FutuREuse

Product or waste?

Criteria for reuse

Rotor for

Interreg North-West Europe FCRBE

European Regional Development Fund

REUSE IN THE CIRCULAR ECONOMY

In the European Union and around the world, construction materials have a massive impact on climate change, ecosystems collapsing and natural resource overconsumption. As a waste prevention strategy, reuse is a great solution to overproduction and natural resource depletion.

Despite its waste prevention potential, the salvage and reclamation trade is largely overlooked, especially in the context of formal construction projects. Better consideration for this approach in tools widely used by the construction industry would be interesting leverage to foster, support and further develop the reclamation sector.

THE FCRBE PROJECT

FCRBE stands for Facilitating the circulation of reclaimed building elements and aims to increase by 50%, the amount of reclaimed building elements being circulated on its territory, by 2032. The project involves 7 partners:
Rotor, lead partner (BE), **Bellastock** (FR), **Brussels Environment** (BE), **The university of Brighton** (UK), **Salvo** (UK), **Construction Confederation** (BE), **Belgian Building research Institute** (BE) and the **Scientific and Technical Center for Building** (FR)
For more information on FCRBE: *http://www.nweurope.eu/fcrbe*

FUTUREUSE: 7 SHORT INTRODUCTIONS TO THE WORLD OF REUSE

This is one of a series of seven booklets that have been produced to serve as a taste of what the FCRBE project aims to achieve. The subjects span the broad spectrum of reuse, covering considerations before, during and after with useful information to guide and inspire working with reclaimed materials. The booklets also highlight environmental benefits, clarify grey areas and frequently asked questions regarding best practices, whilst sparking curiosity for a future where use is reuse.

CONTENT

1.

Reuse as a practice to prevent waste

"Reusable material is a product to be respected."

1.1 Key concepts

The foundation of waste regulation

All waste regulations in the European Union are based on the 2008 Waste Directive. Its purpose is clear: to preserve the environment and human health.

> *Subject matter and scope of application*
>
> *This Directive lays down measures to protect the environment and human health by preventing or reducing the generation of waste, the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use, which are crucial for the transition to a circular economy and for guaranteeing the Union's long-term competitiveness.*[1]

This article is the basis for every product decision or status of a waste material and provides a strong justification for the practice of reuse.

Indeed, measures to protect the environment and human health must go far beyond the logistical treatment of the waste produced. The best way is still **not to produce waste**, or at least to produce as little waste as possible. Firstly, because waste treatment operations have a negative impact in themselves: emissions of pollutants during transport and incineration, construction of infrastructure, the creation of artificial soils in landfill. Secondly, because we exploit limited resources – it is therefore essential to optimise the use of extracted raw materials. Buried or incinerated waste thus represents not only a lost resource but also a new extracted resource.

This is why the directive stresses the importance of reducing the amount of waste produced initially and then optimising its management by always seeking to use it, as a resource, in the most efficient way possible.

What is waste?

Few actors in the construction industry are able to pinpoint the critical moment when a product becomes waste. And when they are, it is not guaranteed that they will all give the same answer. Let us start from the beginning: this uncertainty results from the very definition of "waste" adopted within the European Union.

> *"**Waste**" means any substance or object which the holder discards, is required or intends to discard.*[2]

In this definition, the term "discard" (or its translation) needs to be examined carefully. In most languages, 'discard' covers a wide range of operations but is more specific here. The English version of the framework directive is perhaps more explicit: the term "discard", implies "throw away, abandon". The European Commission has subsequently detailed the various meanings of the term "discard" covered by the definition:

- **"The holder discards": direct action**

  The holder performs an action as a direct consequence of which the materials are classified as waste. Note, this action may be unintentional or accidental.

  Examples: materials thrown into a skip or deposited at a waste disposal site, etc.

  In the context of building works, several actors may at some point carry out this action on behalf of the holder, without the holder being aware of it.

- **"The holder intends to discard": indirect action or lack of action.**

  An intention to dispose of the materials can be inferred from the holder's actions. The classification

1. Waste Framework Directive 2008/98/EC [1] - Art 1

2. Waste Framework Directive 2008/98/EC [1] - Art 3.1

as waste is an indirect consequence of these actions. This is in fact due to the absence of a clear desire not to throw the materials away.

Examples:

– In a waste management plan on a construction site, no waste prevention measures are taken and all materials are considered indiscriminately as waste.

– Stones left over from road works are stored for a long and indefinite period of time, without any further intended use.

Case law shows that the intention of the original holder is not the only basis for determining the status of waste. The analysis is based on the accumulated evidence of various parties with no interest in retaining or reusing a product. This nuance is important in the construction industry, where a large number of parties have responsibility for the materials produced on a building site. They are explained in more detail in section 2.1:"The panel of indicators: a tool for classification.".

- **"The holder has an obligation to discard": mandatory action.**

  The holder has an obligation to dispose of the material as a result of European or national regulations. Classification as waste is then a direct consequence of law and independent of the holder's will.

  Examples: asbestos materials from demolition work, materials irremediably contaminated by lead dust, etc.

What is reuse?

