

'Kit-of-Parts' Platform System (KOPPS) to Provide Affordable, Sustainable and Resilient Housing in Canada

UBC Faculty of Applied Science

UBC School of Law

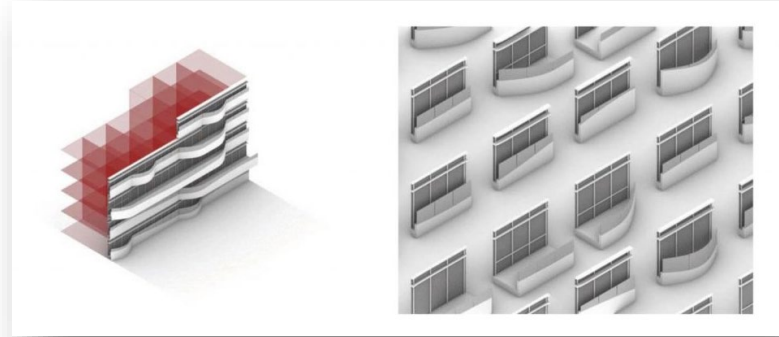
UBC Faculty of Management



OUR VISION FOR AFFORDABLE HOUSING CONSTRUCTION

Mass customization of homes to meet all kinds of needs across Canada

- community-specific design
- sustainable materials
- cost-effective installation



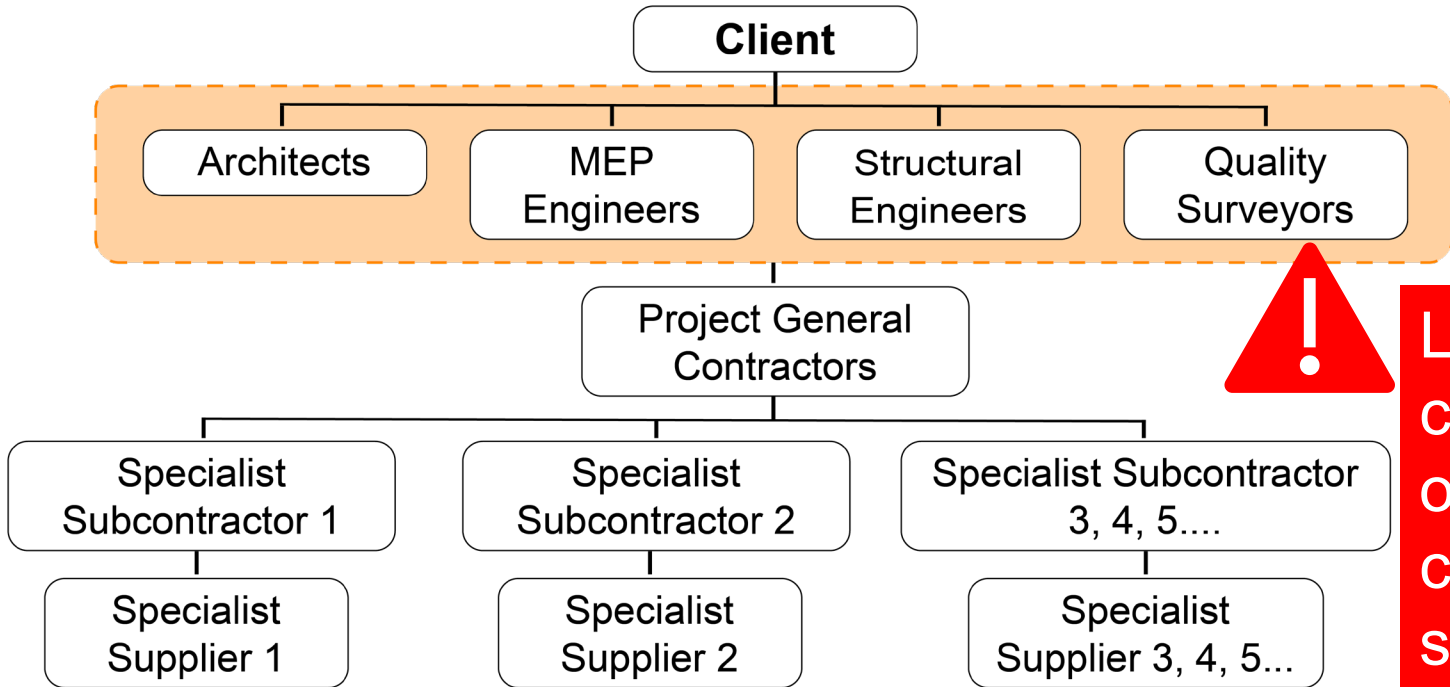
WHO NEEDS KOPPS FOR MASS CUSTOMIZATION?



