



BC HOUSING

# DASH

May 2025

**Helen Goodland RIBA**

Principal, Head of Research & Innovation

**SCIUS**  
Advisory



## *Digitally Accelerated Standardized Housing*

[acceleratedhousing.ca](https://acceleratedhousing.ca)

# What is DASH?

A pioneering project led by BC Housing that aims to address the housing crisis head on.

*An innovative digital platform of tools that can help address the housing crisis.*

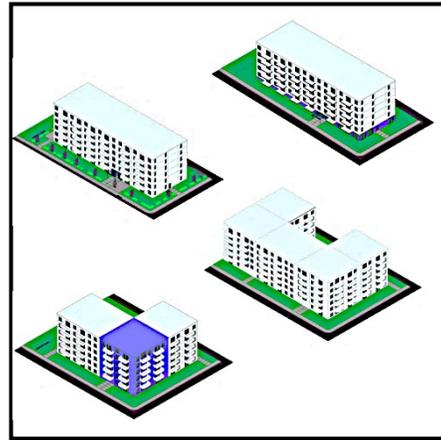
# DASH workflow

1



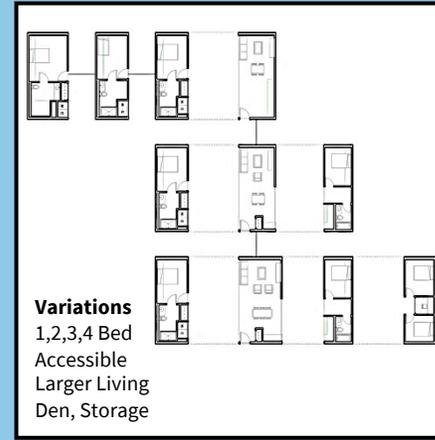
Rules-based generative design platform

2



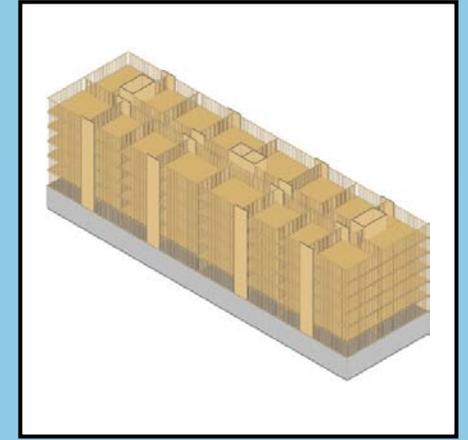
Customizable DASH blueprints

3



Multiple suite sizes and configurations

4



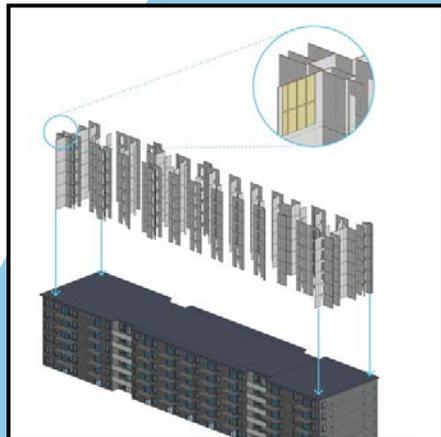
Structural and envelope meets latest BCBC and BC Energy Step Code

5



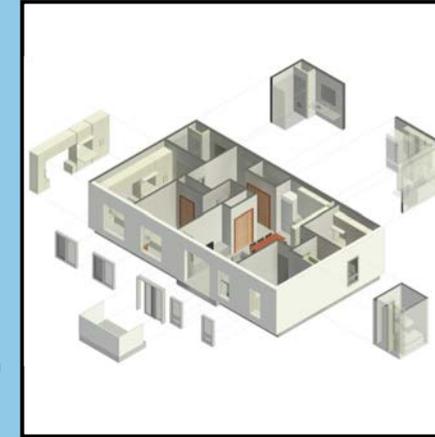
BIM environment “right-sized” for residential construction

6



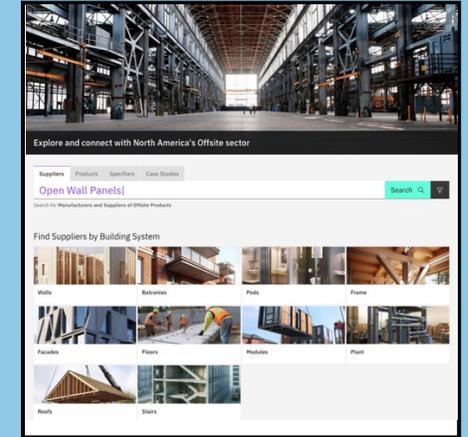
“Kit of parts engine” optimizes the design for prefab

7



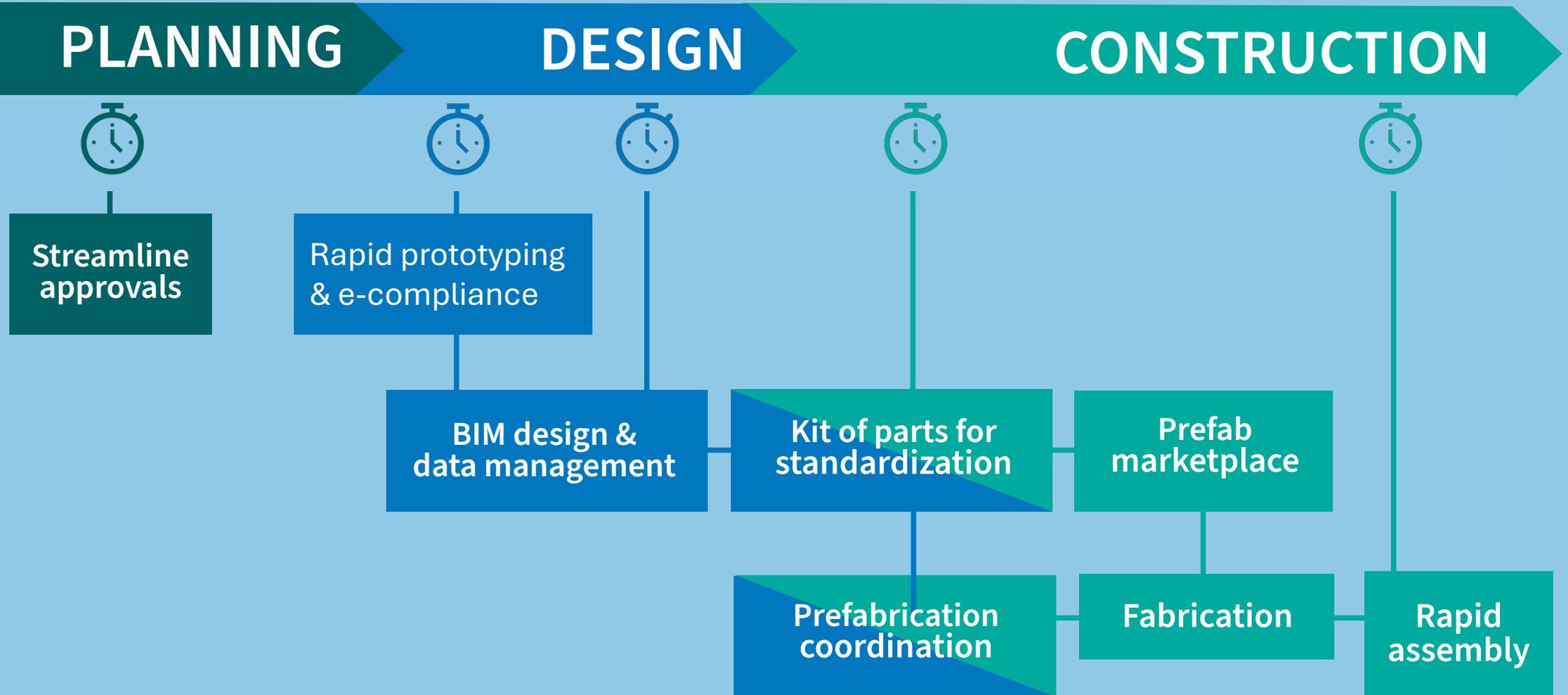
Blueprints meet BC Housing design standards

