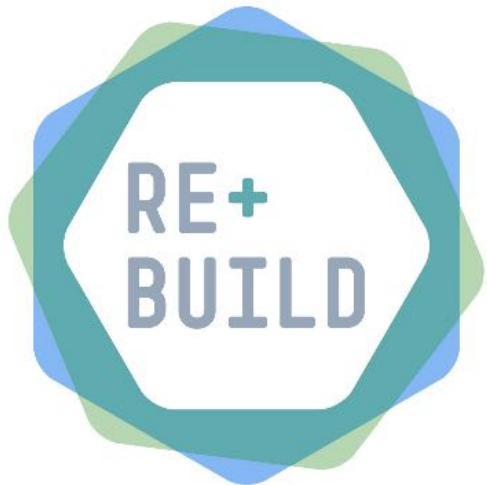




La nuova industria immobiliare

Thomas Miorin



RE-Lab

un paese da reinventare

Svezia - Danimarca

100% rinnovabili dal 2050

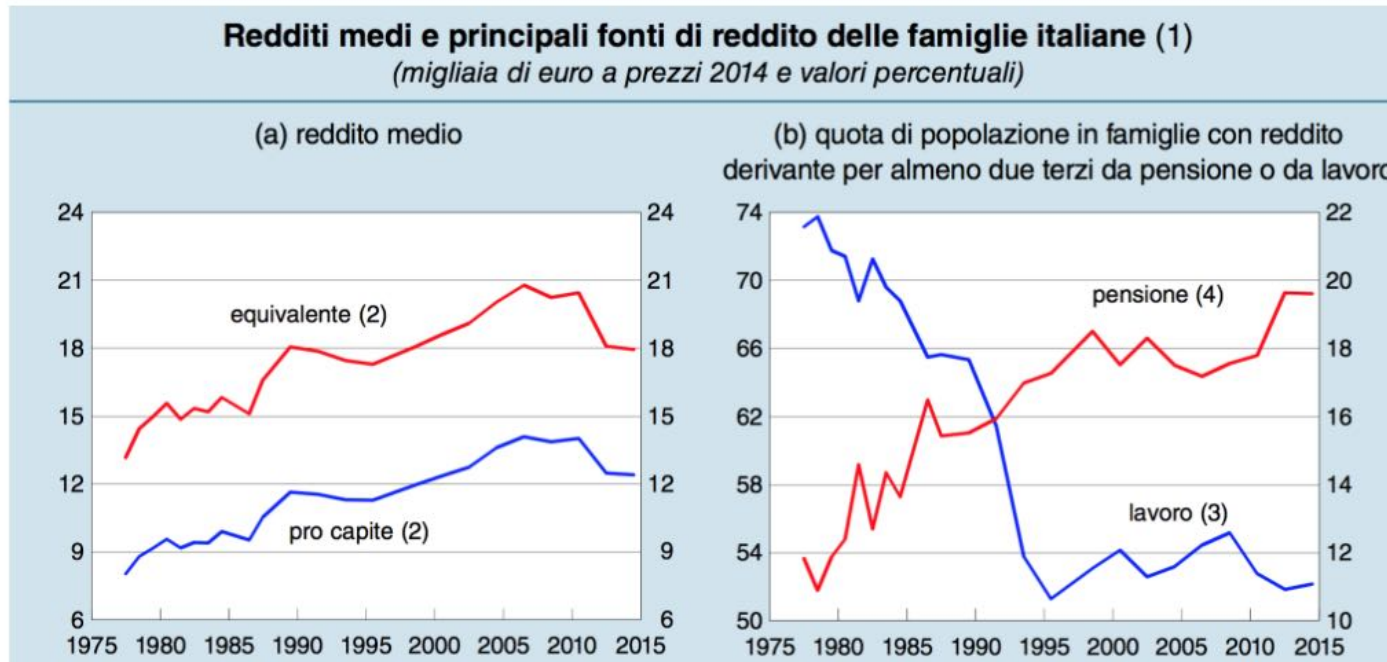
Olanda - Norvegia

Piano per mobilità oil free dal 2025

Germania

Patrimonio immobiliare dal 2050 produttore netto di energia

una nuova domanda



50% famiglie dichiara di vivere in uno spazio troppo ampio

60% spazio uffici non utilizzati anche in orario di lavoro

verso una nuova edilizia

Costi

sotto i 300 € / m³

Ambito

oltre l'edificio: ciclo di vita, nuovi modelli di business

Convergenza

oltre le costruzioni: energia, dati, mobilità, servizi ...

