



# ENERGY- AND WATER MANAGEMENT AT WIENERBERGER

# OUR LIVING SPACE IS CHANGING



# CLIMATE CHANGE

## LONG DRY PERIODS

A photograph of a city street completely flooded with water. Several cars are partially submerged, with only their roofs and windows visible above the water level. The water is dark and reflects the surrounding greenery. The scene is set under a canopy of lush green trees, with a line of parked cars visible on the left side of the road. The overall atmosphere is one of a severe weather event.

# CLIMATE CHANGE

## HEAVY RAIN

# SINKING GROUND WATER LEVELS

## CHANGING OPERATING REQUIREMENTS



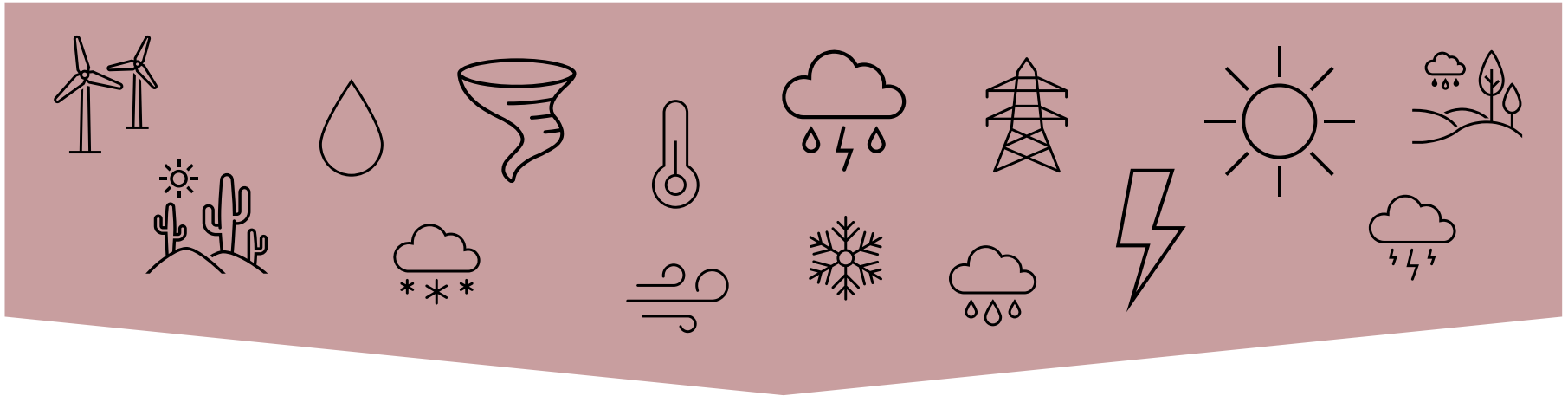
# RISING TEMPERATURES

## URBAN HEAT ISLANDS

A photograph of industrial machinery, likely a gas processing or oil refinery component, featuring large yellow pipes, valves, and a pressure gauge. The scene is set against a clear blue sky. The text 'ENERGY SHORTAGE & UNCERTAINTY' is overlaid in white, bold, sans-serif font across the center of the image.

# ENERGY SHORTAGE & UNCERTAINTY

# ENVIRONMENTAL CHANGES IMPACT OUR CUSTOMERS



**RESIDENTIAL & COMMERCIAL  
BUILDINGS**

**MUNICIPALITIES**



# HOLISTIC SOLUTIONS FOR

## RESIDENTIAL & COMMERCIAL BUILDINGS

**Value-Adding solutions**  
for existing building stock  
and new-built

**Example of renovation  
solutions**

## MUNICIPALITIES

Focus on public **infrastructure** for  
water- & wastewater management

**Example from region North –  
infrastructure water management**

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## EU-GREEN-DEAL: TAILWIND FOR RENOVATION OF BUILDINGS

**EU buildings stock  
responsible for**

**>40%**

of final energy consumption and

**36%**

of greenhouse gas emissions

**EU-Green-deal**

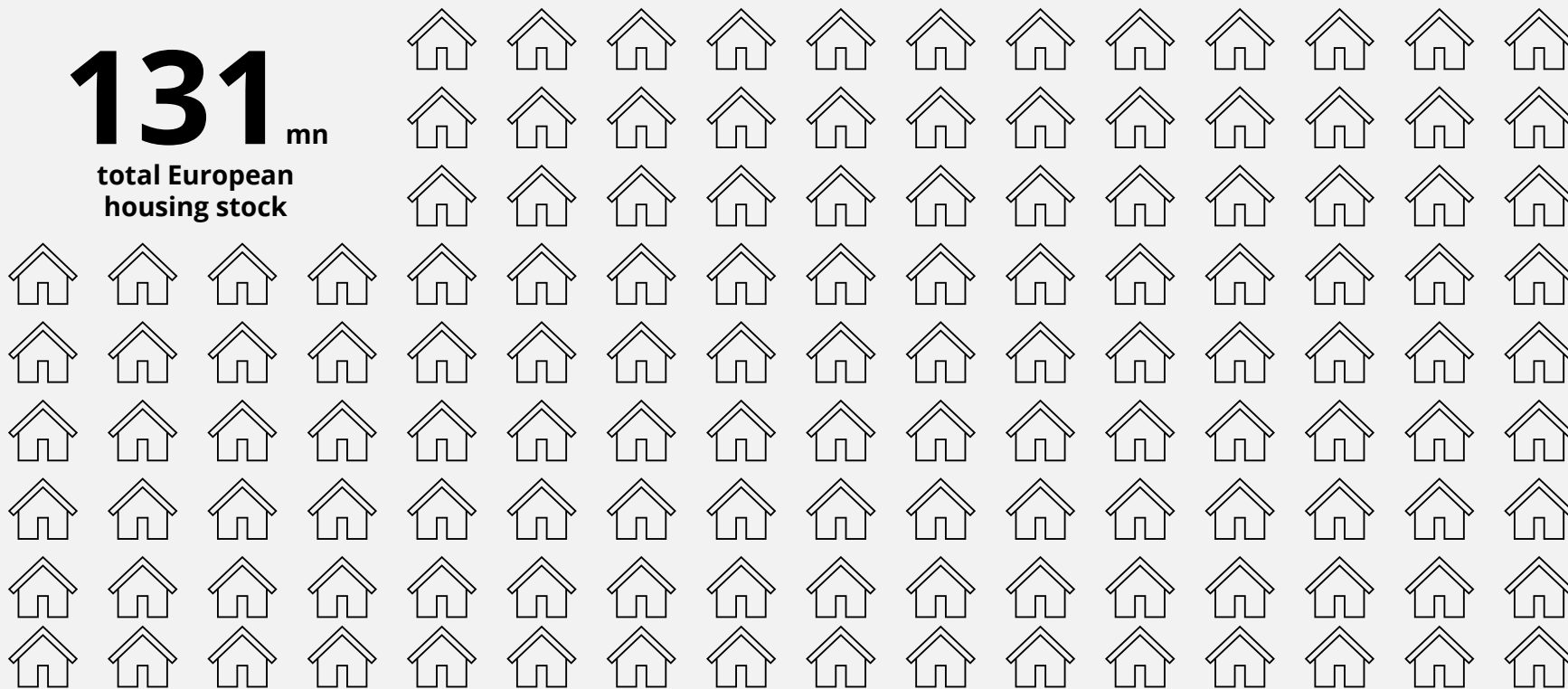
**55% CO<sub>2</sub> reduction**  
until 2030\*

