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# **Circular buildings – demonstrating technical and biological cycles**

*Helsinki – 1<sup>st</sup> of October 2019*

***European Days for  
Sustainable Circular Economy***

**Johannes Kisser**



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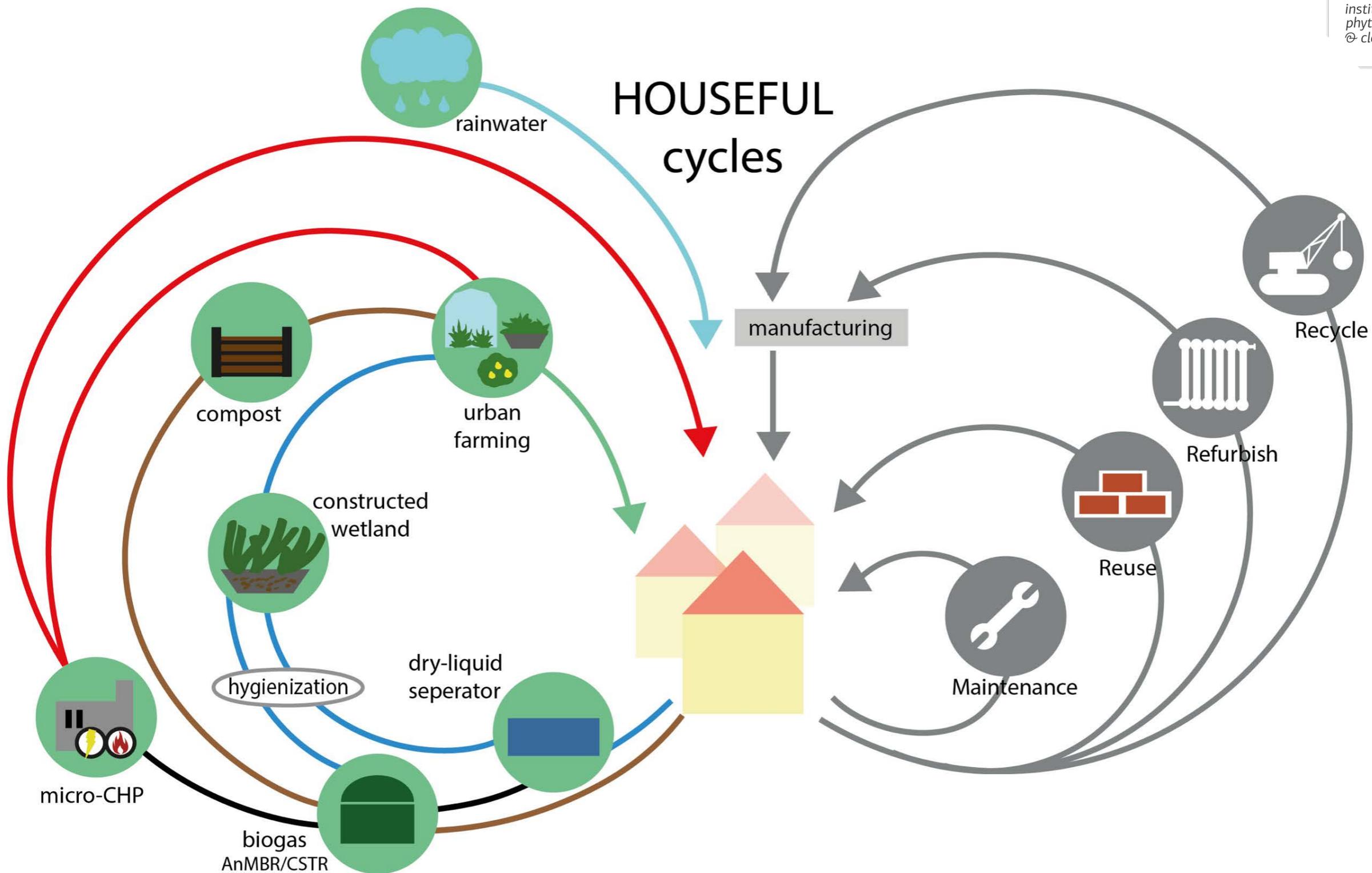
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# Butterfly diagram



