MEASURING PROJECT'S TEAM CULTURE IN PROJECTS USING THE LAST PLANNER SYSTEM

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"Culture"

**„the collective programming of the mind which distinguishes the members of one group or society from those of others"
(Hofstede, 1984)**

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The Construction Industry

- Tough competition leads to unprofitable contracts → focus on claims instead of partner-like conditions (Racky, 2008)
- Escalating (Racky, 2008), adversarial and distrustful relationships (Beach et al., 2005)
- Antagonistic behaviours (Johnston and Lawrence, 1988, Beach et al., 2005)

- Low productivity
- Insufficient quality
- Time over-runs
- Poor safety
  (Senaratne and Wijesiri, 2008)

The Last Planner System

Continuous planning process to improve projects through the management of "relationships, conversations and commitments" (Mossmann, 2015)

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The Last Planner System

Benefits through the Last-Planner-System:

1. Smooth work flow
2. Predictable work plans
3. Reduced cost
4. Reduced time in project delivery
5. Improved productivity
6. Greater collaboration with field personnel and subcontractors (Fernandez-Solis et al, 2013)
7. Transparency
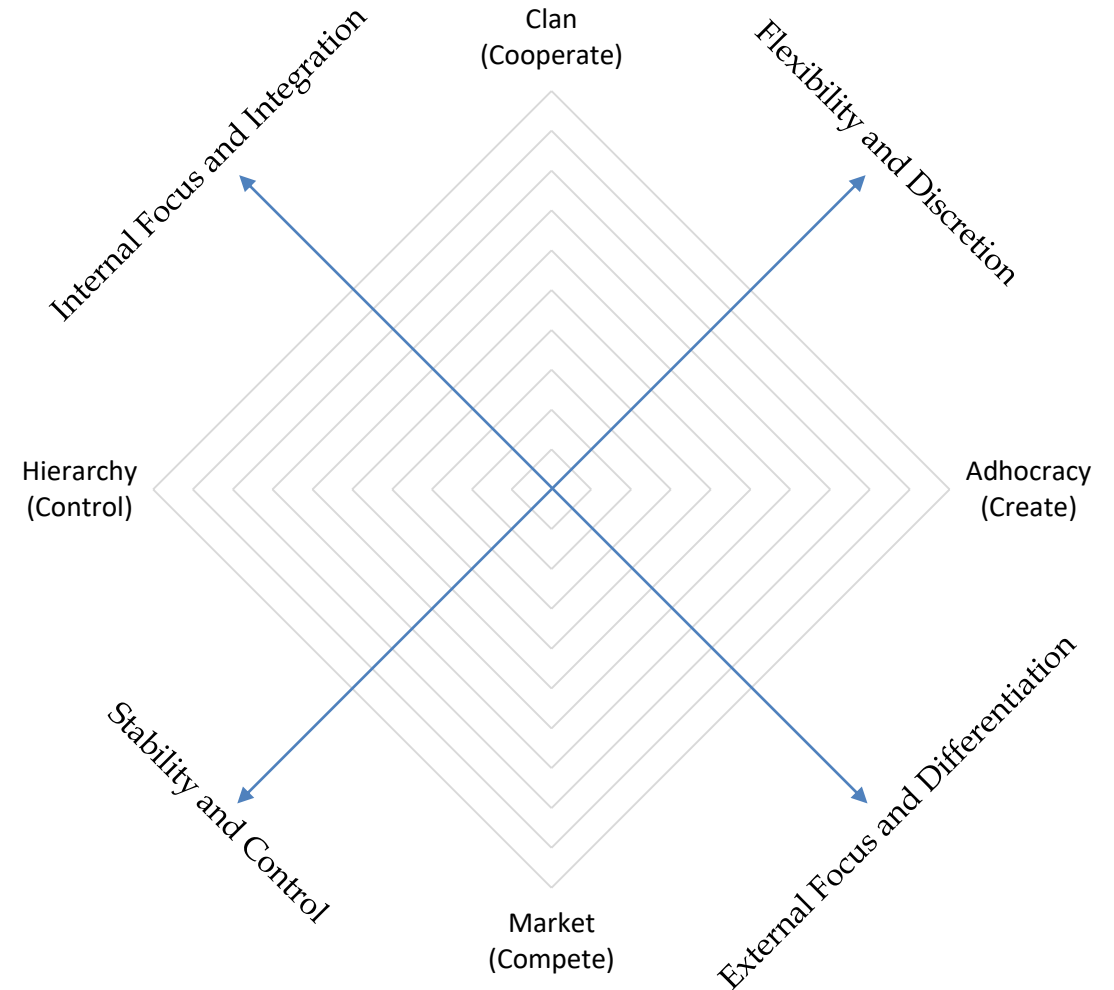8. Mutual Understanding (VDI, 2017)

Impact on Project Culture?

How to measure culture?

121 instruments
# for measuring culture

(Taras et. al, 2009)

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Competing Values Framework

Conducted through a survey with 24 standardized questions

Clan (Cooperate)

Flexibility and Discretion

Internal Focus and Integration

Hierarchy (Control)

Adhocracy (Create)

Stability and Control

External Focus and Differentiation

Market (Compete)

(Cameron & Quinn, 2011)

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Clan
- Sense for the group as a family
- Focus on the individuals
- Focus on teamwork
(Paro & Gerolamo, 2017)

(Cameron & Quinn, 2011)

