



The Renovation opportunity

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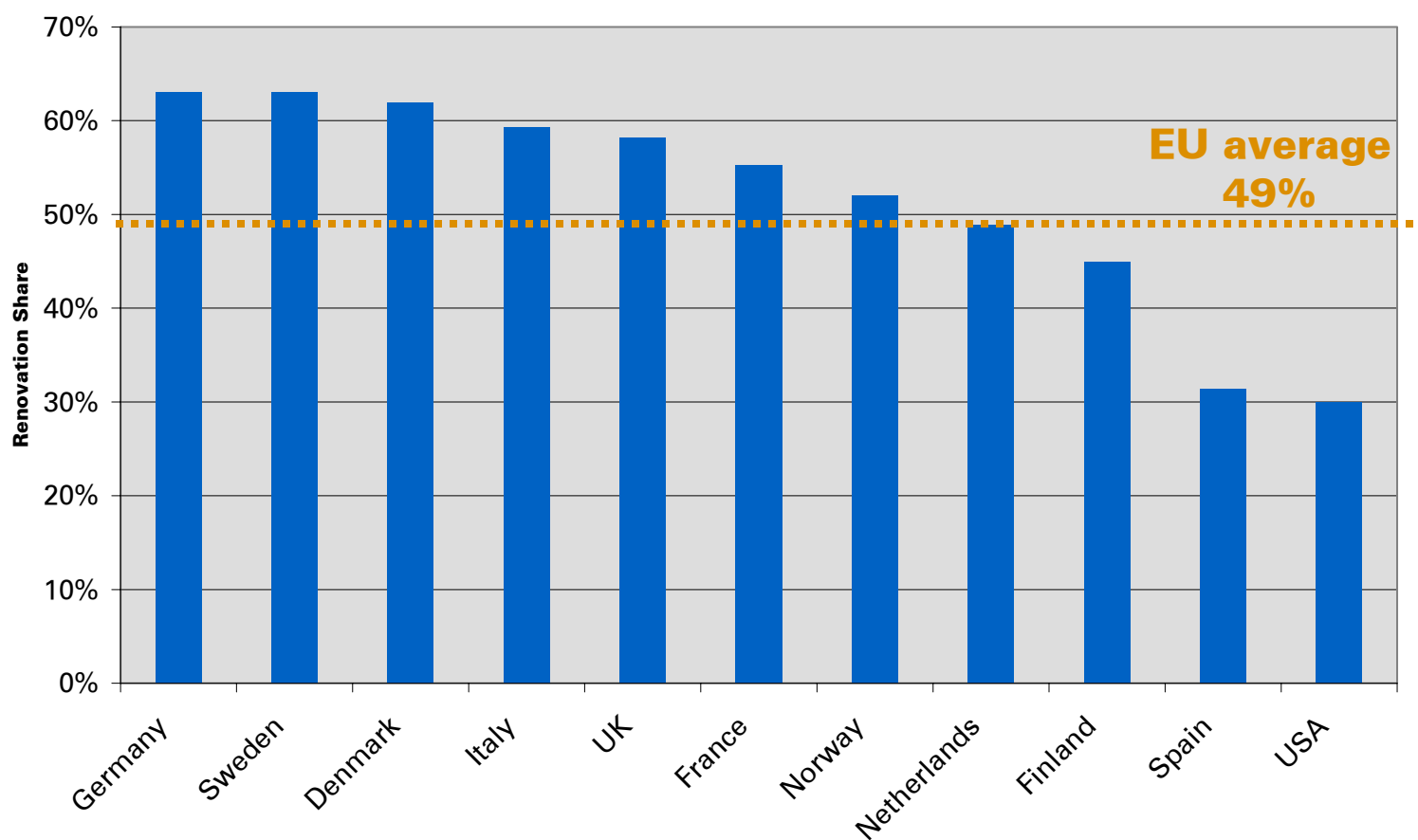
The renovation opportunity