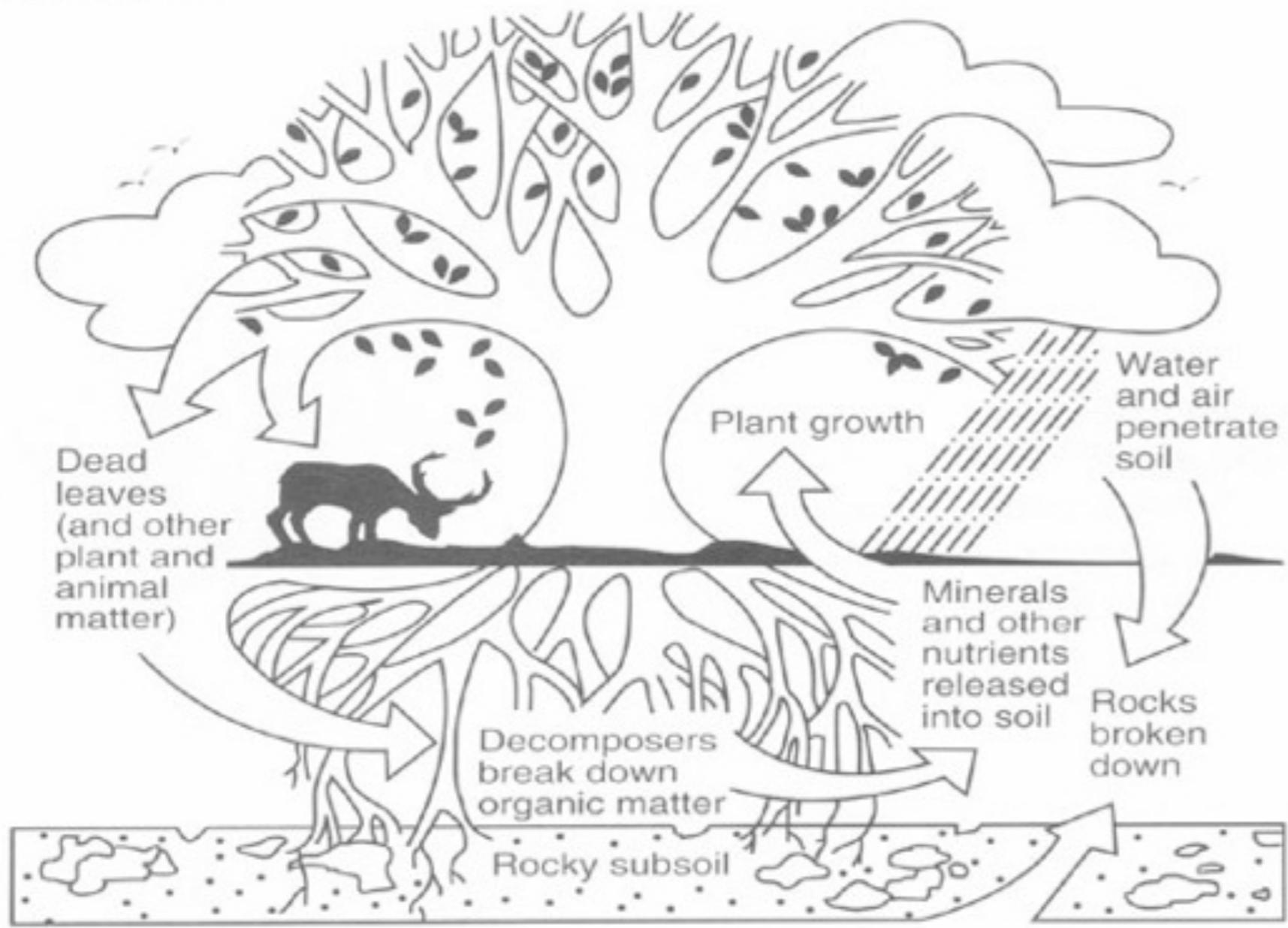
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# Tree as innovation generator and service provider

Nutrient cycle.



Source: nrcs.usda.gov



# A building like a tree



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**William McDonough's  
Treescraper Tower of  
Tomorrow**



# A city like an ecosystem



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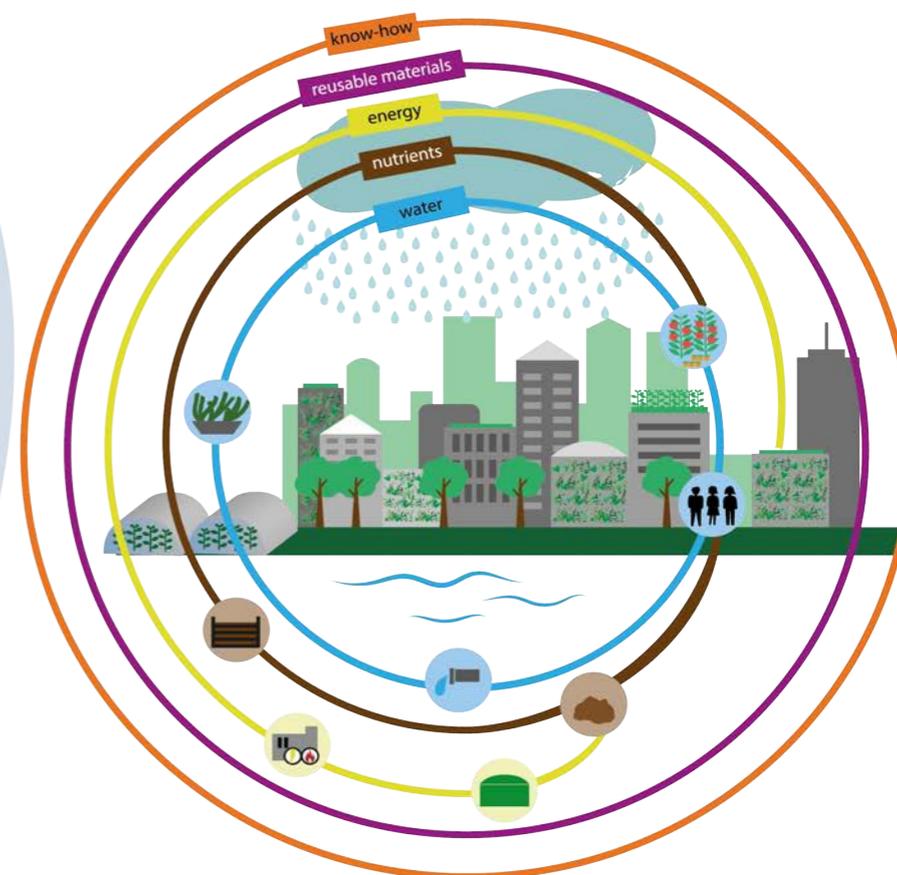
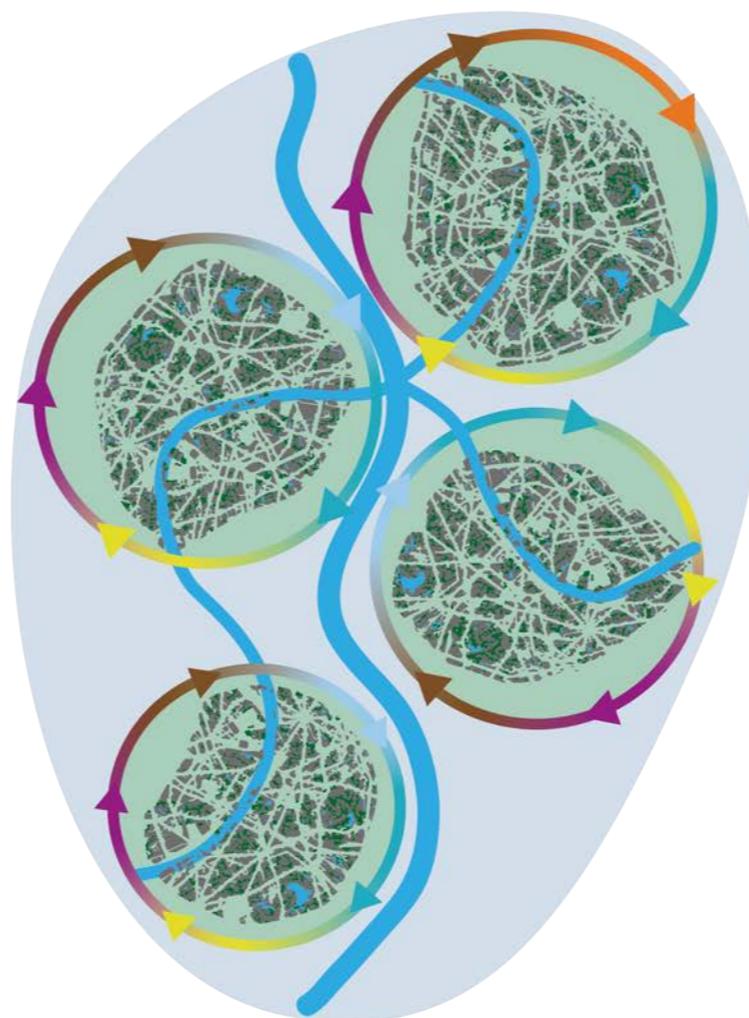