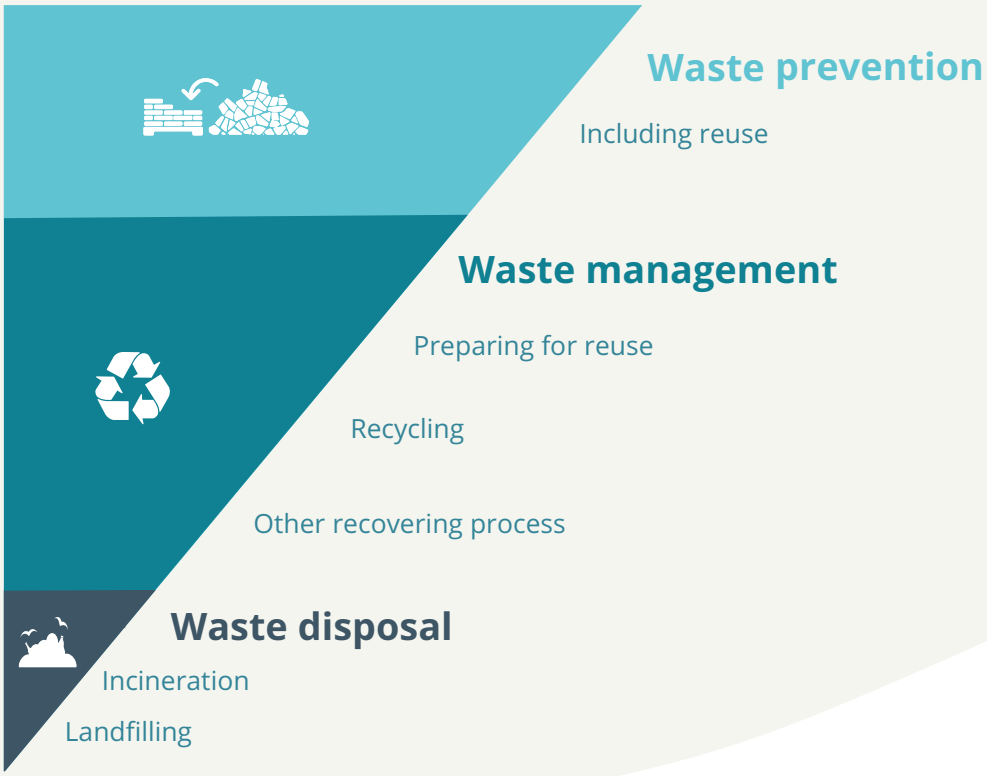
> ***Reuse** means any operation whereby products or components that are not waste are used again for the same purpose for which they were intended.*[3]

From a legal point of view, reuse implies that the materials in question are not waste, nor that their holder **has a desire to discard them** in the sense conveyed by the directive. Above all, since materials are not treated as waste, reuse is a **waste prevention practice**. This practice is therefore considered as a priority over recycling in the hierarchy defined by the European Union[4].

3. Waste Framework Directive 2008/98/EC [1] - Art 3.13
4. Waste Framework Directive 2008/98/EC [1] - Art 4.1

Road construction site in Brussels, September 2020. Blue stone floor slabs are dismantled without particular care: through this action, the contractor discards the materials and legally transforms them into waste.

Waste Collection Centre, Brussels, 2011. Various wood-based materials are removed from construction sites and deposited in a waste consolidation centre: at this stage, all these materials have become waste.



Waste Management Hierarchy (art 4.1 of the 2008 Waste Directive).

In practice, the definition of reuse leaves this question open: what are the criteria to determine whether the holder does not intend to discard the materials? Is the material classified as waste once transferred to another owner? For example, a common mistake is to consider that materials from a demolition site automatically become waste as soon as they leave the site, since the owner obviously had no intention of reintegrating them into the new construction.

However, the following cases can be considered reuse:

- If the material is reused on the same site. In the UK and Ireland the term used is 'same-site reuse'. To be clear, reclamation is the act of extracting, processing, transport and storage prior to reuse. Reuse is the act of taking a reclaimed material and installing it in a new location. So 'same-site reuse' is a shortened term for what is actually 'same-site reclamation and reuse'.
- If the material is reused on another site owned by the same owner.
- If the material is transferred to another party (by donation or sale) for future reuse. If this transfer of material involves several sorting phases, the material will then go through a stage of preparation for reuse.
- If the material is abandoned or deposited in a waste treatment facility, but a new holder comes forward with the desire to reuse it. The material will then go through a stage of preparation for reuse.

Linguistic confusion

The recurrent confusion over the distinction between "Product" and "Waste" has been reinforced by translating the definition of reuse into the multiple languages of the European Union. In French-speaking countries and regions, the initial term "reuse" has sometimes been translated as "réemploi", and in others as "réutilisation". In France, these two words have even been dissociated into two different notions [2]. In Dutch, the term hergebruik is often used for both reuse and recycling, while the former refers to prevention and the latter to waste management. In the UK and Ireland the terms reuse and reclamation are increasingly used by new material manufacturers and recyclers to obfuscate meaning. So 'reuse' of a material may mean its reuse as a feedstock for a lower value downcycled product where embodied energy is destroyed. Thus 'reuse of bricks' can mean 'crushing bricks and using them to build up site levels' - in other words landfill - so reuse of bricks can mean landfill.

What is preparation for reuse?

In practice, the distinction between product and waste can sometimes prove difficult. Aware of this reality, European legislators have provided some flexibility for the transition of material's status from 'waste' to 'destined for reuse'.

> *Preparation for reuse means any inspection, cleaning or repair operation with a view to recovery, whereby products or components of products which have become waste are prepared in such a way that they can be reused without any further pretreatment*[5]

Preparation for reuse may apply to materials classified as **waste by default**. One finds the notion of "discarding" here again, because the materials concerned are those which would have followed the first two paths: the action of discarding, or the intention of discarding (or lack of desire to give a second life to the material) [3]. For example, the materials have been abandoned or deposited in a waste treatment facility. Another very frequent case is a batch of untreated materials where components may not be suitable for reuse until several successive sorting and repair phases are complete.

The materials are thus considered to be waste but reclassified as products once their reuse is clear, i.e. a desire to reuse has been expressed by assigning them a new destination, by repairing them, by finalising the selection of a batch suitable for reuse, etc. Items that have been discarded due to their poor condition will remain waste and should be directed to an appropriate treatment channel such as recycling.

Preparation for reuse can be illustrated with an example from everyday life. A person takes clothing that they no longer use to a thrift store to sell or give away. The store only accepts those items that they believe can be resold. The objects do not become waste, since they are transferred with the intention of prolonging their use for a similar purpose. The original holder transferred their property with the certainty that someone wanted it and remains responsible for finding another destination for the unaccepted clothing.

