



Circularity in the Krommet & KAJ16 building projects

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Vasakronan



Kromet

Lilla Bommen Gothenburg

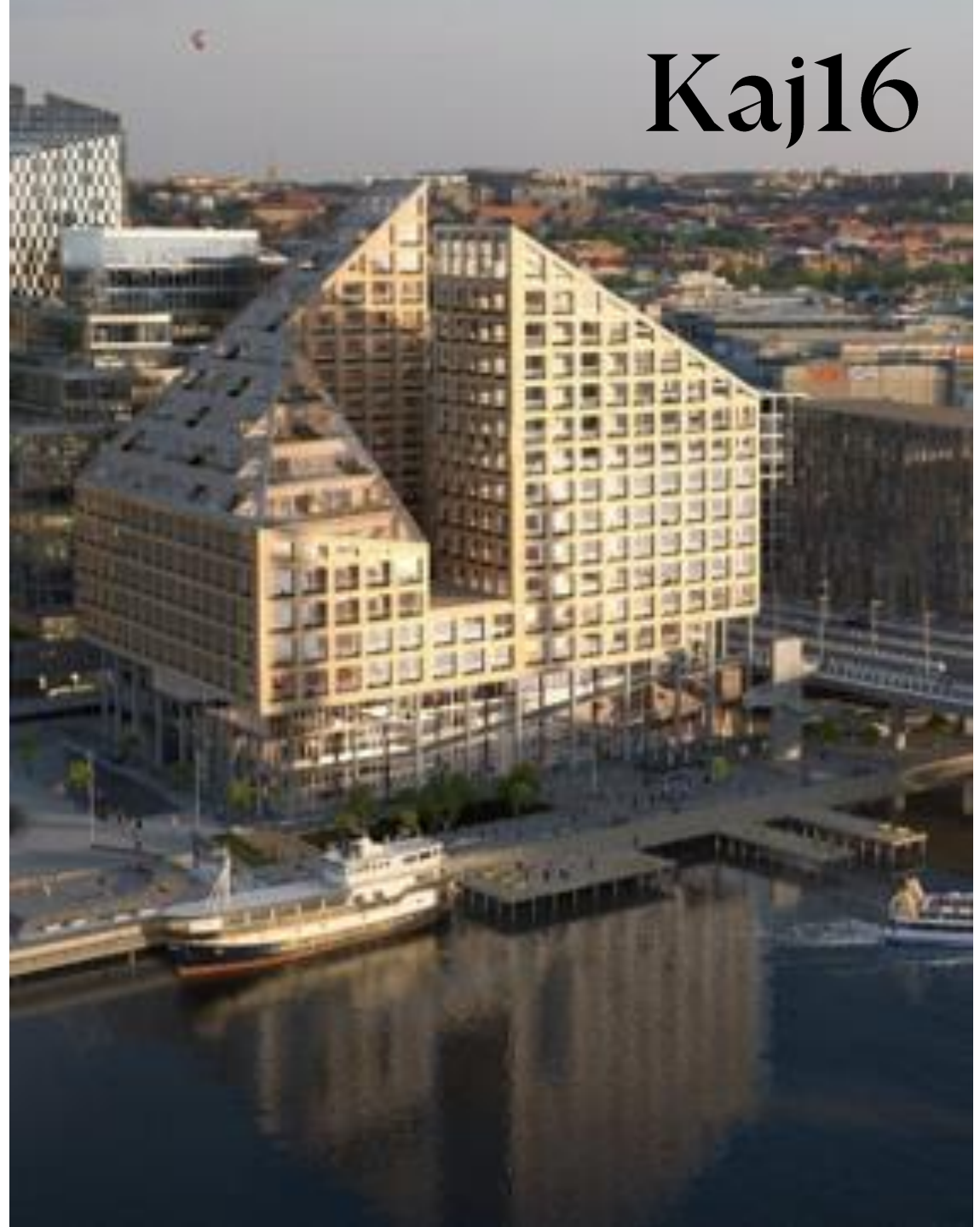
- Office building
- Construction year 1985/86
- Area 11 000 sqm
- Concrete structure (in-situ)



Kromet



Kaj16



Vision



"We decided to make Kromet Vasakronan's largest recycling and recycling project ever. The goal is 100%, ie no material should be wasted."