# Cities inspired by nature



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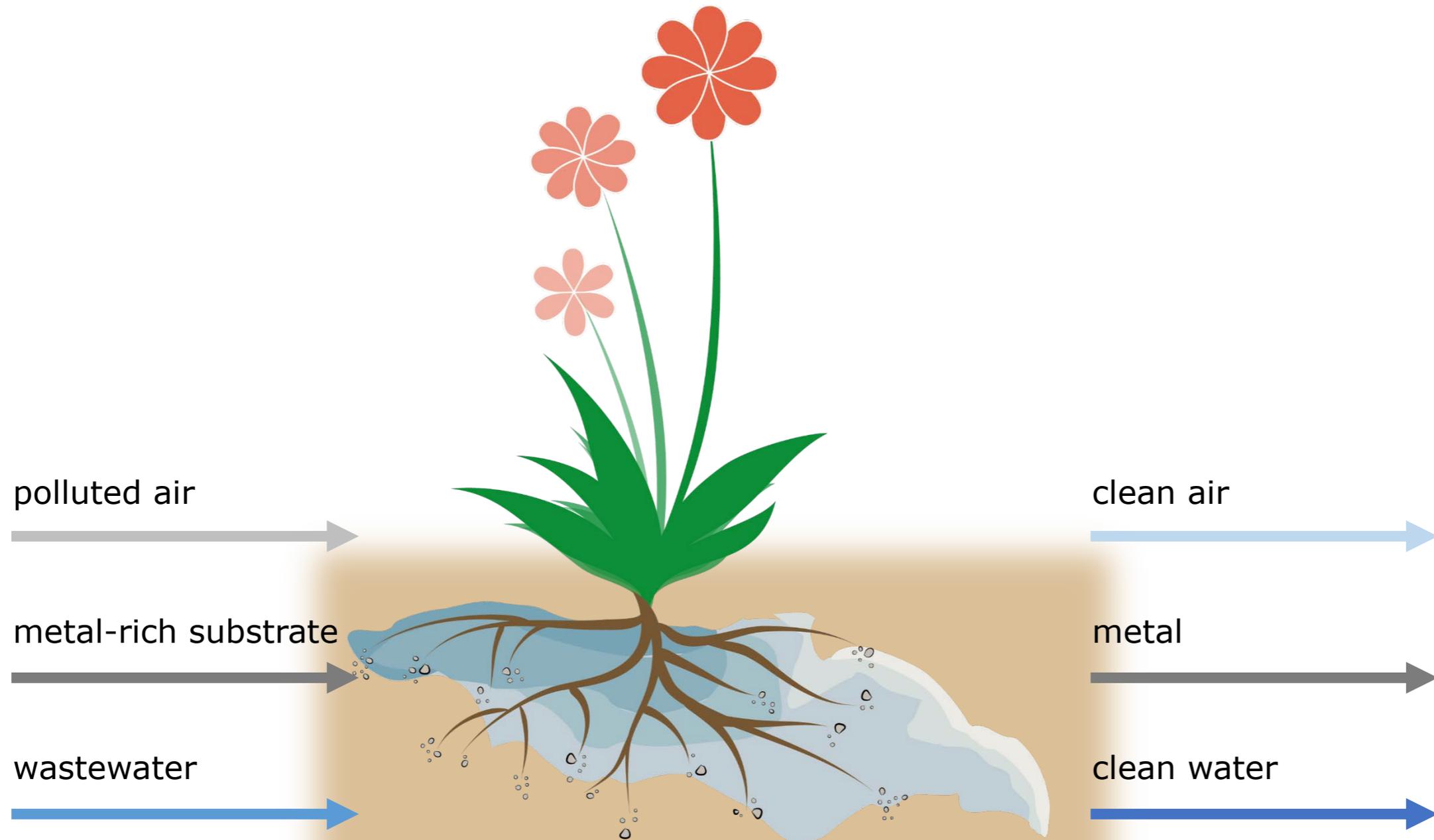


# Plant powers



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# Using plants for water and air treatment



