



INSTITUTE FOR ENERGY AND
ENVIRONMENTAL RESEARCH
HEIDELBERG

The renovation sprint

A concept for resolving the renovation backlog in single-family houses

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Starting point

- Serious lack of work force (craftsmen)
- Very low increase of productivity in construction industry
- Increasing prices for modernisation
- Decreasing renovation rate ($\sim 0,7$ % p.a. across all building types)
- High relevance of unrenovated detached and semi-detached houses from the 50-70s:
 - High energy demand
 - High Number
 - Comparable cubature



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DE.N.SFH.05.Gen

What is a renovation sprint?

Reducing the core phase
of the renovation
(construction phase) to **22 days**
through
organisational and technical
measures



What is a renovation sprint?

	Renovation sprint	Serial renovation (“energiesprong”)
Predominant target buildings	Single-family houses	Multi-family houses
Prefabrication	No / little	High
Renovation methods	“Conventional”	“Industrialized”

What is a renovation sprint?

Overview over central structural and procedural measures

Structural measures

Building skin: renovation formula 24.16.10.3.S[®]

HVAC: district heating / heat pump, photovoltaics

Non-energetic measures: individually configurable

Procedural measures

Detailed construction schedule:
accurate to the hour and across all trades

New roles: Renovation coach and construction site assistance

Efficient processes, preparation and logistics

How the craft sector benefits

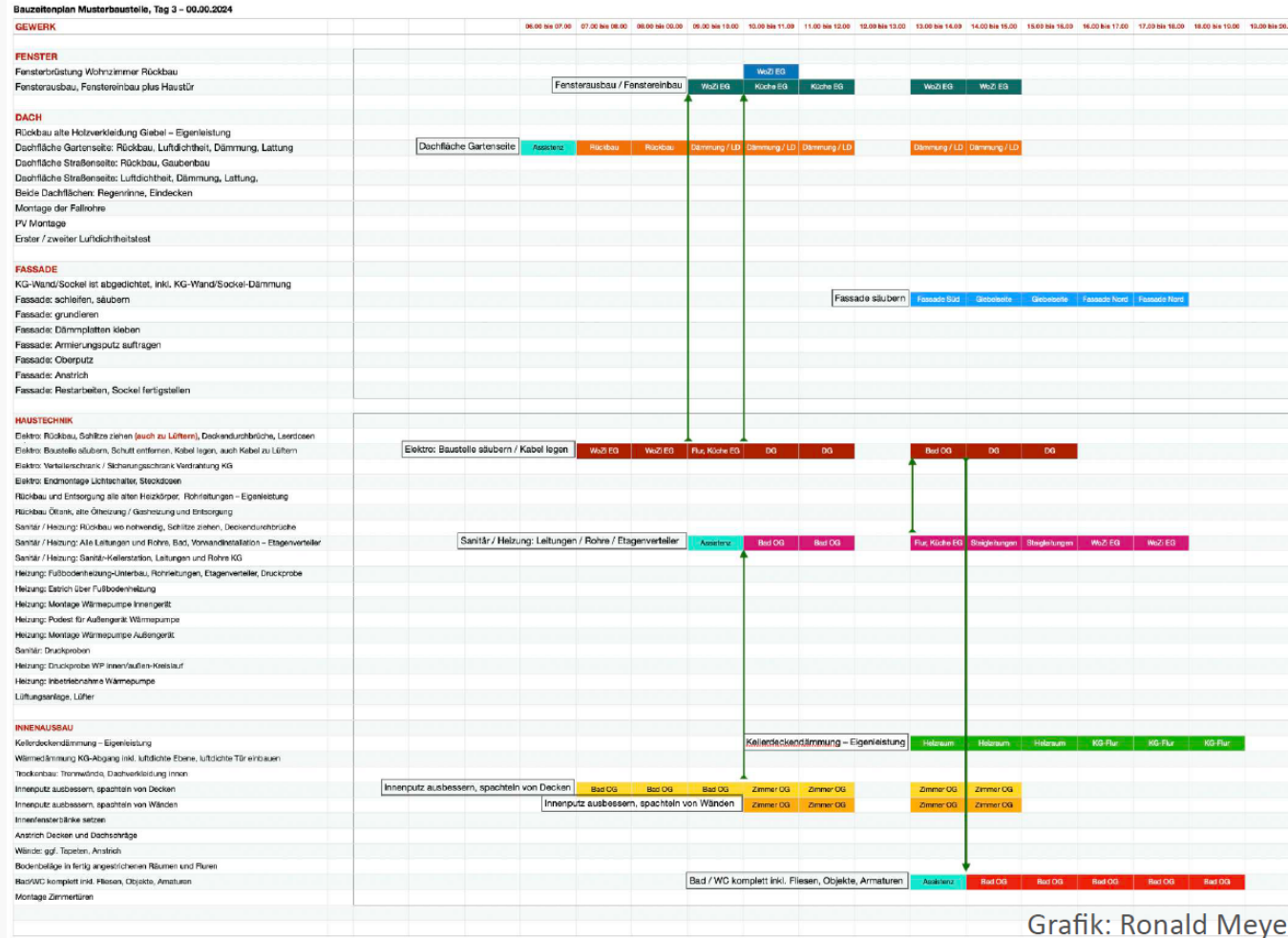
Team of craftsmen at the renovation sprint