nuovi parametri di creazione e di misura del valore

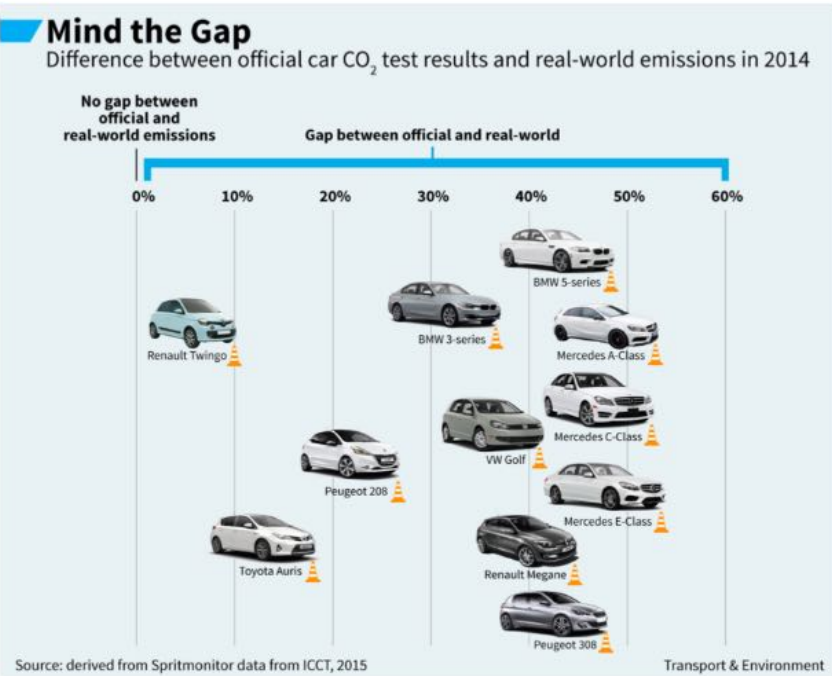
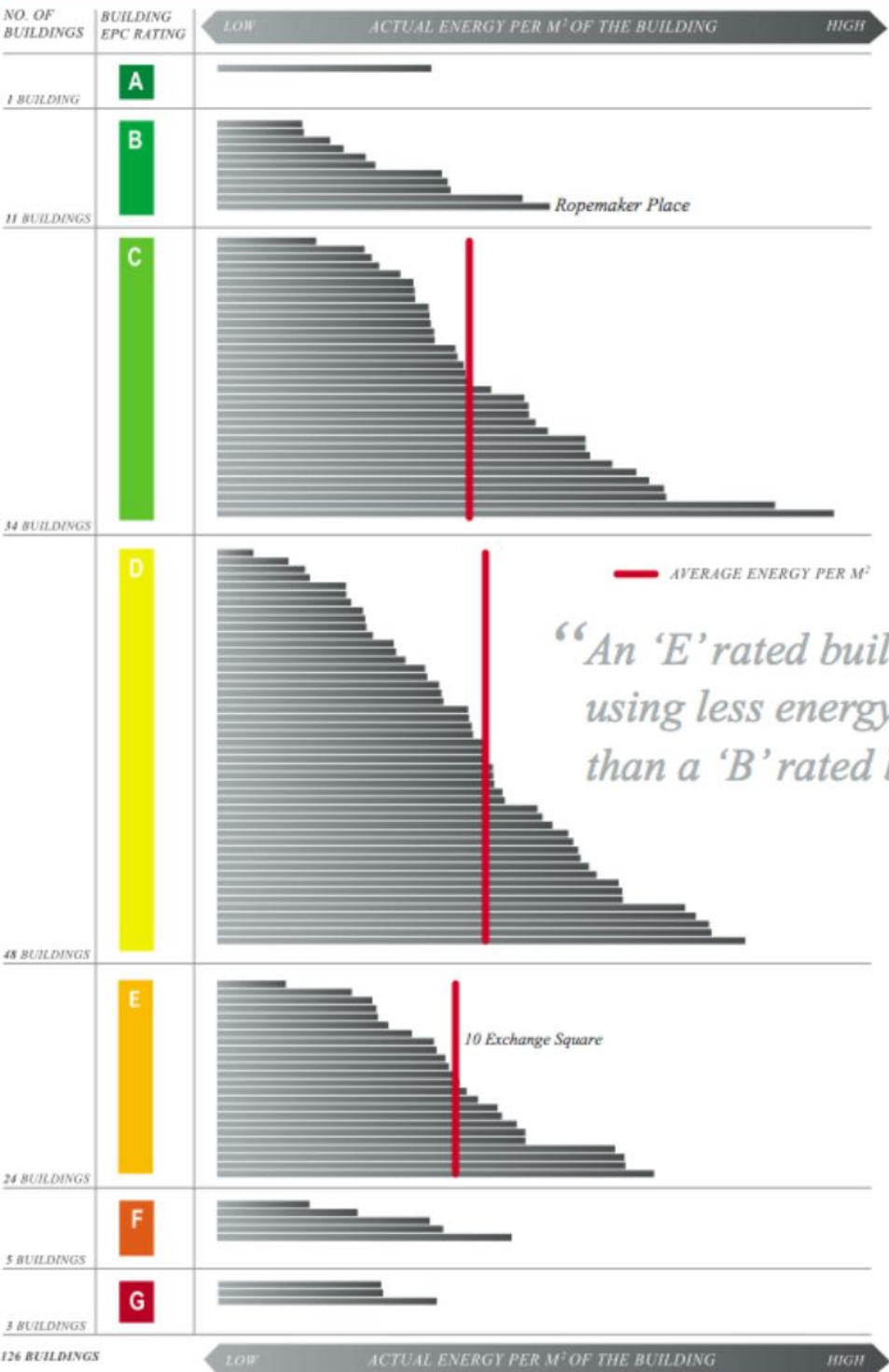


Figure 1 – Actual energy use of more than 100 BBP member offices grouped by their EPC rating



improduttività

COSTRUZIONE

- 10-15% sprechi materiale in fase costruzione

USO

- edificio è una previsione. tutte le previsioni sono sbagliate

CONSUMI

- 20-40% efficientabile con tecnologie e comportamenti
- fino al 90% con deep retrofit

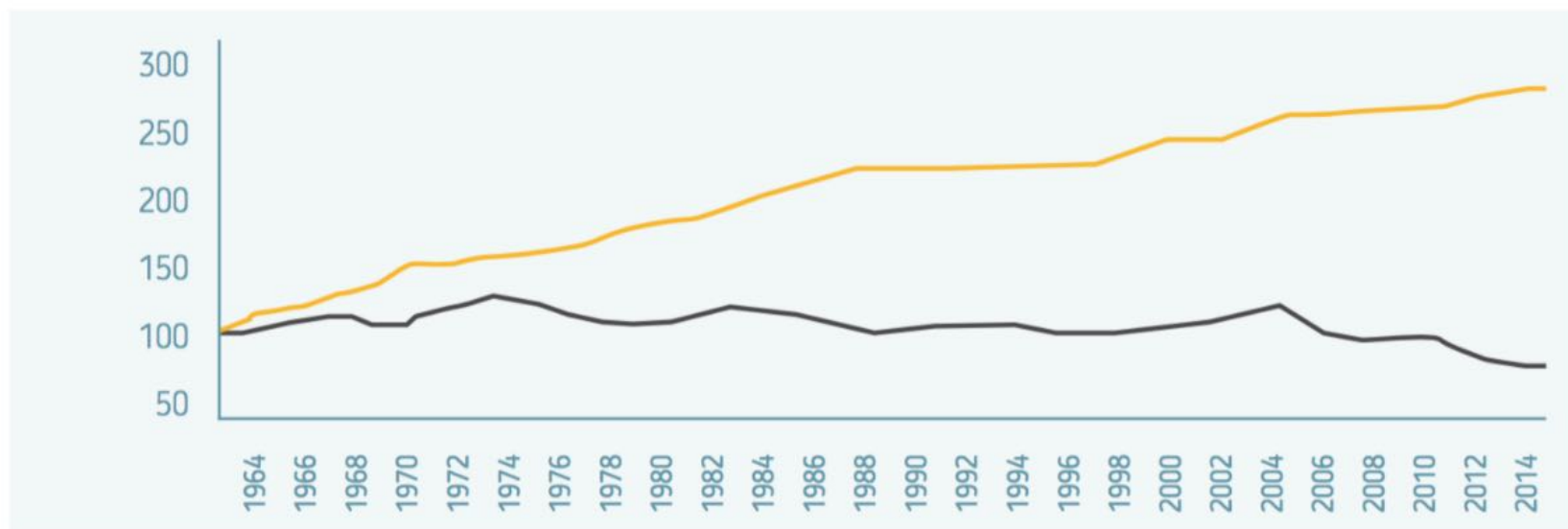
FINE VITA

- 54% materiali in discarica

PROCESSO

- progettazione non integrata
- mancanza coordinamento/linguaggio nella filiera

INDICE DI PRODUTTIVITÀ DEL LAVORO NELLE COSTRUZIONI RISPETTO ALL'INDUSTRIA MANIFATTURIERA



Decrescenti

risorse e servizi dell'ecosistema

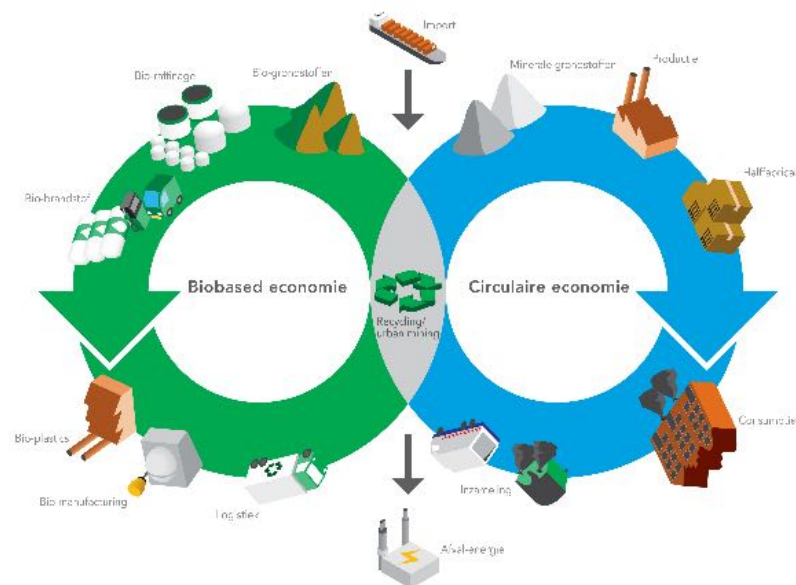


Crescente

domanda di risorse e servizi dell'ecosistema

tempo

Economia Circolare



Da ridurre lo spreco a eliminare il concetto di rifiuto

Impatto Economia Circolare

Economia EU

- incremento produttività 3% annuo
- incremento PIL EU 7% rispetto scenario attuale
- impatto primario annuo 600 mld€ da qui al 2030

