



windmüller

PIONEER THINKING



Westküste 100

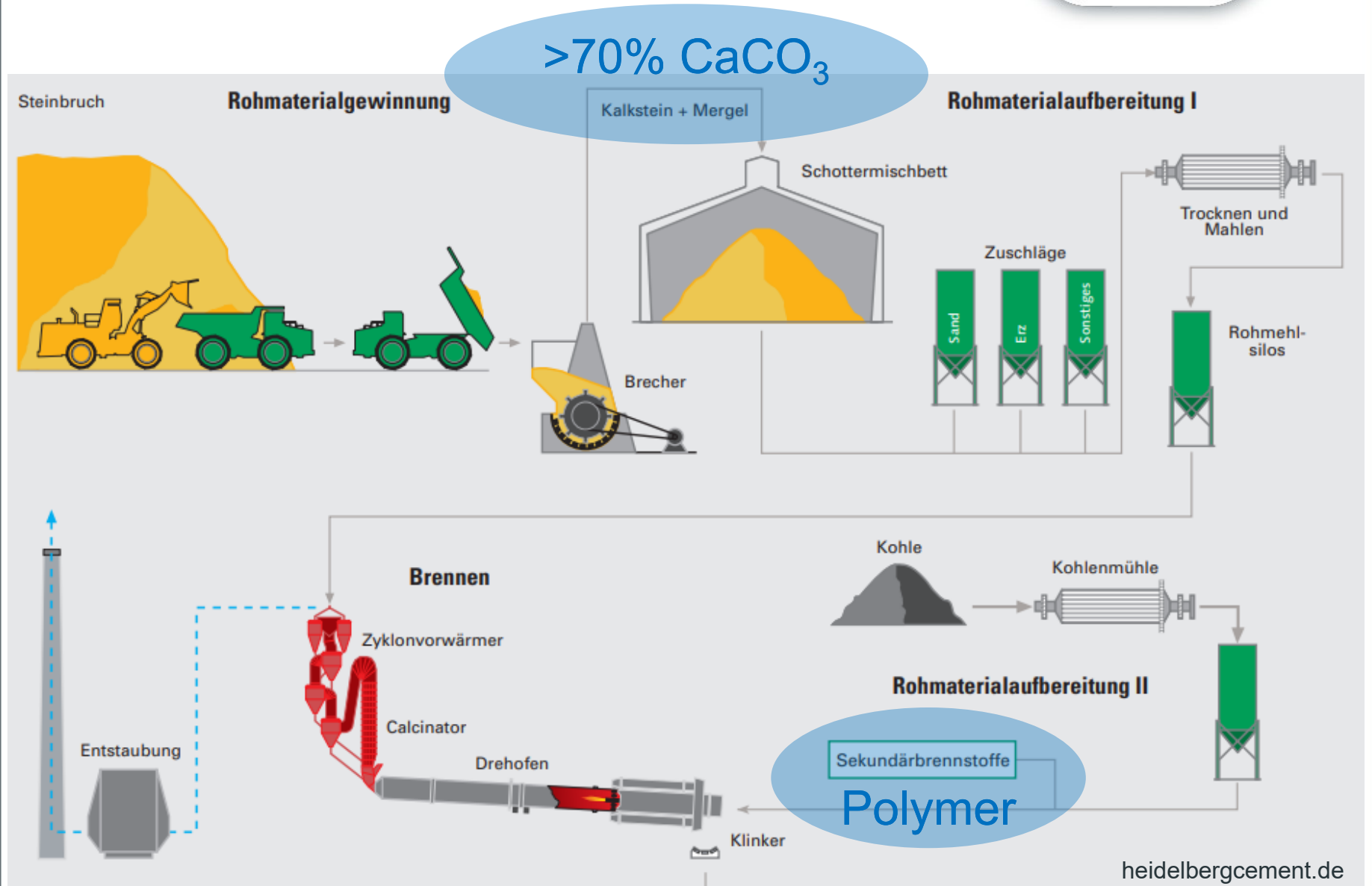
a potential EOL-Concept for non PVC-Flooring

