



Co-funded by the Horizon 2020
Framework Programme
of the European Union



BAMB STAKEHOLDER NETWORK: Special Interest Group 1 MATERIALS PASSPORTS

LAUNCH OF THE BAMB STAKEHOLDER NETWORK, BRUSSELS



SPECIAL INTEREST GROUP 1 : MATERIALS PASSPORTS

PRESENTED BY : LARS LUSCUERE

Leading Partner :



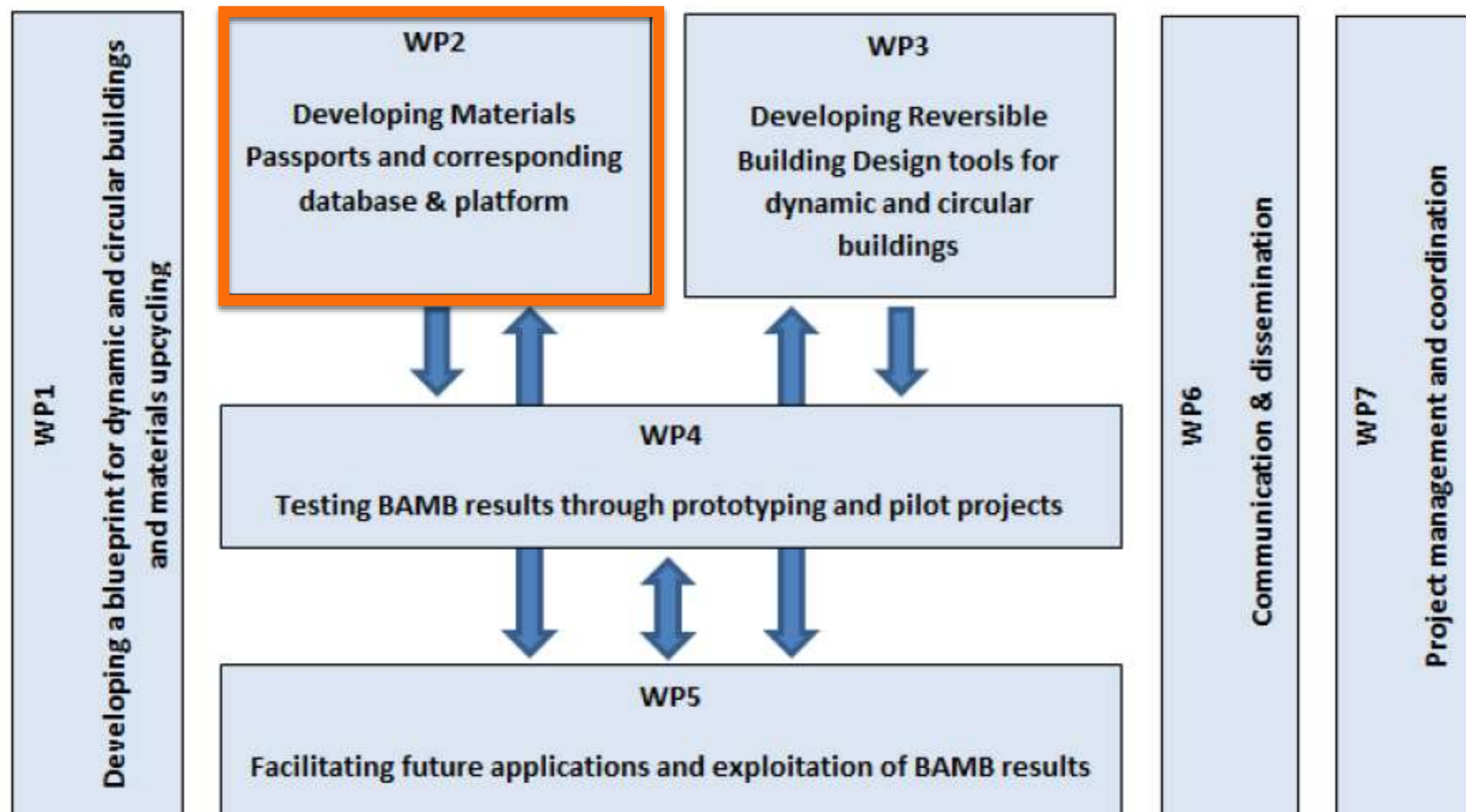
1.
Materials Passports



Contributing Partners :



MATERIALS PASSPORTS - AIMS AND OBJECTIVES



MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling circular product design, material recovery and chain of possession partnerships, improving quality, value and security of material supplies

Through a set of sub-objectives, but first..

MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling circular product design, material recovery and chain of possession partnerships, improving quality, value and security of material supplies

What does this mean, and why do we need it?

MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling **circular product design**, material recovery and chain of possession partnerships, improving quality, value and security of material supplies

Products, including building materials are often not designed for value recovery

MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling circular product design, **material recovery** and chain of possession partnerships, improving quality, value and security of material supplies

There is little high level recycling
in the building industry



Chicagoland Concrete, 2005

MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling circular product design, **material recovery** and chain of possession partnerships, improving quality, value and security of material supplies

C2C products are optimized for health and reusability

But not put in practice to full potential



MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling circular product design, material recovery and **chain of possession partnerships**, improving quality, value and security of material supplies

In order to achieve this, collaboration is required

MATERIALS PASSPORTS – AIMS AND OBJECTIVES

To make and implement electronic Materials Passports enabling circular product design, material recovery and **chain of possession partnerships**, improving quality, value and security of material supplies

Lack of information

- On products and their residual values

- On materials and their composition

- But also communicational challenges

- Information sharing

MATERIALS PASSPORTS – SUBOBJECTIVES

Understanding materials passports

Positioning, stakeholders, use cases

Develop criteria

Data in, information out

Develop software platform

Generate passports on platform

Data collection, assessment, entering data

Continuous updating of the conceptual framework

MATERIALS PASSPORTS – KEY RESULTS

Four deliverables

User requirements report

Conceptual framework

Software platform

300 passports generated backed up by the platform



Co-funded by the Horizon 2020 Framework
Programme of the European Union



MATERIALS PASSPORTS – KEY TERMS/CONCEPTS



MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Materials Passports

MATERIALS PASSPORTS – NEW TERMS

Materials Passports

Material passport

Product passport

Nutrient certificate

Building passport

Circularity passport

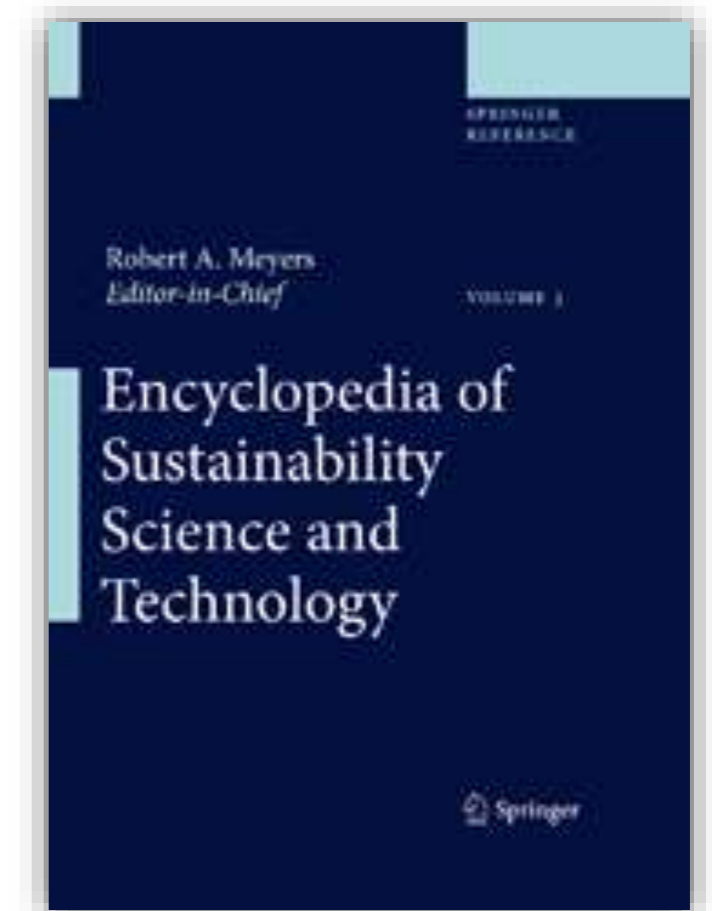
MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