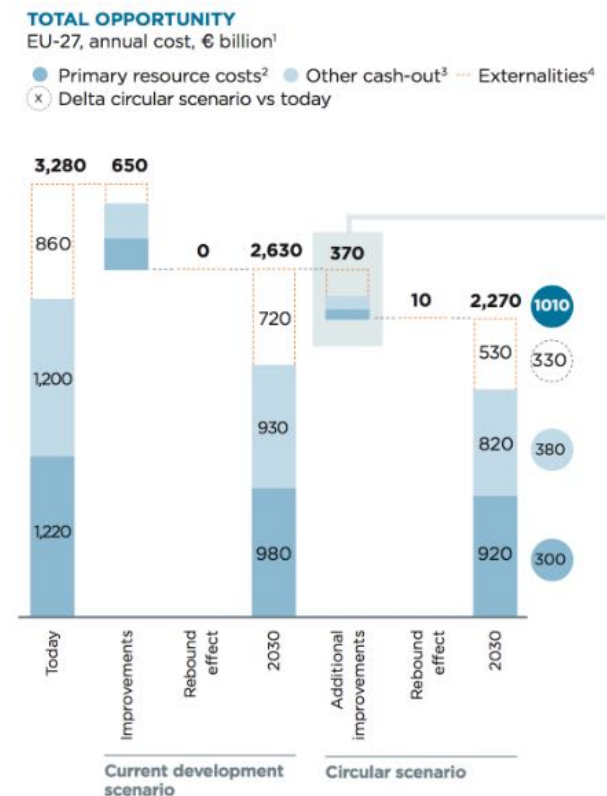


Costruzioni

- EU: Al 2030: benefici complessivi per 1010 mld€
- Italia: 90 mld € nei prossimi 15 anni

Benefici: risparmio materie prime e costi non sostenuti, risparmi spesa pubblico/privata e aumenti efficienza e conseguenti externalità economiche.

Fonte: McKinsey, Ellen McArthur Foundation, SUN, 2016





Rethinking finance in a circular economy

[Financial implications of circular business models]

INTESA  SANPAOLO



ELLEN
MACARTHUR
FOUNDATION



Villa Ze~~X~~a, Nut~~X~~icker, Camera, ... ?



2001: **museo d'arte**

2006: smontato e immagazzinato

2008: **scuola** temporanea (9 classi, 1 biblioteca, 3 metri più ampio)

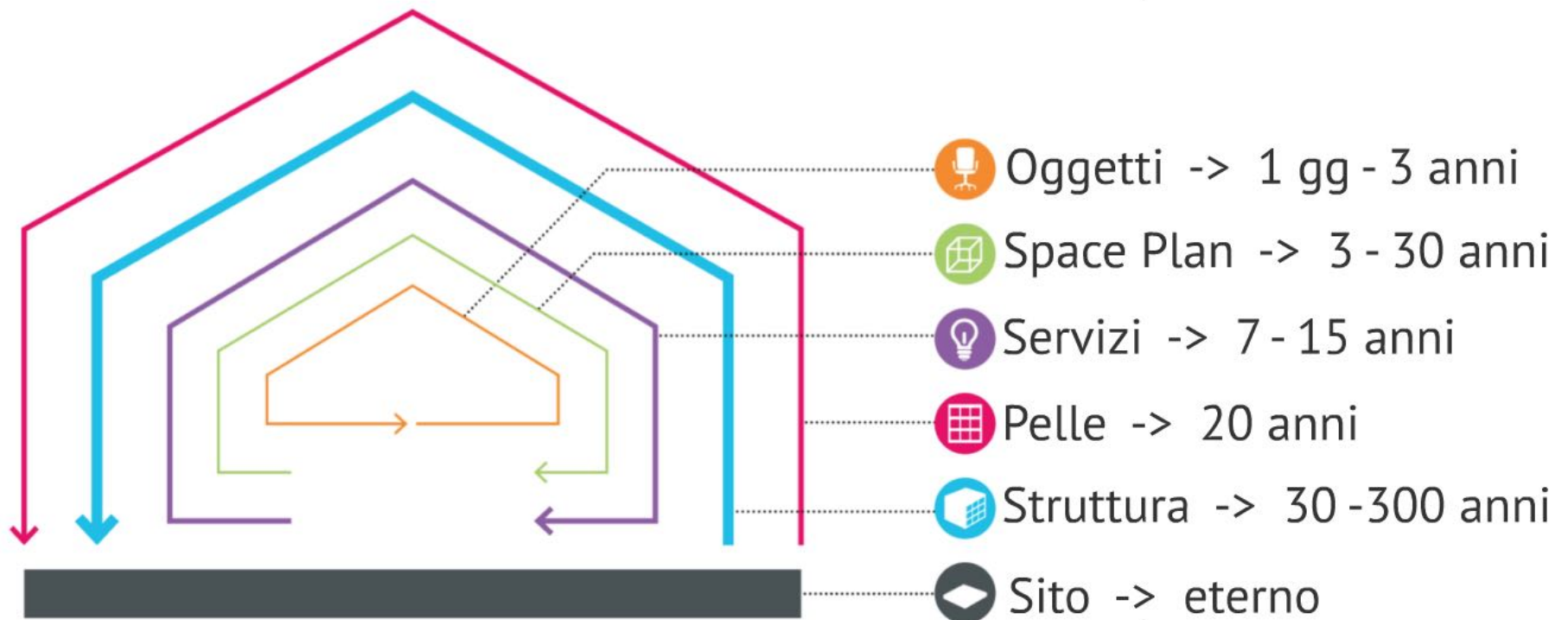
2012: smontato per realizzare **3 edifici** distinti

oggi: archivio di materiali

domani: ?