How to start?

- Plan for recycling – consider time
- Goals for your project –communicate
- Get to know your building
 - Inventory –when and what
- Procurement of contractor
 - Contractors knowledge on “re:subject”
 - Are they used to dealing with reused buildingmaterials
 - Warehouse for reuse & recycling?
- Tools for prioritization and calculation



Inventory of built-in material

Initial inventory - Structure

ELEMENT	MATERIAL	NR.	PLACERING	MÄNGD	KOMMENTAR
Källarbjälklag	Betong	S1	Källare		Platsgjuten, 600-700mm.
Källarytter- väggar	Betong	S2	Källare		Platsgjuten, ca 250mm.
Pelare	Betong	S3	Källare och plan 1-4		Plan 0: 600x400. Plan 1: 400x400. Plan 2-4 350x350
Bjälklag	Betong	S4	Plan 1		Platsgjuten, 320 mm
Bjälklag	Betong	S5	Plan 2		Platsgjuten, 300 mm
Bjälklag	Betong	S6	Plan 3		Platsgjuten, 300mm
Bjälklag	Betong	S7	Plan 4		Platsgjuten 300mm
Bjälklag	Betong	S8	Plan 5		Platsgjuten, 320mm
Stålstomme	Stålbalkar	S9	Plan 5 tak		IPE240 c/c 4800
Stålstomme	Stålpelare	S10	Plan 5		HEA160, HEA120, C/C 4800
Takplåt	Trapetsprofile- rad plåt	S11	Tak		TP110/0,5 Dobel
Skyddsrum	Betong	S12	Väggar, källare		2 st skyddsrum á 180 platser



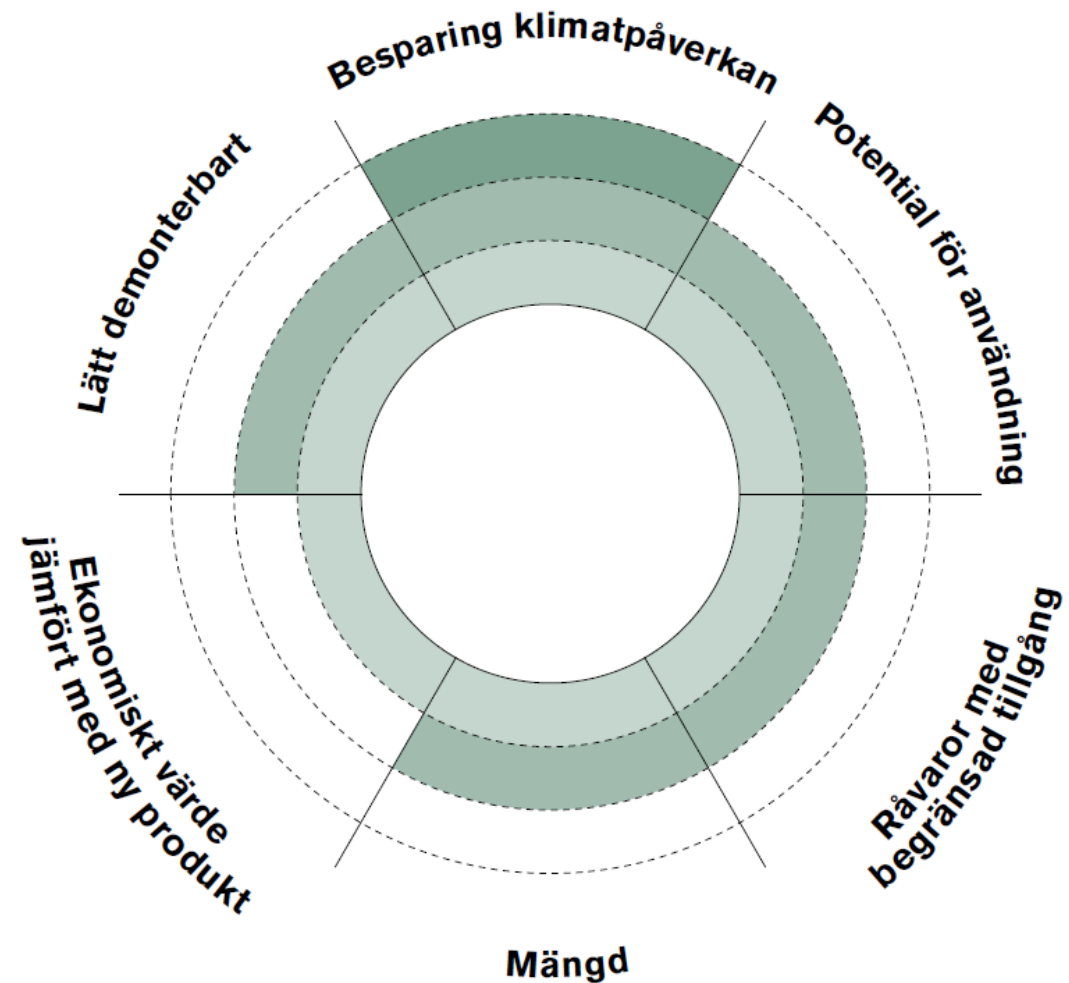
Prioritising material with high potential-high impact

