

# QUALITY MANAGEMENT FOR BUILDING PERFORMANCE



QUANTUM is a four year-long EU funded project, started in January 2016. By developing and demonstrating pragmatic tools and services, QUANTUM is committed to close the quality gap between building systems design requirements and real installations.

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 🐦 @QUANTUM\_H2020

## QUANTUM tools

integrated in

## QUANTUM services

applied in

## QUANTUM pilots

**Performance Test Bench**  
 Tool for the specification and automated validation of BMS functions using Active Functional Specifications

**Comfortmeter**  
 Web-based questionnaire for perceived user comfort

**HPS/NG9**  
 Cost effective and easy to install in-situ energy metering devices with online data analysis

Commissioning in new and overall refurbished nZEBs

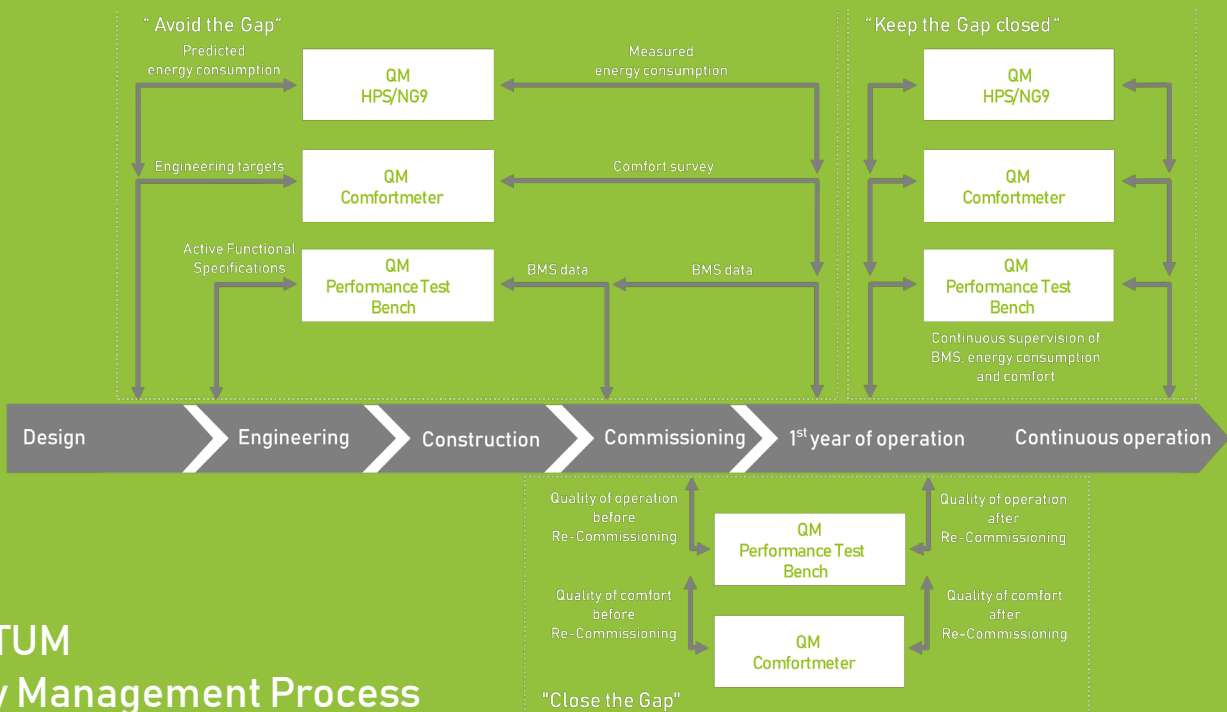
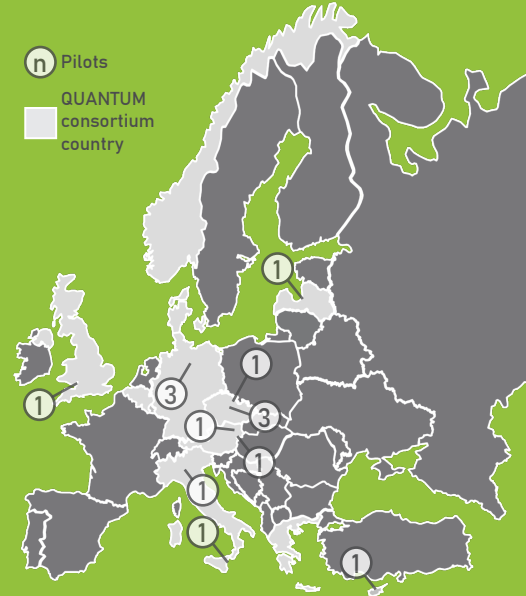
Retrofitting of building systems

Energy Performance Contracting

Re-Commissioning

Facility Management

Environmental certification for buildings



## QUANTUM Quality Management Process

A GENERAL  
QUALITY  
MANAGEMENT  
PROCESS MODEL  
based on the  
“design for testability”  
principle



BUSINESS  
MODELS  
for the application  
of QUANTUM  
tools and services

INNOVATIVE  
ICT-DRIVEN  
QUALITY MANAGEMENT  
TOOLS for BMS,  
energy efficiency  
and comfort

Integration of the  
tools into Quality  
Management  
services and  
APPLICATION IN  
PILOT CASES

DATA SETS  
AND USE CASES  
for the market uptake  
of QUANTUM  
tools and services

INDICATORS  
OF THE ENERGY  
AND ECONOMIC  
SUCCESS  
of the to Quality  
Management  
process

## QUANTUM offers solutions for **CLOSING THE QUALITY GAP** for building services

The estimated average gap between calculated and actual performances of the European building stock is 25% for energy performance and 1,5% for comfort performance.

Research has shown that faultily commissioned and operated buildings are mostly responsible for this gap.



The failure to deliver buildings in line with the contractual commitments arises from the Quality Gap.

The Quality Gap is a quantifiable difference between what has been specified to be delivered in a construction project, and what is actually delivered.

The Quality Gap contributes to the Performance Gap, but is also distinct and measurable.