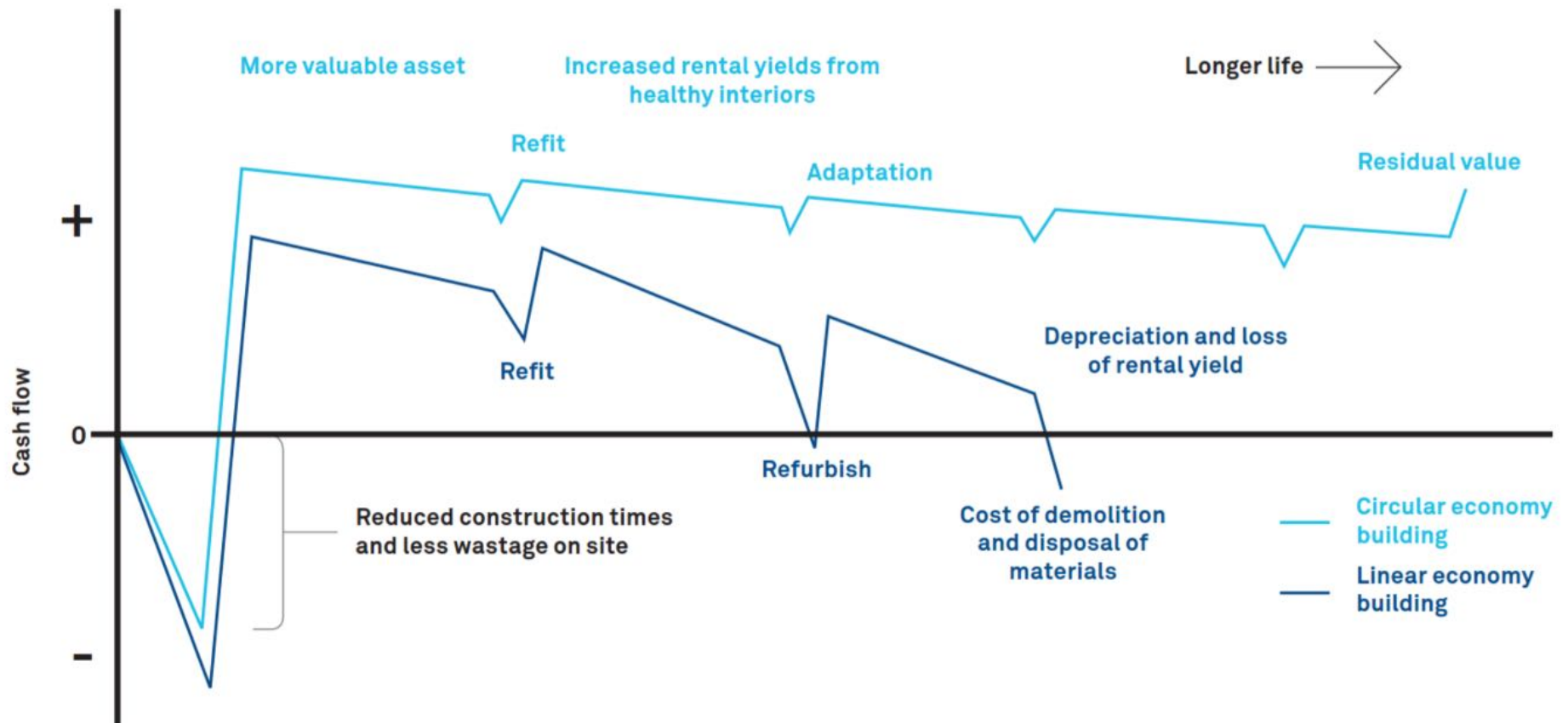


costruzione a layer



Fonte: Adattamento da Stewart Brand

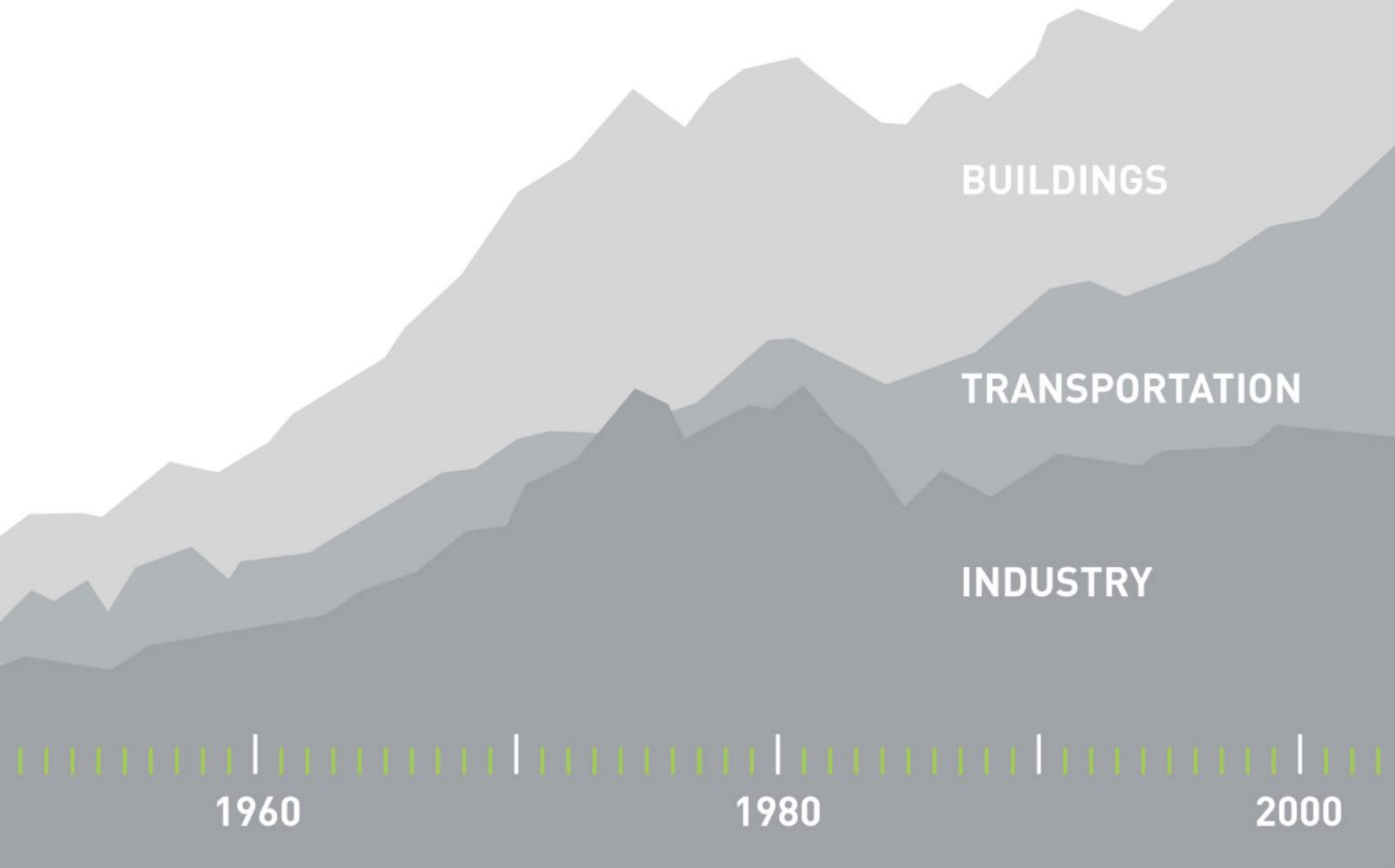
cash flow edilizia circolare vs lineare



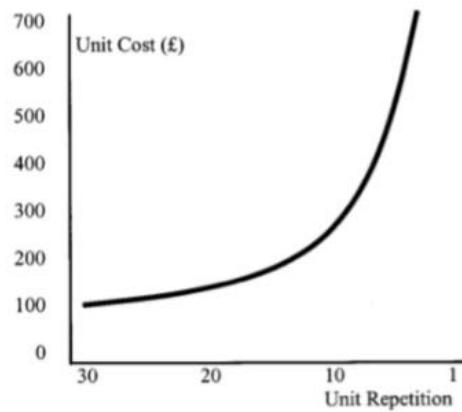
Fonte: David Cheshire, Building Revolutions, 2016