**No additional CO<sub>2</sub>**  
in 2050

\* Baseline year 1990

# STATUS OF THE EUROPEAN HOUSING STOCK

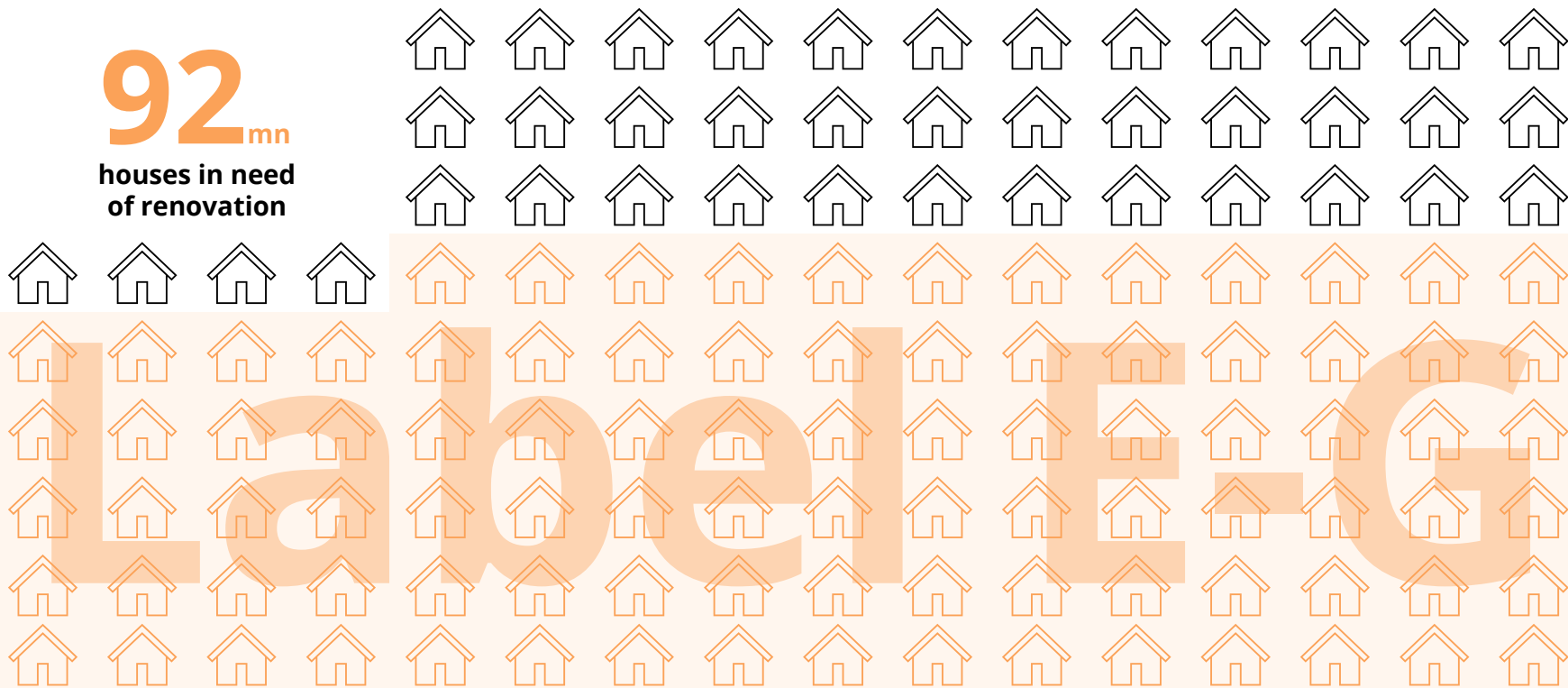
**131** mn  
total European  
housing stock