Bringing
comfort
to life



Renovation potential

Renovation in residential construction



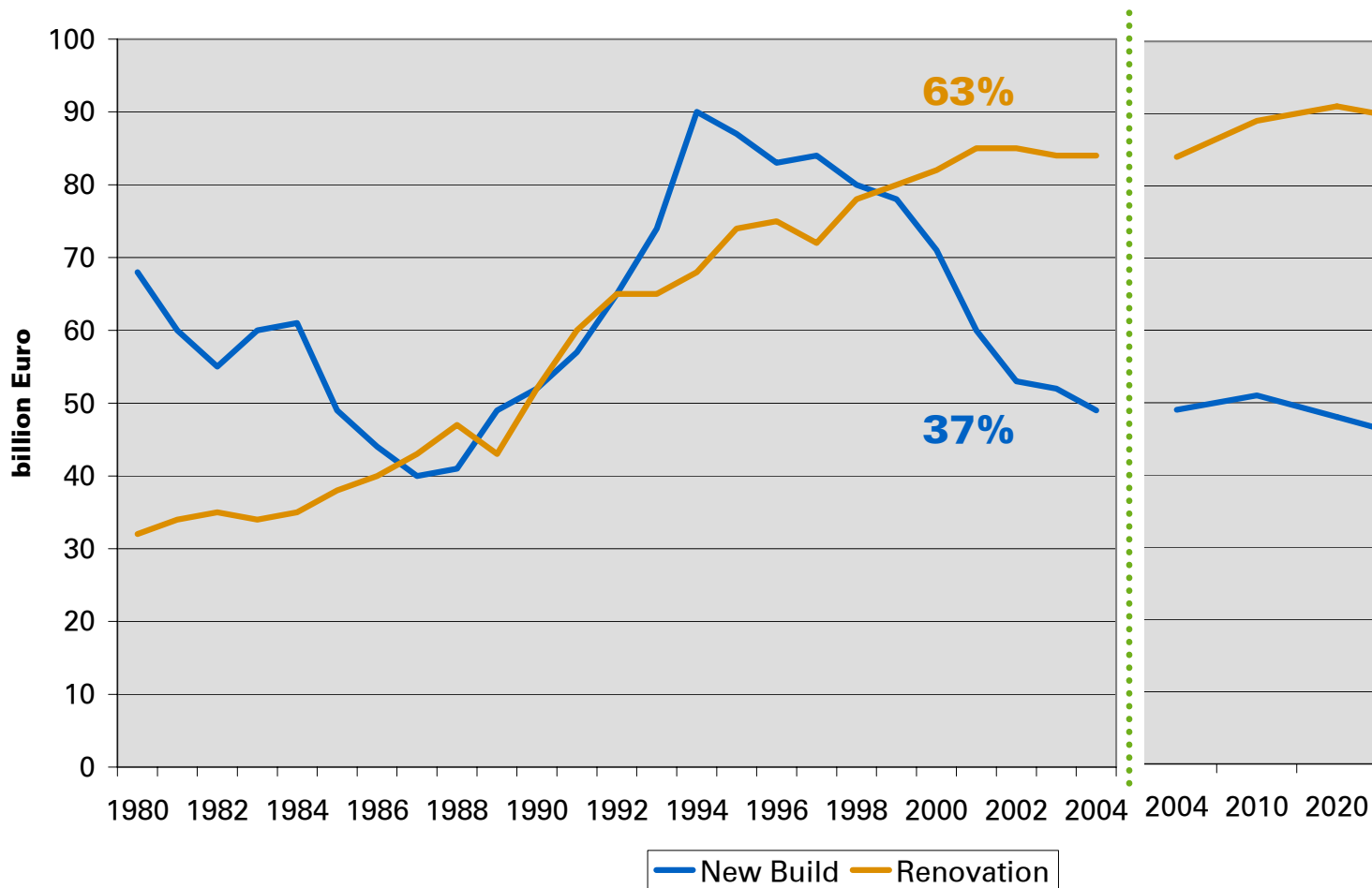
Source: Euroconstruct / Heinze / NAHB

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Renovation potential



Residential construction in Germany




Source: Heinze

Renovation potential

Significance of a House to the owner



My home for a lifetime...



My symbol for social status...



My retirement provision...