Developers (KOPPS main clients)

- Municipal developers
- Private developers

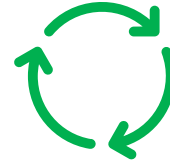
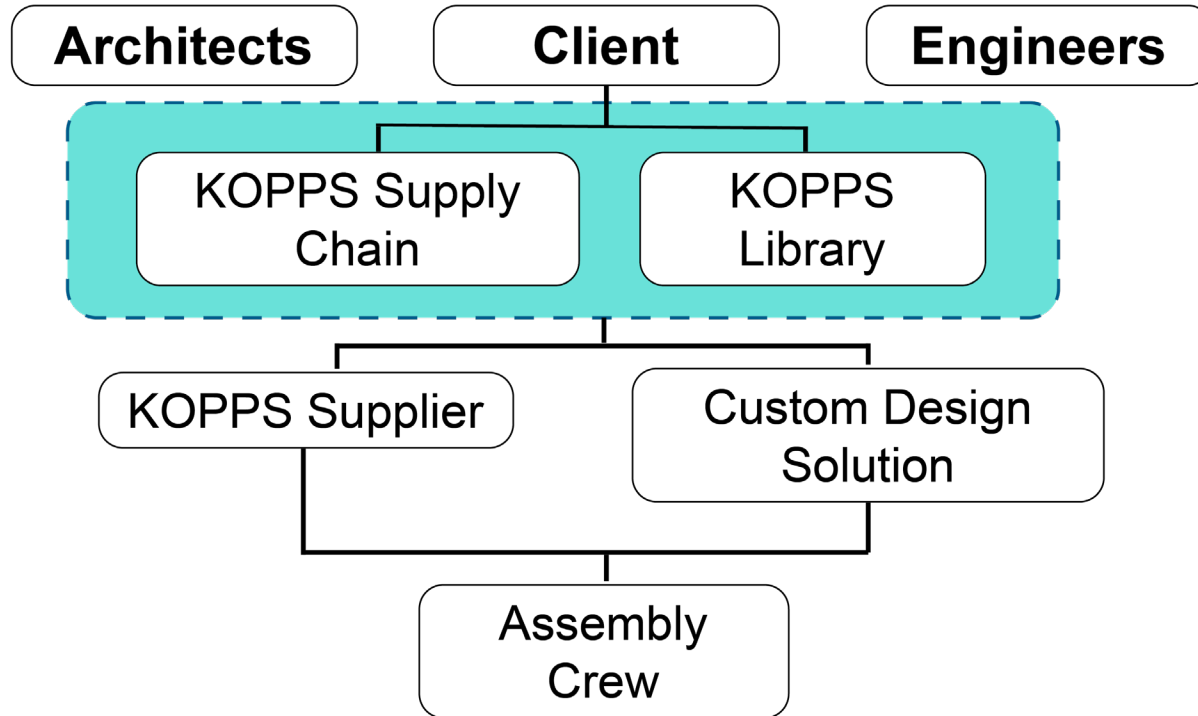
WHY KOPPS?



Lost time in coordination of design changes and site rework!

Traditional prefab home delivery model

WHY KOPPS?



Coherent
information flows
and high-quality
installation

KOPPS mass customized home delivery model

WHY KOPPS?