# 70% OF EUROPEAN HOUSES ARE ENERGY INEFFICIENT AND IN NEED OF RENOVATION

92<sub>mn</sub>

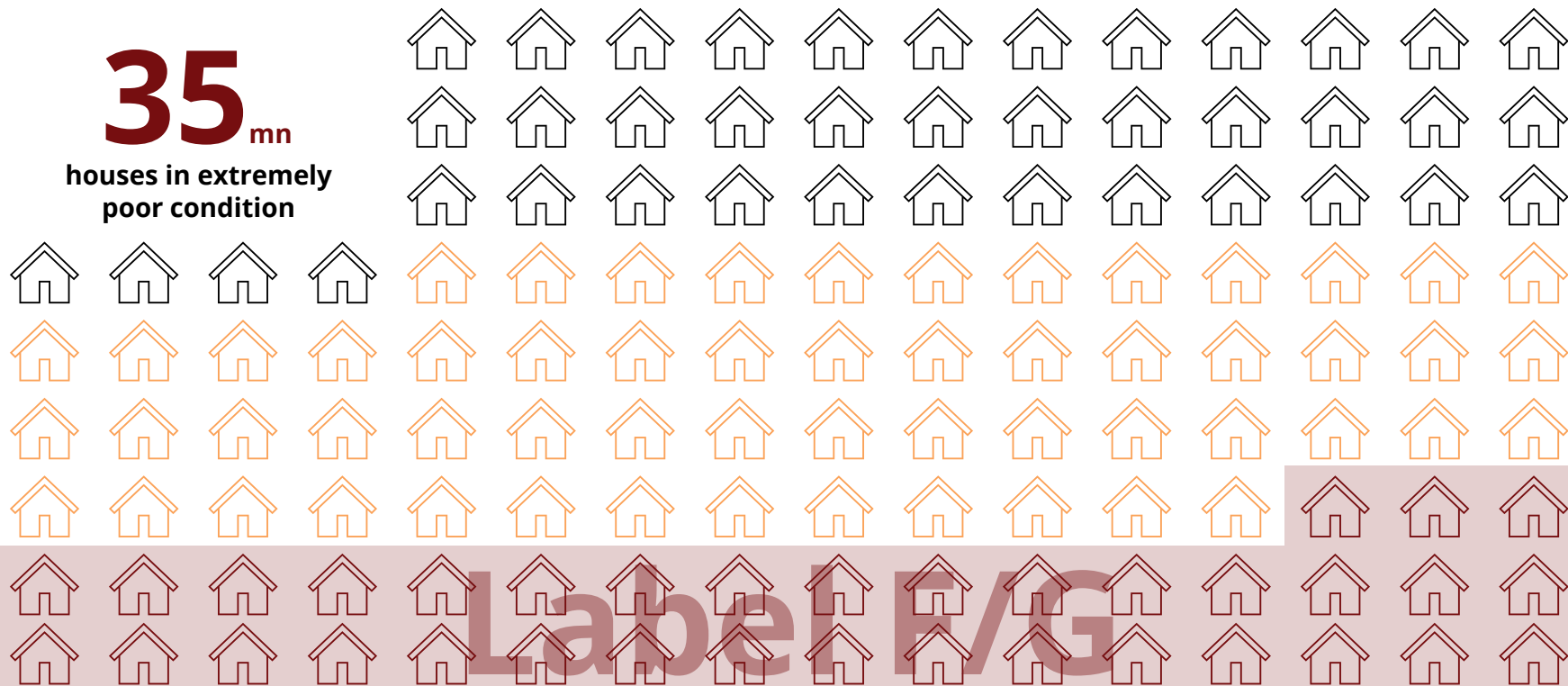
houses in need of renovation



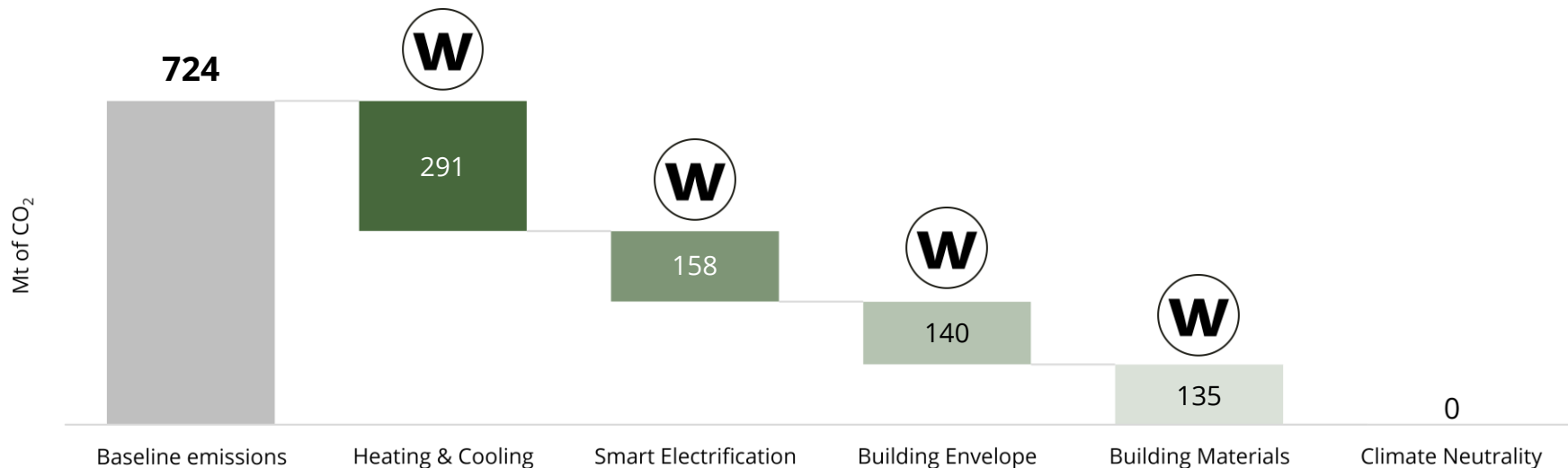
# 27% OF EUROPEAN HOUSES HAVE AN ENERGY LABEL OF E/F AND ARE IN DESPERATE NEED OF RENOVATION

**35**<sub>mn</sub>

houses in extremely poor condition



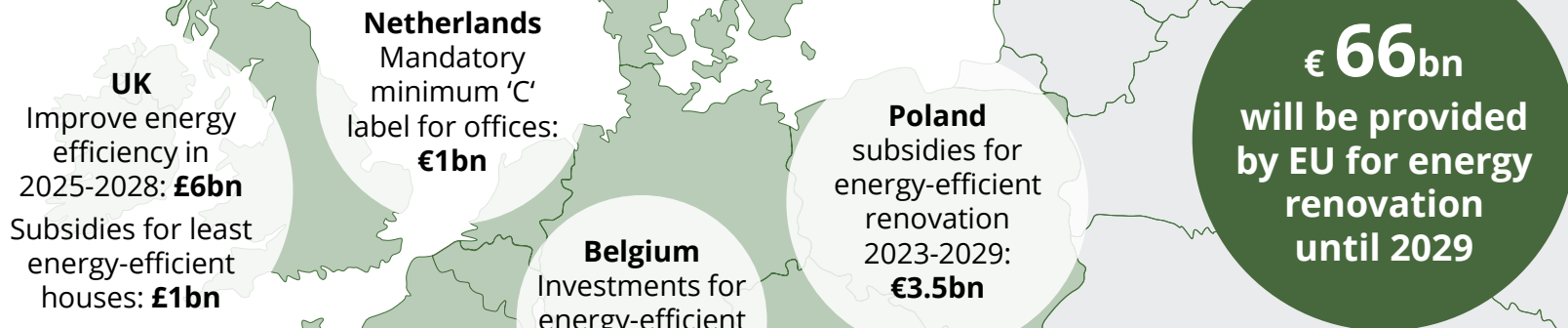
# ~80% OF A BUILDING'S EMISSIONS ARE GENERATED IN THE OPERATION OF THE BUILDING



**With our solutions we are addressing the core levers to improve the energy performance of buildings**

Source: European Climate Foundation 2020: Zero Carbon Buildings 2050 – Summary Report

# COHESION POLICY SUPPORT FOR ENERGY EFFICIENCY AND BUILDING RENOVATION



Source: [renovate-europe.eu](https://renovate-europe.eu), [energy.ec.europa.eu](https://energy.ec.europa.eu)



# DRIVING THE ENERGY TRANSITION THROUGH A HOLISTIC RENOVATION APPROACH

**BEFORE**



**AFTER**



# DRIVING THE ENERGY TRANSITION THROUGH A HOLISTIC RENOVATION APPROACH

BEFORE

House Level F

**34** MWh energy

€ **6,050** p.a.


**150** m<sup>3</sup> fresh water

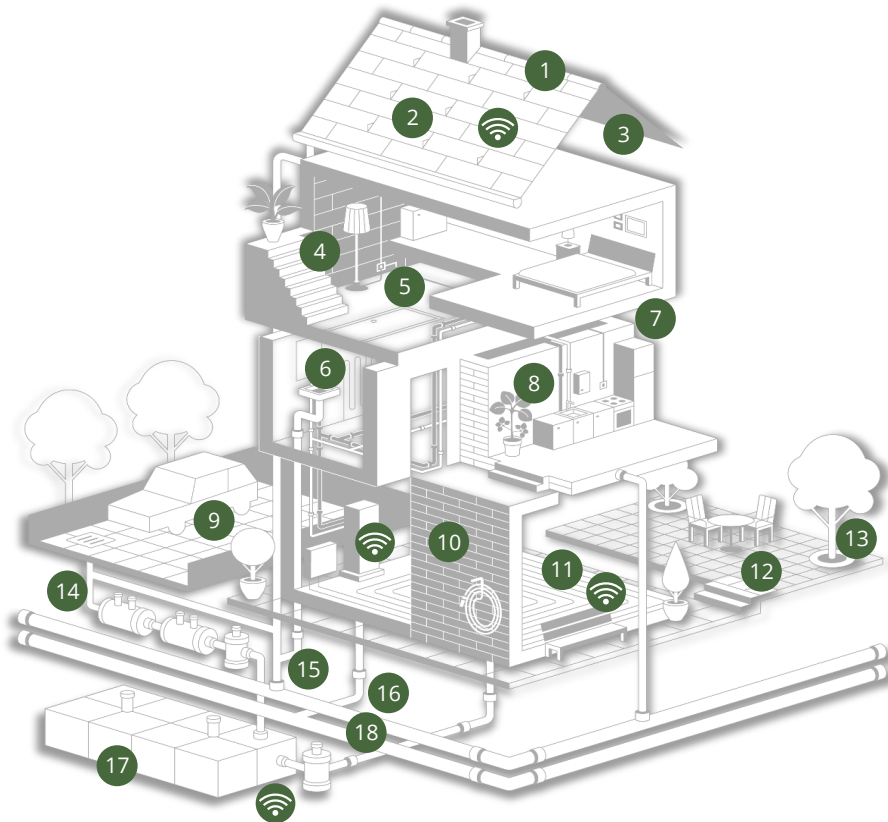
€ **1,000** p.a.



