Equipment eXchange dataformat

2018-04-16 | Frank Giesche | EQX - EQuipment eXchange

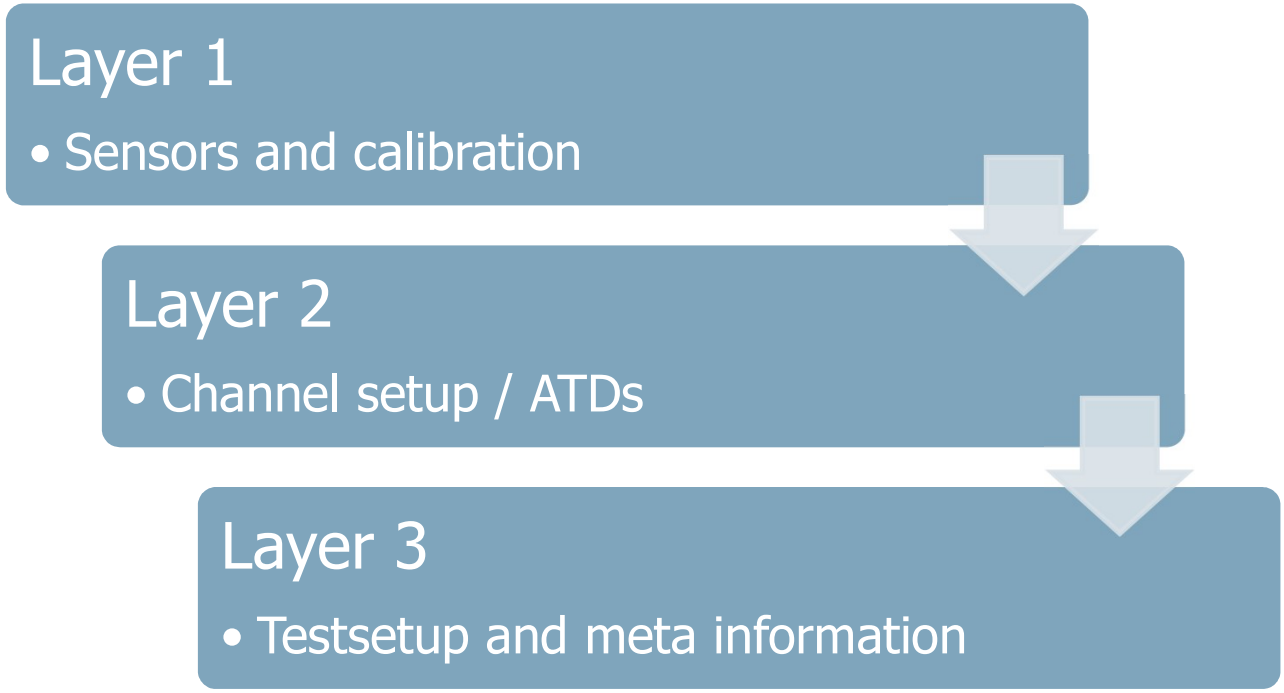
Situation

- **Equipment is sent around between several laboratories**
  - for calibration sensors and ATDs
  - for test execution sensors, ATDs, up to complete body in whites …
- **polynomial and exponential function in addition to linear sensitivity are in use**
  - more necessary data for execution or validation needs to be transported
  - typo errors are not easily visible
- **Different laboratories have different data acquisition systems and databases in use**
  - big manual editing efforts until ready to use
  - high risk of typo errors for essential information
- **continually growing requirements for formal definitions in test result data according to the customers**
  - naming rules for attributes like test type, customer, …
  - channel naming
  - setup parameters,
  - …