RESOURCE RE-PLETION

Role of Buildings And Introducing Nutrient Certificates a.k.a
Materials Passports as a Counterpart to Emissions Trading Schemes

Published by The Springer Encyclopedia of
Sustainability Science and Technology

Hansen, Mulhall, Braungart, July 2012



MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Nutrient Certificates are sets of data describing defined characteristics of materials in products that give them value for recovery and reuse. The certificates are a marketplace mechanism to encourage product designs, material recovery systems, and chain of possession partnerships that improve the quality, value, and security of supply for materials so they can be reused in continuous loops or closed loops or beneficially returned to biological systems. This is done by adding a new value dimension to materials quality. This new dimension is based on the suitability of materials for recovery and reuse as resources in other products and processes.

MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Nutrient Certificates are sets of data describing defined characteristics of materials in products that give them value for *recovery and reuse*. The certificates are a marketplace mechanism to encourage product designs, material recovery systems, and chain of possession partnerships that improve the quality, value, and security of supply for materials so they can be reused in continuous loops or closed loops or beneficially returned to biological systems. This is done by adding a new value dimension to materials quality. This new dimension is based on the suitability of materials for recovery and reuse as resources in other products and processes.

MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Nutrient Certificates are sets of data describing defined characteristics of materials in products that give them value for recovery and reuse.

MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Nutrient Certificates are sets of data describing defined characteristics of materials in products that give them value for recovery and reuse.

So... What is it?

MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

List of ingredients?



Anders Sandberg, 2008



Webaware, 2007

MATERIALS PASSPORTS - KEY TERMS/CONCEPTS

What's in a product/building determines its health impacts as well as its reusability

If you use carcinogens in a product where the user will be exposed to it, the product is carcinogenic

Recycle undefined materials, downcycling or polluting a defined stream

MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Composition is important, but:

Context matters!



© EPEA, 2014

MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Where?

How is it connected to the building?

How to take it out?

Who wants/needs it?

Who owns it?

Can it be reused as is?

Can it be recycled?

Is it in bulk?

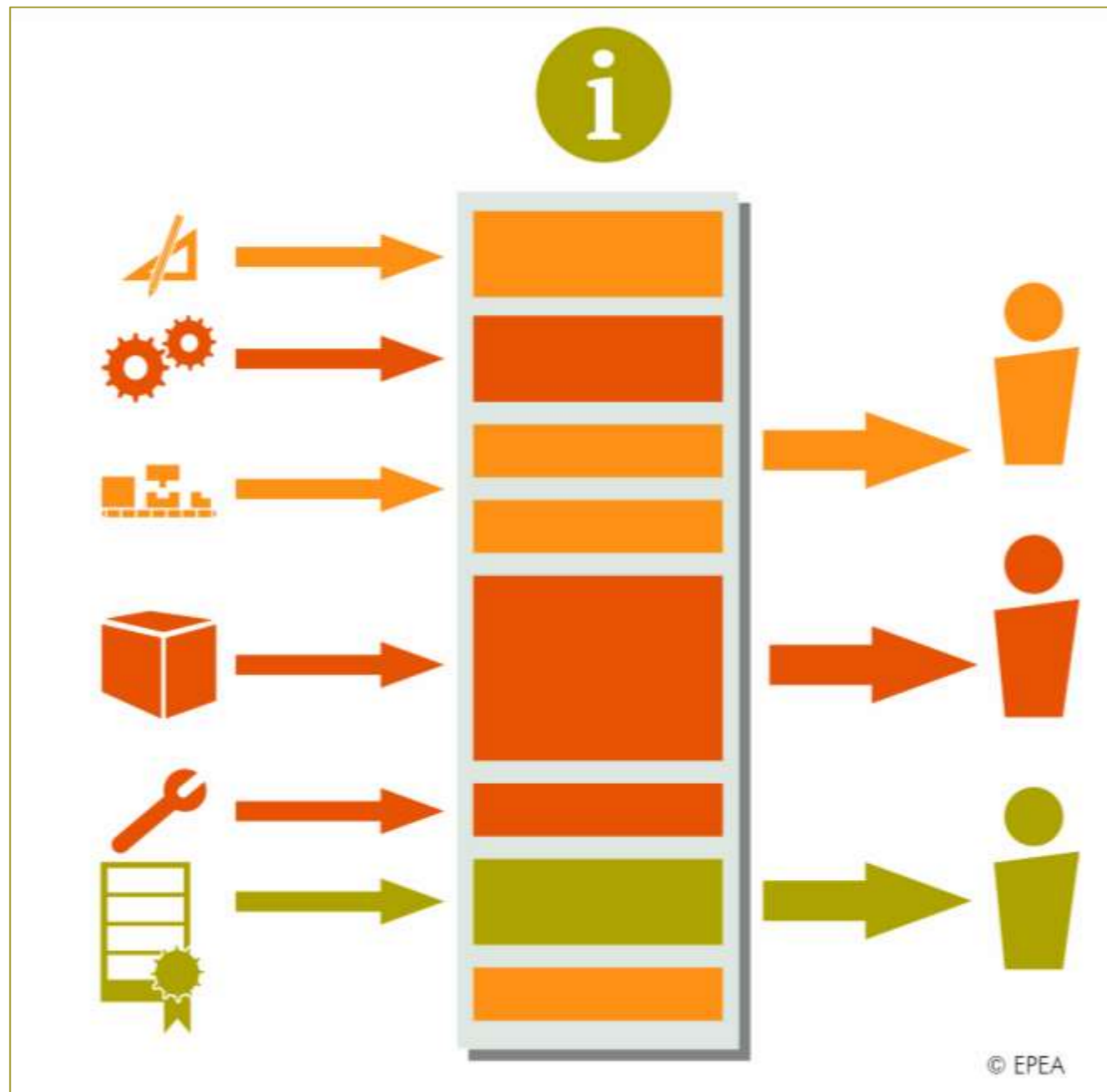
Is it in many materials and products?