Reuse:

- Metal Facade
- Facade elements of concrete
- Glass - windows, meeting rooms
- Installations

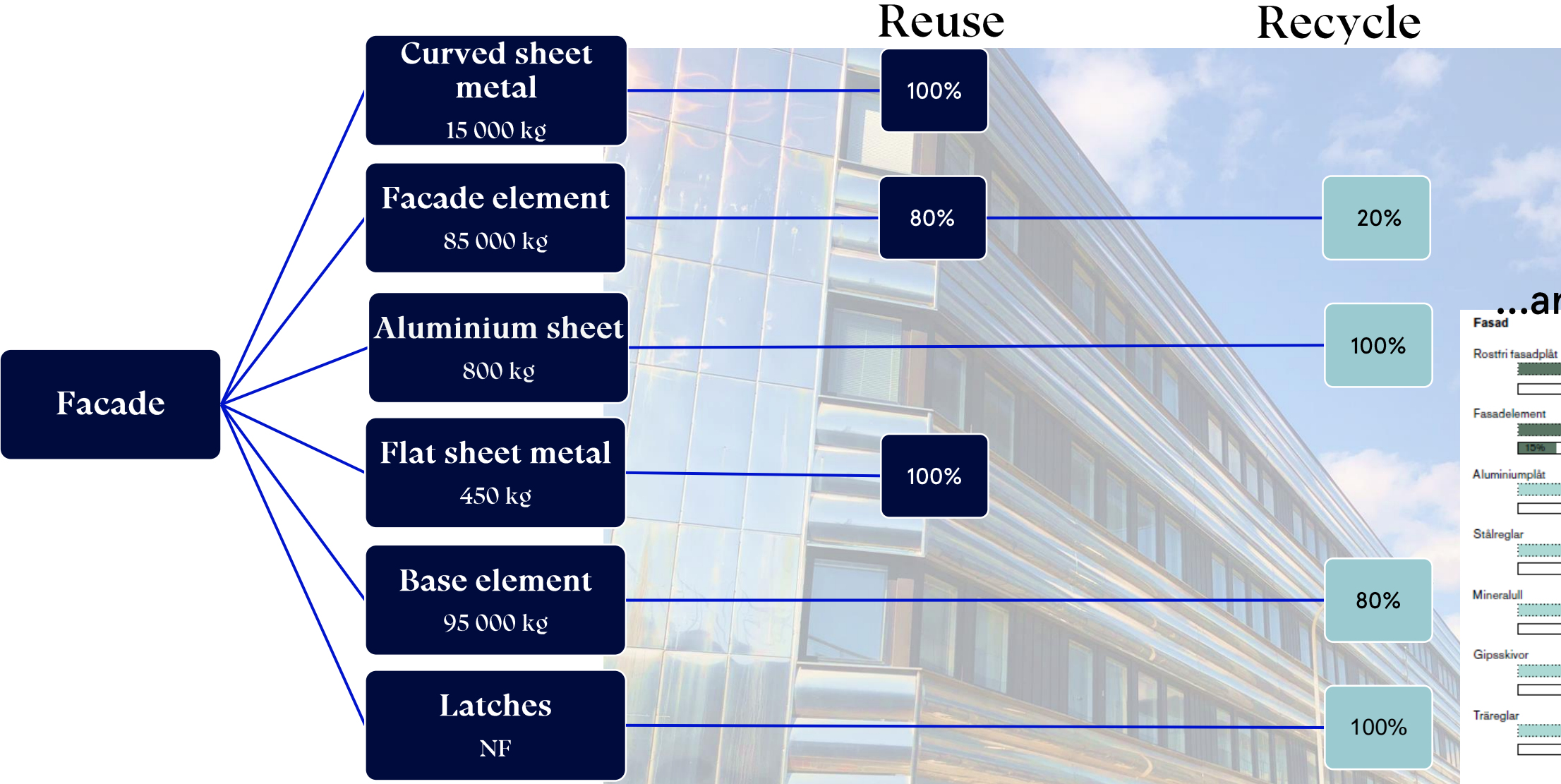
Recycling:

- In-situ cast concrete
- Steel, metals
- Insulation
- Gypsum boards

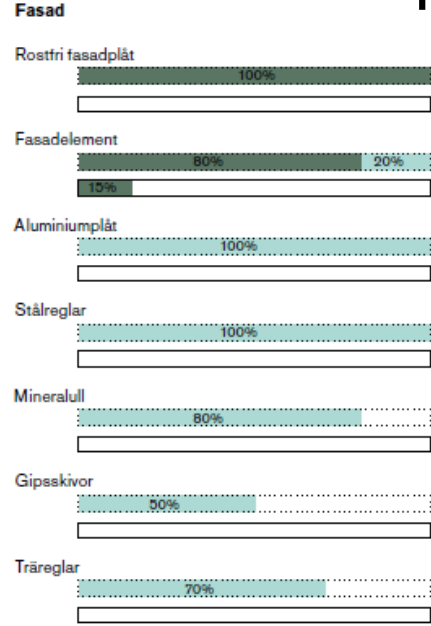


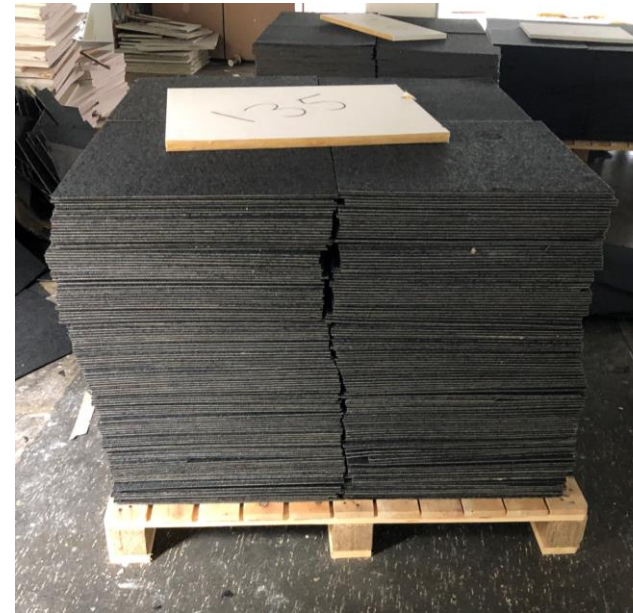
Exampel av evaluation diagram

Example Break down goal



...and follow up





Results

- 2.000 sqm facade sheet
 - ca 150 m² facade element
 - 160 windows
 - 200 doors
 - 300 interior glass sections
 - 4 entrance doors
 - 2400 sqm ceiling tiles
 - 1350 m² flooring textile
 - 50 st kitchen cabinets
 - Staircases
- 400 m cable ladders
 - 60 toilet units of wc-porslin
- Taps, pumps cooling baffles, ventilation ducts, silencer, lighting fixtures, wall socket, switches, motion monitors etc etc.....

106 ton

återbrukat material

203 ton CO₂e

minskade genom återbruk

**98% of building
reused or recycled**



Insights building material

Hard to dismantle:

- Steel frame/construction
- Roofing, metal sheets
- Sandwich elements facade/roof

Hard to reuse:

- 35-year-old installations, such as ventilation ducts, radiators, window sill ducts.
- 35 year old windows

Difficult to recycle:

- Wood products





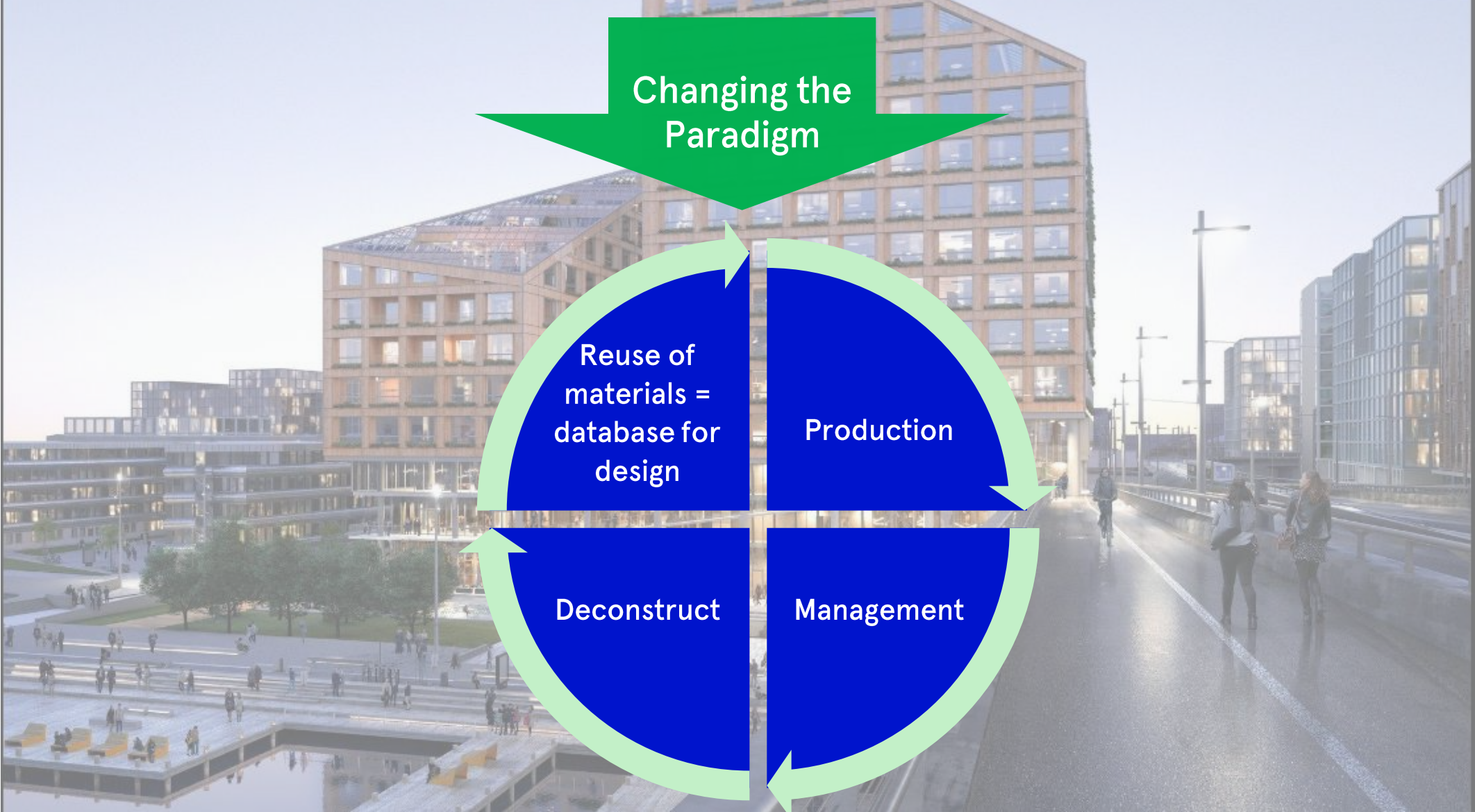