*Note: Consumption for 150m<sup>2</sup> standard Belgian house, gas and electricity mix based on 2023 prices*

# OPTIMIZING TODAY'S PORTFOLIO FOR TOMORROW'S COST-EFFICIENT AND HOLISTIC SOLUTIONS

1. Ceramic accessories
  2. Roof tiles with snow hooks
  3. Roof underlay
  4. Clay blocks
  5. Electrical installations
  6. Wall heating and cooling system
  7. Ceiling cooling
  8. Hot and cold-water installation
  9. Concrete pavers
  10. Facing bricks
  11. Floor heating & heat pumps
  12. Clay pavers
  13. Landscaping elements
  14. Water filtration unit
  15. Wastewater
  16. Fresh water supply
  17. Stormbox for water collection
  18. Water transportation
-  Data transmission



# ITERATIVE DESIGN PROCESS TO ALLOW FOR IMPROVED COST EFFECTIVENESS

## 1. Optimization of building envelope

Designing adequate insulation components in wall, roof and floor.

## 4. Electricity generation and consumption

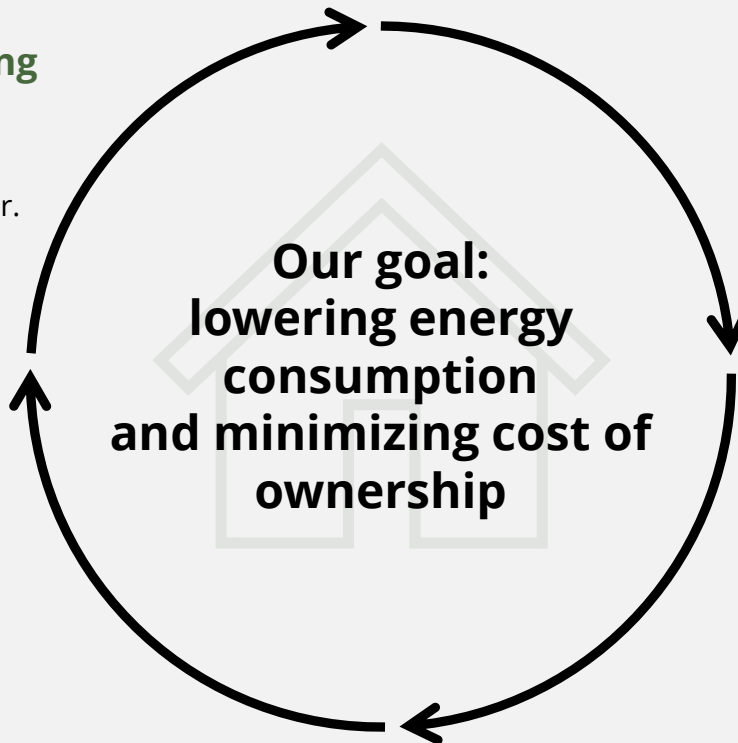
Deriving the dimension of photovoltaic capacity to balance investment costs and production capacity to meet the heat pump demand

## 2. Calculation of potential heat losses

Determine remaining peak heat losses of the building

## 3. Heating and cooling capacity

Calculation of required heating and cooling capacity to cover the heat losses (underfloor heating, ceiling cooling, heat pump, etc.)



# LEVERAGING TOTAL SOLUTIONS PORTFOLIO TO IMPROVE COST EFFECTIVENESS



Note: Consumption for 150m² standard Belgian house, gas and electricity mix based on 2023 prices

Note: with performance management; predominantly green energy

# ADDRESSING THE ENERGY TRANSITION NEEDS OF THE BUILDING SECTOR

**~ 85% less energy consumption @ increased comfort**

**Change from fossil fuels to green electricity**

**50 % reduction in fresh water consumption**



**CO<sub>2</sub> neutral**

**Energy self sufficient**

**Energy cost neutral**

**Increased resale value**

## WAY FORWARD



**Expanded our product-based offerings into affordable and holistic solutions addressing the decarbonization needs of the building sector**



**Serving both the rapidly growing renovation and new-build markets**



**Through integrated end-to-end solution, including operation, we optimize the overall cost effectiveness and create a market differentiation that sets us apart**

# HOLISTIC SOLUTIONS FOR

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Example of renovation  
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Example from region North –  
infrastructure water management



# FROM PIPES TO WATER MANAGEMENT: EXAMPLE OF THE REGION NORTH



EXAMPLE REGION NORTH

# WIENERBERGER PIPE ACTIVITIES IN THE NORTH

# #1

market position on  
infrastructure pipes

# €400<sub>mn</sub>

revenue 2022

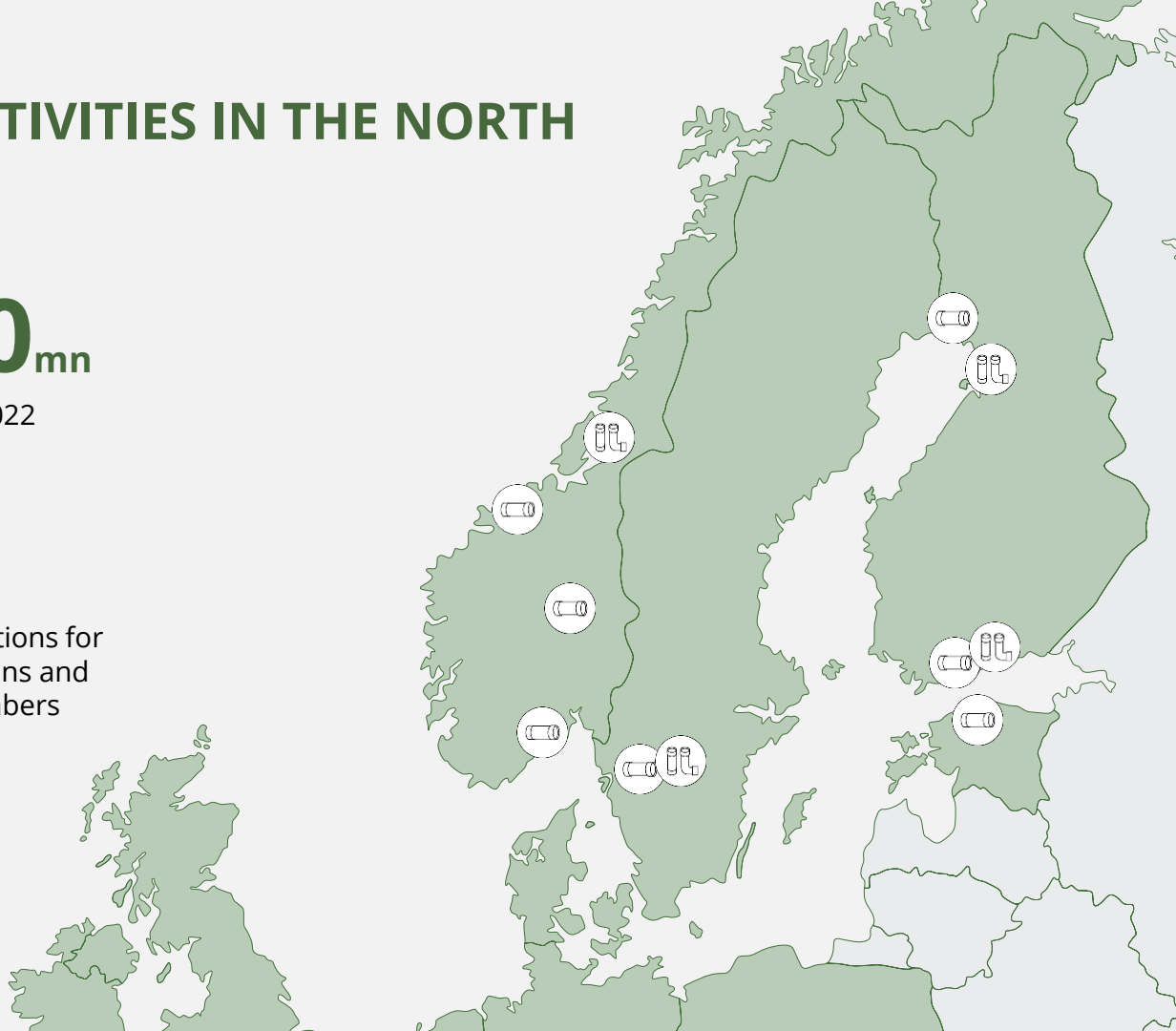
# 7

plastic pipe  
extrusion plants



# 4

production locations for  
pumping stations and  
special chambers



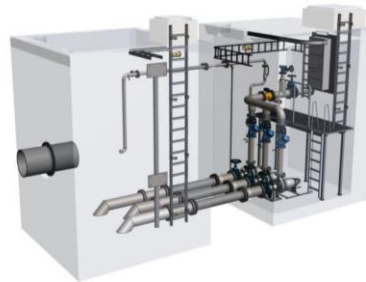
# FOCUS ON WATER MANAGEMENT TO GROW THE BUSINESS ...

