

MHA Institute

Solving real problems in real time

2011 Award for Excellence in Program Innovation
and Design for Lifelong Learning

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Prototyping and Change

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Defining Prototyping

The most important raw material for cultural change has always been the interplay among individuals, and the expression of their ideas, which lead to an ability to innovate and change ways of working. A form of action learning called *prototyping* is based on the way in which humans actually learn and innovate. In short, prototyping is a way of figuring out what to do by doing small experiments. Because the experiments are small, the risk is lower, thus providing more control on possible negative ripple effects.

Prototyping also saves time by not over-planning, and then needing to revise the plan because conditions have changed, or something has been learned that changes how people think about the plan.

To do this, prototyping requires *collaborative creativity*. This is a special form of group work in which people figure things out in a continuous state of ambiguity and complexity. Prototyping operates on the paradox of *slowing down to speed up*. This means that the process seems slow at the beginning, but it has a surprising ability to speed up and cascade as time progresses. This is why it is such an effective process. In prototyping, people figure something out, test it in relative safety, modify it based on what they have learned, and then test it again. They go through this process until they have something that works well enough to take to a broader application.

Prototyping Process

Prototyping is very flexible and fluid. Although it is not a rigid process, it does follow the action learning process. Below is an example of how the prototyping process works:

1. Form a group of 6-15 people to start the process. The more diverse this group is, in both occupation and position, the better the dynamics are for collaborative creativity.
2. This group meets for one day to figure out the scope of the project, the timing of the project, how the prototyping process works, and what they need to know to start the project.
3. The project team gets the education it needs.
4. The project team meets for several days to work on the project, using the prototyping process as a guiding principle.
5. During the working sessions, the project team determines possible critical points, such as issues, ideas, or actions. This will happen several times during the course of the meeting. At these critical points, the project team asks others to give input on what the project team has developed. The idea is not to develop any one idea or issue too fully before testing your thinking on it.
6. Once the project team has determined the first action, it then implements this in a pilot project that is small, yet representative of the reality in which the plan needs to work. Again, the first step is tested as if it were a prototype, rather than a finished product.
7. Once the pilot tests show a certain amount of stability, learning and actions can be extended to more and more people. This is when the process starts to speed up. The key is to continue to develop the actions using a prototyping stance, structured yet open at the same time.

Prototyping and Accountability

Any prototyping initiative produces change at a number of levels:

- Individual level (e.g., knowledge, attitudes, and behaviours)
- Team level (e.g., ways of working, communicating, and learning)
- Organizational level (e.g., consistency, reliability).

Prototyping produces measurable and sustainable results in both behaviours and metrics (e.g., cost savings, increased production levels). The reason for this is that prototyping enhances the conditions in which people involved become engaged and willingly embrace accountability. Prototyping focuses on the following three factors:

- **Being able to do things well:** This involves creating a level of concreteness, relevancy, and support, so that people feel a sense of stability that creates psychological safety. Psychological safety is required for most people as a first step in asking them to try something new. Psychological safety is important because it gives people grace, allowing them to be uncomfortable, to not know, and to have issues with the initiative itself. Giving people enough stability creates psychological safety, so that they become willing to work with ambiguity and uncertainty.
- **Being able to do things better:** This involves creating a level of continuous improvement and flexibility that allows people to contribute ideas and expertise at a local level, while staying aligned with a broader organizational perspective.
- **Being able to do better things:** This involves creating ways in which people can achieve things together, and focusing on things that make a substantial difference. This also focuses on involving diverse stakeholders and creating communities of practice in which ideas, issues, and methods are shared, so that people can learn at a more global level and apply that learning at a more local level.

Prototyping is always successful in dealing with constraints in the current situation. In fact, it works best when the constraints are especially acute. Some of these constraints include:

- Little or no time to spend developing and learning something new
- Little or no resources available to be allocated to a new project
- Possible resistance to anything new being proposed, due to perceptions that the initiative is of little value, or would probably not be implemented

Prototyping is an approach that focuses on learning as you go, and is entirely based in designing plans and actions that are doable within a highly constrained environment.

Sample Schedule

Our experience with prototyping has always used an experienced facilitator. Often, this begins with an external facilitator who takes project teams through the prototyping process, and, at the same time, teaches the team members to facilitate the prototyping process themselves. Each team who experiences prototyping is able to conduct prototyping experiences for others.

Schedules vary depending on the situation. However, a sample schedule gives you an idea of how prototyping works:

1. **Month 1:** A facilitator of the prototyping process orients the project team on prototyping and other related concepts. The project team defines the project, determines first steps of the work plan, and pilot tests the first steps with the first representative group. Often, the project team needs 4-6 days of meetings, and the pilot tests need about ½ day to 1 day each.
2. **Month 2:** The project team moves on to the next steps of the work plan (1-2 days), and pilot tests the second part of the work plan (1-2 days). The initial pilot test from Month 1 now moves into a more broad form of delivery (½ day to 1 day per group). The project team monitors the delivery of the initial steps of the work plan and makes modifications (½ day to 1 day).
3. **Month 3-6:** The same plan as step 2, except the project team works on different parts of the work plan each month.
4. At certain times, some of the members of the project team can be changed, thus increasing the ability of the team to stay fresh in its thinking. This can happen every few months, with about 50% of the team changing every 8 months or so. The project team knows when there is a need for fresh thinking. This shift can be gradual, with only one or two members changing at a time.
5. Often, this process continues for at least a year, depending on the complexity of the project. This means that the entire organization can be involved in as little as three months, thus creating a cultural change that is welcomed by people in the organization.

Note: The need for an external facilitator wanes with time, as the project team becomes more familiar with the prototyping process. We recommend that the project team, or a small number of internal people, become facilitators of the prototyping process.

At a certain point, a shift occurs from introducing new learning to maintenance and continuous improvement. When this happens, there is a noticeable difference in the culture of the organization, as compared to the beginning of this project. At this point, prototyping as a work process becomes a part of the emerging culture itself.