

# TECHNOLOGY PROFILE

## Revolution in the construction industry



The Czech company ERCTECH converts waste to raw material with a broad spectrum of product applications in building constructions.

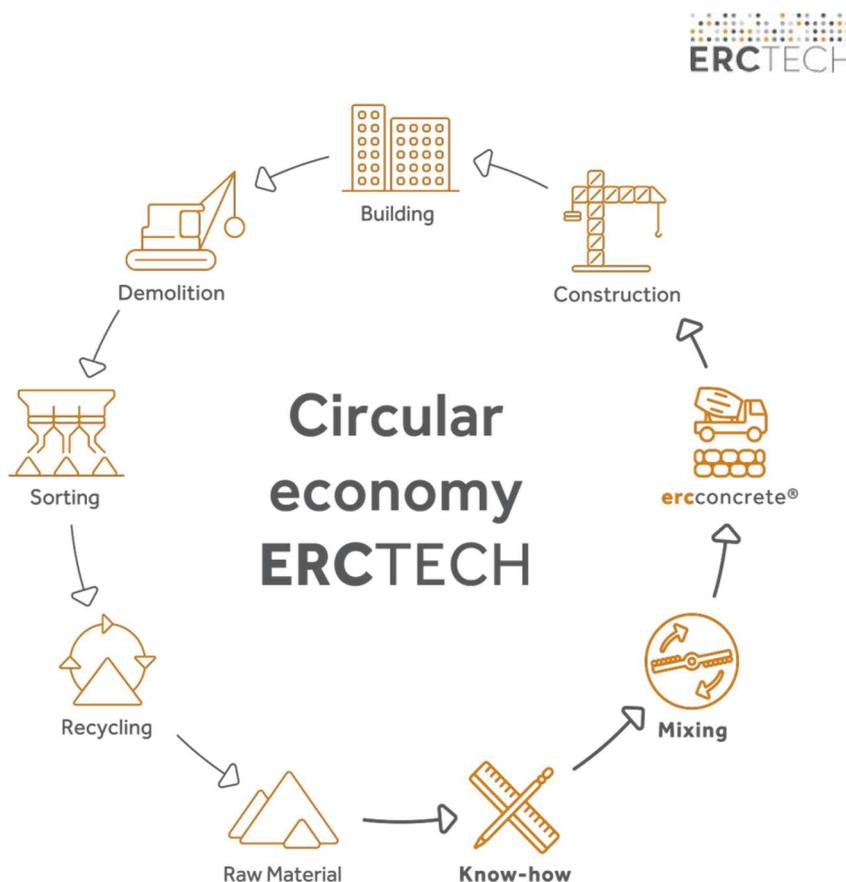
**ERCtech “Effective Recycling Concrete Technology”** brings revolutionary solutions to the construction industry along with a comprehensive solution to the environmental burden of dismantling inert construction and demolition waste across the whole world.

**ercconcrete®** is ERCtech brand for the most economical and “Eco-friendly” material in the world which achieves financial savings of between 15-60% for standard products depending on usage in various sectors of construction business compared to concrete made of natural aggregates.

**ercconcrete® “The only concrete made with 100% recycled material”**

ERCtech know how fulfils the demand for circulation in the construction industry as it does not represent environmental and economical burdens, but also the opportunity and resource raw material that through its repeated exploitation, brings profit to companies, municipalities, regions and society as a whole in the world.

ERCtech provides unique technological know-how to produce **ercconcrete®**, the cheapest building material in the world for all kinds of construction activities, effective on all continents. The cement content in concrete mixtures is lower for up to 30% than concrete with standard natural aggregates and sands. Products made using our technological



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solution and know-how are fully recyclable, ensuring continuous cycle (LCA – Life Cycle Assessment) of product life in the terms environmental impact. The technology reduces the amount of valuable material today only lying in landfills, because it can be fully and effectively used.

EU regulatory agenda: some EU countries have strict requirements on CDW recycling in place already since 2011. All others EU member states will be obliged to recycle at least 70% of non-hazardous CDW by 2020. A complete ban on landfilling will apply across EU countries by 2030. ERCTech makes an effort creating a rule “definition stop landfilling” for the whole world.

ERCTech recycles inert CDW into concrete mixtures by replacing up to 100% of natural/crushed stones and sand through a unique patent-pending process. Products: rubble consisting of bricks, concrete, ceramics and sanitary products, roof tiles etc. The process concerns adding commonly used Nano-material in highly controlled way structurally strengthening particles making the resulting concrete stable, inert and water resilient, no added chemicals allowing for repetitive recycling completely eliminating ecological burden.



### Key Benefits **ERCTech “Effective Recycling Concrete Technology”**



**Commercial:** price difference of this solution to standard products 15-60% (depends on required application), reduction of construction costs, direct financial savings for developers, investors and new construction sub-industry.

**Social:** decreased living costs, especially in rural areas, potential new employment incubator.

**Environmental:** end of CDW landfilling with unlimited material base, liquidation and disposal of old CDW premises, savings of new, natural raw materials, reduction of need for new landfills opening and savings CO<sub>2</sub>, electricity and fuel.

Classification of products: the certification process took place from 2014 until end of 2016. The outputs from the processing of demolition waste, especially from technologically modified recycled materials, were tested and verified in the form of products (concrete) at Technical and Testing Institute of Construction Prague according EN206-1.

Products from the technological process have been certified in accordance with EN206-1 and their use has the following valid certificates and tests: Building Technical Certificate, Product type test report, Production Control System Certificate, Report on the outcome of assessment of the production control system, Test report for the determination of the thermal conductivity



coefficient,

Alkali-Silica expansion Test Protocol and Test report on Eco toxicity-Harmlessness of the product under medical use.

The founders have received major international and national awards for their invention and know how testifying to the potential (e.g. "Best Technology and Product" main price for 2016 awarded by European Quality Association for Recycling or "Best product for secondary raw materials" main price for 2017 awarded by the Ministry of Industry of the Czech Republic).

ERCTECH Production and quality management system is secured by means of: ISO 9001, ISO 14001, OHSAS 18001 and PNPQT 206, Corporate Standard for Production Quality Management, CE certificates of compliance and control tests done by the manufacture.

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