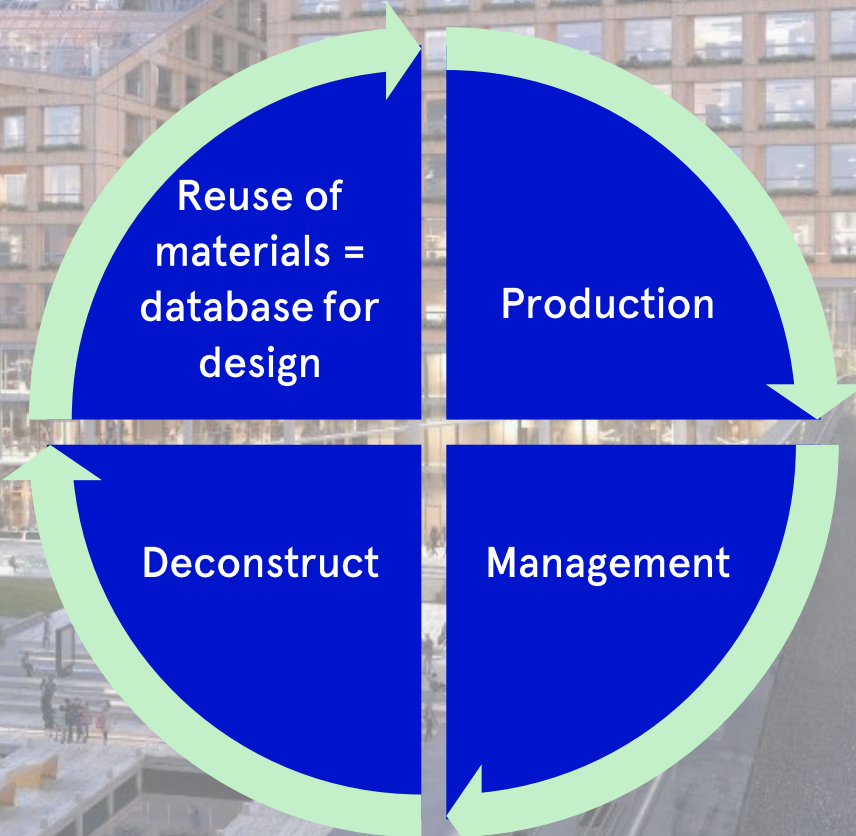
Reuse of building material, some examples



