



TOWARDS HIGH PERFORMANCE EUROPEAN WOOD MATERIALS FOR OUTDOORS USE

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EU COST FP1303

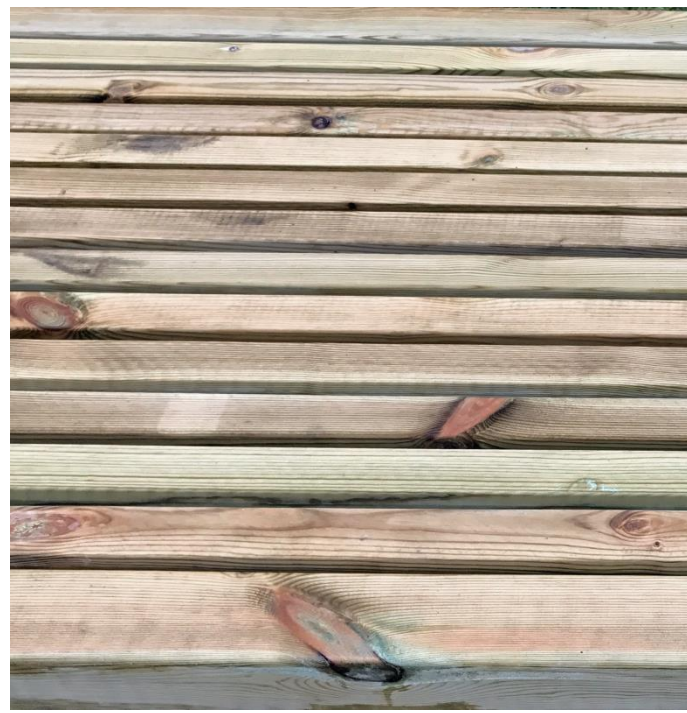
Building with bio-based materials: Best practice
and performance specification

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Zagreb, CROATIA

Research Institutes of Sweden

RISE BIOECONOMY
Biobased materials



Urbanisation

Digitalisation/
Connectivity

Innovate
to Zero

E-mobility

Beyond
Demographics

New Business
Models

What does it mean

- **Mega cities** will rule, 50% in Asia
- Mega Corridors, high density population
- **More effective supply and ecosystems**

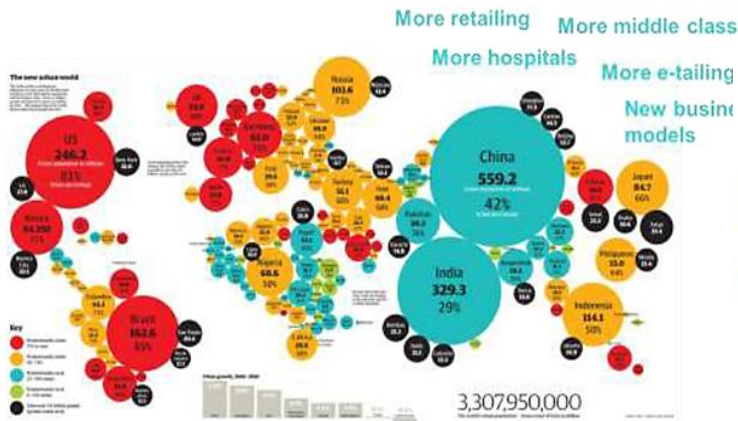
- **Humans love to interact**
- Everything connected
- **Participation**
- Consumers know as much as brands
- Overwhelming load of data

- **Sustainable business for real**
- **Zero waste**
- Zero errors
- **Zero fossil**
- Zero emissions
- **Zero returns**
- Zero accidents

- **New services and logistics**
- Technology is ubiquitous
- **Automated distribution**
- Electric transportation

- **Demographics 2.0**
- Older generations grows, Gen Y grows
- **More lifestyle, occasion than age or origin in focus**
- "I will use packaging to track my..."

