



## ***LECTURE 13***

# ***HOW TO MANAGE BUILDING ADAPTING REUSE***

***OVERALL AIM:***

***Ability to solve design project issues related with adaptive reuse and temporary use of Cultural Heritage***



# Erasmus+

# Current building performance

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- Technical performance
- Functional performance
- Economic performance



# Current building performance

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## **Technical performance**

influenced by:

- Outside and/or climate conditions
- Intrinsic aging of materials
- Usage
- Legislation (tight requirements in building regulations)
- Wishes from owners and users (decreased acceptability and satisfaction)



# Current building performance

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## **Technical performance**

→ can be prolonged by building maintenance

Maintenance is defined as repairs that are needed to ensure or restore the original functionality of the building, but does not include measure that improve the initial technical quality of the building

The technical lifespan of a building ends when the owner is not prepared anymore to carry out the necessary technical interventions





# Current building performance

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## **Functional performance**

→ as long as building complies with the functional demands of the user and the activities of the user are spatially and constructively supported

There comes a moment when the functional quality of buildings is not accepted any longer

Owners can decide to prolong the function by renovating or rebuilding the building (e.g. new façade, layout, furniture), or increasing the volume of the building (horizontally or vertically)

Another option is to change the function (e.g. from office to residential)



# Current building performance

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## **Functional performance**

influenced by:

- Legislation (tightened requirements with regards to ceiling heights, space norms)
- Wishes from owners and users (appearance, size, amenity level, accessibility, parking facilities)



# Current building performance

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## **Economic performance**

→ ends when the owner can no longer see the possibility to generate more income than costs with the building, when the cost-benefit ratio is (permanently) negative, or when the building has a negative value.

This means that the costs of different alternative interventions can no longer be recouped with financial benefits.

Often, owner-users can prolong the economic lifespan, as they can define benefits a bit broader than just financial ones, including immaterial benefits like the support of primary organizational processes or company image



# Current building performance

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## **Economic performance**

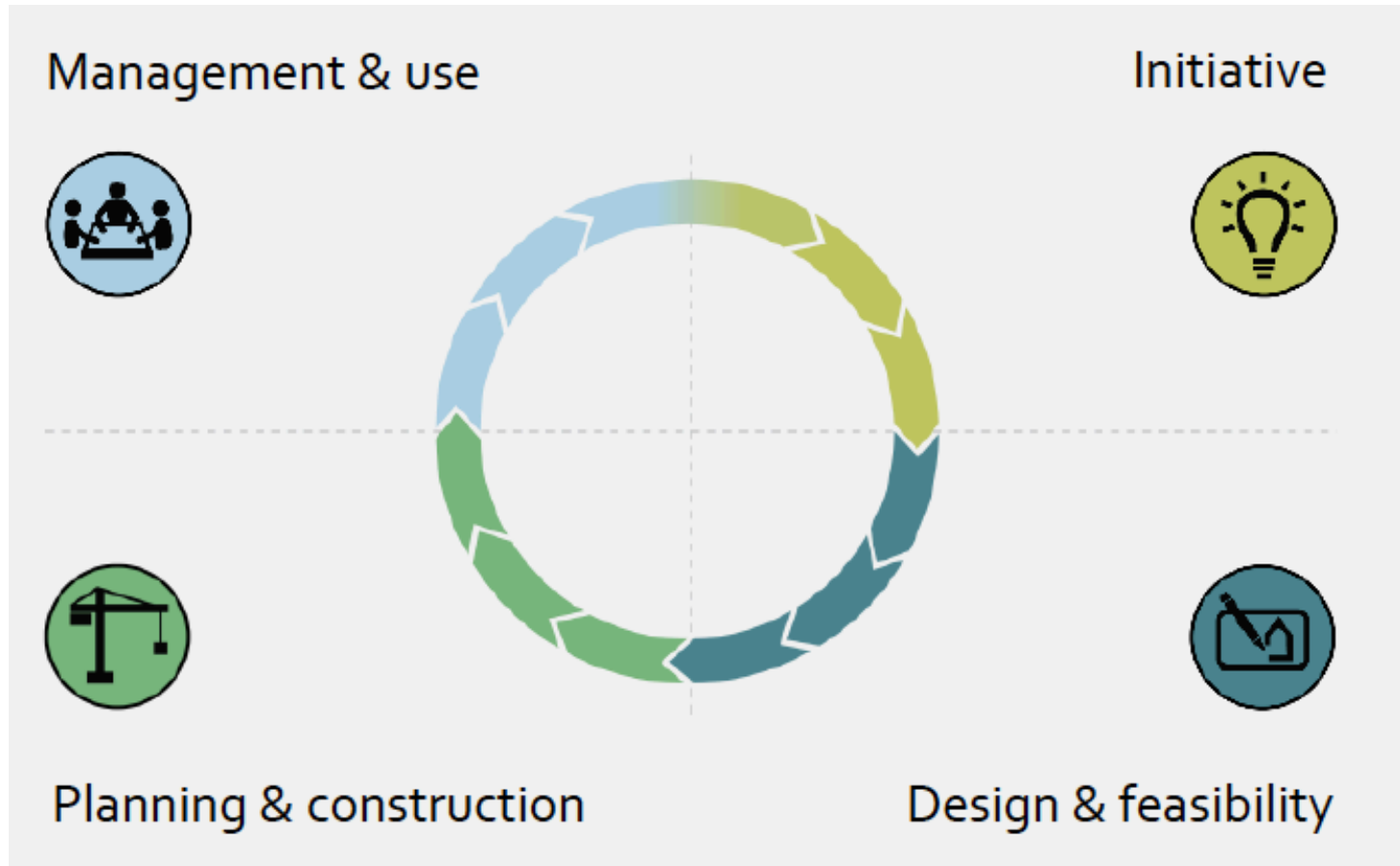
influenced by:

- State of the economy (economic downturns in general result in less demand for space/buildings, and lower rent prices)
- Legislation (environmental law requirements like mandatory insulation to improve energy performance of buildings)
- Wishes from investors and users (investors seek buildings that generate a high/decent yield; users want to pay the lowest possible rent for a certain quality level)



# The process

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Source: TU Delft 2017



# The process

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## Initiative phase



# The process

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## **Initiative phase**

### From the users' side

Users can experience the following accommodation mismatches:

- Quantitative: too much or less space to carry out user activities
- Qualitative: the technical, functional, financial, or aesthetic obsolescence of the building not suiting user needs
- Locational: the building suffices, but user activities require a different location
- Financial: accommodation costs for the user exceed the benefits



# The process

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## Initiative phase

Once a user experiences an accommodation/building mismatch he has four choices:

1. Adjusting user activities to better using the existing building
2. Adjusting the building so it better meets user needs
3. Search for a new building in the existing real estate stock, that better meets user needs
4. Commission a new building to meet user needs

*Adaptation*





# The process

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## **Initiative phase**

### From the owners' side

Owners can have the following reasons for an initiative:

- Opportunity: possession of a building or piece of land that could potentially meet user needs/demand
- Solution: current state of owned building mismatches with current use
- Prevention: chance that current owned building will deteriorate, and will mismatch with future user needs



# The process

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## **Initiative phase**

Different choices:

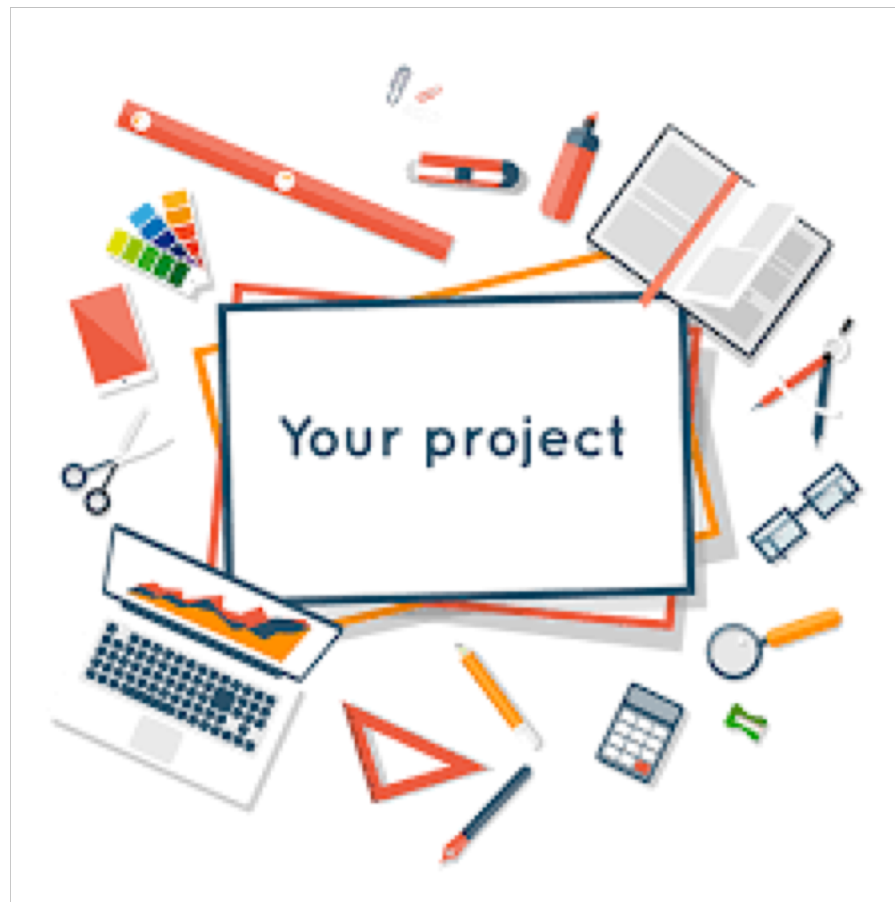
- Doing nothing
- Finding a new user that does not experience any problem with the current state of the building
- Solving the current mismatch by a structural building intervention
- Finding a new user and making a structural intervention to meet new user needs



