



Collaboration Barometer

Development of a Tool for Measuring Collaboration during Design and Construction

by

Prof. Dr. Shervin Haghsheno, Maximilian Budau, Eduard Russmann

What this is about

- Many concepts in Lean Construction are based on collaboration,
- IPD: project success depends particularly on the degree of collaboration,
- Many project parameters such as costs, deadlines, quality, changes or risks are measured and controlled,
- Hardly any focus is placed on measuring and controlling the important factor of collaboration,
- This presentation describes the development of a tool called "Collaboration Barometer", which can be used to measure the degree of collaboration between the participants in a construction project.

Overview



- What is collaboration?
- Development of the collaboration barometer
 - Method
 - Content
 - Implementation
- Experience with the application

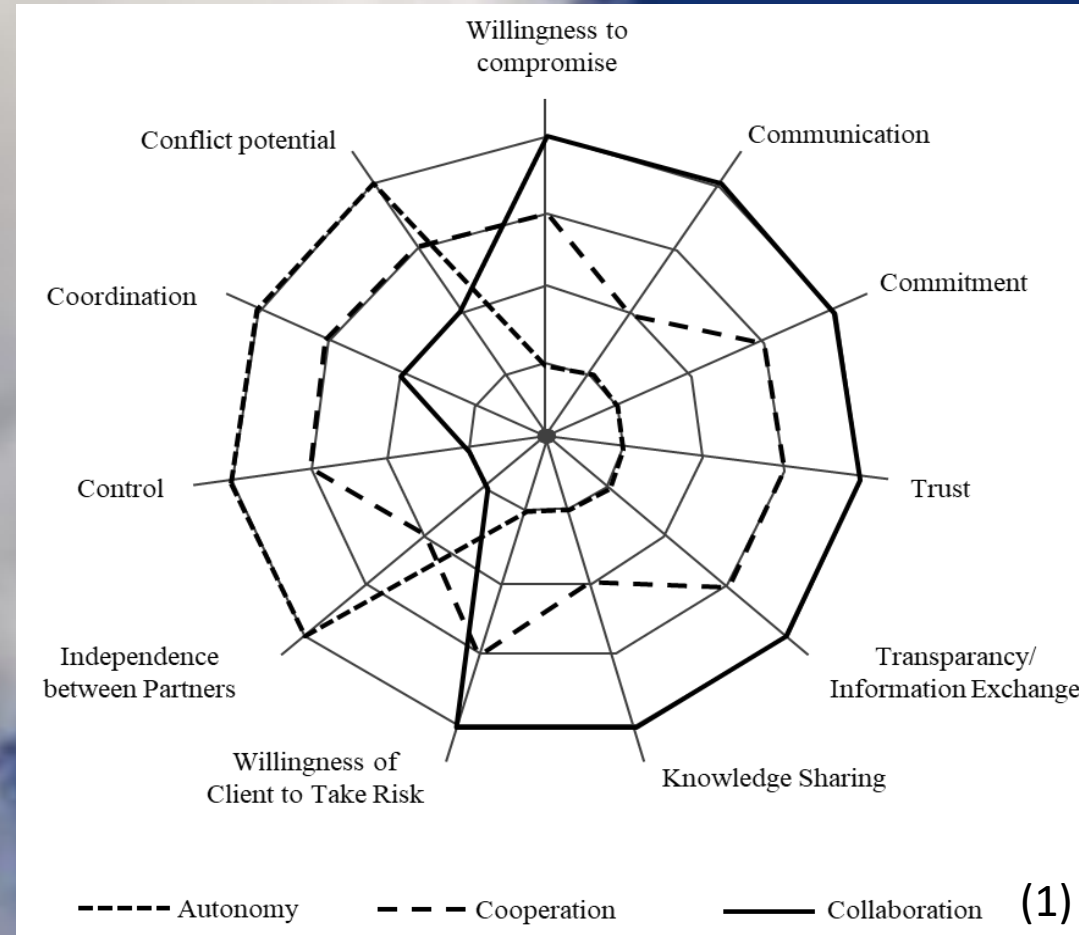
What is collaboration?



