



Design needs Testability:

Active Functional Specifications close the loop between concept and operation

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How **active functional specification** help to maximize building performance

1. Why? - Tackle lacks and create potentials within BAS
2. How? - Managing the quality control loop
3. What? - Digitalizing performance tests

Introduction: Estimated Potentials

>1,8 Mio. Commercial Buildings
in Germany (1b sqm)

>10.000.000.000 € Annual Energy Cost

> 1.000.000.000 €/year Energy Cost
Wasted

due to a Lack of Quality in Operation of
Building Services



Most commercial Building stock has a
Building management system (BMS)

Every new built commercial Building will
have a BMS

→ The data is already available

**The Basis for quality assessment is given
BUT Tools a rare**

Introduction: Automobile vs. Buildings

Performance tests are available
for Cars...



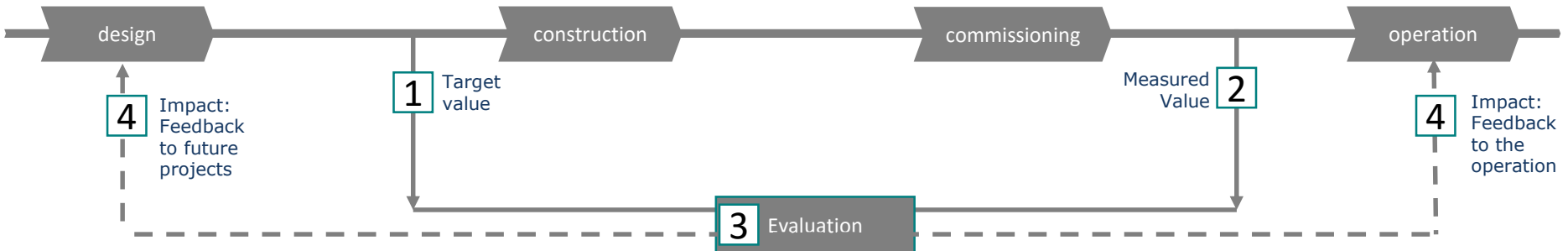
Solution:
Standard Plugin Testing

Commissioning for building automation
is done by visual examination...



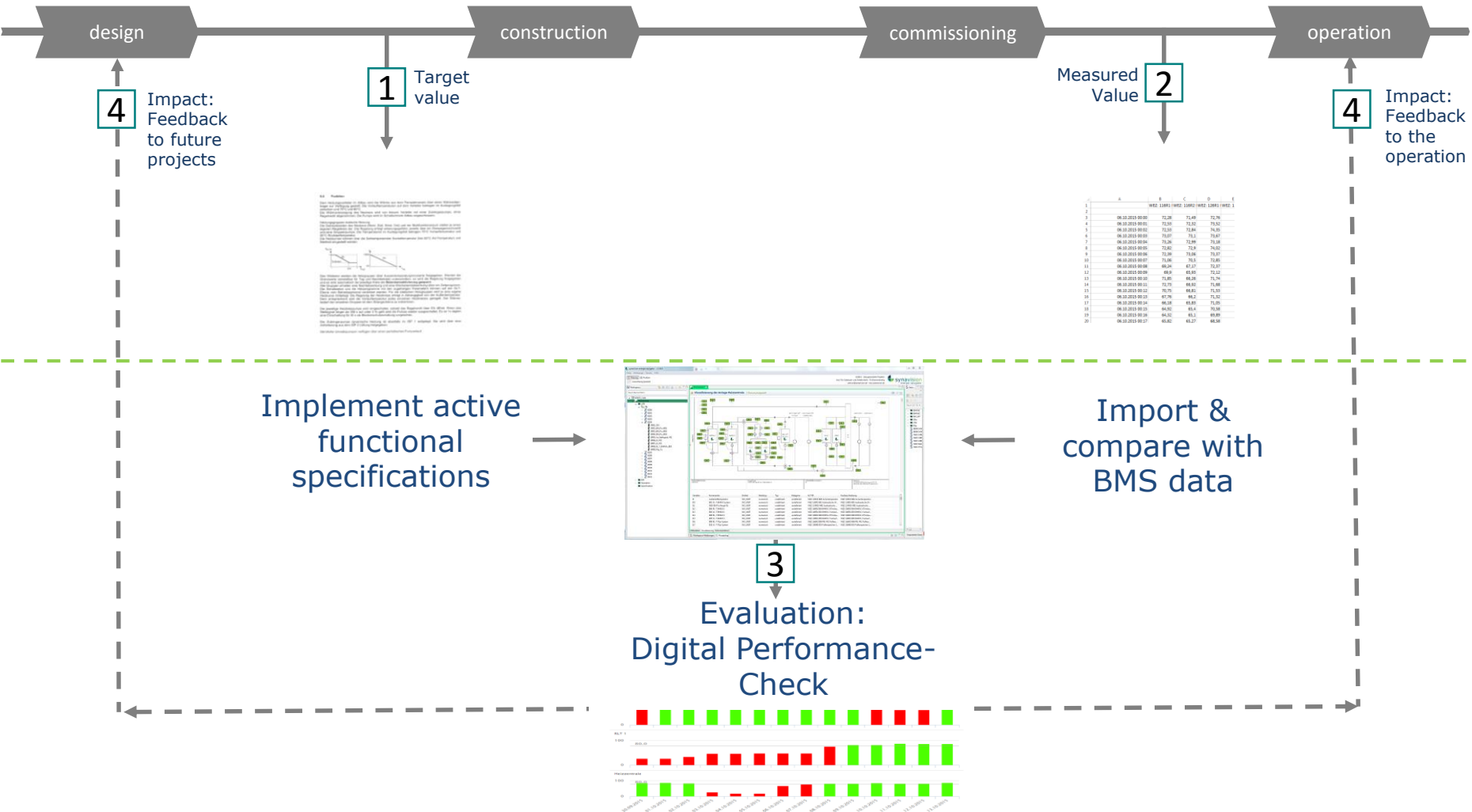
Challenges:
**Individual Concepts, Teams,
Technologies**

