

PREDEMOLITION AUDITS

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TECNALIA is the **largest applied research and technological development centre in Spain**, a European benchmark and member of the Basque Research and Technology Alliance.

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**We want to be the
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all companies to generate high
impact business opportunities
through technology.**

1

**Laboratory
Services**

2

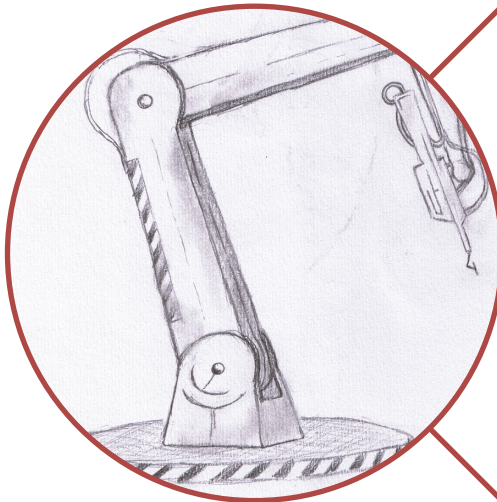
**R&D and
Innovation
Projects**

3

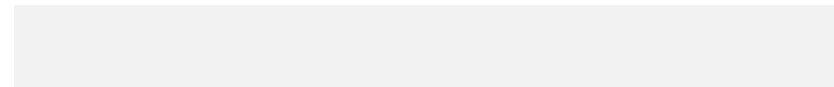
**Development
of Investment
Opportunities**



**1st technology:
Digitalized
predemolition audits**



**2nd technology: Waste
classification and
sorting robotic arm**





Nowadays

- Paperwork
- Architectural plans and technical drawings in paper
- Maintenance and other relevant information can get lost

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Nowadays

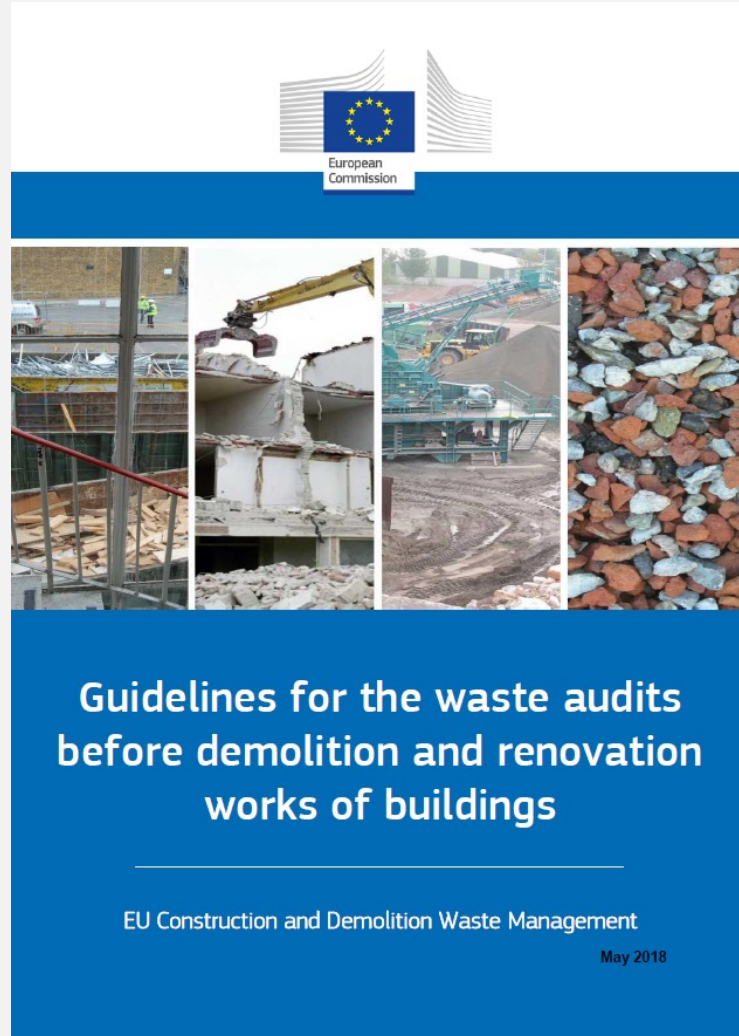
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Future (our development)

