Henning Larsen

Pioneering urbanism and life-centered design

ULI Change Summit, October 23

Signe Kongebro, Global Design Director, Urbanism
Henning Larsen


“Cities are where the climate battle largely will be won or lost”
- UN Secretary-General
António Guterres, Oct 2019


What is the role of urban design in an uncertain world?

VB45


It is in urbanism
that we imagine
what we as a society
can become
Visualization © Vivid Vision
Henning
Larsen

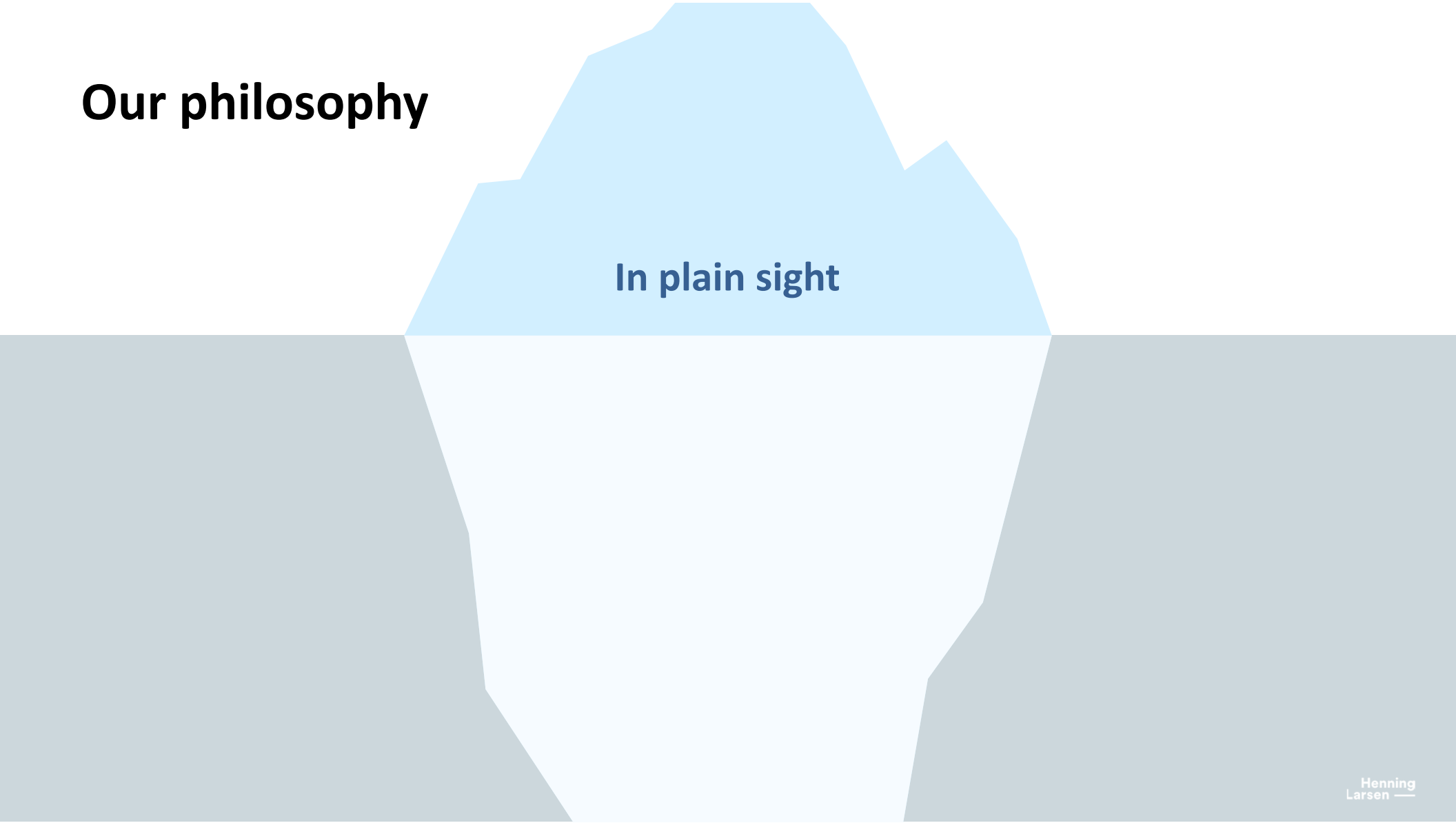
Slide 4

