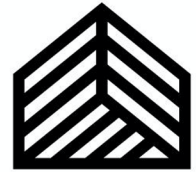


unbuilders



**HERITAGE
LUMBER**



A New Future For Old Buildings

Introduction

Passive House builder, deconstruction & reclaimed wood expert

Adam Corneil - Founder & CEO

- 19 years in sustainable construction
- Passive House certified; reclaimed wood & deconstruction expert
- Policy change advisor to City of Vancouver & other regions
- Demolition Committee Member, National Zero Waste Council

Unbuilders

- Established in 2018
- Deconstruct buildings to maximize the salvage and minimize waste

Heritage Lumber

- Reclaimed wood broker & future product manufacturer



The Problem - Demolition & Disposal

Construction industry wastes valuable resources, incl. **premium old growth lumber**

Canadian Construction
Industry Figures:



20 Million tons of **CO₂** released into the atmosphere through decomposition

100% of which can be **salvaged & recycled**

Retails for **4x more** than new lumber

Traditional Demolition



'Green' Demolition

A building is demolished, but the majority of the materials are recycled

First Steps

- Abatement & initial salvage
- Clean drywall/plaster strip
- Stucco

First Steps

- 'Green' demolition of the structure
- Foundation

Result

- All the valuable lumber is mulched up for energy, pulp & paper or contouring the landfill
- Still massive polluter as GHG is released into the atmosphere