- Reliable, on-time planning
- “Refurbishment coach” manages the construction site
- Routine thanks to well-coordinated teams
- Higher added value per hour
- Digitalization instead of endless paperwork

Renovation sprint brings together what belongs together: top craftsmanship, high-quality planning and digitalization. The most important thing, however, is mutual responsibility and appreciation.

Detailed (hourly) construction schedule



→ orchestrates the different crafts
 → achieves planning security

Pilot project in Hamburg (Germany)

Before



After

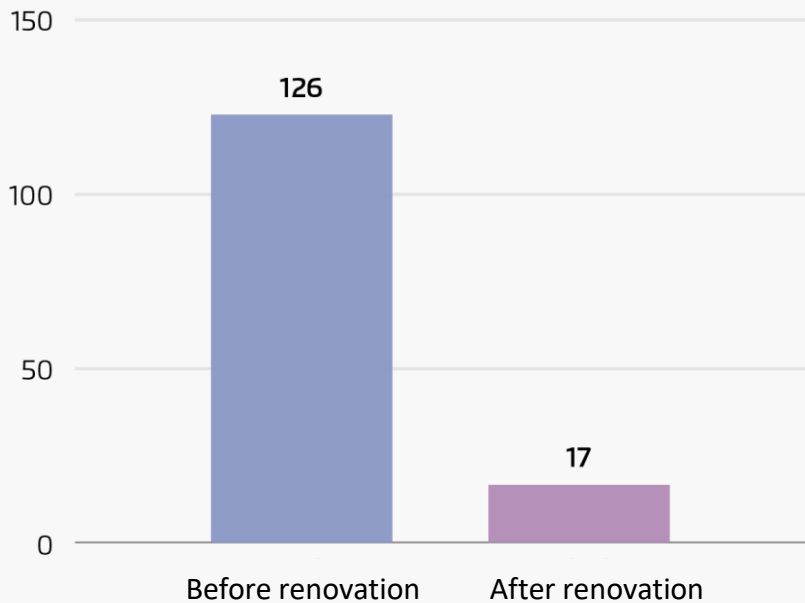


→ 5 realized pilot projects in Germany (since 2022); ~20 planned projects in 2025