8



Virtual marketplace loaded with BC-made prefab products

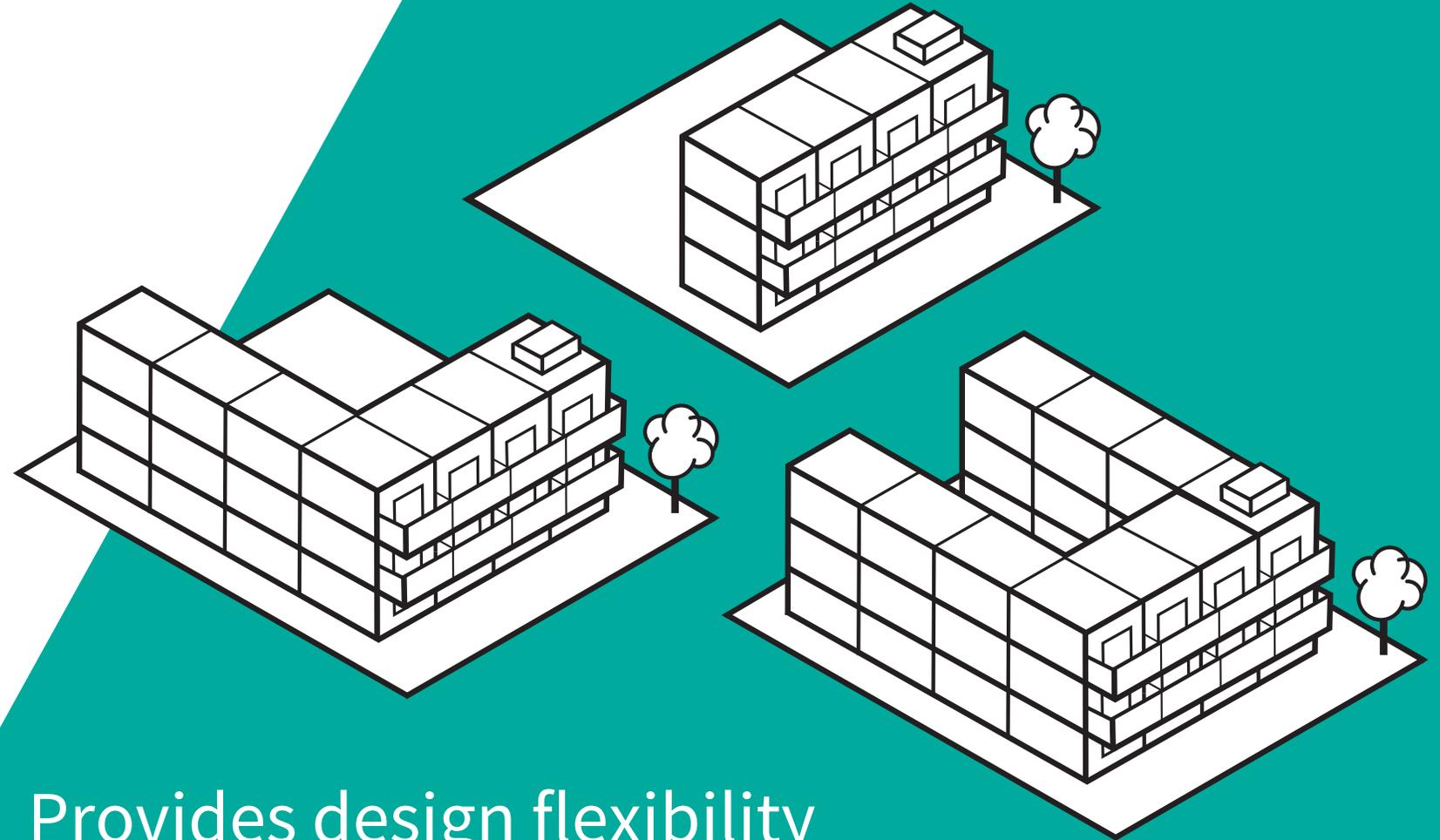
# Time saving benefits



# Rapid prototyping

The DASH generative design tool helps you to

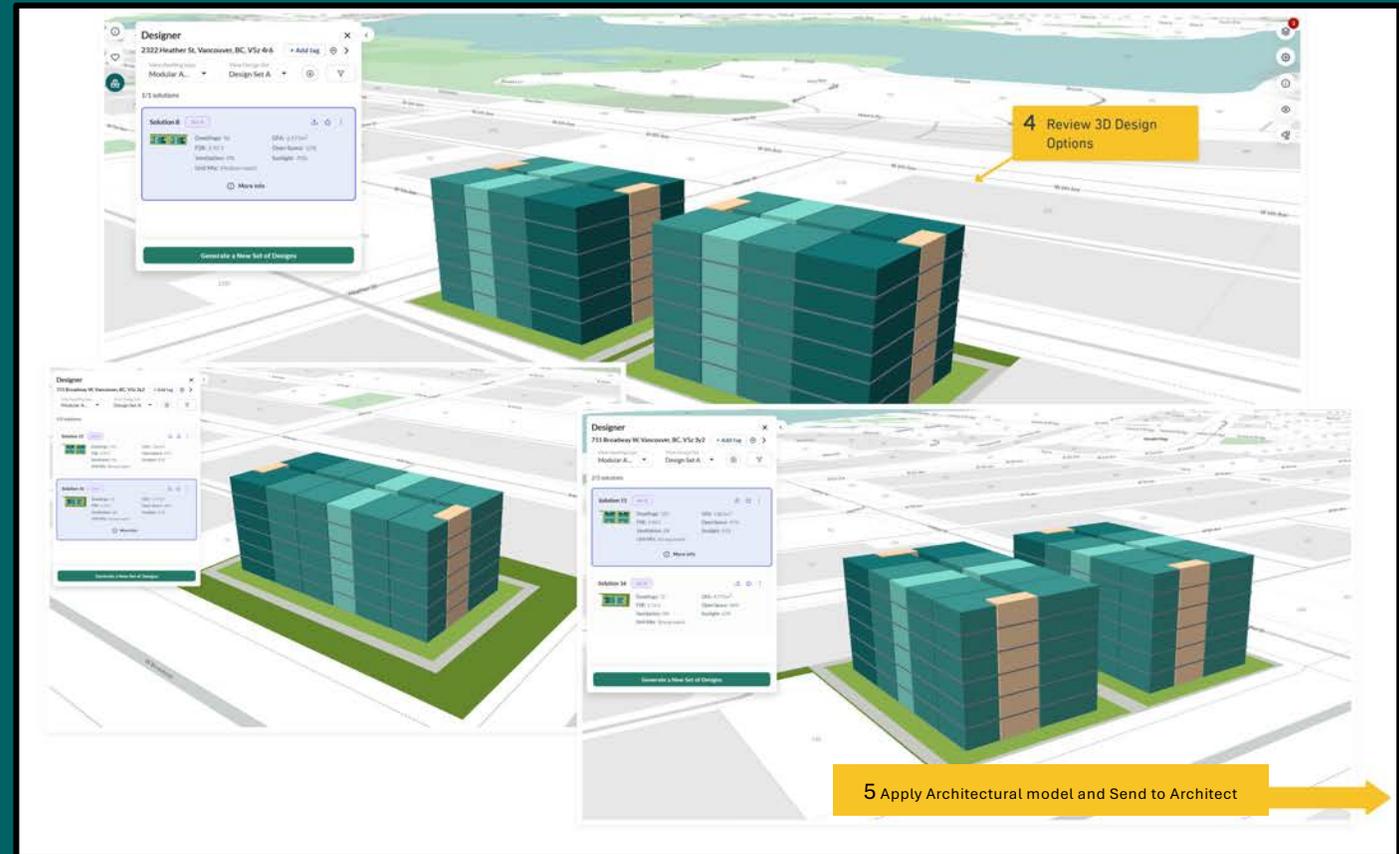
- Find applicable sites
- Quickly determine the optimal development configuration



Provides design flexibility  
with the assembly of blocks

# Generative design

The generative design platform has land use data for Metro Vancouver and with the DASH zoning guidelines for 3 to 6 storey projects.

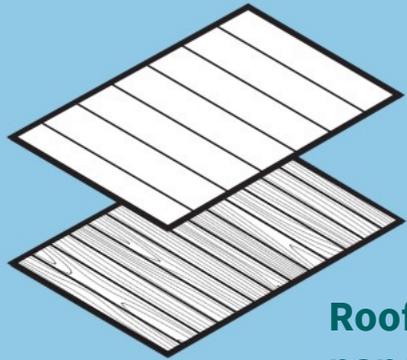


Pre-selects and highlights sites that are suitable for DASH.

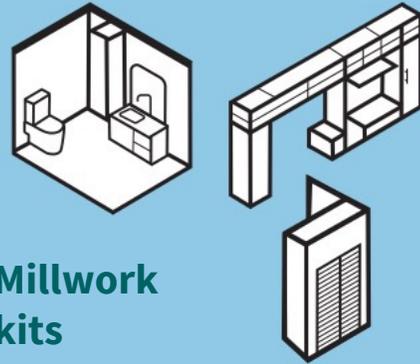
DASH blueprint information has been preloaded so prototype designs can be accurately generated.