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**VertECO**



Magnetverschluss



reco2st.eu

demeaumed.eu

greeninstruct.eu



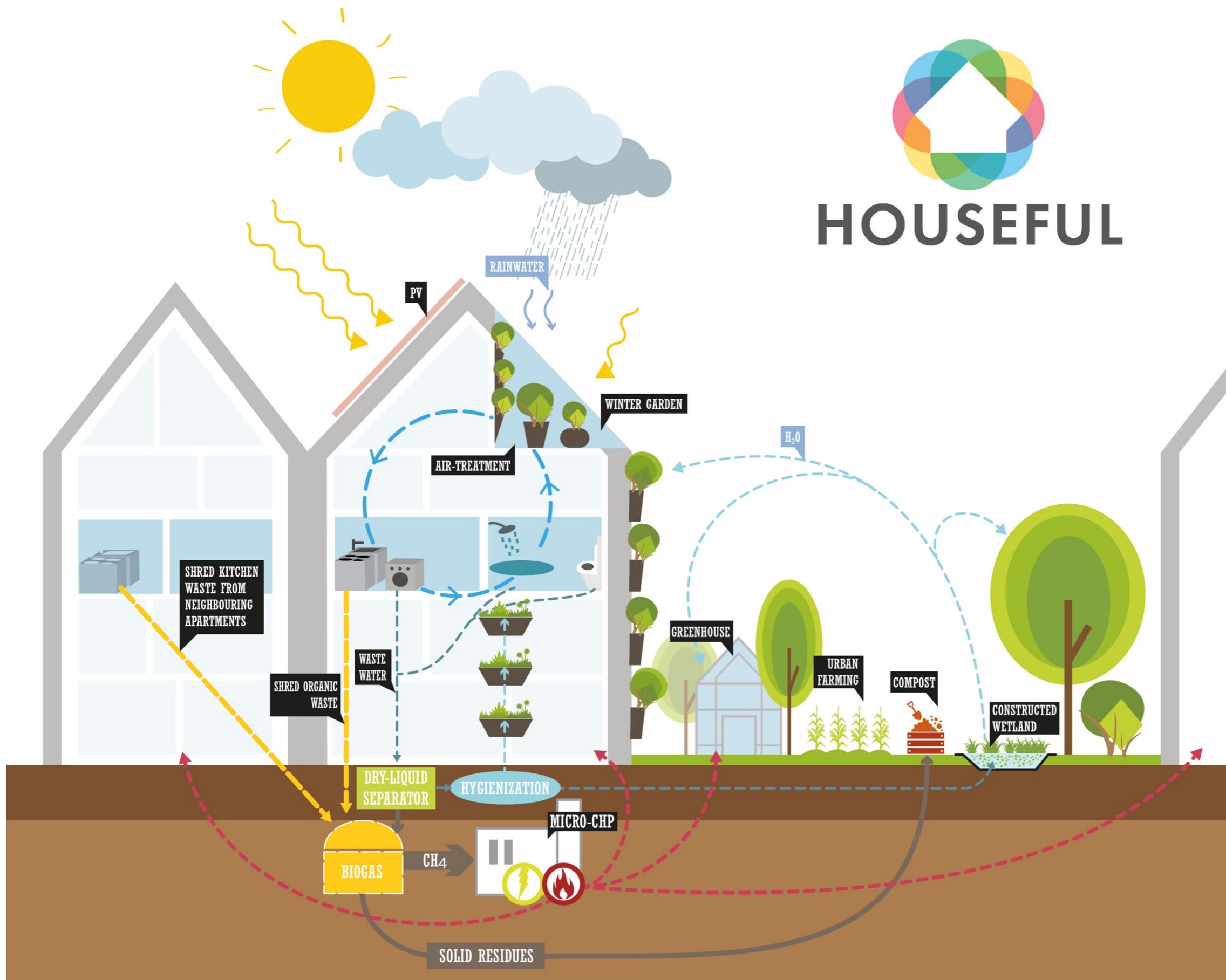
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# HOUSEFUL