CO₂ EMISSIONS BY SECTOR:

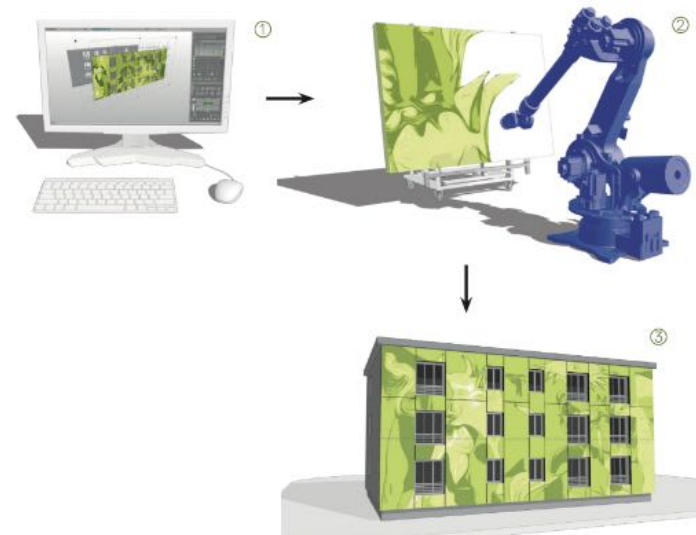
Buildings are an important part of the solution to climate change.



industrializzazione



industrializzazione 4.0.







ABBORDABILE

Finanziabile dai risparmi energetici



QUALITA'

