BAMB
BUILDINGS AS MATERIAL BANKS

Co-funded by the Horizon 2020
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BAMB STAKEHOLDER NETWORK: GENERAL PROJECT DESCRIPTION

@ LAUNCH OF THE BAMB STAKEHOLDER NETWORK, BRUSSELS

Caroline Henrotay | Brussels Environment

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What is BAMB

What are the objectives

How to achieve these objectives

Why it is important to involve stakeholders

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WHAT IS BAMB?

Developing Buildings as Material Banks, eliminating waste and establishing symbiosis in supply industries

Horizon 2020 - WASTE 1 2014 - Moving towards a circular economy through industrial symbiosis

- Starting date: 1st of September 2015
- Duration of 3 years
- Consortium of 16 partners from 8 EU countries

OBJECTIVES

Support human needs

Accelerated Societal Changes

Loss of value of materials & buildings

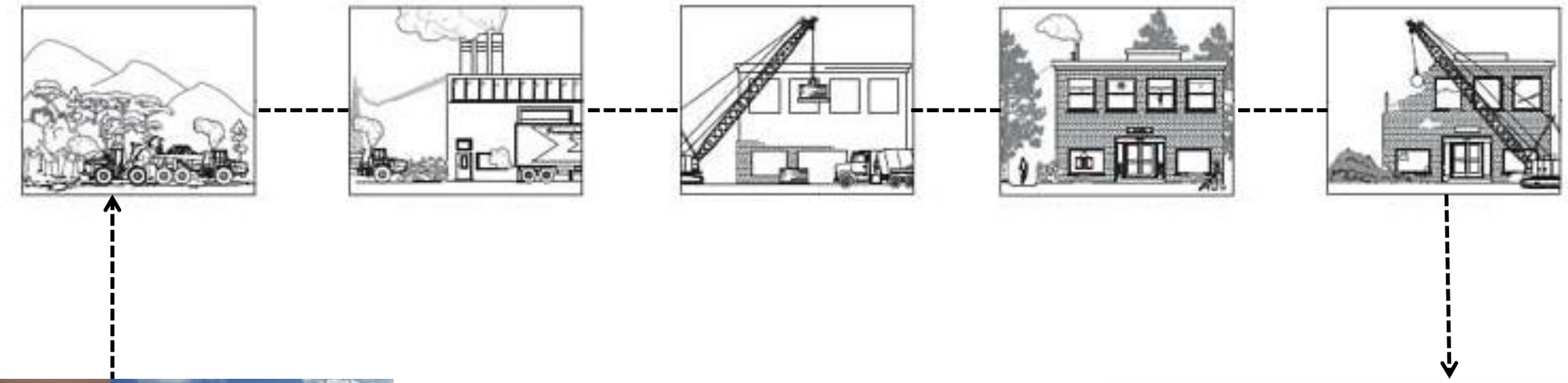
Create +/- 35 % of EU waste

Use 30 to 50% of natural resources used

Cycles of construction, demolition & re-construction

OBJECTIVES

FROM A LINEAR AND STATIC BUILT ENVIRONMENT ...