## Leveraging our strong #1 position on infrastructure pipe solutions...

- › Trusted high quality brand with the municipalities
- › Strong core business with attractive margins

## ...to grow into a holistic provider for municipal water management

- › Highly complementary business to our core
- › Cross selling opportunities
- › Growing our addressable market



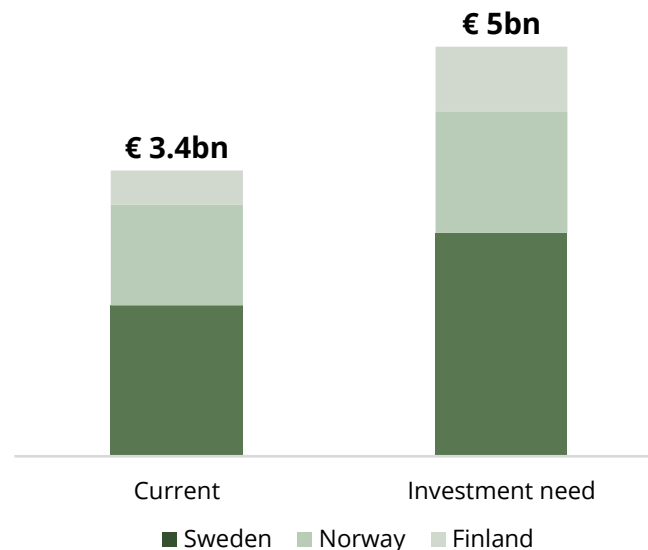
## ... IN AN ATTRACTIVE AND EXPANDING MARKET SEGMENT

### Growing (re)investment need in the water segment driven by

- > Climate adaptation
- > Ageing & underinvested infrastructure
- > Regulatory requirements
- > Growing populations & urbanization

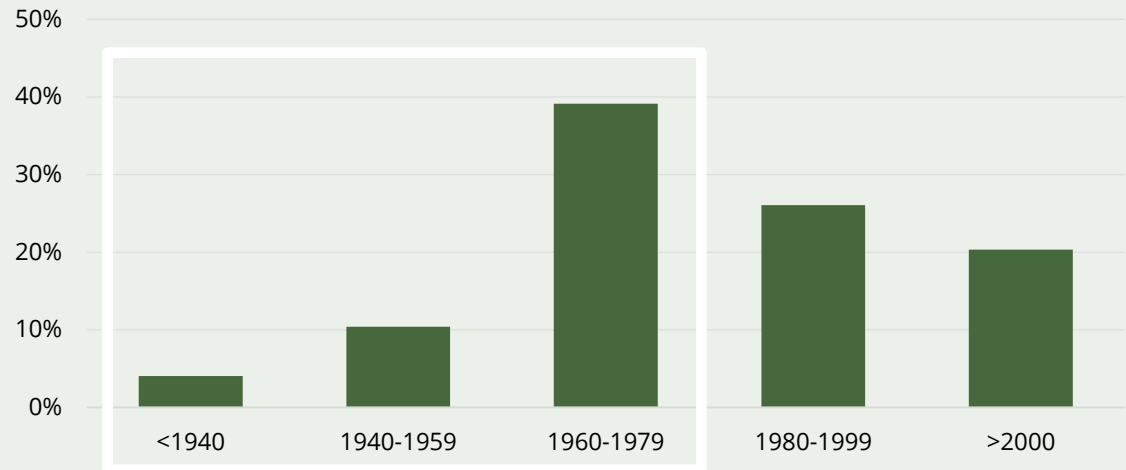
### Investments in water management needs to increase by >45%

### INVESTMENTS IN WATER & SEWAGE INFRASTRUCTURE in € bn



## AGEING INFRASTRUCTURE NETWORKS ...

**Over 50% of the sewage network is older than 40 years, with almost 40% of the entire network being build in the 1960s and 70s.**






*Note: Sewage network in kilometers of Sweden, Norway and Finland / Source: Svensk Vatten, Norsk Vann, Finnish Water Utilities Association*

# ... CURRENT AND HISTORIC UNDERINVESTMENT ...

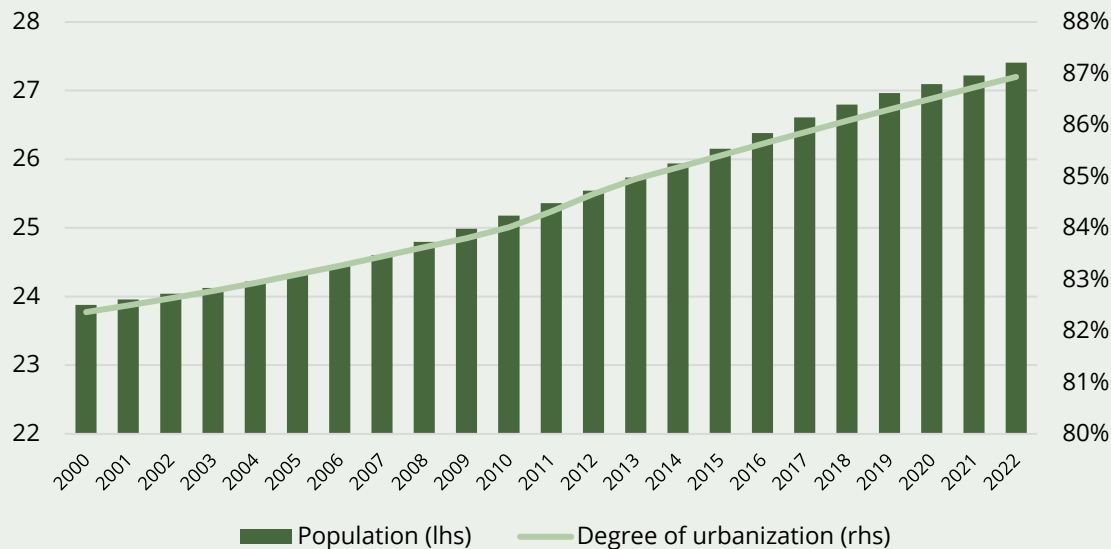
**Current network renewal rate of less than 1% is significantly below long-term sustainable and self-identified reinvestment requirements.**



	CURRENT RENEWAL RATE	IMPLIED REINVESTMENT CYCLE
	0.5%	>200y
	0.8%	>120y
	0.7%	>140y

Source: Svensk Vatten, Norsk Vann, Finnish Water Utilities Association

## ... GROWING POPULATION AND URBANIZATION ...



**Growing population and a high degree of urbanization put additional pressure on the existing water infrastructure in the Nordics.**