Another person deposits their clothes at an association's collection point. These are then sorted; those in good condition are sold in the association's shop, others that can no longer be worn are sent to textile recycling facilities, and others may be incinerated for lack of a

5. Waste Framework Directive 2008/98/EC [1] - Art 3.16

Reuse or preparation for reuse ?

Paving stones are salvaged and sorted on site by a company, according to the instructions laid down in the pre-demolition assessment. Paving stones that are deemed to be in good condition are set aside and sent to another site for reuse. They never cease to be products. **This is reuse.**

During road works, an operator in the reuse channel indicates their interest in collecting some paving stones. They participate at the work site, ensuring the preservation of the salvaged items and rejecting any that are too damaged. At the end of the works, they take the recovered batch to their site to store them until they are sold (as products). **This is reuse.**

During road works, paving stones are salvaged and stored separately on the construction site. The company contacts a potential buyer, and leaves it to the future buyer to carry out an appropriate sorting process. The buyer takes them to their site where workers sort the items. Excessively damaged items, as well as pieces of asphalt and foundation materials are rejected. At the end of the operation, the saved paving stones are classified as products. **This is preparation for reuse.**

A demolition company stores batches of paving stones recovered from road demolition sites in their facility. When a construction company comes forward to use these batches in a new project, the demolition company supplies a quantity in excess of requirements, since they know that some of the paving stones in the batch will not be usable. At the new project site, the paving stones are cleaned and sorted as they are used. Those that are retained then become products. **This is preparation for reuse.**

Company specialising[1] in the recovery and reuse of road materials, Lommel (Belgium). Paving stones from the demolition process are first screened (img. 1) in order to remove small residual elements (dust, fragments, etc.).

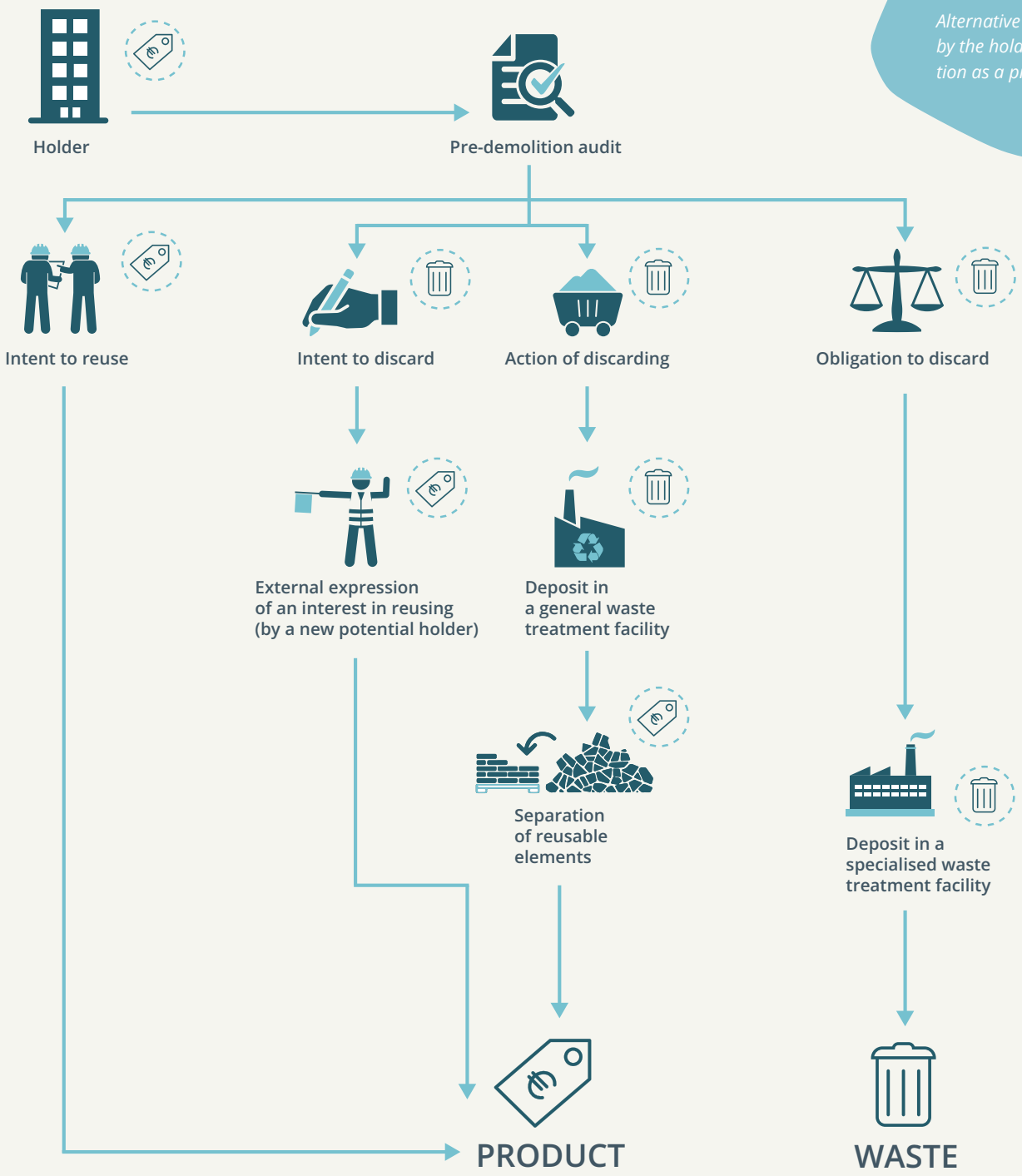
6. Kasco NV, in Lommel (Belgium). More information on https://opalis.eu/fr/revendeurs/kasco-nv.

The whole paving stones are then transported to a sorting station (img. 2), where an operator sorts them by size, type of stone and condition.

better solution. Here the holder has disposed of their property without the certainty that someone else would want it. Their intention is to enable the best possible use of goods they no longer want. The garments therefore become waste by default, but those that are deemed fit to be worn again will regain status as products after the sorting phase. They will have gone through a phase of preparation for reuse.

