



**Upcycling construction and demolition waste into
new building materials**

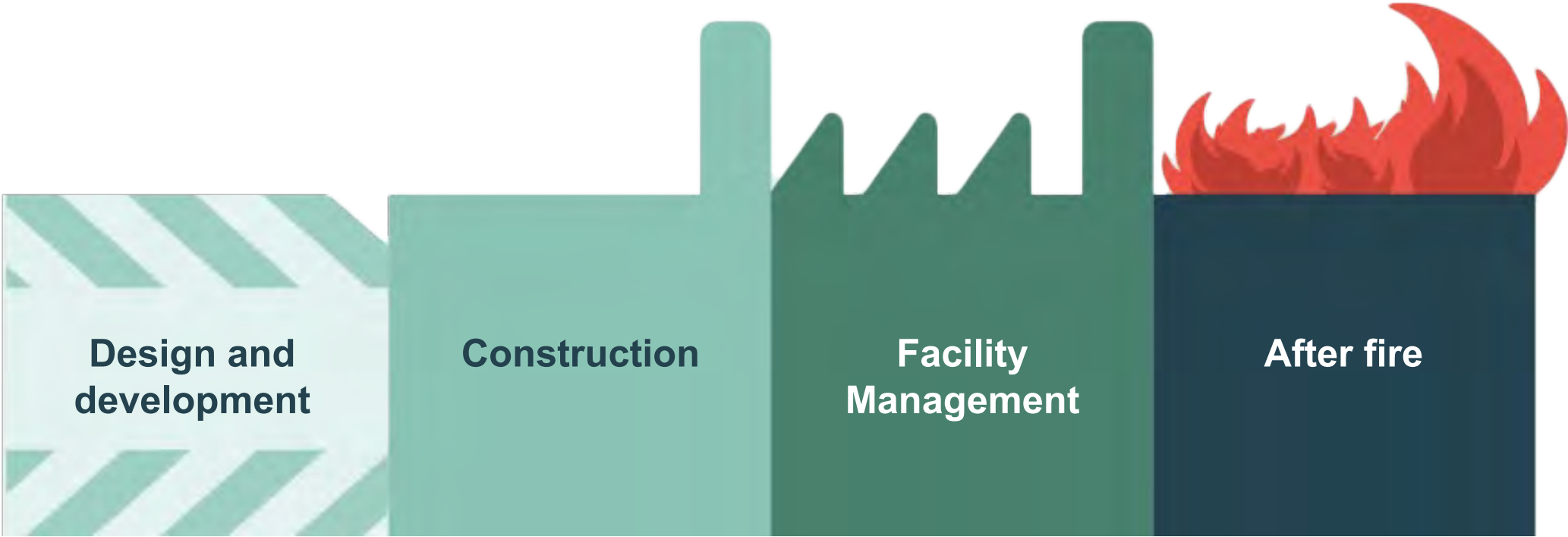
Corbin Entz, Research consultant

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DBI - The Danish Institute of Fire and Security Technology