- Information on BIM models
- No more paper needed
- Automatic updates and registration of info

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AIM OF THE GUIDANCE

Guidance on best practices for assessment of construction and demolition waste streams prior to demolition or renovation

Facilitate and maximize recovery of materials and components from demolition or renovation buildings and infrastructures

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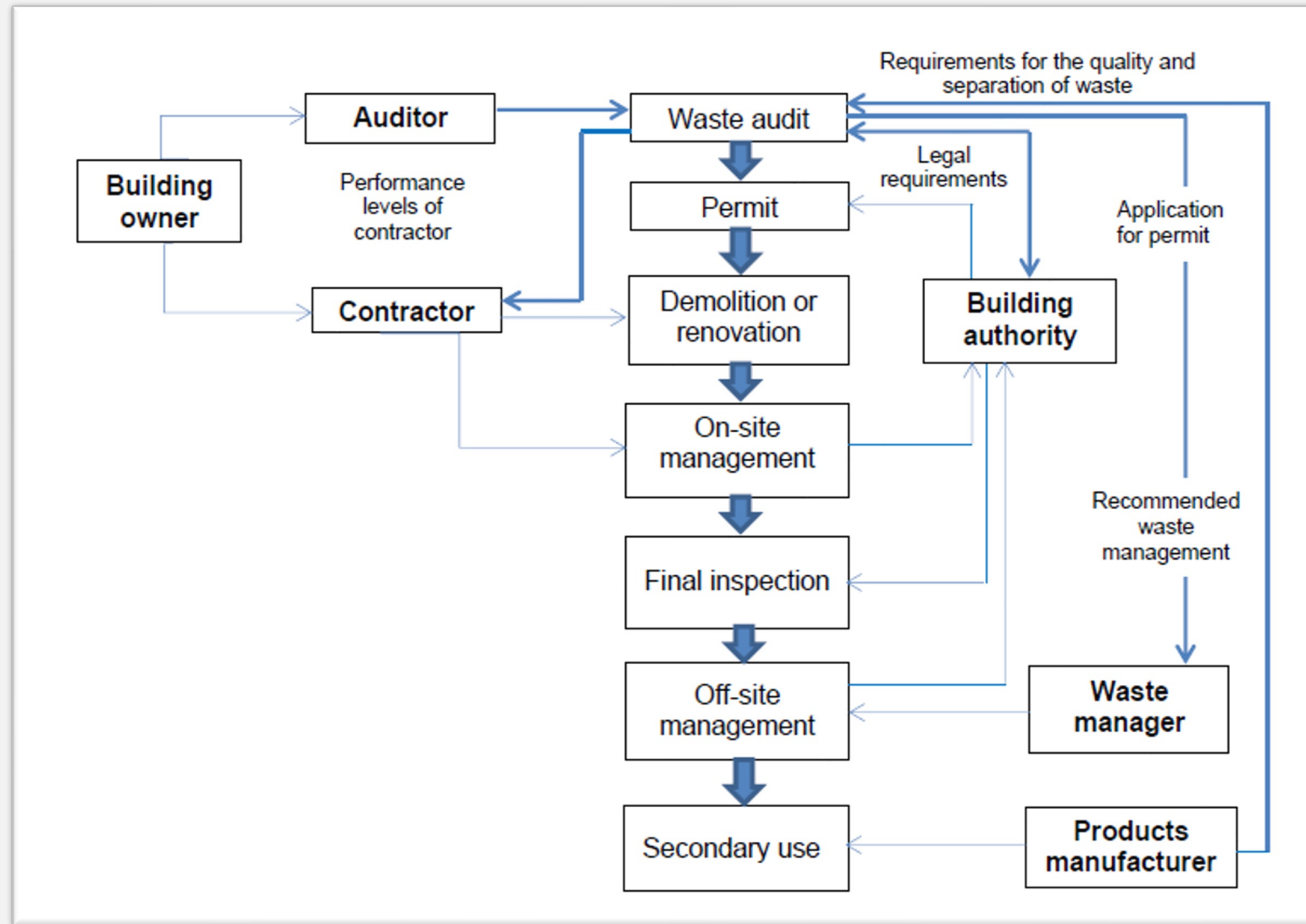
1. Know the type and amount of elements and material
2. To issue recommendations on their future handling
3. Do assesment of the viable recovery routes for materials

