

FROM INVENTORY TO REUSE: PILOTING THE DIN SPEC 91484 IN BELGIUM

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INTRODUCTION

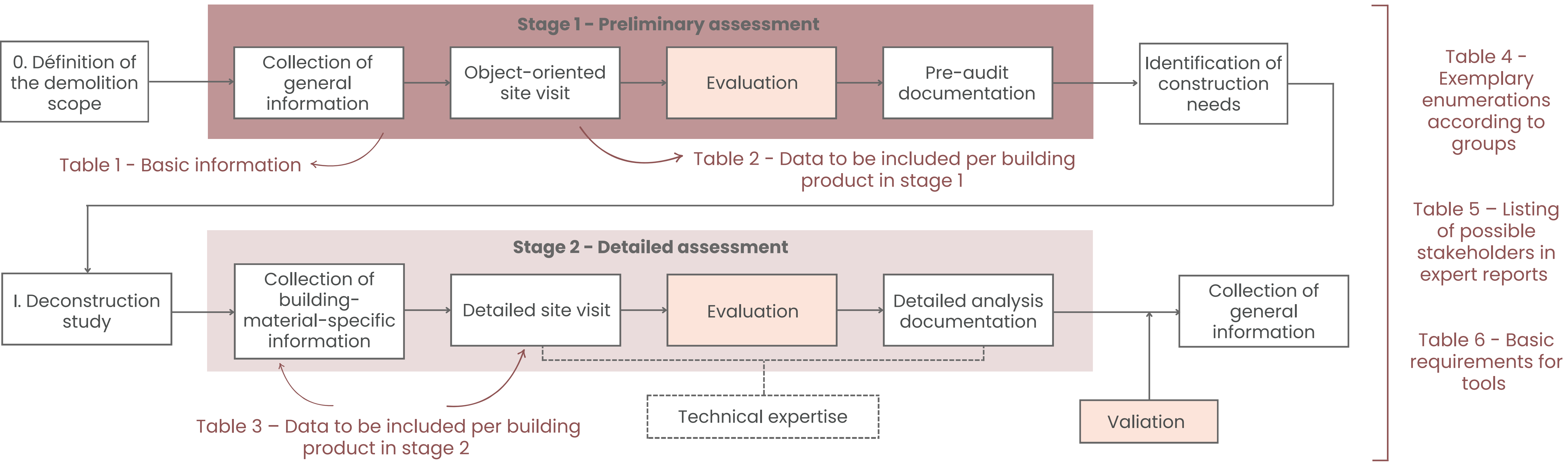
Belgium's deconstruction sector generates 26 tonnes of waste annually (Stabel, 2025). Material reuse, defined as the reintegration of an existing component into a new construction project without material reprocessing and with preservation of its original function and performance (Nicolas et al., 2026), constitutes a promising avenue for reducing this impact.

However, identifying reusable materials within a building first requires carrying out a pre-demolition audit. Such audits play a central role by enabling the identification of reusable and recyclable components and by guiding selective demolition planning (Ericsson et al., 2026).

In Germany, this process is framed by the DIN SPEC 91484 (Deutsches Institut für Normung, 2023), which sets out a standardized procedure. In Belgium, by contrast, no harmonized framework currently exists: the regulatory landscape remains fragmented across regions (Tracimat/OVAM in Flanders, Bruxelles Environnement in Brussels, and an as-yet incomplete Walloon PWD-R). This poster therefore aims to examine the transferability of the DIN SPEC standard to the Walloon context.

