



Ympäristöministeriö  
Miljöministeriet  
Ministry of the Environment

## Normative development as a driver for LCA

Nordnet LCA workshop  
04 Oct 2016  
Senior specialist Matti Kuittinen  
D.Sc., architect

Core indicators for resource efficiency

Green Public Procurement

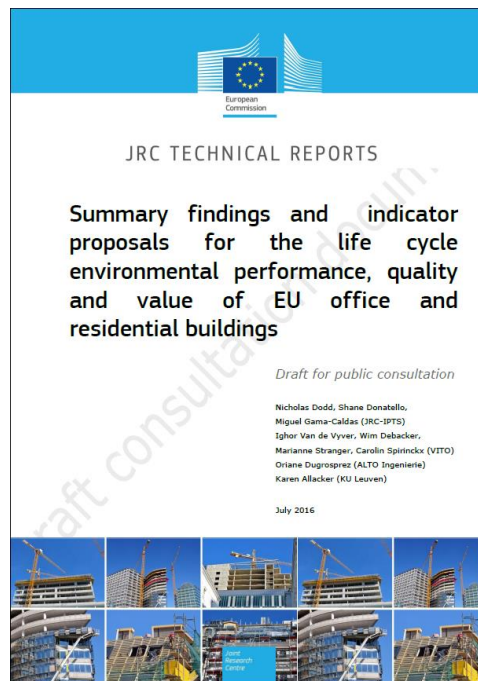
Carbon footprinting into building regulations

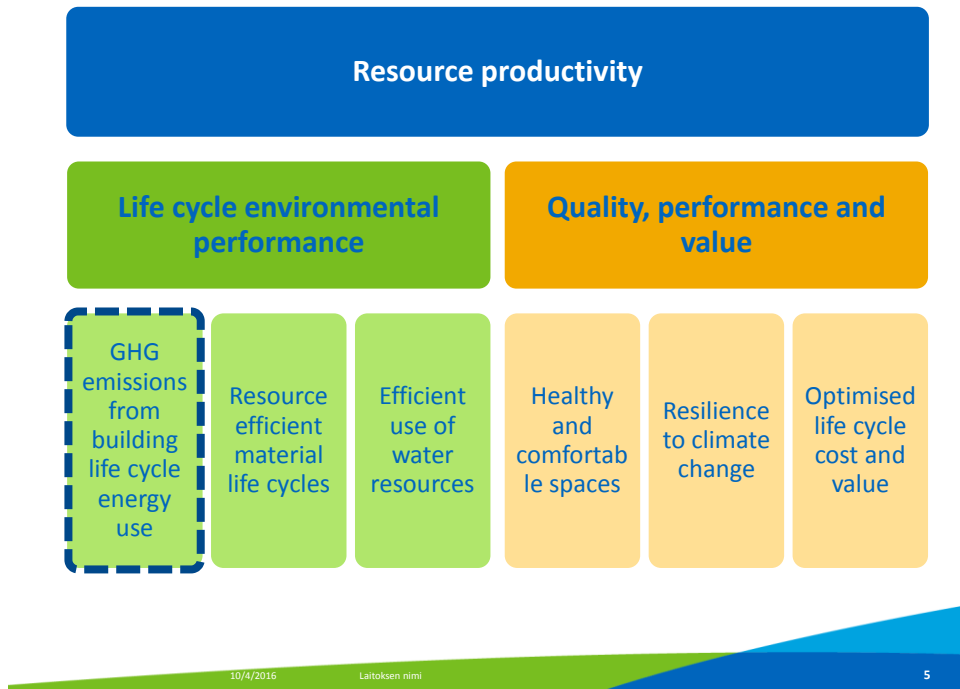


Brussels, 1.7.2014  
COM(2014) 445 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**ON RESOURCE EFFICIENCY OPPORTUNITIES IN THE BUILDING SECTOR**





