

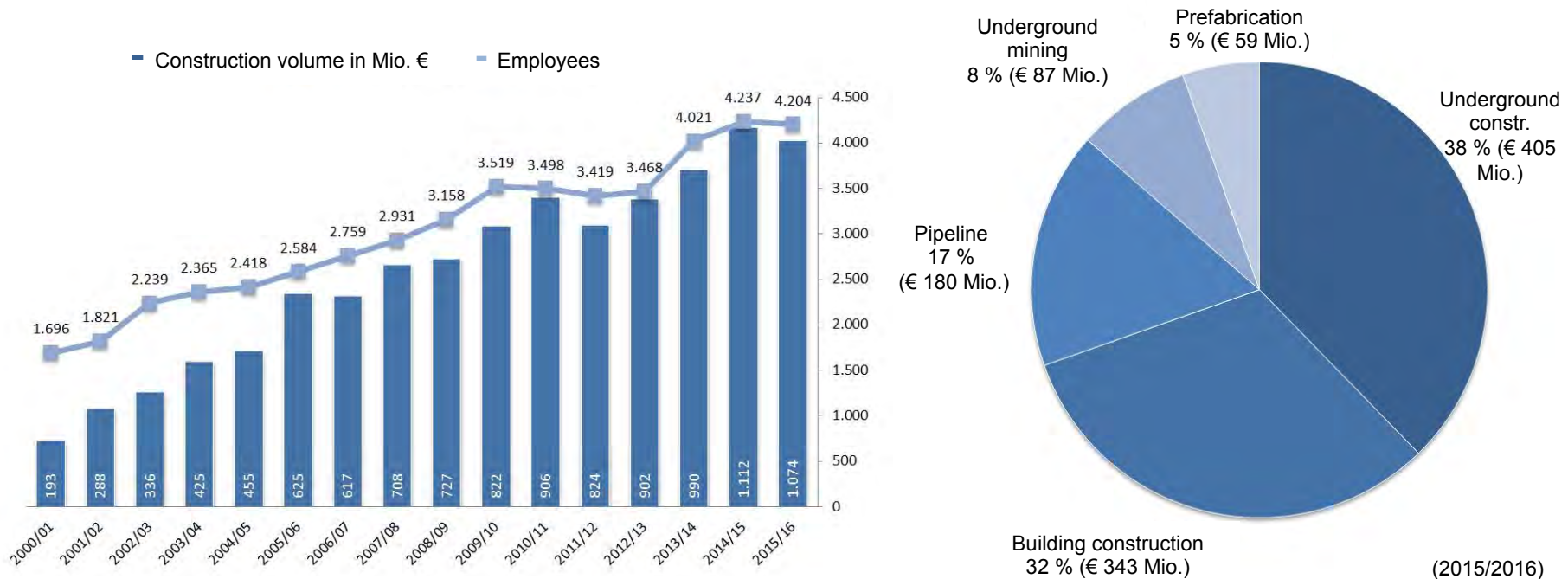
The precast concrete factory of the future

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1984 – 1990	Civil Engineering - Vienna University of Technology
1990 up to now	HABAU GmbH, A-4342 Perg Site and Project management of national and international construction projects
2014 up to now	Assistance of the technical director HABAU GmbH

HABAU Group

- consisting of 23 companies
- operating in all possible fields





PURPOSE OF INDUSTRIAL HALL

- 7.315 m² area
- Ø room height 12 m
- approximately 90.000 m³ room volume
- Heating...?