While preparation for reuse applies to materials that have become waste, reuse takes precedence over recycling in the waste hierarchy defined by the European Union[6] The European Commission allows a certain flexibility in the application of this hierarchy, considering that the final choice should be justified by the desire to achieve the most environmentally positive result in the overall life-cycle analysis. Preparation for reuse is nevertheless considered to be the best alternative.

7. See Figure 1 - The Waste Management Hierarchy, part 1.1: What is reuse?



Alternative avenues of action by the holder until classification as a product or waste.

1.2 The challenges of differentiation: what reuse avoids

What are the consequences for the holder of a material to be classified as waste?

- **The original holder's responsibility.** If the material poses a health, safety or environmental risk and is identified as waste, then the person who puts it back into circulation is liable in the event of an accident.
- **The accusation of waste trafficking.** Waste must be transported under special conditions to reduce the risk of pollution. It must also be deposited and treated in authorised facilities (waste collection centres, incinerators, recycling facilities, etc.) and is subject to specific taxes. If a material classified as waste is transported in non-compliant conditions or is left untreated in an abandoned state, then the official holder may be subject to heavy fines.

The risks involved are enough to worry actors in the construction industry, and if in doubt may prefer to consider everything as waste. Yet reuse is already practised, and has been for a long time. It is being practised on an ever-increasing scale: sponsors include reuse objectives in their programming, architects prescribe reusable materials in their projects, and contractors often salvage valuable materials from demolition sites for resale or reuse in new structures. In addition, there is a well-developed network of reclamation dealers specialising in the recovery and resale of reused building materials throughout Europe (and beyond).

Do they constantly risk being accused of waste trafficking? Fortunately not, as long as they make their choice of reusing in good faith and ensure that the new use of the material is not harmful to the environment and human health[7].

8. Waste Framework Directive 2008/98/EC [1] - Art 1 *Subject and scope:* 'This Directive lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste [...]'.

A third negative consequence is the **complexity of declassifying materials classed as waste**. Once classified as waste, materials have to meet specific conditions (depending on their final use) before they can be reintroduced to the market. These conditions are often adapted to industrial production based on standardised requirements. This is why recycled materials, whose constitution is changed, are better able to meet the requirements [of industrial production] than reusable materials. Recycled materials are unlikely to progress from waste status without some degree of investment (chemical analysis, performance tests, etc.) which then cancels out their potential economic value.

Here, it is the legal notion of preparation for reuse that allows the sector to avoid this consequence, by considering that objects regain a de facto product status when they are ready for their new use.

2.

The conditions for certainty of reuse

"Reclaimed materials are like any other products."

2.1 The panel of indicators, a tool for classification

To follow is a discussion of the questions raised by the legal definitions. We have seen that the key notion when determining whether material salvaged from a building site is a "product" or "waste" is the intention to reuse the material. If so, is reuse certain?

This question is complex when considering the many decision makers on a construction project: at what point should this desire to reuse be determined? Who is competent to express it? Only the holder? Is a specific qualification required to make this decision? What about the site operators, who are also well placed to spot last-minute opportunities?

Figure 3 on the next page combines the criteria established by the courts (in particular by the Court of Justice of the European Union) as well as by certain administrations, by which materials may be classified as products or waste. The 'panel' of indicators idea is significant: **virtually none of these indicators individually define whether material is classified as product or waste.**
It is the combination of several indicators on one side or the other that will determine the classification. Symbolically, the figure 3 will be clearest where the most indicators are selected. This panel of indicators can also be used as a tool during the programming phase, to avoid uncertainty. In a well-managed reuse project, the evidence in favour of product status should accumulate without difficulty.

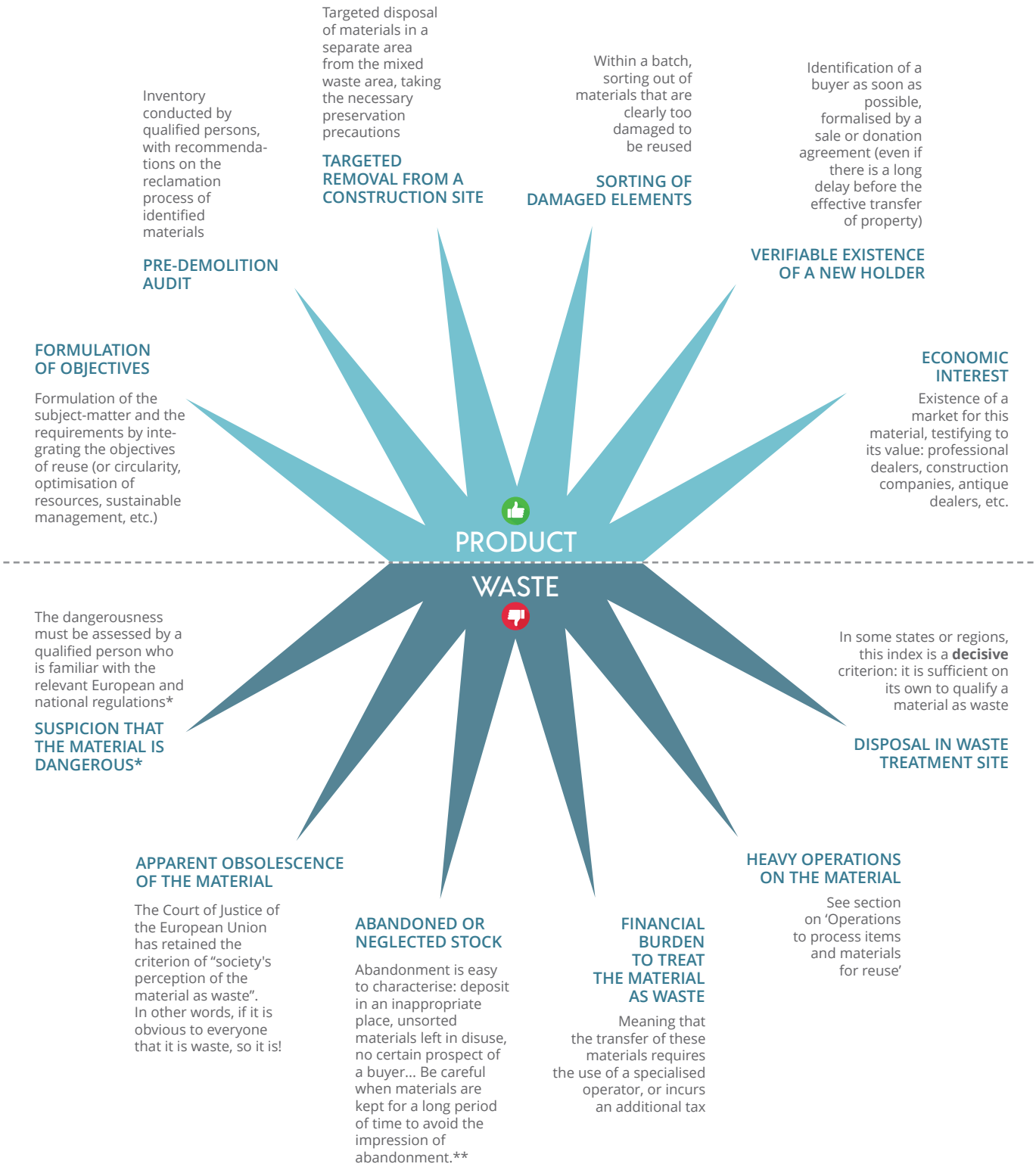
Fortunately, the courts have clarified the potential confusion by gradually determining a panel of indicators to assess the good faith of this intention to reuse [5].