- Community-specific design

User-friendly interface:
Customizable floor plans
to reflect developers' needs



Input Generate Settings

Requirements

Country: DE

Amount Beds: 3

Amount Baths: 2

WC:

Storage:

Separate Kitchen:

Walk-in closet:

Meter box:

Generate

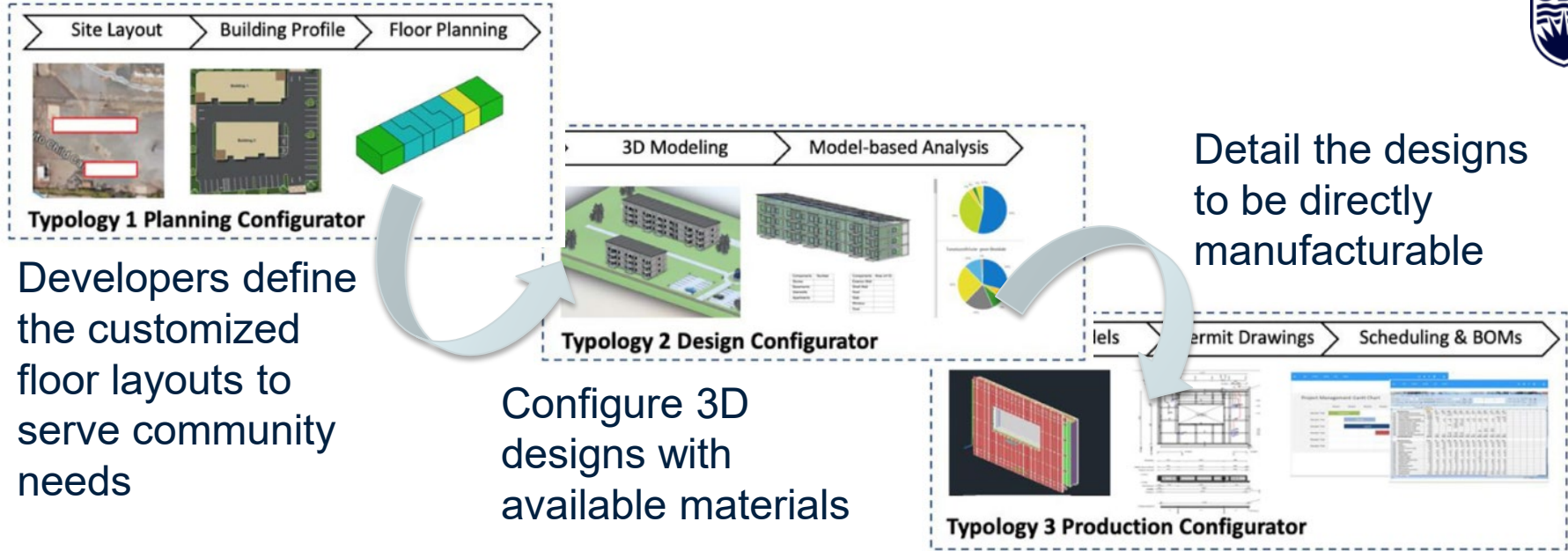
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Cancel OK



WHY KOPPS?

- Community-specific design



WHY KOPPS?

- Sustainable materials

Double Leaf - Outward Opening - Over Panel

Neos Protect



Materials all certified and available



Full visibility of material supplies and design specifications



The OB-72 is the door system that started it all for us. Born after our owners found they could not get great aluminium folding sliding doors for their building projects, their ambitious solution was to create a company capable of manufacturing the UK's best quality doors, that's backed by uncompromising levels of service.

The result was the OB-72, a cleverly designed, beautifully made and exquisitely finished sliding folding door system that features a unique free-glide running system.

Offering sightlines of 72mm and chamfered beading, it provides a more traditional style and given its innate strength, it means that it can accommodate door sets of up to twelve doors in a single configuration, as well as corner and bay set ups.