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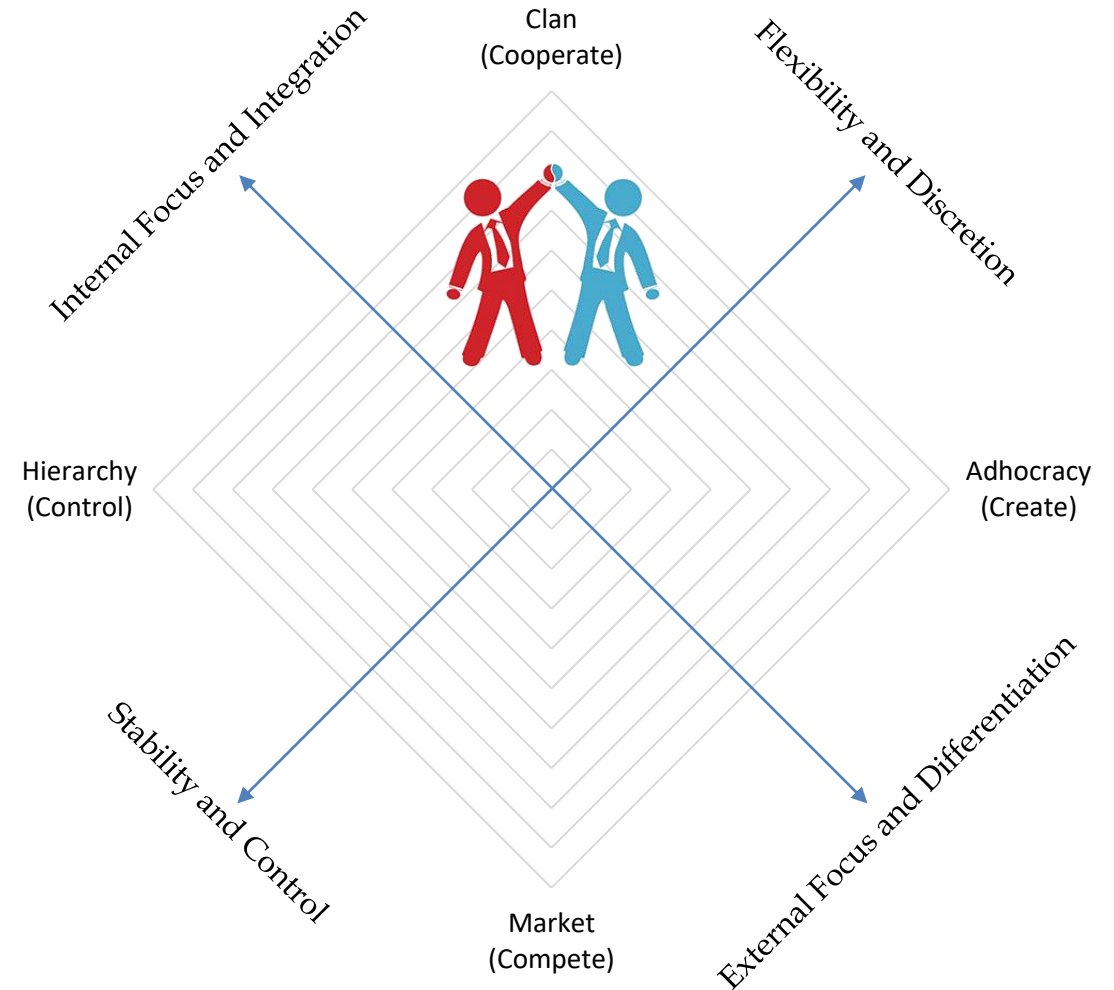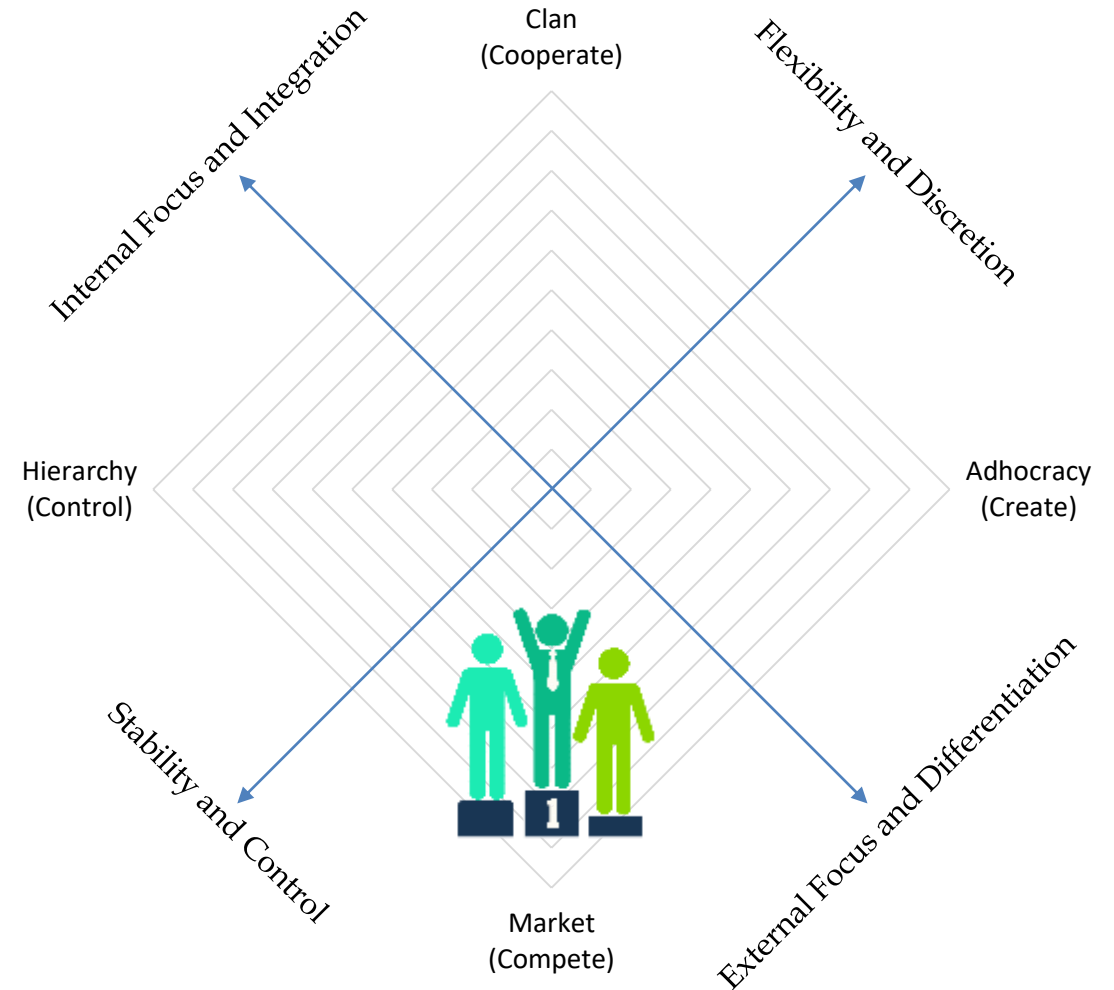
Market