Performance garantite a lungo termine



NON-INTRUSIVO

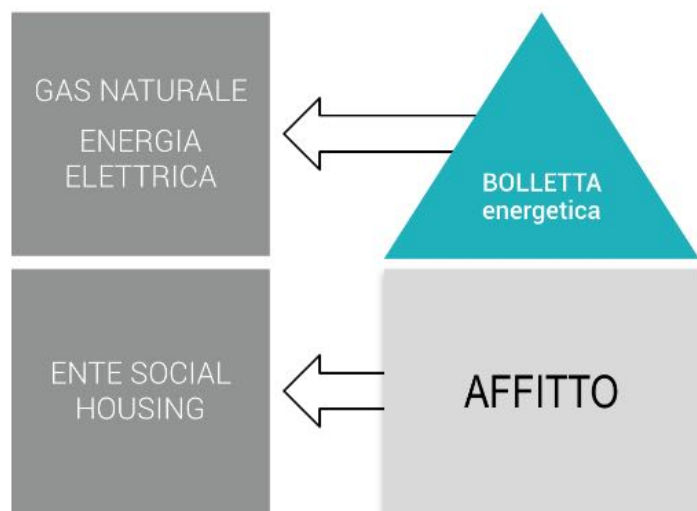
Riqualificazione entro la settimana



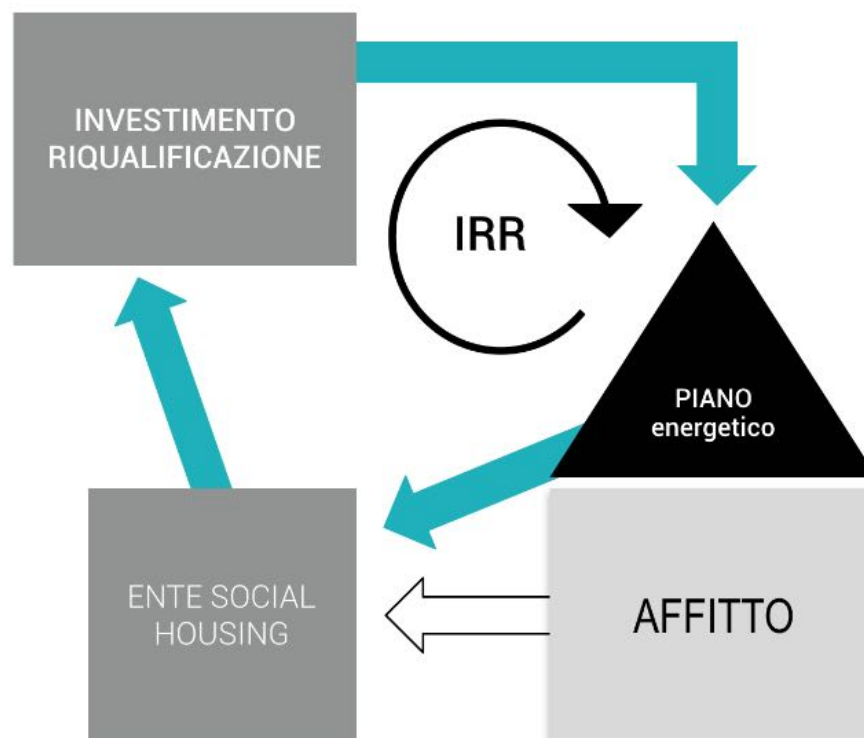
MIGLIORA LOOK & FEEL

Rendere i vicini gelosi

PRIMA

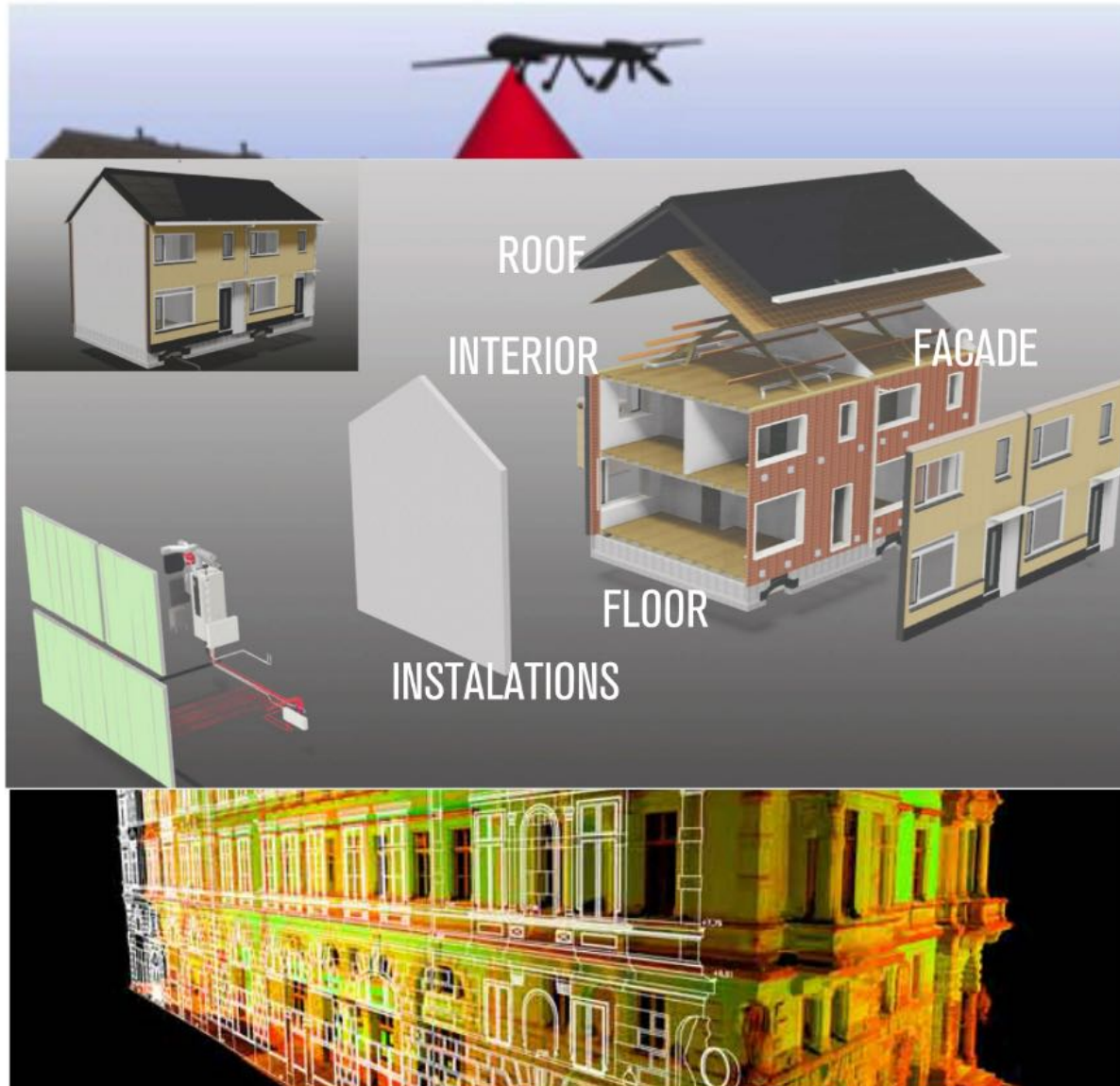


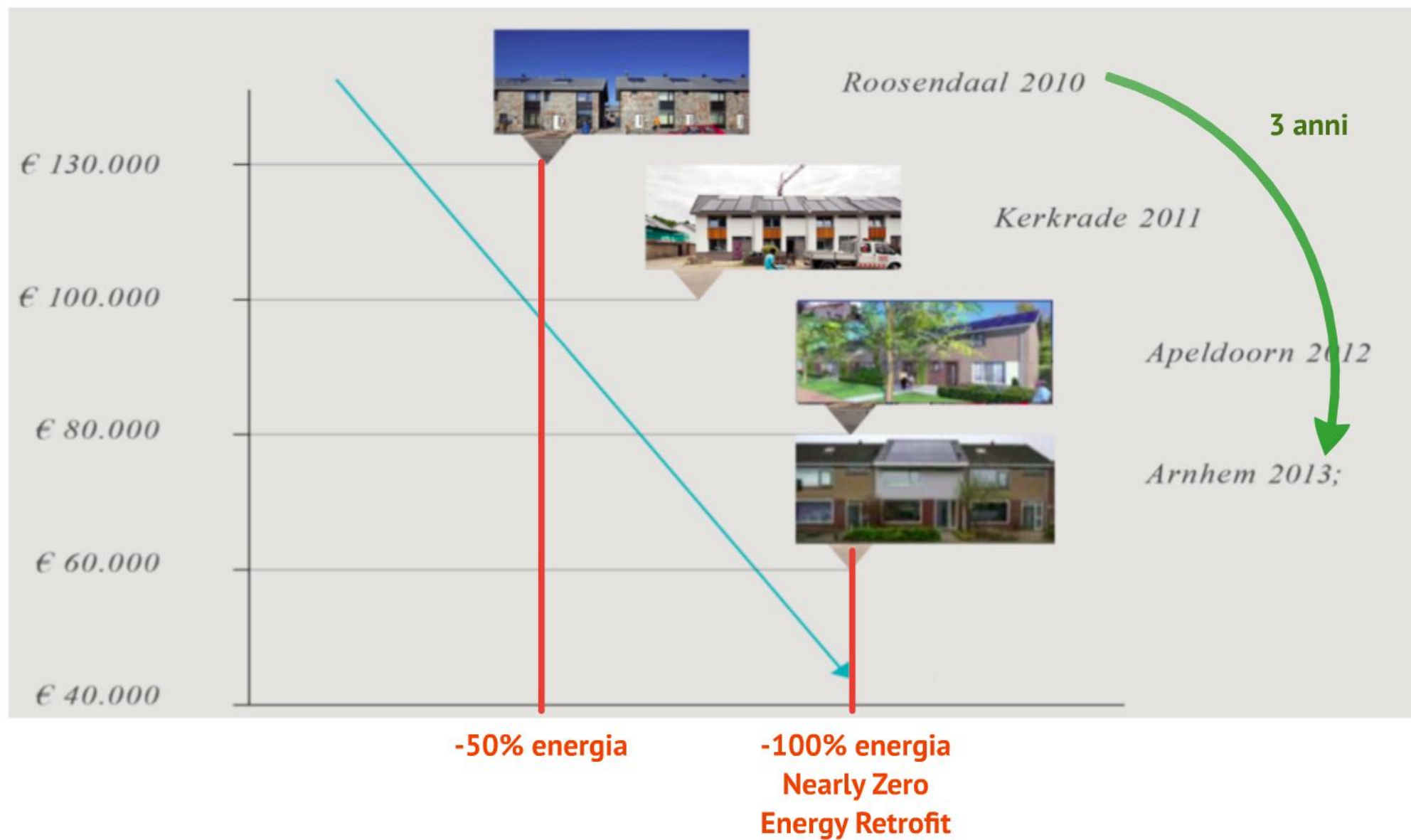
DOPO LA RIQUALIFICAZIONE





digital manufacturing





evoluzione dell'industria immobiliare



da stock a flussi

evoluzione del prodotto immobiliare

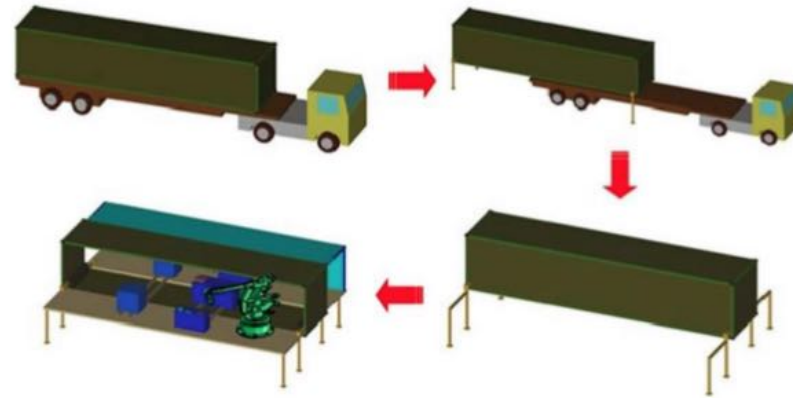


20%
tradizionale

60%
industriale

20%
speciale

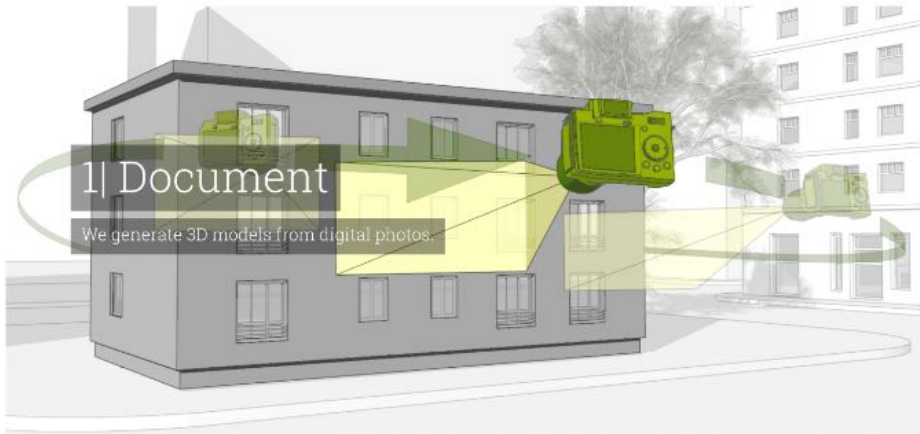
Modern Flying Factories - Skanska



facciata 4.0.