DIN SPEC 91484

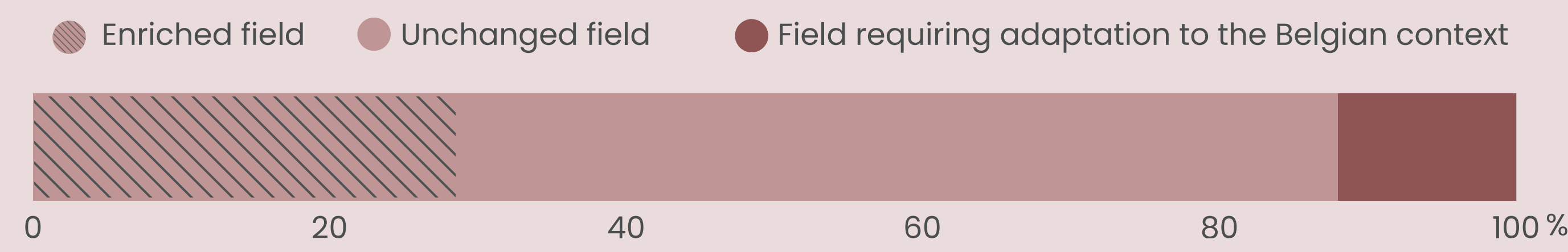
The procedure unfolds in two sequential stages. Stage 1 (Preliminary assessment) gathers general building information and basic per-product data through an object-oriented site visit, leading to a first evaluation of each product's reuse potential. Stage 2 (Detailed testing), reserved for products with confirmed or unclear potential, adds detailed technical data (connection type, dismantlability, existing documentation) through a more thorough inspection, supported where needed by expert reports.



METHODOLOGY

Each of the forty fields from the source repository is compared against Belgium's available databases and normative tools : cadastre, regional PEB (energy performance of buildings), building permits, Statbel, NBN standards, TOTEM in order to identify, for each one, the most relevant equivalent or, failing that, to document its absence.

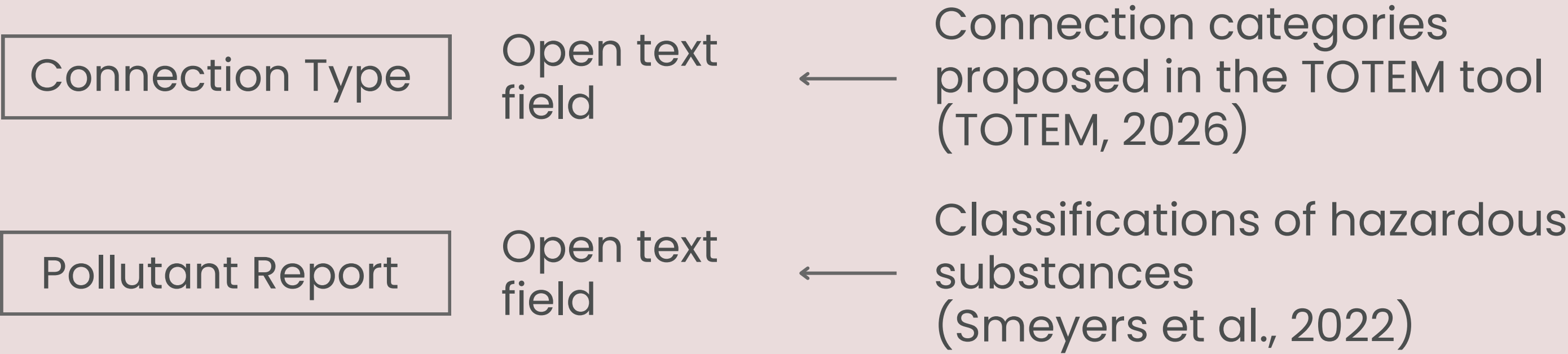
RESULTS



An assessment of their compatibility with the Belgian context shows that 5 fields require mandatory adaptation, as they explicitly refer to German regulations. For example :



Beyond these regulatory adaptations, several fields could be enhanced by integrating tools and methodologies developed in Belgium to support building component reuse.



OPEN ISSUES

- ▶ Regional fragmentation as a structural constraint
- ▶ Implementation process is highly time-intensive and economically challenging for businesses
- ▶ Overreliance on free-text entries hinders comparison between PDAs
- ▶ Absence of specific criteria for the "Evaluation" and "Validation" steps of the PDA process

NEXT STEPS

- Develop a grid for the "Evaluation" and "Validation" steps
- Conduct a systematic literature review on the current state of knowledge on pre-demolition audits (PDA)
- Test the framework through a case study

REFERENCES

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