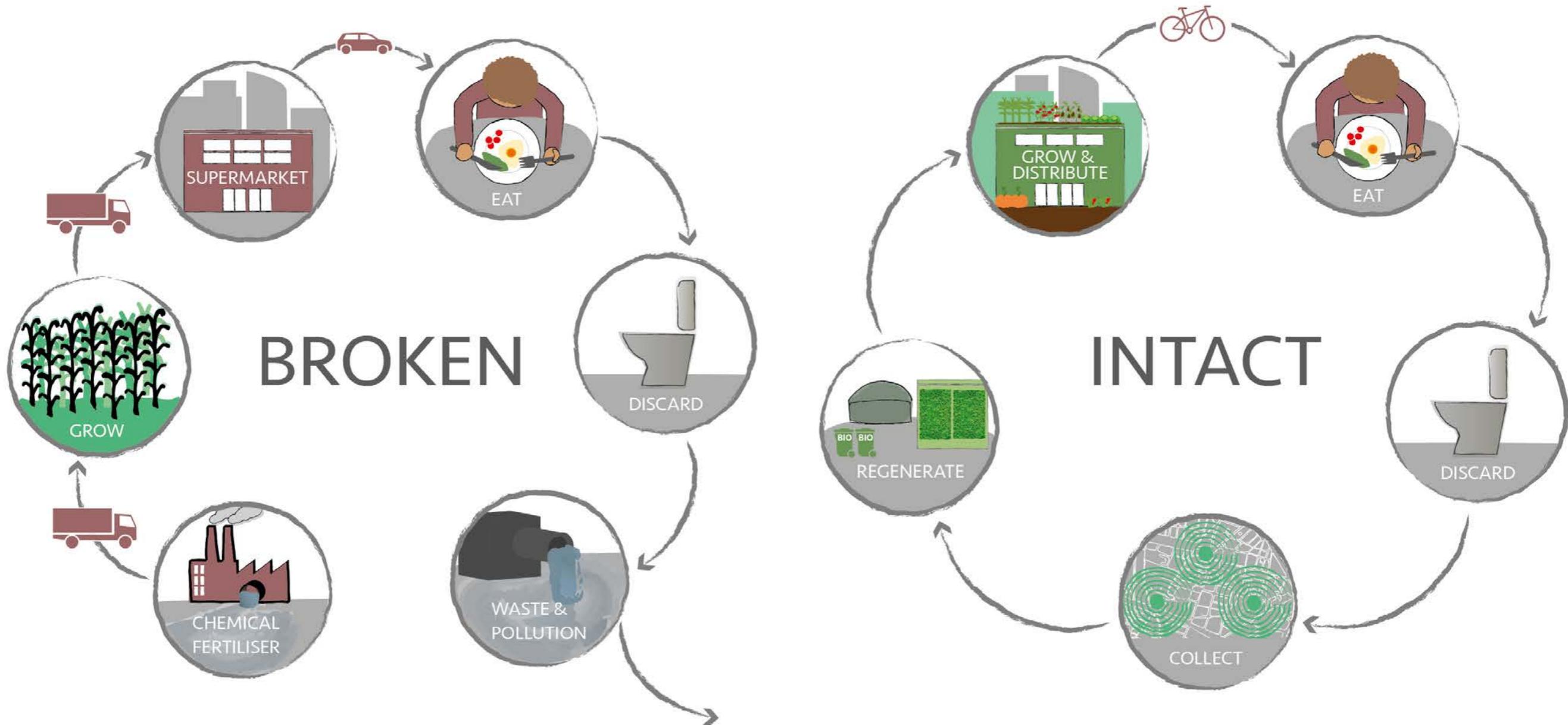


# Food value chain



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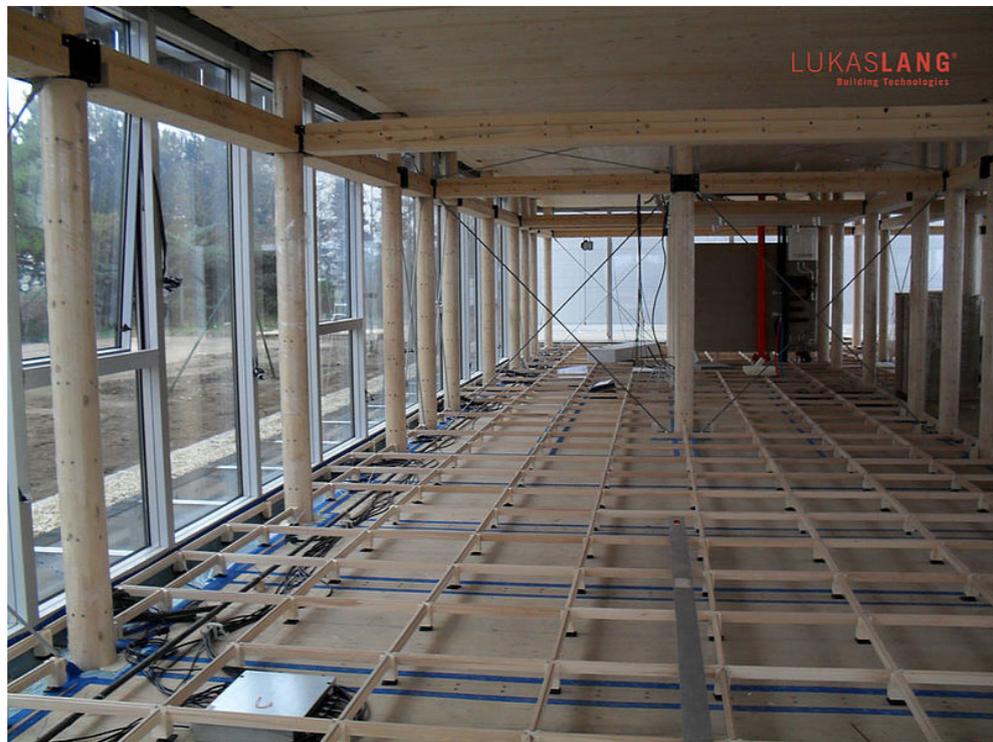
# Rethinking construction



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- Modular construction
- Standardisation
- Pre-fabrication