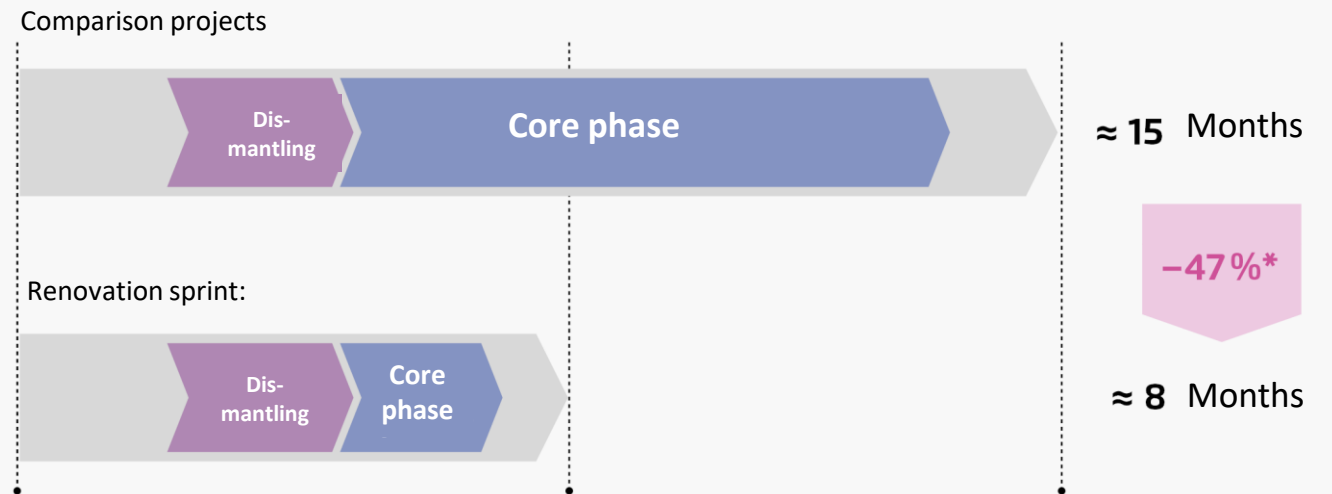
Savings

Energetic quality: Reduction of energy consumption and CO₂ emissions by around 90 %

[kg/m²]