This download is for the Origin Global, OB-72 Aluminium Bi-fold Door (3+1)

Download BIM

View BIM

Quote Enquiries

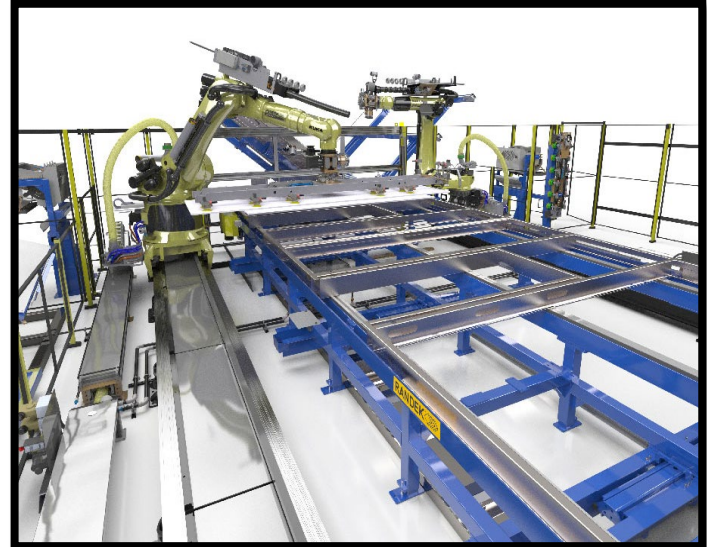
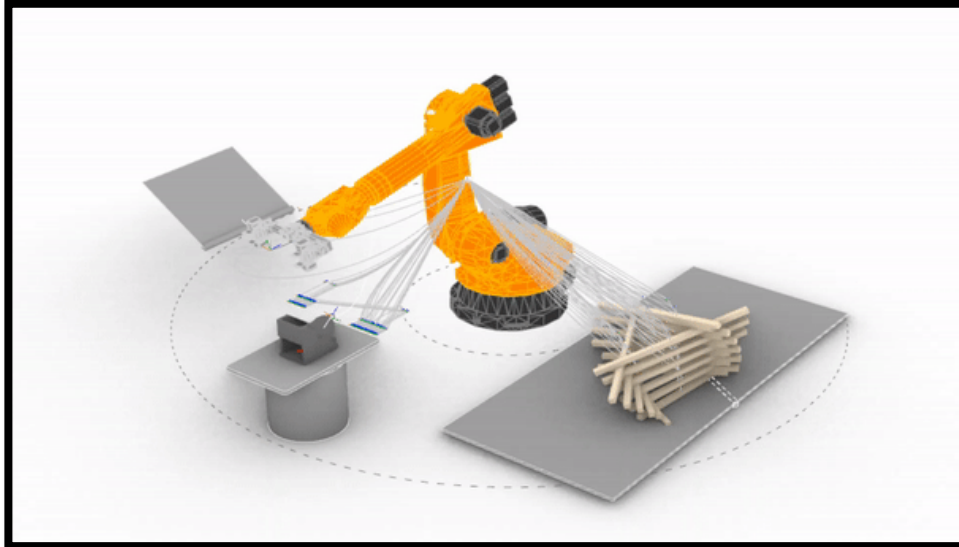
Add to Selection

Procurement for Category Pieces Required

View Project

WHY KOPPS?

- Cost-effective installation
 - Optimized workflows to reduce defects and rework
 - Less dependent on weather constraints



PLAN 2023-2025

Current: Stage 2

Community engagement

- Conversations with communities to identify design constraints
- Expand community network

Prototype of KOPPS digital platform

- Building KOPPS materials databases
- Integrate design codes and standards
- Simulate digital fabrication processes

Implementation

- Test the solution in a real project with a community
- Scale implementation to more communities

Future: Stage 3



DISCUSSION QUESTIONS

Do you think a model like KOPPS would be effective in your community? Why or why not?

What are major obstacles you expect to encounter using this model in your community?

How can KOPPS be improved to accommodate the local building permit processes?



THANK YOU!
Q&A



CONSTRUCTION INTEGRATION & DIGITALIZATION

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