ECOLOGICAL DESIGN PRINCIPALS

- Sustainable heating
- Avoidance of fossil fuels and reduction of CO₂ emissions
- Healthy work environment leads to productivity increase



HEATING TECHNOLOGY SOLUTION

- 1.410 m² solar collector area (GASOKOL)
- Resource of gas tank (80.000 l) as backup - built in 1943
- 2.200 m³ of concrete core storage elements - 35cm thick floorplates with heating coils



CONCRETE AS A THERMAL ENERGY STORAGE MEDIUM

- Tremendous active storage mass
- High energy storage capacity
- Optimal temperature level



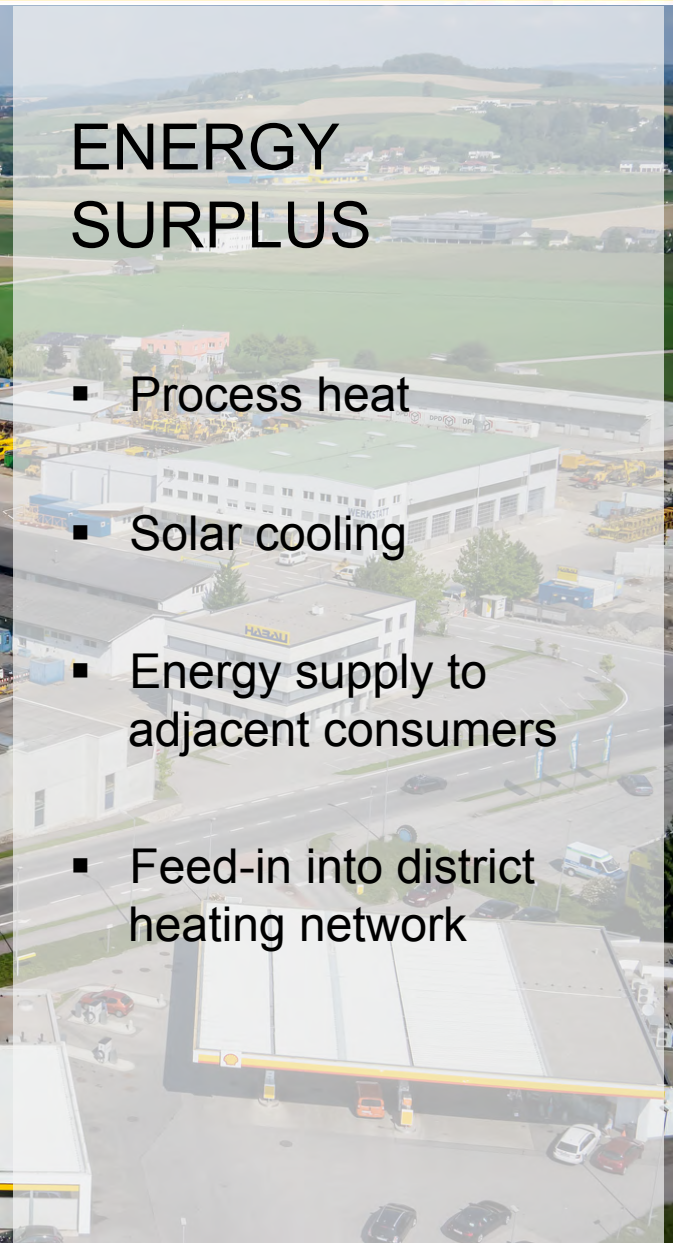
THERMAL ENERGY – RETURN PER YEAR

- 1.410 m² solar collector area
- 540.000 kWh solar energy output per year
- CO₂-Reduction of 190 tonnes per year
- 70.000 m³ savings in natural gas



ENERGY SURPLUS

- Process heat
- Solar cooling
- Energy supply to adjacent consumers
- Feed-in into district heating network





NO COSTS FOR THERMAL ENERGY

- 100 % efficient
- 100 % professional
- 100 % solar
- 365 days per year
- But is it profitable?

INVESTMENTS AND AMORTISATION

- After 2 years production of 1 Mio. kWh
- Energy savings per year: > € 70.000
- Amortisation: 7 – 8 years