## ... CLIMATE ADAPTATION REQUIREMENTS ...

### Climate adaptation investments into the networks required in order to address

- › more frequent **extreme rainfall** and seasonal variations
- › longer periods of **droughts** in-between rain periods
- › increase in **surface water and flood-related damage** to infrastructure, buildings and danger to life and health





## ... REGULATORY DRIVERS ...

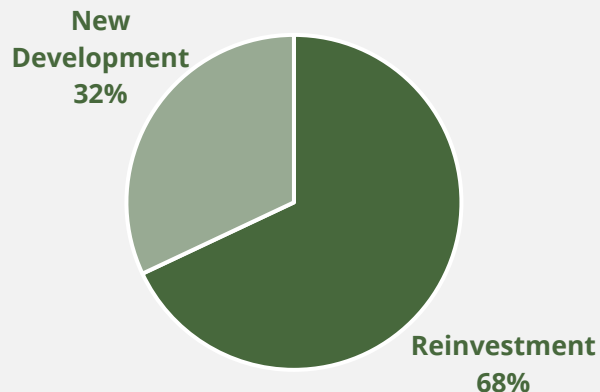
**Stricter regulations on EU (e.g. zero pollution 2050) and national levels to safeguard the quality of water require adaptations of the existing infrastructure**

- › Stricter requirements on e.g.
  - › overflow events
  - › foreign water
  - › water purification
- › Monitoring, control & reporting → digital water

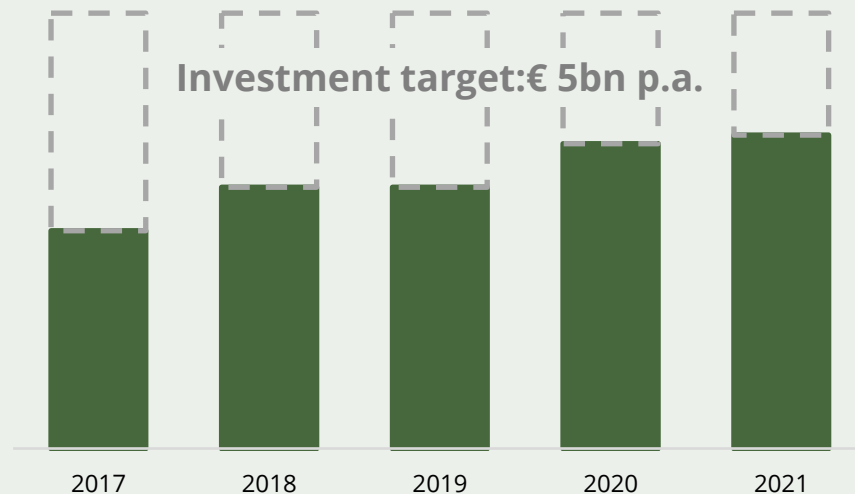


# ... LEAD TO INCREASED REINVESTMENT REQUIREMENTS AND A STRUCTURALLY GROWING MARKET

### INVESTMENTS IN WATER & SEWAGE INFRASTRUCTURE in %



### INVESTMENTS IN WATER & SEWAGE INFRASTRUCTURE PER YEAR in € bn



Source: Svensk Vatten, Norsk Vann, Finnish Water Utilities Association

# VALUE CREATION PATH

## PRODUCTS

### Pipes & Fittings & Accessories

Offering commoditized products like pipes, fittings, manholes, accessories



## FULL SYSTEMS

### Pumping stations, special chambers, tanks, etc.

For sewage, rainwater and groundwater



## CONNECTED PRODUCTS

### Remote monitoring and control

Providing remote and web-based controlling and monitoring system for network assets



## SMART SOLUTIONS

### Deep insights & Digital water

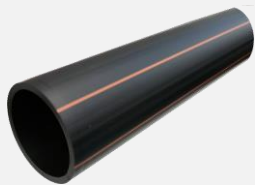
Providing insight into the performance of the network. Solutions e.g. for leakage & foreign water detection, predictive maintenance, etc.



# ATTRACTIVE MARGIN PROFILE

## PIPE TRADITIONAL BUSINESS

### Pipes & Fittings



- › Water & sewage pipes & fittings
- › Manholes
- › Retention tanks
- › Firewater tanks

**<50% of the project  
10-20% pipe gross margin\***

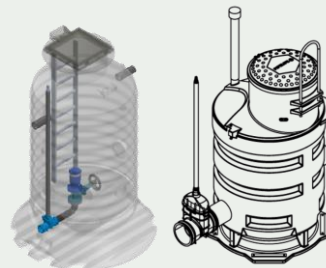
## WATER MANAGEMENT NEW BUSINESS

### Pumping stations



- › Pumping stations for sewage and rainwater
- › Pressure increase stations for fresh water

### Bespoke chambers



- › Valve chambers
- › Monitoring chambers
- › Aeration chambers

**>50% of the project  
30-40% system gross margin\***

### Accessories | Monitoring



- › Water accessories
- › Sensors
- › Connectivity & remote control
- › Smart solutions

\* Values refer to example project in Finland

# GROWING PLATFORM BUILT VIA ORGANIC INVESTMENT AND TARGETED M&A

**Acquisition of InterAct, NL**  
Monitoring & Control and Smart Solutions for the Group



**Acquisition of QPS, NO**  
Added capabilities in pumping solutions



**Factory extension Sweden**  
Infra water management capabilities for Sweden + Norway



**New factory in Vantaa, FI**  
Added capabilities in infra water management solutions



**Acquisition of Wideco, SE**  
IOT & Smart Solutions



**Continued buy and build strategy**

## WAY FORWARD

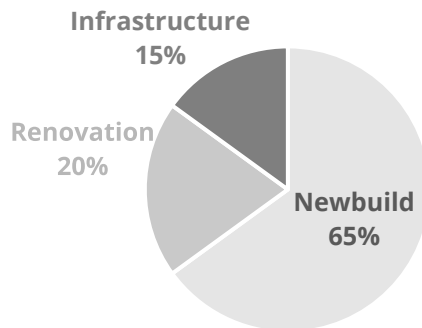
- › Extended our core business into infrastructure water management solutions to **grow** our **addressable market**
- › Position Wienerberger as a **trusted solution provider** for our end customers
- › Continue to build the platform via **buy and build** strategy



# PIPE SOLUTIONS ARE KEY CONTRIBUTOR TO PORTFOLIO TRANSFORMATION...

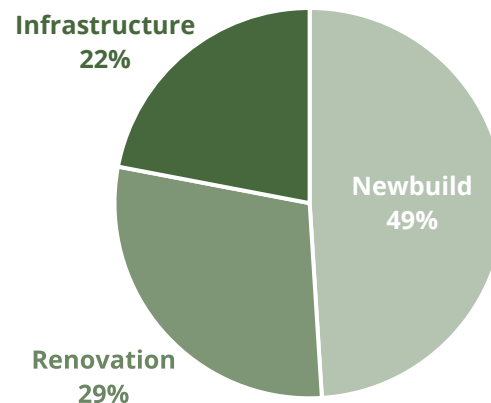
- > Pipe activities with large **exposure to less cyclical infrastructure and renovation** markets
- > End **markets with sustainable growth** expectations
- > **Wienerberger grows beyond market** via shift from product to solution and focus on end markets