# BC Housing-compliant “Building Block” units

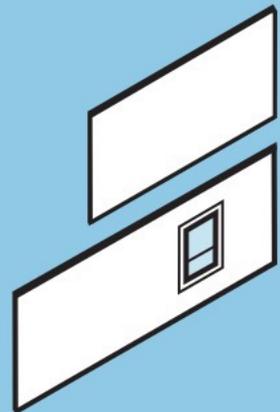
## KIT OF PARTS



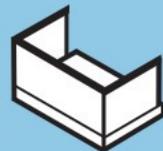
Roof & floor panels



Millwork kits

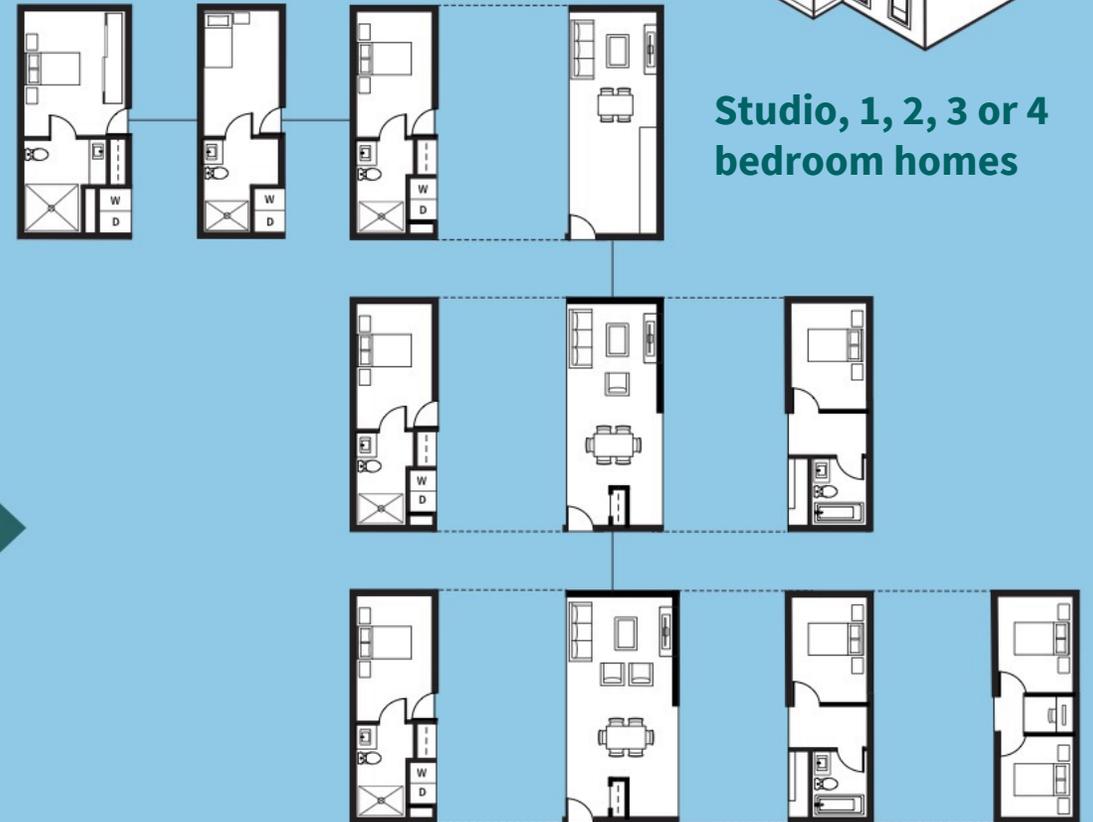


Interior & exterior wall panels



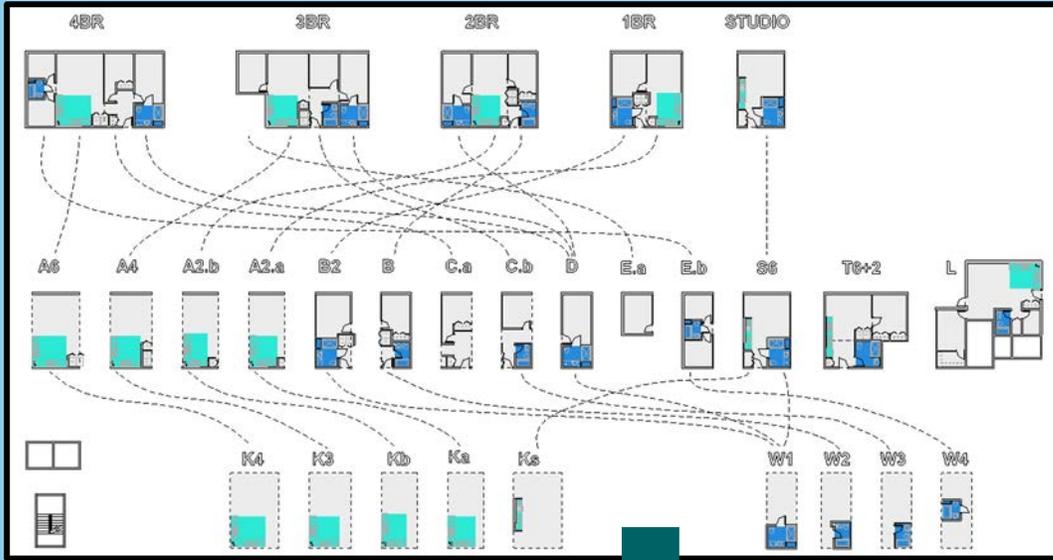
Balconies, sunshades, canopies, etc.

## BUILDING BLOCK UNITS



Studio, 1, 2, 3 or 4 bedroom homes

# The DASH kit

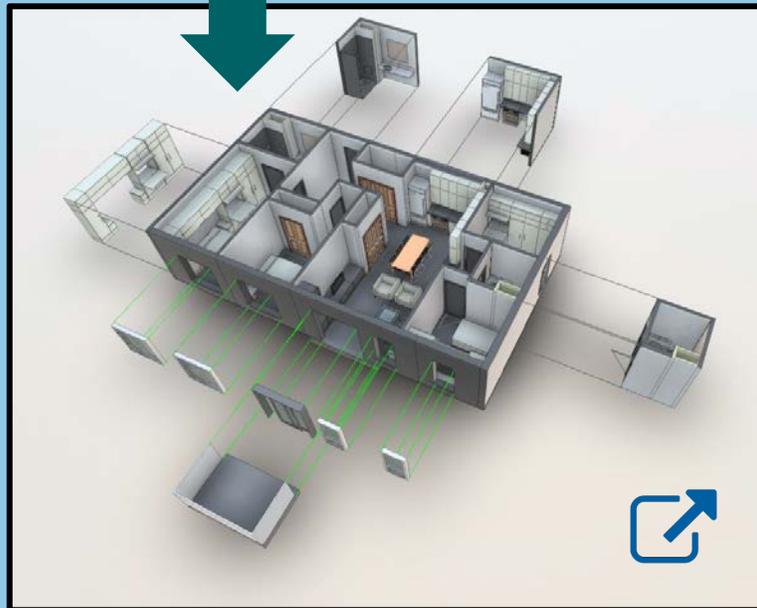


The DASH Blueprint works for 3 to 6 storey projects with various configurations suitable for BC's Lower Mainland.

The DASH kit of parts can be compiled into buildings to fit lot dimensions.

The mix of studios, 1-4 bedrooms can be adjusted to the development requirements. The suite units are coordinated to BCBC, BC Housing Design Guidelines, DASH zoning guidelines, BC Energy Step Code 4.

Multiple suite design options can be configured into units



Units can be compiled into the overall building form



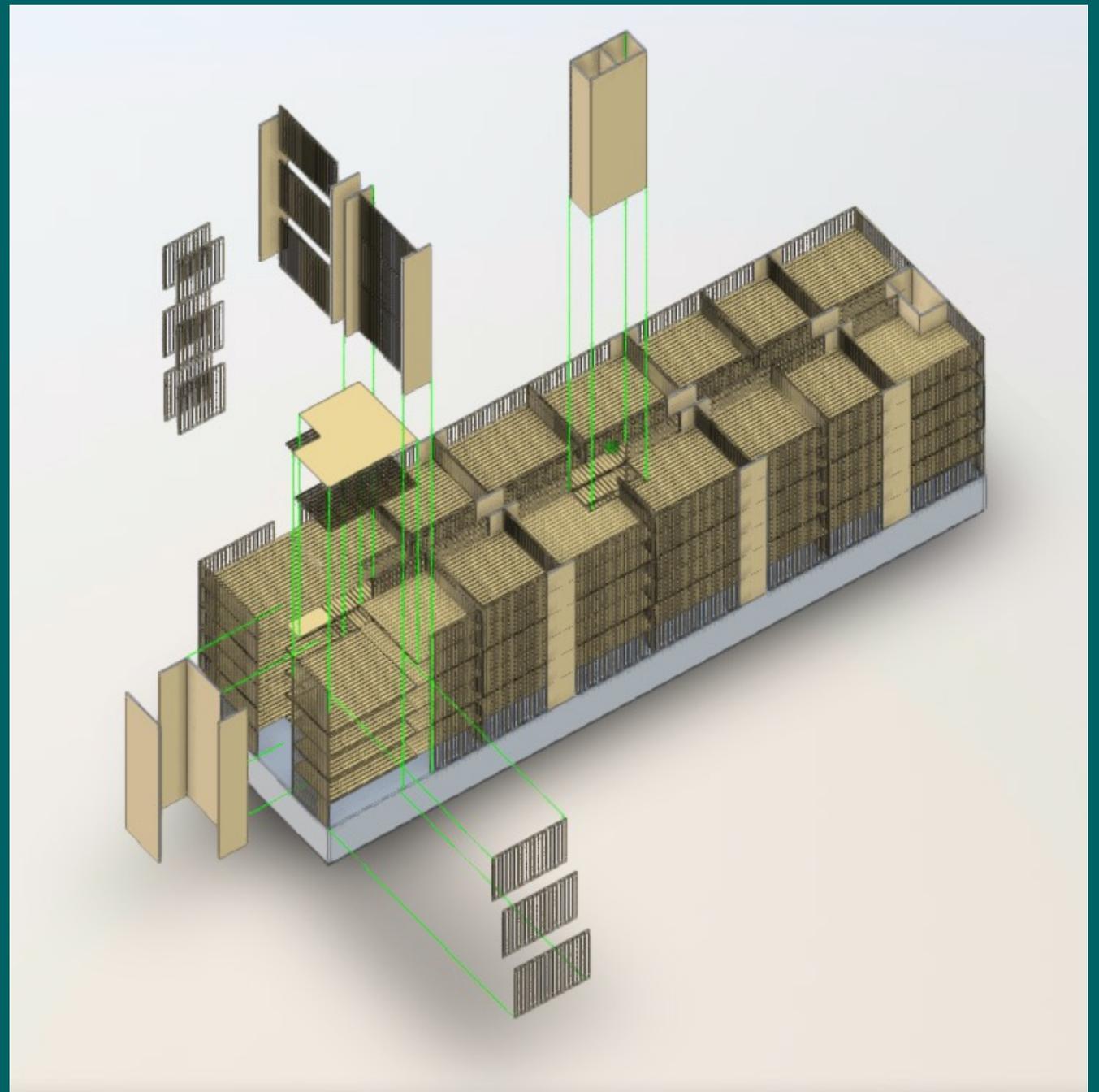
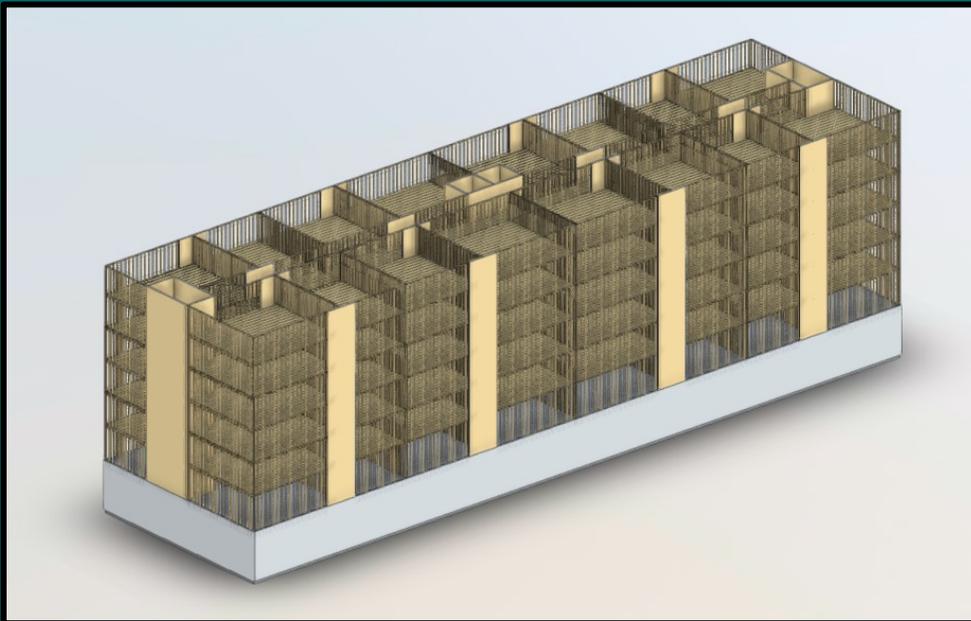
# Structural innovation

