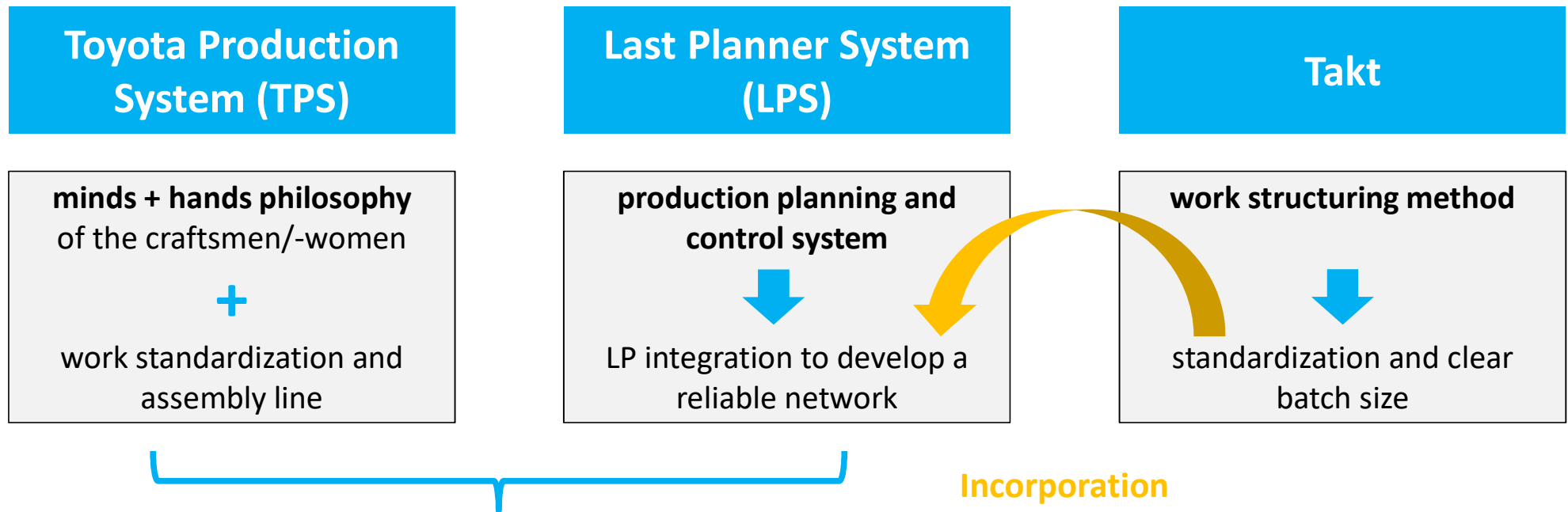




The Beauty of a Phase-overlapping Last Planner System with incorporated Takt

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BACKGROUND BASED ON LITERATURE



Commitment, Teamwork, Empowerment & Training

RESEARCH QUESTIONS AND METHOD

1. How does LPS function as a production system across the whole project and which role does takt play in the LPS?
2. How to design a production system for all project phases?