- Focus on competition and competitive advantage
- Focus on external influences from
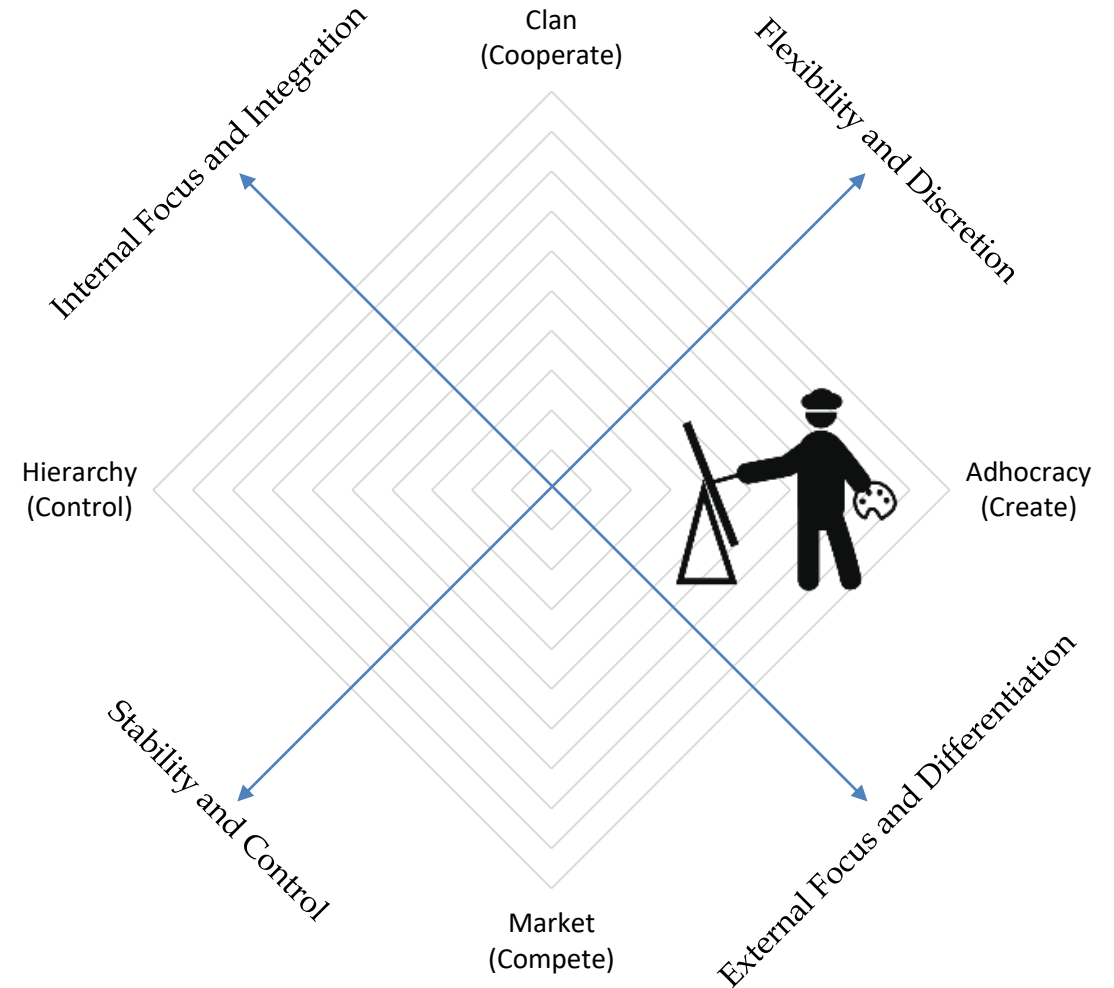 - Competitors
  - Suppliers
  - Customer