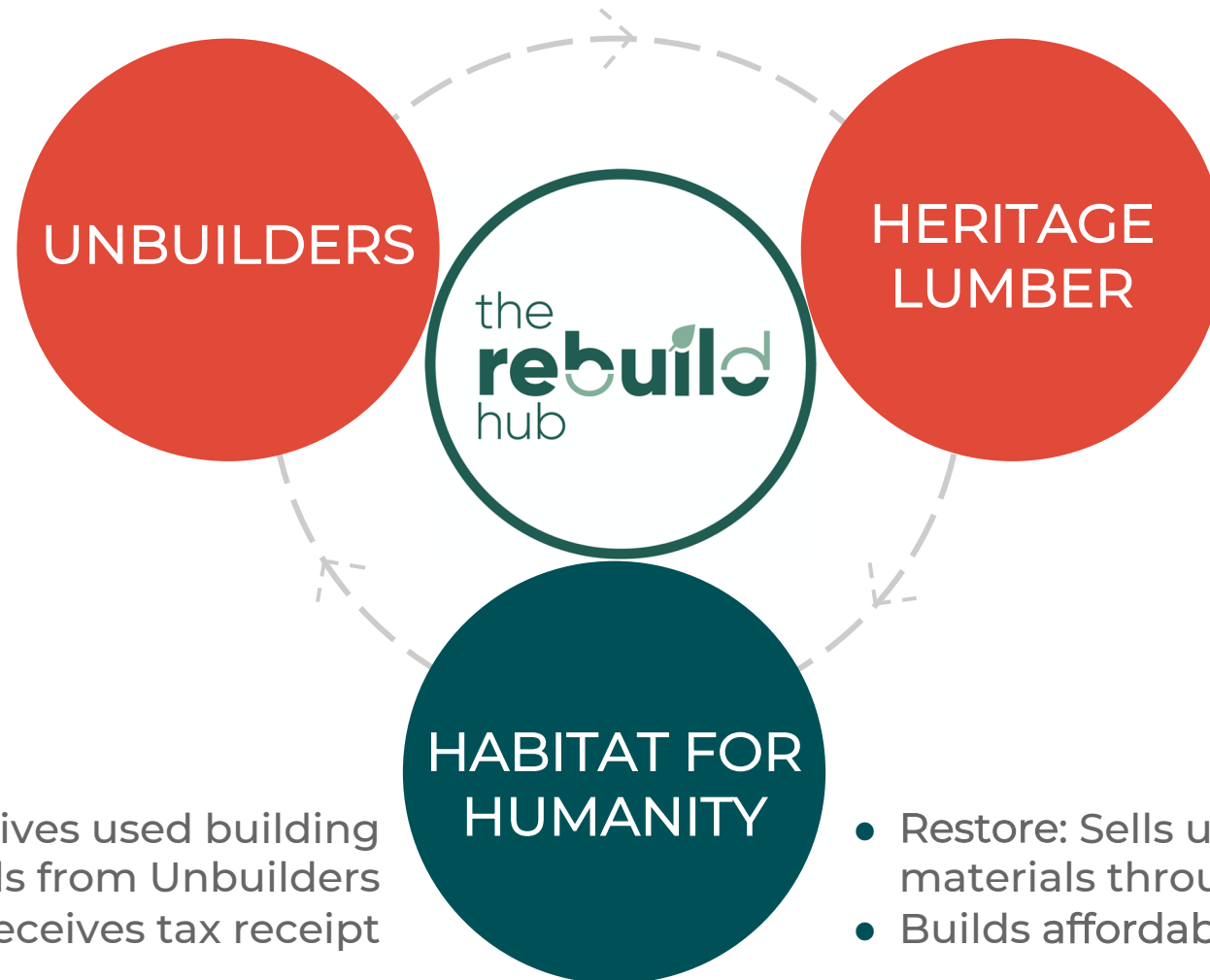
'Green' Demolition



Our Solution - Salvage & Reuse

Unbuilders deconstructs & salvages; Heritage Lumber resells & remanufactures; Habitat resells & builds affordable housing

- First dedicated deconstruction & salvage company in Canada
- 1,550 tonnes diverted from disposal in 2020 (7,500 tonnes of CO₂)
- Record setting 99% salvage & recycle on single family home



- Reclaimed wood brokerage
- Reclaimed wood receiving yard for wider industry
- Reclaimed products and R&D projects

- Receives used building materials from Unbuilders
- Owner receives tax receipt

- Restore: Sells used building materials through
- Builds affordable housing

Deconstruction Hurdles

Nothing worth doing comes easy

Cost

- Deconstruction typically costs more than demolition
 - Creative business models – donation & acquisition