1| Document

We generate 3D models from digital photos.



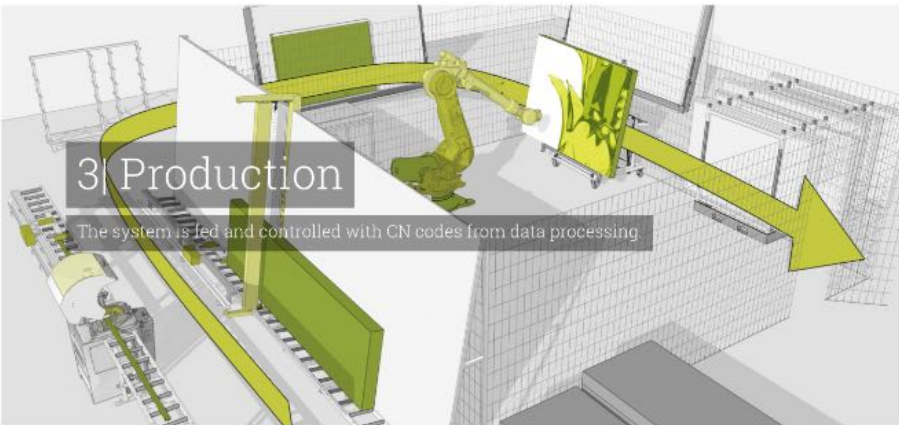
2| Model

In the deformation analysis, we evaluate the flatness of the wall surfaces and the discrepancies in the straightness of wall edges and window embrasures.



3| Production

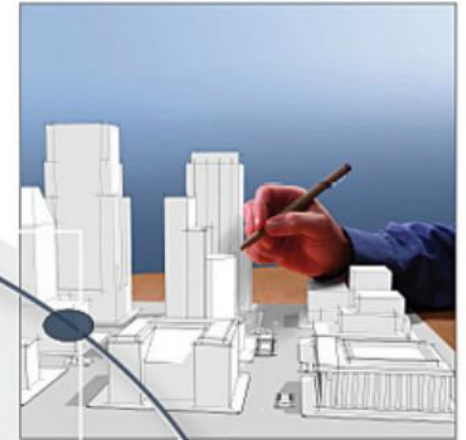
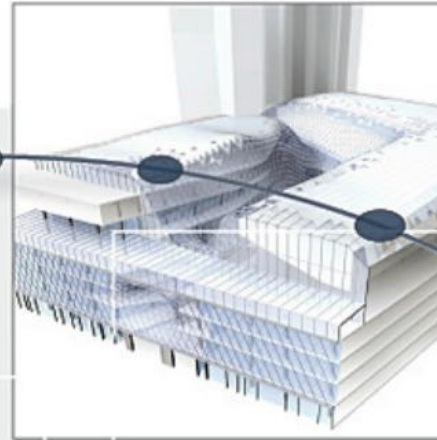
The system is fed and controlled with CN codes from data processing.



4| Install

Our patented rail system allows for simple and quick installation.





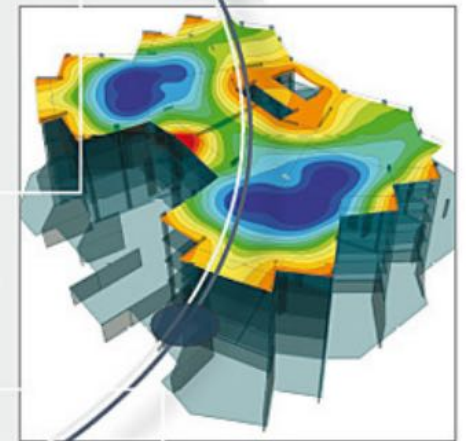
Architecture

Project Management

BIM

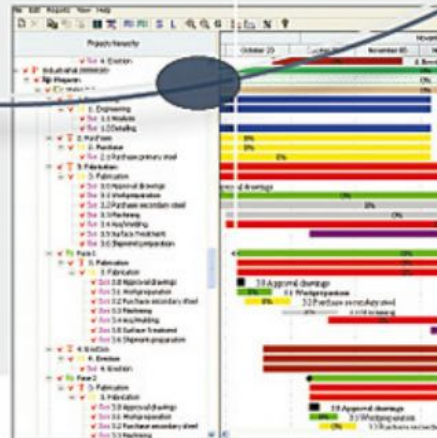
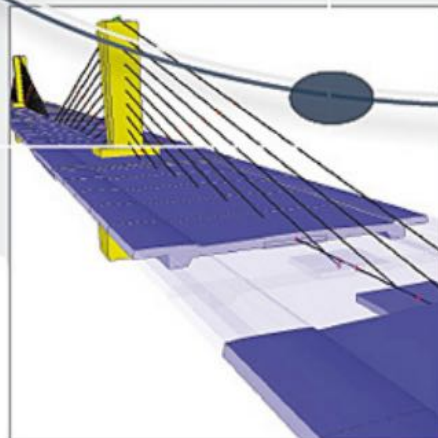
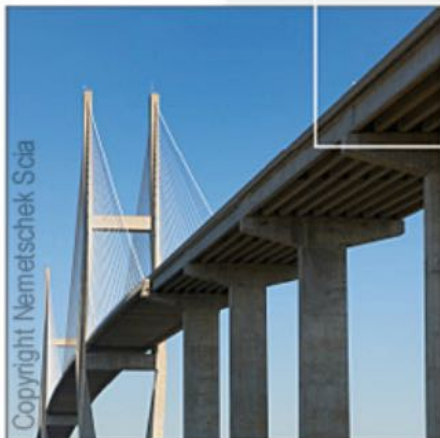
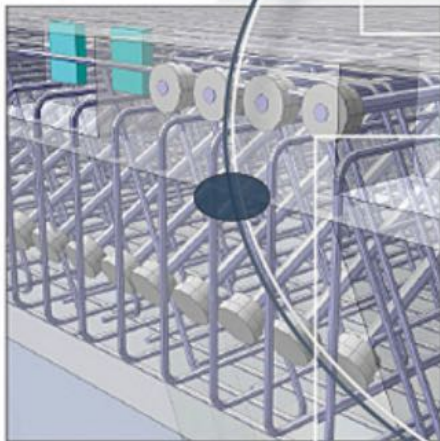
Detailing

Control Institution



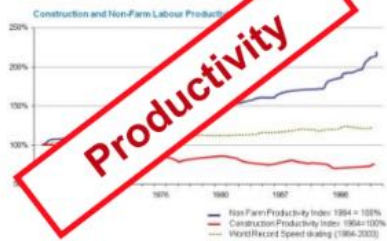
Engineering Design

Fabrication



Declining Productivity

Construction has become less Productive over the last 40 years



Source: US Dept. of Commerce Bureau of Labor Statistics

SKANSKA

35% Waste

Waste is an activity that consumes resources without adding value



SKANSKA

Source: Per Erik Josephson, Chairman

15% Defaults

A significant part of the defects are created in the early stages

The Causes of the 15% Costs in relation to Defaults



SKANSKA

Source: Per Erik Josephson, Chairman

Operational Efficiency



amazon home services

A side-profile view of a silver Amazon Home Services delivery van. The van is parked on a light gray surface against a plain, light gray background. The side of the van features the "amazon home services" logo in white, with the Amazon smile logo integrated into the word "amazon". The van has a large sliding door on the side, a black side mirror, and a black antenna on the roof. The wheels are silver with a multi-spoke design. The front of the van shows the headlight and a portion of the hood.

