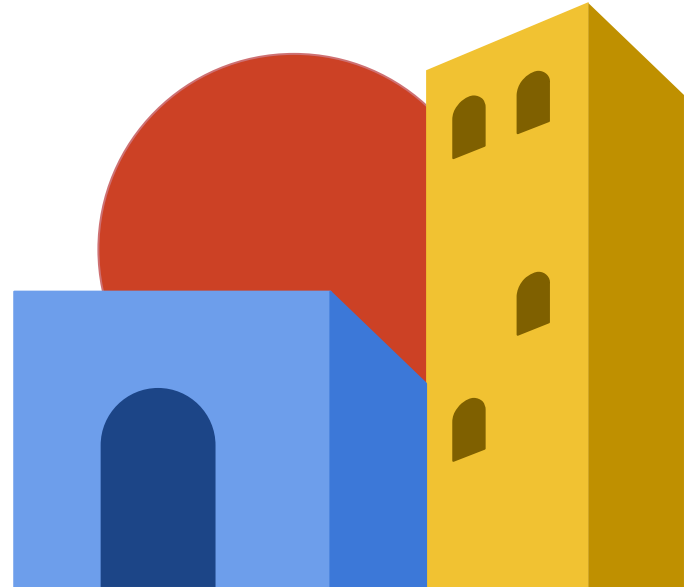


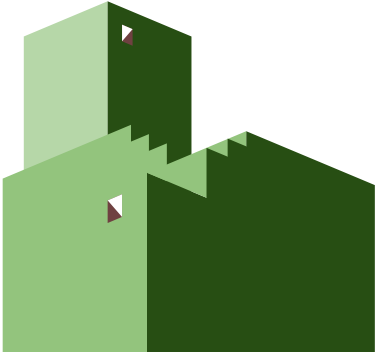
# Make a BIM

Data week presentation  
June 2023



“Buildings account for  
**40%** of energy  
consumed.”

[The European Green Deal – Renovation wave  
factsheet 2020, European Commission](#)



# In 2021, 41.7% of waste in Finland came from demolition and construction

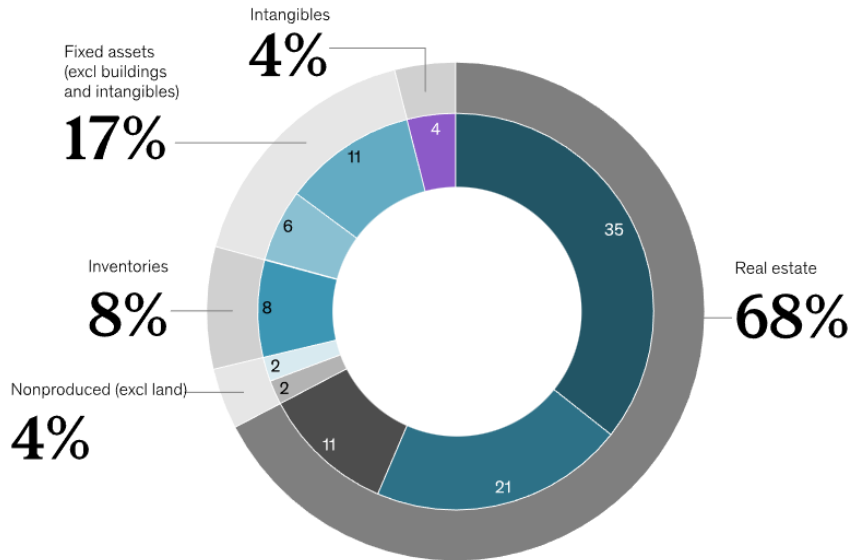
- [Jätteiden synty toimialoittain, 2017-2021](#) Tilastokeskus (not including mining waste)

# Buildings represent 32% of global wealth

## Real estate accounts for two-thirds of real assets.

Distribution of real assets, global average, 2020, %

- Land
- Mineral and energy reserves
- Machinery and equipment
- Dwellings
- Other nonproduced assets
- Infrastructure
- Nonresidential buildings
- Inventories
- IP products (Intangibles)