VB45 Added HL logo and visualization credit
Victoria Bell, 26/04/2023

Lilac Tree

Oak Tree

Our philosophy



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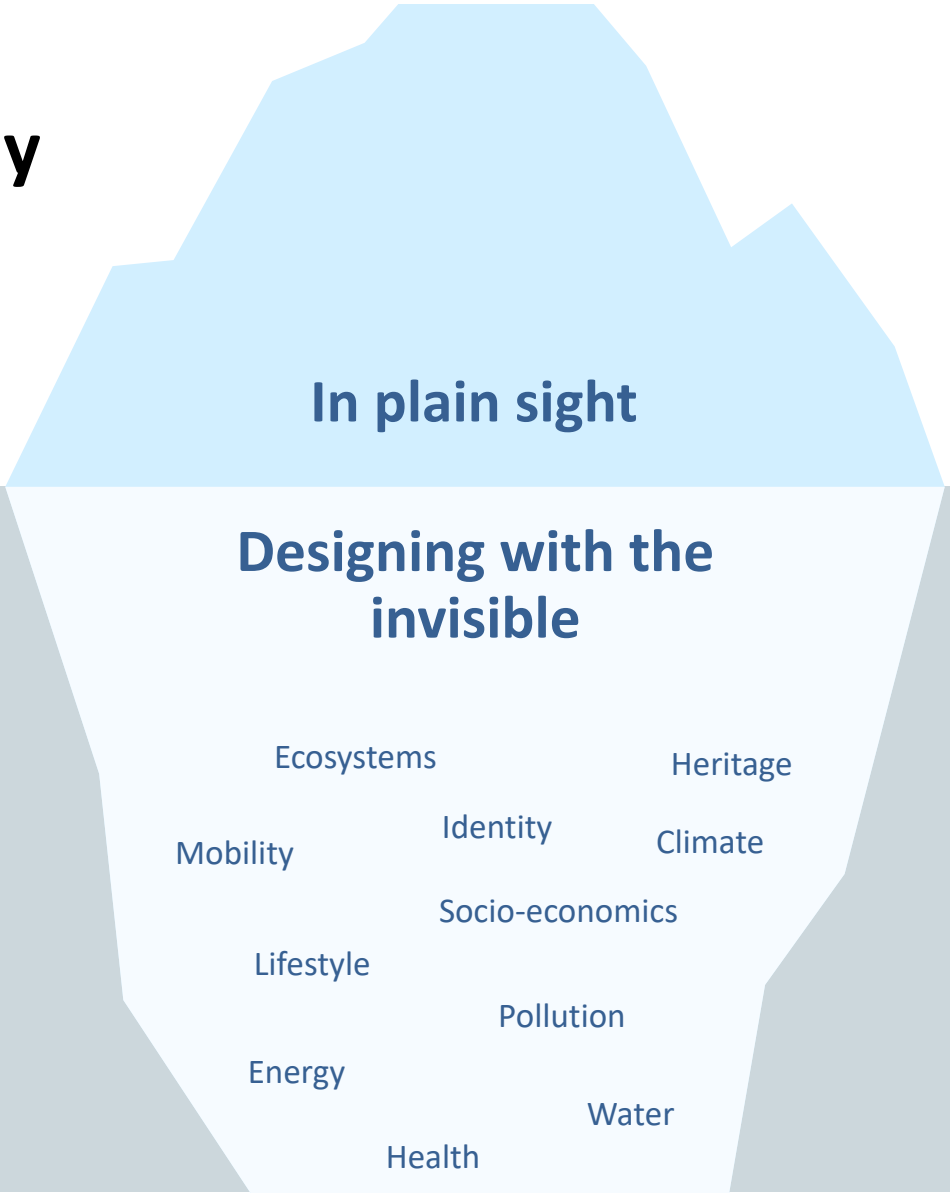
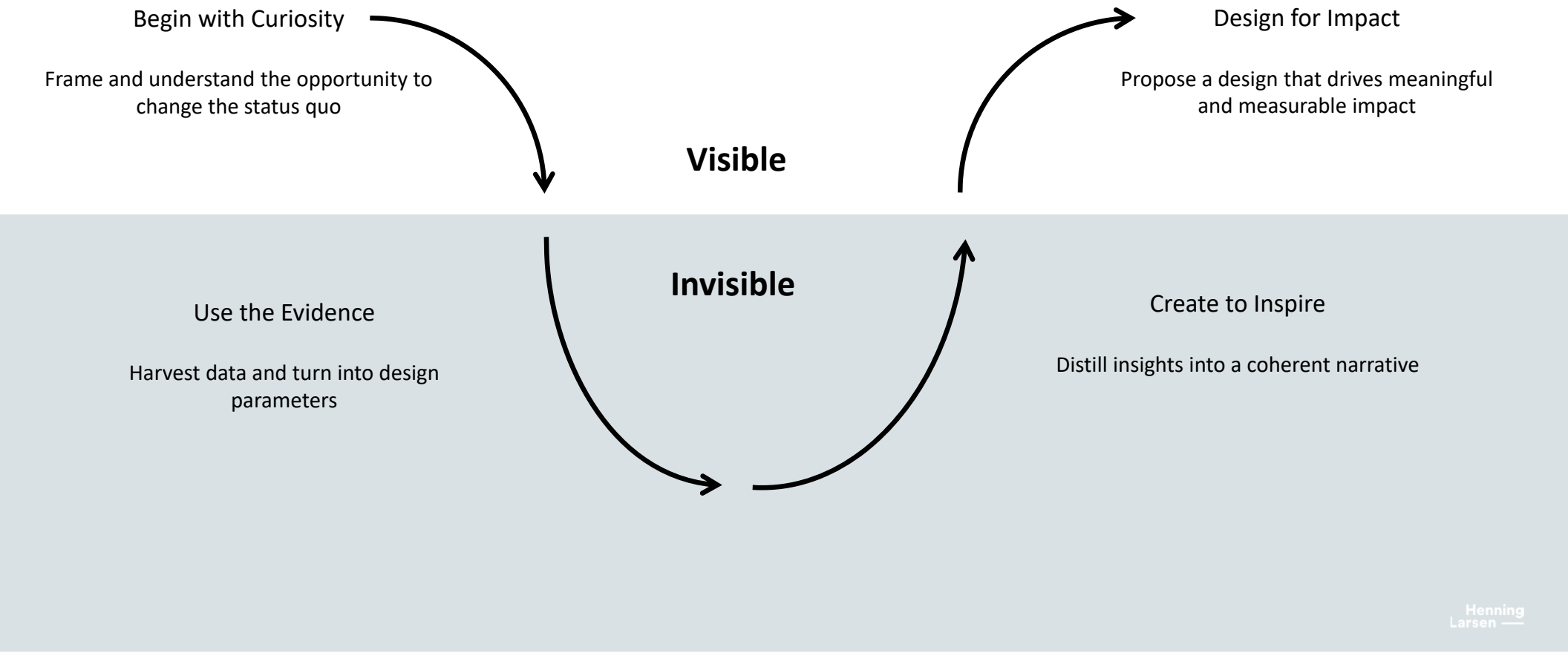
Our philosophy



Our philosophy



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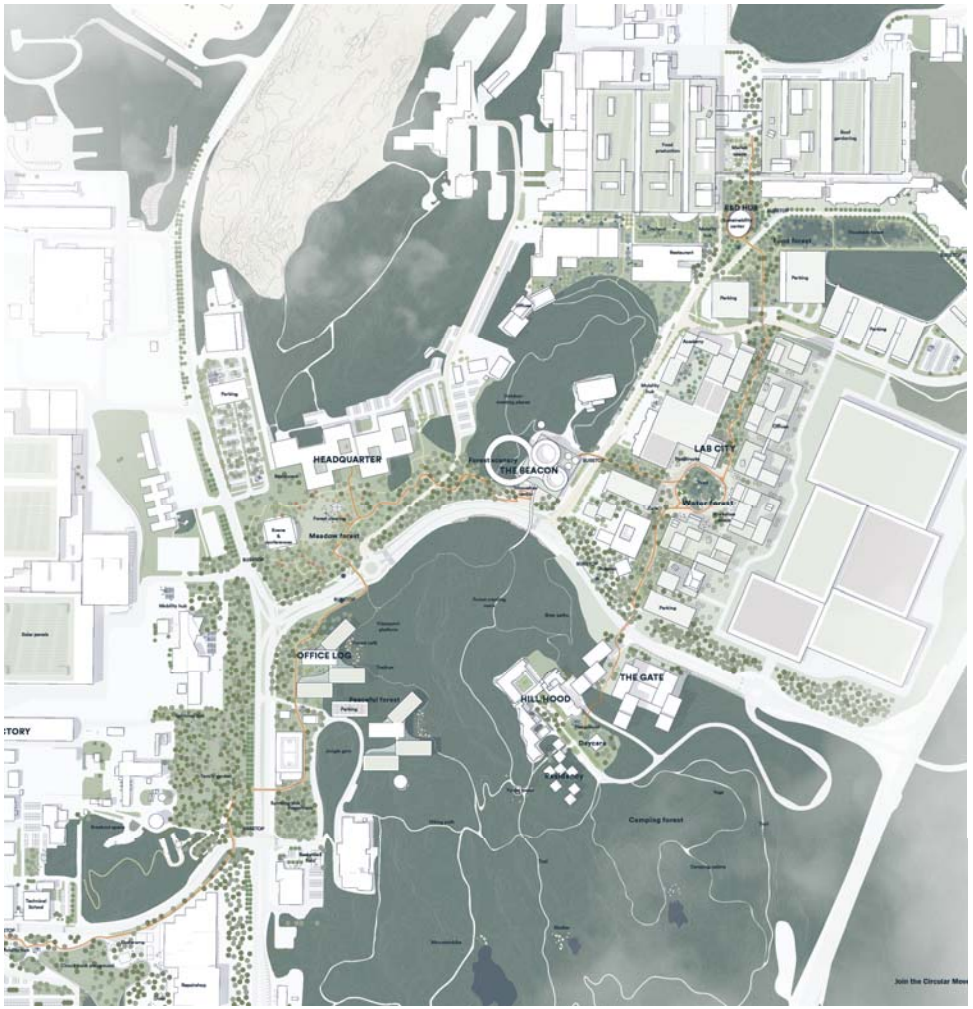
Designing with the invisible

We translate systems into life-centric urban design to create a desirable life for all