Motives for renovation



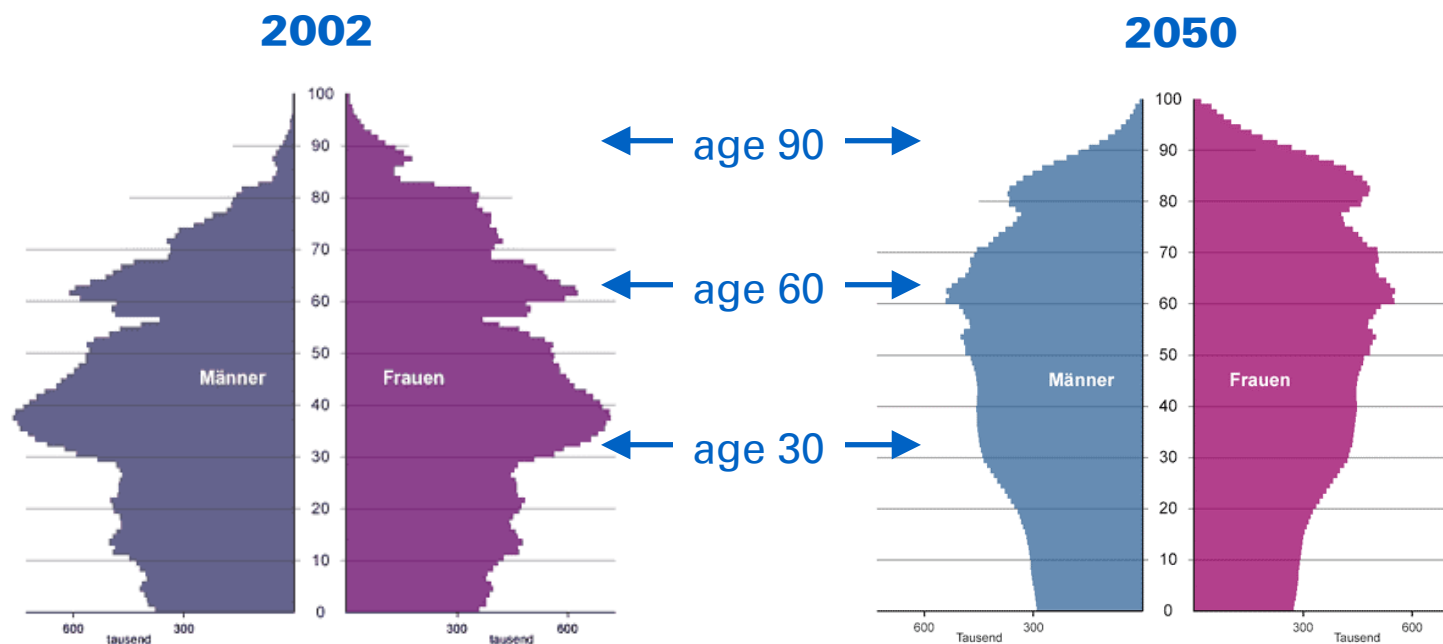
1. **Comfort**
2. **Increased demand of space**
3. **Damages**
4. **Utilisation of government aids**
5. **Money available**



Renovation potential

Growth drivers

- **Demographic situation**
 - Average number of children down to 1.3
 - Population is decreasing and growing older



