Designing the Design Process
Exploring Organizational Paradoxes
of Scrum and Stage-Gate

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Era of Standardization

Organizations have a long lasting tradition in designing their workflows and business processes.

The predominant organizational design approach still is that of standardization.

In an era of organizational standardization (Brunsson 2002) production, and increasingly office work have been central object to standardization.

As standardization was seen as an impediment to innovation, R&D has long been spared.

But along with an increasing "projectisation", project management has become more formalized as a result of various standardizing efforts.

Two Roads to Designing Design Work in R&D

Standardization

Design and innovation work becomes object of thorough standardization.

Automotive Sector.

e.g. **Stage-Gate** (Cooper 2009)

... and Beyond

Agile project management frees design work from standardized routines.

Software-Development.

e.g. **Scrum** (Schwaber (2004).

Both approaches try to solve organizational paradoxes and tensions.

But which new ones are they creating?
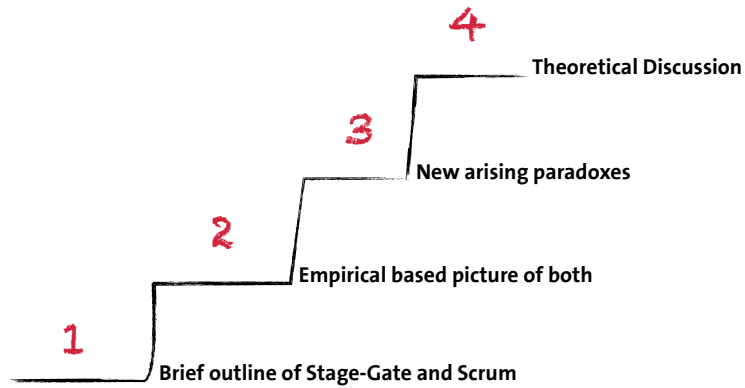

Two Roads to Designing Design Work in R&D

Stage-Gate

Scrum

Both approaches try to solve organizational paradoxes and tensions.

But which new ones do they create?

Steps

4 — Theoretical Discussion

3 — New arising paradoxes

2 — Empirical based picture of both

1 — Brief outline of Stage-Gate and Scrum

Stage-Gate: Taming the innovation process

Aim: Shorten time to market and **reducing** risks of innovation.

Scope: Perfect planning and separating invention and innovation.

Main approach:

- streamlining the innovation process to down and according to plan
- all relevant departments participate in decisions
- innovation process is cut in stages, formal gate meetings decide whether to continue or terminate

Scrum: setting self-organization free

Aim: Shorten time to market and **coping** with risks of innovation.

Scope: Ongoing interaction with customer to perfect the design product.

Main approach:

- rough planning by organization, fine tuning by respronsible team for two weeks and daily
- giving back responsibility to the developping team
- short and iterative innovation cycles with hands-on deliverables for customer

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From Perspective of Theory of Paradoxes

Stage-Gate   Both try to solve exploitation-exploration tensions   **Scrum**

Stage-Gate		Scrum
profits		breakthrough
tight coupling	←— Andriopoulos/Lewis 2009 —→	loose coupling
discipline		passion
performance	←— Gibson/Birkinshaw 2004 —→	features
centralization		decentralization
stability	←— Eisenhardt 2000 —→	flexibility
control		freedom

Methods and research design

Stage-Gate   **Scrum**

Stage-Gate	Scrum
Manufacturing	ICT
5 highly innovative companies	1 highly innovative company
Mostly typical German SME	Typical German SME
Employees 350–39.000	Employees 430
Total Revenue 40 Mill.-5,2 Mrd. Euro	Total revenue 39 Mio. Euro
71 qualitative interviews	19 qualitative interviews
Several group discussions	Several group discussions
Theoretical Sampling (Glaser/Strauss)	Theoretical Sampling (Glaser/Strauss)
Qualitative Content Analysis (Mayring)	Qualitative Content Analysis (Mayring)
Theoretical Sensitive Coding (Kelle)	Theoretical Sensitive Coding (Kelle)
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New Paradoxes in Designing Design Work

Stage-Gate: Paradox of Decoupled Standardization

tensions between real innovation needs and demands of standard procedure

standard claims to support innovation process but rather neglect its needs

standard implements hegemonic discourse that makes an evaluation of real innovation needs impossible

standard is increasingly perceived as an illusory world

innovators feel like actors performing a play about innovation not as engineers operating in a real innovation process

intentions of the standardization ideal more and more erode

efficiency and risk reduction are eaten up by facade-like gate-meetings and time-consuming aftermath justifications

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New Paradoxes in Designing Design Work

Scrum: Paradox of Imposed Self-Organization

Again, the needs of the design process itself have to be addressed and supported.

Self-organization of the design teams is a core ingredient of Scrum. But: the modes and manners of this self-organization are imposed in details.

Scrum as a standard procedure demands self-organization of teams but meticulously describes how, when and even in which kind of posture self-organization should be brought to life.

Contradiction is amplified by implementing self-organization into an otherwise hierarchical organization.

If innovation needs require changing Scrum methods, the best self-organized team fail Scrum.

With deep customer integration, there is no real segregation between inside and outside, employees experience twofold logics morphed into one, inseparably intertwined.

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Conclusion: Coping with Paradoxes is Work

Based on thorough qualitative material and according analysis we spotlighted two additional paradoxes that seem characteristic for novel organizational design approaches aiming on processes of innovation and of product design:

The paradox of decoupled standardization and the paradox of imposed self-organization.

Managing these paradoxes of innovation and design is not any more the sole responsibility of the top management, but occurs on all organizational levels.

Coping with paradoxes is a challenge for everyday work: Employees permanently compensate, integrate and alleviate organizational tensions as they become dysfunctional.

The competencies needed for that are mostly hidden capabilities that predominantly resist formalization and objectification but are experience-based and show an embodied quality.

We conceptualize these capabilities as labor capacity (=Arbeitsvermögen, Pfeiffer 2004) and would suggest to broaden the theory of paradoxes by this complemental

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Thank you!

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