LukasLang®, AT



Cellophane House™, Kieran Timberlake, NY



Flexline, Hegelo, NL

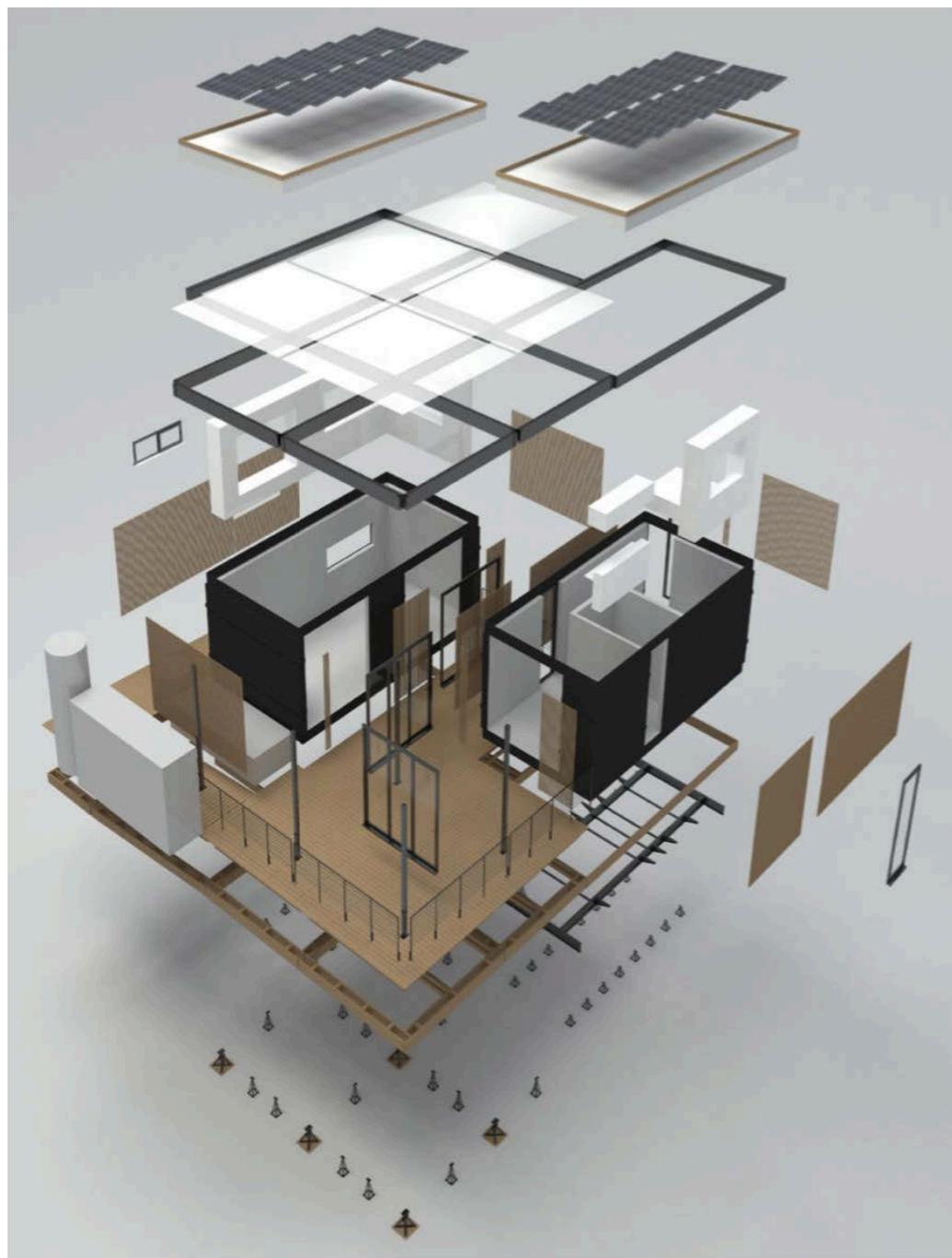


# Material banks



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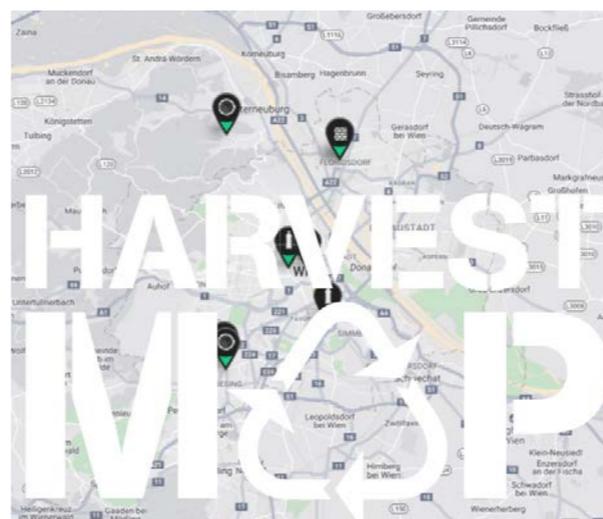
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[www.bamb2020.eu](http://www.bamb2020.eu)



Source: [www.anslowbryant.com](http://www.anslowbryant.com)



**Materialnomads**

**ebay**



**Gumtree**

**BauKarussell**



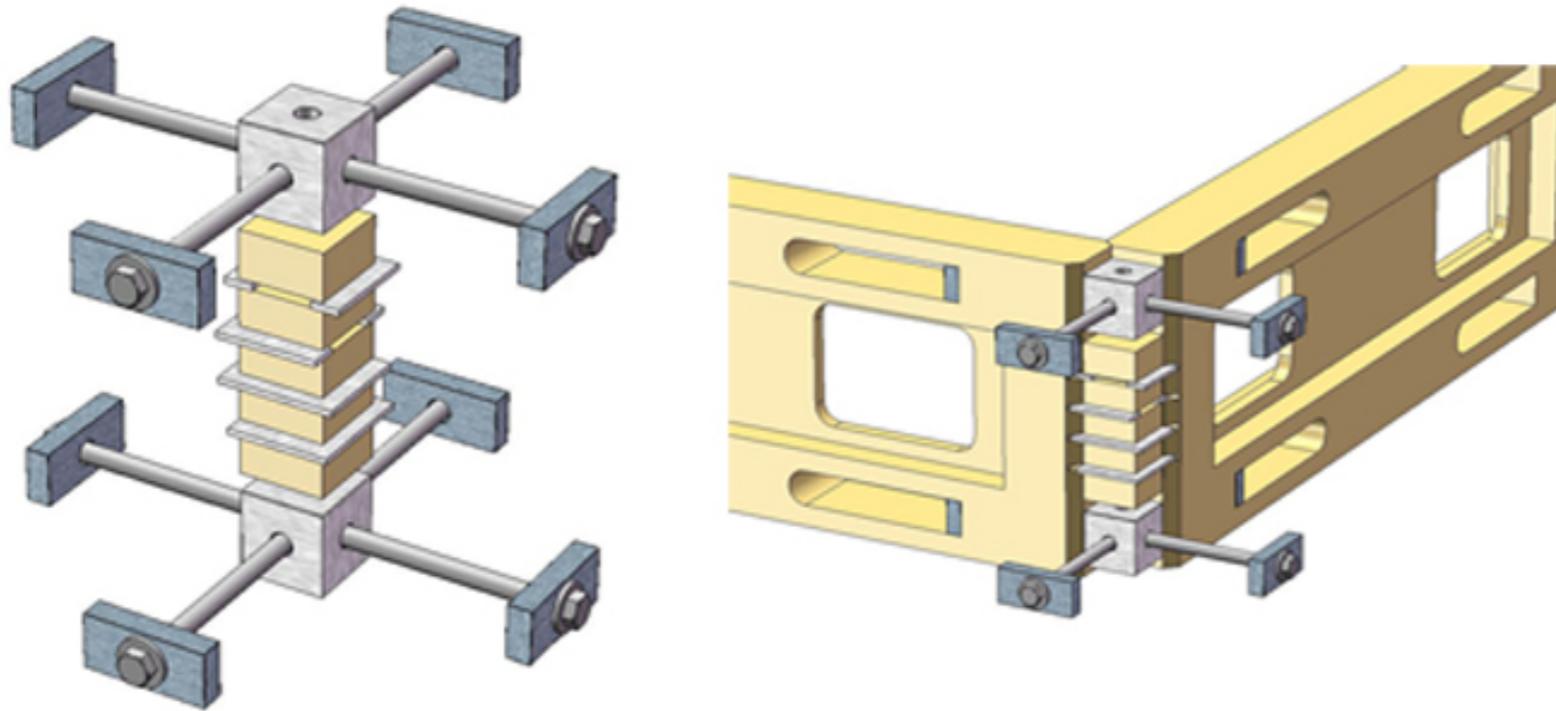
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# Deconstructability