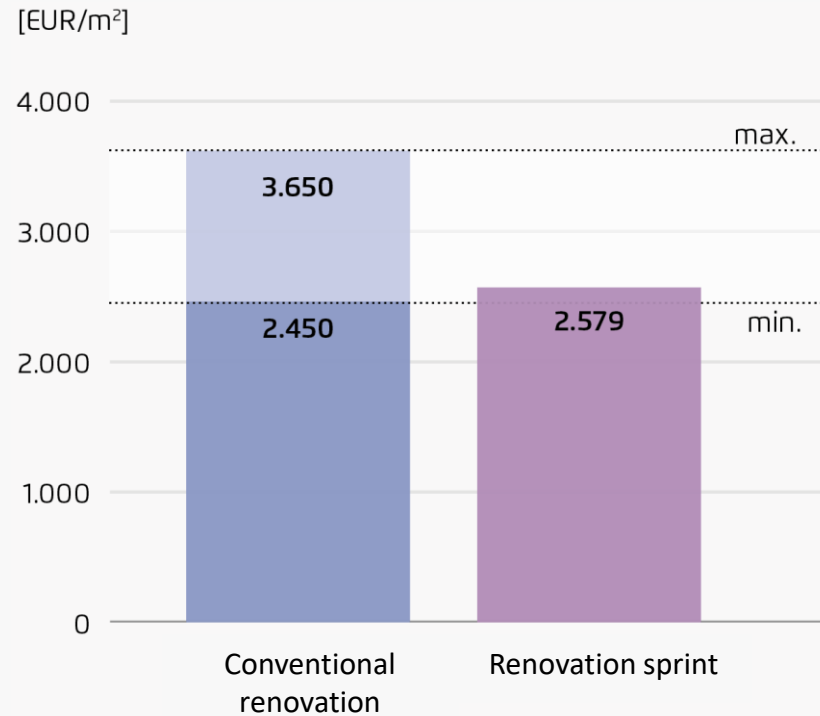


Time: Halving of the total project duration and 22-day core phase

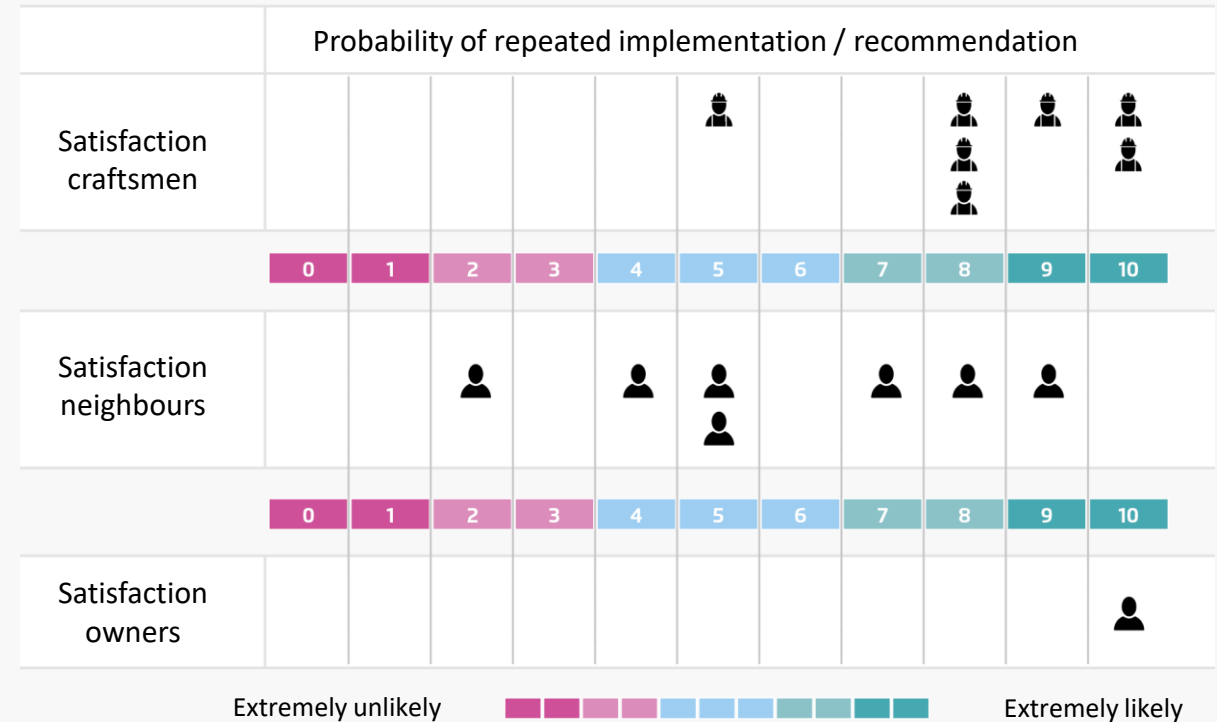


Savings

Costs: comparable to or lower than conventional refurbishments

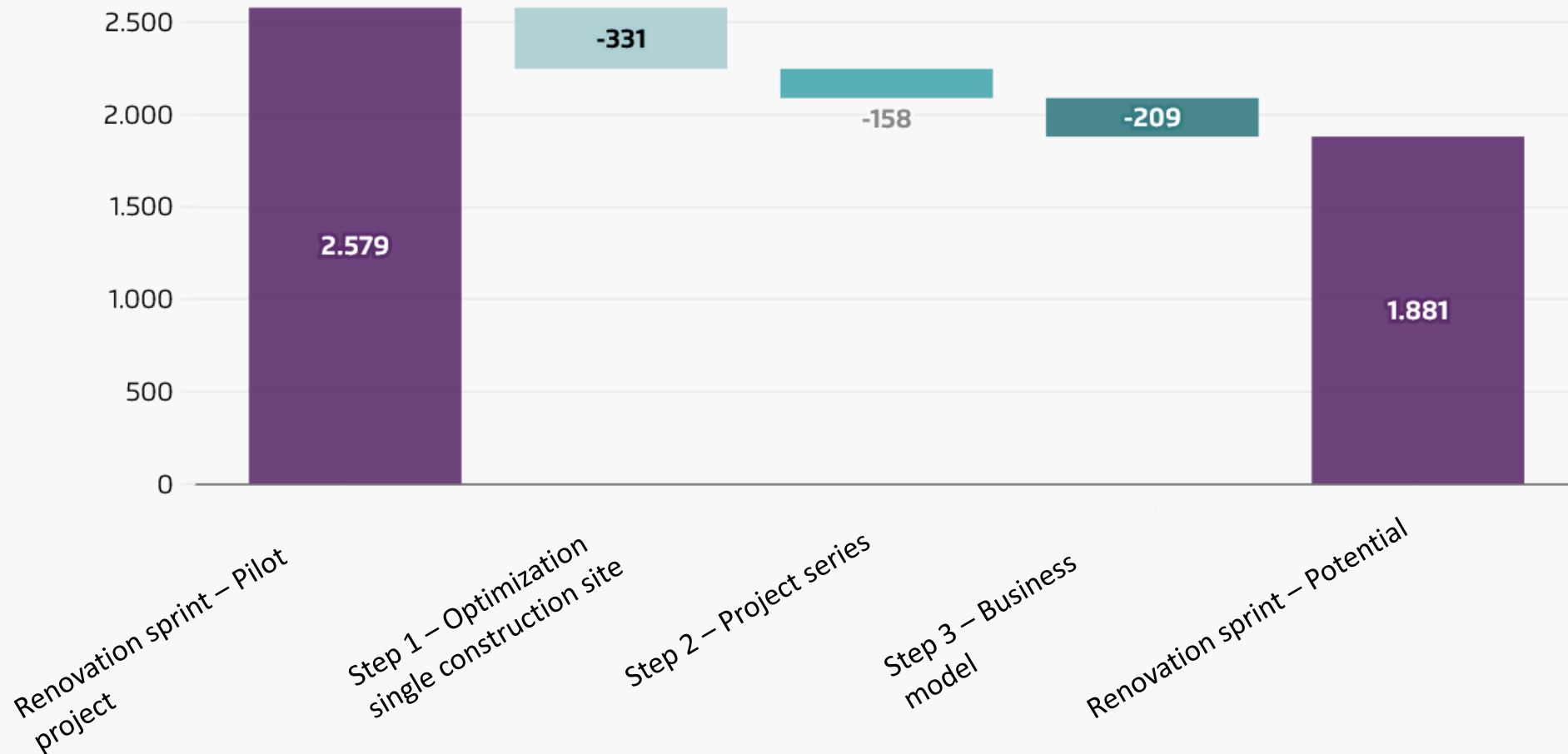


Motivation: high motivation & satisfaction
Resources: disruptive factors noise & stress



Cost reduction potential of around 30 percent

Costs per square
meter of living space
[EUR]



Supporting the roll-out through political instruments

Introduce a central market development office

- Initiates, coordinates, supports and accompanies the dissemination
 - Generating and providing knowledge
 - Supporting practitioner
 - Communication and networking

Define and support training of renovation coaches

- Skills: Communication and coordination
- Target group: various professional groups
- Initiative of the chambers (of crafts, architects, engineers)

Short-term temporary financial incentives

- Start-up funding for renovation coaches
- Bonuses for refurbishment sprint teams
- Bonuses for successful implementation

Speed up planning and approval processes

- Reducing bureaucracy
- Simplifications
- Standardizations

Outlook

- 1. Make the approach better known**
- 2. Implement further projects and improve the concept**
- 3. Advocacy work for upscaling instruments**

Thank you!

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