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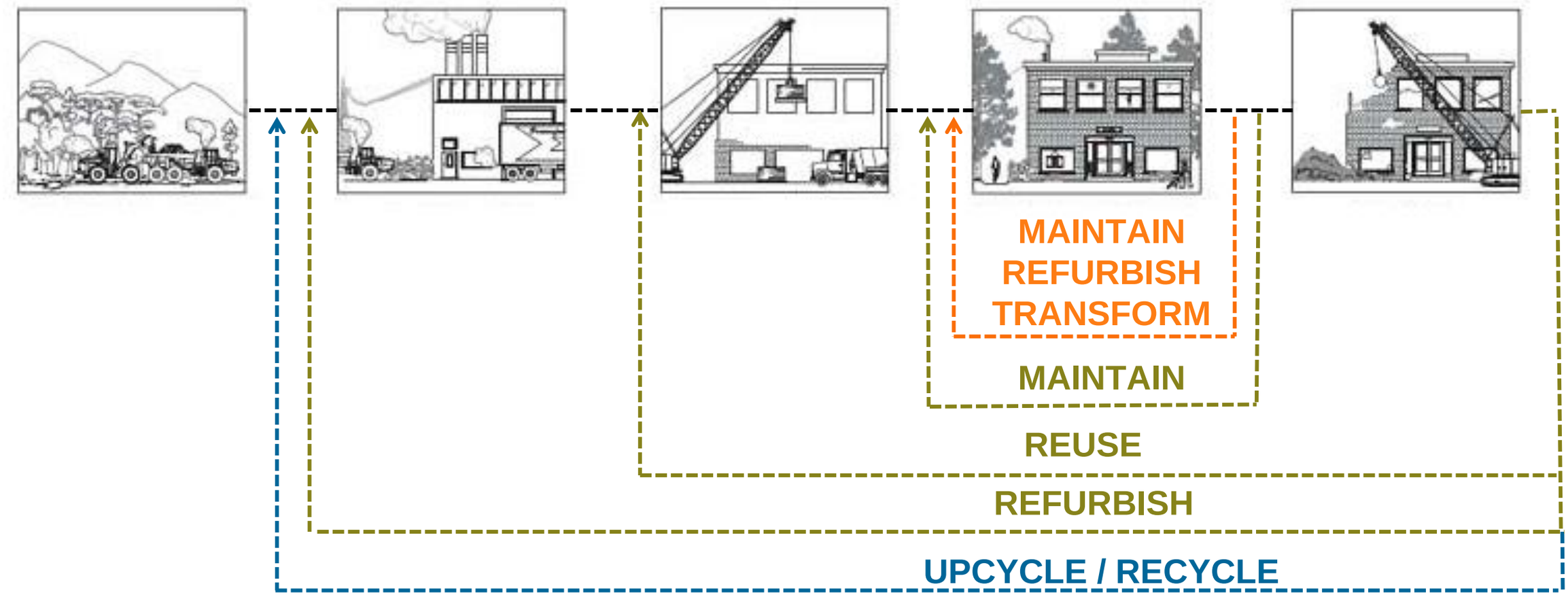
OBJECTIVES

... TO A CIRCULAR AND DYNAMIC BUILT ENVIRONMENT



- BUILDINGS
- BUILDING PRODUCTS & SYSTEMS
- MATERIALS

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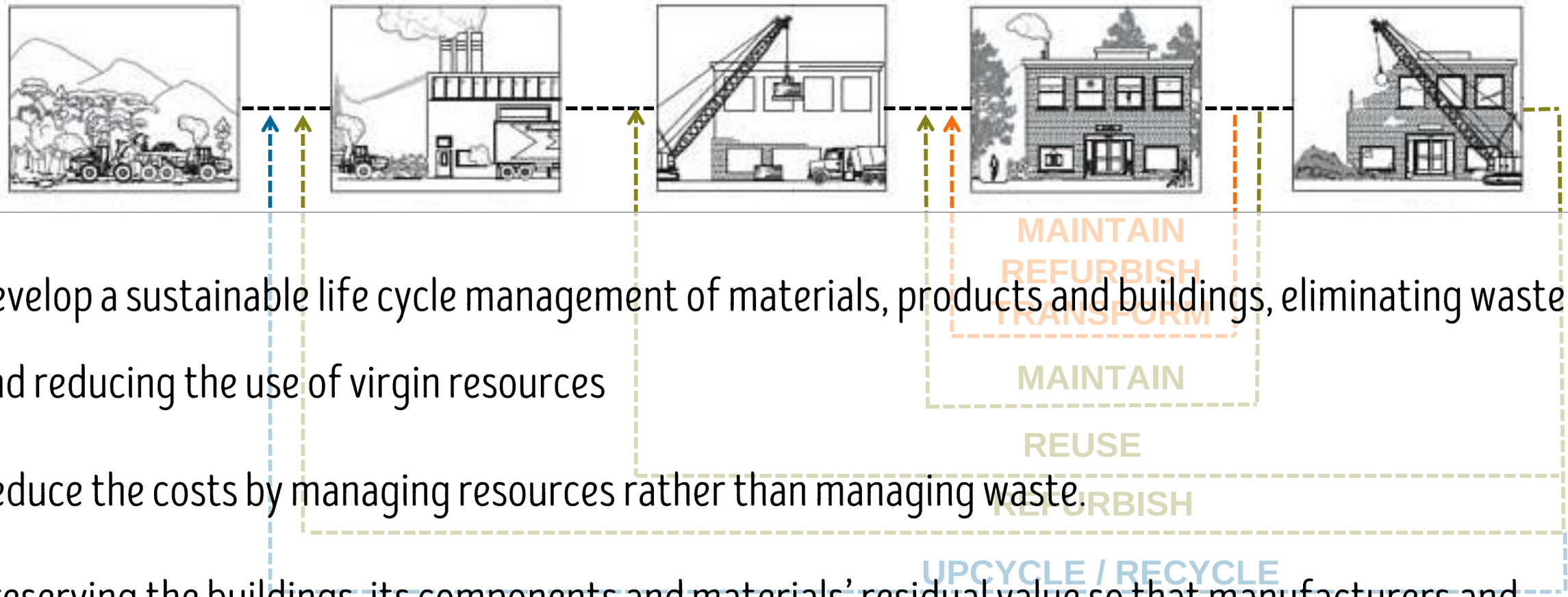
OBJECTIVES

