



Circular Buildings

Renovations that produce more than they cost

Yvette Watson, 24 mei 2016



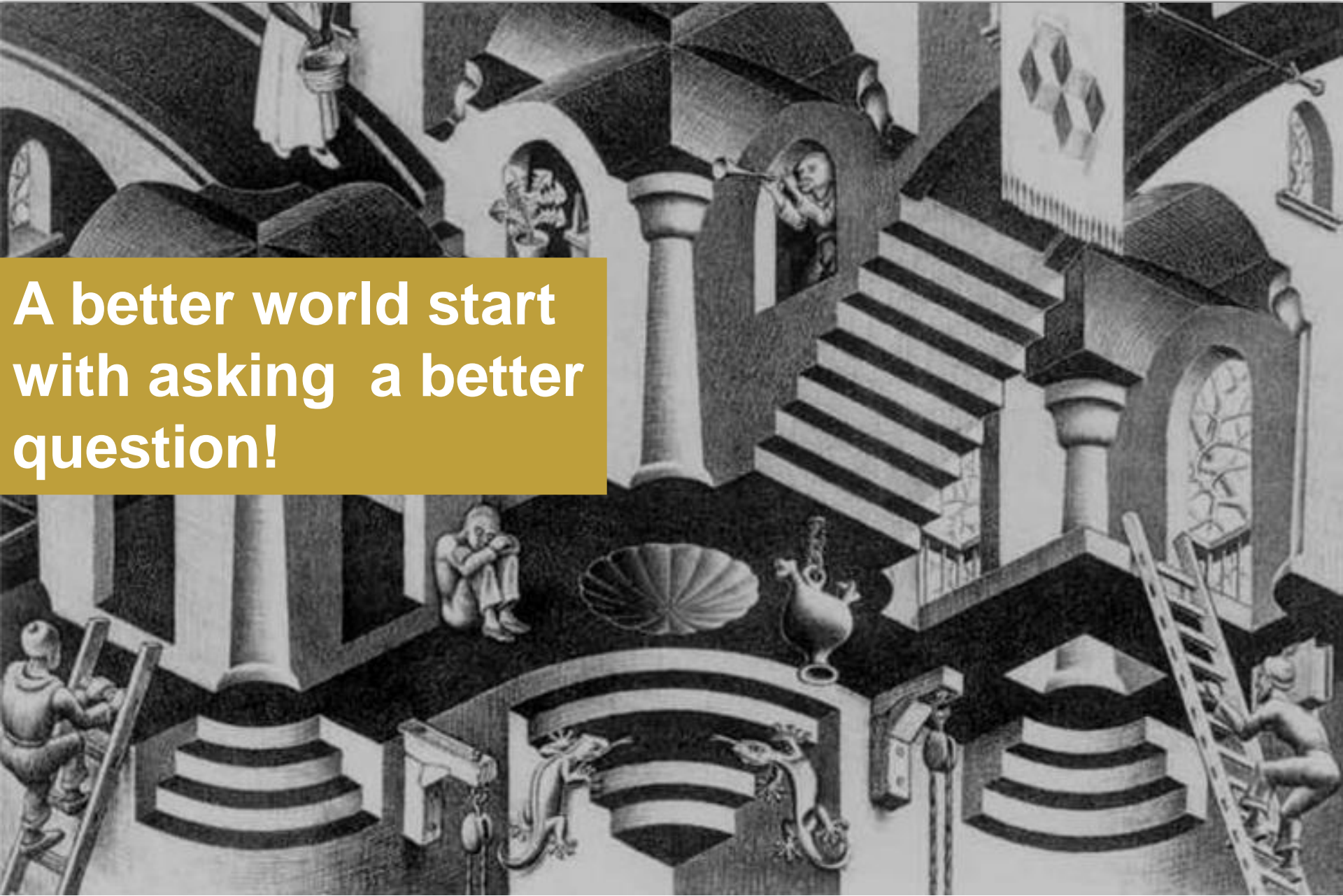
**No more virgin
materials in
our buildings!**