- **Experience economy**
- Sharing economy
- "less assets"
- Participation
- **Pay for time + experience**



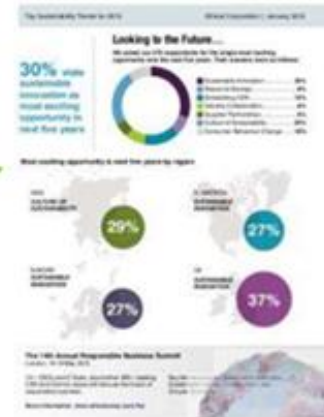
BUSINESS MODELS CHANGING



CONSUMER POWER AT LAST



SUSTAINABILITY EVEN MORE IMPORTANT

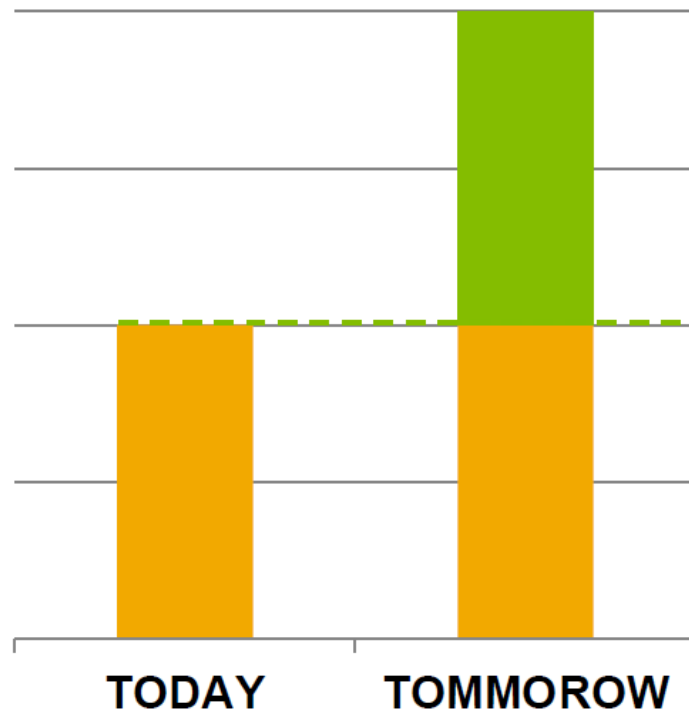


WHAT DOES IT TAKE TO CREATE 100% MORE VALUE?

HYPOTHETIC APPROACH

Value add in forest based industries

Characteristics



- “Non-bulk business”
- Charge for function
- New markets \neq high investments
- New Business Models needed

- High volumes
- “Bulk trap”
- Currency
- WACC

- Today there is a range of **different wood materials and products** for use outdoor **on the market**.
- The majority of these consist of **untreated, preservative treated or modified wood**.
- **Sapwood** from coniferous trees needs protection to resist biodegradation and get a reasonable service life.
- **Heartwood** has moderate service life in above ground situations and may be used without further treatment

PROTECTED WOOD FOR OUTDOORS USE

Preservative treated



ORGANOWOOD®



ke
bo
ny





New materials and products with higher added value can provide the right product at the right place in the **public environment**





Public stakeholders and consumers are seeking for durable wood materials

- Try to comply with political decisions (sustainability, biobased,...)
- Are influenced by society trends (increased use of wood in general)
- Environmental aspects, maintenance and safety are crucial factors

WHY TARGET PUBLIC CONSUMERS?

- **Public consumers purchase in larger quantities, and that is the key factor** that could drive the shift to high quality wood products with truly predictable properties and service life.
- **By targeting public consumers an economical driving force is created.**
- **Public stakeholders and end users are key players on building public opinion and by that influencing other markets.**

- Environmental concerns seem to make this group **less positive to import of wood materials, especially of non-native wood species** (in Sweden).
- Public consumers **have also higher expectations on performance and cost-efficiency while handling taxpayers' money.**
- As private users, public stakeholders and end users **are also confused regarding the properties of the wood products on the market.** Taxpayers' money is being spent in expensive alternatives to preservative treated wood with the promise of higher performance which is not being delivered.