EQX history

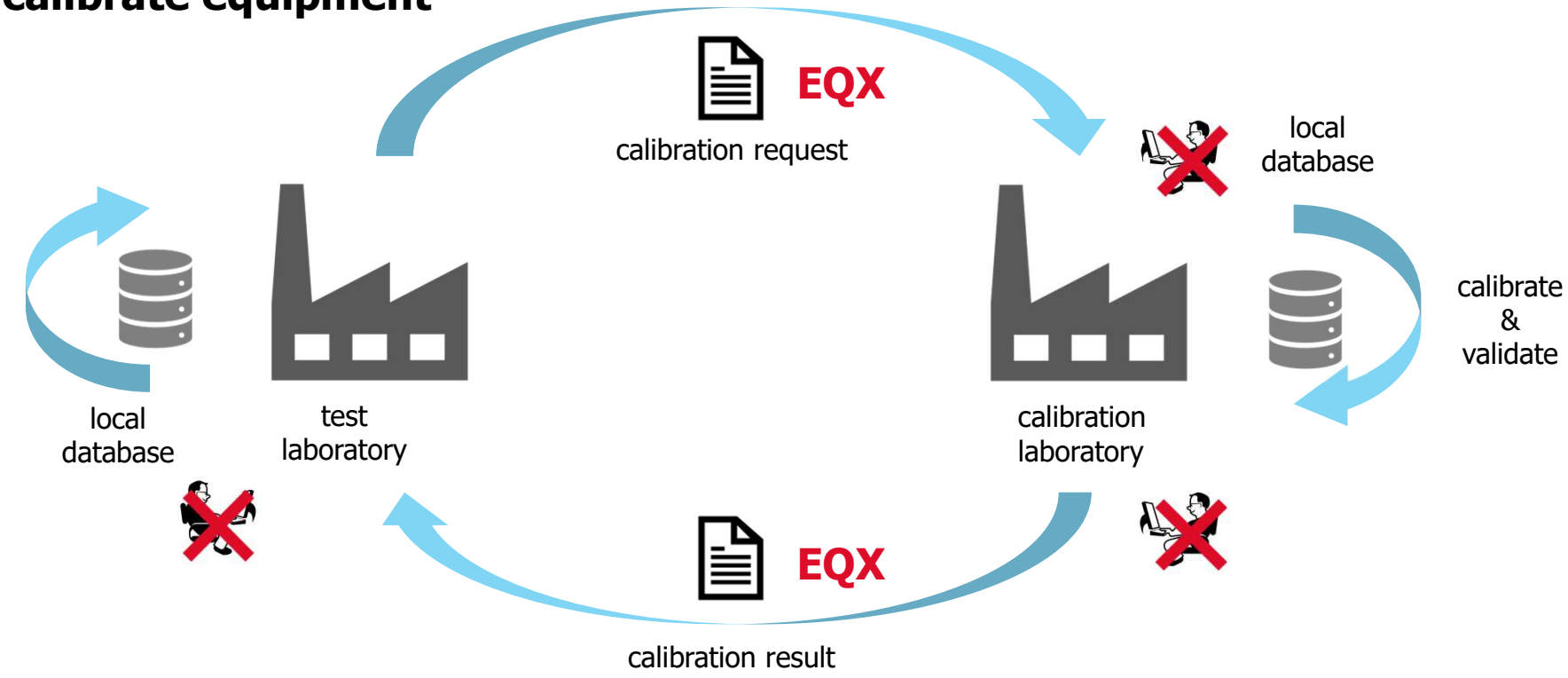
- 2007 : working group equipment exchange defines version 0.9
  - first prototypes have been realized by Delphi and Messring
- 2009 : version 1.0 is defined
  - developed by KT Automotive, Messring, MSC and Kistler
  - intention : exchange a set of sensors or ATDs from one DAS system to another without loss of information
- 2010 : version 1.1
  - support the exchange of testsetups with ISO-MME attributes and additional attributes
- 2011 : version 1.2
  - additional optional attributes defined for sensors and testsetups
- 2012 : version 1.3
  - additional attributes for calibration validation and categories
- 2014 : version 1.4
  - additional support for 'digital sensors'
  - enhanced ID-Module support and new ridge resistance attribute
- 2016 : version 1.5
  - defined in two developer meetings with ZF/TRW, Kistler, DTS, Hentschel, Messring
- 2018 : request for New ISO work item
- 2019 : ISO/NP TS 23520 registered as new project at ISO.org

