CIRCL®

Radically digital construction of your perfect house

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1982

2022

HYTTEFADET
SKIPPERKRO

CIRCL® creates the perfect house on every plot in Belgium: radically digital in 1 minute, physically in 6 weeks only!

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Smart and optimised concept!

Combination of 2D elements and 3D modules

Walls, floors, roof → prefab 2D elements

Energy module, bathroom, critical core
→ prefab 3D modules

Plug & Play = Idiot proof

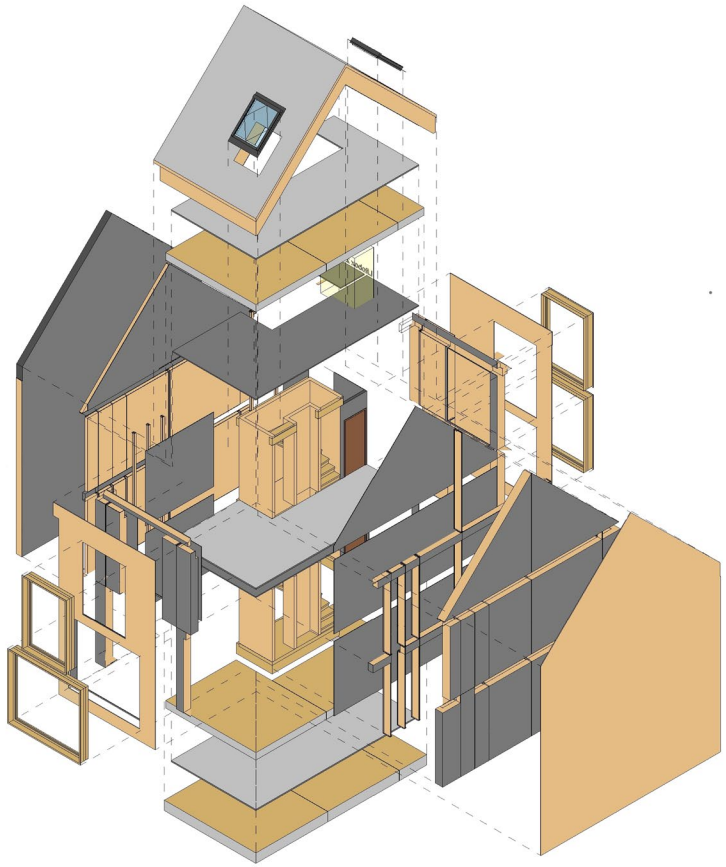
Smart standardised systems & universal connectors

Dry construction

Shortening construction time + fully circular

Energy efficient

Balanced and standardised energy system
+ future-proof insulation shell



No compromises on sustainability & circularity

50%
of energy consumption

42 € / month
heating, electricity and warm water

34%
of total waste

0,79
demountability index

0,51
conventional houses

40%
CO_2 emissions

257 kg CO_2 eq/m²
life cycle impact

583
conventional houses

Smart combination of hard and software

Hardware
Technical construction concept

Software
Fully integrated
BIM first approach

- **Qualitative & comfortable**
- **Achievable & affordable**
- **Optimised layout**
- **Energy efficient**
- **Circular & sustainable**

CIRCL uses generative design to create optimal houses

TRADITIONAL DESIGN — RECORDING DECISIONS
PARAMETRIC DESIGN — [2]ASSOCIATING GEOMETRY
GENERATIVE DESIGN — DESCRIBING GOALS + CONSTRAINTS

COMPUTER AIDED DRAFTING

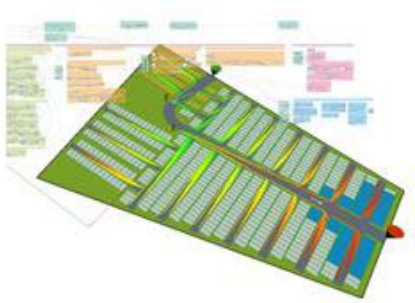
PARAMETRIC MODELING

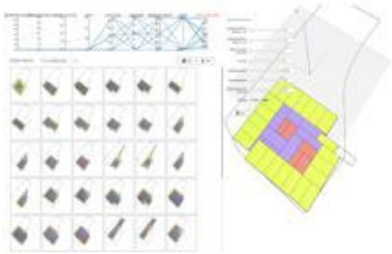
DESIGN AUTOMATION

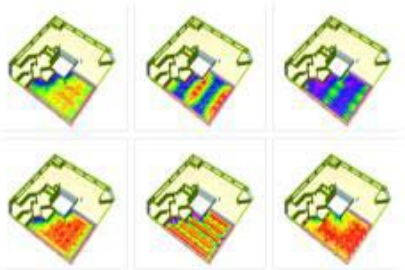
COMPUTATIONAL MODELING

OPTION GENERATION

DESIGN OPTIMIZATION







AUTOCAD REVIT DYNAMO REFINERY

Generative design in 1 continuous flow

CONTEXT
plot, orientation, type, buildable area, height of the cornice, other building regulations

CUSTOMER
people, # rooms, # living and working rooms, habits, furniture, minimum surfaces...