VB4



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Slide 12

VB4 added logo to the footer
Victoria Bell, 26/04/2023

VB5

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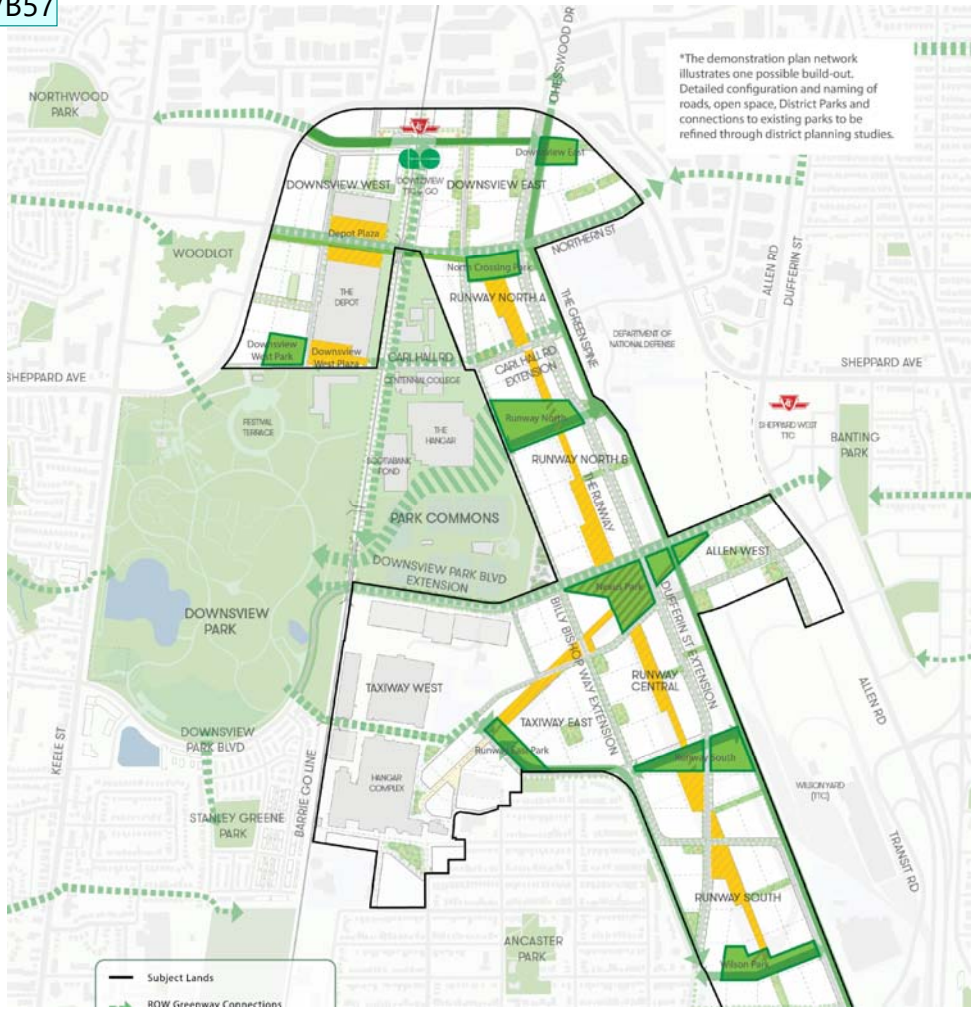
Slide 13

VB5 Added logo to the footer

Victoria Bell, 26/04/2023

VB6

VB57



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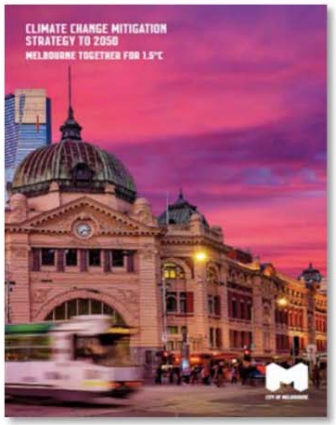
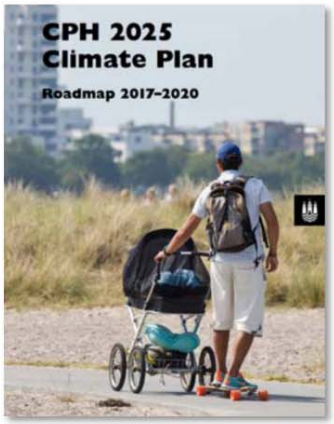
Slide 14

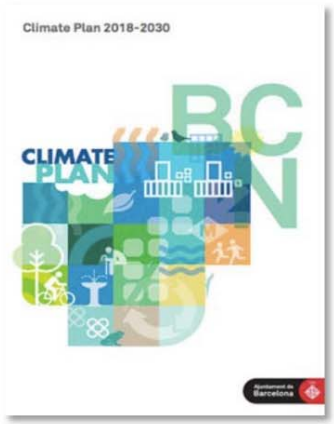
VB6 Added logo to the footer
Victoria Bell, 26/04/2023

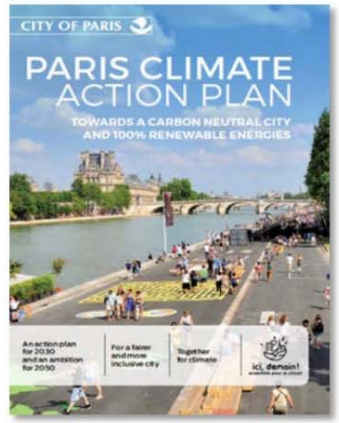
VB57 According to our portfolio drive, the visualization on the right is confidential, but perhaps you have a more recent update.
Victoria Bell, 26/04/2023

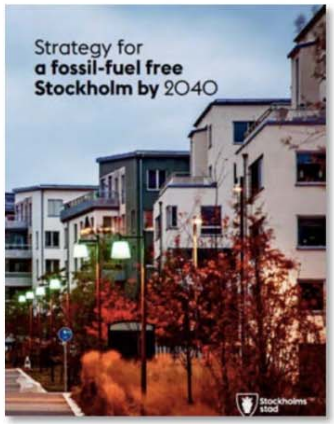
More than 250 cities globally has a climate plan

