



## THE CARBON CYCLE PROJECT SINKHOUSE

### **Carbon Negative**

Removing CO<sup>2</sup> from the atmosphere for a net carbon reduction and positive climate change

#### **Carbon Sink**

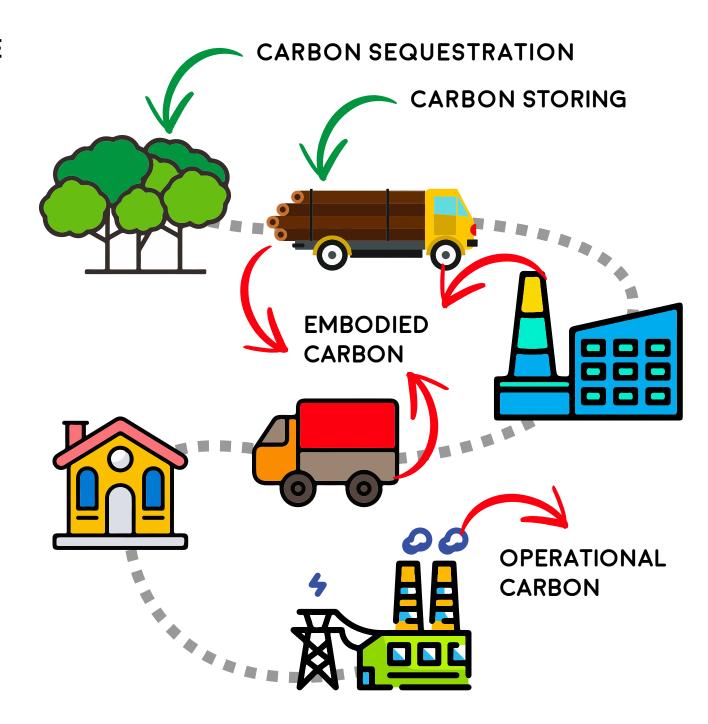
Anything that absorbs more carbon from the atmosphere than it releases, also carbon sequestration

#### **Operational Carbon**

The net carbon emissions from all energy sources used to heat, cool, ventilate, light and power buildings

#### **Embodied Carbon**

Embodied carbon is the net emissions of green house gases used to mine, log, harvest, extract, process, manufacture, transport and assemble a built unit