**Renovation
National
Library**



**We have a
dream...**



**A better world start
with asking a better
question!**

Collaborate
and engage



Green Deal



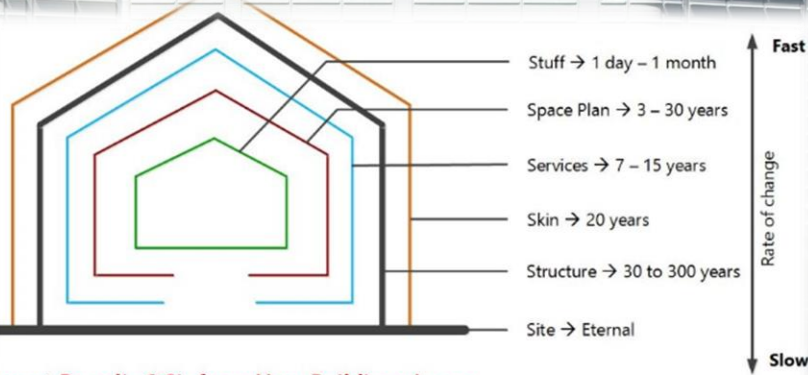
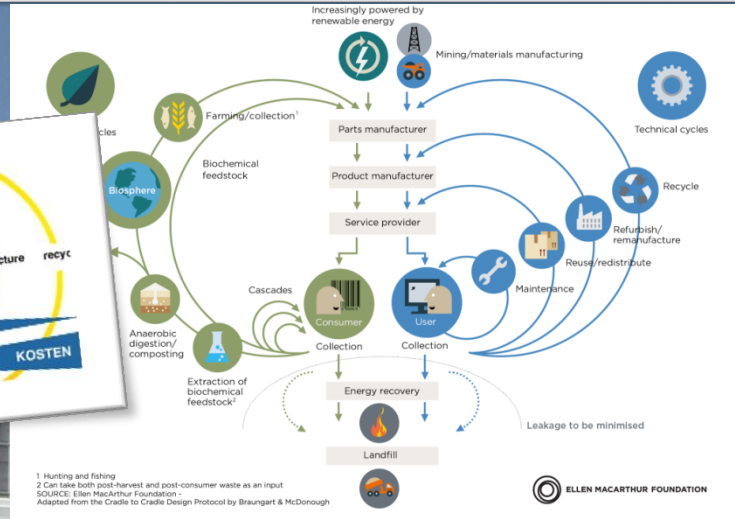
Transition to circular buildings



A close-up, low-angle shot of a bronze statue of a man's head and hand. The man's face is in profile, looking towards the right. His hand is raised, palm facing up, with fingers slightly curled. In the background, a clear blue sky is visible, and a small white airplane is flying from left to right, appearing to fly through the man's hand. The lighting is bright, suggesting a sunny day.

**How about
changing your
perspective**

There are no sustainable materials, only the sustainable usage of those materials



Verkoop	Product-dienst combinaties		
Enkel het product	Productgeoriënteerde diensten	Gebruiksgeoriënteerde diensten	Resultaatgeoriënteerde diensten
<p>De gebruiker/consumert koopt het product en krijgt het in eigendom</p>	<p>De gebruiker/consumert koopt het product + een productgerelateerde dienst (zoals een recycleprogramma)</p>	<p>De gebruiker/consumert betaalt voor het gebruik van het product (bijvoorbeeld 'pay-per use')</p>	<p>De gebruiker/consumert betaalt voor het resultaat van het product</p>
<p>Verkoop</p>	<p>Verkoop Productgerelateerde dienst</p>	<p>Lease Terugnname</p>	

Figuur 23: product-dienst combinaties gebaseerd op Stouthuyzen (2014b)

LAAG	Sublaag	Nr.	Flexibility Performance Indicator			
			1	2	3	4
1. LOCATIE	2.1 Afmetingen	01(2)	0	0	0	0
		02(5)	0	0	0	0
		03(11)	0	0	0	0
2. STRUCTUUR	2.2 Toegang	04(17)	0	0	0	0
		05(21)	0	0	0	0
	2.3 Constructie	06(29)	0	0	0	0
		07(30)	0	0	0	0
		08(42)	0	0	0	0
3. HUID	3.2 Gevel	09(53)	0	0	0	0
		10(56)	0	0	0	0
4. INSTALLATIES	4.1 Meten & regelen	11(57)	0	0	0	0
		12(65)	0	0	0	0
	4.2 Dimensionering	13(70)	0	0	0	0
		14(73)	0	0	0	0
		15(77)	0	0	0	0
5. RUIMTEN/AFWERKING	5.1 Functioneel	16(78)	0	0	0	0
		17(79)	0	0	0	0
	5.2 Ontsluiting	18(79)	0	0	0	0
		19(79)	0	0	0	0

* Nummers tussen () verwijzen naar de volledige lijst met 83 indicatoren

Stewart Brand's 6 S's from How Buildings Learn





**Experience is
the teacher of
all things**

Fabulous opportunities

WHY

HOW

WHAT

The circular economy closes the loop of materials. Materials represent value. The built environment consumes more than 30% of raw materials in the NL. The circular economy has potential to create 54,000 extra jobs and € 7.3 billion economic growth per year.

Government as user

- National Government largest real estate owner of NL
- Government 10% circular purchases (motion nov '15)
- Circular tenders puts the market in motion
- Abate bottlenecks

Financing models

- Shift from tax on labour to tax on raw material and waste
- investment fund transition to circular production
- Product to service presses heavily on balance manufacturer
- deposit model

Stimulating regulation

- Break barriers property and liability
- Vested interests and cultures break through market
- Competition legislation i.r.t.
- Chain cooperation tax break renovating and taxing new construction



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