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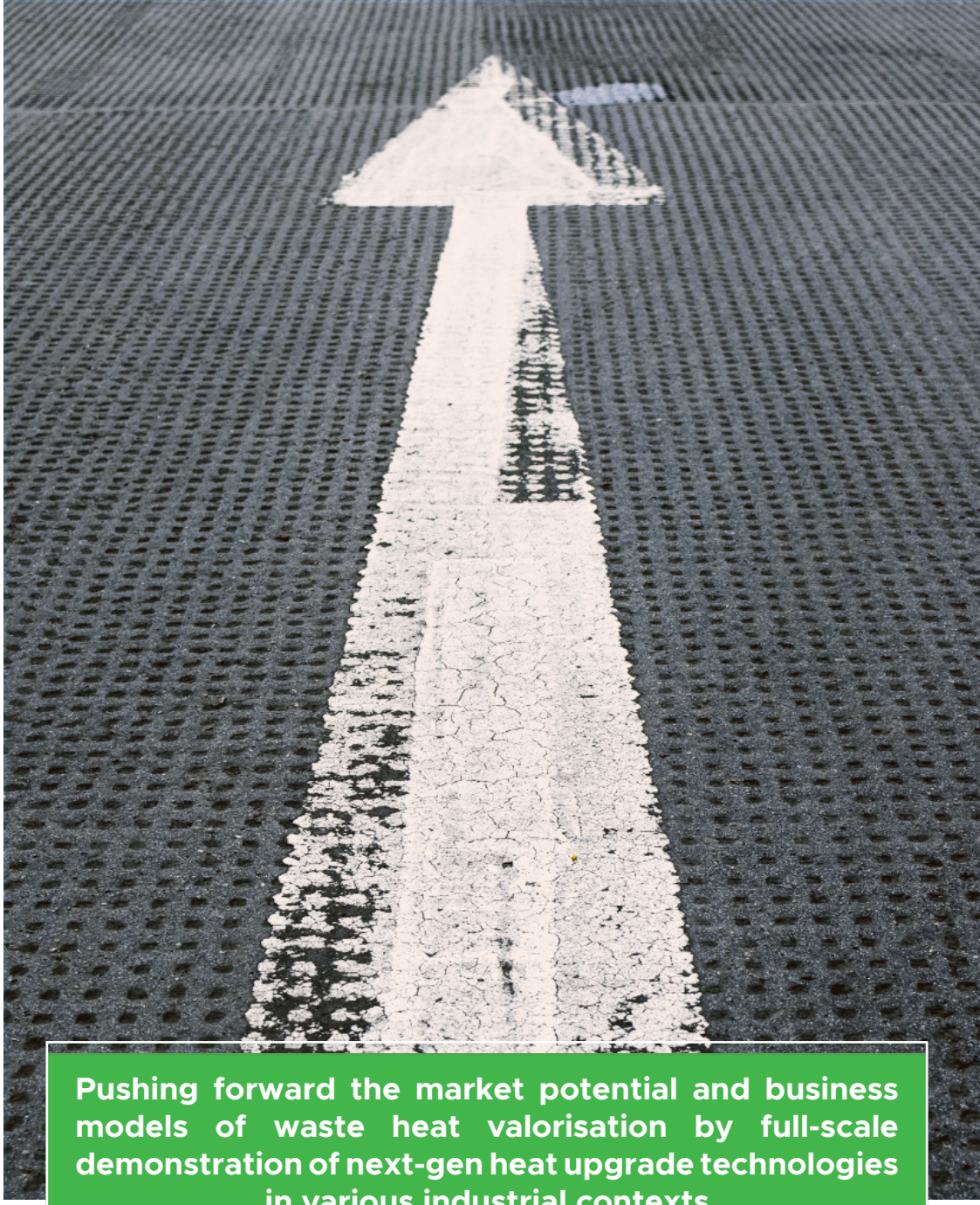

Pushing forward the market potential and business models of waste heat valorisation by full-scale demonstration of next-gen heat upgrade technologies in various industrial contexts

Push2Heat

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Overall Scope

PUSH2HEAT is an EU-Funded project that aims at addressing the technical, economic, and regulatory barriers that prevent heat pump heat upgrading technologies to be widely deployed. It will do so by scaling up four different heat upgrading technologies (whose supply temperatures range from 90 °C to 160 °C) to optimise their efficiency and economic performance. In addition, it will focus on integrating them into the relevant industrial sectors such as the paper and chemical industries. The four technologies will then be demonstrated in four selected industrial sites.

The project will also work towards demonstrating suitable business models and dedicated exploitation roadmaps for higher market penetration of heat upgrading technologies.

Technologies involved

PUSH2HEAT will demonstrate the stable and robust operation of four types of heat pumps for heat upgrading.

Two electrically driven heat pumps will be integrated into the **Paper sector**

1. **Vapor compression heat pump with turbo compressors**
2. **Vapor compression heat pump with piston compressors**

Two thermically driven heat pumps will be integrated into the **Chemical sector**

1. **Thermochemical heat pump**
2. **Absorption heat pump**

Expected outcomes

1. Full-scale demonstration of heat upgrade systems to supply various industrial processes with useful heat in the sink temperature range of 90 °C to 160 °C, extracted from industrial waste heat.
2. Upscaling and improvement of techno-economic performance of heat upgrade technologies in order to enable integration and adaptation to more industrial processes.
3. Demonstration of business models and contractual agreements for the use of upgraded heat within the industrial plant, other neighbouring plants or external heating networks.
4. Better awareness of challenges and benefits of heat upgrading in relevant industrial sectors.