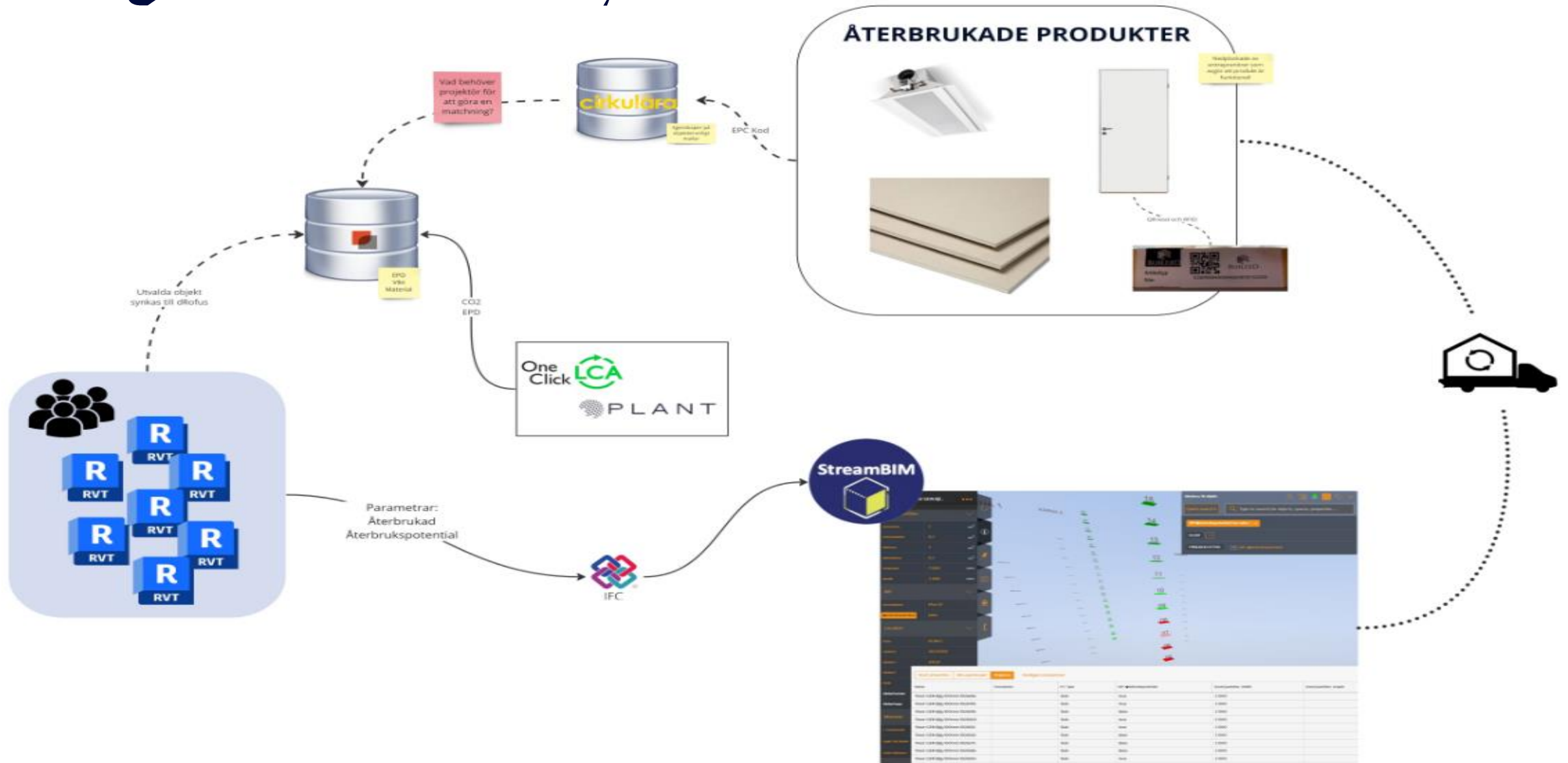
Reuse of building material, some examples

Moving forward – reusing material in Kaj16





Digitalisation is key!



Thank
you!

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