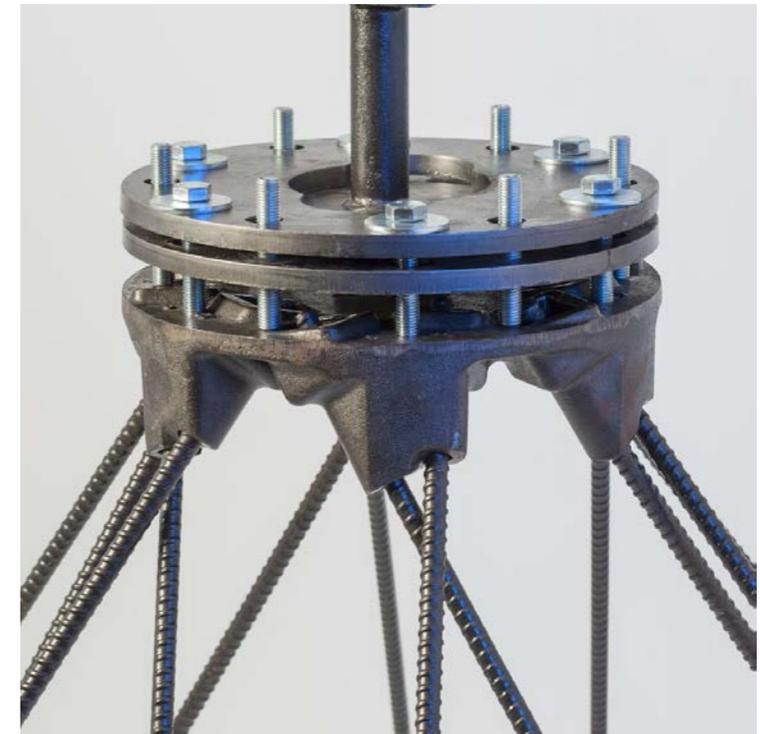


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**Wood construction system Cross House, CH**



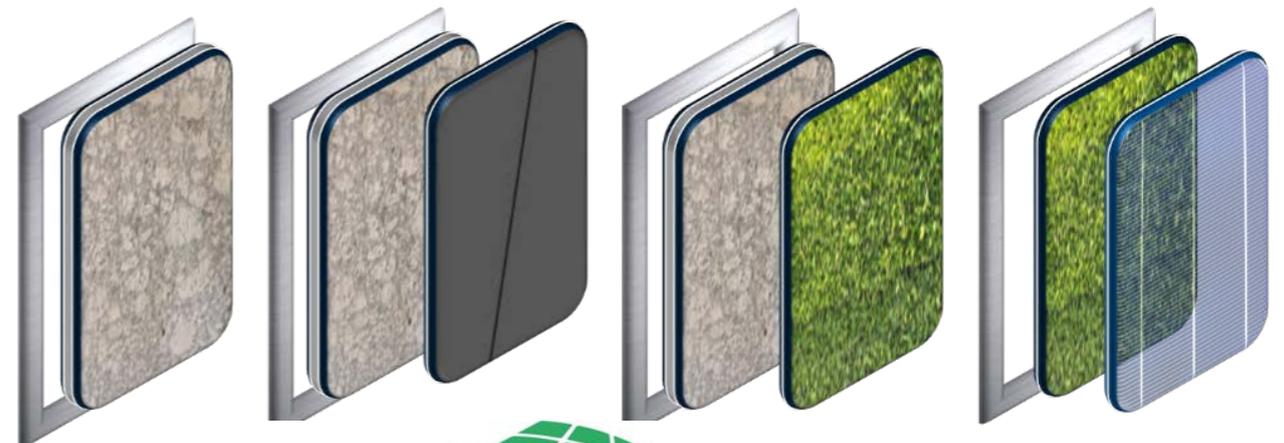
**Spinnanker, AT**

**INDUO®-MODULRAUMTECHNIK BIETET**  
Mehrfachnutzen bei Produktion und Montage



Die INDUO®- Modulraumtechnik basiert auf

- den induo®- Ankern
- den induo®- Modulecken



**INDUO® wood systems, DE**



[pvadapt.com](http://pvadapt.com)



[www.alchemia-nova.net](http://www.alchemia-nova.net)

# Service models

## Business Model Innovation

Selling light as a service instead of bulbs



Selling light not light bulbs - [zwcblog.org](http://zwcblog.org)



Schiphol airport - [lighting.philips.com](http://lighting.philips.com)



Flooring - [shawcontract.com](http://shawcontract.com) (Shaw, Forbo, Desso, Tarkett, Interface, etc.)

# Upcycling & Urban Mining



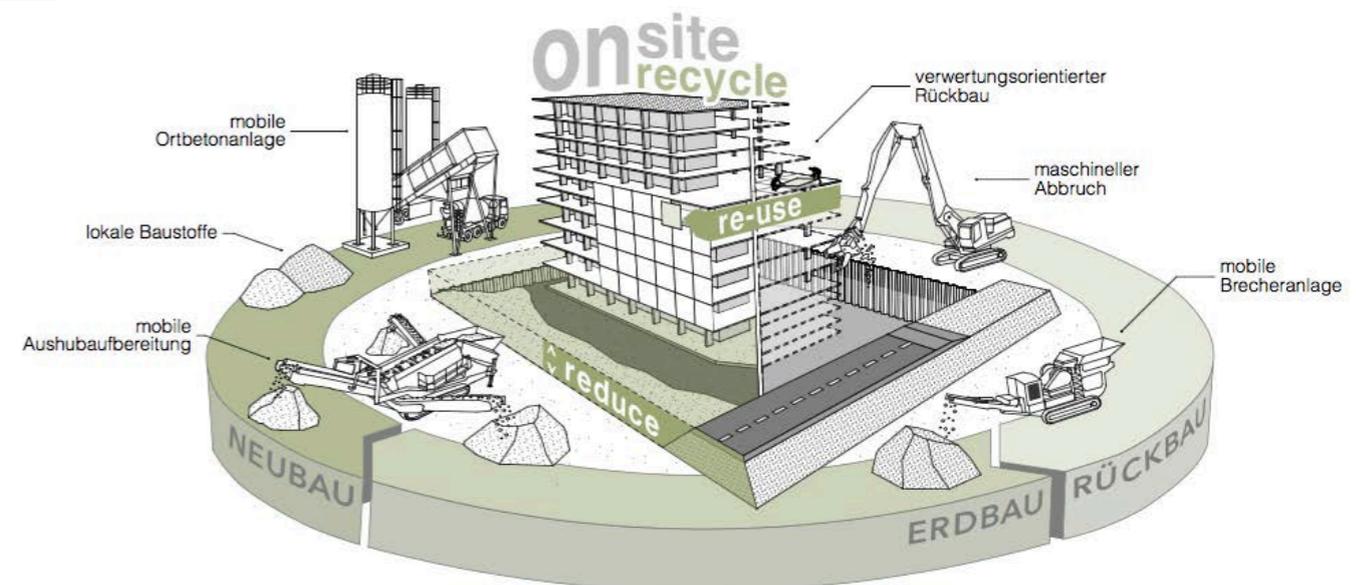
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miststück