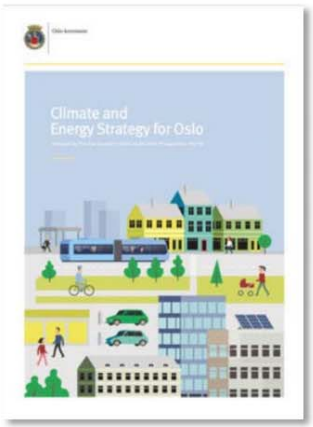


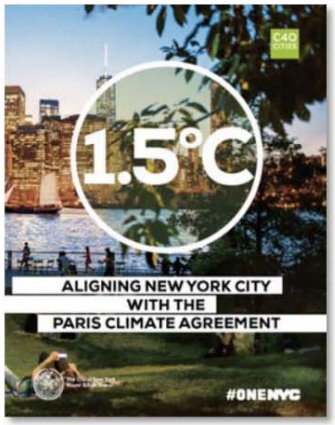








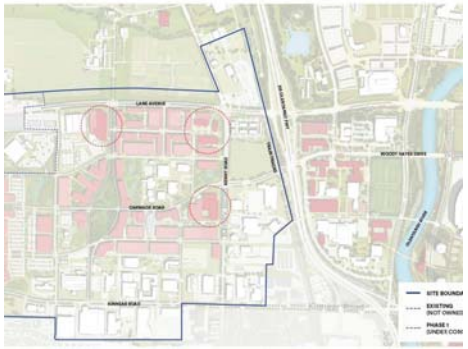




C40

Henning Larsen ongoing large scale projects

Lim Chu Kang, Food production, Singapore



Ohio State University, innovation district, Tishman Speyer, US

Pembroke harbour front, Ireland

Fælledby, Denmark

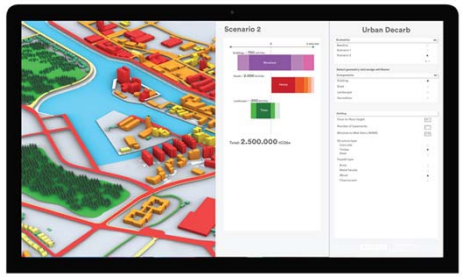
Aarhus rewater, DK

Verona main station, TOD, Italy

Downsview, Toronto, Canada

Gdansk Imperial Shipyard, Poland

Applied research for larger scale



Urban Decarb

GeoPlant

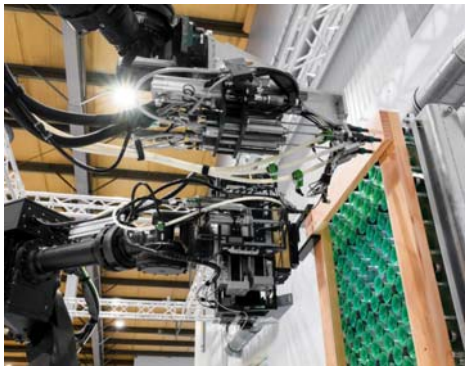
Green Scenario

Galago

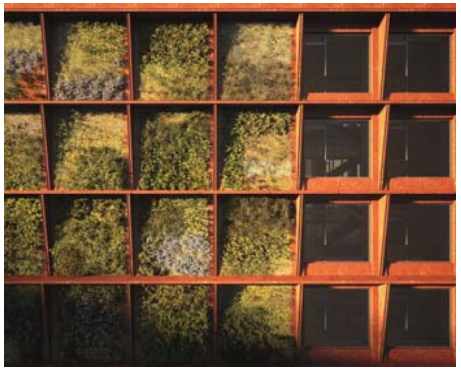
1 to 1 prototyping (client & industry-driven innovation)

3Dprint, RowHouses

Straw school building, Felballe Friskole



Robotic Manufacturing, EarthShot



Nordø, Byggros

Open source

Henning Larsen
121.434 følgere
2md. • Redigeret •

The construction industry has an outsized impact on the environment but it also has enormous potential to be at the forefront of change.

... se mere

Se oversættelse

Kasper Kyndesen og 243 til

4 kommentarer · 9 genopslag

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121.434 følgere
2md. • Redigeret •

On Monday, we sailed along Copenhagen's canals to Nordø, marking the perfect ending to the first day of UIA World Congress of Architects CPH 2023.

... se mere

Se oversættelse

Du og 413 til

2 kommentarer · 5 genopslag

Henning Larsen

Urban Decarb™


Every Dane accounts for 13
ton of CO2e per year


In 2022 we configurated
2000 tons of CO2e/designer
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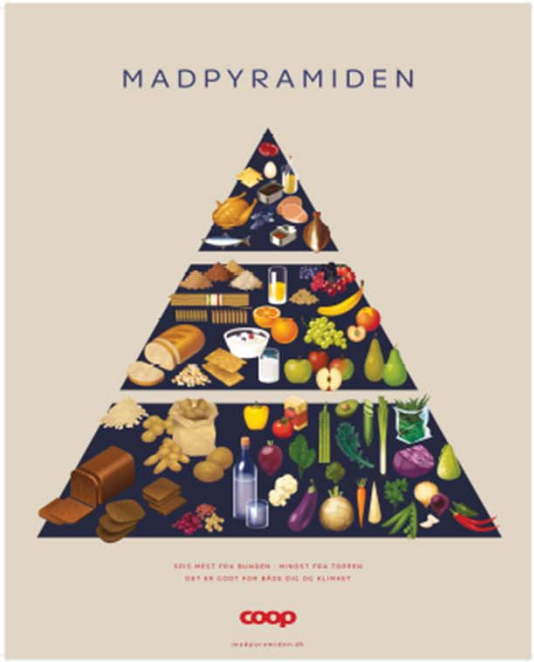
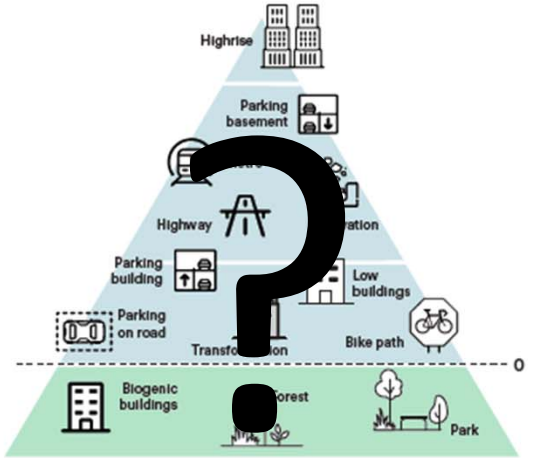
VB22

What should we prioritize to build and what should we limit?



Buildings material pyramid on C02e

Urbansim material pyramid on CO2e



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VB22 Added logo to the footer
Victoria Bell, 26/04/2023

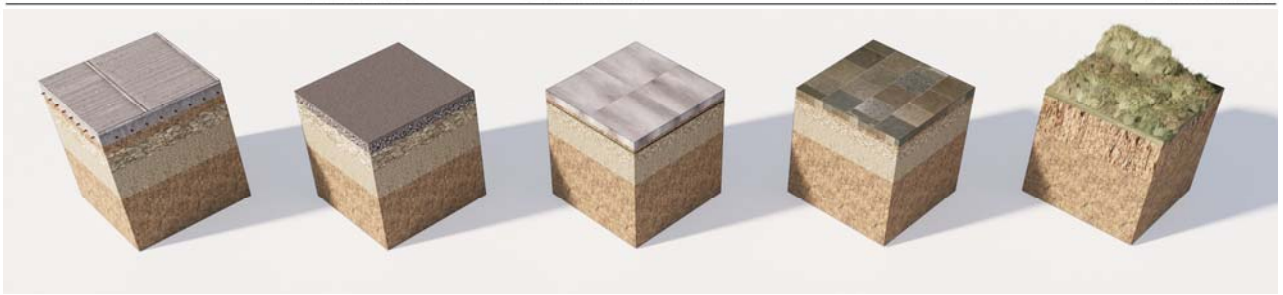
New materials - Flooring

-6 to 2 kg CO2e / m²	-5 to -1,6 kg CO2e / m²	-3 to 3 kg CO2e / m²	5 to 13 kg CO2e / m²	8 to 12 kg CO2e / m²	13 to 17 kg CO2e / m²
CORK TILES	**WOOD LAMINATE**	**LINOLEUM**	**CARPET TILE**	**VINYL TILE**	**RUBBER**