## Macro-objective 1: GHG emissions from building life cycle energy use

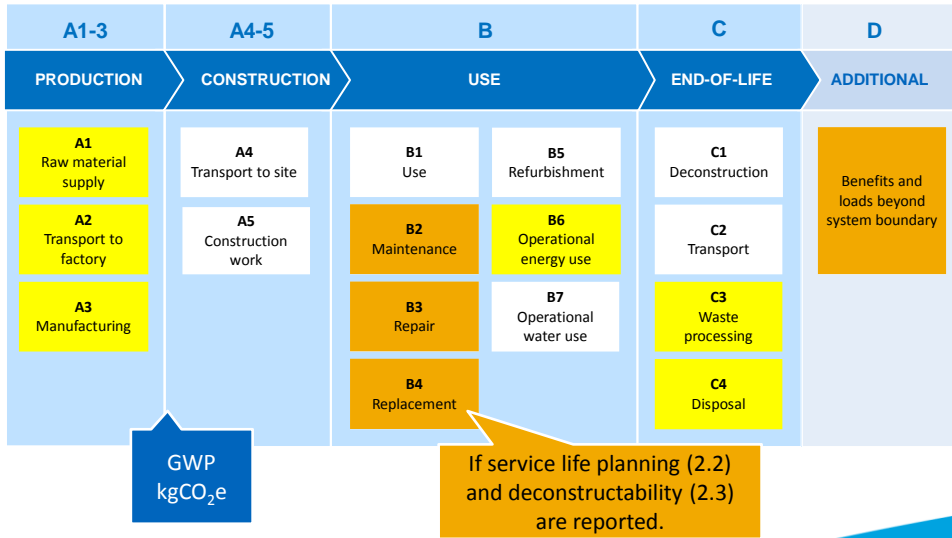
### Operational energy use

- Calculation according to standard EN 15603.
- Unit: kWh/m<sup>2</sup>/a.
- Additional indicators: air tightness, thermal imaging, commissioning.

### Embodied life cycle GWP

- Calculation according to standards EN 15978 and EN 15804
- Availability of data is recognised as an issue regarding attention
- Included: substructure, superstructure, external envelope, internal walls, floors and roof, fit out and services

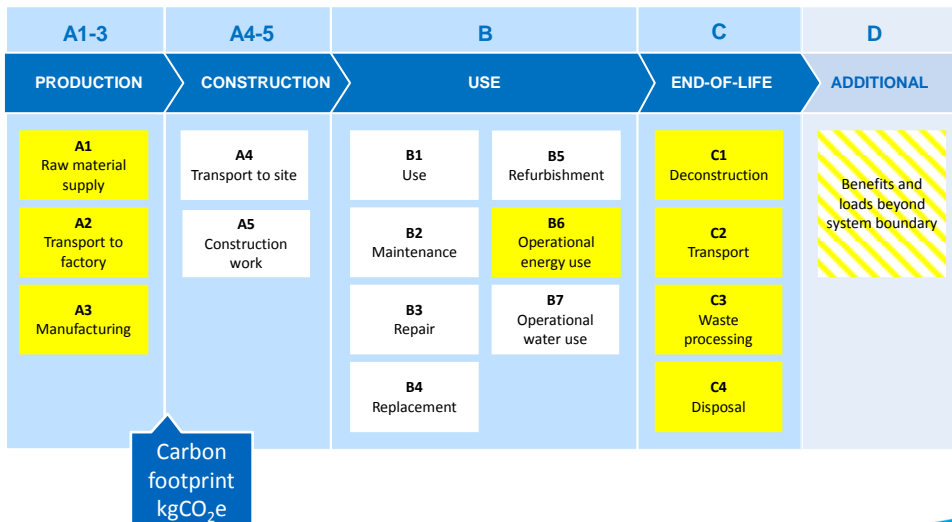
## Embodied life cycle GWP Option 1: Defined boundaries and scope