Overlapping facade tiles produced with geopolymer-binder

DBI's services cover several stages of a building's lifetime



RESEARCH & DEVELOPMENT

FIRE TESTING

FIRE CONSULTANCY

Training Department

INSPECTION

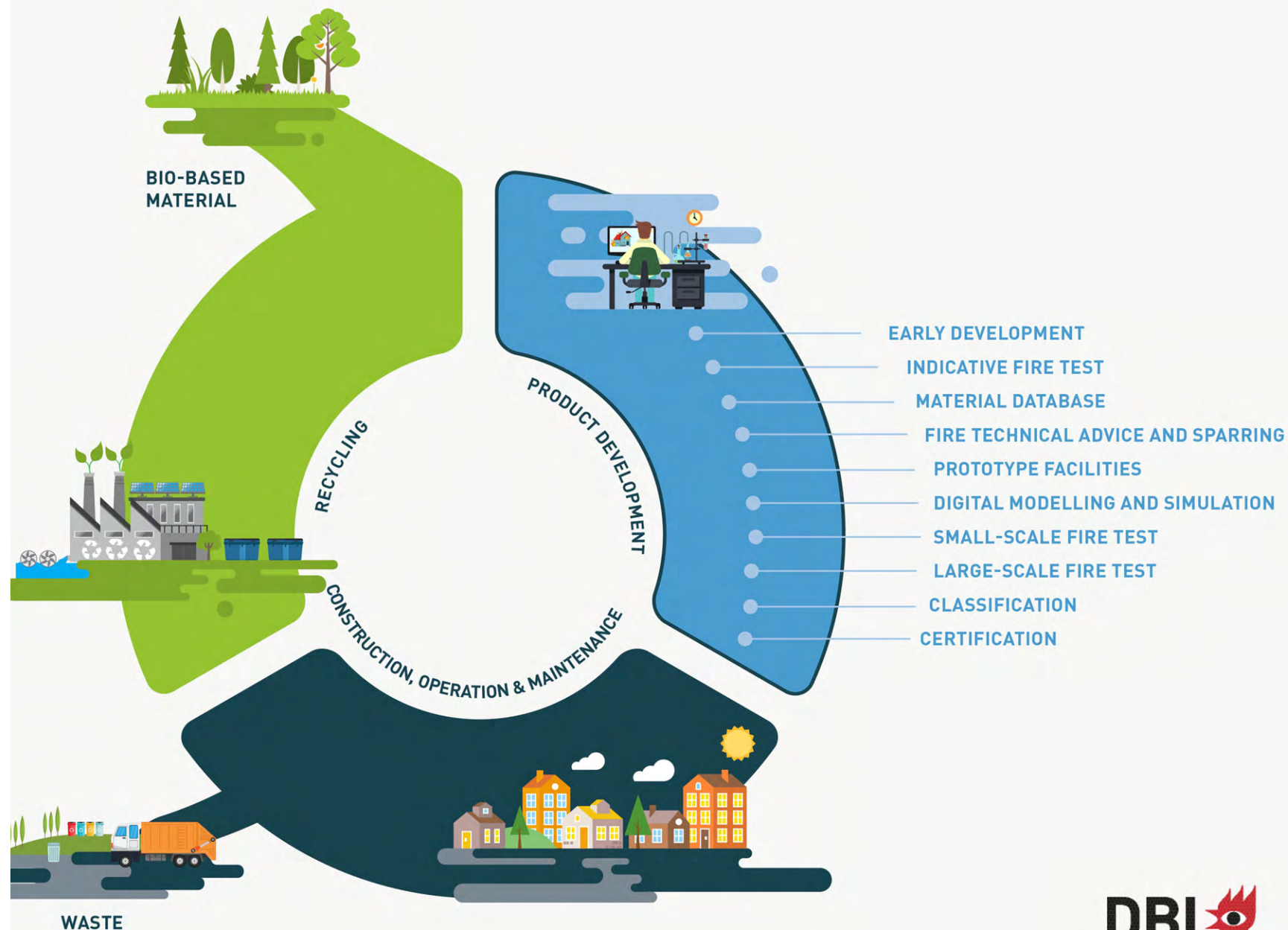
FIRE INVESTIGATION

Boosting the development of more sustainable building materials

DBI has a large team of innovative experts who help guide manufacturers of bio-based and recycled building materials develop new products and reach their targeted fire classification.

We aim to show that fire requirements are not a barrier by integrating fire as an early *design parameter* in the product development.

Our goal is to ensure rapid and efficient product development that supports the green transition.



ReSource – upcycling
construction and
demolition waste to new
building materials

DBI leads a consortium that will create a supply chain across the construction and waste sector, enabling a **circular economy** with the use of geopolymer technology

We replace cement with geopolymer-binder in **Komproment's** facade tiles and **Troldtekt's** acoustic panels

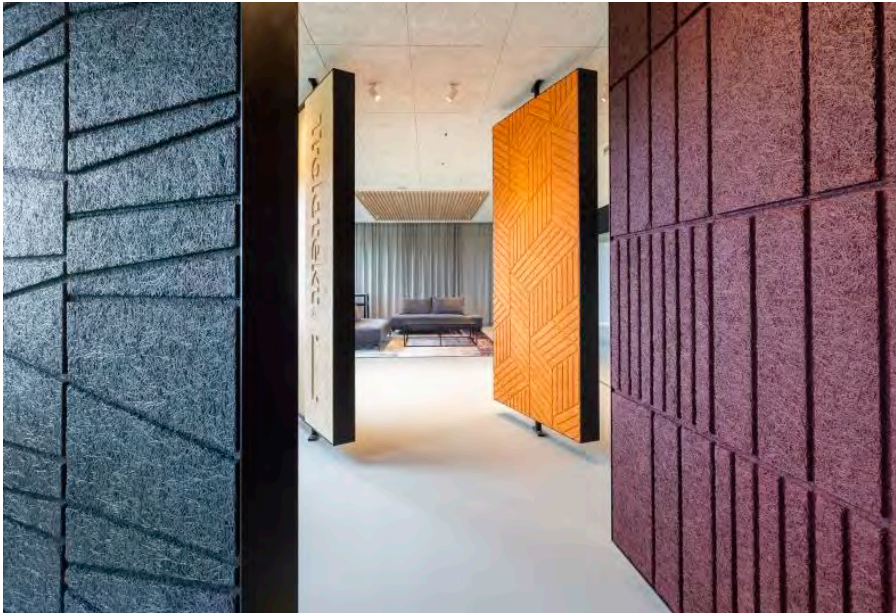
RGS Nordic and **E-mineral** seek to transition from waste managers to resource providers