Source: Destatis

Renovation potential

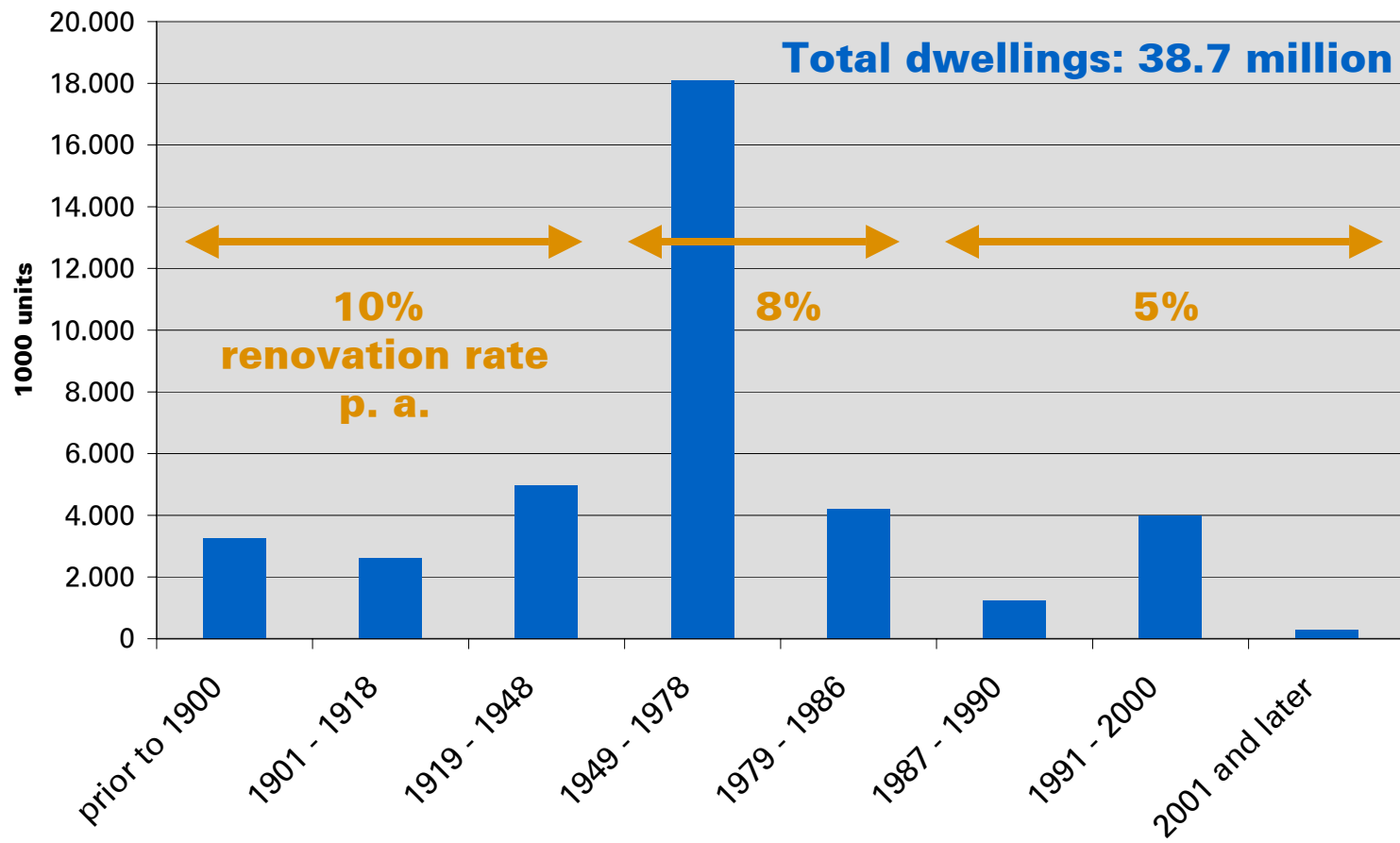
Growth drivers

- **Technical situation**
 - Demand for technical features meeting special requirements of senior citizens increasing
 - New technical regulations require the replacement of inefficient heating systems (in Germany, potentially 2 million heat generators until 2008)
 - Tenants of older buildings desire the same level of comfort and efficiency as is standard in new houses



