

Three concrete fields of action can be identified for reuse. The respective challenges as well as the resulting tasks and necessary steps for the stakeholders involved in the construction process are described below.

FIELD OF ACTION: TAKE A STANCE FOR CIRCULAR ECONOMY

CHALLENGES

So far, acceptance of reused components rather in the private sector, major reservations regarding quality

TASKS

Create a different point of view and actually implement a design for conversion and deconstruction:

- ▶ **Educate and set new trends**
Explain the positive features of reuse and remove concerns regarding quality; overcome the image of “waste”
- ▶ **Cooperation between the relevant stakeholders already at an early planning stage**
The appropriate use of reused components in specific projects requires increased cooperation between planners, manufacturers, marketplaces for building components and other stakeholders from the start of the project.
- ▶ **Put sustainability into practice**
Sustainability, which is often anchored in corporate strategy, should be more strongly implemented in practice, e.g. by offering services that include the reprocessing of components for reuse. Then the aspect of reuse can also be used for communication.

NECESSARY STEPS FOR

Planners

Involve and educate future users from the outset; act as mediator and involve all stakeholders relevant for facilitating reuse in the early planning process

Public sector

Cities and municipalities can act as role models and should promote and implement reuse wherever possible

Manufacturers

Consider new business models in the area of reuse, add service features to the portfolio

FIELD OF ACTION: IMPROVE THE LEGAL SITUATION

CHALLENGES

- ▶ **Uncertainty regarding legal situation**
Lack of information with regard to existing legislation
Major concerns about liability and warranty

TASKS

- ▶ **Assistance and educational services needed**
Provide information and clarity regarding the current legal situation: Offer reliable guidance on component reuse (including liability and warranty issues)

NECESSARY STEPS FOR

Legislators

Formulate and communicate clearer rules regarding the reuse of components (e.g. via laws, regulations, fee systems); educate and monitor implementation

Manufacturers

Evaluate new forms of warranty (e.g. assumption of warranty for selected components after reprocessing by the manufacturer)

Planners

Make use of training opportunities; inform about current legal situation

Organisations and associations

Provide continuous education and training to manufacturers and planners on the legal requirements and possibilities

FIELD OF ACTION: OPTIMISE PROCESSES

CHALLENGES

Processes for reuse often not yet economically viable, as they have not yet been established due to low demand

TASKS

- ▶ Tension field between economic risk, future viability and sustainable business strategy:
- ▶ **Optimise processes**
Develop and test solutions for existing barriers (e.g. high logistical effort for transport, loading/unloading and storage of components for reuse, material control)
- ▶ **Make information available**
Facilitate future deconstruction by documenting information for further use and material recovery and making it available on site directly at components or building materials (e.g. via RFID, BIM, building/material passport, etc.)
- ▶ **Bring supply and demand together**
Create central trans-regional marketplaces or platforms that enable systematic reuse

NECESSARY STEPS FOR

Deconstruction companies, recycling companies and disposal companies

Establish higher-level take-back processes in cooperation with manufacturers; train employees

Manufacturers

Invest in the optimisation of deconstruction and take-back processes at an early stage and thus ensure an early market entry; examine the advantages of modular or serial production

Public sector (or similar stakeholders)

Act as a role model and support the future deconstruction with digital tools, if necessary create trans-regional platforms