ERFMI 21. October 21

www.windmoeller.de

Dr. Thomas Hohberg

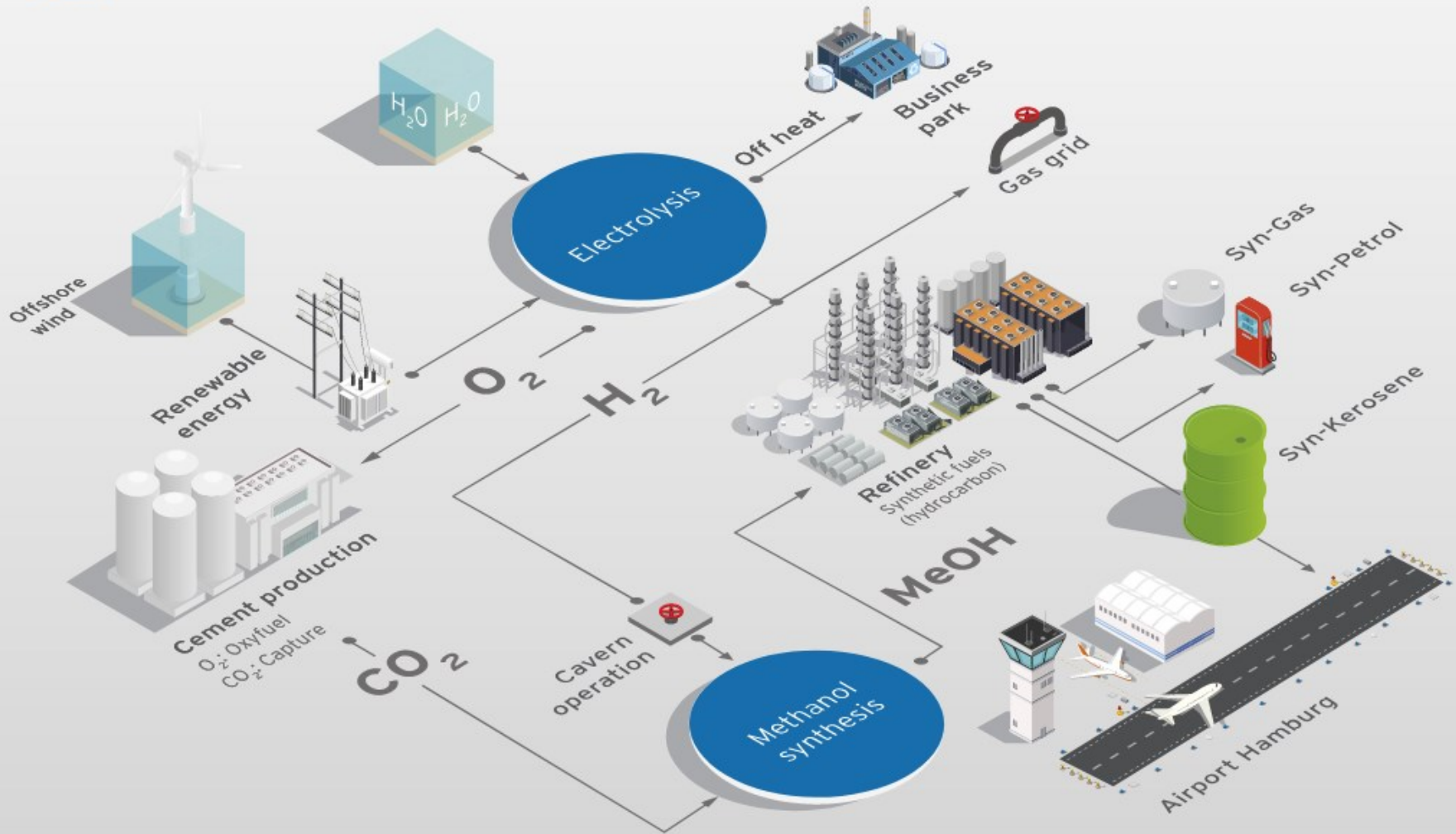
Cement Production



Westküste 100



Industrial scale green hydrogen and decarbonization



Non PVC Flooring examples



Data from published (EPDs)