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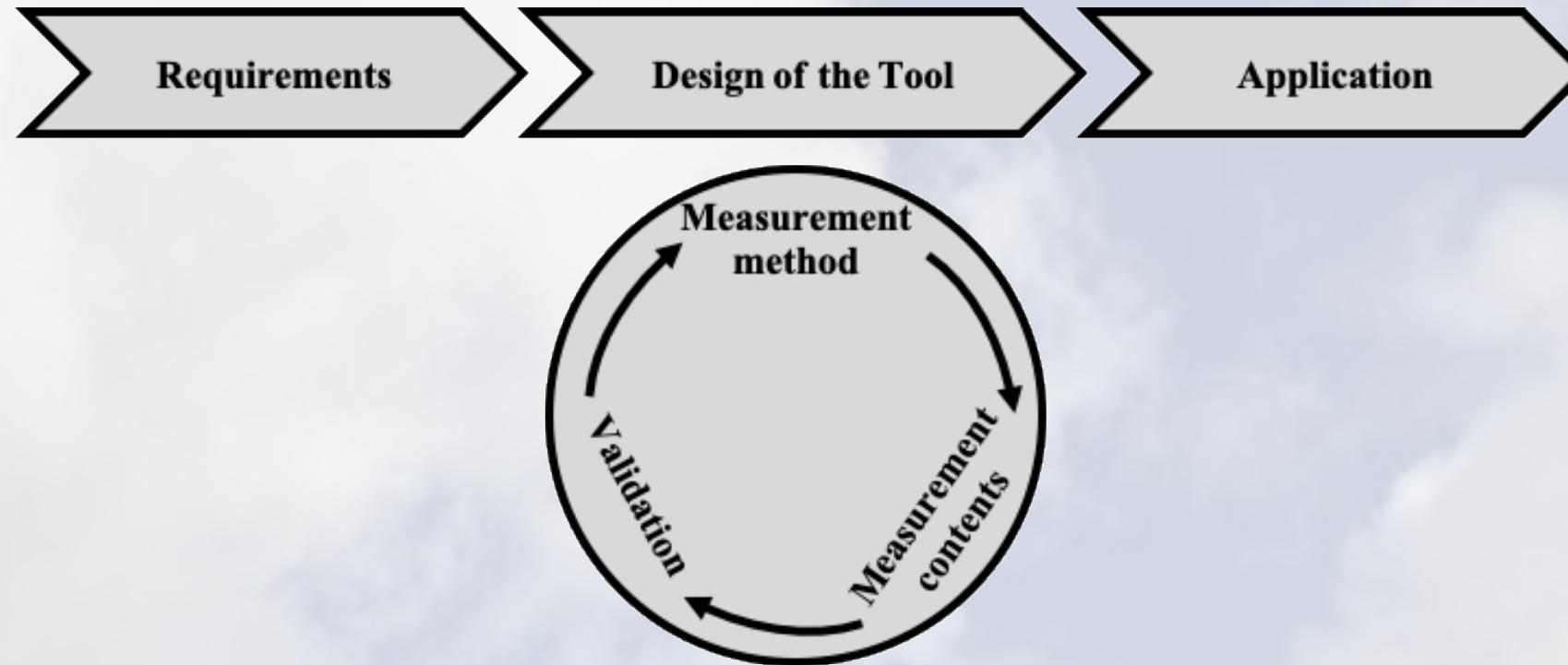
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Development of the collaboration barometer

- Method:



Development of the collaboration barometer



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- Content:

Layer	No.	Factor of Influence	Statement
Relationship and Culture	1	Change of perspective in dealing with each other	The participants are able to put themselves in the position of others and understand their interests.
	2	Respectful and appreciative handling	The representatives of the participating companies treat each other with respect and appreciation.
	3	Openness, honesty and trust	Cooperation in the project is characterised by openness, honesty and mutual trust.
	4	Reliability with regard to commitments	The participants are reliable in that they keep their promises regarding deadlines and performance contributions.
	5	Positive error culture	Those involved disclose their mistakes and do everything necessary to avoid them in the future.
	6	Positive feedback culture	The participants are able to give objective and open feedback or to deal constructively with feedback.
	7	Willingness for continuous learning	Those involved have a personal attitude that is characterised by the desire to learn continuously from others.
	8	Proactive communication	Participants communicate proactively by sending relevant information to the right people without being asked.
	9	Constructive handling of conflicts	Any conflicts that arise are addressed openly and resolved constructively ("Conflicts as opportunities").

