Test Analysis - Toolchain
Strategy

Datum: 22.04.2020 | OE: EKSE/3 | KSU-Klasse: 0.2 - max. 4 Jahre
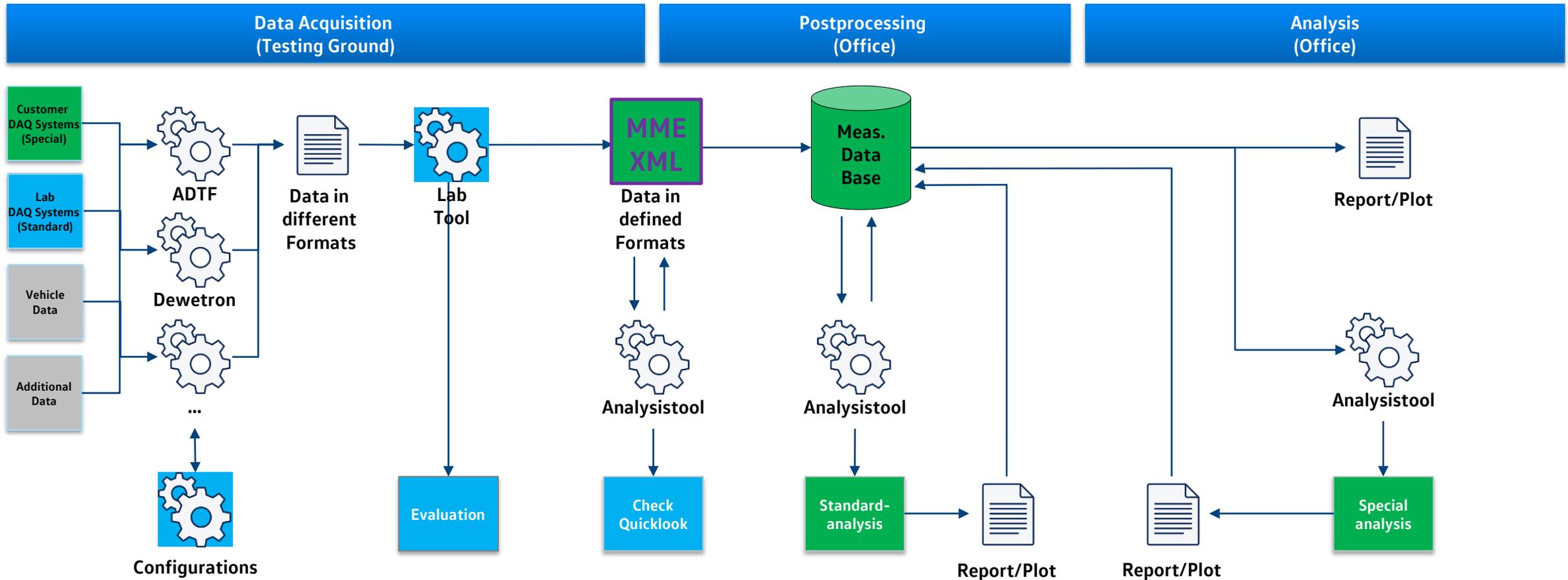
MME 1.6Rev2
Clarification / Basic Conditions

Problem	Solution
Existing Channel Codes don't cover all requirements	Codes for Time and Event channels created; see MME-Forum: https://www.iso-mme.org/forum/viewtopic.php?f=38&t=604 and https://www.iso-mme.org/forum/viewforum.php?f=145
Reference coordinate systems have to be defined for all vector channels	see proposal on the next pages
How to transport data where descriptors are missing	VW uses one additional XML-File for each test. Other XML-, JSON-, INI- File formats are known (NHTSA, …)
Type of the test, *Subtype of the test* and *Regulation* should be defined	*Regulation*: see Table 2.16 for MME 2.1 *Type* and *Subtype*: see recommendation
TB 21 of EuroNCAP covers only a part of the channels named in the test procedures	Discussion in this group and close contact to the EuroNCAP staff
…	

MME 1.6Rev2
Reference Coordinate Systems - Background

- Positions and orientations are mostly measured by GPS based systems and therefore available in a stationary reference coordinate system (**TST**).

- Accelerations and angular velocities are measured in inertial systems like in passive safety tests. The directions are given by the current position of the vehicle (**1DY**) or target (**2DY**).

- Velocities can be calculated by integration of the accelerations, by differentiation of the positions or by a combination of these methods:

  1) For the integration start values from the stationary coordinate system (**TST**) are combined with the dynamic orientations of the vehicle (**1DY**) or target (**2DY**). The velocities therefore belong to an intermediate coordinate sytem.

  2) For the differentiation the resulting velocities belong to the stationary coordinate system (**TST**).

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Reference Coordinate Systems - Proposal

Id	Characteristic	Directions	Description	Comments
1DY	VUT dynamic	X Y Z	Dynamic Coordinate System according ISO 8855 moving like the VUT	see figure ISO_ACTIV_16R2_20200117.pdf
2DY	Target dynamic	X Y Z	Dynamic Coordinate System according ISO 8855 moving like the Target	see figure ISO_ACTIV_16R2_20200117.pdf
LOC	Steering Wheel	1 2 3	Local Coordinate System of the Steering Wheel (1 = Longitudinal)	Only the rotation around the longitudinal axis of the steering system is used
NED	NorthEastDown	1 2 3	Stationary Earth fixed Coordinate System (1 = North, 2 = East, 3 = Down)	typically from GPS based systems with units [m]
TST	Testground Static	X Y Z	Coordinate System with Stationary Origin at the Test Ground and Stationary Directions	derived from NED based data by moving the origin to a point at the test ground and rotating to the main driving direction

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