PU-Flooring

Chalk	54%
Polymer	44%
Others	2%
Renewable	28%

Linoleum

Chalk	26%
Polymer	34%
Cellulose	36%
Others	2%
Renewable	70%

Rubber

Chalk	9%
Kaolin/Silica	45%
Polymer	32%
Others	13%

Thermoplast

Filler	54%
Polymer	38%
Others	8%

Laminat

Cellulose	82%
Polymer	12%
Others	2%
Renewable	82%

Parquett

Cellulose	89%
Polymer	4%
Renewable	89%

Carpet

Filler	36%
Polymer	64%
Others	1%

Carpet tyle

Filler	41%
Polymer	59%
Others	1%

Carpet tyle

Filler	52%
Polymer	47%
Others	1%

Combined Energetical and **Material** Recovery plus CO₂ Capturing



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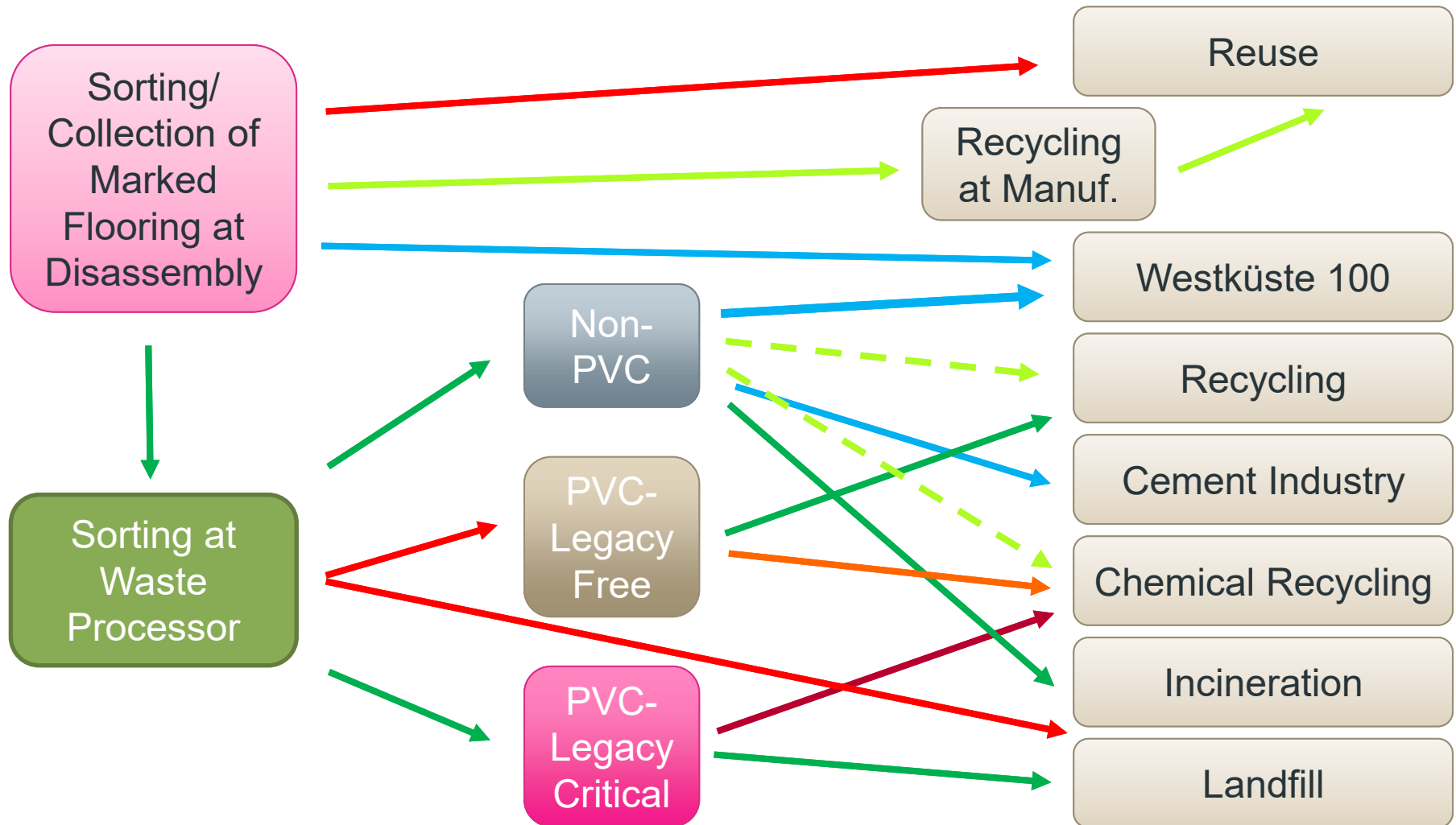
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Flooring CE Concept

Post Consumer Flooring Sorting Scheme



Cement Industry Requirements



Critical for the Cement process are:

Halogenes (Cl, F, Br), S, P, volatile heavy metals (Sb, Hg, Pb)

Typical organic legacy additives should cause no problem

Questions:

Can we expect post consumer flooring with critical ingredients for the cement process

Can (Shall) we design new products to fulfil the cement requirements?

Consequences / Opportunities



Possible next steps:

Invitation or Expert meeting with Geocycle or VDZ (Cement industry association)

Contacts: Tanja Freiburg, Dr. Thorsten Haase

Our Contribution / Competence:

If we can provide Information/Proof, that historical old flooring is suitable for the cement industry, this would be a unique situation qualifying a whole class of post consumer construction waste for a new End Of Life option.

Benchmark:

Cement Industry and Westküste 100 EOL can be evaluated (EPD / LCA).

The results will be a key Benchmark to compare every other CE concept with.

Covered Flooring Range:

Potential to cover almost every non-PVC flooring waste (including existing post consumer waste) within short time while keeping every alternative (material or company specific concepts) unhindered.

Globalization:

Cement industry is global present, and the concept has the potential to work globally without long shipment distances.