Currently at **proof-of-concept** (TRL 4) next phase aims for demonstration and full-scale production (TRL 6-8)



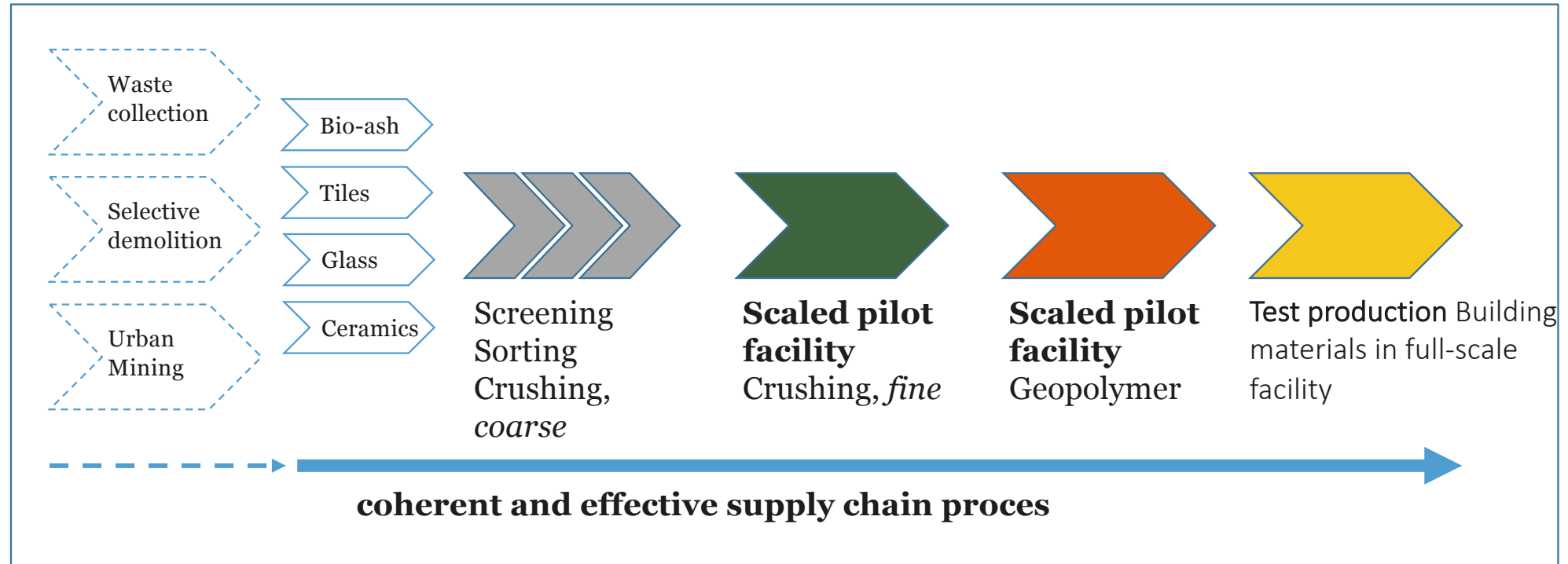


Komproment's overlapping facade tiles produced with geopolymer-binder



Troldtekt's acoustic panels produced with geopolymer-binder

Challenge 1: Creating a coherent supply chain while ensuring the right final cost with the right CO2- and resource profile



Challenge 2: Design of Experiments for Geopolymers Formulation

Binder Sodium and Potassium – Silicate
Metakaolin

Fillers Red Brick Powder



Biomass fly ash
&
Bottom ash



QUESTIONS?

Please feel free to reach out to us:

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