Resued materials - Bricks

0,52 kg CO2e	25,8 kg CO2e	36 kg CO2e	47,9 kg CO2e	50,1 kg CO2e	59,7 kg CO2e
Used bricks, Gamle Mursten ApS	**Pantheon Nordic and Colosseum Nordic, Komproment**	**Cover, Petersen Tegl A/S**	**Grey Bricks, Randers Tegl**	**Yellow Brick, Matzen Tegl**	**D-bricks, Petersen Tegl A/S**
type: Used bricks (whole and half) thickness: 108 mm density: 1800kg/m3 CO2 pr. tonne: 2,7 kg lifetime: ? EPD no: MD-16007-EN	type: Clay Tileds thickness: 35 mm density: 1600 kg/m3 CO2 pr. tonne: 461 kg lifetime: 150 years EPD no: MD-21020-EN	type: yellow- and red-firing clay, German and British clay thickness: 37 mm density: 1825 kg/m3 CO2 pr. tonne: 533 kg lifetime: 150 years EPD no: MD-19006-EN	type: grey, yellow, and red firing clay thickness: 108mm density: 1825kg/m3 CO2 pr. tonne: 243 kg lifetime: 150 years EPD no: MD-17002-EN_rev1	type: Yellow-firing clay thickness: 108 mm density: 1600 kg/m3 CO2 pr. tonne: 290 kg lifetime: 150 years EPD no: MD-20044-EN	type: yellow- and red-firing clay, German and British clay thickness: 108 mm density: 1825 kg/m3 CO2 pr. tonne: 303 kg lifetime: 150 years EPD no: MD-19006-EN

Urban pavement



In situ concrete incl steel (150mm)	Asphalt	Concrete tile – 7 cm	Granit (fra EU)	Park
+80 kgCO2eq/m2	**+17 kgCO2eq/m2**	**+30 kgCO2eq/m2**	**+30 kgCO2eq/m2**	-4 kgCO2eq/m2 /Y -200 kgCO2eq/m2/50Y
Life span : 50 years	Life span : 15 years	Life span : 25years	Life span : 50 years	