(Paro & Gerolamo, 2017)

Clan
(Cooperate)

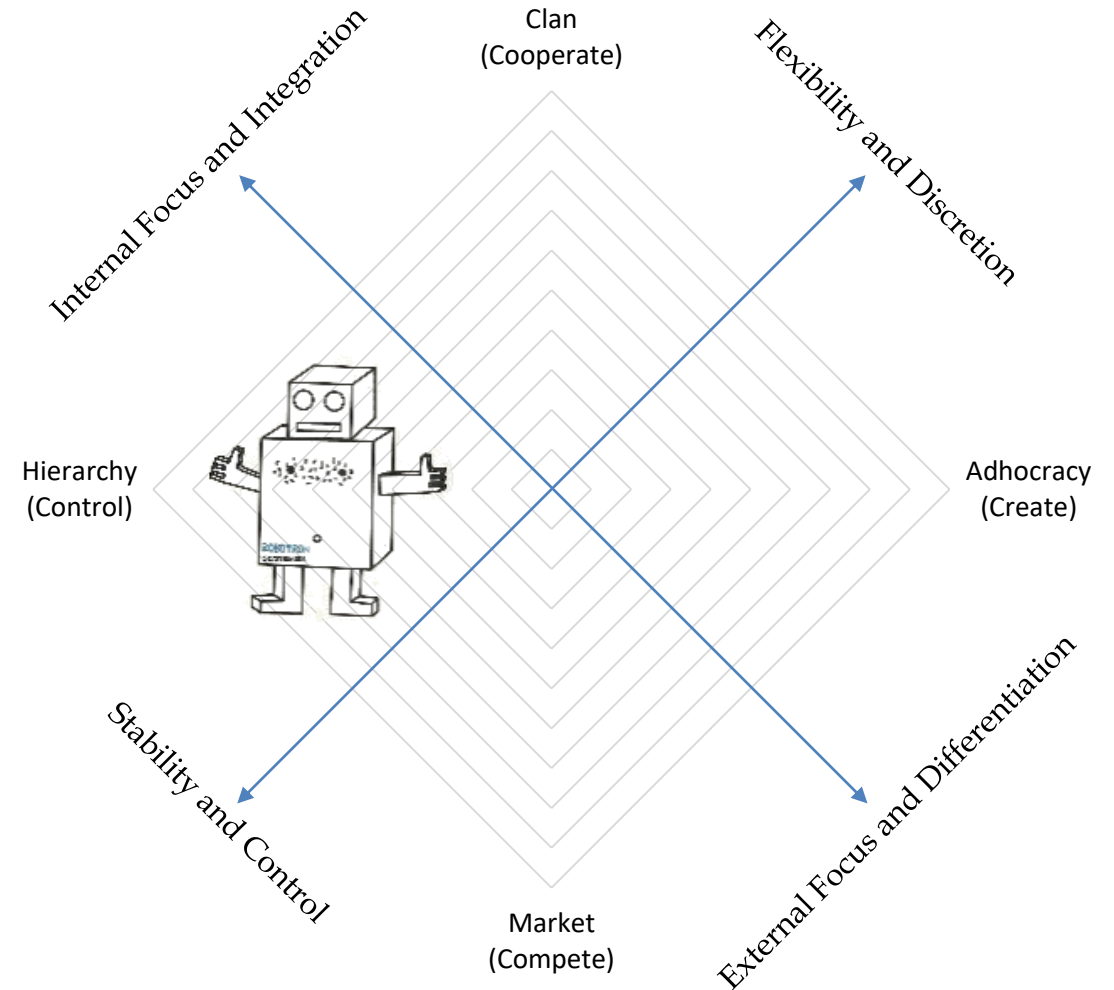Flexibility and Discretion

Internal Focus and Integration

Hierarchy
(Control)

Adhocracy
(Create)

Stability and Control

External Focus and Differentiation

Market
(Compete)

(Cameron & Quinn, 2011)

Adhocracy
- Focus on flexibility
- Dynamic and ad hoc decisions
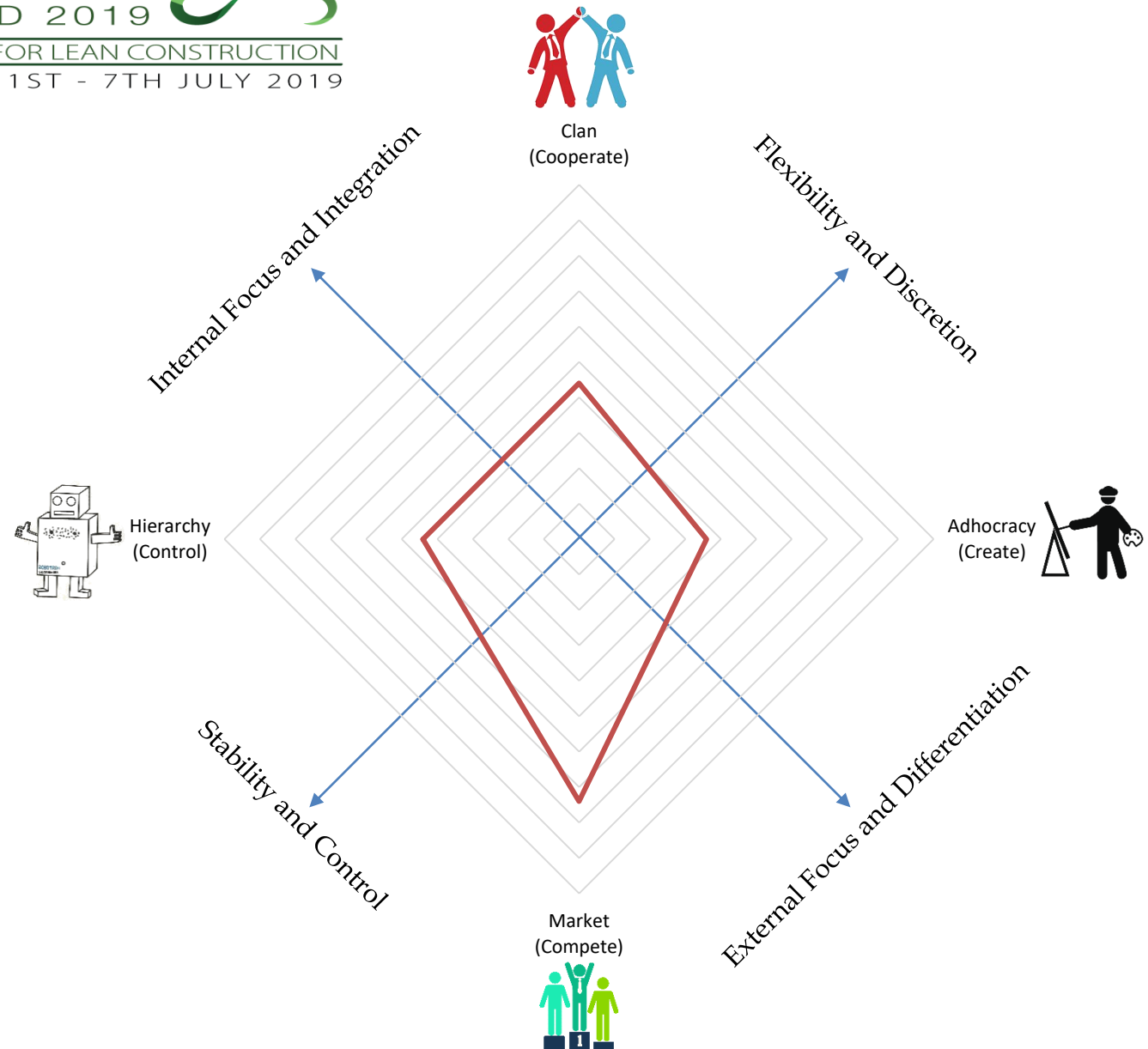- Focus on creativity
(Paro & Gerolamo, 2017)

Clan
(Cooperate)

Internal Focus and Integration

Flexibility and Discretion

Hierarchy
(Control)

Adhocracy
(Create)

Stability and Control

External Focus and Differentiation

Market
(Compete)

(Cameron & Quinn, 2011)

