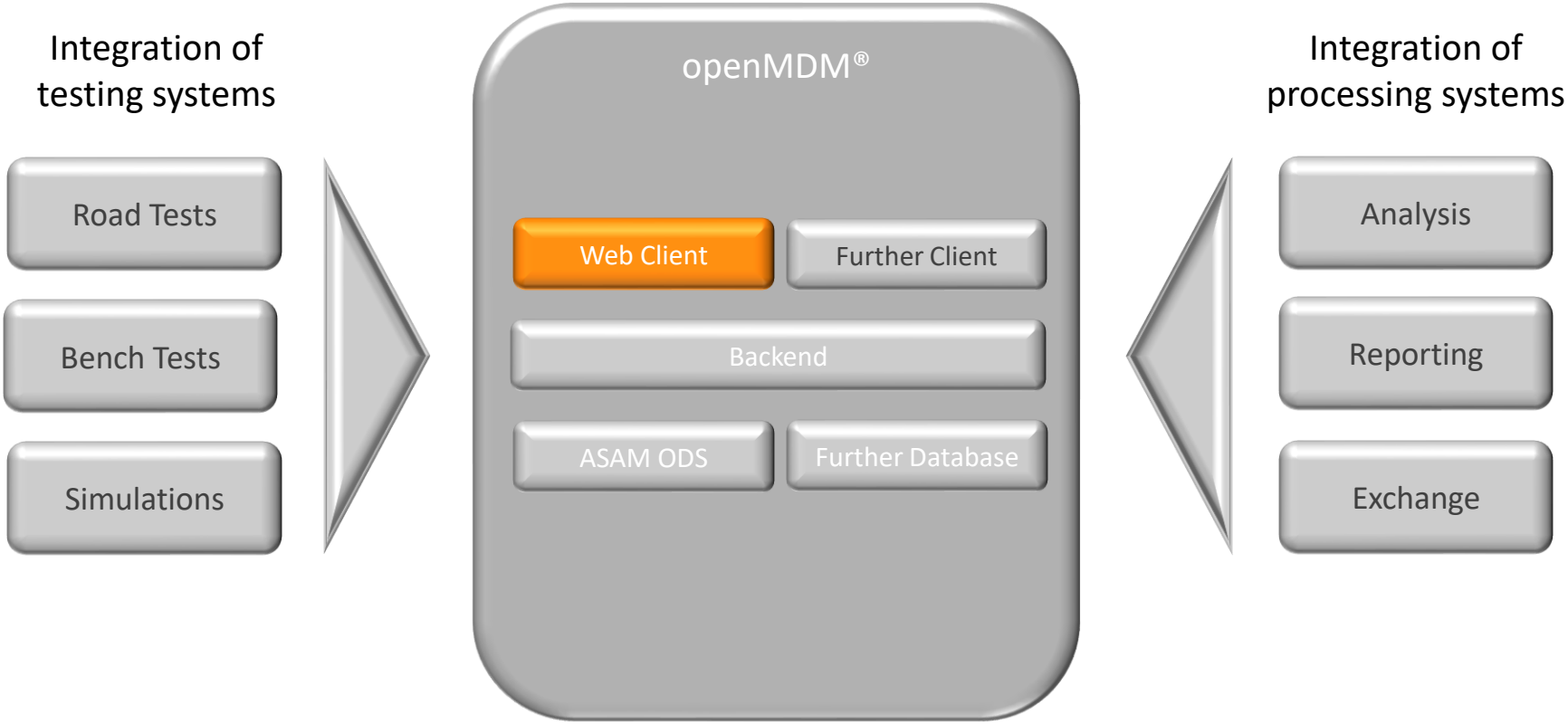
openMDM®

Platform for Test Data Management



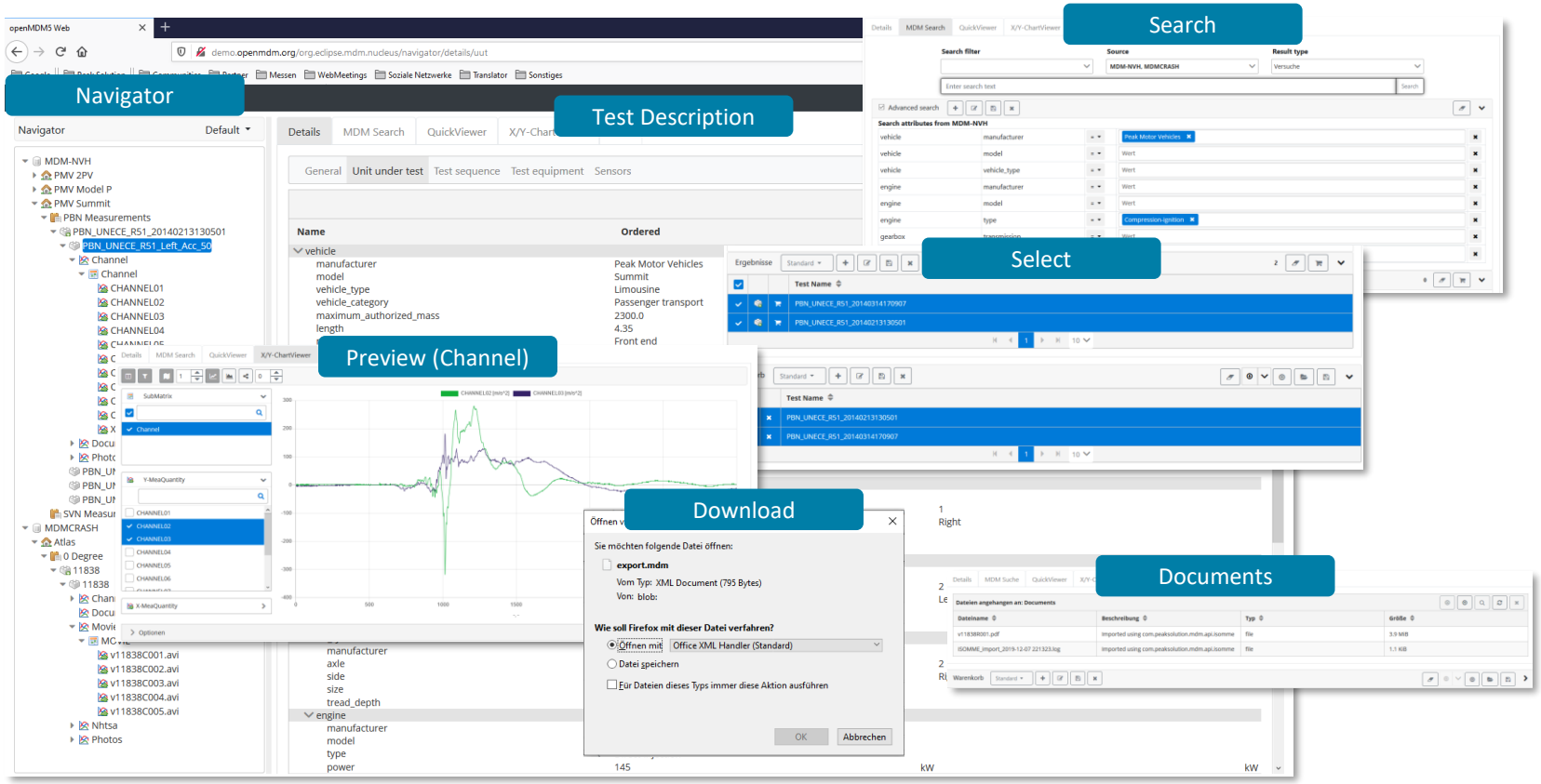
openMDM®

User Interface



openMDM®

Web Client



openMDM®

Plan. Measure. Share

Open Source Platform for implementing Test Data Management

Suitable for the openADx tool chain?