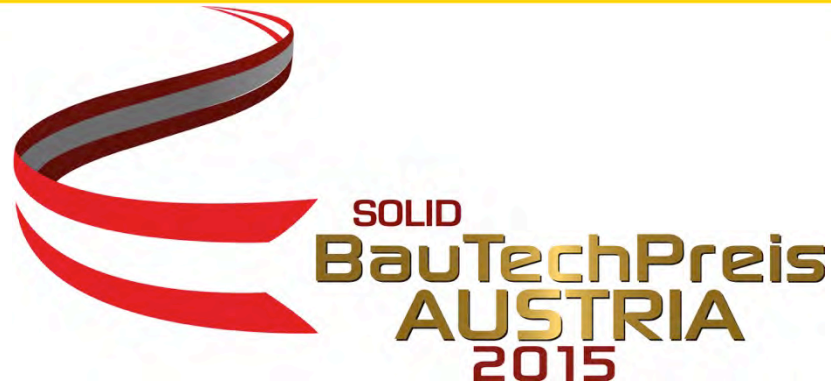
360° SOLAR THERMAL ACTIVATION OF CONCRETE ELEMENTS

- Industrial sector
- Municipal
- Habitation



FROM NOW ON IN EVERY DESIGN PHASE

- In every future project
- from the beginning
- considering the possibility
- of 360° solar thermal activation of concrete elements



ACKNOWLEDGMENT AND AWARDS

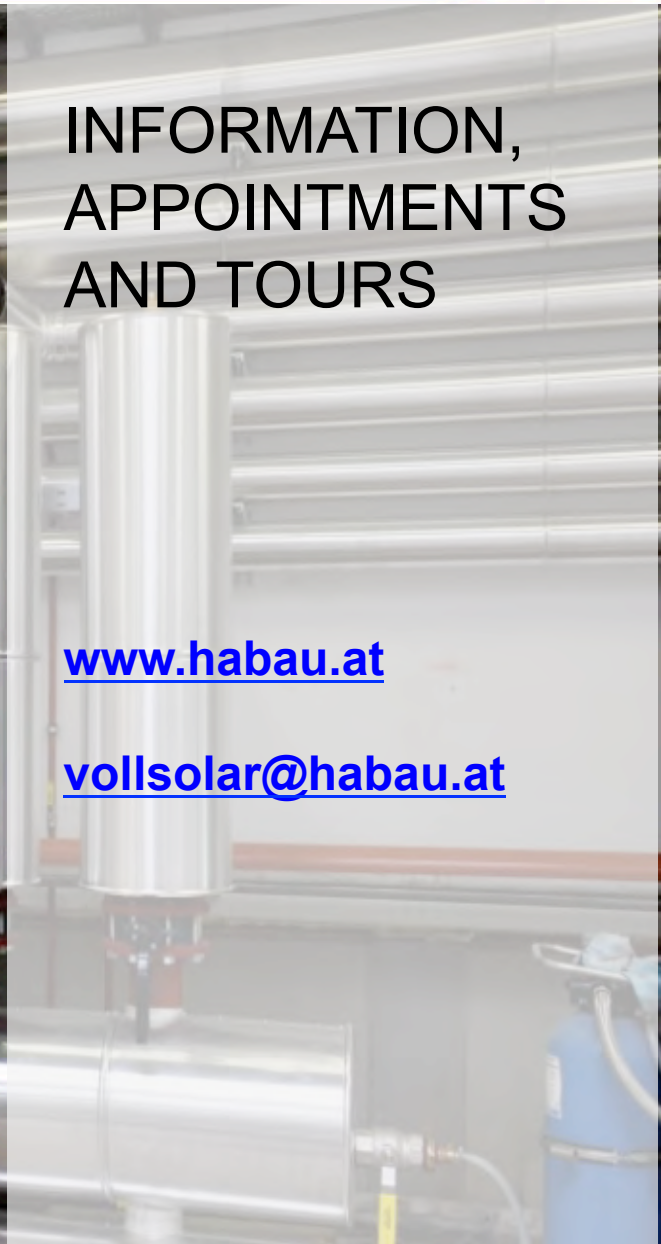
- Austrian construction technology Award “Bautech”
- “Öko Star“-Award
- Upper Austrian award for environment and sustainability



INFORMATION,
APPOINTMENTS
AND TOURS

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THANK YOU FOR
YOUR ATTENTION

Design:
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Collaboration:
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Arch.DI Irene Hauer-Karl

Whatever
your requirements are:

We build it.
For more than 100 years.



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