Action research during the project

- Discussions
- Meeting and plus delta evaluation
- Observations

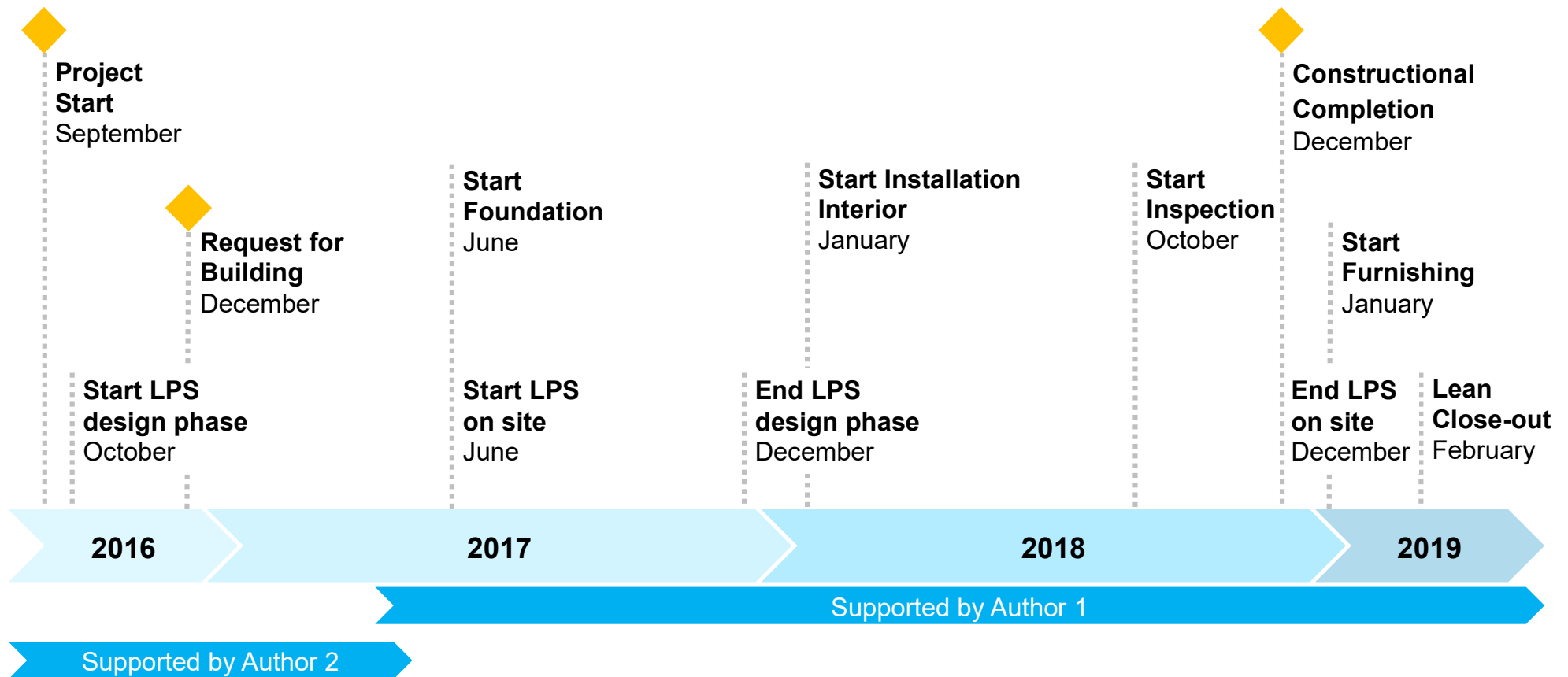
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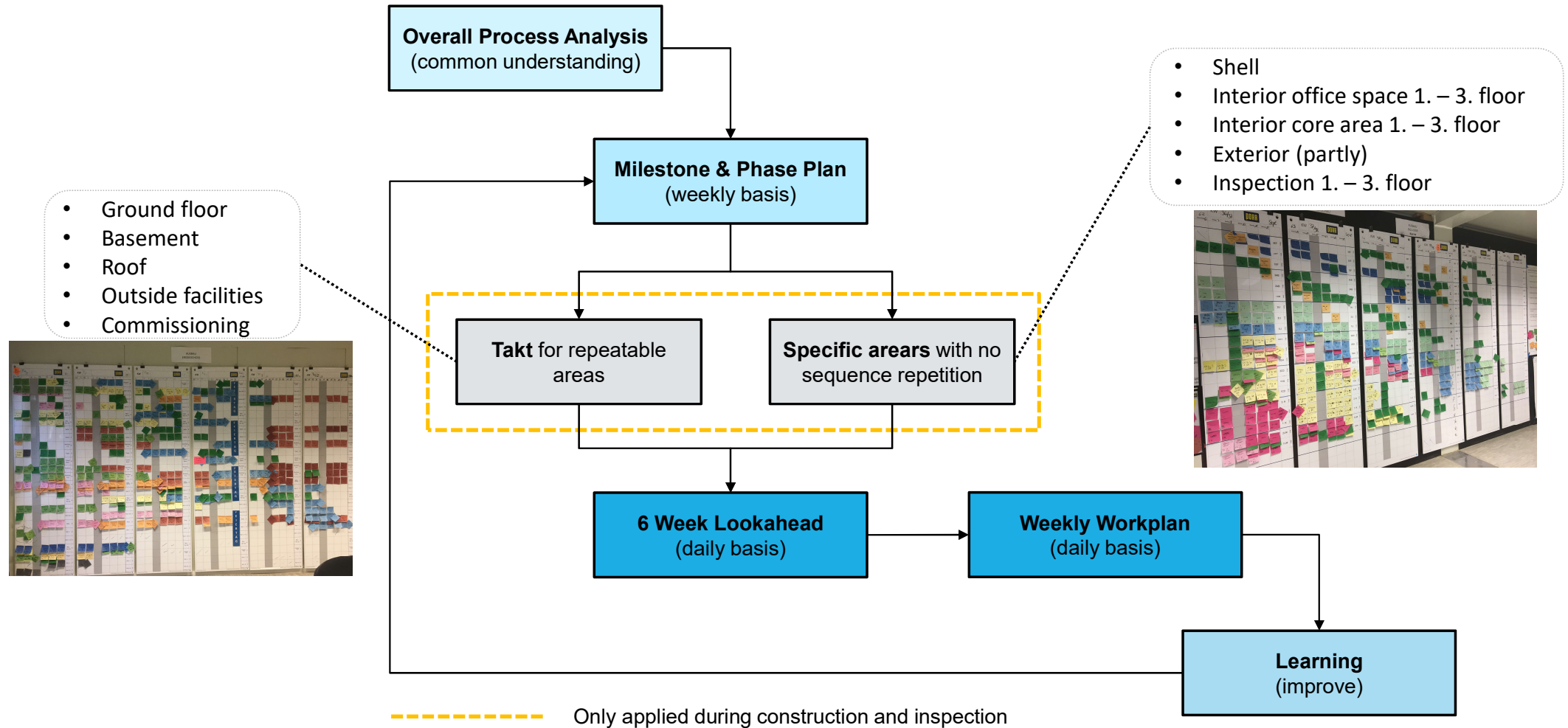
Case study research after the support