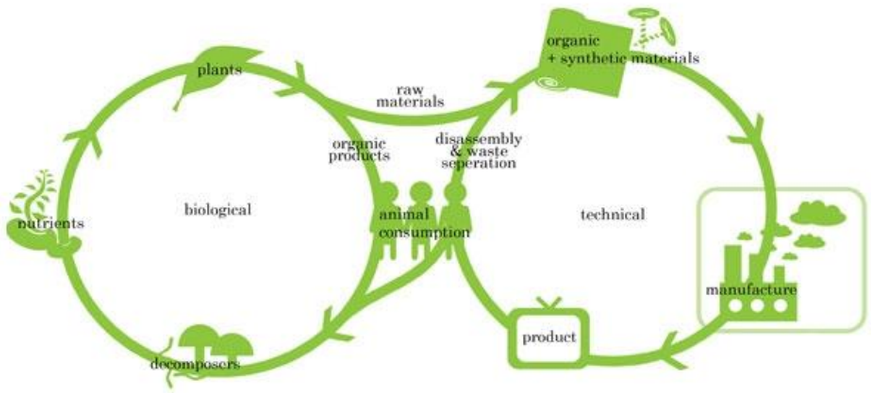
... TO A CIRCULAR AND DYNAMIC BUILT ENVIRONMENT



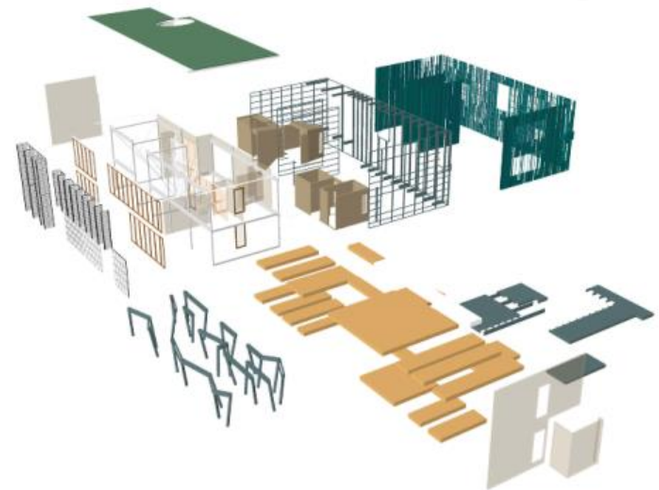
- Develop a sustainable life cycle management of materials, products and buildings, eliminating waste and reducing the use of virgin resources
- Reduce the costs by managing resources rather than managing waste.
- Preserving the buildings, its components and materials' residual value so that manufacturers and owners will be able to make money out of their "waste" by high quality reuse and recycling strategies.