The panel of indicators illustrates that the qualification for reuse cannot be systematic. The European Commission underlines that 'The Court of Justice of the European Union has recognised a need for flexibility on a case-by-case basis, and the need to consider the facts and circumstances involved. [...] It should be noted that no single factor or indicator is conclusive on its own. It is always necessary to consider all the circumstances' [3,4].

Ultimately, there are multiple criteria to be considered to ensure the reuse and de facto product status of materials. There is one important factor: their reuse must be certain. In other words, the holder of the material must be able to show that appropriate efforts are being made to orientate a product towards reuse if the destination is not already known.

Dismantling natural stone slabs, Antwerp 2018. The slabs have been identified in an inventory of potential materials for reuse in a public building. They are the subject of targeted removal by a specialised operator, who will also ensure their resale in a well-established market. The panel of indicators clearly converges on the side of a classification as a 'product'.

Figure 3: The panel of indicators (based on the interpretations of the 2008 Waste Directive by the Court of Justice of the European Union)



* Footnote: The European Regulation includes for example:

- the list of hazardous waste, regularly updated by the European Commission (https://eur-lex.europa.eu/legal-content/FR/TXT/?uri=CELEX:32000D0532). It is strongly recommended to look for possible complements at the national level.
- the REACH Regulation (https://echa.europa.eu/fr/regulations/reach/understanding-reach) (cf Treated Wood case).

** The case study "The Pavilion" provides a good example of what is considered abandonment (Judgment rendered by the Court of Appeal of Liege on January 7, 2009). See also in "Frequently asked questions : *Est-il risqué de conserver des matériaux issus d'une déconstruction sélective si on n'a pas de projet réemploi immédiat pour eux ?*"

THE OPINION OF NATIONAL JUDGES

The two cases below illustrate more complex issues that have arisen in the courts. They answer very specific questions and provide a better un[d]erstanding of the logic followed by the judges interpreting the notion of waste.[9]

The refrigerator case[10]

A professional supplier of equipment for reuse stores used refrigerators and other electrical appliances in their yard for short periods of time (maximum one week). Their activity consists of repairing the appliances and then reselling them to the public. A supervisory authority notifies them that this equipment is considered waste and that they should have a permit to treat it. Is this a correct assessment?

> *Answer: no. This case took place in the United Kingdom, where the judges did not classify the objects as waste because the shape of the objects had not been changed, items awaiting repair did not contain any dangerous substances and had retained their original function [5].*

The pavilion case[11]

The land in front of a pavilion was covered with various objects (old rotten wood, old building materials, old cars, etc.). After a certain period of time, the municipal authority ordered, by decree, the disposal of this supposed waste. The holder refused, arguing that it was not waste but that these were objects that could be used in the future. In whose favour did the court rule?

> *Answer: the municipality. In this case in Belgium, the Court condemned the holder for 'Abandoning waste', citing the dilapidated state and the disparate nature of the objects left on the land, 'which precluded them from being regarded as a set of reusable materials for the renovation of a building' [5].*

9. These cases have been judged by national courts, but are based on the indicators determined mostly by the Court of Justice of the European Union.
10. UK High Court of Justice, London. *Environmental Agency v. Thorn International UK Ltd*, 2 June 2008, [2008] EWHC 2595 (Admin)
11. Judgement of the Court of Appeal of Liège, 7 January 2009, Amen-Env, [2009]. Book.3 p.216, note: B. JADOT

THE RECOGNITION OF THESE INDICATORS IN LAW

In **France**, the 'Anti-Waste for a Circular Economy' Law of 10 February 2020 specifies that 'all products sorted on site by a competent reclaimer will not be classified as waste' [6]. This law also defines the framework for the "Product-Material-Waste" diagnosis which will be mandatory for significant demolition or restoration operations and which includes a section on identifying the reuse potential of materials.

In the **United Kingdom**, all of these indicators are listed in detail in a guidance document for the use of government environmental agencies [4].

It is therefore a given that reuse is certain from the moment that the holder has a clear desire to keep the product in use, that a new destination or new holder is clearly identified and that the material in question is clearly suitable for reuse. The materials then remain [classified as] a product.

When these three conditions are not met, reuse is still possible but must be assessed on a case-by-case basis, based on the context. If there are insufficient indicators to support reuse or uncertainty remains, it can be assumed that the material has become waste by default, but may regain its product status after preparation for reuse. This step establishes a clear desire for reuse (by sorting and repair). It may also involve finding a new holder for the material, or a new use, or both.