BCBC 2025

Prefab WF envelope and interior wall panels

TJI based floor cassettes with the option for CLT

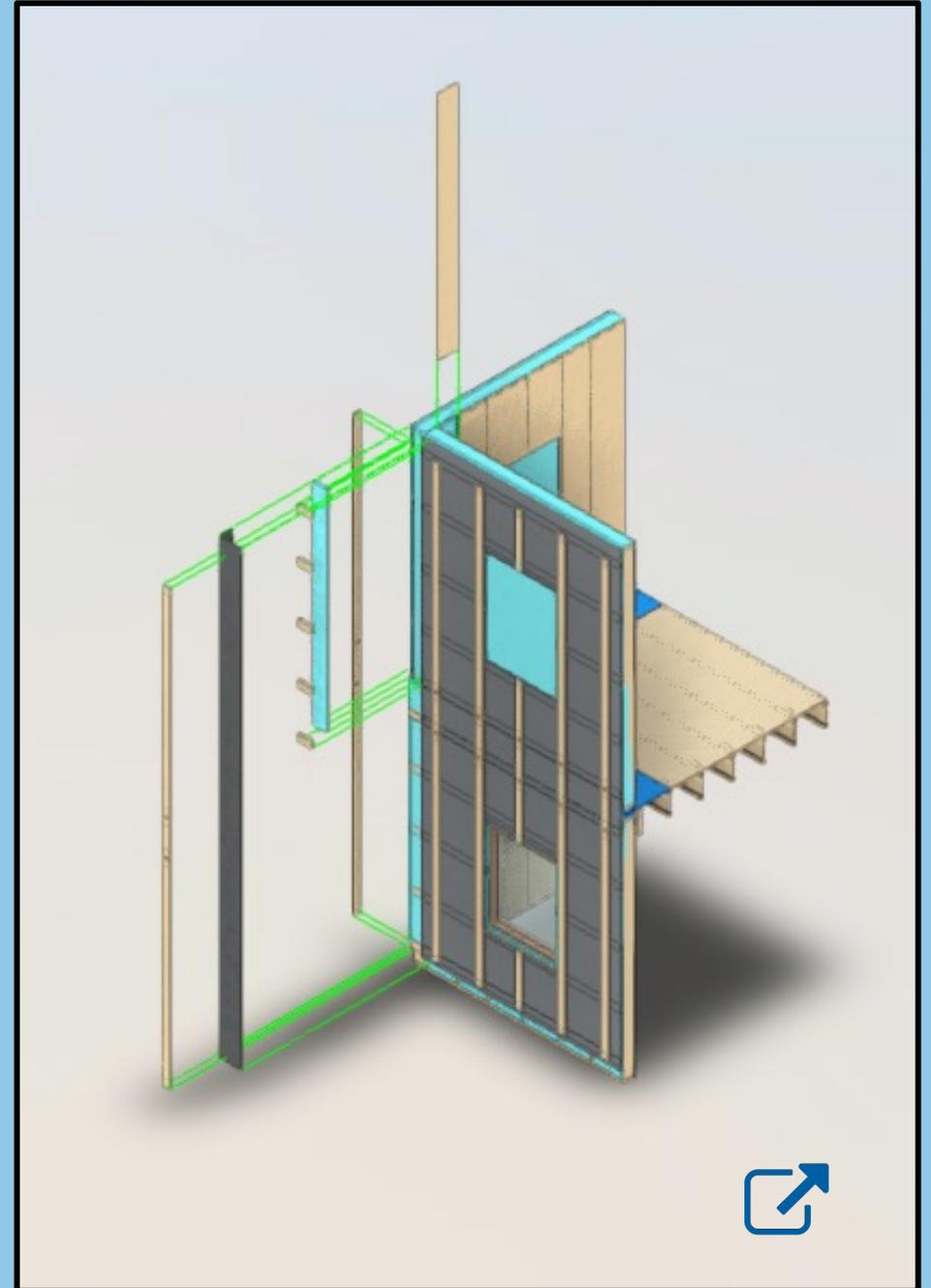
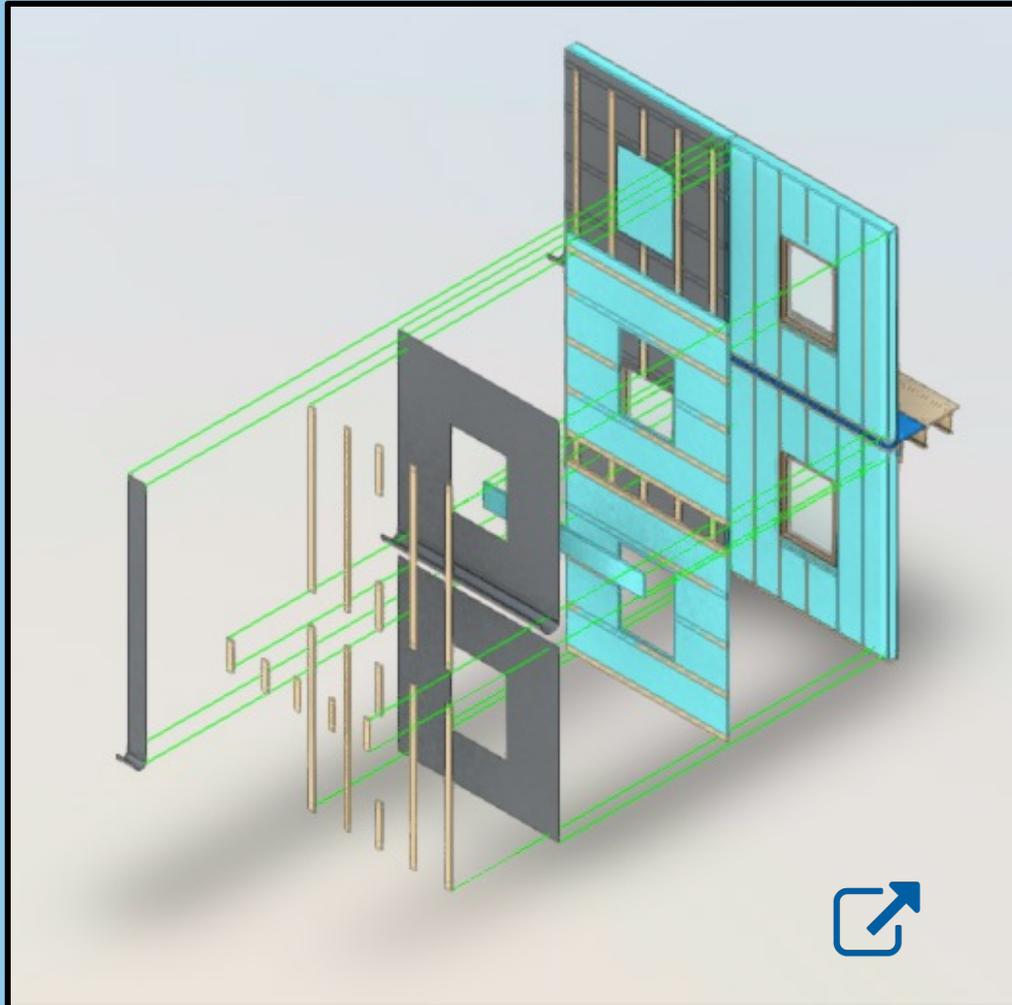
CLT shear walls to perimeter, core & corridors.