# The process

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## Design and feasibility phase



# The process

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## **Design and feasibility phase**

→ preparation phase: users and owners decide which alternative they want to translate into a building concept and design, while simultaneously calculating the feasibility of the design

The feasibility of a design primarily is concerned with financial and planning considerations

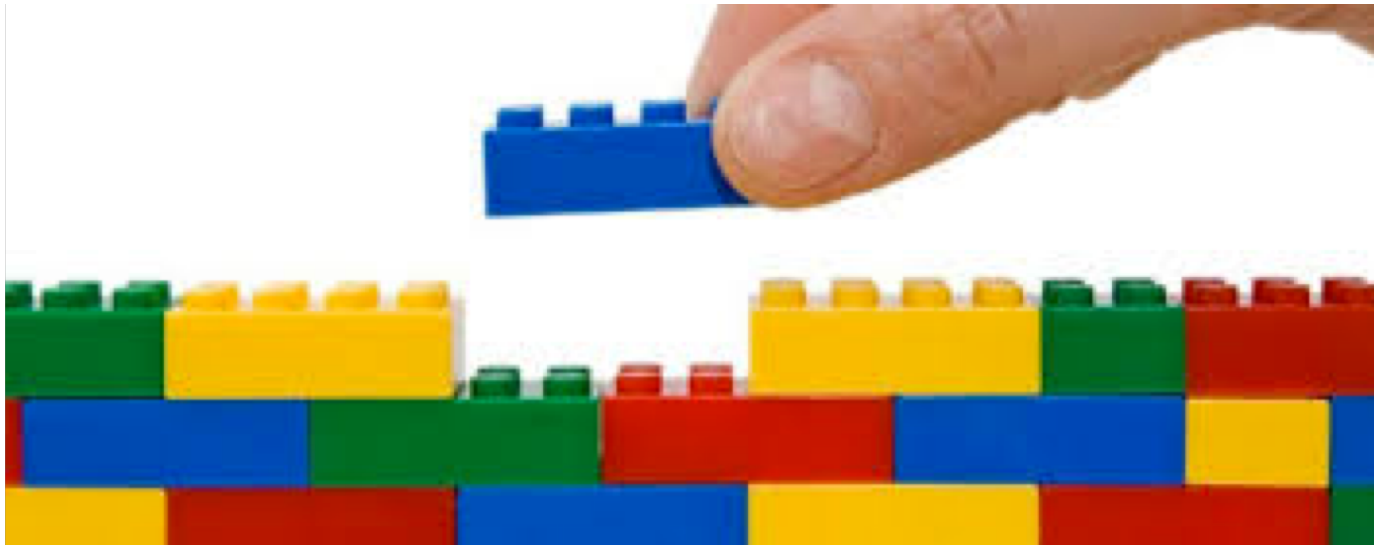
The fine-tuning of design and feasibility matters can be considered as an iterative process that evolves into a final decision for a certain accommodation alternative



# The process

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## Construction and planning phase



# The process

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## **Construction and planning phase**

- Defining of tasks and activities
- Selecting and contracting of various parties
- Deploying financial resources
- Planning, appointing and realizing foreseen activities
- Managing the building process and project
- Revising the strategic process design when necessary



# The process

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## Management and use phase



# The process

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## Management and use phase

→ the longest building life cycle phase. In essence, this phase should cater for user needs and demand and satisfy the owner in terms of a good cost-benefit ratio

In the operation phase, the building owners, sometimes equal to or referred to as building operator, might take a passive or active stand towards operation and maintenance:

- Passive attitude: the owner waits for the user to stress accommodation problems
- Active attitude: the owner constantly consults with users about changing needs, pro-actively steering towards solutions





# Temporary and Interim Uses

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- Temporary uses can be an important way to maintain sites in use, and to avoid demolition by neglect – abandoned buildings are vulnerable to decay and eventually to demolition
- Temporary use is also often low-impact and can help protect the building until a new, longer-term use is found
- Parameters for temporary use need to be clearly established at the outset and rights and responsibilities of all parties clearly understood by all
- A program of rolling temporary uses can be also a valid long-term strategy for the reuse of a place



# Temporary and Interim Uses

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Among the different uses:

- retail, including charity and 'pop-up' shops
- community activities like exhibition spaces and information points
- art and craft studios and workshops
- exhibitions, performances, hospitality and events
- storage and filming
- markets
- new business incubators



# Further readings

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- Heritage Council of Victoria (2013) Adaptive Reuse of Industrial Heritage: Opportunities & Challenges, [http://heritagecouncil.vic.gov.au/wp-content/uploads/2014/08/HV\\_IPAWsinglepgs.pdf](http://heritagecouncil.vic.gov.au/wp-content/uploads/2014/08/HV_IPAWsinglepgs.pdf)
- TU Delft (2017) Managing Building Adaptation A Sustainable Approach





**Project "SURE - Sustainable Urban Rehabilitation in Europe"  
implemented in frames of Erasmus+ Programme  
Key Action 2: Strategic Partnership Projects  
Agreement n° 2016-1-PL01-KA203-026232**



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