**Caritas**  
Vienna



HOUSEFUL.eu



**COMM**.at  
forschen planen bauen



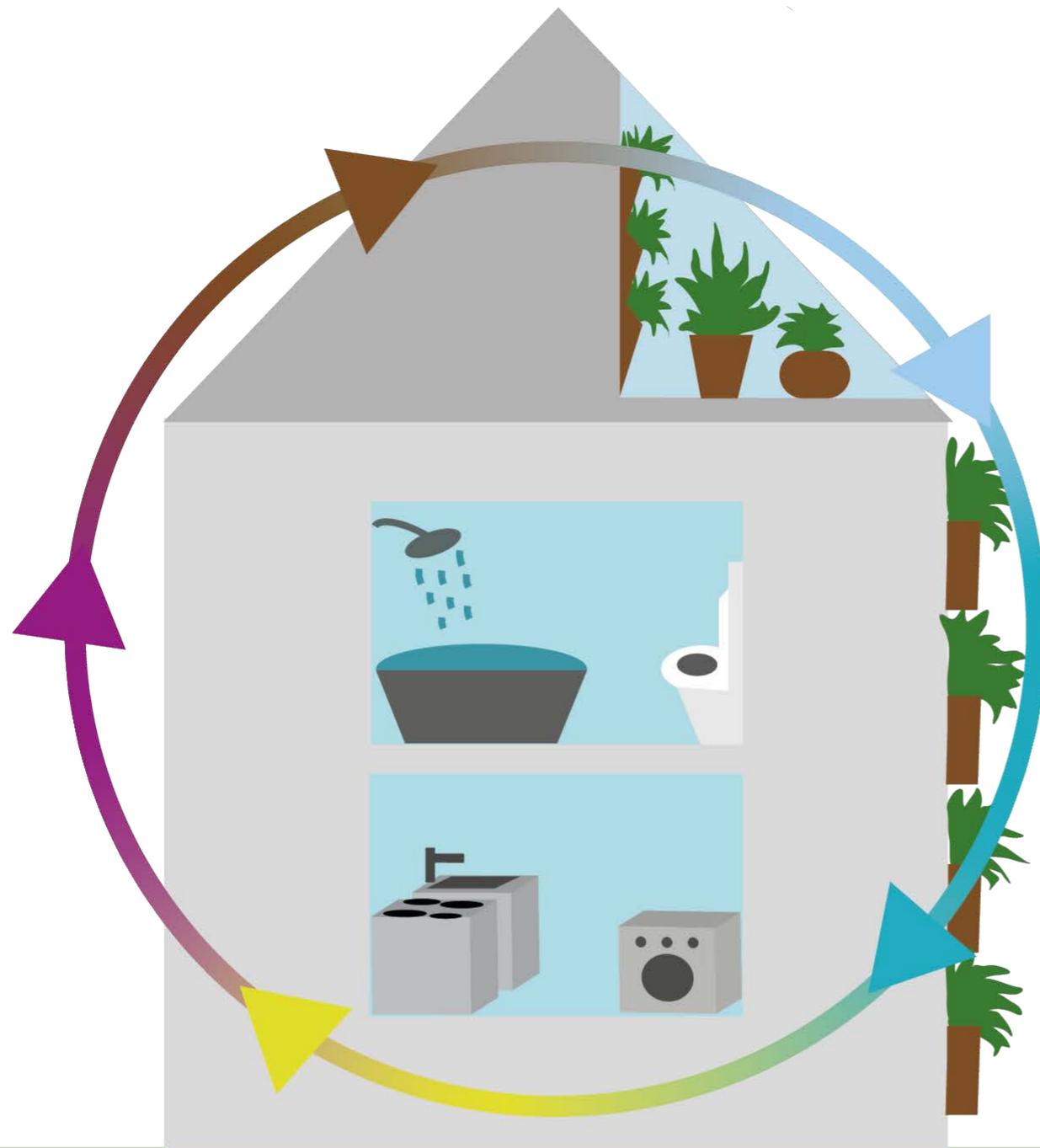
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# Service-based business models based on life-centred design



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air



energy



water



resources



nutrients



***save money***



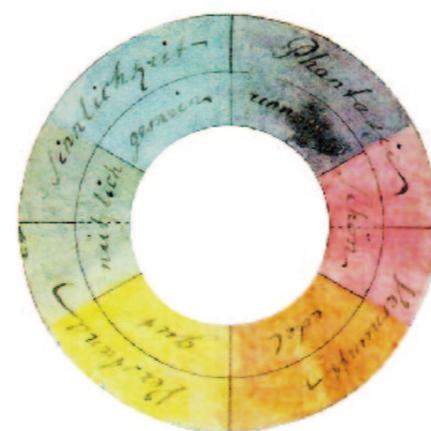
***make money***



***contribution to planet earth***



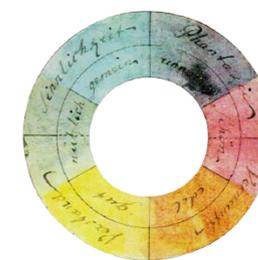
**Thank you for your attention !  
Dream - Plan – Implement - Celebrate  
circular economy solutions !**



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research