2.2 Change of use, a practice compatible with reuse

Operations to process items and materials for reuse

'For a use identical to that for which they were designed'[12]: the margin of change from the initial use of a material or item remains a major factor of uncertainty for the sector. The creativity of those involved in reclamation and reuse quickly exceeded the imagination of those who drafted the official definition: doors used as exterior panels, beams adapted to become benches, window frames assembled to form a façade... one material reused can hide another!

In practice, this issue is secondary to that of "product or waste" status, since a material will not be classified as waste simply if its new use is different. As soon as the reuse of the material is certain, its holder can dispose of it as they wish in compliance with the law. Just as someone who buys a new wooden door is within their rights to use it as a table.

In fact, it is the operations applied that limit possibilities: reuse authorises the material to be cleaned, descaled or sanded to restore it to its original state. A surface treatment can also be applied (waterproofing, varnish, paint, etc.)[13].The item may also be cut to adapt it to its new purpose. Utility equipment (boilers, ventilation units, etc.), can be overhauled and repaired to extend their service life. That summarises the situation for reuse and preparation for reuse.

These operations do not change the composition of the product nor do they radically alter the structure of its raw materials. It is thus possible to carry out some transformation of the materials to adapt them to their new purpose (e.g. sawing planks or cutting stone), but not to the point of radically changing their main characteristics (e.g. crushing the planks into chips or the stone into aggregates).

As an example, the BREEAM label presents, in its directory, the scope of possible operations associated with reuse as '*a minor transformation that does not alter the nature of the [construction] product or material (e.g. cleaning, cutting, fixing to other construction products)*'[14].

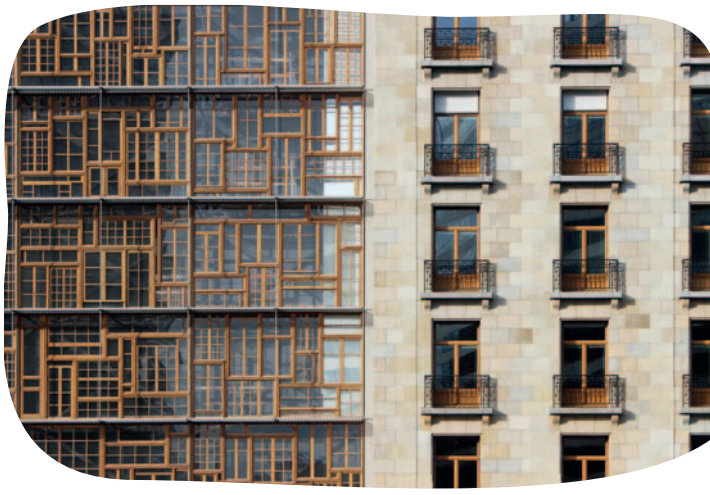
These operations may themselves, however, generate waste (sawdust, stone dust, residues, etc.). Therefore, transformations must be performed in accordance with legislation.

12. Waste Framework Directive 2008/98/EC [1] - Art 3.13

13. Refer to *Material Surface Treatments* of the futuREuse booklet series (by Emmanuel Cortés Garcia for Rotor, 2021).

14. *BREEAM Guidance Note GN18 Rev3.2 © BRE Global LTD - October 2019*

Circular pavilion, Encore Heureux, photographers: Cyrus Cornut + Florence Morisson (construction site)



Façade of the European Council and the Council of the EU, Samyn and Partners.

THE TREATED WOOD CASE[15]

A municipality in northern Finland had wooden bridges built to allow vehicles to pass over a path leading to a village. The wood used to support these bridges came from old telephone poles, which had been treated with a CCA (copper-chrome-arsenic) solution in their previous usage. The poles were therefore classified as hazardous waste. However, REACH regulations allow wood treated with CCA to be used in certain forms and under certain conditions:

- The wood is only used in a professional or industrial context.
- Its treatment with CCA is justified to preserve the structural integrity of the wood, and thus the safety of humans and animals.
- It is unlikely that the public will come into skin contact with the wood during its lifetime.

This is particularly true of its application as "structural timber for public, agricultural, administrative and industrial buildings, bridges and engineering structures".

In this particular case, the wood from the old poles thus avoided being classified as waste and could be reused. This case illustrates the fact that health and environmental risks are the fixed boundaries separating products from waste. It is always with these risks in mind that judges will apply and interpret the law [5].

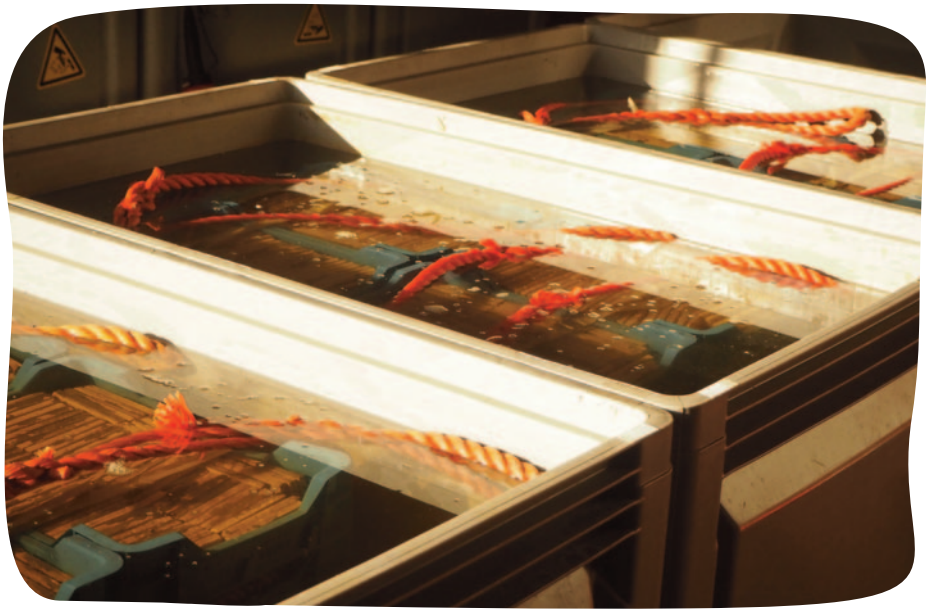
15. Judgement of the C.J.E.U of 7 March 2013, *Lapin*, C-358/11. §§17; §§22-26; § 60; §§ 63-64.