Time

- Deconstruction takes more time
 - Machine-assistance & experience reduces time

Material Outlets

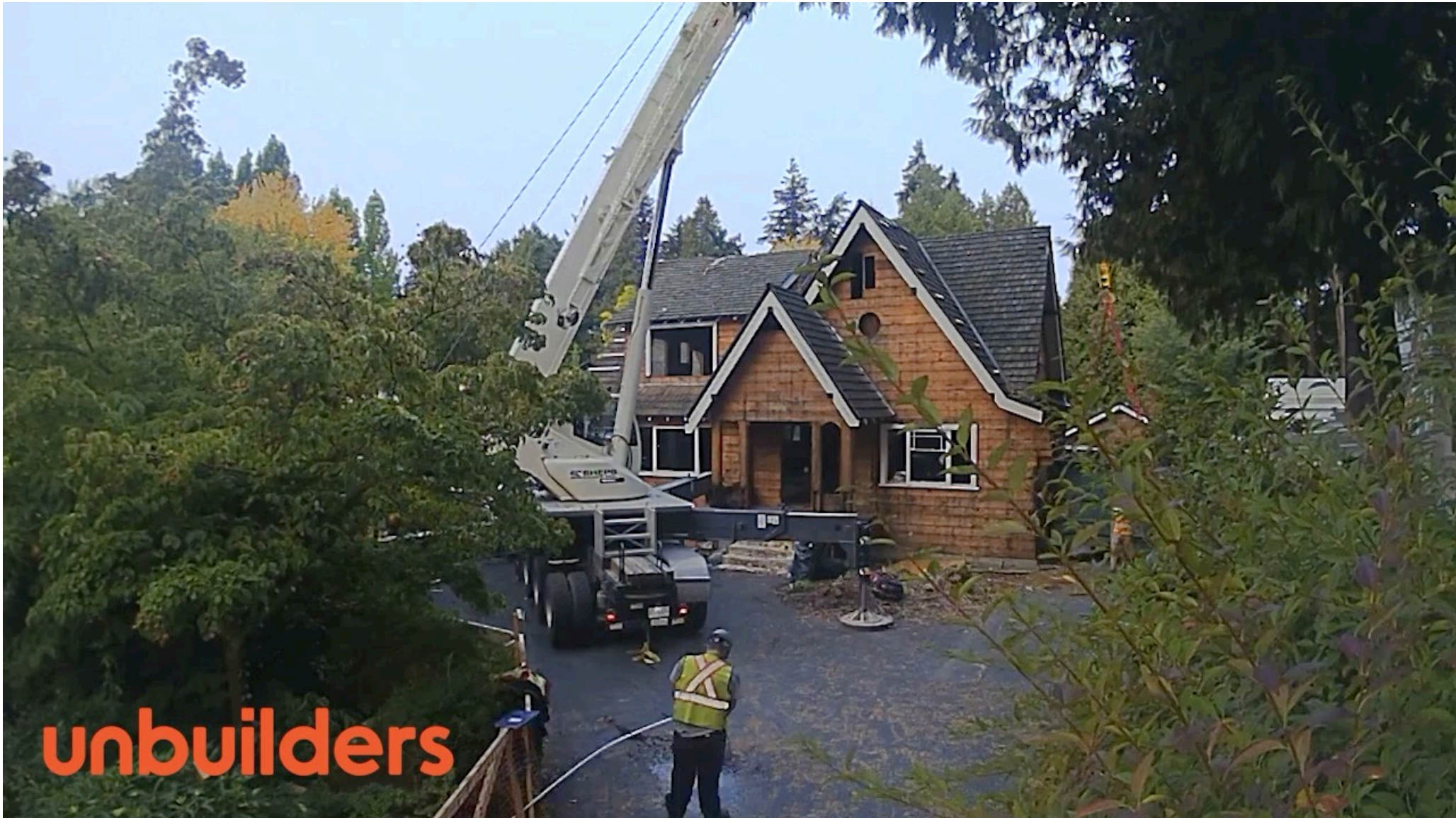
- There's no outlets to bring high volumes of salvaged materials
 - Receiving yard + Rebuild Hub with Habitat for Humanity

Policy

- Most regions have policy that favors demolition
 - Policy changes have been implemented, more to come



Crane Deconstruction



Our Roots – Old Growth Lumber

Our company is harvesting more than a raw material, we are salvaging **our history**

Old Growth Lumber

- Trees 2000 years old once covered our continent
- Used for framing buildings up until 1970
- **Scarce resource**, rarer with every demolition & will not grow back for generations
- Small amount left standing & no longer cut for dimensional lumber

Benefits of Old Growth Lumber

- **12 times less embodied carbon**
- **3 times stronger** than new lumber¹
- Most sustainable building material on the market¹

Though our cities may be young, they were built with **ancient trees**



Reclaimed Products

Reclaimed Wood Products & Finishes

Applications

- Dimensional lumber
- Products: Flooring, wall/ceiling cladding, stairs, counters, tables, furniture, decks, siding, soffit, fascia