EQX – 3 layers of implementation



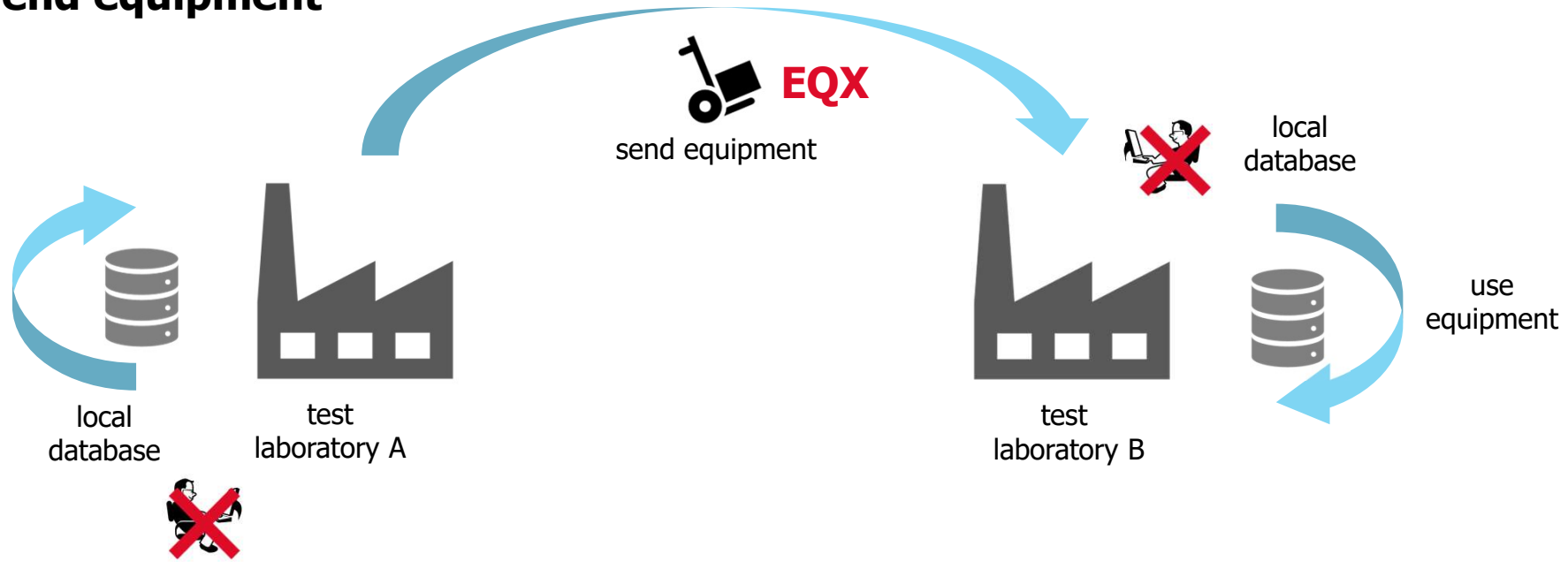
EQX – layer 1 use cases

calibrate equipment