Cleaning of the groove in parquet strips, after cutting, to adapt their size to their new purpose.

Reuse or recycling?

Why is there a limit on applicable operations? Because a profound transformation of the physical and chemical nature of the material would be similar to recycling.

Cleaning the edges of a marble slab. In this case, the operation does not affect the slab itself, but removes mortar residues from its previous use.



Cleaning of ceramic tiles by soaking. Here, too, the aim of cleaning is to eliminate mortar residues on the edges and bottom of the tiles.

> *"**Recycling**" means any recovery operation whereby waste is reprocessed into a product, material or substance for its original function or for other purposes [...]*[16]

'Recycling' is a lower priority than 'reuse' and 'preparation for reuse' in the waste management hierarchy. Indeed, the environmental impact of this practice is considered, by default, to be more severe. In spite of this, recycling is often favoured over reuse because it is more adaptable to industrial standards.

We can switch to a recycling operation by fundamentally transforming a material. If the material or item was suitable for reuse, this represents a potential loss of material and a less favourable carbon footprint[17]. Furthermore, recycled materials have usually been classified as waste, and are thus managed by an authorised operator. In order to be used again (through recycling), they may have to meet mandatory standards, pass certain tests, may be subject to taxes, and so on. A recycled product will be expected to have the same qualities as a new product in order to be placed on the market. All this requires a certain vigilance. In addition, recycling is based on a different economic sector from that of reuse and does not allow for the same retention of historical and cultural heritage.

The advantages of the notion of preparation for reuse are clear: it avoids highly regulated and costly processes and benefits from more flexible conditions when not classified as waste, when the operations applied to the material are minor and extend its initial life cycle.

The study of several cases of change of use makes it possible to draw the line between reuse and recycling (and therefore between product and waste), based on recurrent indicators such as treatment operations, loss or gain in value, etc. Generally speaking, a recycled material will have more limited opportunities for use than a reused material. Either it will have a filling function (insulation, covering, mulching, etc.), or it will have to be combined with new material in order to be used again. On the other hand, a reusable material can still fulfil a greater variety of applications, even if far removed from its original function. Even if it acquires the status of waste temporarily, preparation for reuse can return a material to use without extensive processing. The fundamental difference between the two is that **the recycled material is closer to the final status of waste** than the reused material.

16. Waste Framework Directive 2008/98/EC [1] - Art 3.17

17. This has to be kept in perspective: it is possible for some materials, in some operations, that the environmental impact of recycling may be lower than that of reuse. Multiple factors can influence the final balance (transport, type of material, treatments applied, etc.). However, the European Commission recognises that by default, i.e. in the absence of thorough case-by-case studies, reuse has a lower environmental footprint than recycling.

These Burgundy slabs have been sawn horizontally so they could be used as flooring.

The transformation is minor and the usage is the same: there is no doubt that this is **reuse**.

Partition panels made of HPL (high-pressure laminate) have been transformed into stools.

The transformation applied consists of simply cutting the panels. Only items in good condition may be used for this new purpose and their former holder has knowingly disposed of them. This is **reuse**.

These old bricks have been salvaged and cleaned to be used as facing or filler bricks.

They are **reused**, but declassified from use since they now only serve part of the purpose for which they were designed.

These damaged tiles have been broken up and used in crazy paving.

The use is close to the original one but the items could not be reused because of their poor condition. They became waste by default. Their new implementation has put them to a new use very close to that of the original. They have therefore regained product status after a phase of **preparation for reuse**.

These wooden beams have been sawn into floorboards.

They are no longer able to fulfil their original function or did not find a buyer. They therefore became waste by default but were deemed suitable for a new use, with a simple cutting operation. They have therefore regained product status after a phase of **preparation for reuse**.

These slates have been crushed for use as mulch.

They were no longer considered suitable to fulfil their original function or did not find a buyer. The treatment was significant, and the material has lost a lot of economic value. This is **recycling**.

2.3 Frequently asked questions and practical advice

Q Can we think about reuse in a waste management plan on a construction site?

Yes. Reuse is in fact a waste prevention practice. Preventing waste contributes to its management by reducing the flow. Such action is quite possible and even desirable in a waste management plan. More and more project managers talk about "Resource Management Plans" or "Circular [Management] Plans". However, it is recommended that items intended for reuse and those intended for waste treatment be clearly identified in the plan.

Q How can a contracting authority formally justify its decision to reuse a material?[18]

The holder can clearly demonstrate a desire to maximise the reuse of salvaged items in a demolition works contract.

- By carrying out a pre-demolition audit.
- By taking an official position in favour of reuse and the circular economy. These intentions may thus be incorporated into an internal charter or a note of intent voted by the Board of Directors, which sets out the desire to promote the reuse of materials in construction projects. This document then serves as a reference for future programming.
- By including a clause in contract tenders announcing the intention to recover materials as products and justifying this against legislation. Note that the benefits of reuse meet the primary objective of the EU Waste Framework Directive, namely "*the protection of the environment and human health by preventing or reducing the adverse impact of waste generation and management and by improving the efficiency of such use of resources*"[19].

Q Is it risky to store materials from a salvage operation if there is no immediate reuse project for them?

The intention is, of course, perfectly honourable, but unless someone is specifically in charge of actively seeking to orient these materials to reuse, there is a significant risk that they will end up being forgotten. As we have seen, reuse must be certain. How then can we demonstrate that we did not just want to avoid taxes on waste?