Development of the collaboration barometer



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- Content:

Layer	No.	Factor of Influence	Statement
Targets, Organization and Processes	10	Good information flow	The information flow in the project is targeted and sufficiently available.
	11	Good decision management	Project decisions are made in a sound, transparent and timely manner.
	12	Flexible handling of changes and imponderables	Stakeholders show the necessary flexibility to deal with change appropriately.
	13	Clear competence and responsibility	In the project, tasks are clearly assigned and responsibilities are clearly assigned.
	14	Entrepreneurial behaviour	The parties involved act in an entrepreneurial manner and are prepared to take risks in an appropriate form and actively manage them.
	15	Striving for operational excellence	Those involved strive to achieve ambitious goals by avoiding waste in the processes.
	16	Pursuit of common project goals	The participants focus on the success of the project and align their actions accordingly.

Development of the collaboration barometer

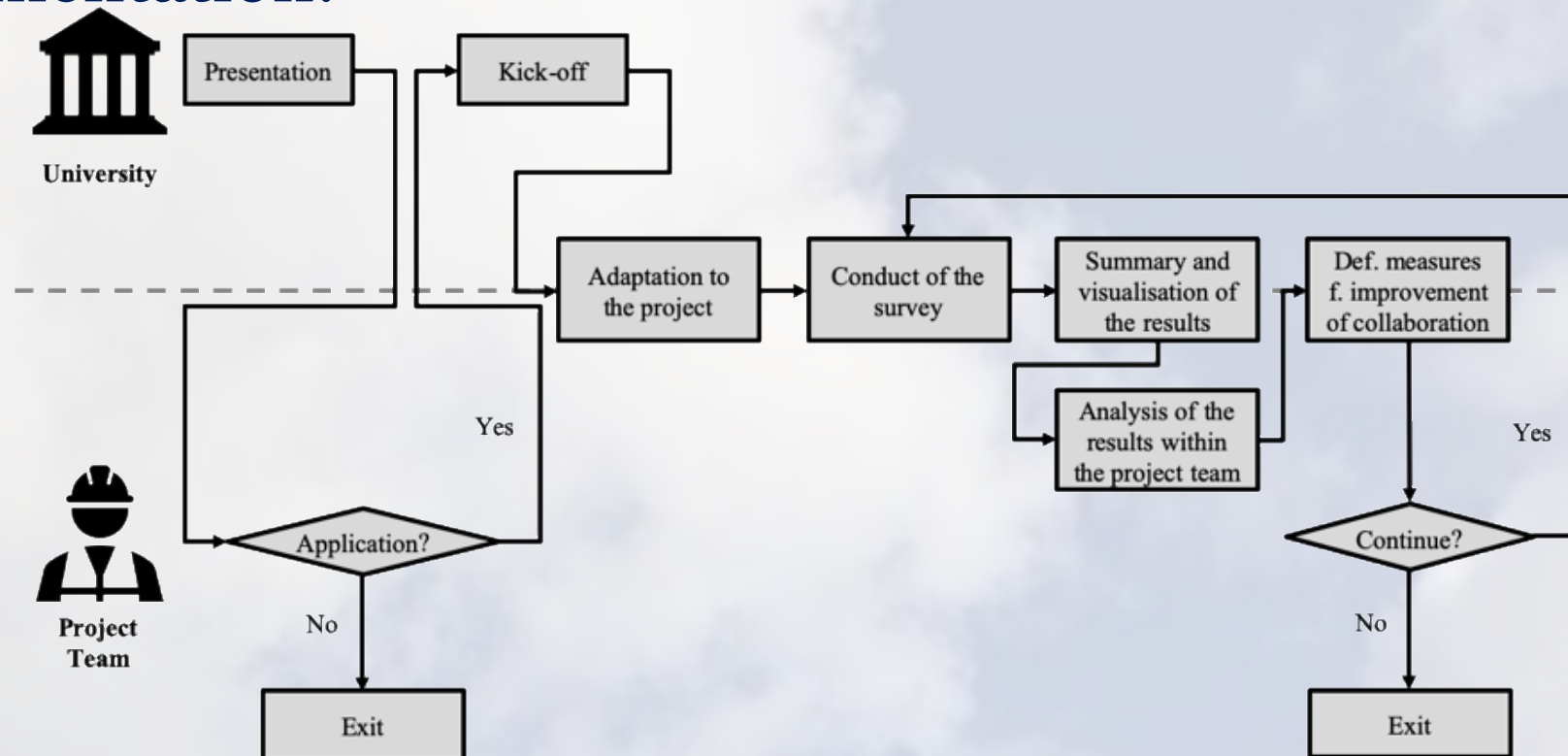


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- Implementation:



Experience with the application



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Collaboration Index

Total

Current
Index Value **67,46%**



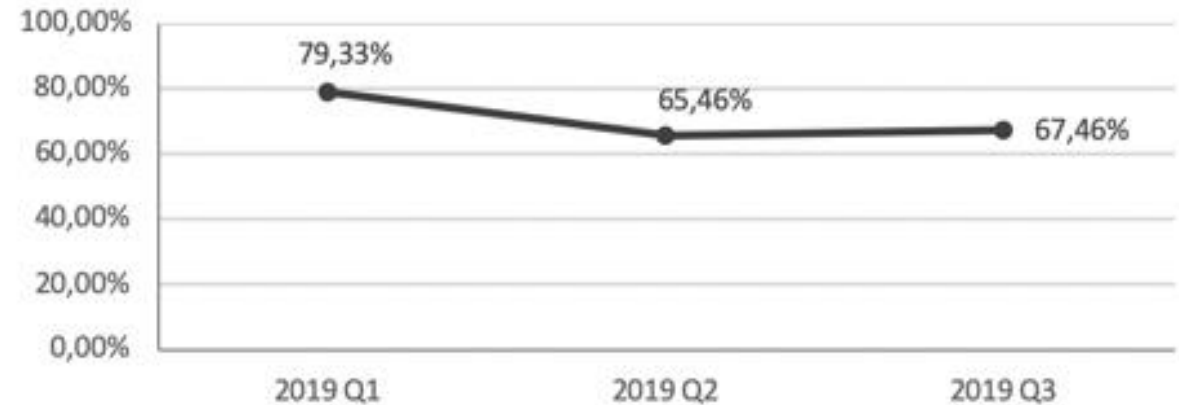