Can it be recovered?

Metal	5000kg
Wood	5000kg
Glass	600kg
Walls	250000kg
Ceilings	100000kg
Floor	30000kg



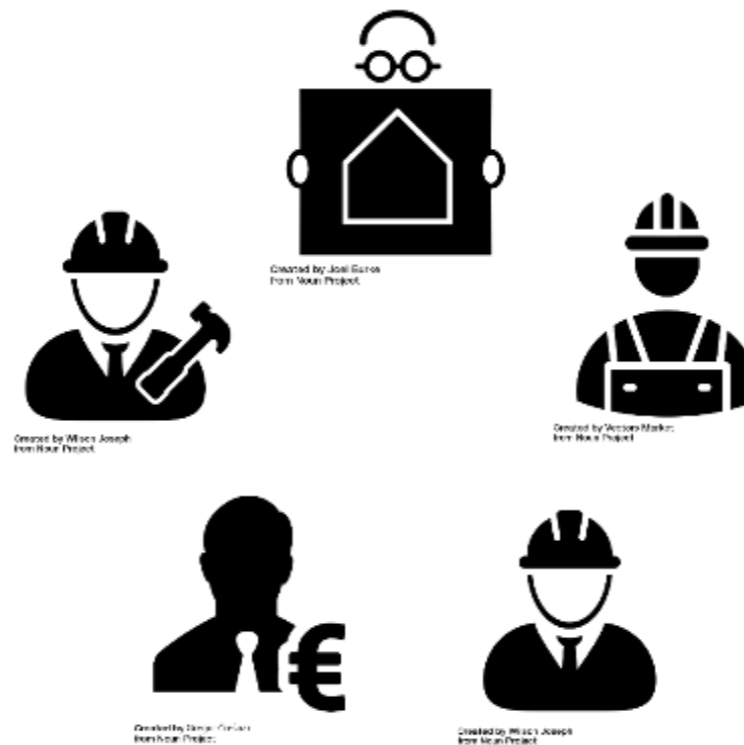
WHO HAS THE DATA / WHO NEEDS THIS INFORMATION



MATERIALS PASSPORTS – KEY TERMS/CONCEPTS

Stakeholders throughout the value chain of a building

From developer to supplier of product manufacturers



MATERIALS PASSPORTS – OPPORTUNITIES FOR STAKEHOLDERS

Circular supplier communities

Workshops to engage suppliers in understanding the value of passports

Generation of passports, including for pilots

Get involved through the stakeholder network

Special interest group 1 - Materials Passports



Co-funded by the Horizon 2020
Framework Programme
of the European Union



JOIN US!

www.bamb2020.eu