The time criterion is not the only determinant of abandonment. Especially since long periods can elapse in construction before the material is used in a new project. But the holder of the material must be able to show that they are making appropriate efforts to ensure its effective reuse. Here are some steps to take if you wish to store materials for a long period of time with a view to reusing them:

- Draw up an inventory of what is stored, to be able to search actively for a future purpose (e.g. by referring to it for each new project, or circulating it to potential buyers).
- Inform the professional reuse sector of the availability of this stock[20] and place announcements on online platforms for the reuse of building materials.
- Only keep materials which are visibly fit for reuse and discard any that are too damaged.
- Carry out any tests necessary if the presence of a hazardous substance is suspected (e.g. traces of tar glue or lead dust).
- Store them in an appropriate way: the packaging and storage site must guarantee the materials' reusability (protection against weather conditions, etc.).
- Formalise the future destination of these materials as soon as possible through a contract of sale or donation, even if there is a long period before their actual transfer.

18. A complete formulation, tailor-made for public administrations in the Brussels-Capital Region (Belgium), is proposed in the article Extracting reusable materials from public buildings by Sophie Seys and Lionel Billiet, p.22-23. [5]

19. Directories exist of professional suppliers of reuse materials, such as www.opalis.eu (France, Belgium, the Netherlands) and www.salvoweb.com (worldwide, with a specific focus on the UK and Ireland).

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What about products that may potentially contain substances classified as hazardous?

This is still a complex issue today. The European Commission acknowledged this in a communication in 2018: '*New chemicals are constantly marketed while others are forbidden when they are found to pose a risk. This ongoing process implies that products legally produced today may contain a substance that later may be forbidden*.' It refers to these as '*legacy substances*', adding that this issue '*will continue to constitute a barrier to the circular economy*' and that '*when considering possible chemical restrictions and exemptions to restrictions, we must give more attention to their impact on future recycling and reuse [...]* [7].

The question of reuse and hazardous materials thus remains largely unresolved. The REACH regulation, which lists substances classified as dangerous and restricts their circulation on the European market, only applies to new products. Moreover, the traceability of reused materials is often difficult to establish, especially when items were produced before the European Union even existed!

The appropriate precautions should therefore be taken, bearing in mind the overall imperative of protecting the environment and human health. Depending on the intended use of the material, the precautionary principle should be applied: if a particularly vulnerable environment or people are likely to be exposed to it, it is recommended to carry out the necessary tests beforehand, or simply to discard a material in this instance if it presents a potential risk.

It is recommended to seek the advice of reuse experts, who can assist in managing this risk. The expertise of craftspeople and operators in the reuse market can also be a great help: someone with extensive experience of the product concerned will be best placed to assess the presence of and risks associated with a legacy substance.

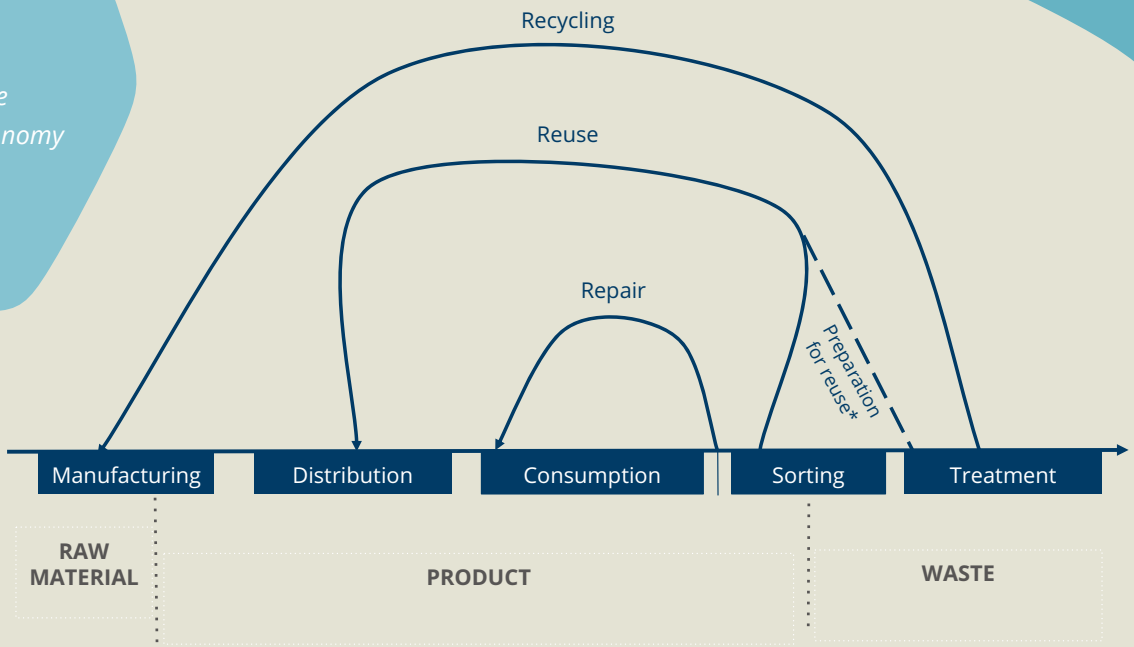
Key message

Reuse = Product = Waste prevention. A reusable material is not (or is no longer) waste. In order to avoid classification as waste, the final reuse must be certain. The panel of indicators can be used at the planning stage of the reuse objective to avoid potential pitfalls. When the context of the operation nevertheless leads to the material being classified as waste (abandonment, error, logistics or multiple-stage processing chain, before reuse is certain, etc.), this is preparation for reuse: the material is then waste by default but will regain product status as soon as reuse is certain.

Preservation of human health and the environment. All waste legislation is aimed at preventing health and pollution risks. These risks must always be considered when making reuse choices, based on relevant regulations and the advice of qualified employees.

Materials operations. Cleaning, repair, resizing, etc., remain in the field of reuse. They are limited to restoring the material to its best possible condition and adjusting it for a new use. Of course, the chemical composition of this material or the treatments that may have been applied to it must not present any risk to health or the environment in its new intended use.

Terms in the circular economy



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(abbreviated in the footnotes: Waste Framework Directive 2008/98/EC).

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