RE-THINKING THE DESIGN AND BUILDING VALUE CHAIN

C2Craddle & Material Passports



Reversible Building Design



Source: loblolly-house, Maryland, USA, 2006
http://kierantimberlake.com/pages/view/20/loblolly-house/parent:3

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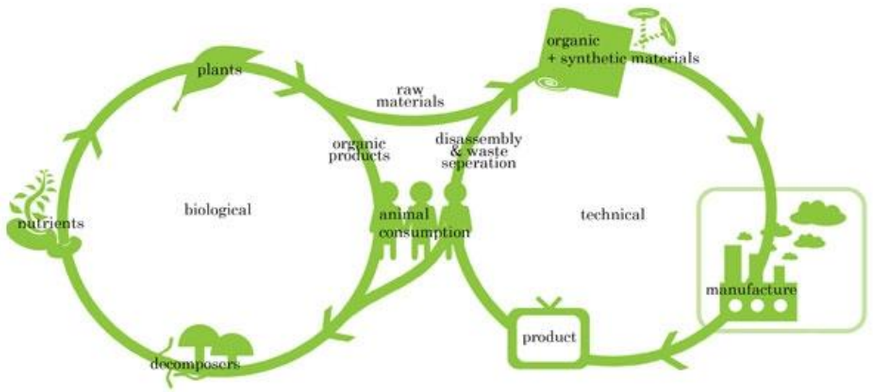
RE-THINKING THE DESIGN AND BUILDING VALUE CHAIN

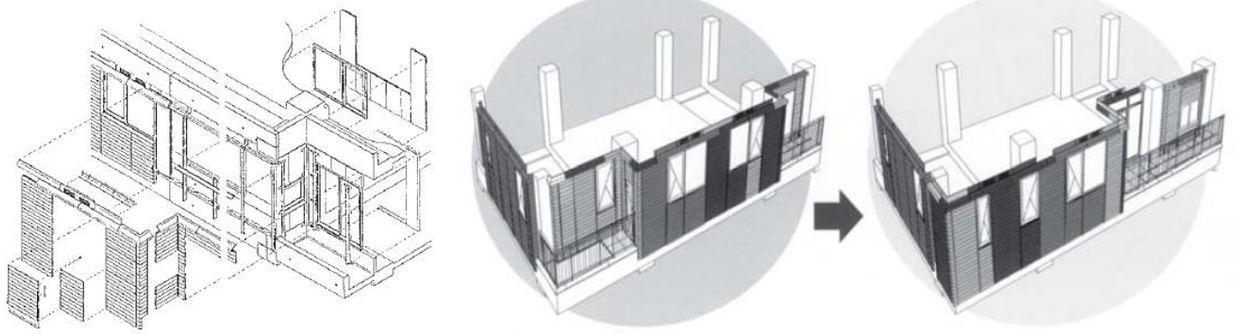
C2Craddle & Material Passports

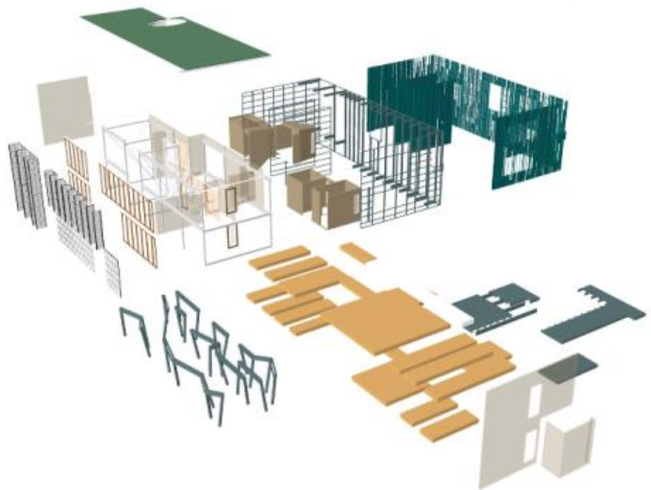


- Materials passports (MP) are electronic sets of information describing defined characteristics of building materials, products, and systems which make them suitable for resource recovery and re-use.
- They describe the value for recovery and re-use of buildings materials in ways which allocate added value for stakeholders across the value chain