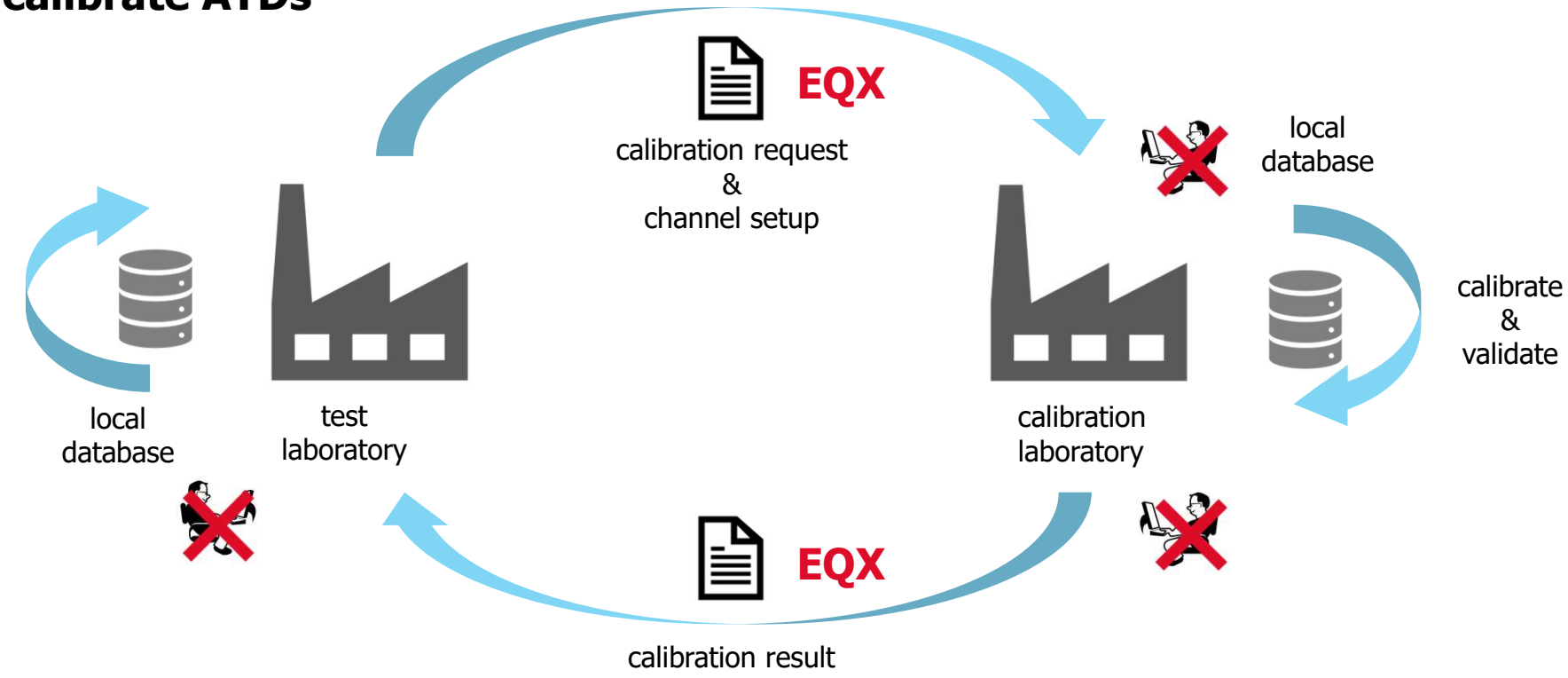
EQX – layer 1 use cases

lend equipment



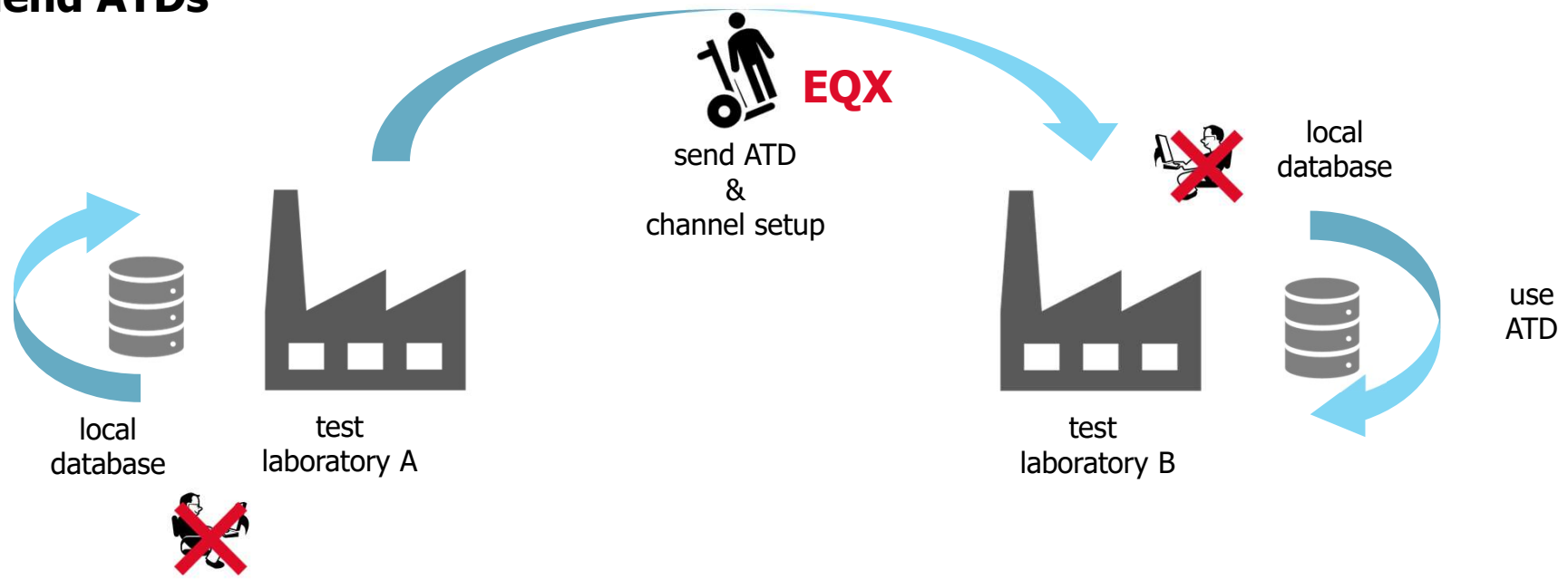
EQX – layer 2 use cases