## 2012



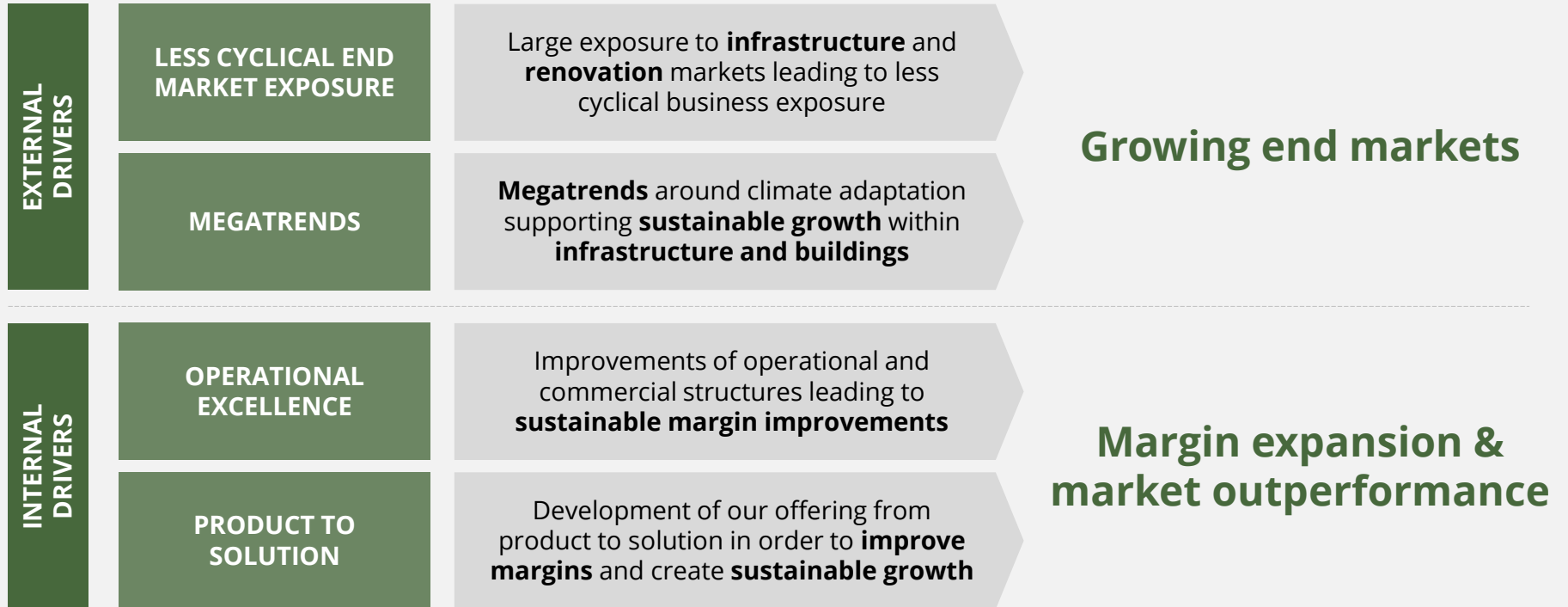
€ 2.4 bn revenues

## 2022



€ 5.0 bn revenues

# ...WITH AN ATTRACTIVE BUSINESS EXPOSURE TO CREATE SUSTAINABLE VALUE





## OPTIMIZATION OF INDUSTRIAL SETUP



**CONSOLIDATION OF MANUFACTURING NETWORK BY COMBINING SMALLER PLANTS**

Sweden, Finland & Ireland



**INVESTMENTS IN AUTOMATION LEADING TO EFFICIENCY IMPROVEMENTS**

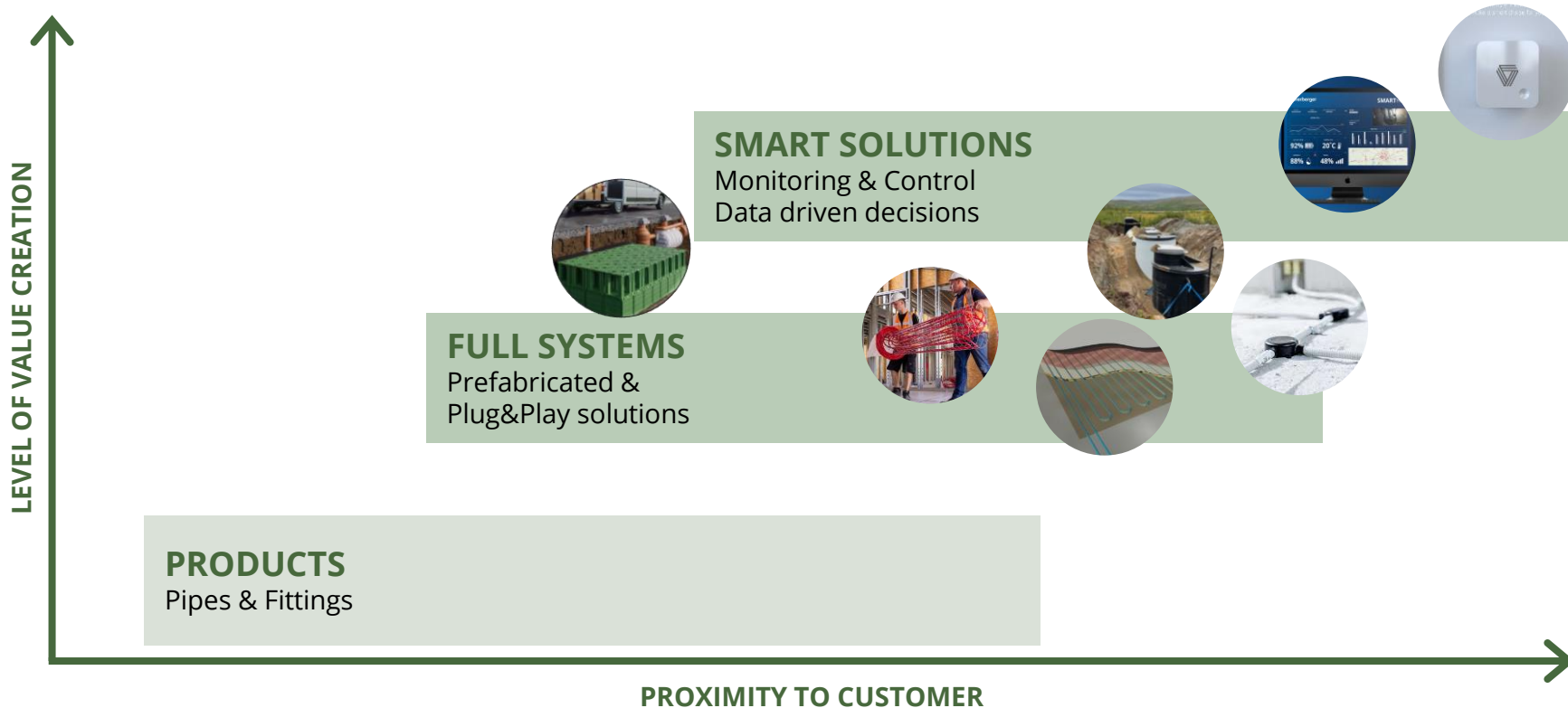
Norway, Sweden, Estonia, Poland, Germany, Austria, the Netherlands



