

Innovation in housing construction and renovation in Barcelona

NYC/Barcelona/Amsterdam webinar
22 March 2022

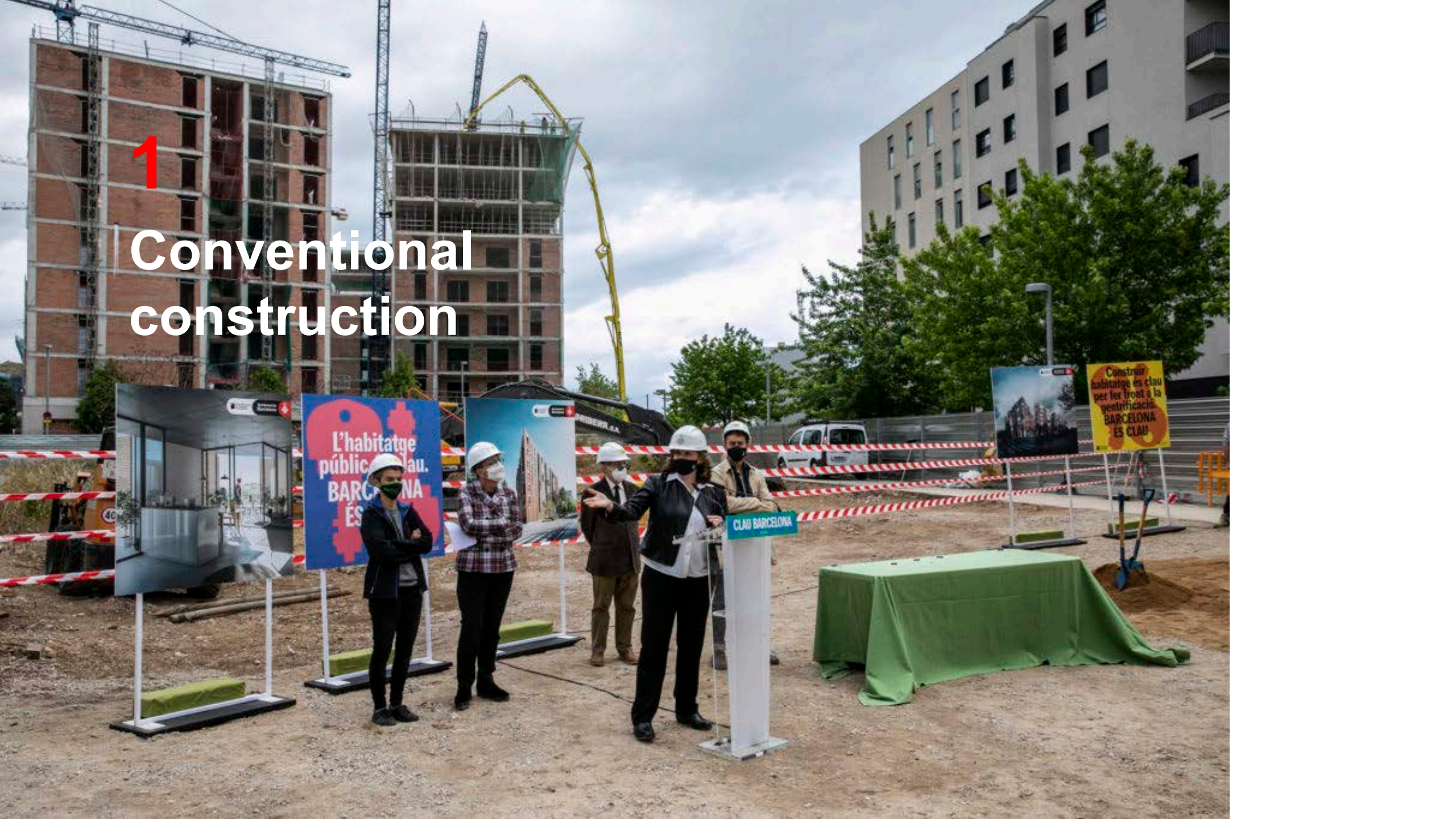
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Conventional construction



1.1 Conventional construction

- **Conventional construction methods tend to be:**
 - More expensive
 - Slower
 - More disruptive to neighbors
 - Less sustainable
- **Public housing goals in new construction**
 - Affordability
 - Comfort
 - Compliance (building code, fire safety, etc.)
 - Blend in with private projects
 - Social inclusion
 - Durability and low maintenance costs
 - Energy efficiency and small carbon footprint
- **Public goals in renovation** (additional to prior principles)
 - Less intrusive to residents



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**Industrialized
housing
construction
and
renovation**



2.1 New construction

APROP temporary accommodations

- **15-month development time** thanks to the combination of design and construction bidding process and the use of industrialized technology for faster assembly and disassembly.
- On-site construction works reduced to 4 months.
- 67% waste reduction and 32% reduction in carbon emissions during construction.
- AA energy efficiency (25 kWh/sqm/year).