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Relevant legislation such as the requirements for environmental permits if waste is to be used on site or any waste that may be hazardous and which needs to be managed in accordance with specialized waste legislation

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Role of waste audit actors in the waste management process

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1st step

Desk study



2nd step

Field survey



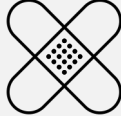
3rd step

Reporting

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Desk study

- Age of building: info about the history of the building and type of materials and construction techniques
- Design documents if available: useful for planning the field survey. Also, useful for identification of date, dimensions, construction typology...
- History of maintenance and reno
- List of dangerous substances 
- Surroundings, accesses and local facilities

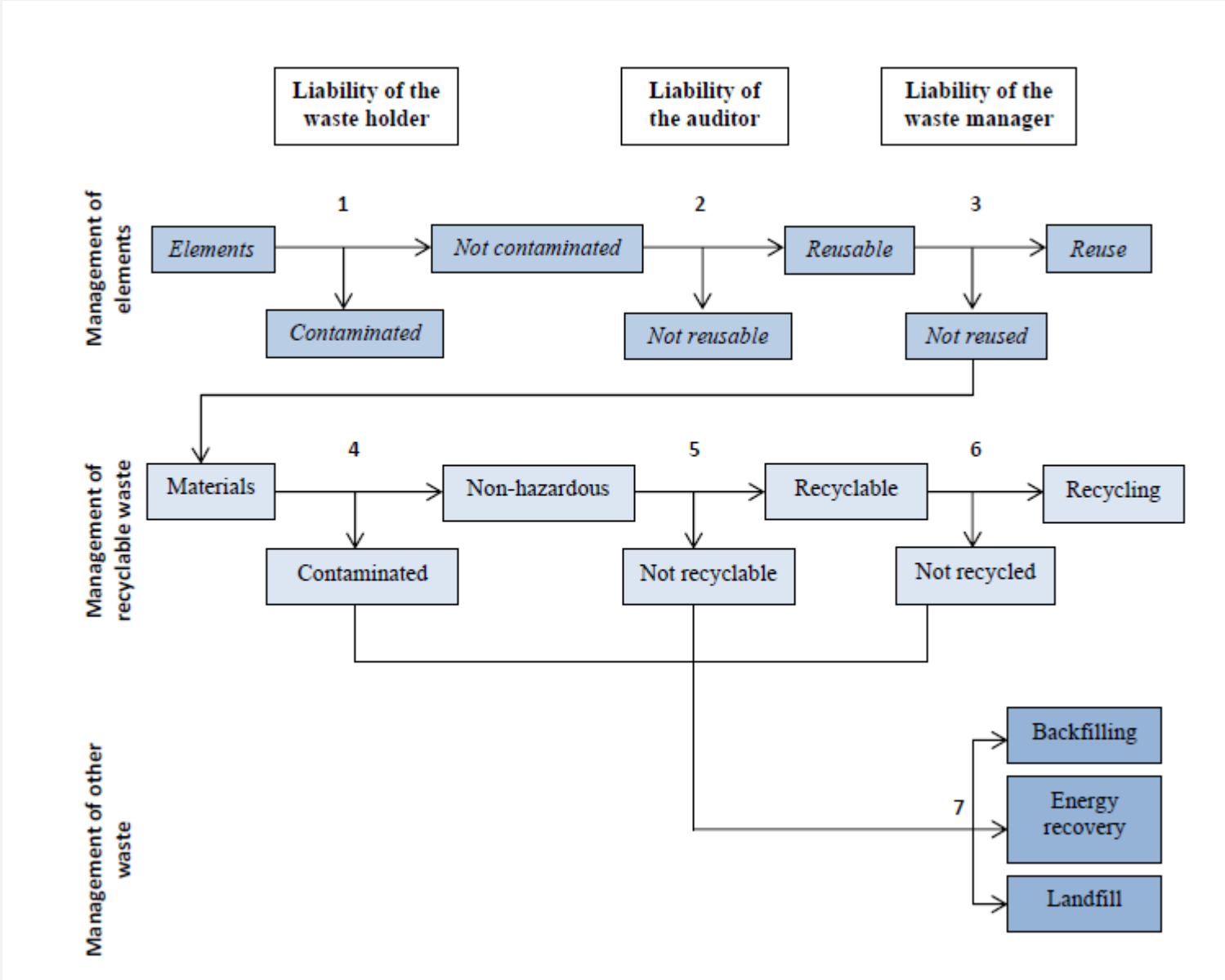
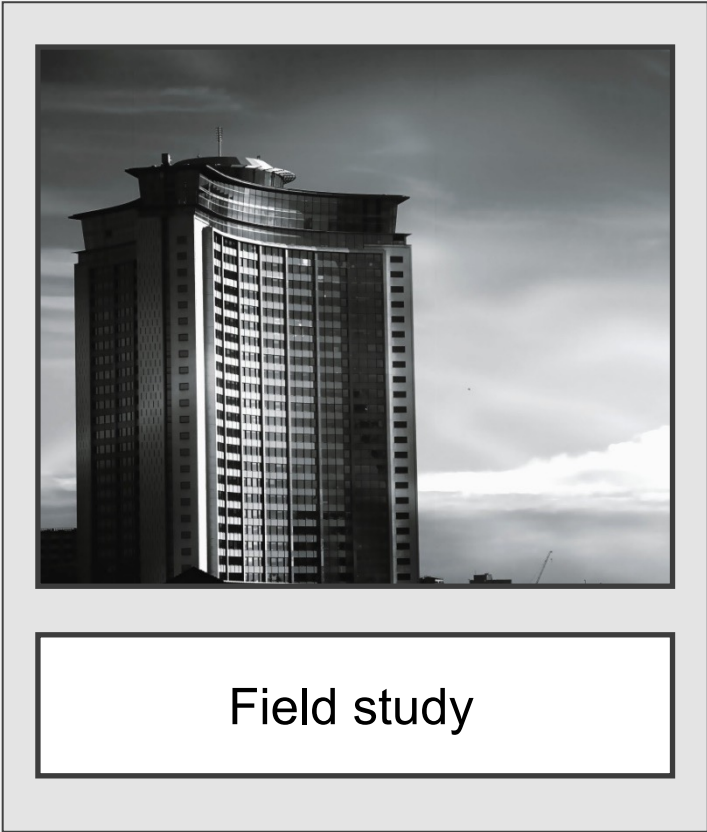
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Field study

- Site visit and general analysis of the building (checking what was learned during the desk study)
- General audit and inventory. The general audit and inventory is to have an idea (for every part of the building) of which materials occur and to collect the necessary information to identify, quantify and localize them in the building.
- Detailed audit and inventory. The different rooms are inventoried in detail (floor coverings, lighting units, interior walls, false ceilings, etc.)
- Sample taking and analysis (not all materials can be visually identified. Therefore, suspect materials need to be sampled and analysed)