Renovation potential

Age of dwellings in Germany



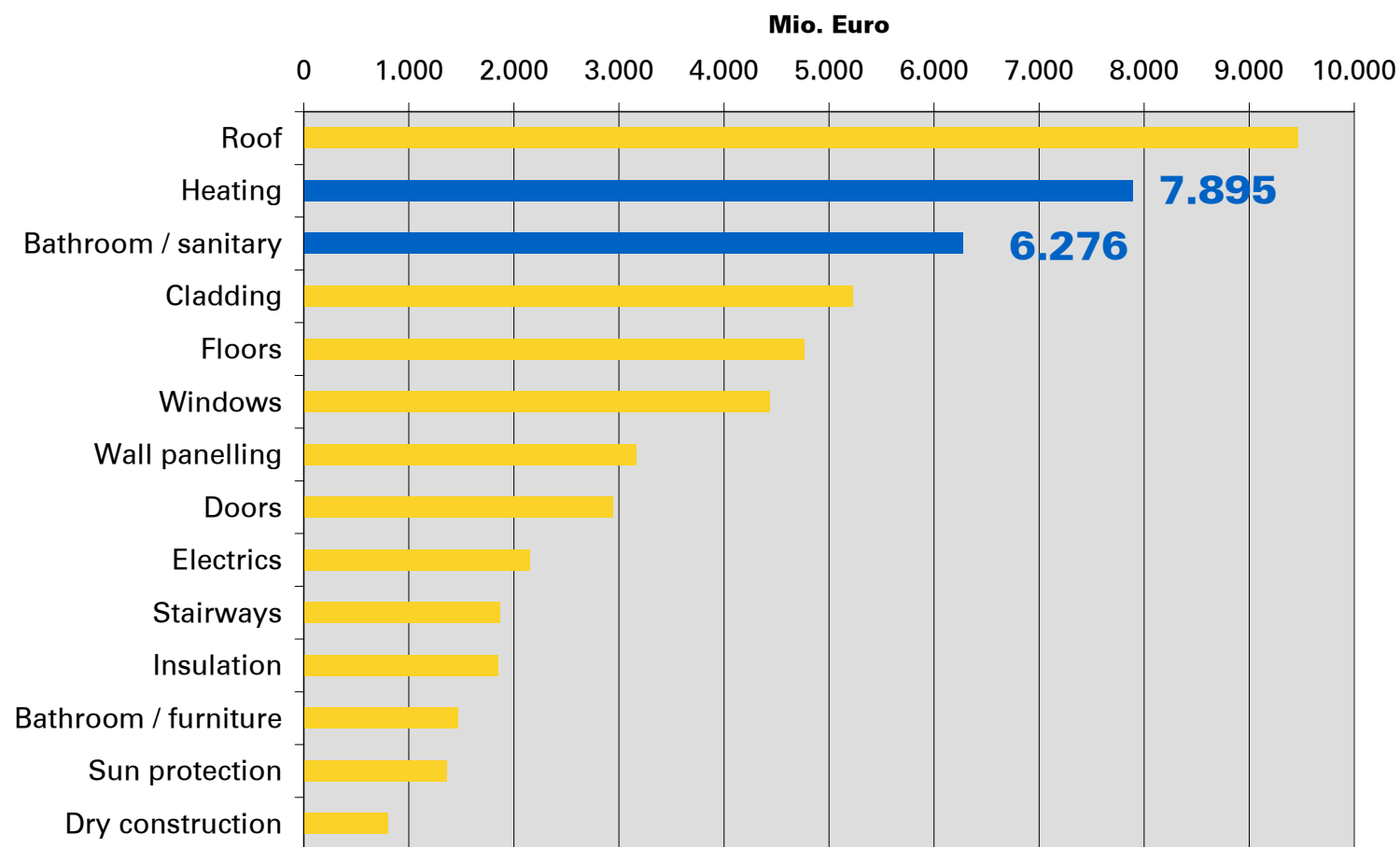
Source: Destatis

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Expenses for different product groups in renovation



Source: Heinze Modernisierungsstudie

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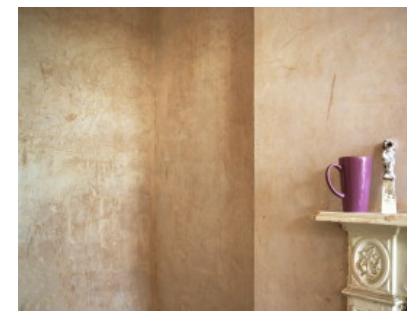
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Uponor solutions

Specific conditions in renovation projects

Identifying specific renovation requirements through workshops with installers, planners, wholesalers and owners:

- 
- Structure of the building (especially floors and ceilings) remains unchanged
 - Existing structures (floors, walls) often uneven
 - Tenants keep living in the building during the renovation
 - ⇒ fast renovation time important
 - ⇒ noise and odour have to be avoided
 - ⇒ danger of fire to be excluded



Uponor solutions

Consequences for Uponor's key businesses

- **Tap Water & Radiator Connection**

- Easily adjustable to uneven walls
- Safe jointing technology
- Easy and fast installation
- Highest hygienic requirements