calibrate ATDs



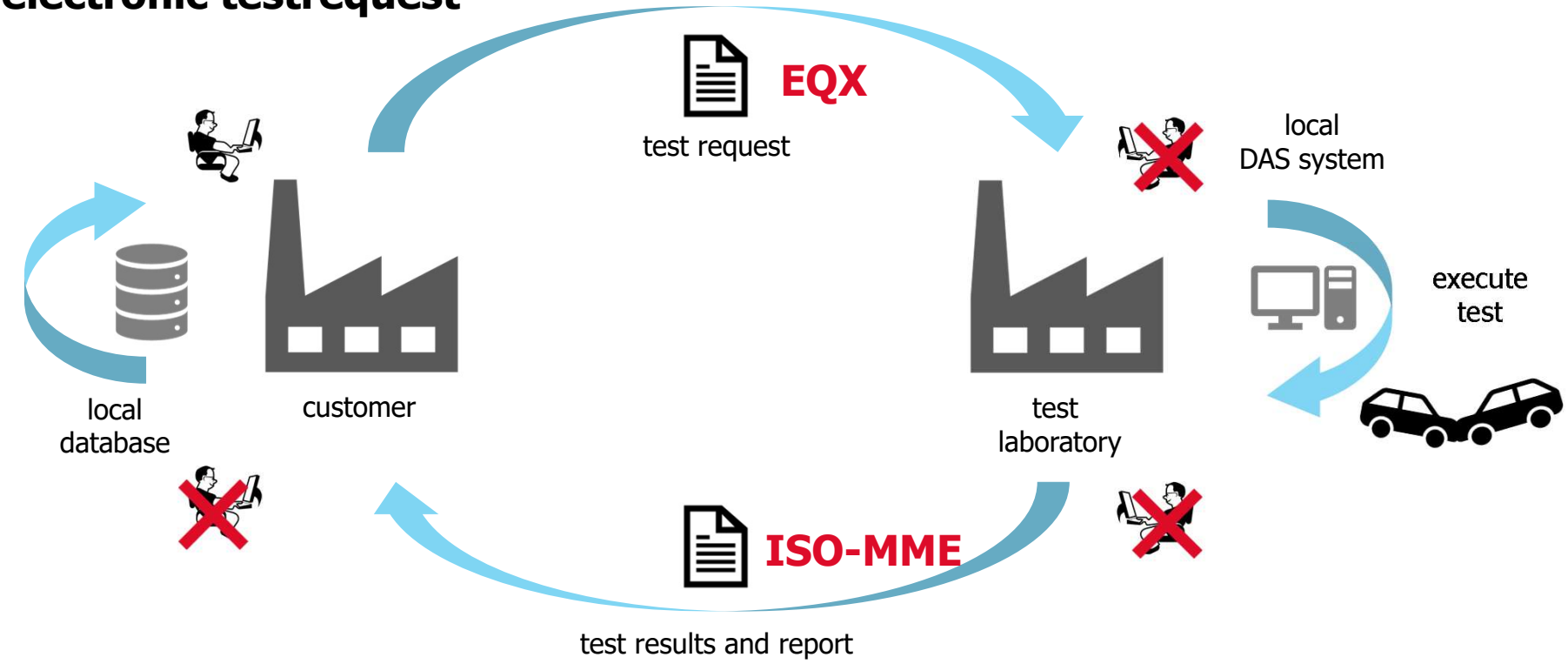
EQX – layer 2 use cases

lend ATDs



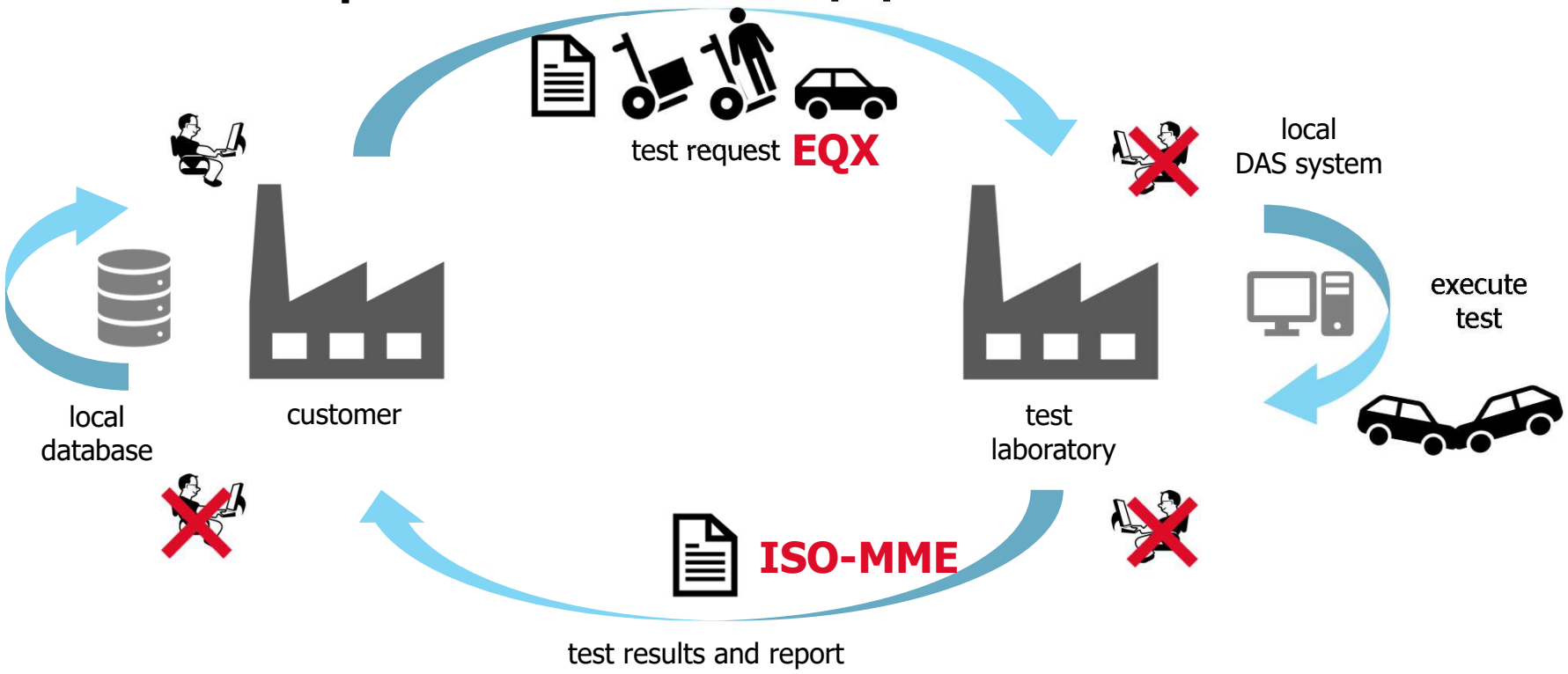
EQX – layer 3 use cases

electronic testrequest



EQX – layer 3 use cases

electronic testrequest with additional equipment



try EQX