# Envelope Systems

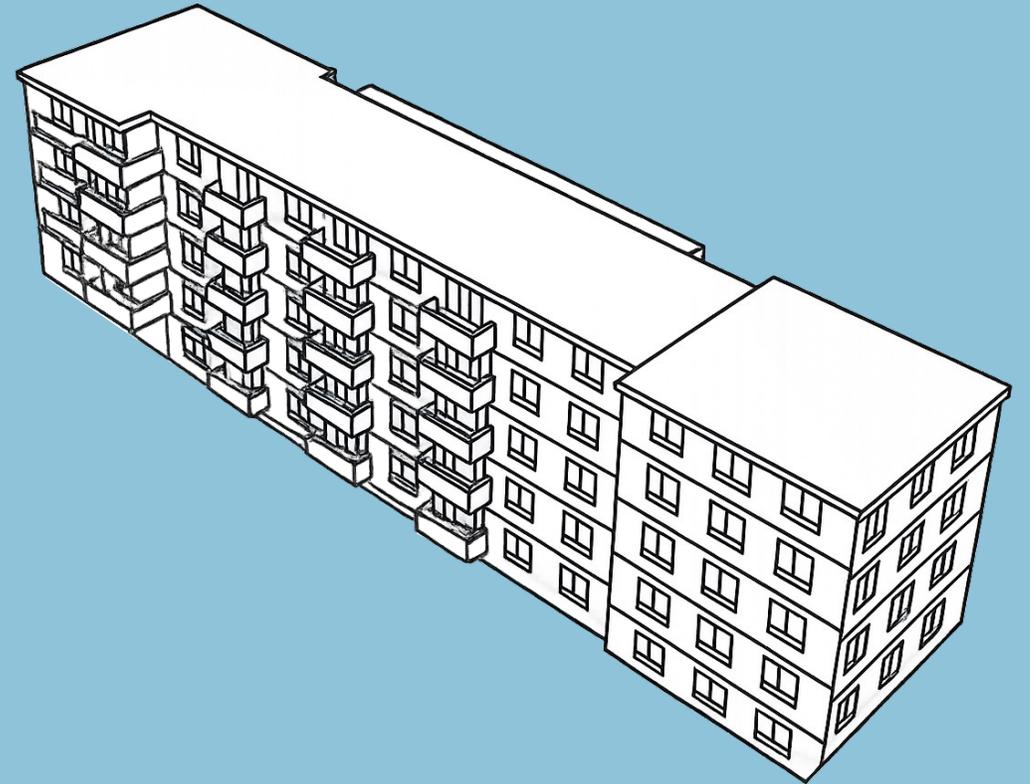
Wall panels & connection systems designed in collaboration with local manufacturers.

Use standardized components where possible.



# BIM is essential for DASH

- **Facilitate information exchange** and access between stakeholders
- Enable the required **precision and information quality** needed for prefab
- **Avoid duplication** and decentralization of project information
- **Standardize** project management



# The KOPE Platform

## DASH Prefab Directory



DASH Blueprints Suppliers Products Specifiers Case Studies

Search

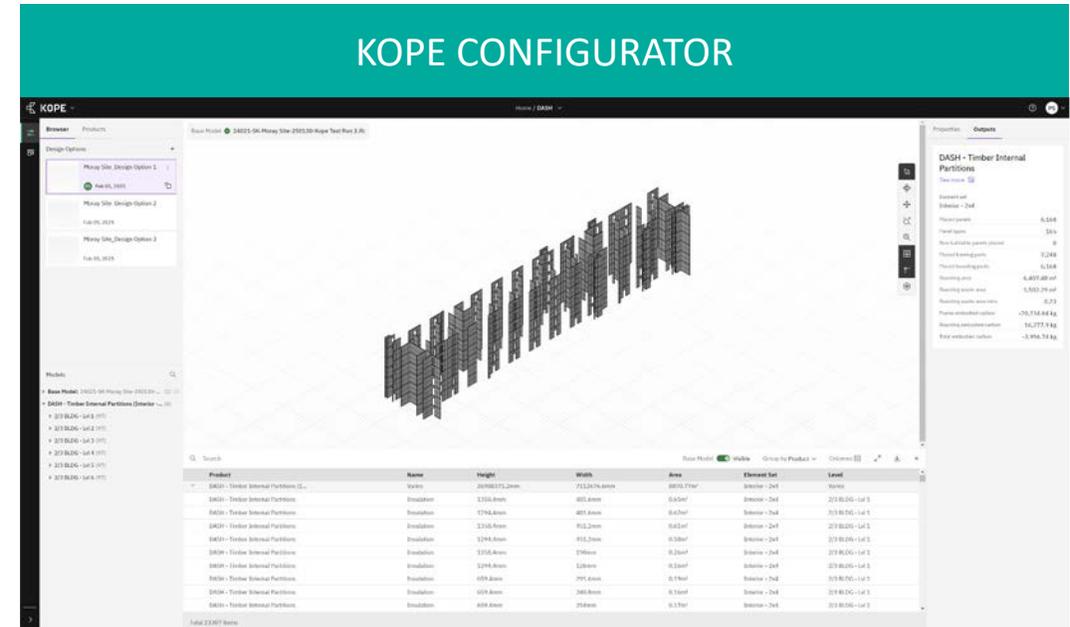
Search for DASH Blueprint Products

Find Approved Suppliers by Building System



Supplier Products

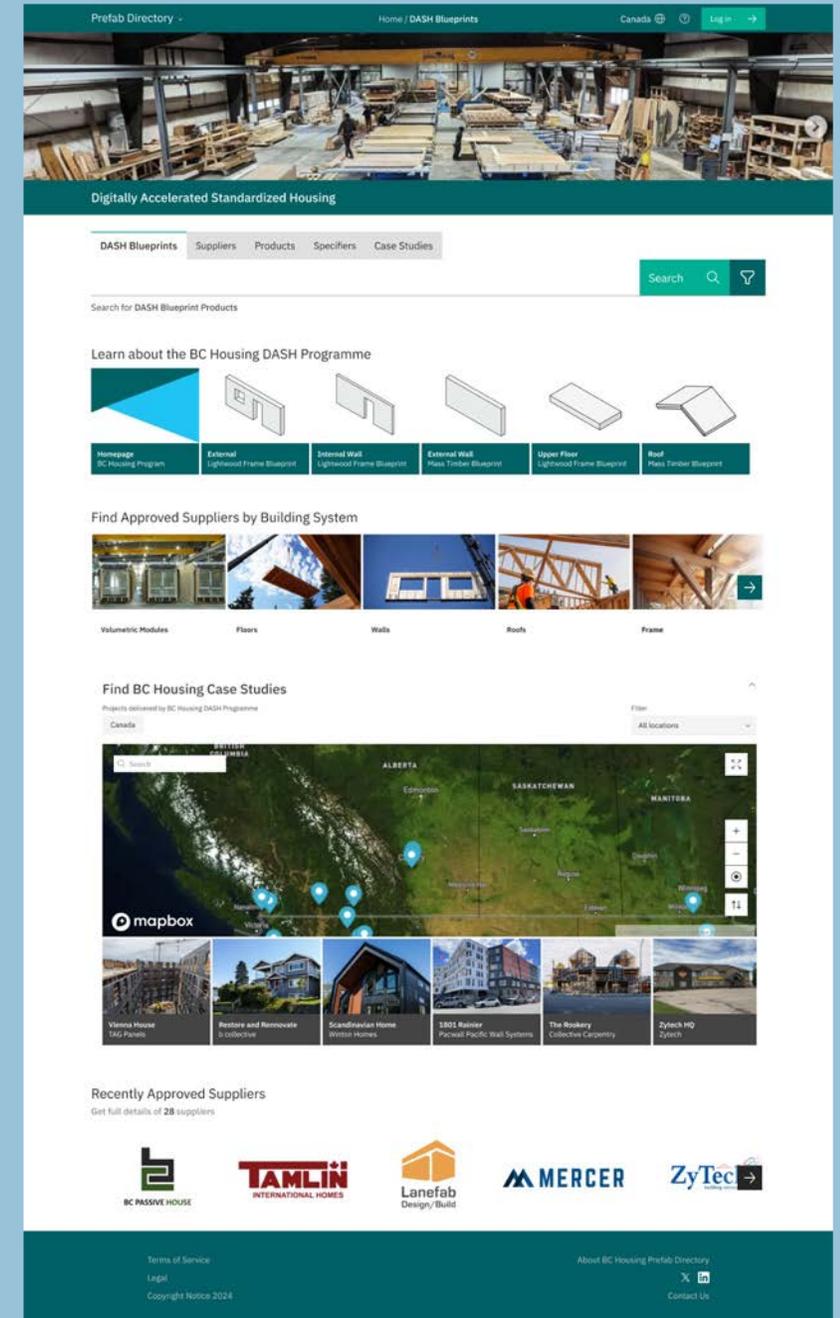
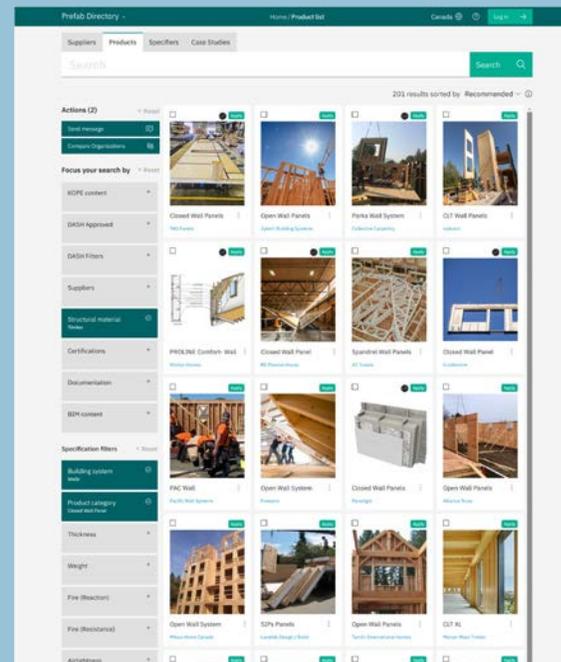
## KOPE CONFIGURATOR