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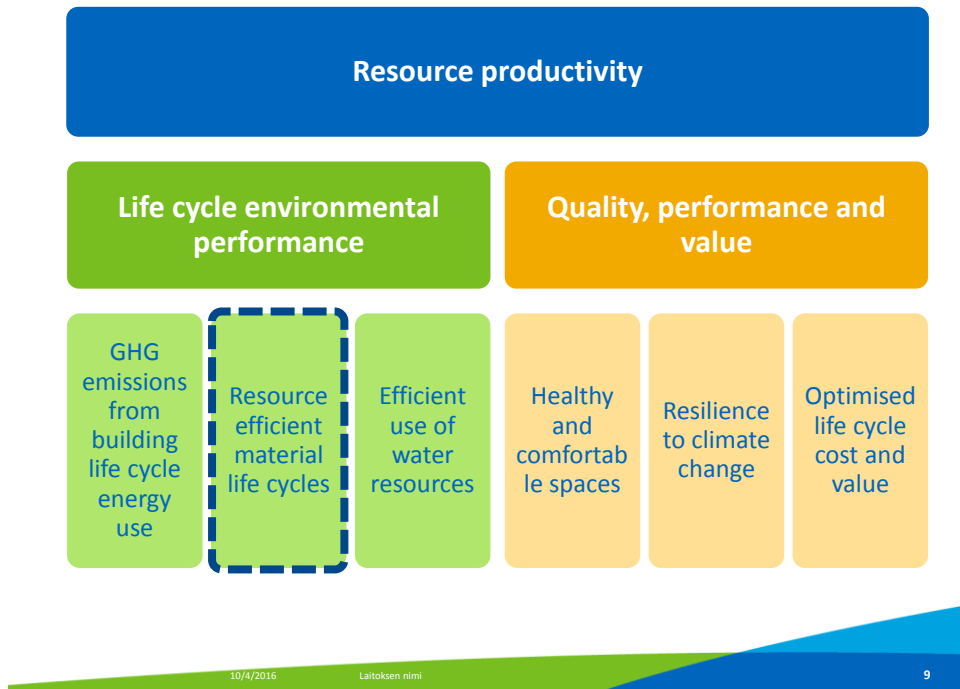
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## Embodied life cycle GWP Option 2: Whole life cycle with defined scope



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## Macro-objective 2: Resource efficient material life cycles

### Material efficiency and structural design optimisation

- Building mass and form
- Building structure comparison

### Full LCA

- Impact category results normalised to m<sup>2</sup>.

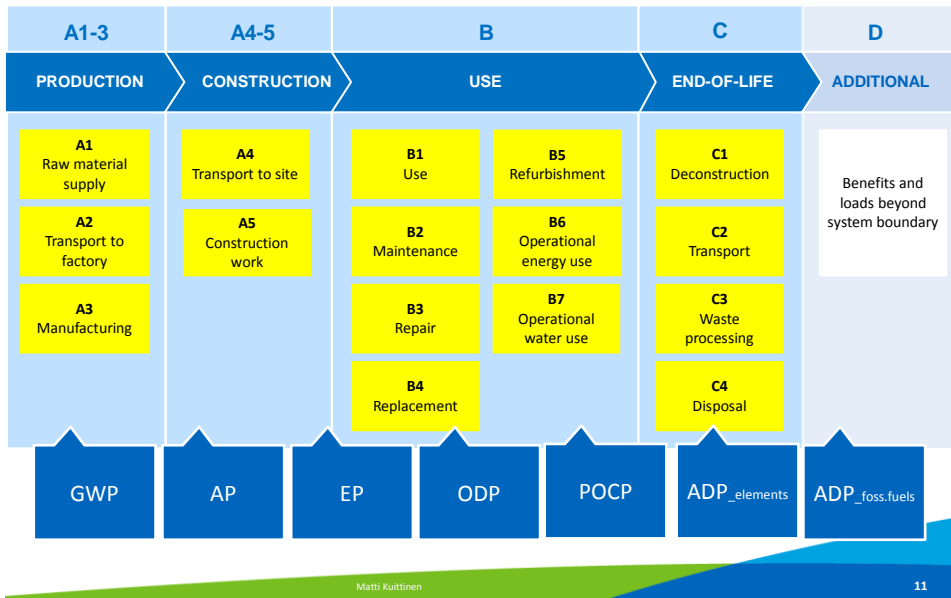
### Building, element and component service life