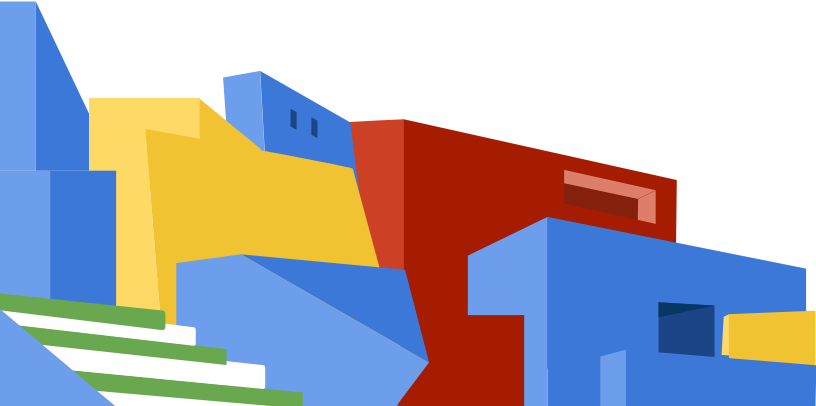


Note: The global average is an extrapolation derived from a weighted average of 10 countries based on GDP. Figures may not sum to 100%, because of rounding.  
Source: AMECO; CEIC; EU KLEMS; Federal Reserve Board; national statistics offices; OECD; World Bank; McKinsey Global Institute analysis

**But where's the data?**

We use AI to automatically create building information models from architectural drawings.

For cities, funds **and the building you live in.**



# What is a Building Information Model?

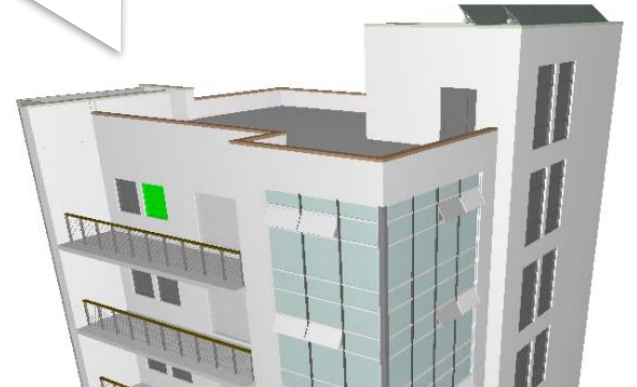
Usually shortened to **BIM**

A 3D model with properties created by architects and engineers.

Traditionally starting at 1000€

As a result **under 5%** of existing buildings have building information models.

This window has specific measurements, materials, thermal emissivity, a fire rating etc.



# Solution

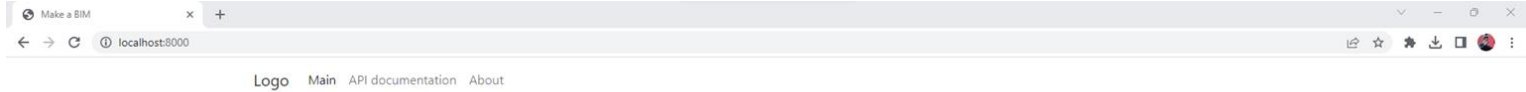
Make a BIM is a **neural network** that automatically generates BIMs from floor plans.

- Available through a website & API
- Input **floor plan images** + optional data
- Download a simple and standardised BIM model





# Work in progress demo :)



## Generate IFC models from floor plans

Drag and drop one or more floor plans  
note that this is still in development

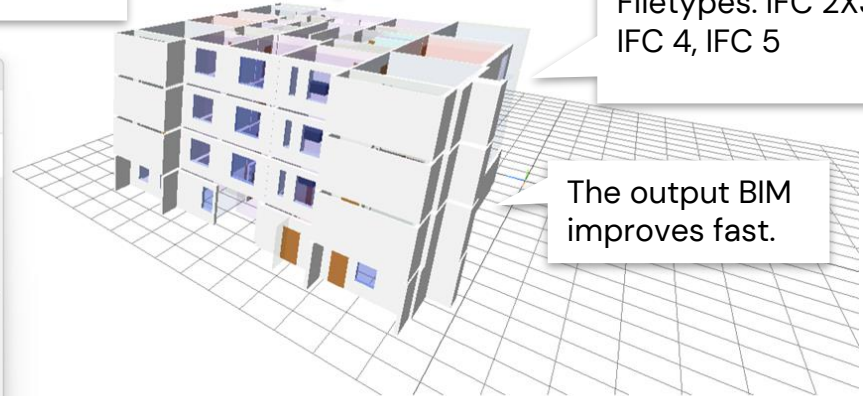
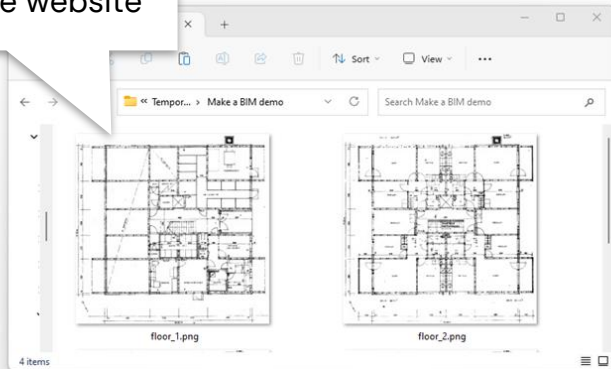
Choose Files 4 files

The unoptimized process takes a few minutes.