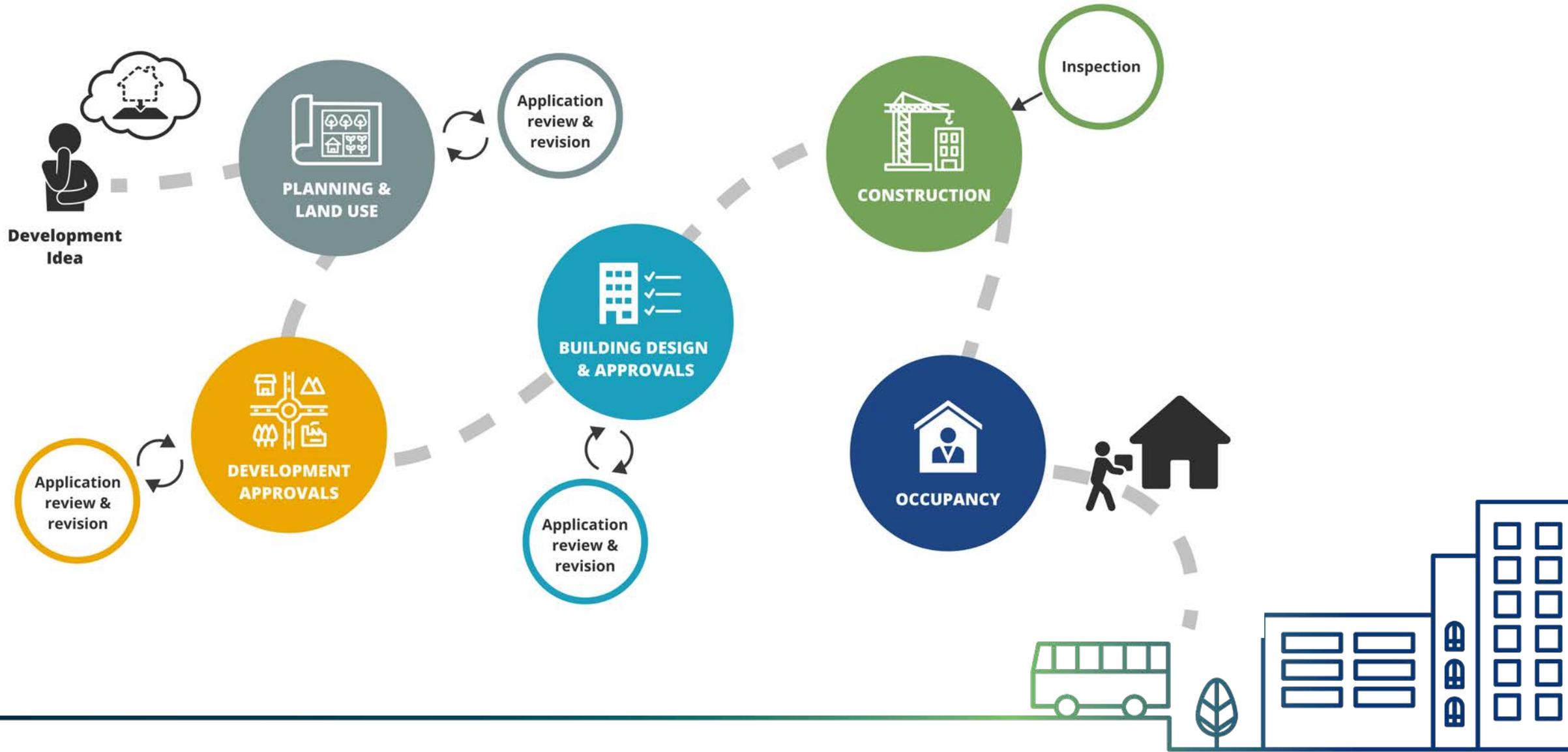
Into DASH Projects

# Prefab Directory

- Centralizing programme requirements.
- Linking that with a centralized database of Suppliers and Products.
- Enabling verification of capability and compliance with programme and project standards.
- Draw insights from the health and capacity of the Market.
- Add compliant solutions to your supply chain, ready to configure.



# Fitting in with the Housing Development System



# DASH facilitates municipal reviews

## Pilot municipalities:

Bowen Island Municipality  
City of Burnaby  
City of Delta  
City of Langley  
City of Maple Ridge  
City of New Westminster  
District of North Vancouver  
City of Richmond  
City of Surrey  
City of Vancouver  
City of White Rock  
City of Kelowna



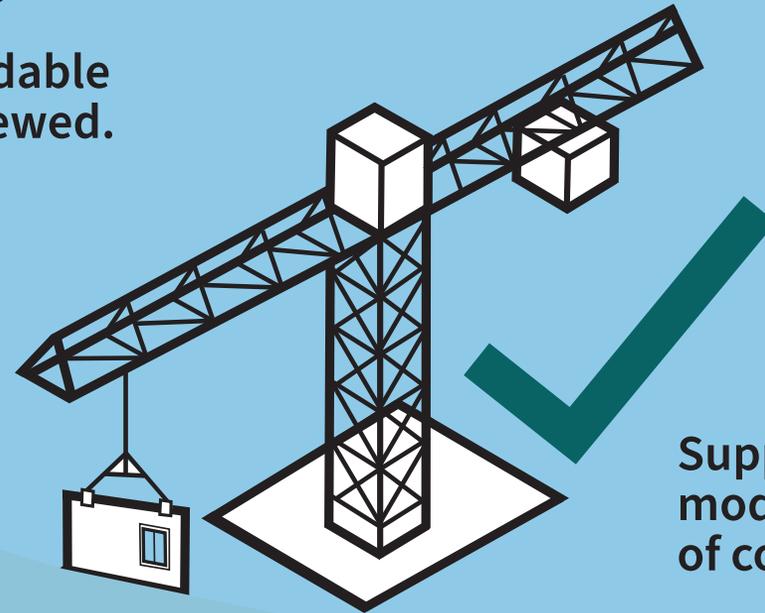
**metro**vancouver



Machine-readable  
and pre-reviewed.



Consistent,  
streamlined  
approvals.

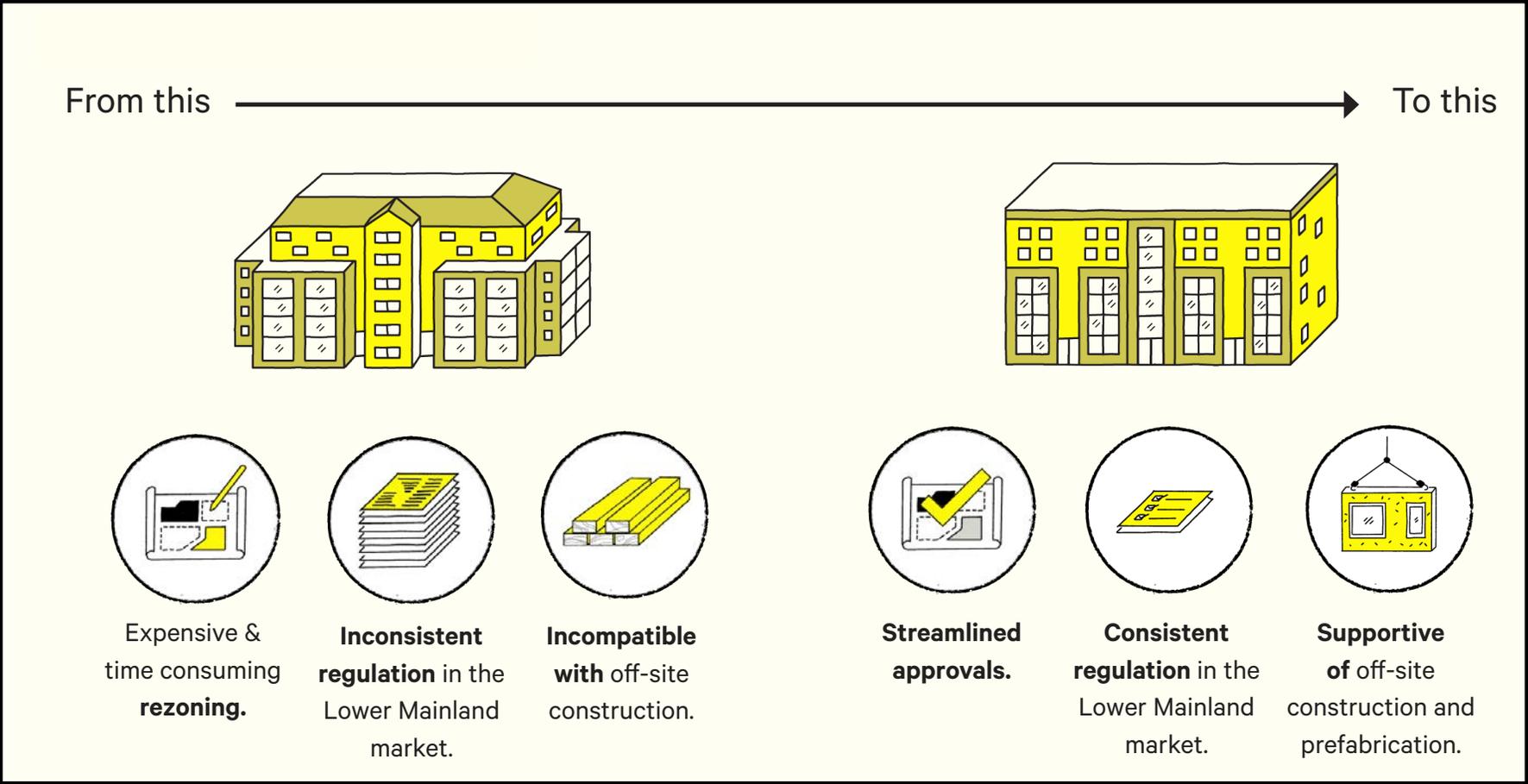


Supportive of  
modern methods  
of construction.