RE-THINKING THE DESIGN AND BUILDING VALUE CHAIN

Reversible Building Design





- Reversible design is a design strategy and approach that enables buildings to be easily adapted, transformed and disassembled:
  - Building level
  - System level
  - Product level

Source: loblolly-house, Maryland, USA, 2006
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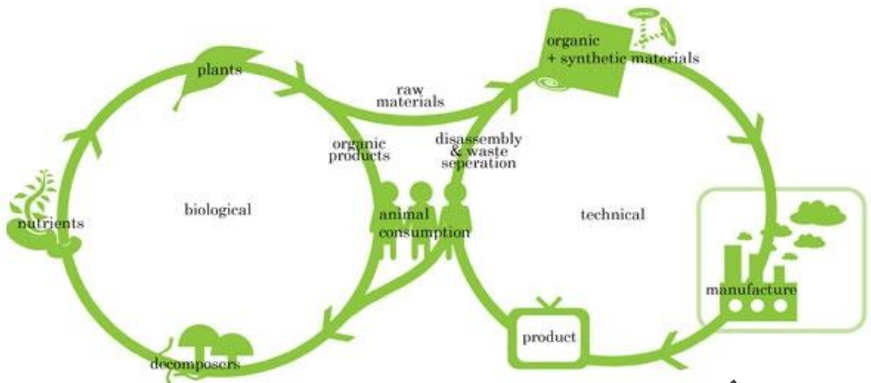
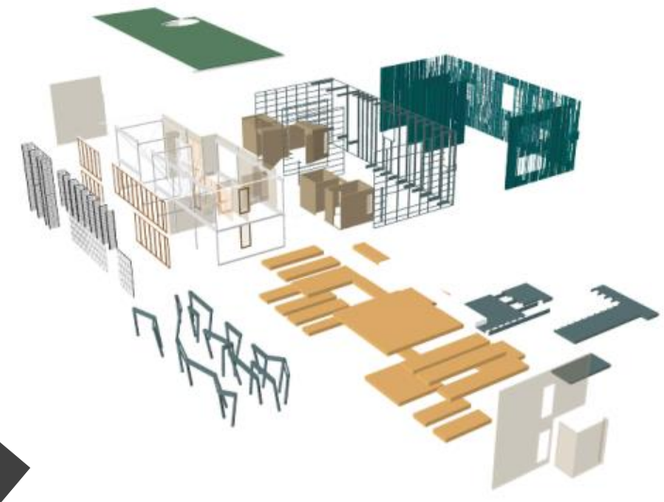


Reversible Building Design



Transition - Change

- Design of buildings, systems, components, elements, …
- Management of buildings, systems, components, elements, …
- Ownership & responsibility: Building as object - > building as service
- Financial, economic and business model
- …