THE CHALLENGE

- **Need for new wood assortments with improved quality**
- **Suitable wood raw material assortments which allows for full potential in the different wood protection technology**
- **Improved wood quality, only possible through changes in the value chain from harvest to final product.**
- **New markets?!**



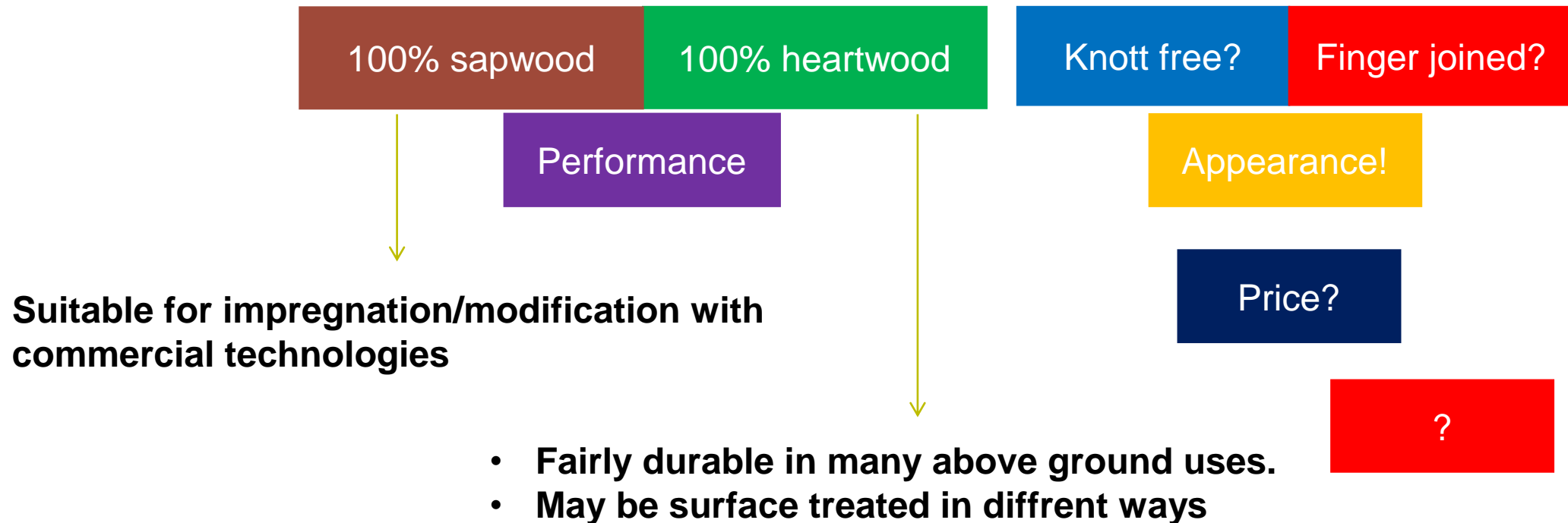
European conifer forests

EU has some 177 MHa of forest and other wooded land and wood is by far the most important forest product