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Buildings

Parking

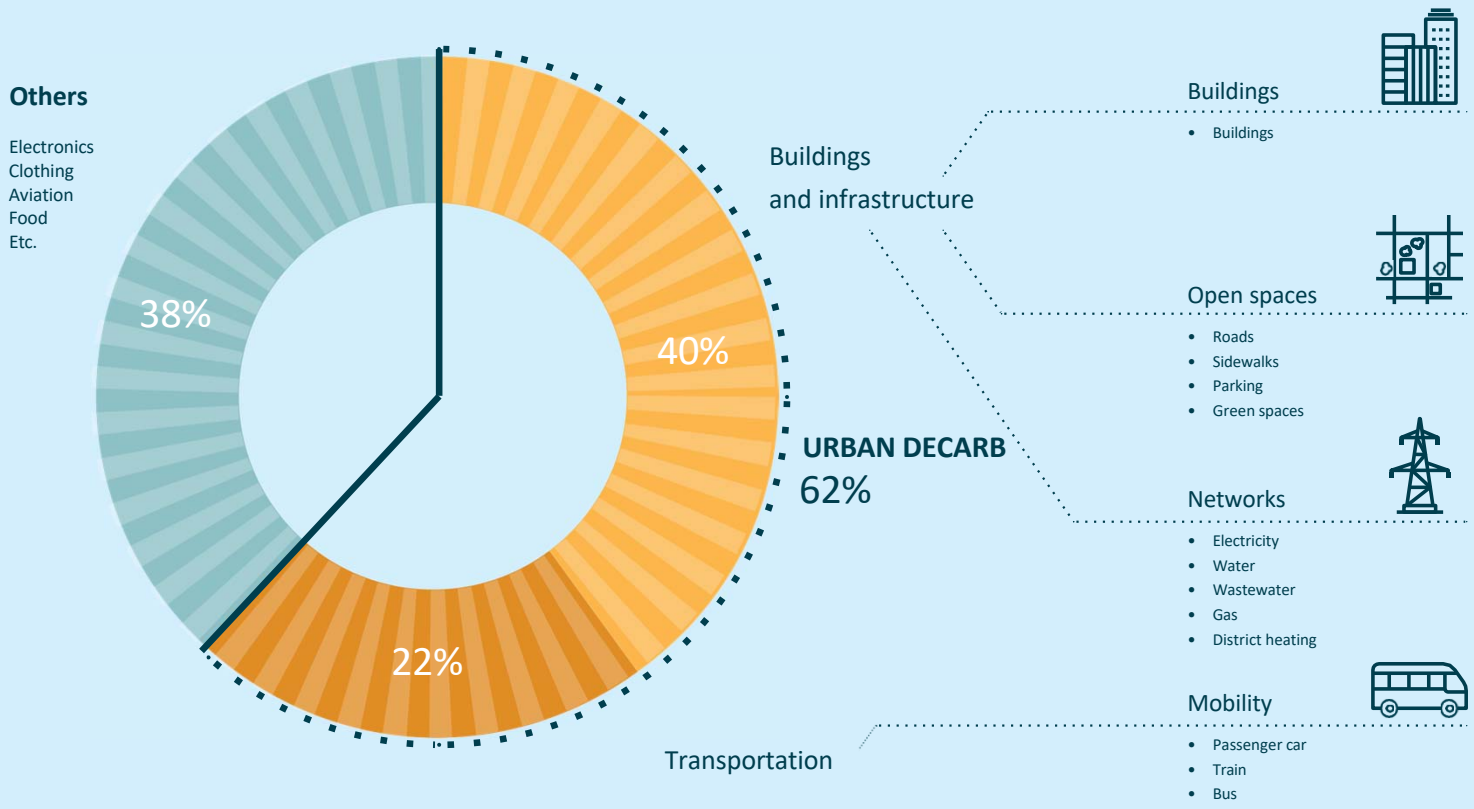
Roads

Landscape

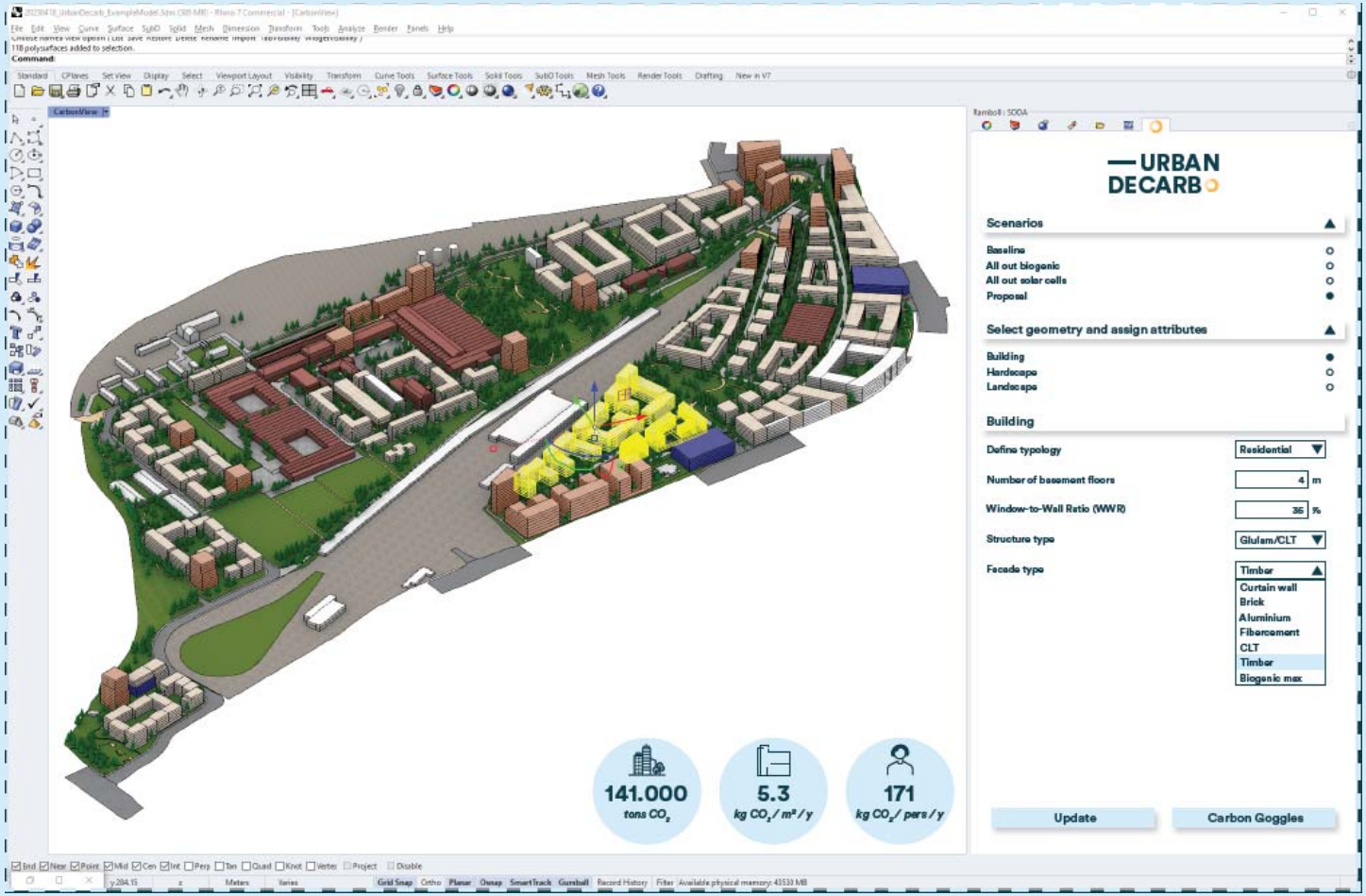
Technical infrastructure

Excavation

1. What are the most carbon intensive parts of urbanism?



Step 2: Assign attributes to visualize carbon footprint



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Step 3: Scenario comparison - Examples

"Conventional"

- Concrete and brick buildings
- No transformation
- Parking below ground
- Primarily hardscapes

Transformation & Biogenic

41%

- Hybrid and biogenic buildings
- Transformation where possible
- Parking above ground
- Primarily hardscapes

Trees & Landscape

45%

- Reduced parking
- Primarily landscapes and trees

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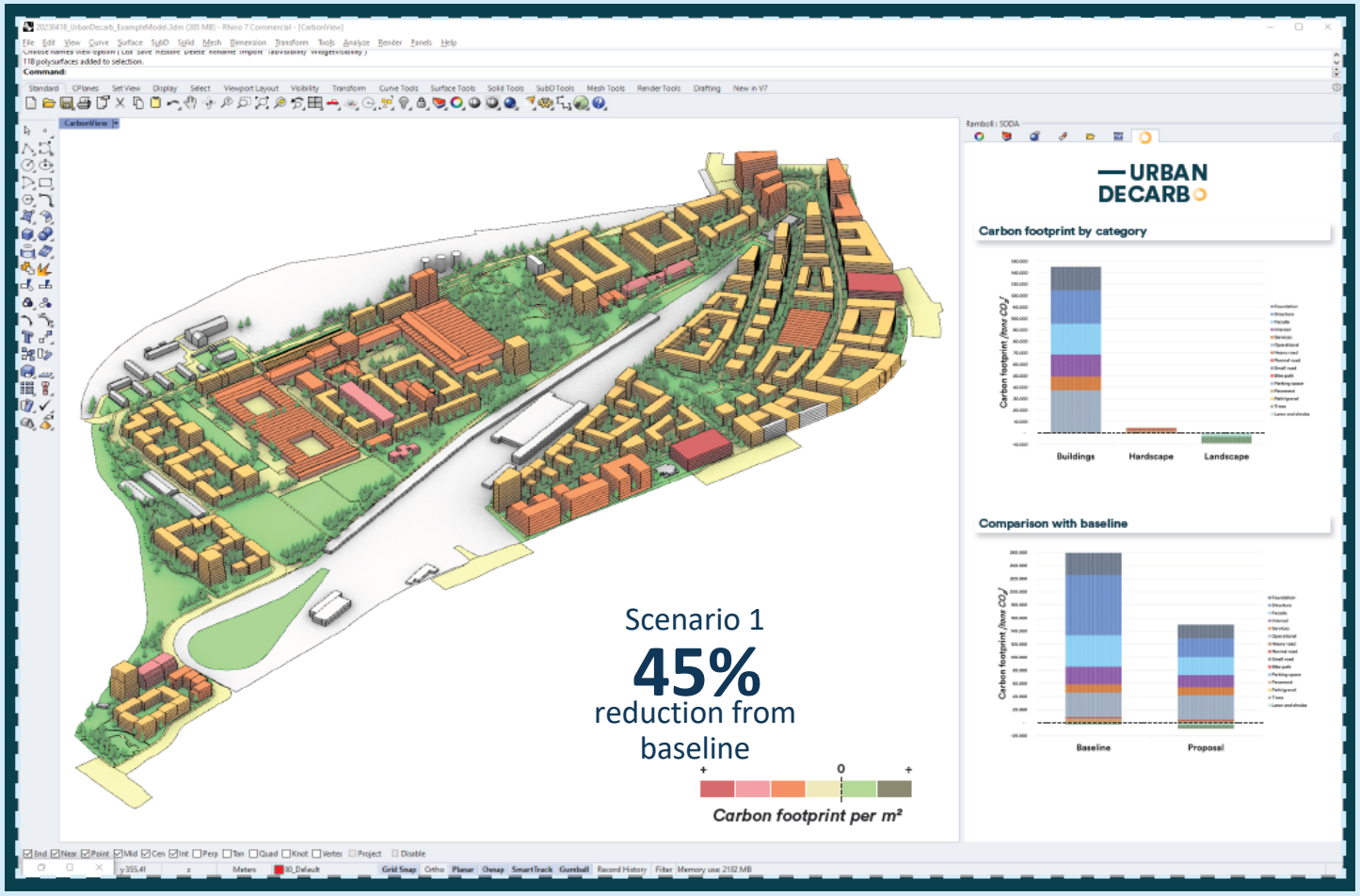
Step 4: Visualization “Carbon Googles”