Hierarchy
- Clear work standards and rules
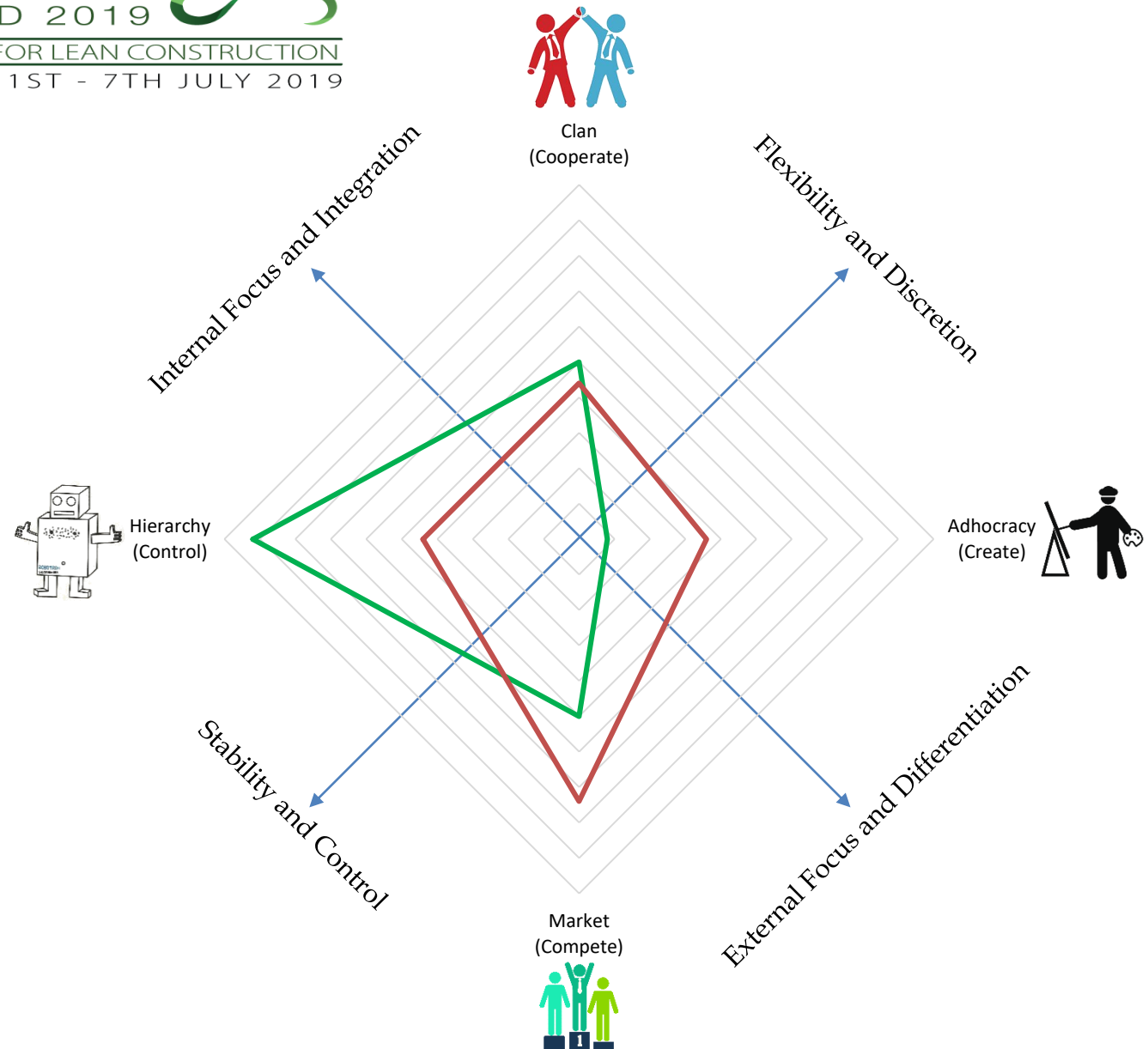- High focus on control of the internal operations
(Paro & Gerolamo, 2017)

Clan
(Cooperate)

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(Cameron & Quinn, 2011)

Culture in the construction industry
(Cameron & Quinn, 2011)

Clan
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Internal Focus and Integration

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Culture in the construction industry
(Cameron & Quinn, 2011)

Ideal Lean Culture
(Paro & Gerolamo, 2017)

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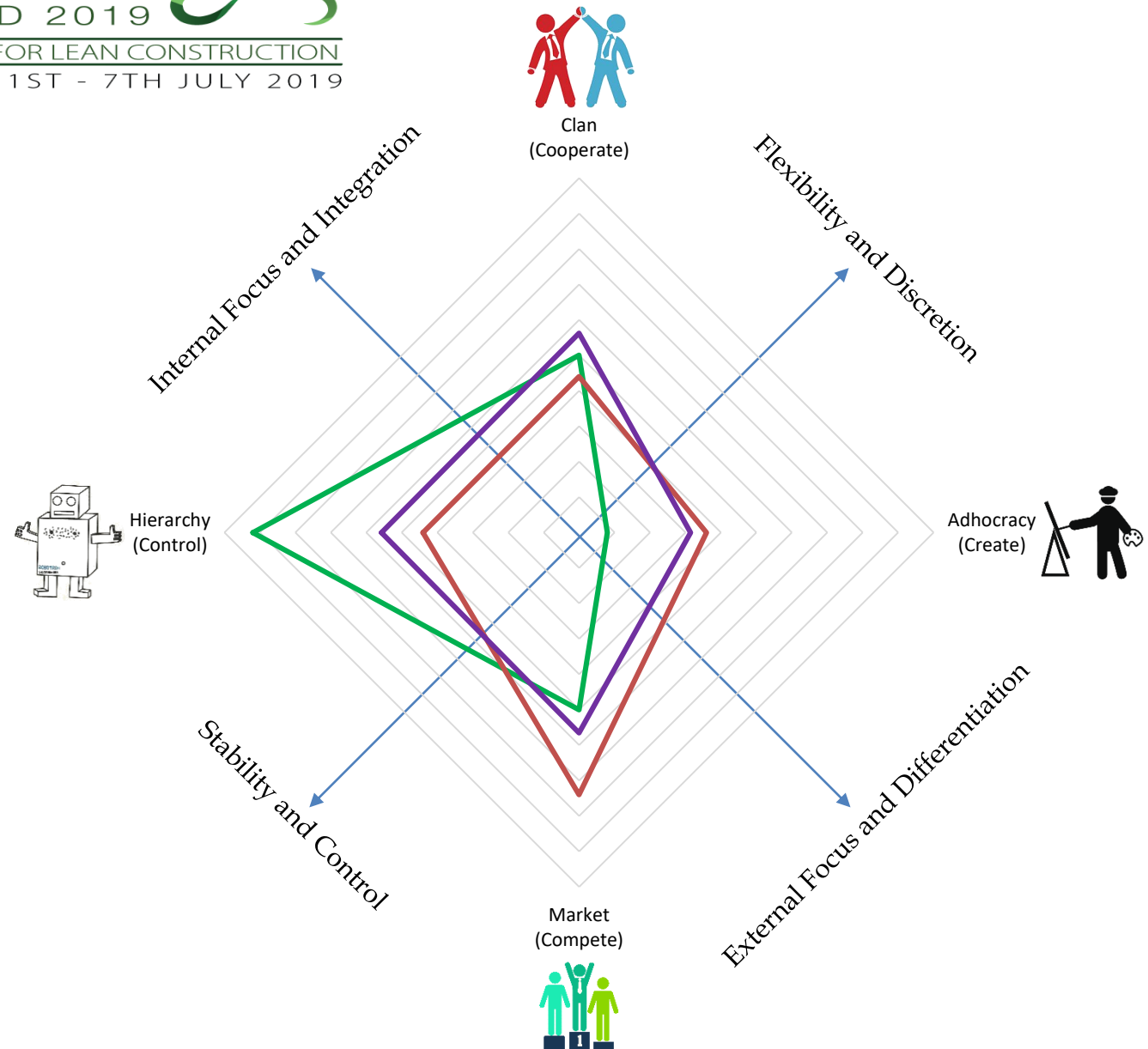
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Case 1