**INVESTMENTS IN EXPANDING & UPGRADING OUR FACTORIES BY ADDING NEW CAPABILITIES AND PRODUCT GROUPS**

Norway, Sweden, Finland, Bulgaria & Turkey

# INCREASED CUSTOMER PROXIMITY AND VALUE CREATION THROUGH INNOVATION AND SYSTEM SOLUTIONS



# STRONG M&A TRACK RECORD FOR PIPE SOLUTIONS IN EUROPE

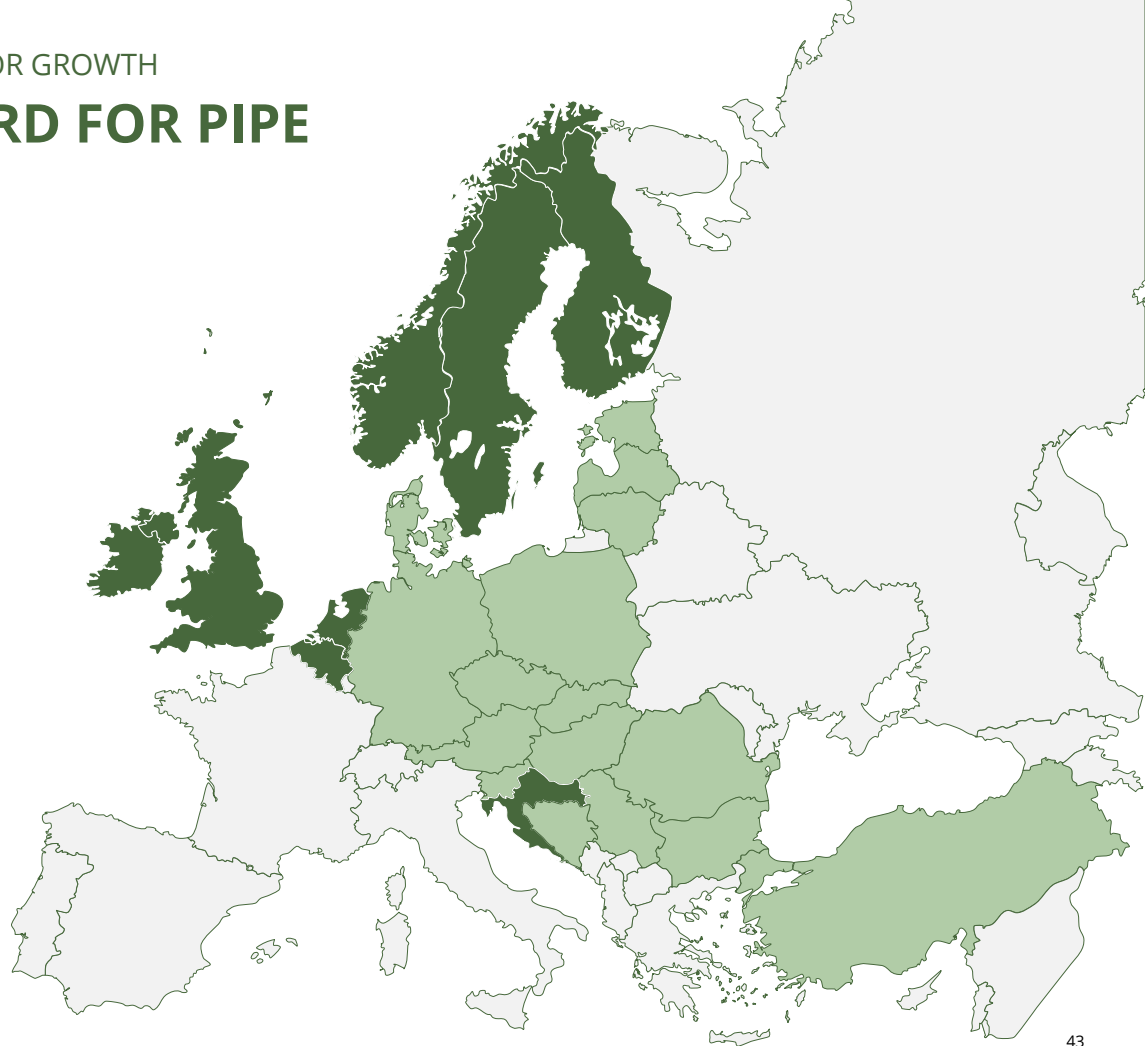
## Our acquisitions since 2016

### Water management & Smart solutions

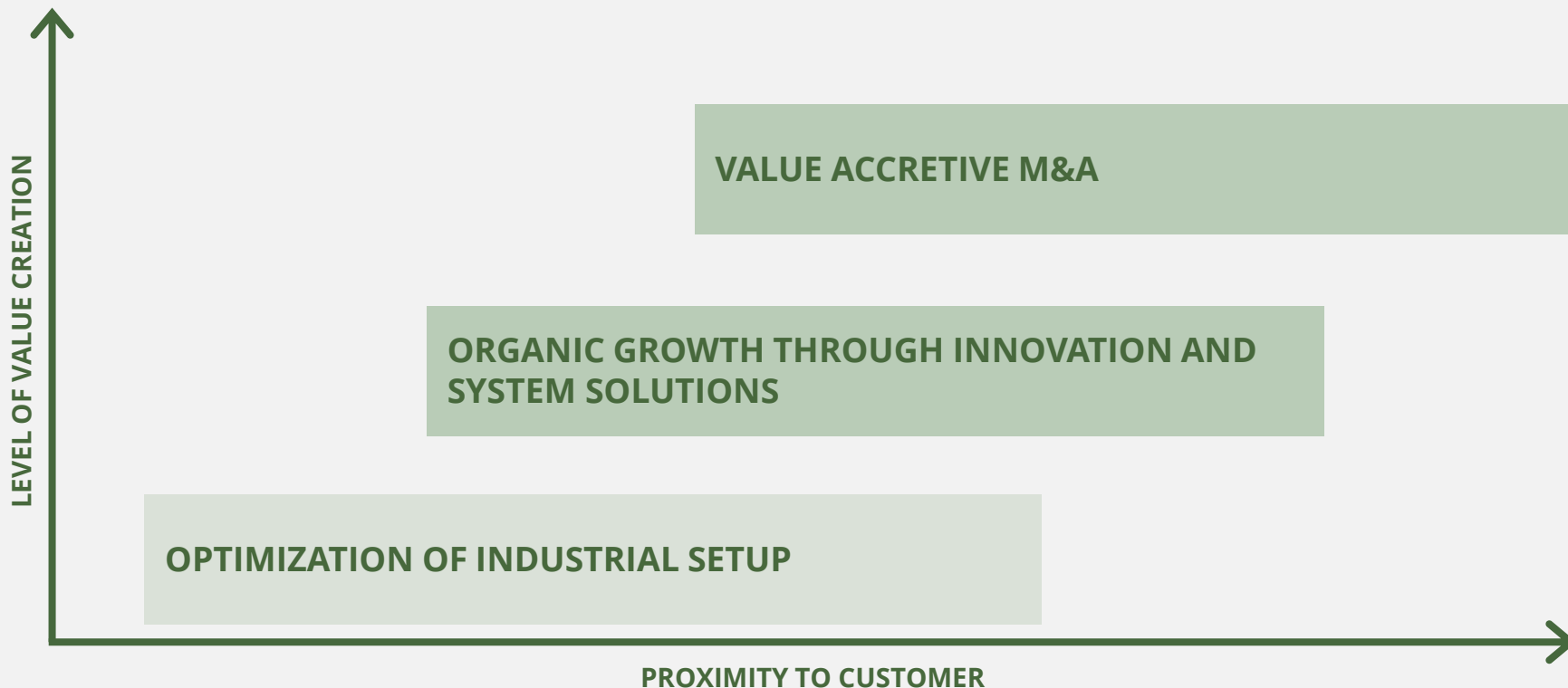
- › Finland: Talokaivo
- › Norway: Isoterm
- › Netherlands: InterAct
- › Sweden: WIDECO
- › Norway: QPS

### In-house & Renovation solutions

- › Netherlands: Preflex
- › Belgium: Reddy
- › UK: FlowPlast
- › Ireland: Cork Plastics
- › Croatia: Vargon



# PIPING REVENUE EXPANSION THROUGH OPTIMIZED INDUSTRIAL SETUP, ORGANIC GROWTH AND M&A



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