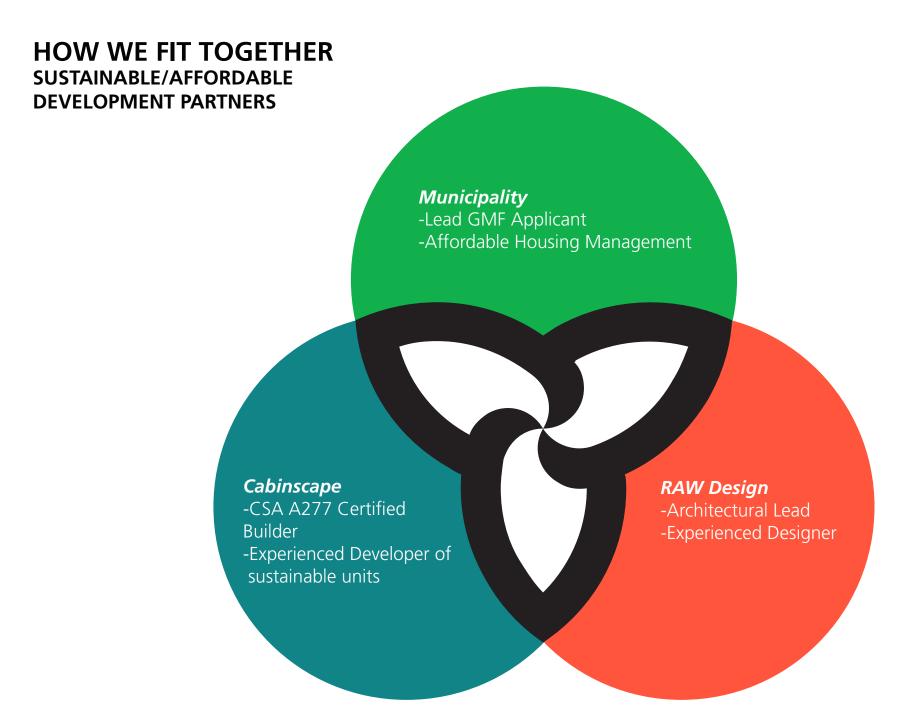


## SUMMARY PROJECT SINKHOUSE

- -Proposing a pilot development of two **carbon negative**, manufactured homes
- -Go beyond the required standards and produce a "carbon sink", net negative manufactured home
- -Partner with municipalities, conduct real world testing
- -Existing provincial level code developments focus on energy efficiency and **operational carbon**
- **-Embodied carbon** is quickly becoming an important topic
- -Functional testing and follow up analysis will be fed back to finalize a proven design
- -Create a best in class approach to, environmentally responsible, affordable manufactured home fabrication, community design and municipal level regulatory approaches









## MUNICIPAL PARTICIPATION PROJECT SINKHOUSE

## **Green Municipal Fund Application**

- -Green Municipal Fund (GMF) | municipality must be the lead applicant.
- -Cabinscape and RAW to complete application and supporting documentation
- -Disbursement of funds flow through the municipality.

### Affordable Housing Partner

- -Final built unit becomes an asset managed by a municipal department or partner
- -The rental and management of the units then falls under affordable housing entity

## **Supporting Financing**

- -GMF will cover up to 80% of the cost to develop
- -20% be provided by the partner who obtains the asset
- -Alternatively, municipal level grant or subsidy program fills remaining 20%

## Energy/Carbon Efficiency Incentives (optional/encouraged)

- -Progressive municipalities are beginning to reward responsible building
- -Encourage the learnings from this program to inspire similar incentives

#### **GMF**

GMF helps local governments switch to sustainable practices faster. Their unique mix of funding, resources and training gives municipalities the tools they need to build resiliency — and create better lives for Canadians.

#### **Affordable Housing**

Affordable Housing as per the GMF is 80% of market value



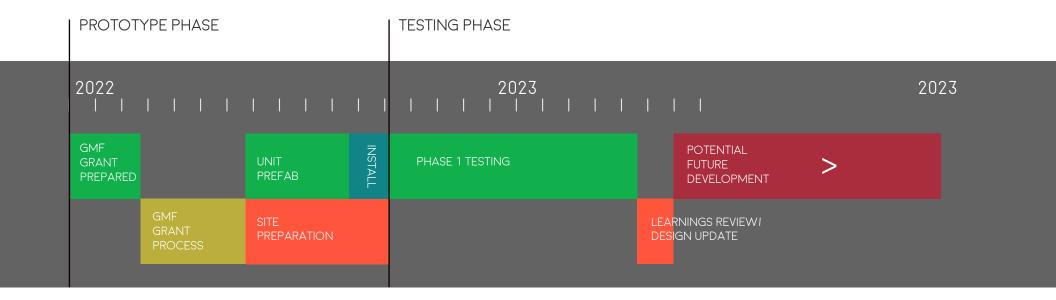
## **EXISTING DESIGN**IMPROVING ON EXISTING STANDARDS

- -World's first off grid CSA A277 certified manufactured homes
- -The existing "Penner" model is fully code compliant as an A277 unit
- -Select lower carbon materials
- -Increase solar and remove dependency on fossil fuels





## PROPOSED SCHEDULE



#### **GMF GRANT PREPARED**

Initial phase of GMF grant including "pre-proposal"

#### **GMF Grant Process**

Full grant application, including technical drawings, updates, site plans and full development schedule.

### Unit Prefab / Site Preparation

Fabrication of units and site preparation (clearing, pads prepared, well drilling, etc)

### Install

Installation of unit and final permitting

## Phase 1 Testing / Learnings Review

Live-in testing and review/feedback process



## COST BREAKDOWN 2 CABIN PILOT PROJECT

ADMIN I PROJECT MANAGEMENTI	\$47.000	HOUSING
ACCOUNTING I GRANT PREP I PM		PARTNER \$94.600
<b>DEVELOPMENT I</b> SITE DEVELOPMENT I PREPARATION	\$78.000	
		GREEN
CONSULTING & ENGINEERING I DESIGN. MODELING AND TESTING	\$101.000	MUNICIPAI FUND \$378.400
FABRICATION I HOUSING BUILD	\$247.000	



# THANK YOU PLEASE REACH OUT

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