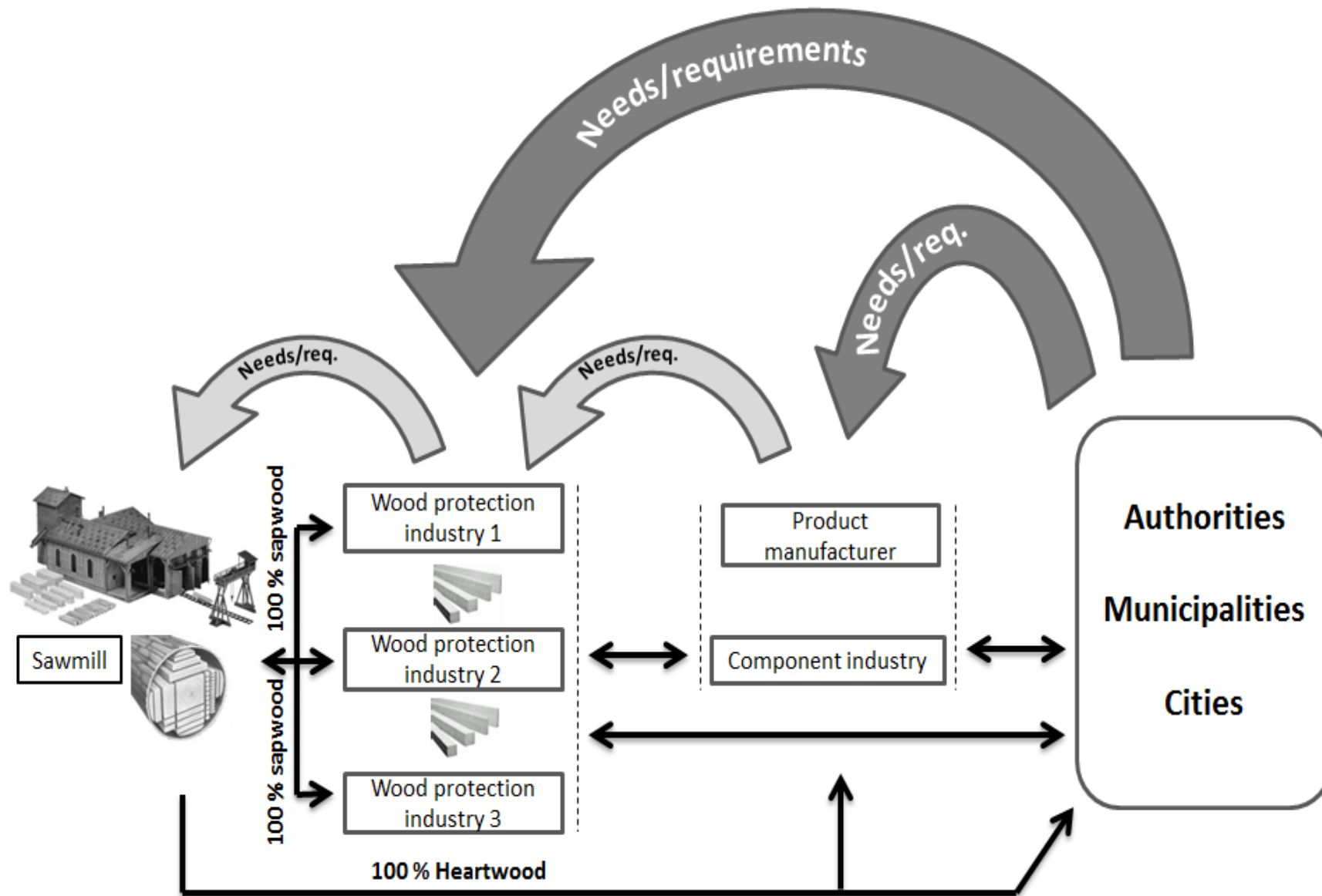
- Large dimension trees growing in Scandinavia

TOWARDS HIGH PERFORMANCE WOOD FOR OUTDOORS USE IN THE PUBLIC ENVIRONMENT

Wood assortments for a wide and growing market



Proposed value chain towards high performance wood for use in public outdoor environment.



- Need for sawmill technology development
- Management of issues concerning current knowledge and information on available wood materials contra novel wood materials.
 - This means that the wood protection industry will also have to experiment with new assortments in different ways to be able to answer this question.
- Describe the impact on the environment of novel products treated with specific wood protection technologies and compare these to other alternative wood materials in an understandable and convincing way.
- Ultimately, for the benefit of the European forest sector, society and end users in general, high performance wood building materials for outdoors use made of European wood may become available.

THANK YOU!

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Bioekonomi
Biobaserade material