Build densification 400 % **Total: 16.500 people**

Plotratio from 23% to 101%

New Build: 506.000 m2
Repurposed buildings: 72.900 m2

Grass: 150 %
Trees: + 330 %



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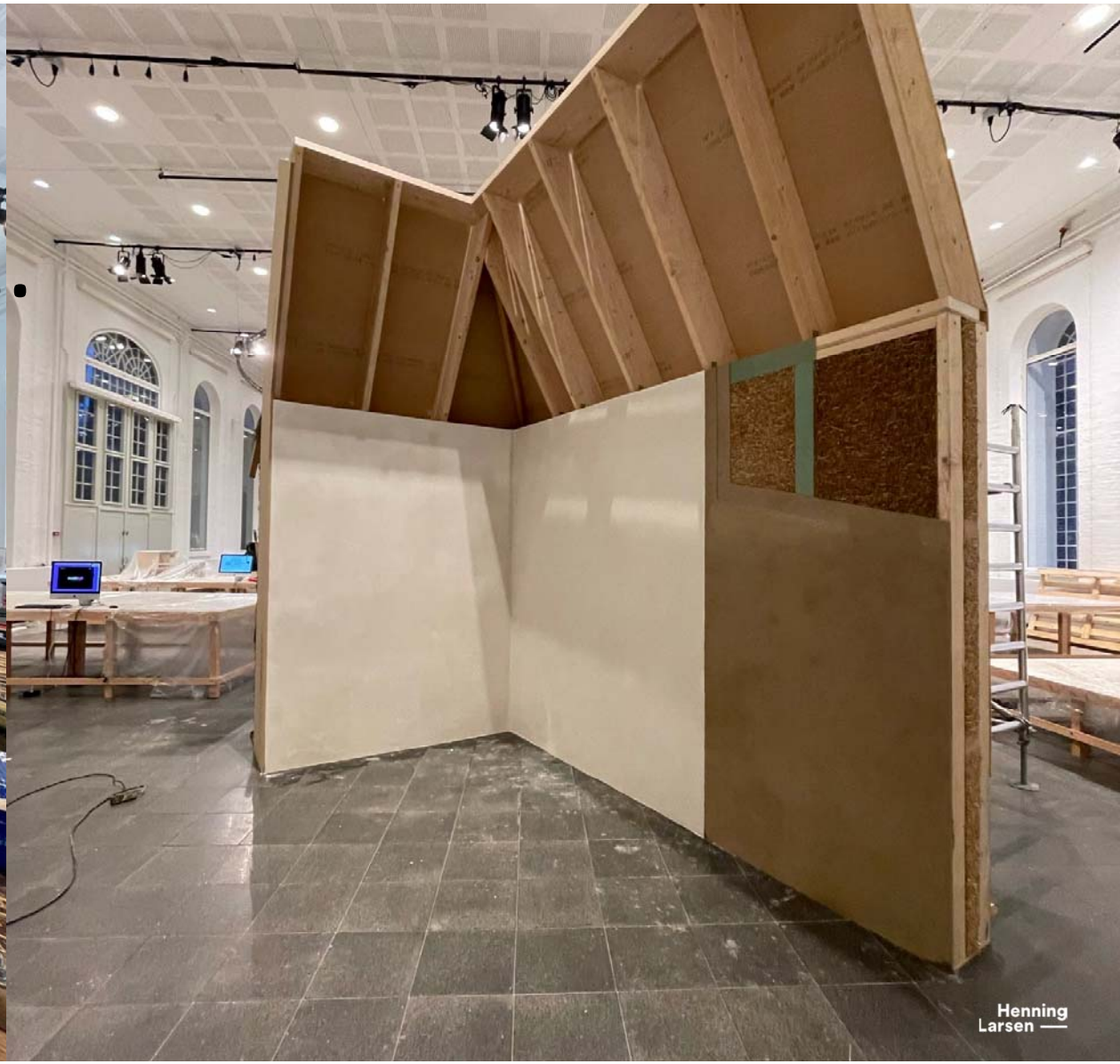
Scale matters

VB46

Research and development...



Slide 31

VB46 Added HL logo
Victoria Bell, 26/04/2023

VB47

Slide 32

VB47 Added HL logo
Victoria Bell, 26/04/2023

VB48


Figure 1. 3D view A, panels
Figure 2. 3D view 1, panels
Figure 5. West side view_1
Figure 3. North side view
Figure 7. East side view_1
Figure 6. West side view_2
Figure 4. South side view
Figure 8. East side view_2
Henning Larsen

Slide 33

VB48 Added HL logo
Victoria Bell, 26/04/2023

A ‘hippie material’ made into an industrial building product

Henning Larsen — VB49

Slide 34

VB49 Added HL logo
Victoria Bell, 26/04/2023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Larsen


Photo © Rasmus Hjortshøj
Henning Larsen

Henning Larsen
121.434 følgere
4md. • Redigeret •

6.7 kgCO2eq/m2/year. That's the annual carbon footprint of the extension to Feldballe School. How did we get there?

... se mere

Se oversættelse

906 8 kommentarer • 16 genopslag

Henning Larsen
121.434 følgere
3d •

At present, construction waste accounts for half of the world's solid waste, 90% of which comes from demolition.

... se mere

Se oversættelse

Magnus Reffs Kramhøft og 1.129 til 2 kommentarer • 26 genopslag

Henning Larsen
121.472 følgere
3md. •

How it started vs. how it's going.

Construction is underway at Sundby School - the first primary school in De ... se mere

Se oversættelse

Cameron Clarke og 614 til

2 kommentarer • 14 genopslag

Henning Larsen
121.434 følgere
1u •

"We start by embedding sustainability and data-driven design into the core narrative of our early design concepts. This way, we can present our approach to clients from the very beginning, rather than adding sustainability as an afterthought. " ... se mere

Se oversættelse

Karolina Lepa - Stewart og 1.413 til

11 kommentarer • 42 genopslag

Henning Larsen
121.434 følgere
3u •

#BTS at WoV

World of Volvo is currently under construction in Gothenburg, Sweden. ... se mere

Se oversættelse

Du og 912 til

13 kommentarer • 14 genopslag

Synes godt om | Kommenter | Slå op igen | Send

Riccardo Pedroni • 1.
Senior Associate at Ramboll
1u •

Week 07 and 08 #Marmormolen Progress

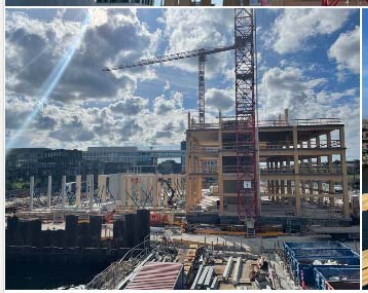
In these two weeks we have started a new module while we go up!
Now the catch-up game starts!

And first time our Building Services Specialists climbed up on the timber levels:
Maria Tyrychtrova Nielsen, Kenken Aoshima and Lewis Hunter were quite excited!

#timber #timberconstruction #sustainablechange #sustainableconstruction

AP Pension

Se oversættelse



Du og 67 til

1 kommentar • 3 genopslag

Henning Larsen
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1md. •

We are designing the world's largest wood city in Stockholm, Sweden.

Spanning 25 city blocks in the south of the capital, this monumental mass · ... se mere

Se oversættelse

Anders Park og 2.429 til

28 kommentarer · 36 genopslag

Henning Larsen
121.434 følgere
9md. •

Located west of the center of Reims, the site chosen for the new NEOMA school is part of a neighborhood in transfer: Port Colbert.