The output BIM model is visualized before payment & download

Filetypes: IFC 2X3, IFC 4, IFC 5

Input - Multiple floor plan png images are dropped on the website

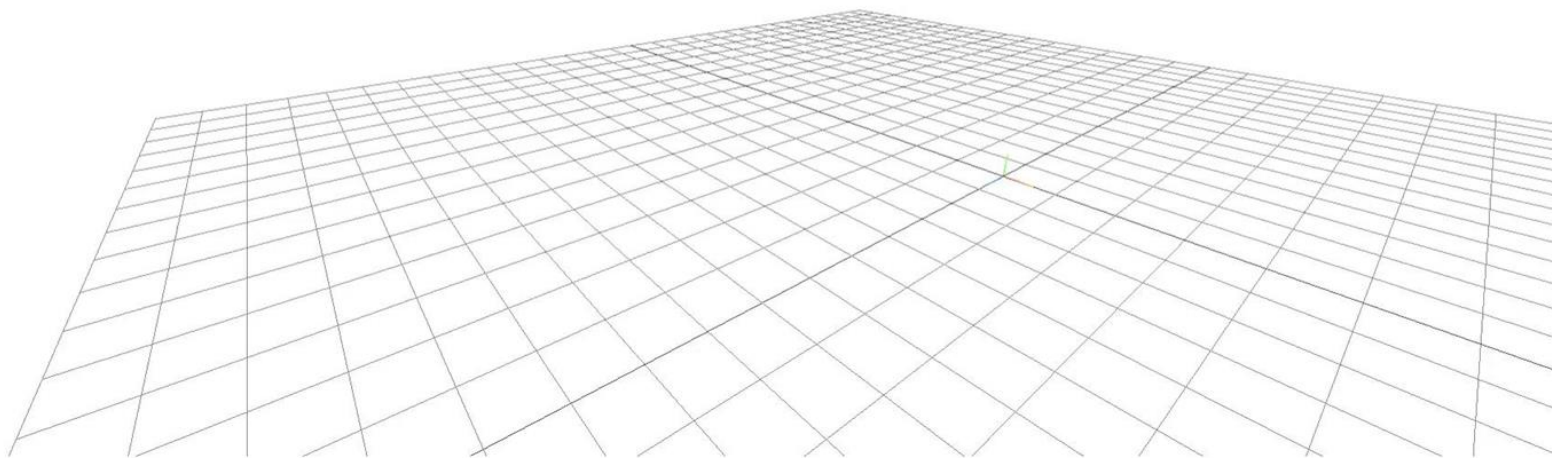


The output BIM improves fast.

# Generate IFC models from floor plans

Drag and drop one or more floor plan images here to try it out. Please note that this is still in development.

Choose Files No file chosen



Video on YouTube: [https://www.youtube.com/watch?v=7pkfMO\\_H5ol](https://www.youtube.com/watch?v=7pkfMO_H5ol)

# GeoE3



The **3D buildings** APIs provides scalable data for Make a BIM:

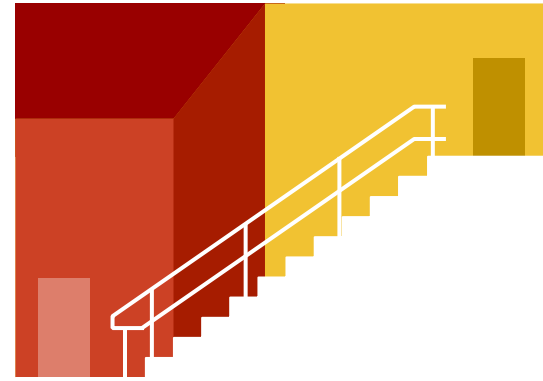
- Roof geometry
- Building height
- Location data

These 3 are important for **making better BIMs!**

# Impact to building owners

Compared to existing methods our process is

- + Automatic -> *no need for slow and laborious manual work*
- + Standardized -> *all models follow the same logic*
- + Cheap -> *from tens of thousands to hundreds of euros*
- + Fast -> *process takes seconds, not months*
- + Scalable -> *automatically generate thousands of BIMs*



# Sustainability impact

Few existing  
buildings have  
IFC models

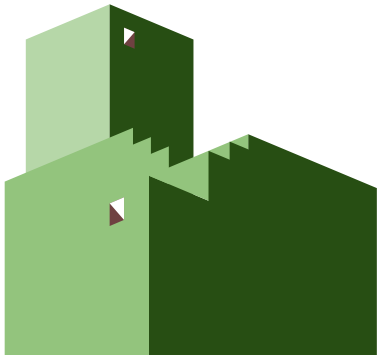
“To reduce emissions by at least 55% in 2030 and build the foundations for a climate neutral Europe by 2050, the Renovation Wave aims to renovate **35 million** inefficient buildings by 2030.

