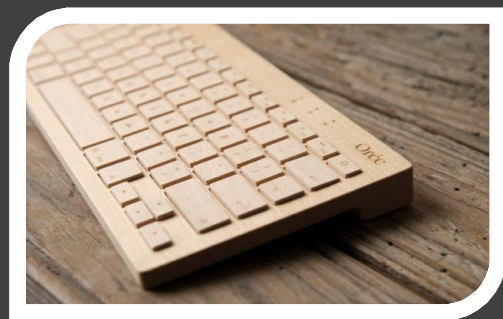
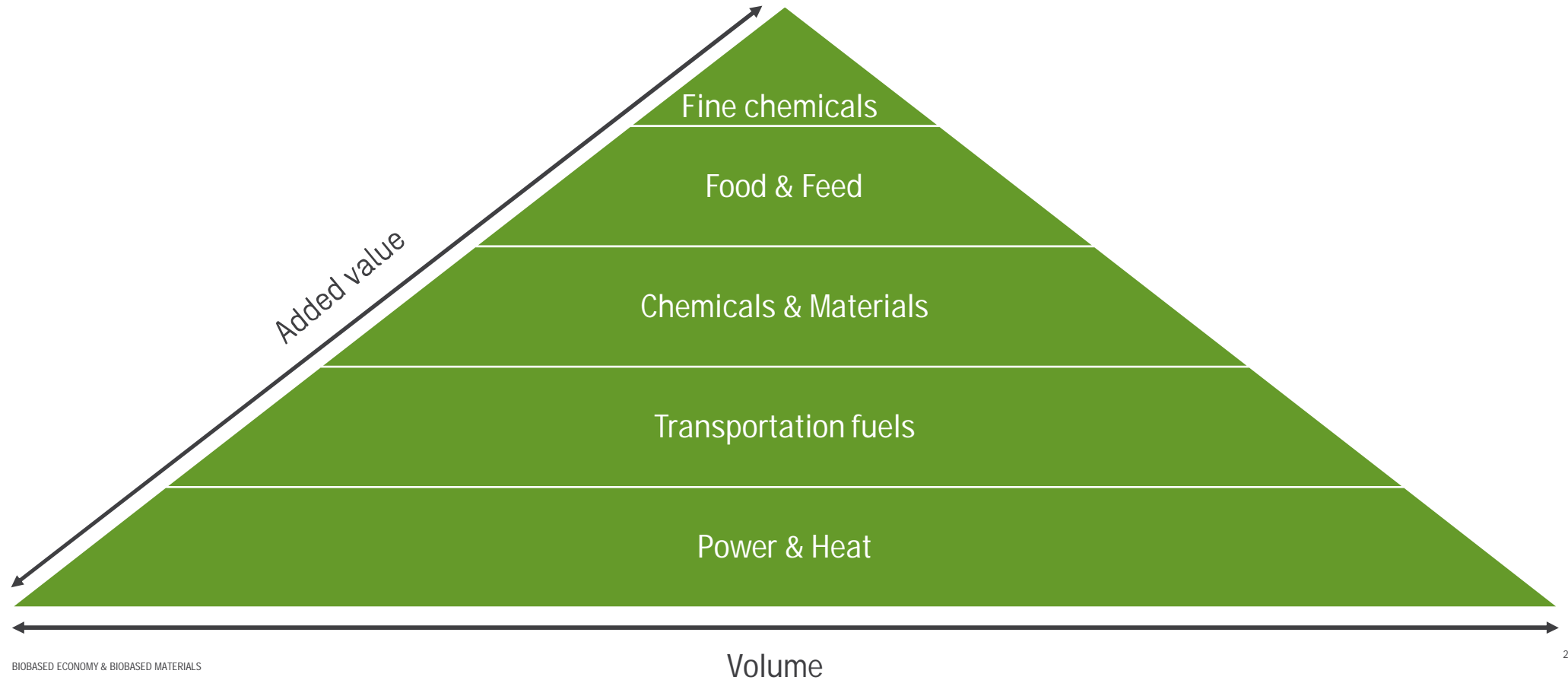