... se mere

Se oversættelse

1.208

6 kommentarer · 15 genopslag

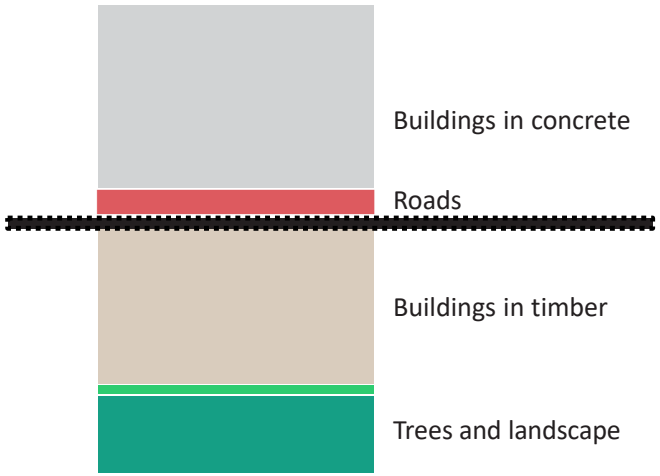

Ørestad Nord
Amager Fælled
Sydhavn
Vejlands
Kvarter
Henning
Larsen

N

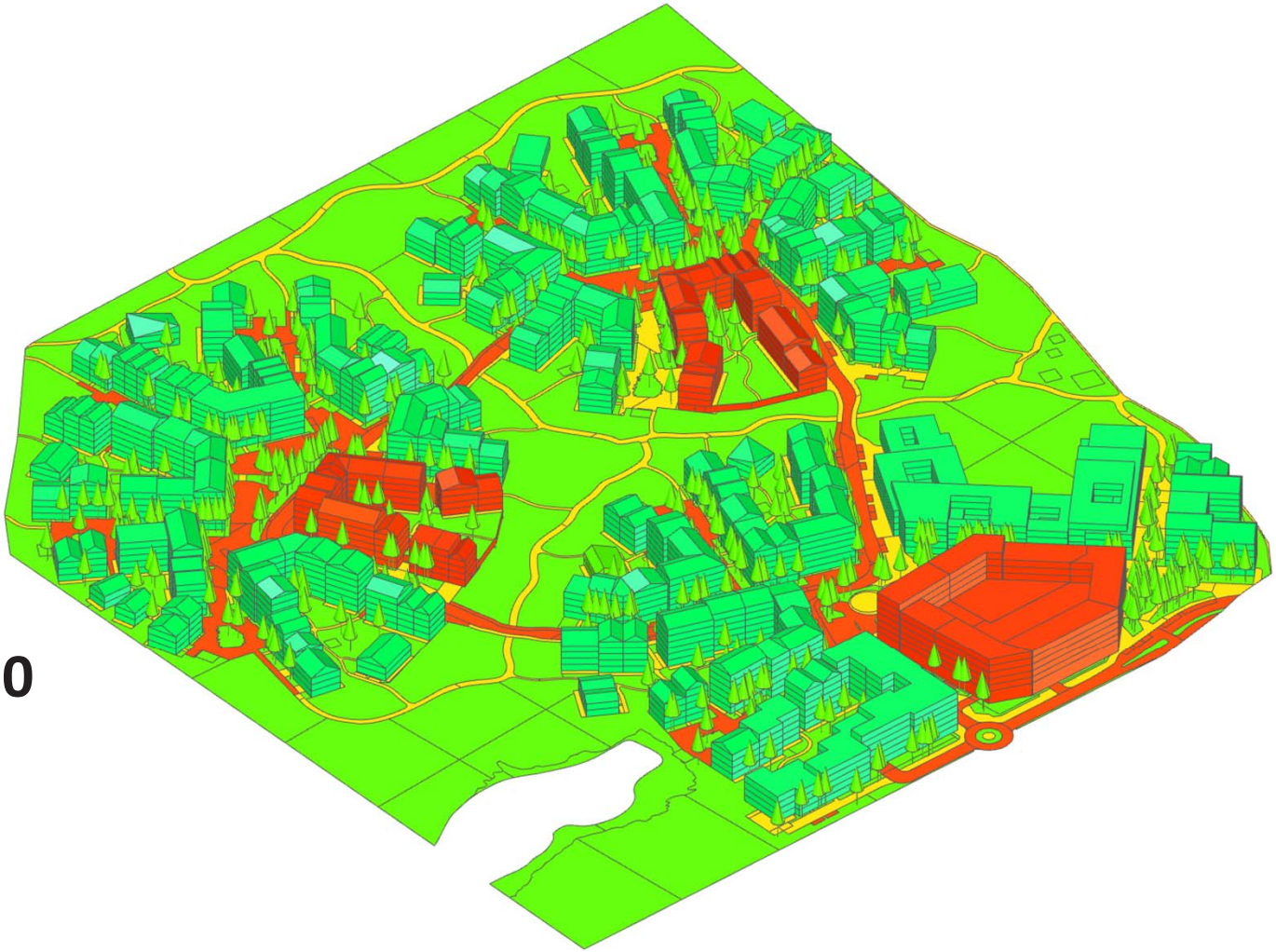
Henning Larsen

Carbon Googles

Reduces 62.800 tons of upfront carbon vs conventional



(A1-A3) 50 years



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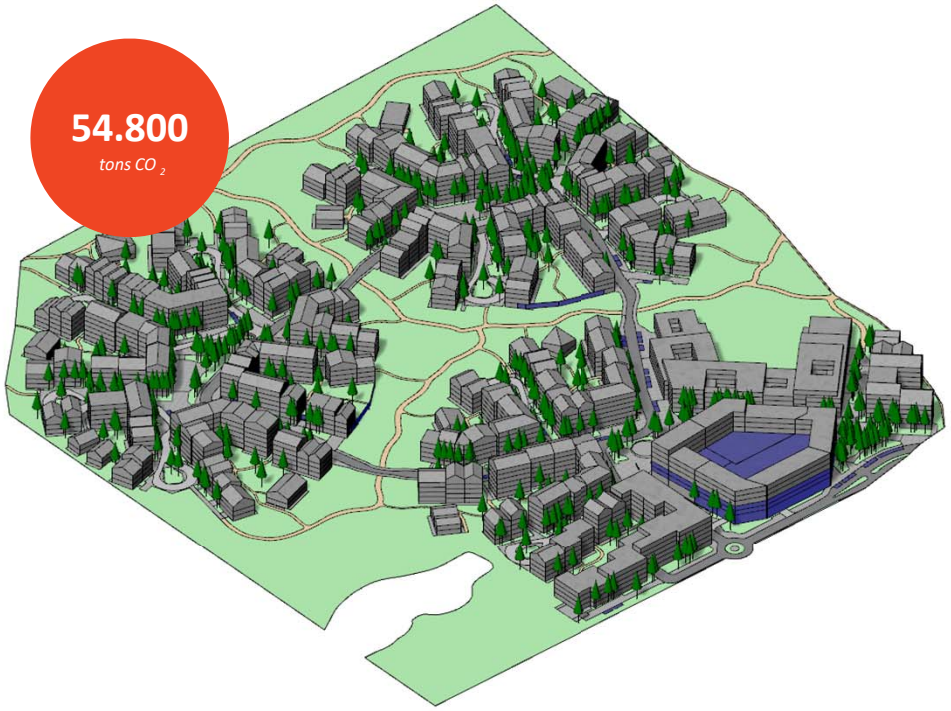
Conventional

+ CLT
+ Timber cladding
+ No burning after 50 years



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Living together


The future urbanim starts in
unleashing hidden contextual
resources


VB58
…and decarbonizing through design

Slide 47

VB58 decarbonize changed to decarbonizing
Victoria Bell, 26/04/2023

…by recycling through transformation of existing buildings

…and reducing through biogenics and increased urban nature

Henning Larsen

Thank you

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