2.1 New construction

APROP temporary accommodations

- APROP Ciutat Vella: In use, 12 units.
- APROP Glòries: Under construction 42 units.
- APROP Quetzal: Design phase, 40 units.



2.1 New construction

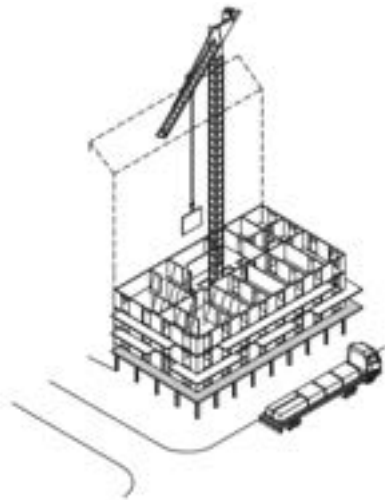
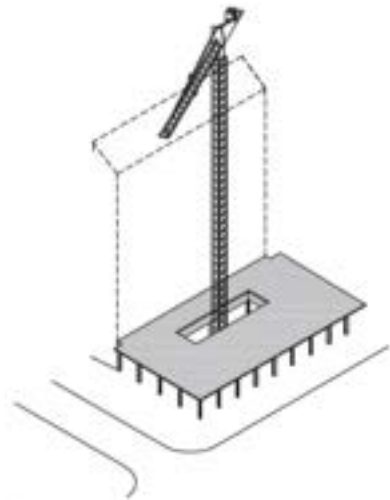
Public tenders for public housing using “industrialized” solutions

- 2 public tenders (design+construction):
 - 4 projects with a total of 151 units in Sant Martí (20 M€).
 - 2 projects with a total of 135 units in Sant Andreu (11.7 M€).
- Scoring takes into account:
 - Architectural quality.
 - Quicker building times. Average construction time of 31.5 months (-40%).
 - Energy consumption and CO2 emissions (85% of the final score). Most winning proposals use cross-laminated timber and include photovoltaic energy systems.