Relationship and culture

67,47%



Targets, Organ. and Processes

67,45%



Experience with the application



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Overview

Layer	No.	Factor of Influence	Relevance	Δ	project-specific manifestation	Δ
Relations and Culture	1	Change of perspective in dealing with each other	92,86%	↑	71,57%	↑
	2	Respectful and appreciative handling	78,57%	↑	57,29%	→
	3	Openness, honesty and trust	75,00%	↑	66,86%	↑
	4	Reliability with regard to commitments	78,57%	↑	76,43%	↓
	5	Positive error culture	85,71%	→	62,00%	→
	6	Positive feedback culture	92,86%	↑	71,57%	→
	7	Willingness for continuous learning	82,14%	→	76,43%	→
	8	Proactive communication	82,14%	↑	66,86%	↓
	9	Constructive handling of conflicts	82,14%	→	57,29%	→
Targets, Organization and Processes	10	Good information flow	75,00%	↓	67,00%	→
	11	Good decision management	82,14%	↑	67,00%	→
	12	Flexible handling of changes and imponderables	82,14%	→	57,14%	↓
	13	Clear competence and responsibility	64,29%	↓	57,29%	→
	14	Entrepreneurial behaviour	92,86%	↓	71,71%	→
	15	Striving for operational excellence	71,43%	↓	76,29%	↓
	16	Pursuit of common project goals	60,71%	↑	76,43%	→

References



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- (1) Schöttle, A., Haghsheno, S. and Gehbauer, F. (2014).
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Thank you!



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