- **Underfloor Heating**

- Existing building structures remain untouched
- Floor structures only raised minimally
- Easy connection to existing heating systems



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Uponor solutions - Tap Water & Radiator Connection

Requirements to renovation systems

Results of focus group workshops with installers, planners, wholesalers and owners:

UNIPIPE[®]
Systems

- **Combining the advantages of metal and plastic pipes**
 - **Innovative fitting technology**
- **The ideal solution for renovation requirements in tap water and radiator connections**

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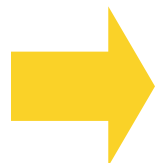
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Uponor solutions - Underfloor Heating

Requirements to UFH renovation systems

Options for using the comfort of UFH systems

1. Remove the existing screed down to the concrete and install a conventional UFH system with the required insulation and the pipe system to be embedded in new screed layer
 - ⇒ dirt and noise, long installation time
2. Install a UFH system on top of the existing screed after removing the old floor covering
 - ⇒ minimal height of the system required in order to maintain the room height



No existing UFH system was able to meet these requirements

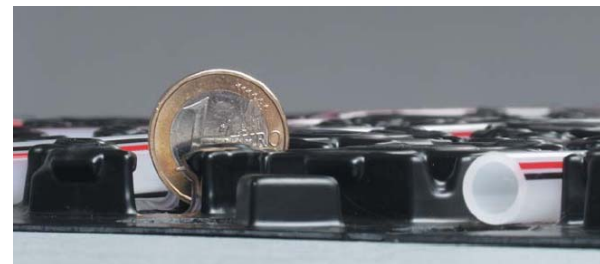
Uponor solutions - Underfloor Heating

Velta Minitec – Uponor's brand-new innovation

- **Development of a solution to meet new market requirements**
 - System for a new application ("soft" renovation)
 - Floor heating / cooling system with a minimum height (max. 15 mm)
 - Heat output (Va 10 cm/tiles): 70 W/m²
 - Short heating up / cooling down time
 - No separation from radiator system
 - Lower heating temperatures
 - Fast installation time



Systems

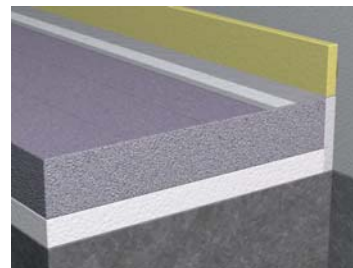


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Uponor solutions - Underfloor Heating

Velta Minitec – Uponor's brand-new innovation

- **The result: An unrivalled innovation**
 - PEXa pipe 9,9 x 1,1 mm
 - Patent-protected renovation panel with self-adhesive layer (dimension 1,12 x 0,72 m)
 - 40 mm high edging strip
 - Control station for connection of UFH and existing radiators
 - Fast drying time (2 weeks less than conventional systems)



UFH connection radiator connection

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Uponor solutions - Heating & Cooling

Polymat – Uponor's new universal solution

- **Heating and cooling**
- **Installation underfloor, in ceilings and walls**
- **New build and renovation**
- **Residential and commercial buildings**



- capillary pipe system
- total height of system only 6 mm
- for smooth and uneven surfaces
- extremely short heating-up period
- high cooling efficiency
- dynamic control mode
- efficient and environmentally friendly use of regenerative energies

Uponor solutions

Ready for the future

- Clear long-term trend toward renovation
⇒ 2/3 of market volume
- Review of Uponor offering together with customers
⇒ identification of offering fits and gaps
- Development of new products and systems
⇒ tackling new market opportunities



Uponor is well prepared to tap the growing potential of the renovation market



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Business conclusion

- **Competition**
 - The renovation market offers new differentiation potentials
 - The substitution of metal by plastic systems is accelerated due to their specific advantages in renovation

- **Target groups**
 - The installer as "consultant" to the home owner is the main decision maker / influencer in renovation projects



The renovation opportunity

Business conclusion

- Uponor is well positioned in the Tap Water and Radiator Connections renovation market with a high share of sales
- Continuous growth with the market potential and the market shares of our systems
- Within Under-floor Heating Uponor is building a completely new market segment
- The renovation market is characterised by better differentiation opportunities and less price sensitivity