How **synavision** ensures building performance



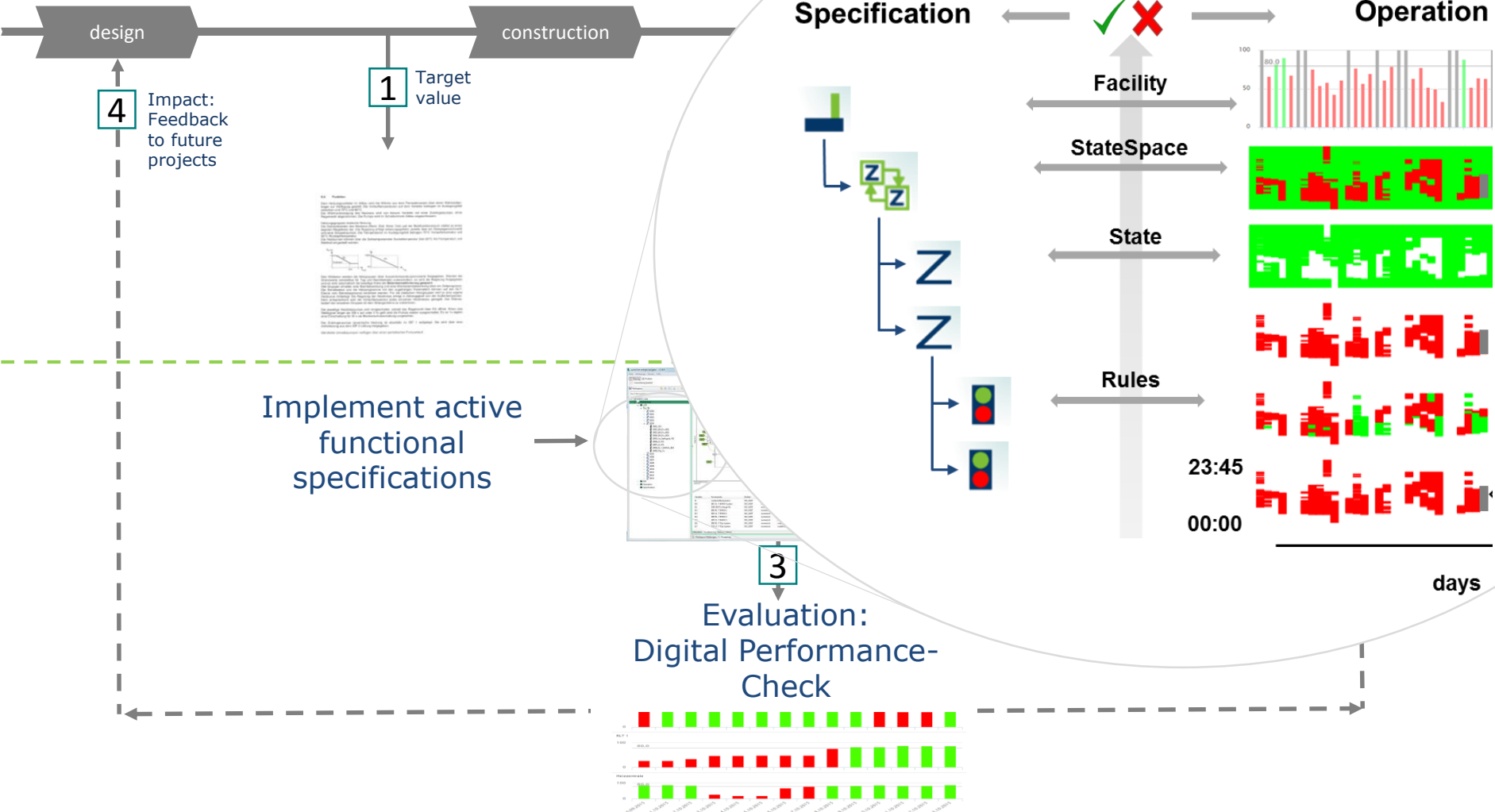
synavision
provides a digital performance
test bench to close the loop!