- Building services
- Non load-bearing components
- Load-bearing components

### Design for deconstruction and recyclability

### Construction and demolition waste minimisation

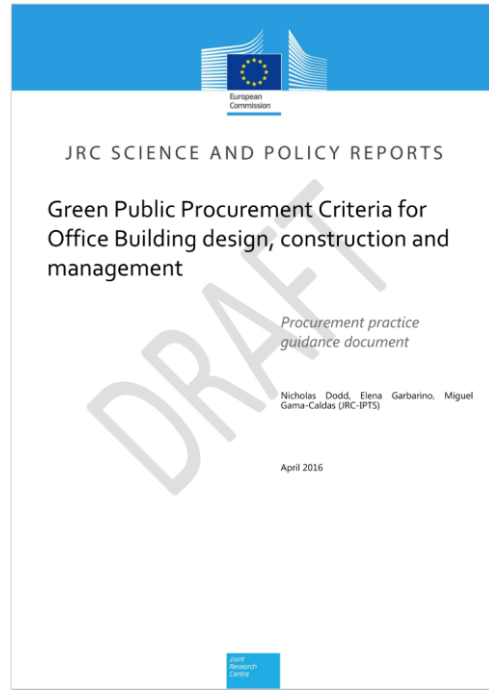
## Indicator 2.1: Full LCA



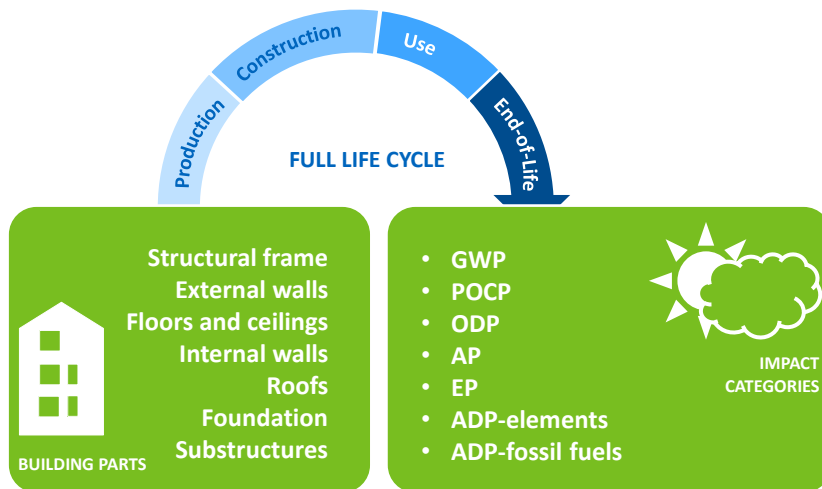
Core indicators

Green Public Procurement

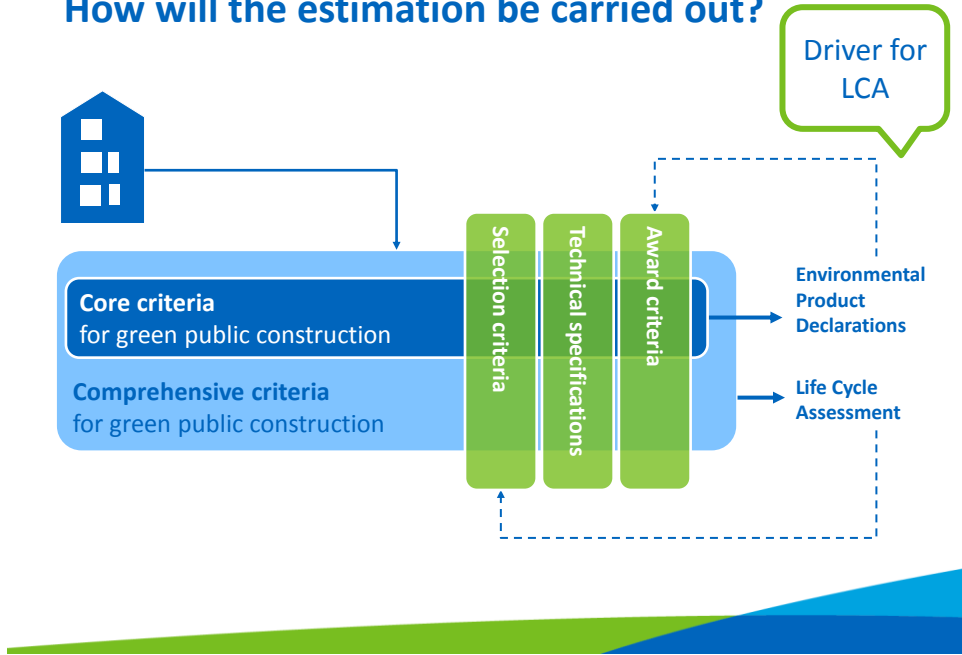
Carbon footprinting into building regulations