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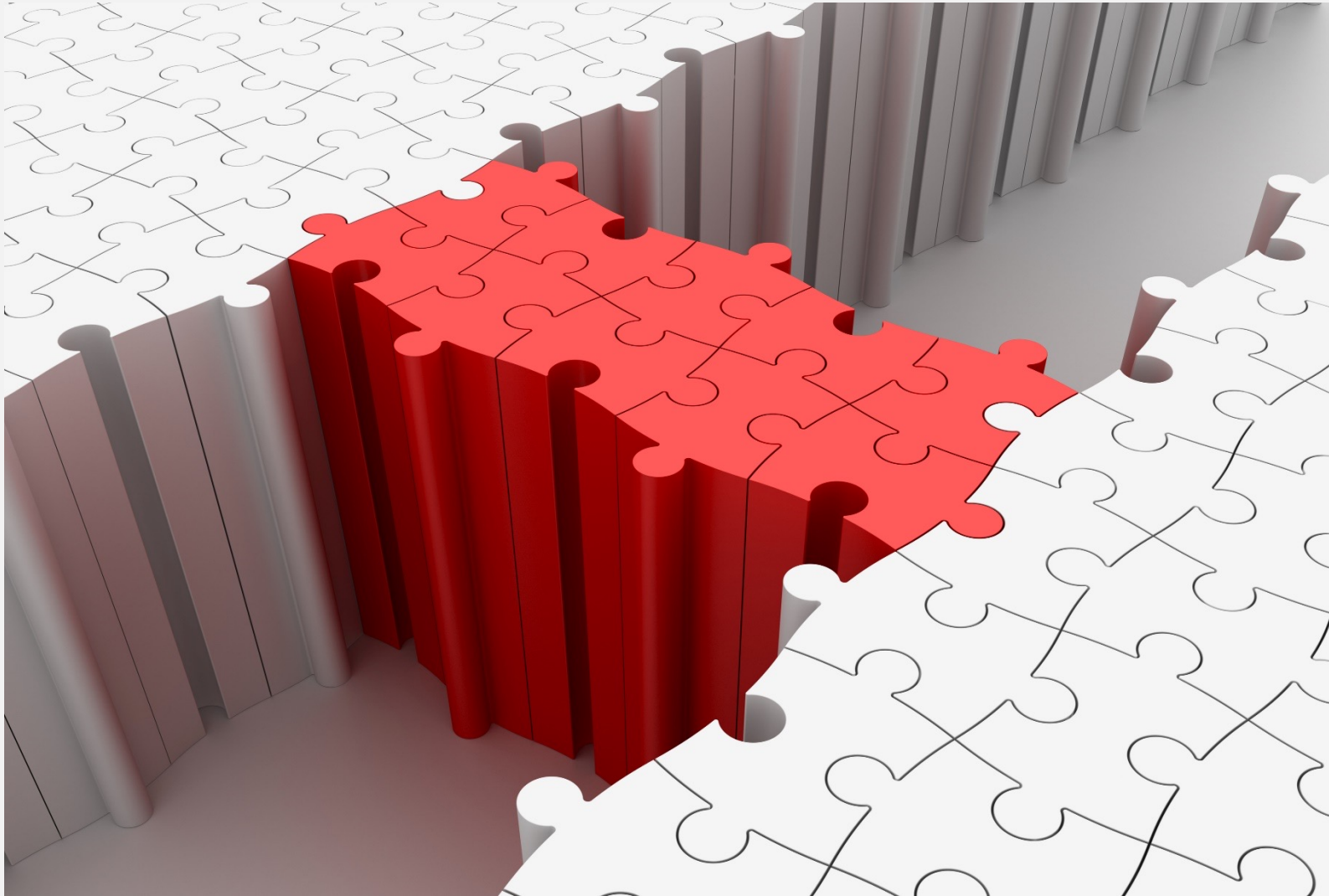
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Reporting

- Waste fractions arising (in tonnes, m3 or other units)
- Total waste arising (absolute in tonnes, m3 or other units)
- Summary of hazardous wastes identified in the building or infrastructure
- Description of the methodology followed, including the steps performed and the techniques employed.
- List of documents that were available, for instance hazardous substances assessment, any information on the building or the construction materials used originally, etc.
- Other supporting materials where available (pictures, site-plans and any other documents that could be useful for the correct performance of the project).

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Discussion

How are the predemolition audits performed in China if so?



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THANK YOU FOR YOUR ATTENTION

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