BIOBASED-MATERIALS

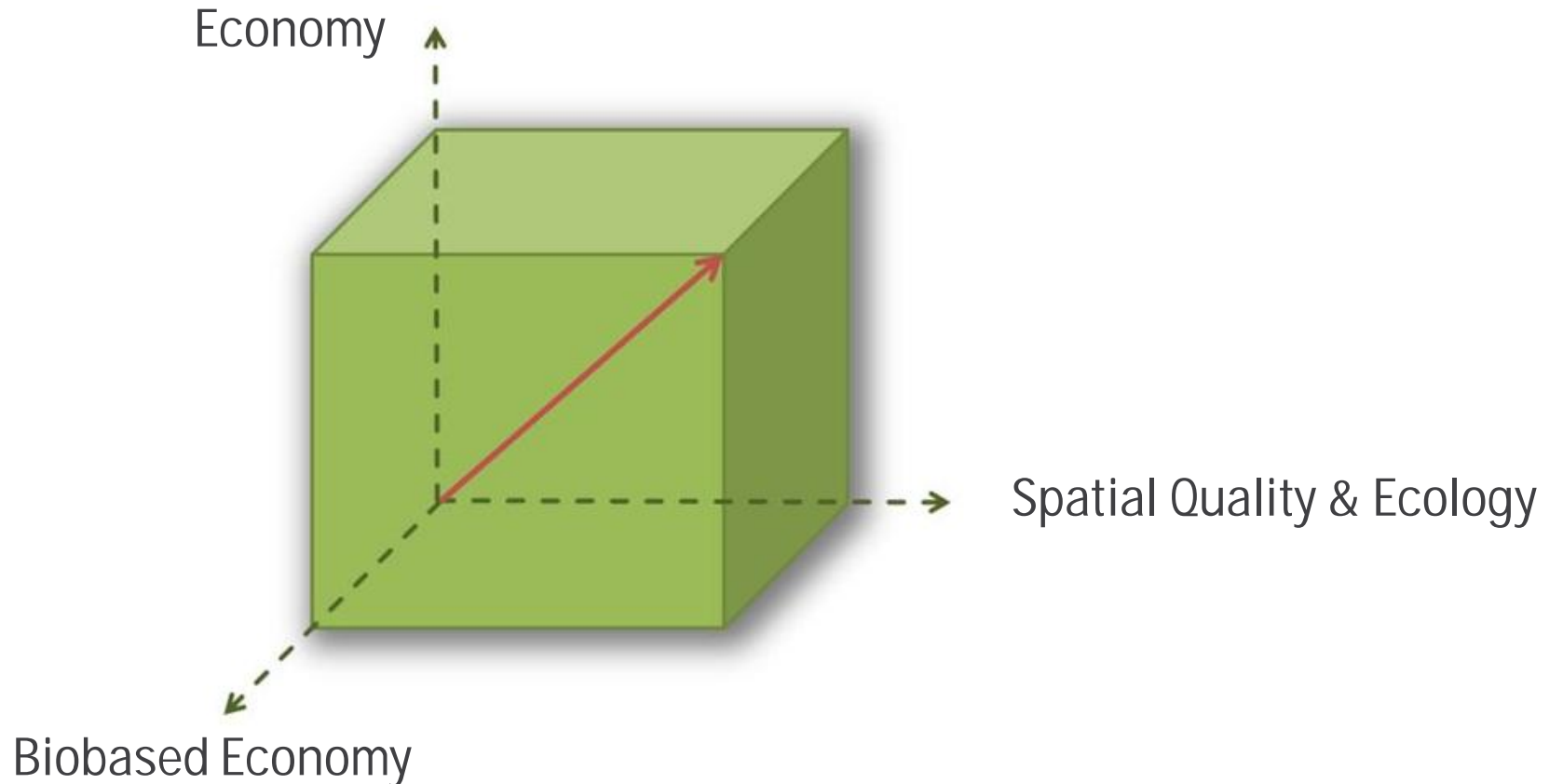
TOWARDS A SUSTAINABLE SOCIETY



Biobased Economy & Materials



Biobased Economy: Field of work



Policy & Incentives in relation to BioBased Economy

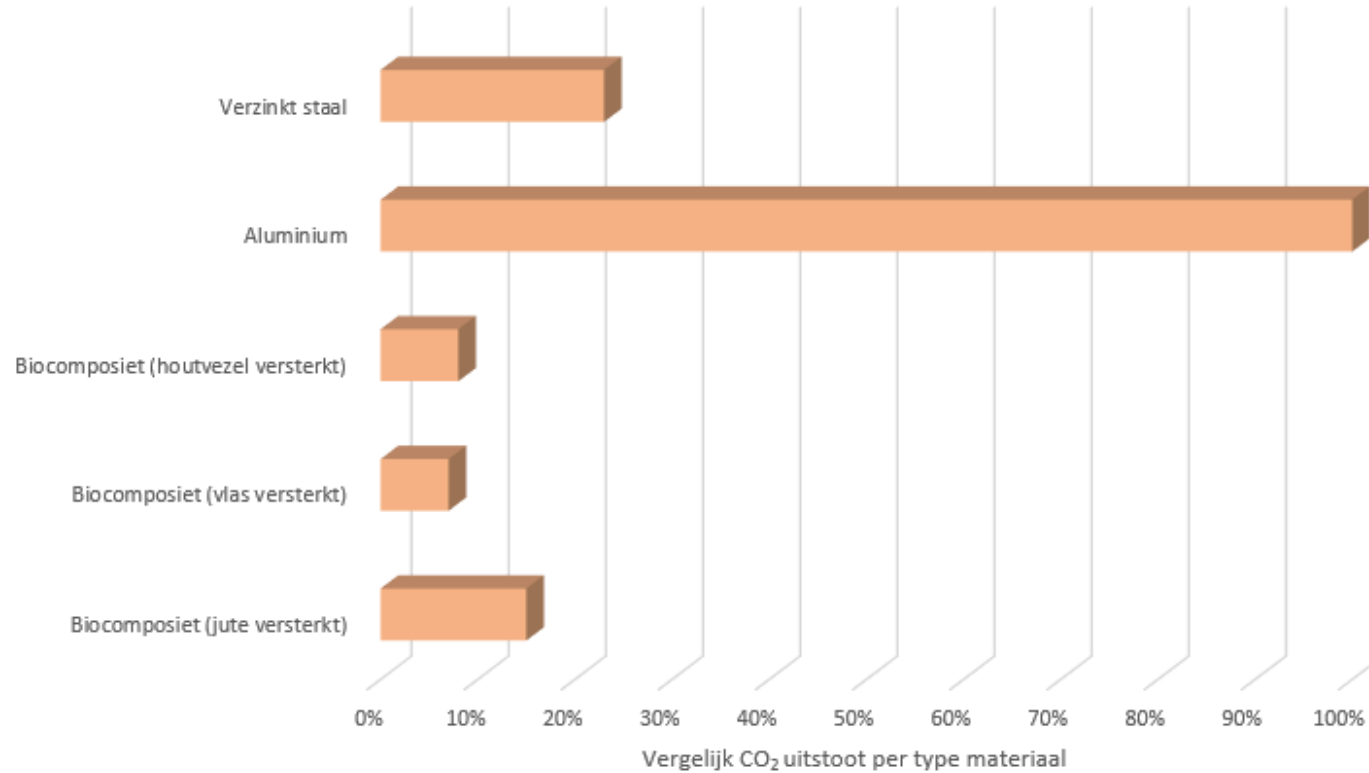
- Sustainability & Policy
- Sustainable Energy
- Energy Efficiency
- BioBased Economy
- Innovation and Policy
- Stimulation Regional Economy
- Apperance and Green Image

Biocomposite

- Fibre from organic material (wood, grass etc.) with a bio-resin
- Recyclable
- Lifespan is comparable with concrete and steel
- CO₂ reduction of 80 to 90%
- Strong, frost resistant
- Regional feedstock



CO₂ emission for one streetlight



PROJECT: Eco-Dynamic Cycle Path – An evolution towards a sustainable and Smart Cycle Paths

- Materials from biocomposite (wood fibres and Bio-resin)
- Eco-Dynamic Lighting
- Energy Savings
- Limit disturbance ecology (colour and intensity)
- Green feedstocks (Biobased Economy)
- Smart Communication (IT)
- Safety (fog or emergency situations)
- Flexible, recyclability
- Comfort
- Lifetime
- Innovation
- Future users



Partners:



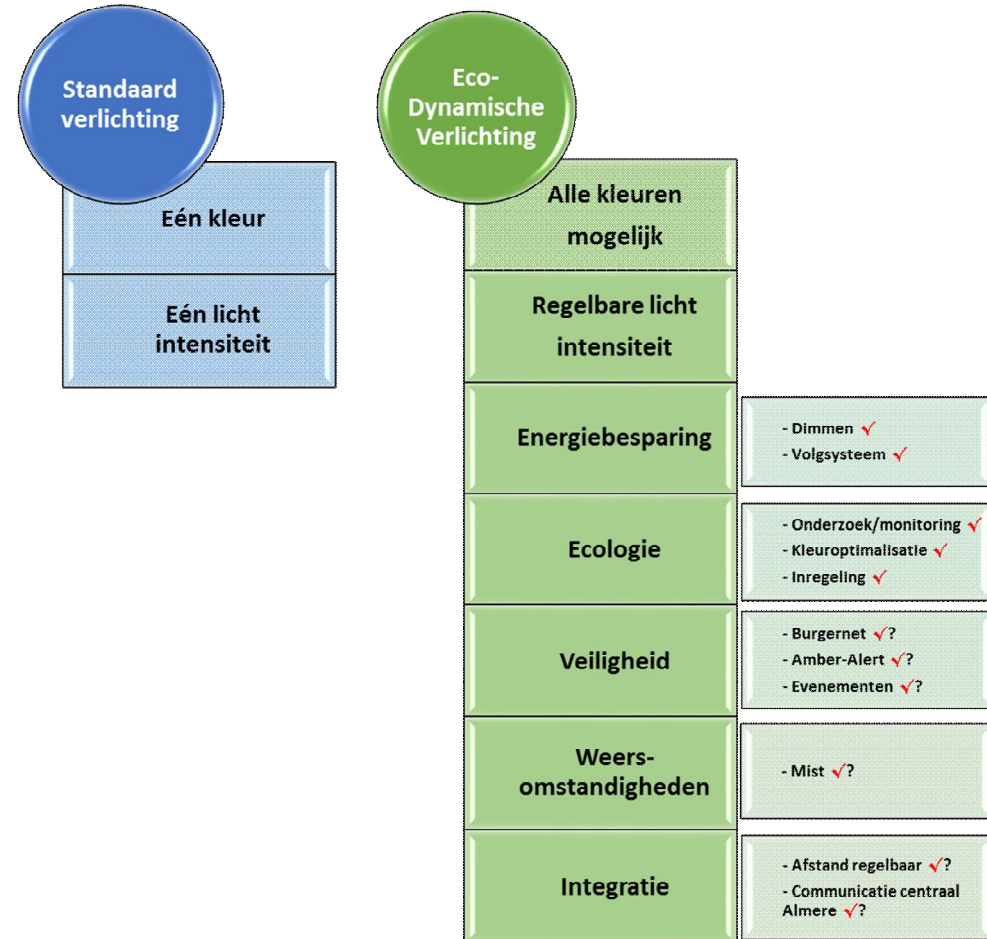
Recreatieschap Drenthe

PROJECT: Cycle path - World's first?



Eco-Dynamic lighting

- Sustainable lighting (LED)
- Variable color spectrum and intensity
- Ecological responsible
- Safety
- System integration
- Dynamic communication
- Unique design



Development biocomposite materials

- Testing and demonstration of biocomposite cycle-path
- Testing and demonstration of biocomposite lighting (poles and fixtures)
- Development cycle bridge
- Demonstration biobased materials for building applications
- Optimisation of the LCA-analyses in relation cost reductions



Market approach

Ambition of the bio composite program is to further develop and test bio composite as substitution for concrete, aluminium and steel in bicycle bridges/ fly-overs, streetlights and decking's in wetlands.

For 2018 we aim to have standard bio composite products used by minimal 10 organisations with all together 1000 streetlights and 5 demonstration projects.

Our first aim is to target on a select group of front runner organisations and municipalities in regard to sustainability and CO₂ reduction.

We promote (the advantages of) the innovation through market initiatives (Green deal infratrucuur), presentations, our network and publications in professional journals (e.g. Cobouw).

Partners of this program:

Sweco works in collaboration on this project with: EVA-Optic te Zwartsluis, Stenden Hogeschool in Emmen, Green PAC, Naftex in Wiesmoor (D), Provincie Drenthe, Recreatieschap Drenthe and 'INTERREG V Nederland-Duitsland'

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