Construction 2025 Vision

Lower costs

33%

reduction in the initial cost of construction and the whole life cost of built assets

Faster delivery

50%

reduction in the overall time, from inception to completion, for newbuild and refurbished assets

Lower emissions

50%

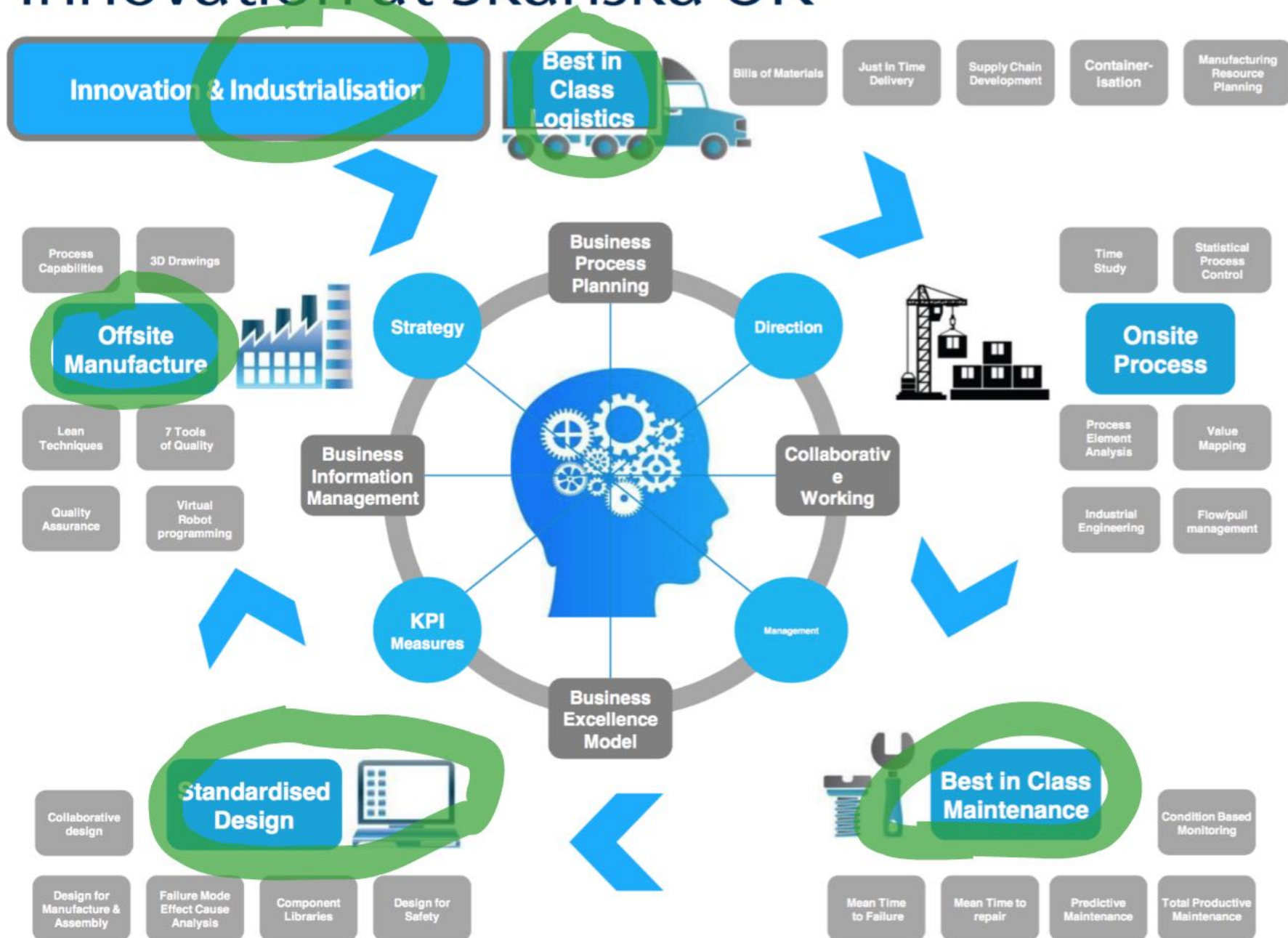
reduction in greenhouse gas emissions in the built environment

Improvement in exports

50%

reduction in the trade gap between total exports and total imports for construction products and materials

Innovation at Skanska UK



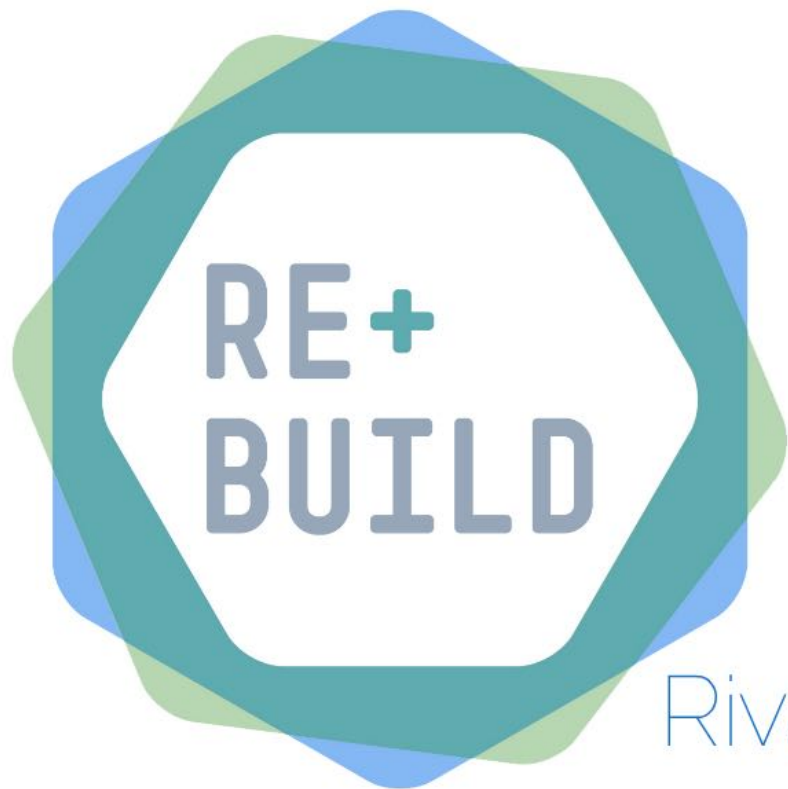
conclusioni

direzione "future proof": crescita e sviluppo

transizione di un sistema

capitali

leva e ibridazione con manifattura



70 **ANCE**
1946 - 2016

ASSOCIAZIONE NAZIONALE
COSTRUTTORI EDILI

Riva del Garda, 21-22 Giugno
Milano, 11 Ottobre

Thomas Miorin

 tmiorin

RE-Lab