# DASH zoning guidelines for prefab-friendly development

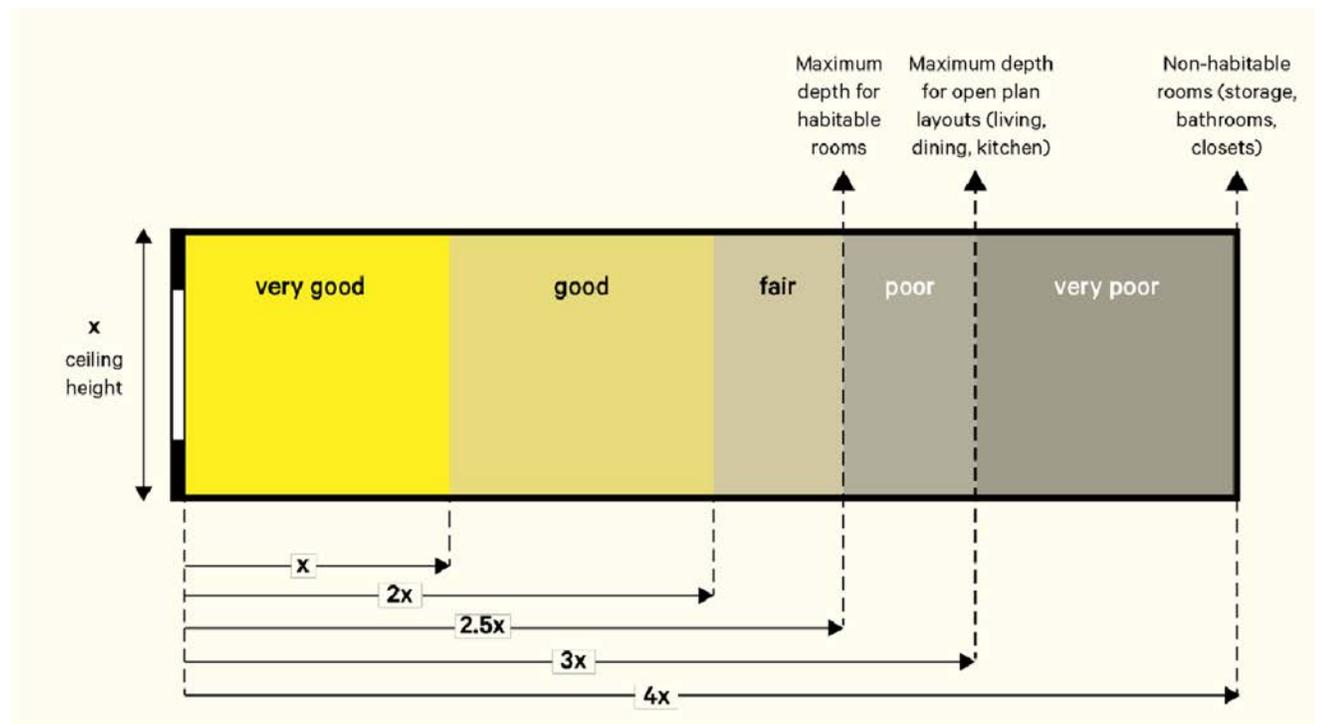
Aimed at helping municipalities develop a standardized regulatory approach for 3 – 6 storey rental buildings

Supportive of the DASH blueprint building designs and optimized for off-site manufacturing.



# Regulating Building Bulk Without FAR/FSR

- Use setbacks and a maximum building height to regulate the interface with adjacent buildings,
  - All storeys within a building count towards the storey limit, with exceptions for parkades, mechanical, etc.
- Maximum unit depth to regulate the livability of units
  - Unit depth regulation offers greater flexibility for the building form.
  - Because hallway widths are determined by code and represent unleaseable area, the building width is inherently limited by market dynamics.



## Standardize and Reduce Setbacks (where appropriate)

- Reducing setbacks can enhance the viability of development, particularly for courtyard-style buildings.

Front yard	3.0-6.0 m (10-20 ft.) <i>This value may be reduced further in mixed-use areas.</i>
Side yard	Interior: 1.5-6 m (5-20 ft.)  Exterior: 2.4-4.75m (8-15 ft.)  <i>These values may be reduced further in mixed-use areas</i>
Rear yard	4.5-6.1 m (15-20 ft.)



# Design Standards

ARTICULATION

ACCESS



EXTERIOR  
CLADDING  
MATERIALS

LANDSCAPING

AMENITY AREAS

# DASH does not constrain creativity



**Benchmark 1:** 330 Goldstream is a 6-storey prefab social housing project in Victoria. It achieved Step Code 4 and was an early adopter of prefabrication and Lean project delivery. Despite being faced with 10 days of inclement weather, the total erection time for the 6-storey structure was only 69 days.

**Credit:** [Cascadia Architects](#)



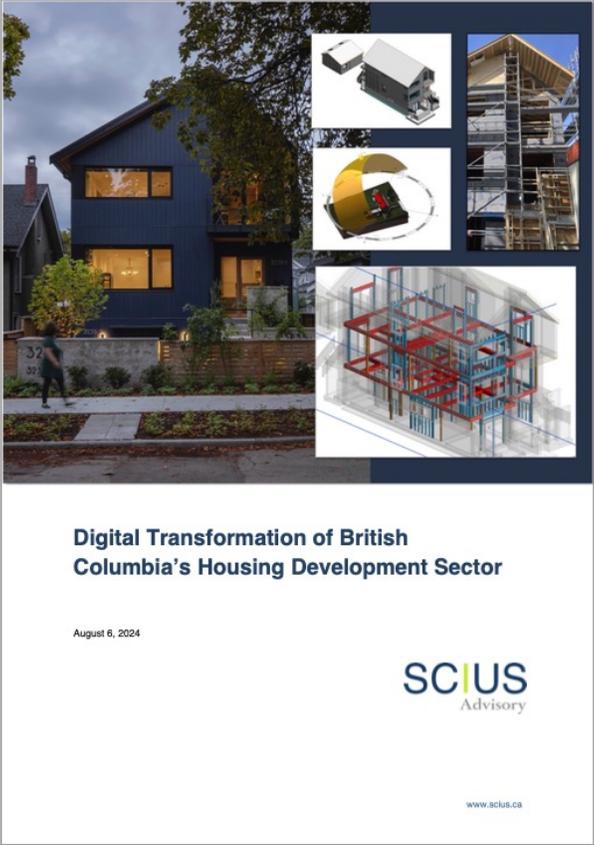
**Benchmark 2:** Vienna House in Vancouver is a National Housing Strategy that uses BIM throughout design, construction and handover. The 6-/7-storey mass timber and prefab wood frame building will provide 123 units ranging from studio to four bedrooms. It is aiming for completion in Spring 2026.

**Credit:** [Public Architecture](#)



**Benchmark 3:** The Dik Tiy Passive House performance social housing project in Smithers, BC for the Witset Nation **Credit:** [Cornerstone Architecture](#)