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Culture in the construction industry
(Cameron & Quinn, 2011)

Ideal Lean Culture
(Paro & Gerolamo, 2017)

Project Team Culture Case 1
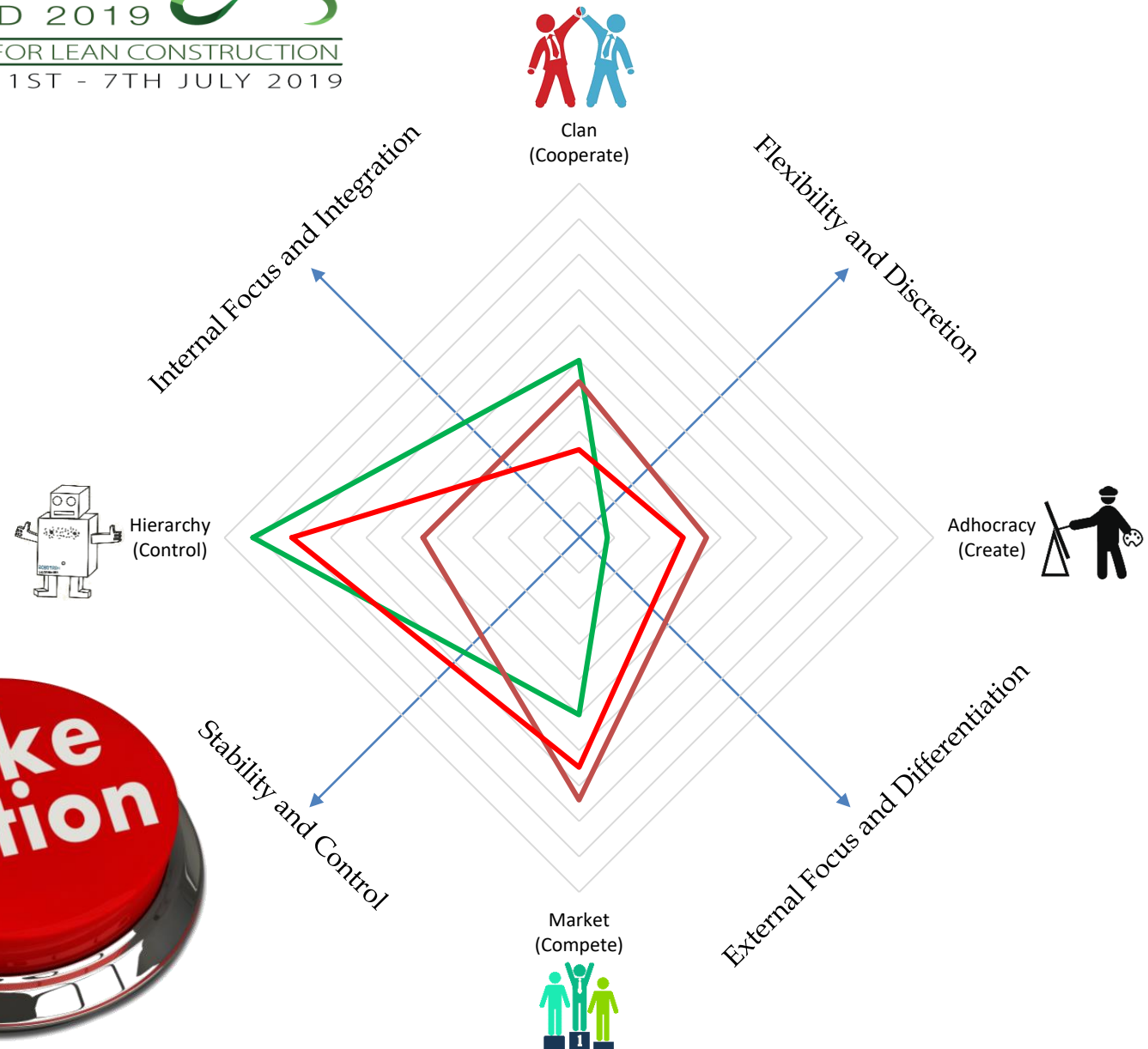Percent Plan Completed
PPC = 83%

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Case 2

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Culture in the construction industry
(Cameron & Quinn, 2011)

Ideal Lean Culture
(Paro & Gerolamo, 2017)

Project Team Case 2
Percent Plan Completed
PPC = 51%

Clan
(Cooperate)

Flexibility and Discretion

Internal Focus and Integration

Adhocracy
(Create)