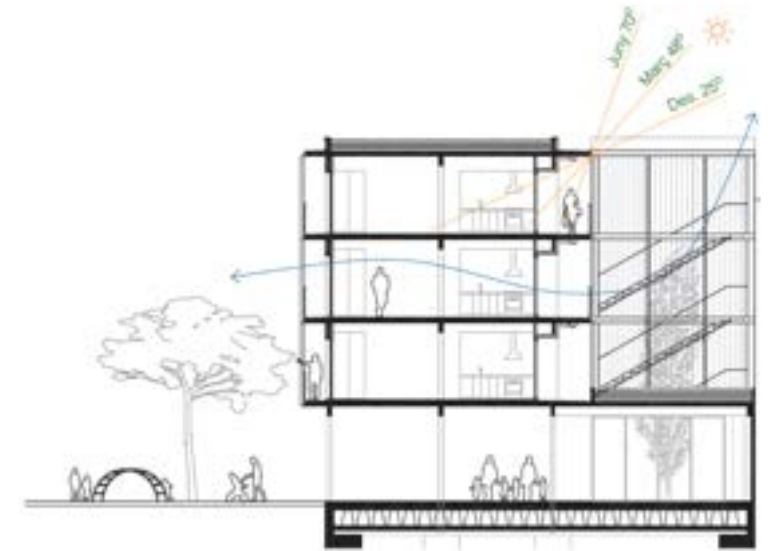
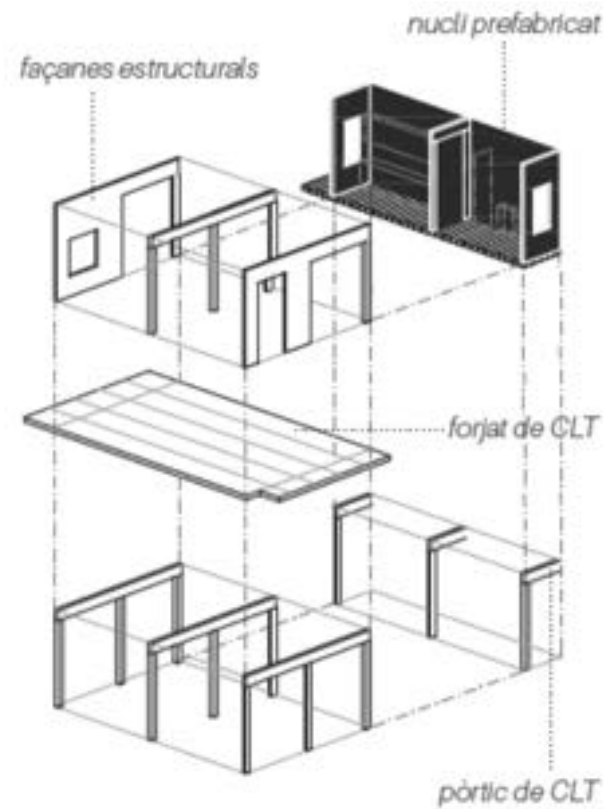
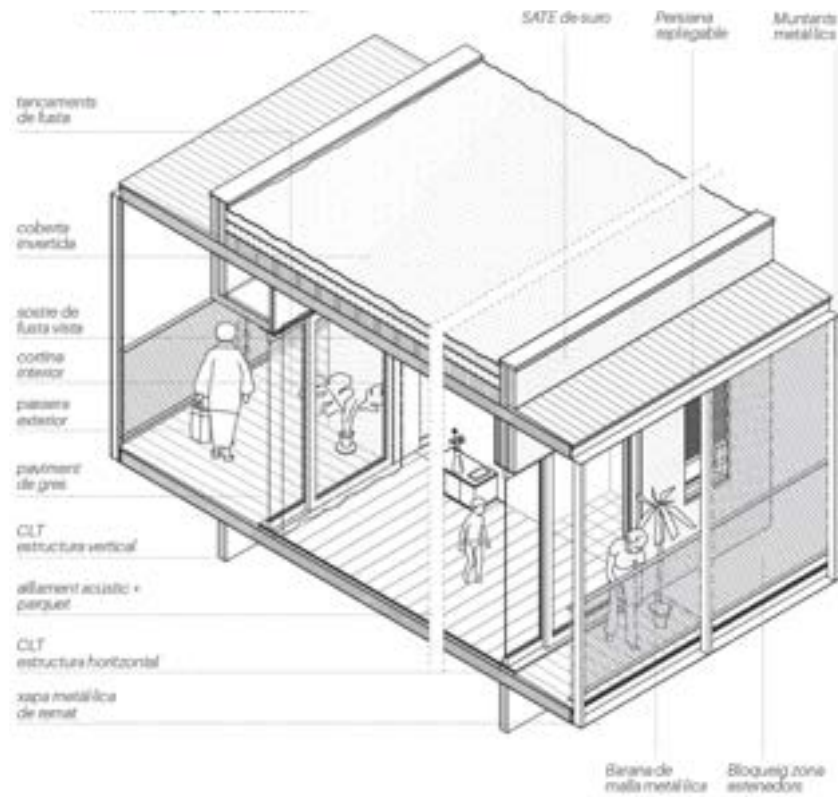
2.1 New construction

Passatge Arriassa s/n



2.1 New construction

Carrer Binefar 22



2.2 Renovation

Can Fabra

- Old industrial complex converted into youth housing.
- Existing façade has been preserved, while a 4-storey wood building has been built inside it.
- Recycle + nature-based solutions.



2.2 Renovation

Urban regeneration and High Complexity Estates program

- Proactive strategy to promote building renovations in the private housing stock focusing on:
 - Energy efficiency.
 - Affordability and tenant protections.
- 127 M€ in public subsidies (5 years) + 381 M€ in private investment= **508 M€ investment.**
- **145.000 neighbors benefited.**
- **34.800 jobs created** (MITMA estimates).
- **1.000+ M€ GDP increase.**



Thank you

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