# Leveraging BC's Digital Leadership



1. Digitize Regulations

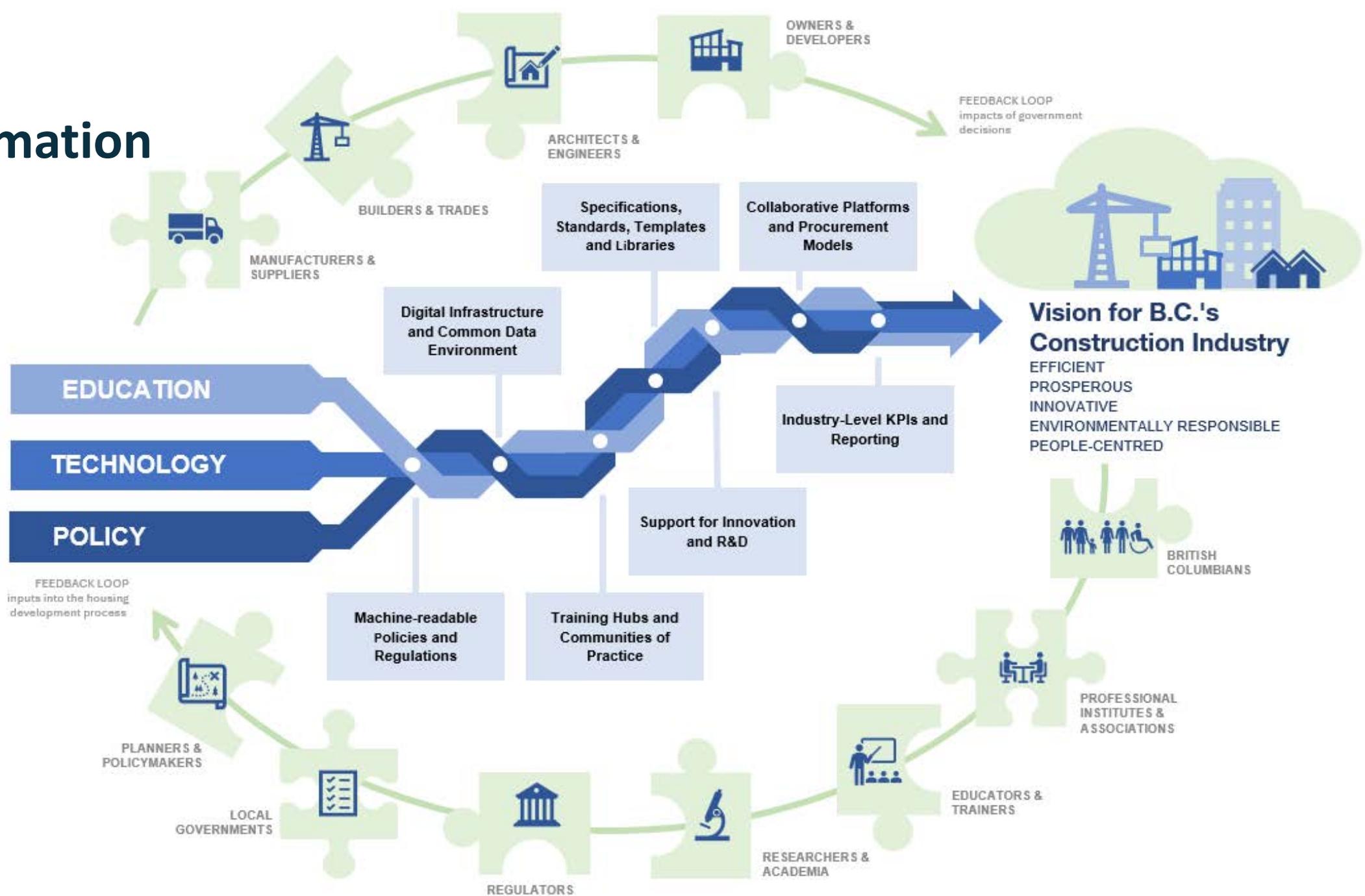
2. Permitting as a service

3. Digital collaboration

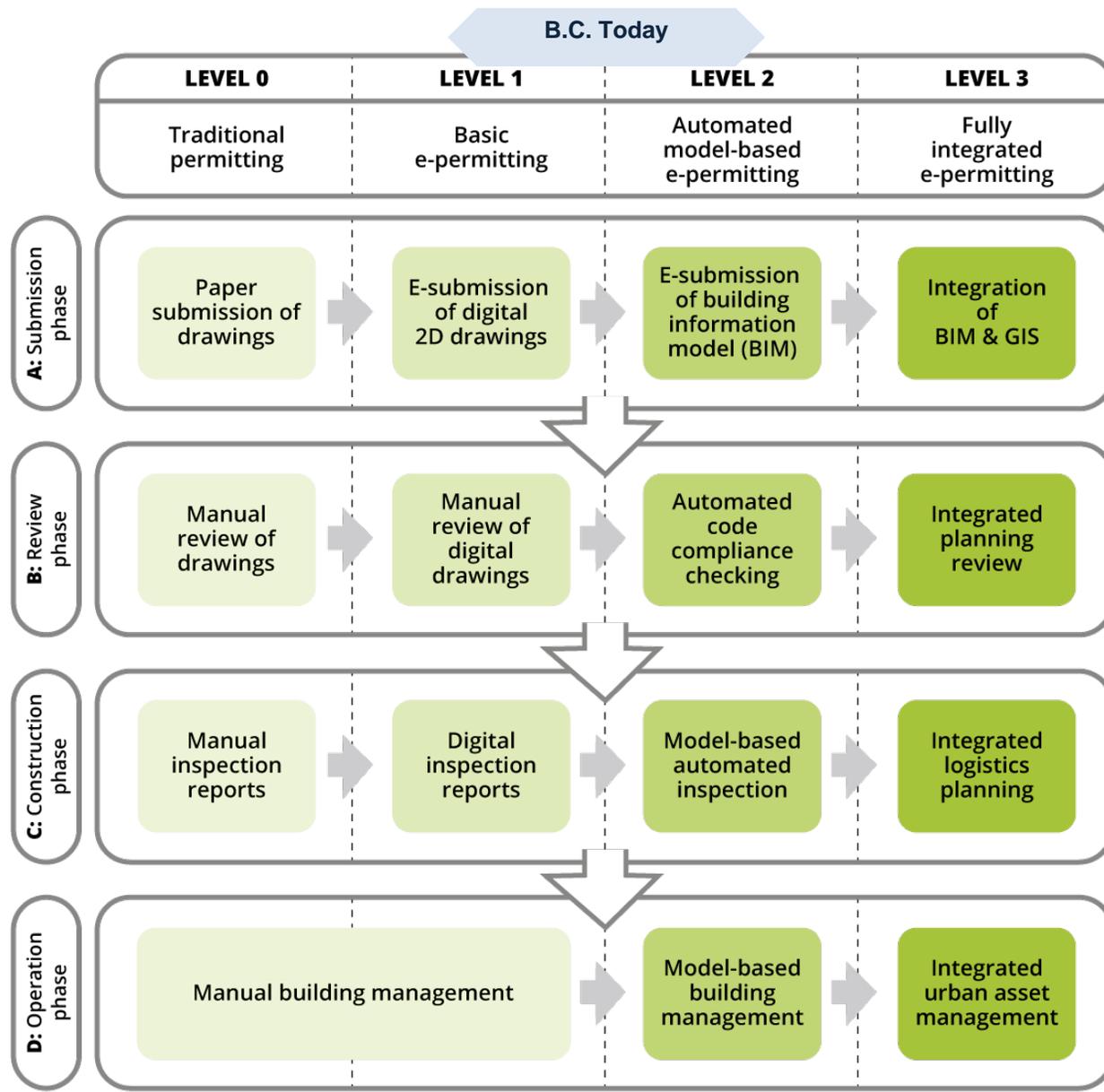
North American Leader in Digital Permitting and Construction



# Digital Transformation Vision



# State of Play



The situation is changing fast.

Several local governments are testing automated model-based e-permitting systems – some with AI-enabled generative planning capabilities that will help developers quickly evaluate the permissible development potential of their sites.

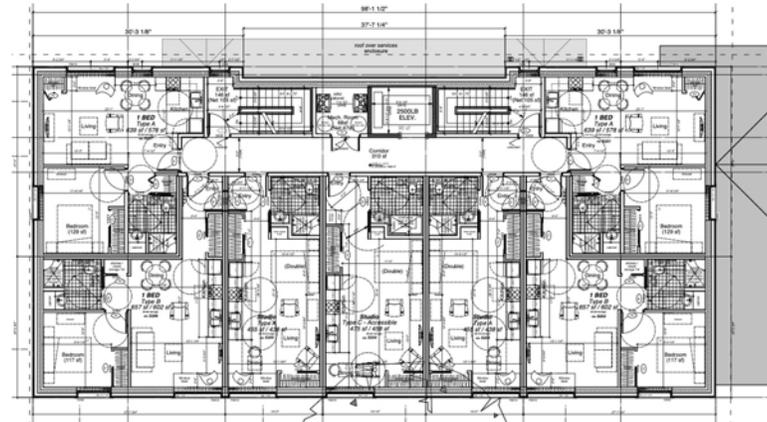
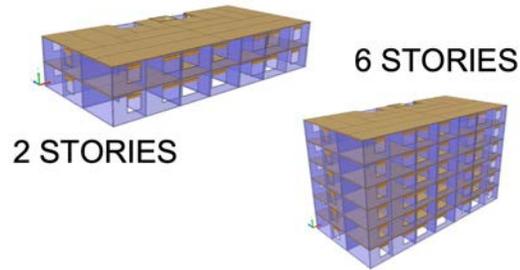


# Next phase of blueprint designs

- RFPQ to prequalify architects, engineers, and building scientists to prepare blueprints complete. RFP to be issued shortly.
- Overall, design stewardship is provided by Zaha Hadid Architects.



**Prefab light wood frame and mass timber options for First Nations housing in Smithers.**



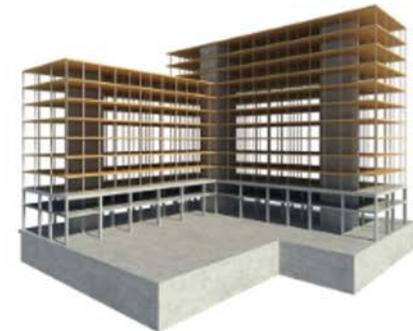
**7+ storey mass timber**



Point Tower - City of Vancouver



Slab Tower - City of Kamloops



L Tower - City of Coquitlam

## Founders

### Local Authorities/Housing Market Partners:

- [BC Housing](#)
- [Metro Vancouver Housing](#)

### Digital Transformation and Project Management Experts:

- [Scius Advisory](#)
- [Aliova](#)

### Design and Structural Experts:

- [Iredale Architecture](#)
- [Timber Engineering Inc.](#)

### Legacy Digital Transformation:

- [BIMOne Inc.](#)

## Technical Partners and Supporters

### Prefabrication Experts:

- [b collective](#)
- [Kindred Construction](#)

### Architectural Advisors:

- [Zaha Hadid Architects](#)

### Software:

- [KOPE](#)
- [Archistar](#)

### Funding:

- [Canada Mortgage and Housing Corporation \(CMHC\)](#)

## Collaborating Manufacturers

- [BC Passive House](#)
- [ZyTech](#)
- [Kalesnikoff](#)
- [Freeport](#)
- [ROC Modular](#)
- [Alliance Truss](#)
- [b collective](#)
- [Collective Carpentry](#)
- [Naikoon](#)
- [TAG Panels](#)
- [Winton Homes & Cottages](#)

# 5 year plan

- Hire DASH staff
- Create new blueprint designs
- Start 20 DASH pilot projects
- Onboard manufacturers to provide additional product types in other locations
- Establish Leadership Council



# Got questions?

**Contact us at:**

[support@acceleratedhousing.ca](mailto:support@acceleratedhousing.ca)

[acceleratedhousing.ca](https://acceleratedhousing.ca)

