BUSINESS ECOSYSTEM APPROACH TO THREE FINNISH WMC PROJECTS

Noora Viholainen & the KäPy team
• The methods of wood construction are still new, projects are mainly pilots and the actors are few (e.g. Franzini et al., 2019; Lazarevic et al., 2019)
• The construction industry is not keen on adopting such new, risky methods (e.g. Hurmekoski et al., 2015; Gosselin et al., 2017)
• Homebuyers may likewise favour more familiar materials used in multi-storey applications (Høibø et al., 2015)

→ Collaboration, communication and sharing of knowledge are important for innovation (Matinaro & Liu, 2017) and WMC to strengthen its market position (Sardén, 2005)
• Yet construction projects tend to lack feedback loops (Gann & Salter, 2000) and interest to collaborate with external project actors and stakeholders (Bygballe & Ingemansson, 2014)
“Innovative businesses can’t evolve in a vacuum. They must attract resources of all sorts, drawing in capital, partners, suppliers, and customers to create cooperative networks.” (James F. Moore, 1993)

- Further co-evolutionary logic and increased interdependency, dynamism (Aarikka-Stenroos & Ritala, 2017)
- Builds around the leading company (keystone player)
  - E.g. creates value for the entire ecosystem, distributes information, wants to improve the functioning of the system (Iansiti & Levien, 2014)
  - An important role in promoting mutual learning (Williamson & De Meyer, 2012)
BUSINESS ECOSYSTEMS IN CONSTRUCTION PROJECTS

- Connection between a well functioning BE and business outcomes (value created) (Pulkka et al. 2016)
  - Shared logic and ways of operating
  - Effective governance of collaboration
  - Specialized, complementary participants focal for value creation (Pulkka et al., 2016, Thomas & Autio, 2014)

- Not previously studied in WMC projects

(Pulkka et al. 2016)
RESEARCH QUESTION

• How is BE taking shape and functioning in industrial wood construction projects? (Participants, roles, governance, communication, etc.)
  
• How do the partners see the common goals as part of their own operations (shared logic)?
  
• What are the benefits of being a member in BE and what are the key factors for its success?

Toppinen et al. (2019)
**CASES & INTERVIEWS**

- 3 novel, pioneering case projects with wood as main structural material
- 23 semi-structured interviews (2017-2019)
  - Face-to-face when possible, otherwise via phone
  - Length 27-120min (65min on average)
  - Recorded and transcribed

<table>
<thead>
<tr>
<th>CASE 1: a two-storey multi-family building with 14 apartments</th>
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<td><strong>Developer/main contractor</strong></td>
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<td><strong>Project actors</strong></td>
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<td><strong>Municipality representative</strong></td>
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<th>CASE 2: a three-storey building with 27 small-scale apartments</th>
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<th>CASE 3: a twelve-storey student housing project</th>
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<td><strong>Project actors</strong></td>
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EXAMPLE OF BE MAP | CASE 1

Case 1

Developer and main constructor*

Municipality
Zoning, infrastructure, supervision

Core business

Excavation and yard work

Real-estate agent

Foundation work

Future residents

Site supervisors (HPAC and electricity) + electrical plans

Enlarged business

Structure and foundation plans

HPAC plans

Architectural plans Principal designer

Door and window supplier

* Including main site supervision and elements (designing and manufacturing).
Trust was indicated to strengthen long-term collaboration…

“We have of course aimed towards long-term collaboration in designing and [choosing] contractors, so that projects would be such that all [designers and contractors] can manage…we refine the collaboration all the time when we move forwards…You quite often see that that the aim is to find the cheapest price and then the partners change every time, especially when business conditions are good…Building these wooden multi-storey constructions is a bit of a special field, so if you have trust you should [hold on to good partners].”

- Architect/main designer, Case 2

…which is important for co-learning and accumulating knowledge on WMC.

“In my opinion this has been learning for everyone still…Always new things. So now that we would build such a building next time with the same crew, it would be quite a lot clearer.”

- Main site supervisor, Case 2
While it seemed that the hubs had difficulties in disseminating the larger goals as well as keeping the ecosystem “connected”…

“Well I do not know, of course the contractor has their own clear goals for the whole project, to build a successful and financially profitable project…”

- Representative of wood element supplier, Case 2

“There was no proper project management, which would have dealt with the schedules and made sure that everything fits between the different actors.”

- Foundation work, Case 1

…most actors were aiming towards similar targets (high-quality and cost efficiency) both in their own work, but also when thinking about the final product created together.

“Sure, this here is teamwork… Meaning that everyone works together for a common goal.”

- Structural engineer 2, Case 1
The improved sustainability as a shared benefit (or vision) was not heavily discussed, yet other shared benefits were seen to emerge from the case WMC projects:

“I would think building a completely new kind of wooden multi-storey construction has been the benefit for all [participating in the project], above all it provides visibility and interest. And maybe some boldness from the organization to do new things. That is the biggest [benefit].”

- Architect, Case 3
CONCLUSIONS

- Realized models of co-operation between the different actors during the projects and the accumulated experience create various benefits for the partnering companies (reference value, R&D, trust and familiarity…)
  - Yet no clear sign of integrated collaborative teams
- Future research needed e.g. on
  - shared sustainability logic/perspective of business actors in WMC
  - co-evolutionary aspects using longitudinal data
THANK YOU!

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