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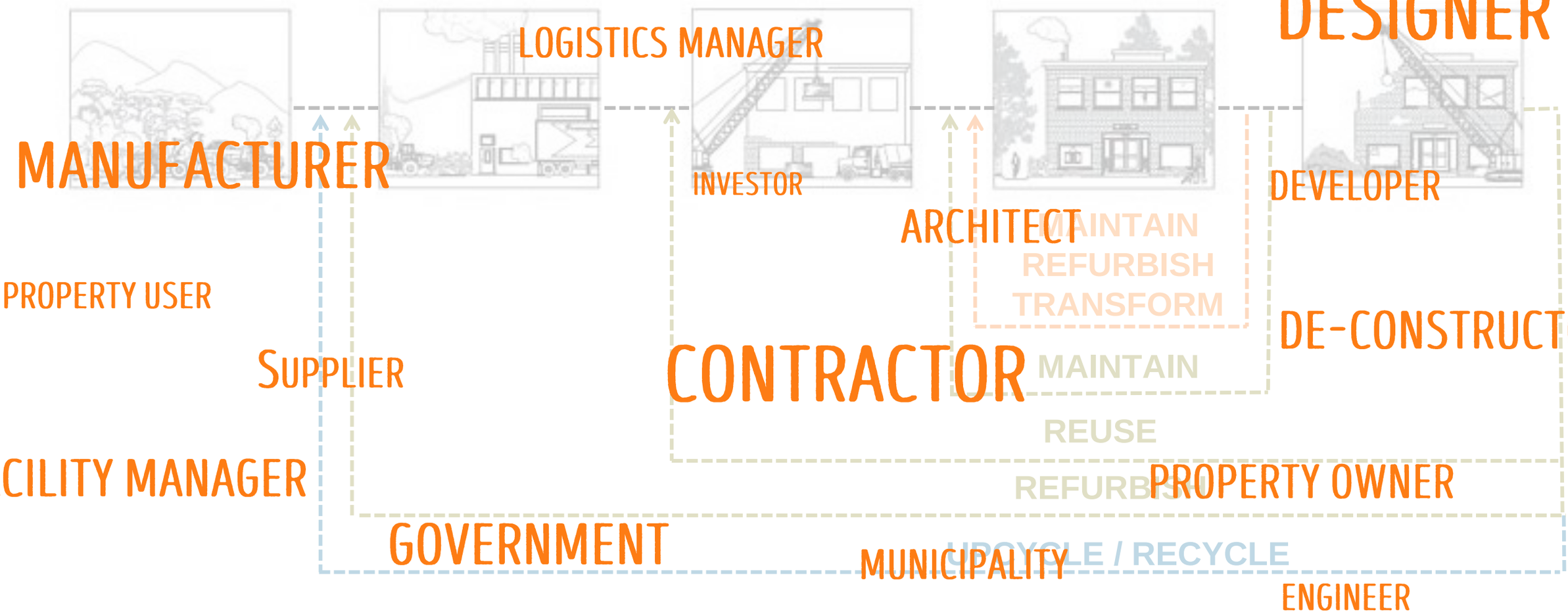
RE-THINKING THE DESIGN AND BUILDING VALUE CHAIN

TOWARDS A CIRCULAR AND DYNAMIC BUILDING DESIGN



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RE-THINKING THE DESIGN AND BUILDING VALUE CHAIN

Materials Passports
& corresponding databases
& platform

Reversible
Buidling design tools for
dynamic & circular buildings

- Building Level Integrated Decision Making Model & BIM add-on for Resource Productivity
- Circular business models
- Suggestions for adaptated or new policies & standards

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RE-THINKING THE DESIGN AND BUILDING VALUE CHAIN

Materials Passports
& corresponding databases
& platform

Reversible
Buidling design tools for
dynamic & circular buildings

Testing BAMB results through prototyping and pilot projects

- Building Level Integrated Decision Making Model & BIM add-on for Resource Productivity
- Circular business models
- Suggestions for adaptated or new policies & standards

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MAIN OPPORTUNITIES

- Design and develop better high quality products and buildings
- Optimization of the (re)manufacturing process and costs through reduced use of virgin resources (costs) and increased value out of “waste”;
- Increase the value of the material investment
- New market opportunities within the area of reversible logistics
- New circular business models for different stakeholders:
  - building development & management
  - building components supply
  - valuable materials reuse and recycling
  - …
- New engineering and design services : “Reversible design” & “circular engineering”
- Increase the effective & efficient use, maintenance, refurbishment, etc. of the building and thus :
  - continually meeting the evolving needs and requirements
  - increase competitivity within the evolving real estate market

SYNERGIES WITH THE BUILDING SECTOR

STAKEHOLDER NETWORK

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STAKEHOLDER NETWORK - 6 SPECIAL INTEREST GROUPS

1. Materials Passports

2. Reversible Building Design

3. Data management (including BIM)

4. Business Models

5. Policies and Standards

6. Case Studies and Pilots

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JOIN US!

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