- 21 interviews
- Lean close-out workshop for reflection



PROJECT OVERVIEW





VIENNA
Design Phase



Pull

MUNICH
Construction Phase



REASONS TO ADJUST THE TAKT

- No error-free and no on-time delivery of construction documents
- Limited availability of resources in the market
- Lack of timely involvement of trades
- Shortage of subcontractor availability
- Shortage of labour
- Variable performance by the different work crews of a trade
- No availability or late delivery of material
- Late change orders by the client
- Delayed decision-making by the client

*How
often
do you
think
this
happens?*

CONSIDER THE HUMAN FACTOR

One team consisting of...

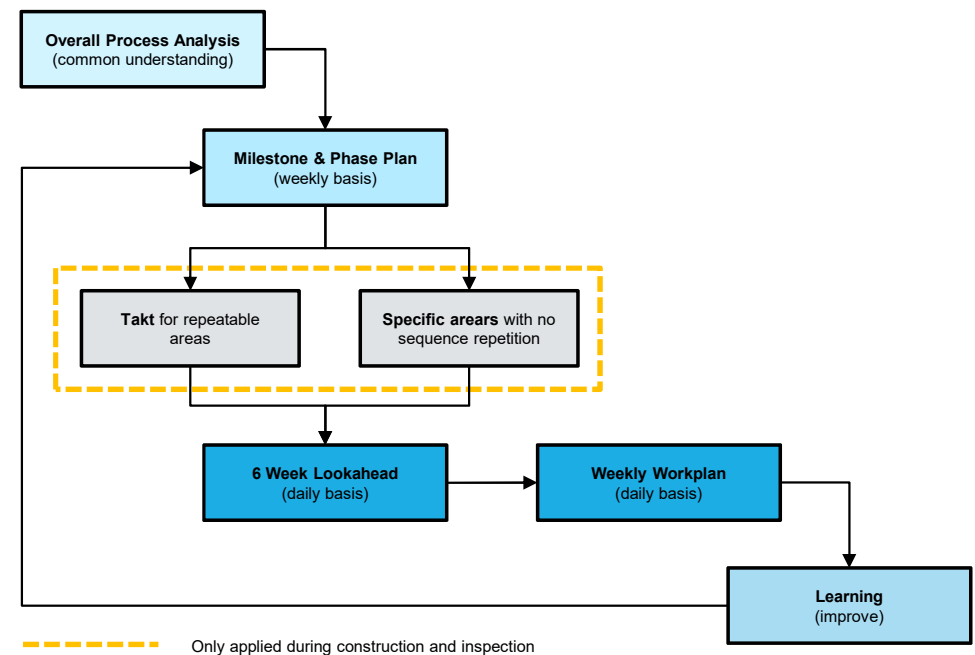
1. Different personalities
2. Different attitudes and behaviours
3. Different languages
4. Different experience
5. Different learning speeds
6. Different expectations



PRODUCTION SYSTEM

Major outcomes

- LPS triggers minds + hands thinking
- LPS is a driver for productive conversation
- Takt is a good tool for repeatable areas
- Keep takt flexible for improvements



CONCLUSION

Design a production system that...

- Easily engages people to collaborate
- Span from design till handover
- Serves as marketplace for information, planning, re-planning and communication
- Integrate knowledge of the Last Planners
- That gives the team flexibility
- And where Team members feel free to voice their concerns



Adjust based on the teams needs and product request



Supported by the different organizations