Making Distributed R&D Work
Internationalization of Teamwork in R&D Teams and its Formal and Informal Aspects

Stefan Sauer
Prof. Dr. habil. Sabine Pfeiffer

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Steps

CoTeQ
Tool for Self-Analysis
Empirical findings

Trust
Theoretical framing

Challenges of transnational cooperation

Background
Project and methods
Joint Project

Science and automotive industry

Funding: German Ministry of Research and EU

Technical University Darmstadt
iSF Munich
Fraunhofer Institute Stuttgart
Several Tier-1 companies

Empirical Background

Qualitative case studies.
45 semi-structured interviews.
6 group discussions.
In-depth content analysis and Grounded Theory.
Standardized online survey.
3 transnational cases of R&D cooperation.
Three Cases of R&D Cooperation

Germany Romania
Tier 1 – Electronic Applications

Germany China
Tier 1 – Joint venture – Gearing / Hydraulics

Germany
Tier 1 Engineering emobility
Tier 1 Car Electronics
Finland

Necessity of transnational and interorganizational cooperation in R&D

Increasing globalization, flexibilization, informatization.

Speeding up innovation cycles.

Highly competitive markets.

Peak Oil.

Glocalization.

Rapidly changing constellations between the Triad/BRIC.
Challenges in coping appear not only on the macro/meso level of branches, business strategies and organizational structures, but...

...are to become real in everyday innovation work.

Challenges in coping are not only solved by processes and standardization...

...but have to be revived daily by innovation workers.

**Informal** challenges of transnational cooperation in R&D

Coopetition – Cooperation and competition
Increasing uncertainty due to organizational, spatial and cultural aspects
Challenges for daily (team-)work
Trust – theoretical framing

Trust as a mechanism to reduce social complexity
Trust as an individual resource of action
Economic impact of Trust
Trust as a “risky advance concession” (Luhmann 1979)
Trust cannot be established in a (only) strategic way

Trust – mainstream sociological view

Luhmann (1979) distinguishes between systemic trust (confidence) and personal trust (Luhmann 1979)
Systemic trust (confidence) is defined as

- Trust in persons representing systems
- Generalized trust in systems
What does trust mean in everyday work?

How is trust produced in cooperation work?

What makes innovation workers capable „doing“ trust in a competitive ecology?

Trust – our perspective

Trust in persons representing systems

Generalized trust in systems

But??

No separation between systemic trust (confidence) and personal trust

Trust has always personal and systemic components

Trust is a fluid concept

--> Trust-based teamwork depends on cultural, social, and organizational (informal) aspects
Case 1: Intraorganizational cooperation in Europe

Fast growth of the Romanian subsidiary

Lack of experience of the Romanian colleagues and high workload

Very differing communication and feedback culture

Meeting colleagues in person as a key factor for developing trust

Increasing mistrust because of the lack of transparency
Case II: Joint Venture Triad-BRIC

High level of mistrust among German employees

Two dimensions of cross-cultural communication: linguistic skills and diverging communication styles

Different speed in performing work process

Case III: Interorganizational cooperation in Europe

Transparency and mutual goals

Team building and project meetings

Easier communication concerning technical issues in English
3-step process of building trust

- building trust
  - setting mutual goals
  - stipulation
  - specification of interfaces
  - definition of mutual prospects
  - highlighting the chances of success
  - respect
  - commitment

- developing trust
  - joint work and joint success
  - reciprocal contribution
  - valuing the cooperation partner
  - feedback
  - transparency in decisions
  - face-to-face contact
  - team spirit

- strengthening trust
  - loyalty
  - long-term key personalities
  - strengthening face-to-face contacts
  - reducing control
  - skill transfer
  - performing preliminary work without consideration
  - risk tolerance
  - addressing issues and failures
  - handling confidential matter discreetly

CoTeQ: Collaboration and Teamwork Questionnaire

Managing teamwork is a complex mission, depending on many measures

Purpose: help teams to analyze their teamwork

12 items and 22 questions with standadized response categories

Guideline based on our empirical findings

CoTeQ should not be a solution but a ‘helping hand’
CoTeQ: The Kiviat Graph

Thank you!