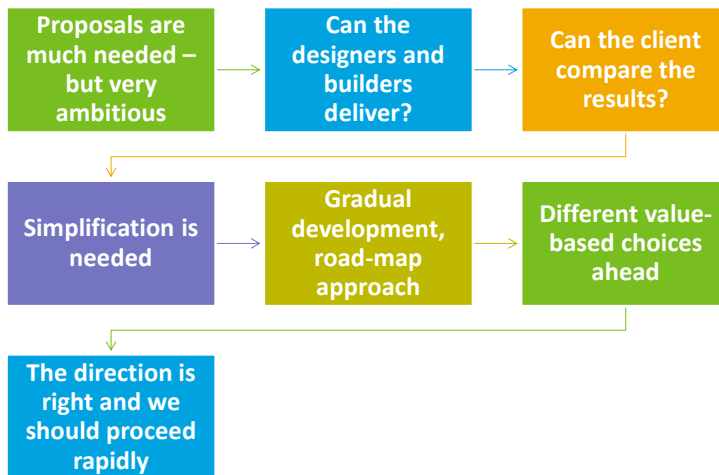
## What will be estimated?



## How will the estimation be carried out?

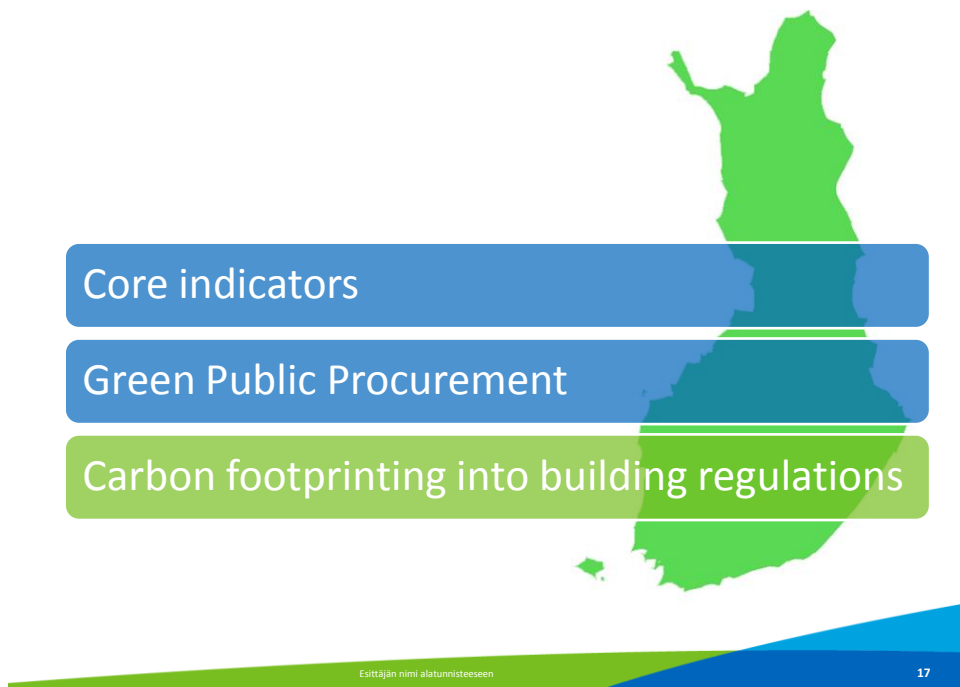


## Some thoughts on the resource efficiency core indicators and green public procurement

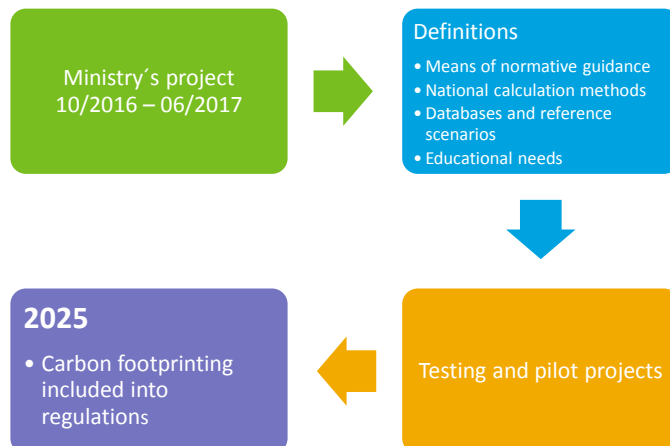


Individual opinions that do not necessarily reflect the opinion of the ministry.





## A roadmap for including carbon footprinting into building regulations





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## Summary

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Many of the policy initiatives are built on the assumption of widespread use of LCA.

There will be a great need to improve the competence of the designers and product manufacturers.

An active discussion between the stakeholders and policymakers is needed.



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Thank you for your  
attention!

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