Hierarchy
(Control)

Stability and Control

External Focus and Differentiation

Market
(Compete)

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Culture in the construction industry
(Cameron & Quinn, 2011)

Ideal Lean Culture
(Paro & Gerolamo, 2017)

Project Team Case 3
Percent Plan Completed
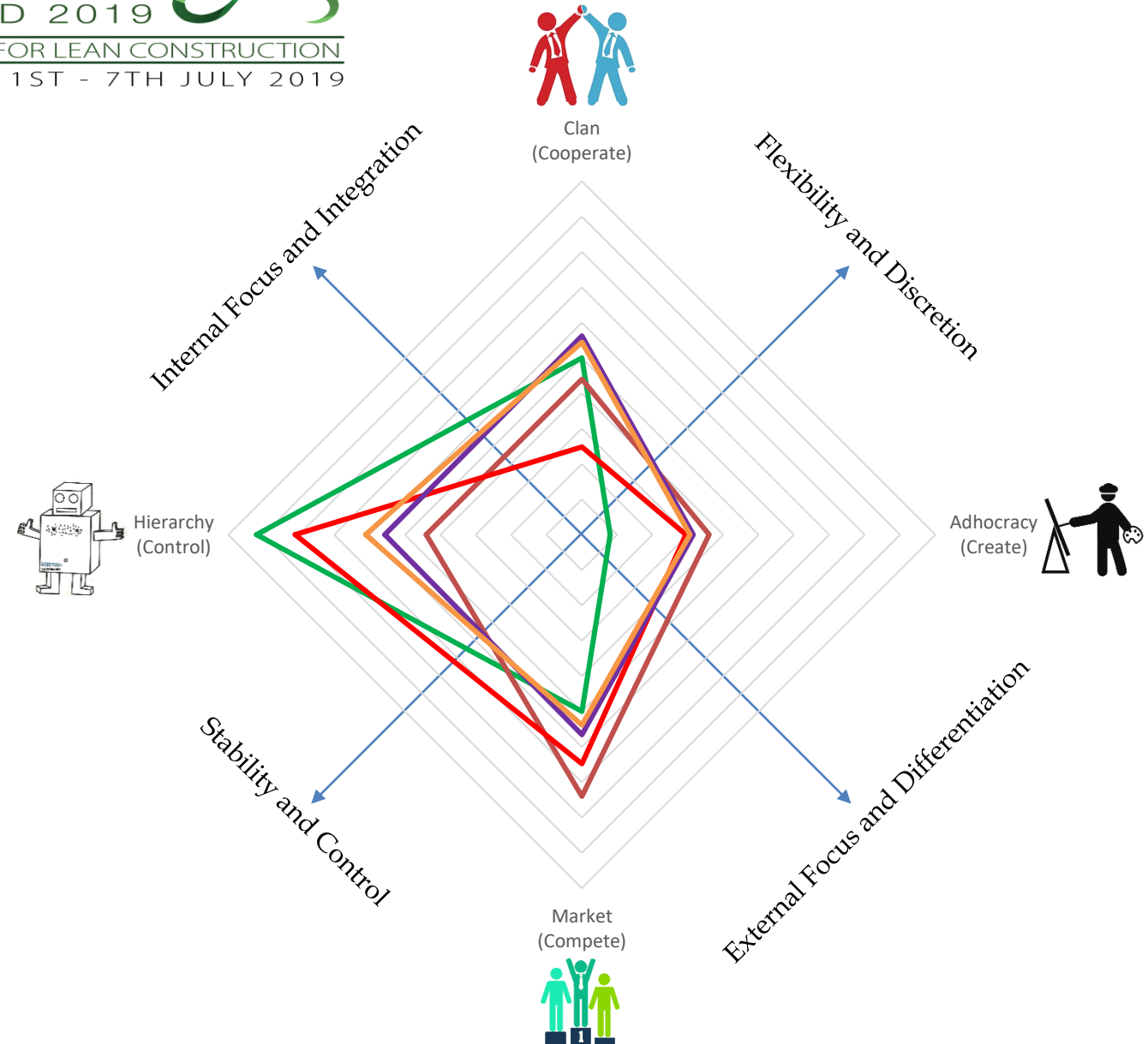PPC = 71%