TECHNICAL
built-in in the CIRCL concept

ENERGY
E level, S level...
+ adaptions where required

GENERATIVE DESIGN
- automagically generated design of a house within all hard constraints
- layout of all roooms, windows, doors, stairs, bahtroom(s), toilet, kitchen...

PERSONALISATION by CLIENT
- moving interior walls, windows, doors
- adding furniture
- adding kitchen modules
- choice of materials

VISUALISATION
- 3D renders
- AR walk through

BUDGET
construction cost
TCO for the customer

SUSTAINABILITY
measuring environmental impact via TOTEM

PRODUCTION
- building permit application
- BOM
- order statements for all suppliers
- details for production facilities

Granular approach to fully-integrated BIM

Basisprijs: 37.107 € excl. btw

Polestar

Polestar 2
Long range Single motor (+ 3.306 € excl. btw)

Inbegrepen diensten en functies

Exterieur
Magnesium (+ 826 € excl. btw)

Snow
+ 826 € excl. btw

Magnesium
+ 826 € excl. btw

Thunder
+ 826 € excl. btw

Moon
+ 826 € e
btw

Midnight
+ 826 € excl. btw

Void

1 smooth & integrated digital flow from A to Z

1

Requirements

- Client needs
- 100m² or 200m²?
- Terraced house? Open? Half-open?
- Orientation?

Specifications in 1 click!

2

Floor plan

- Generative design: optimized proposals
- Client chooses preferred option
- Changes in 3D view

Flexible design

3

Design choice

- Façade
- Floors
- Windows
- Kitchen
- Bathroom

Best options from our selected partners

→ Real-time price & energy calculation at every step!

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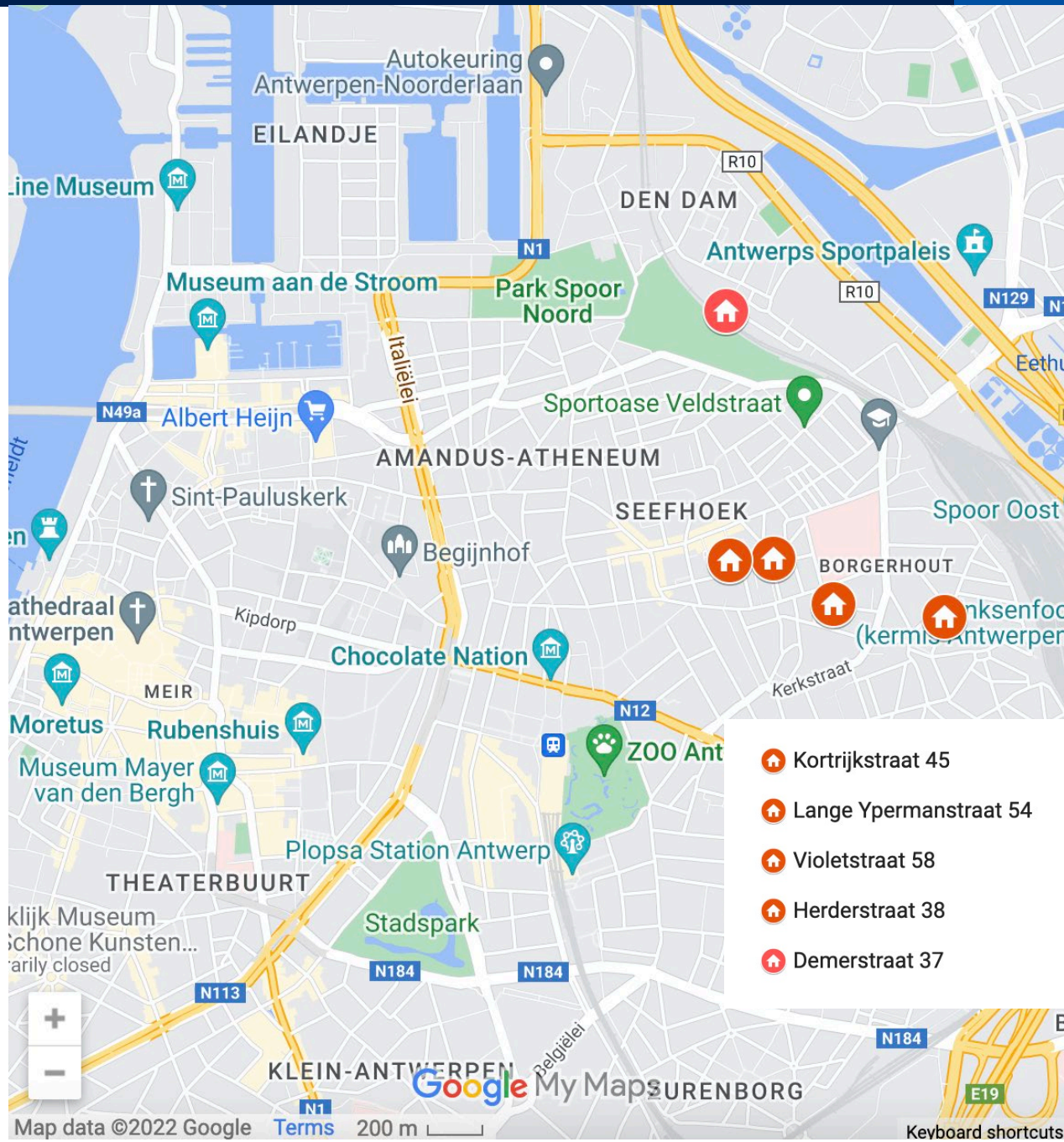
Evaluating opportunities for complete makeover projects

