

SPEAKER

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Embodied carbon in construction

- Upbrella method
- Upbrella in action
- Environmental Assessment Report
- Embodied Carbon in a Building's LCA
- Contribution of Upbrella Projects

→ Upbrella method

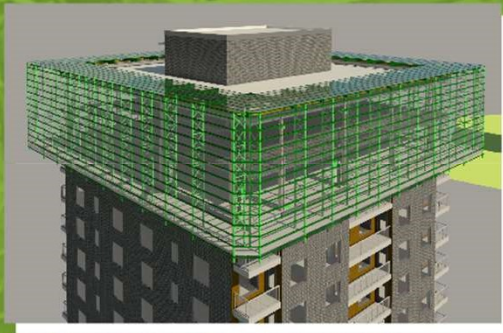


Sheltered high-rise construction
No tower cranes

- 1 Build final roof + Install Upbrella
- 2 Assemble new floor structure at man's height
- 3 Lift new floor assembly to its final height
- 4 Install vertical supports (columns & sheer walls etc.)
- 5 Do wet-works (floor, stairs, core) (if applicable)
- 6 Start envelope installation

REPEAT
SEQUENCE
UNTIL TOP OFF

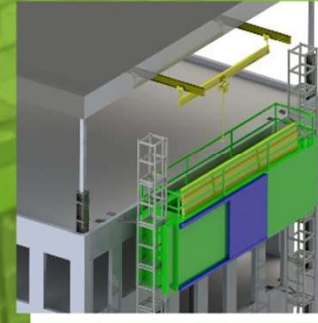
Equipment



Worksite Shelter



Lifting System



Material Handling
Systems

→ Upbrella in action



Sheltered high-rise
construction with no
tower cranes



www.youtube.com/watch?v=Dtl1uiUlxE4



TOUR CARMELHA, MONACO, 9 FLOORS CLT/MASS TIMBER (2022)

→ Environmental Assessment Report



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Program:
Construction of a 215 tf
(65 m) mixed-use tower

Superstructure:
Composite
(Steel + COMSLAB)

Envelope:
Masonry
(bricks)

Certifications:
None planned

Surface area:
74,597 ft² [6,930 m²]



→ Embodied Carbon in a Building's LCA



-16%
Reduction

COMSLAB
Composite Floor System
+ steelbeam & columns

= -10%

- ✓ Less concrete
- ✓ Less waste

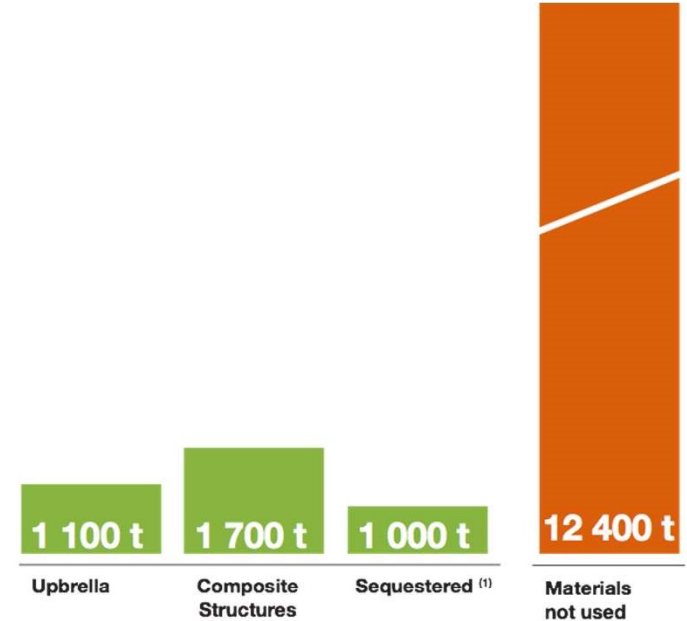
upbrella
CONSTRUCTION

= -6%

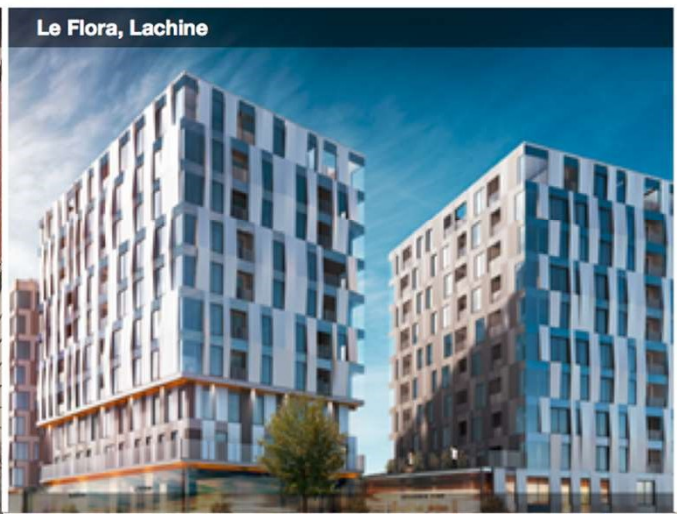
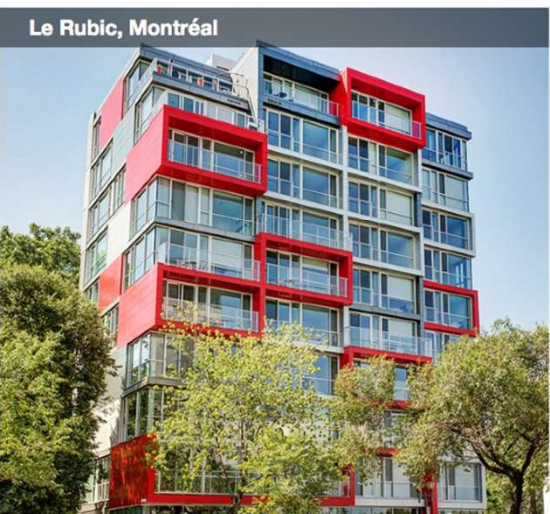
- ✓ Less waste
- ✓ Less temporary energy
- ✓ Faster project delivery
- ✓ No tower crane

→ Contribution of Upbrella Projects

Upbrella Projects = Reduction of **CO₂-eq**
Total of 3 800 t



* Note (1) : Potential CLT/Mass Timber sequestration



Thank you!

Embodied carbon in construction

A KATERRA – UPBRELLA WEB EVENT

**In collaboration with the
Quebec Economic Office of Toronto**

Québec 



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**The only way
to go is up!**

To learn more:

www.upbrella.com