How **synavision** ensures building performance

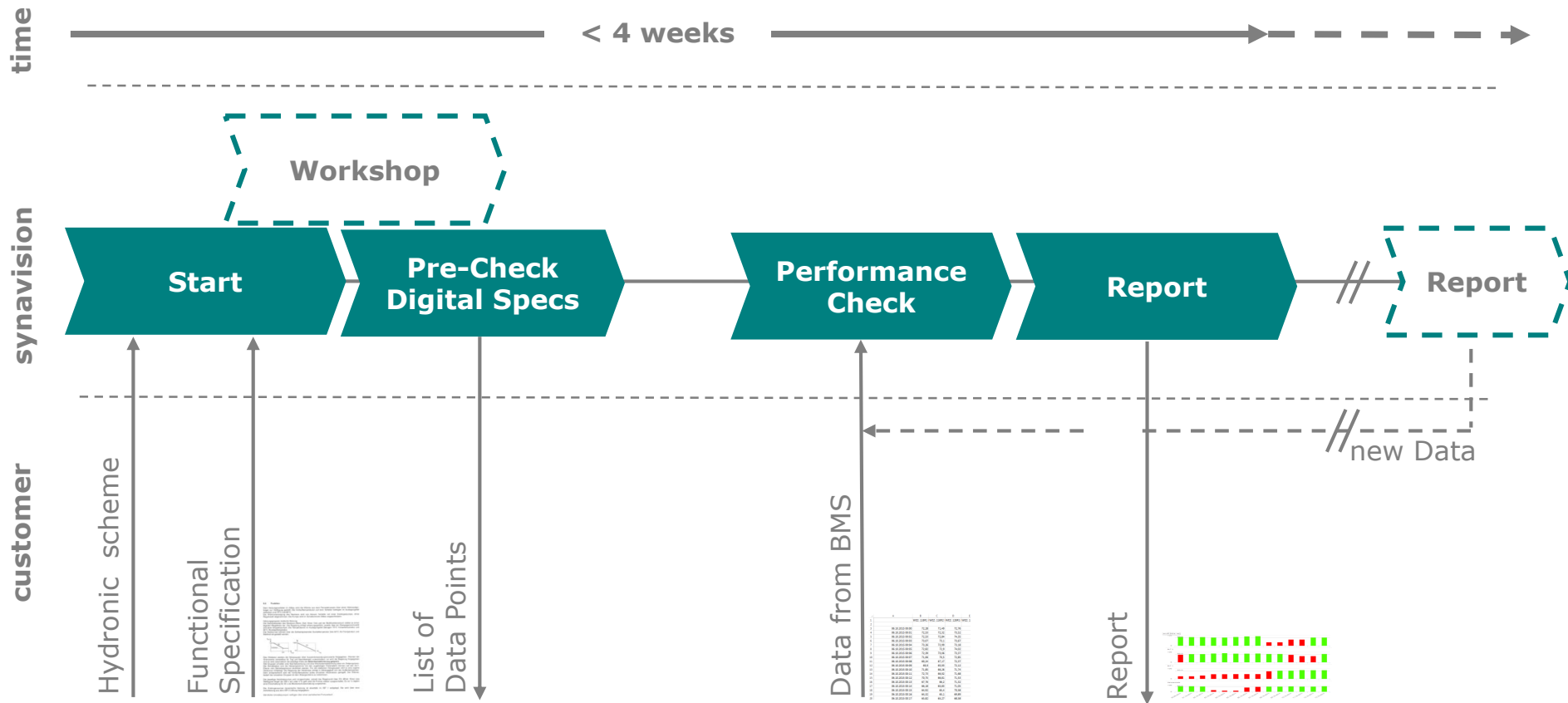


How synavision ensures building

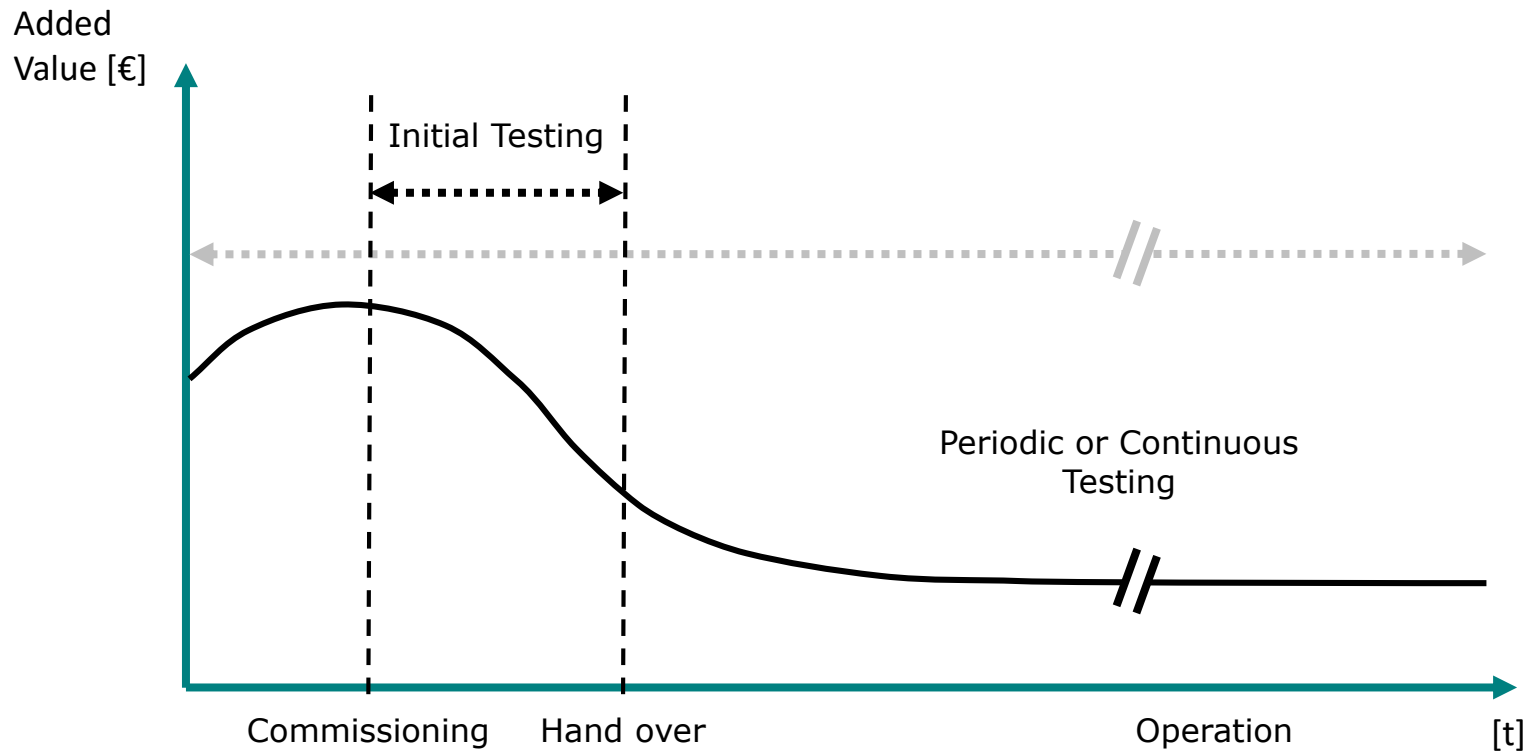
Simplified State Chart



Basis Workflow of synavision projects



Business Opportunity



Closing the loop ...

... effectively	Checks are part of regular processes in the building sector
... transparent	All specifications and evaluations are comprehensible and documented
... fast	Start to report < 4 weeks
... easily	Initial training for engineers < 4 weeks
... robust	Digitalization ensures scalability
... economically	QM for Cx has a valid business model

Thank you for your attention!