Products with a Story

- Reclaimed wood and fixtures from buildings with history

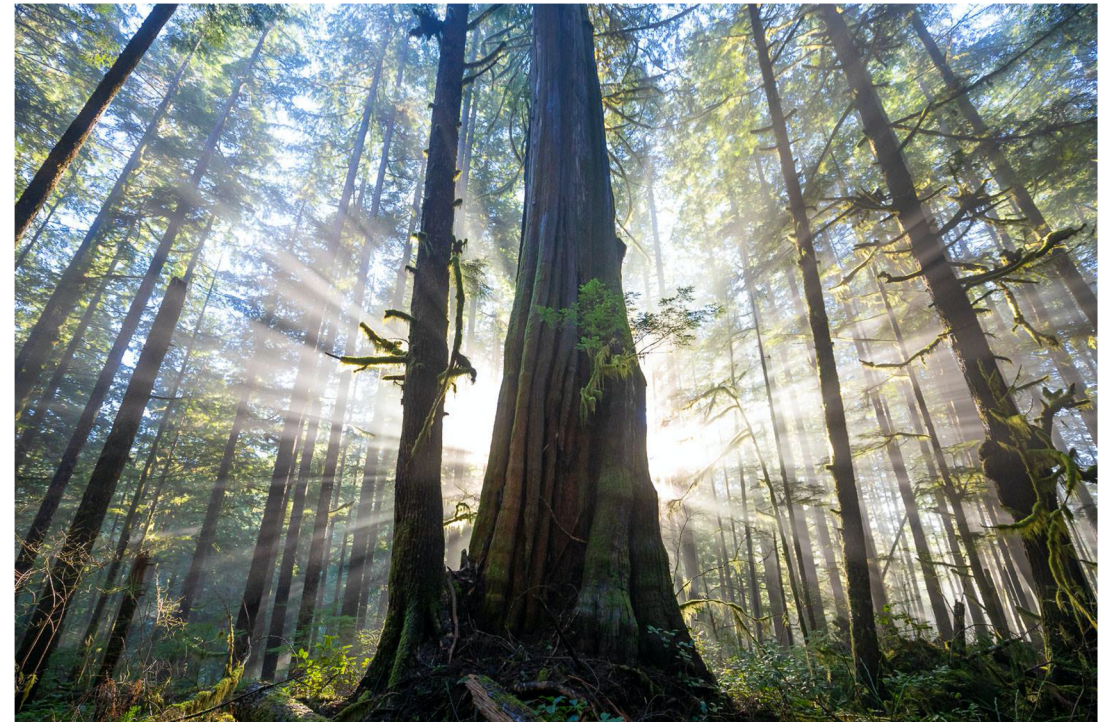


Deconstruction Impact - Environment

Huge positive impact on the environment

Environmental

- C&D generates 4 million tonnes of waste annually - over $\frac{1}{3}$ of all solid waste
- **19.9 Million tons of CO₂eq** released into the atmosphere through decomposition
- Landfills are overflowing



Deconstruction Impact - Social

Making our communities healthier & more affordable

Social Impact

- Better for communities - quieter, cleaner
- Preservation of history through material salvage
- Contributes to the construction of affordable housing through partnership with Habitat for Humanity

Health

- Demolition does not remove all hazardous materials - we average 2 call backs per job; every demolition means hazardous material exposure
- Health risks to workers and community
- **Contaminating** landfills, recycling facilities and our communities



Deconstruction Economics

Creates jobs & stimulates the economy

Jobs

- Deconstruction jobs: over 45,000 jobs in BC alone, 250,000 jobs nationally
- Likely double that total from the offshoot economic activity & jobs needed:
 - Transportation, material handling
 - Used building material sales
 - Wood workers, carpenters, renovators
 - Designers
 - Recycling streams

Economics

- Metro Vancouver: \$3.4 billion per year from deconstruction & reclaimed wood sales
- National: \$18.8 billion per year



Policy Change

Policy needs to adapt to favor deconstruction & house moving

Permits

- Release permits 4 months sooner if the owner chooses deconstruction or moving the building
- This alone will make 95% of people go this route

Permit Cost

- Make deconstruction & moving permits cheaper to incentivize owners

Compliance & Penalties

- Dedicated staff ensuring compliance is hit in regards to the material destination
- High fines if compliance is not met



It's Not Waste,



It's Just Wasted.



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