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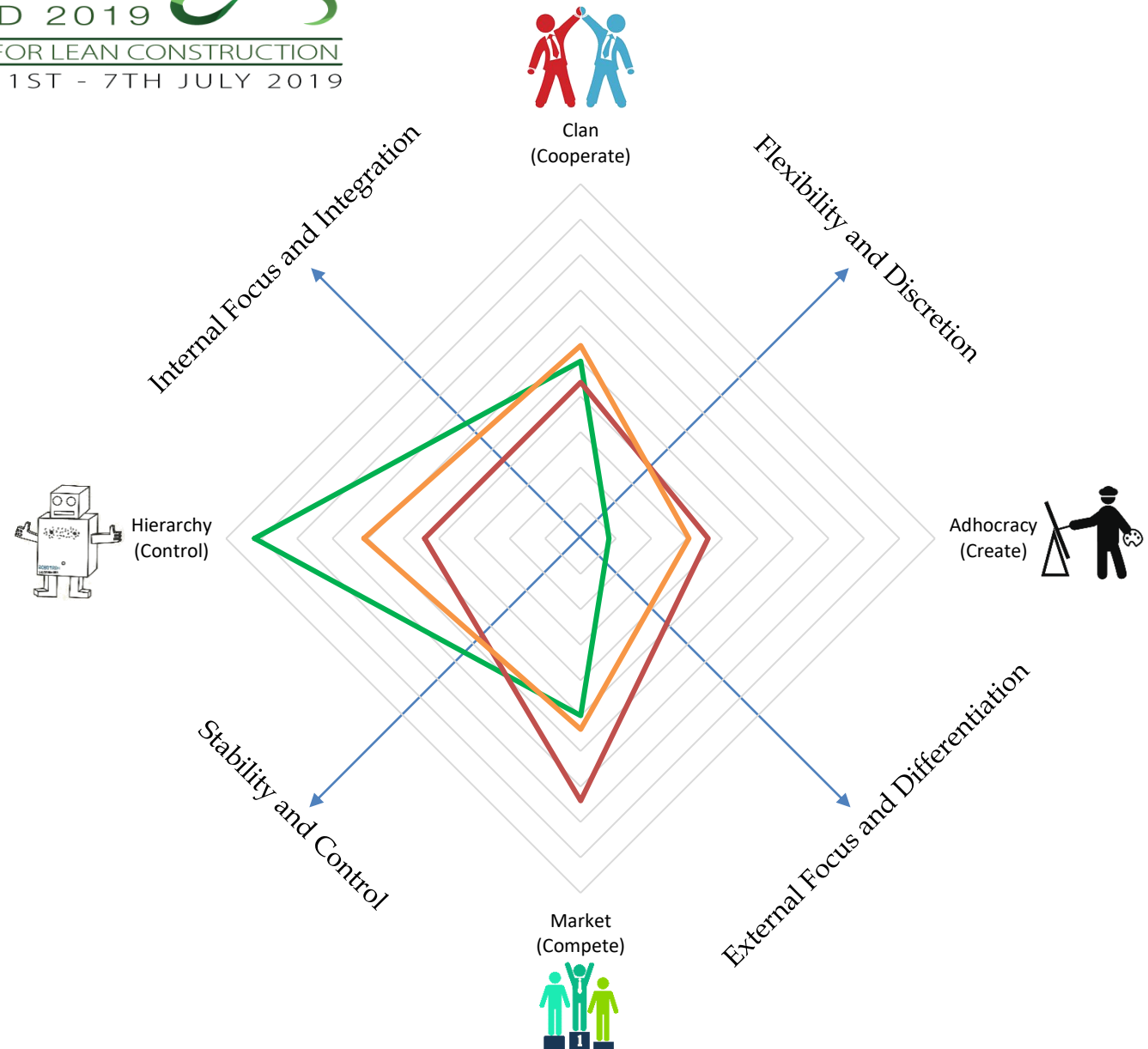
Conclusions
- The Competing Values Framework is a suitable tool to measure and interpret the project culture
- There is a measurable relation between the project culture and the Last-Planner-System performance (the shapes of the projects with high PPC scores are similar)

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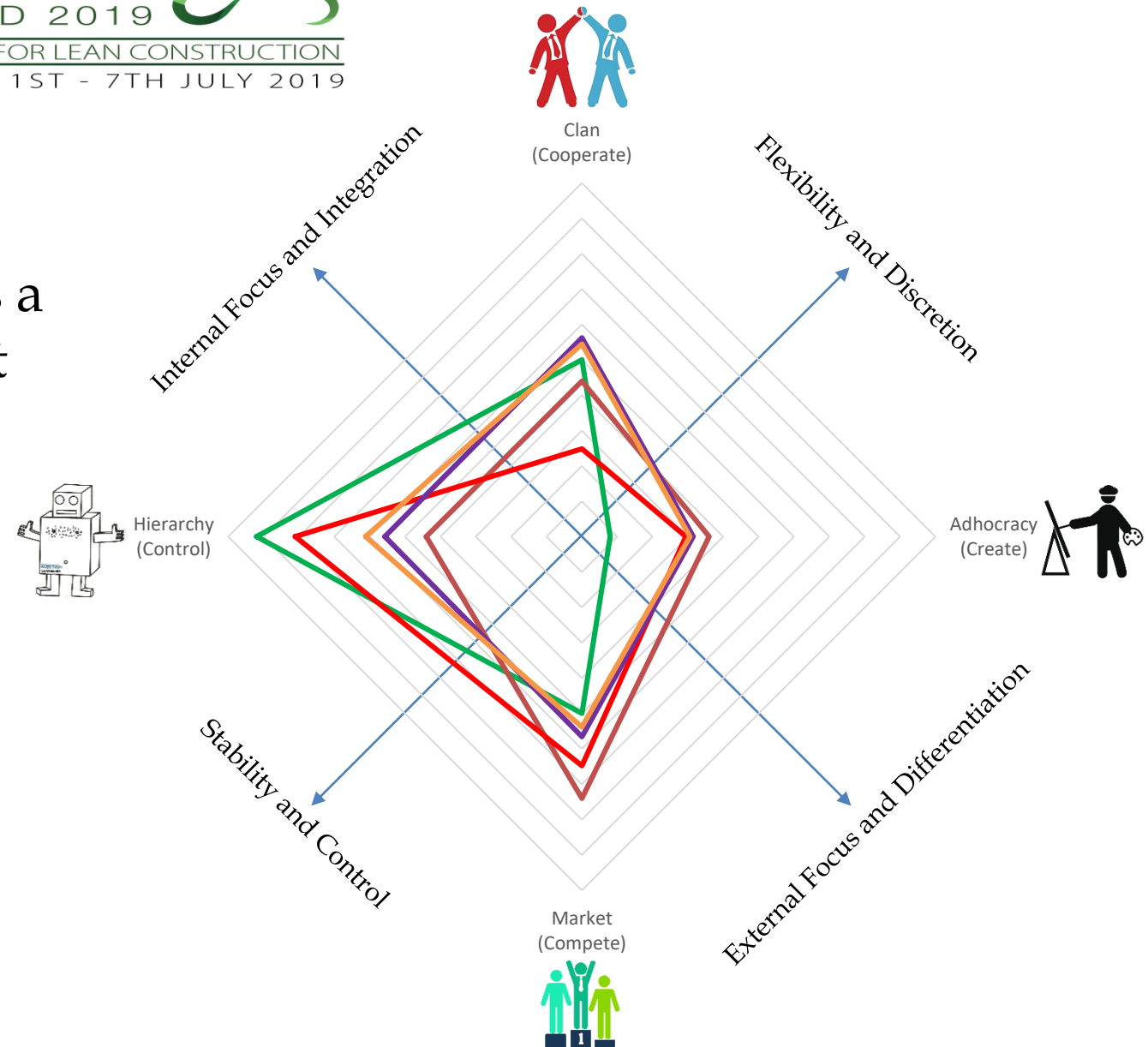
Recommendations
- The correlation of the PPC and the culture should be investigated
- How does the ideal culture for construction projects looks like?
- How to improve the culture in this direction?

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Thank you for your attention

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