85–95% of buildings in the EU are expected to still be standing in 2050. Renovating them is essential to reducing emissions and energy use.

Buildings account for 40% of energy consumed and **36%** of energy-related greenhouse gas emissions.”

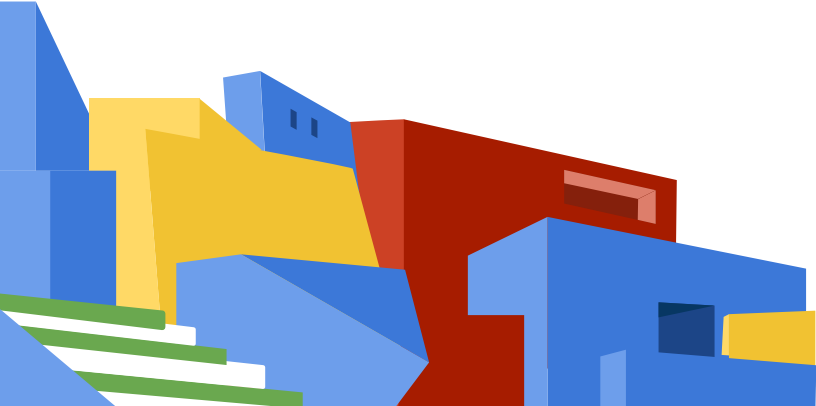
[The European Green Deal – Renovation wave factsheet 2020, European Commission](#)

Potential for  
considerable  
sustainability  
impact at  
scale



# Example use cases

# Automate building analysis



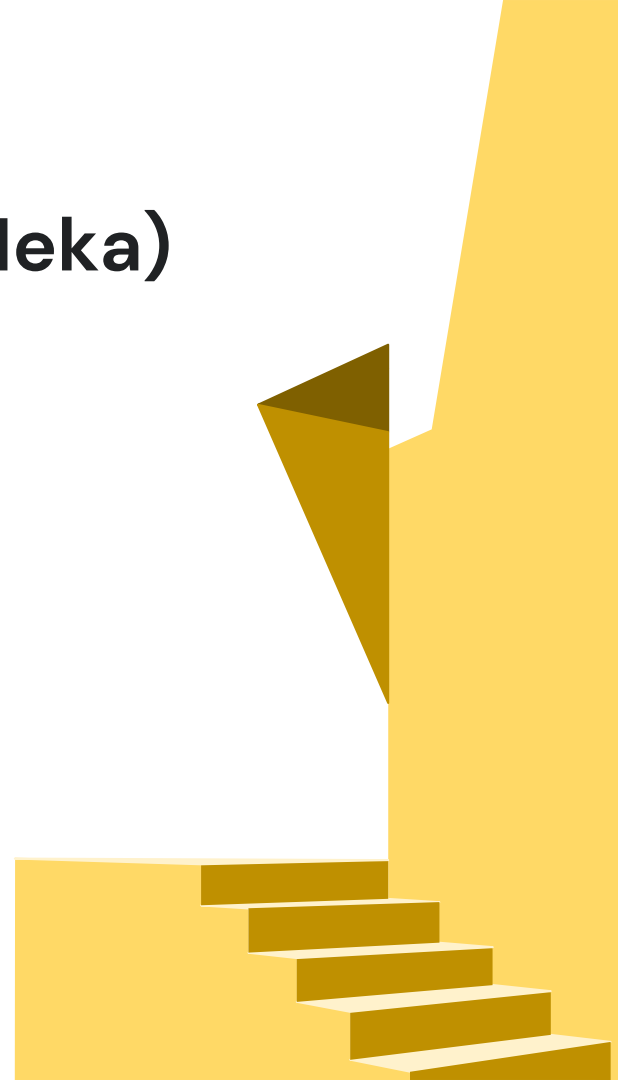
Use Make a BIM as a source for quantifiable, scalable and easy-to-use data source for BIM data.

- Create inventories of areas, spaces, building parts.
- Simulate performance and compliance.
- Digital twin development.
- Design initial data.