- Cheap houses (175k – 225k) with bad enery label (E or F)
- CIRCL calculates alternatives for every plot
- Within a minute, you get a concrete offer of what's possible for which guaranteed price
- Real-time Total Cost of Ownership
- CIRCL builds within 6 weeks after approval of building permit



Why?

Because construction is not sustainable.

This should change. We inspire the industry and we proof that it can be done, by making it happen.

How?

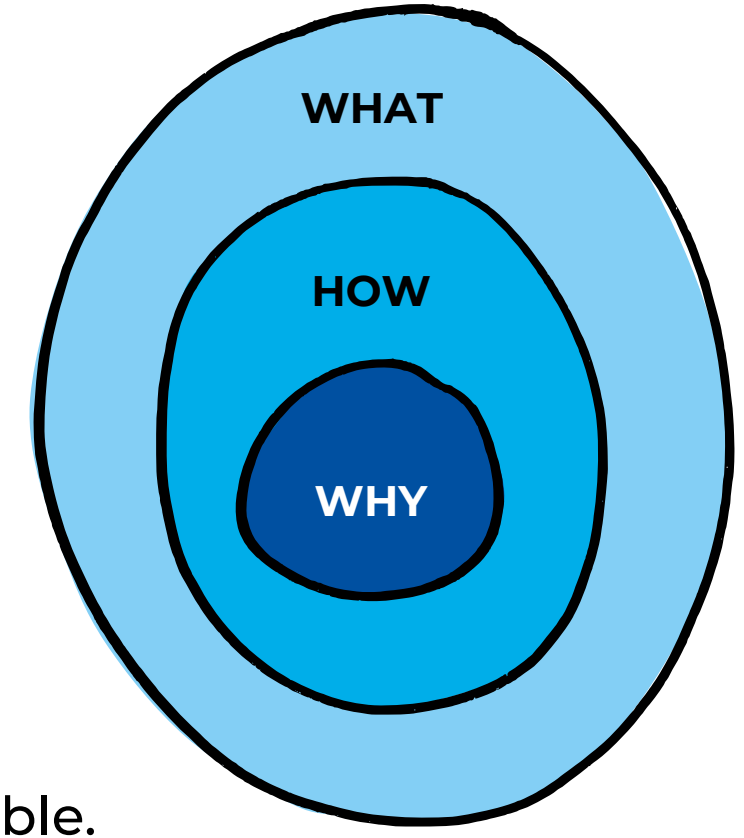
Standardised and industrialised construction method, integrated in a radically digital process that allows for flexbility.

We choose the right partners.

What?

We create the optimised home for our clients.

Fast & efficient. Sustainable, but also feasible & affordable.



CIRCL® will build 1 home a day

- **Got a slum and want a new sustainable home?**
- **Want to do an opportunity scan in your area?**
- **Can you help with our scaling process?**

Interested to be part of the circl(e)?

hello@circl.be | circl.be

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