Two Case Studies of Achieving Repeatable Team Performance through Collaboration Engineering

Gert-Jan de Vreede, University of Nebraska at Omaha (U.S.)

Executive Summary

The Collaboration Engineering approach enables organizations to design and deploy processes using professional collaboration techniques and technology for recurring high-value collaborative tasks. The full article describes pilot Collaboration Engineering projects in two organizations. Based on these cases, recommendations are given for applying Collaboration Engineering.

Collaboration Engineering is based on three foundations:

- **Collaboration is multi-dimensional**—the people who work together, the process they follow, the information they use, the collaboration technology they use, and the leadership or facilitation that guides them.

- **A focus on recurring collaboration processes**—collaboration engineering is appropriate for recurring processes, rather than ad-hoc, infrequent collaboration.

- **Process design uses a pattern language**—Collaboration Engineering uses a design pattern language called *thinkLets*. Patterns are capsules of expertise that can be reused to solve similar challenges. *ThinkLets* codify aspects of the five collaboration dimensions into design patterns that can be used to “click together” to design a collaboration process.

### Examples of ThinkLets

<table>
<thead>
<tr>
<th>ThinkLet</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>FreeBrainstorm</td>
<td>To generate a broad, diverse set of creative ideas in response to a single brainstorm question while being inspired by the contributions of other team members</td>
</tr>
<tr>
<td>LeafHopper</td>
<td>To generate ideas in depth and detail on a set of topics of the team members’ choice</td>
</tr>
<tr>
<td>TreasureHunt</td>
<td>To have pairs of team members extract a list of key ideas on assigned topics from a raw set of brainstorming comments</td>
</tr>
<tr>
<td>BucketBriefing</td>
<td>To process and consolidate a collection of brainstorming ideas into a draft statement, outline or other format that is concise, coherent and unambiguous</td>
</tr>
<tr>
<td>CrowBar</td>
<td>To discover and discuss the reasons behind disagreement on certain issues</td>
</tr>
<tr>
<td>MoodRing</td>
<td>To track the level of consensus within the group with regard to the issue currently under discussion</td>
</tr>
</tbody>
</table>

Collaboration Engineering has two phases: *design*, where the repeatable collaboration processes are designed and piloted, and *deployment*, where the new collaboration processes are introduced and practitioners are trained (see figure on next page).

---

1 The full article is published in the June 2014 issue of *MIS Quarterly Executive*, available online at www.misqe.org.
Two Phases of Collaboration Engineering

The collaboration engineer creates a first version of the collaboration process design by decomposing, the collaborative task into a logical sequence of activities that require a group to execute five patterns of collaboration: 1) Generate: Move from having less to having more ideas to consider; 2) Converge: Move from having many ideas to focusing on and having a shared understanding of the few worthy of more attention; 3) Organize: Move from having less to more understanding of the relationships among ideas; 4) Evaluate: Move from having less to more understanding of the value of ideas toward a certain goal; Build consensus: Move from having less to more willingness among the team members to commit to a proposal toward attaining the goal. Different thinkLets are specific for each pattern of collaboration.

Collaboration Engineering is an approach to designing collaborative work practices for high-value recurring tasks and deploying those designs for practitioners, who are domain experts, to execute for themselves without ongoing support from professional facilitators. A collaboration engineer uses design patterns (thinkLets) that represent codified professional collaboration expertise to create and document a prescription for collaborative work practices and then transfers that prescription to practitioners.

To create the pattern of collaboration in a team, the practitioner who leads the process (the domain expert acting as a team leader or facilitator) needs to give instructions so that team members can follow a logical sequence of actions to share and process information using certain tools. To aid the practitioner, this information is codified and recorded into a reusable thinkLet design pattern.

However, Collaboration Engineering is not meant to be a cookbook. Rather, it should be seen as a collection of design steps. Experience shows that the order in which these steps are executed depends on the type, complexity and scope of the collaboration task, as well as on the existing knowledge level in the organization. Certain design activities may be carried out concurrently. For example, exploring existing process standards and designing the process in terms of activities and patterns of collaboration can occur simultaneously.

Recommendations for Applying Collaboration Engineering

1. **Invest in the Purposeful Design of Repeatable Collaboration Processes.** There is strong evidence that purposefully designing collaborative processes increases the quality and decreases the time needed to produce deliverables.
2. **Identify a Critical Collaboration Process That Can Serve as an Example.** Asking a few simple questions (e.g., How frequently is this process executed? What is the payoff if this process is done well? What is the downside if this process goes badly or fails? Do people love or hate having to do this process?) will help to identify and prioritize those processes with the highest likely pay off.
3. **Accommodate the Goals of all Critical Stakeholders.** Team members are most likely to be motivated to participate actively in the collaborative process and be committed to the outcomes if they understand and support its goals and benefits, and have an active role in achieving the outcomes.
4. **Invest in Developing Collaborative Competencies.** Practitioners should be trained to lead collaborative efforts in their domains. Trained practitioners can faithfully execute thinkLets-based processes and achieve high-quality results.
5. **Develop a Library of Related Collaboration Processes.** Repeatable collaboration processes are often related to other potentially repeatable collaboration processes. A library of related repeatable collaboration processes will promote a collaborative culture where teams consistently use similar techniques and think of them as “the way we collaborate.”

To date, complex collaboration efforts have often required the assistance of external collaboration experts such as professional facilitators or consultants. The Collaboration Engineering approach reduces the need for such professionals. ThinkLets, a pattern language consisting of codified best-facilitation practices, enable the design of modular collaboration processes that practitioners can facilitate themselves. The two case studies reported in the full article demonstrate that the relevant expertise to lead a day-long team process to design a collaborative process can be learned in half a day.