# Project with Helsinki City Housing Company (Heka)

- Finland's largest lessor, 50 000 apartments.
- Contacted us through word of mouth
- Project to generate about 100 models for renovation cost and energy efficiency multi-objective optimization.

→ Saves them time, money and carbon footprint



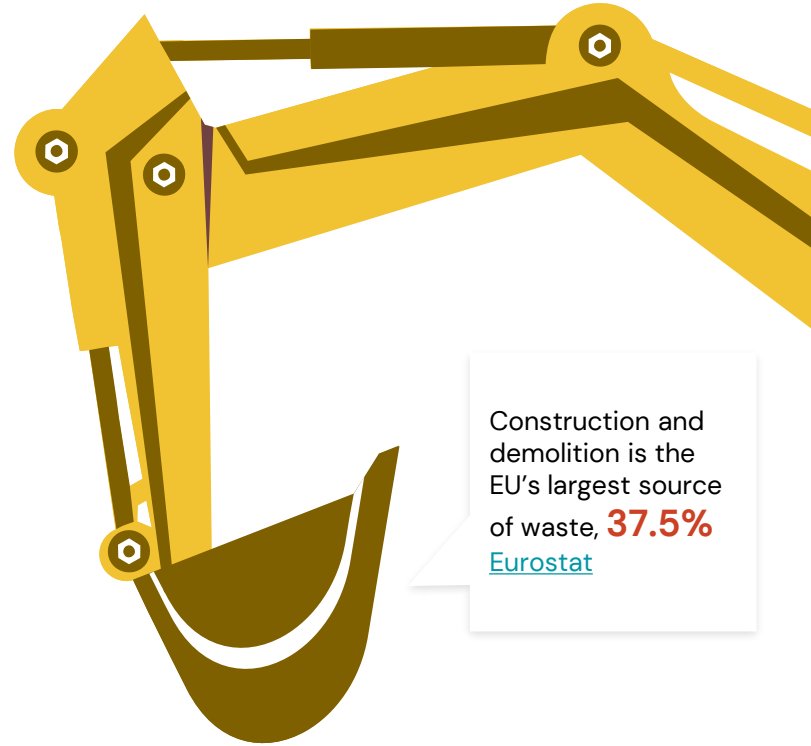


# Use case - Circular economy

## Reusable building part inventory

1. Generate building part inventories for end-of-life buildings using **Make a BIM**.
2. Rank building parts based on carbon footprint, cost, location and schedule.
3. Use data for design and building parts in construction and refurbishment.

→ Reduce waste and carbon footprint while increasing profitability



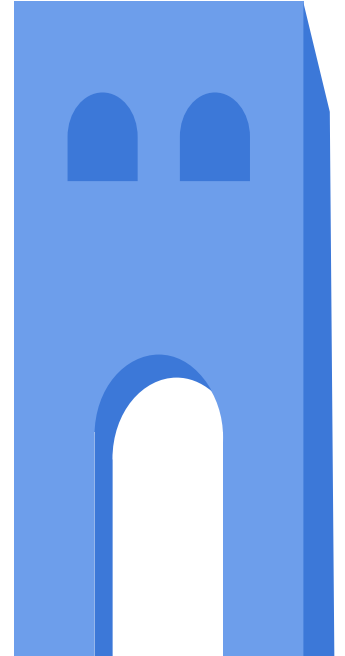
Construction and demolition is the EU's largest source of waste, **37.5%**  
[Eurostat](#)

# Use case – Retrofit permits

New building permit laws may require applying for a permit using a BIM model instead of 2D drawings.

For example the new [2023 Building Act in Finland](#).

-> Make a BIM makes it easy, cheap and fast to apply for a retrofit permit while also creating reusable data.



# Leo Salomaa

Co-founder, Architect,  
BIM & AI developer,  
Entrepreneur

9 years of experience

# Jami Valorinta

Co-founder, Mad Data  
scientist, Mathematician,  
Entrepreneur

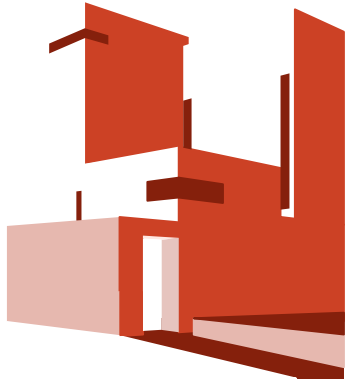
8 years of experience

# Ville-Matti Tanninen

Co-founder, Lean  
Computer scientist,  
Data engineer

7 years of experience





# Make a BIM

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We want to collaborate with you so please contact us :)

We're looking for mentors, ecosystems, pilots and pre-seed funding

Under construction