



A Comprehensive Approach to Designing Collaborative Work

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Abstract

Every organization in the world faces the problem of keeping pace with the rate of change in the external environment. This external environment can be exemplified by what we see in the business environment today: rapid change, increasing competition, shrinking cycle times, and more demand for innovation than ever before. This demand puts pressure on an organization to find ways of working that produce business value in shorter time periods than they are traditionally used to.

The growth and use of technology in the workplace has spurred much of the changes we are experiencing. Throughout the 1990's and into the 2000's there has been significant energy and focus given to idea of collaboration however much of the implementation has been around the use of technological solutions to improve *transactions*. Improving transactions is only a small part of the gains that can be achieved by collaboration.

Most of the gains to be achieved through collaboration will come from collaboration between people, between departments, and between businesses or organizations . Until now, collaboration between people primarily takes place in meetings or in ad-hoc gatherings “around the water cooler.”

This paper outlines a comprehensive approach to designing collaborative work and provides an introduction to a system that can support groups of people of various sizes to be highly productive. This is important because the next level of productivity gains will come from improving the way humans interact with each other.

Enabling humans to collaborate more effectively has the potential to unleash significant amounts of creativity and innovation within an organization. Unleashing this energy can improve the productivity of individuals and groups, can help organizations achieve their goals, and can improve the overall satisfaction of everyone involved.

Highlights of this paper include:

- A system for getting work done
- Why have a meeting?
- Designing Collaborative Work
- Collaborative Environments
- Collaborative Technologies
- Collaborative Processes
- Facilitation
- Bringing in outside knowledge
- Collaboration as intervention or strategic asset?

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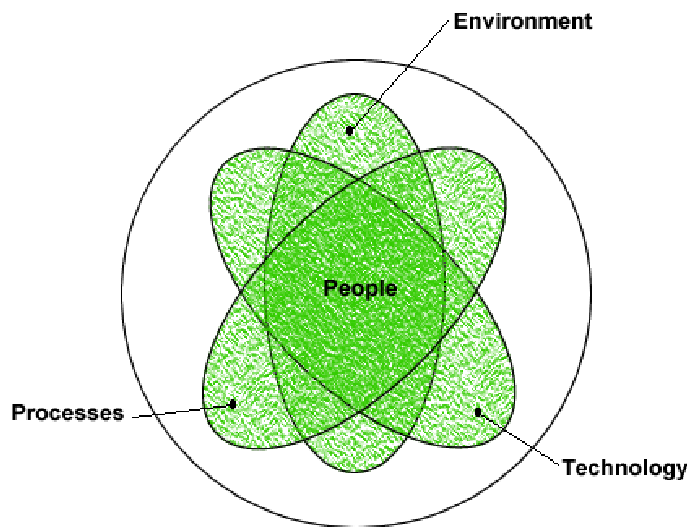
When we think about the environment we mean the physical environment, the virtual environment and the emotional environment. When we talk about technology and tools we mean both physical and virtual technologies. When we talk about processes we mean the flow and steps people take, as well as the way people interact, to get things done.

The nature of the business environment we are in today requires thinking differently about the way we organize people and accomplish work. Today’s business climate is one of rapid change, increasing competition, shrinking cycle times, which creates more demand for innovation than ever before. This demand puts pressure on organizations to produce business value in shorter time periods than they are used to.

When we first started InnovationLabs we had a long term vision of changing the way people work in organizations to be requisite with these types of external circumstances. To do this we posited there could be a systemic approach to designing work that allowed for a high degree of human interaction, high levels of knowledge sharing, greater demonstrations of creativity and innovation, and higher levels of productivity. We imagined that people would behave and work differently if we changed the way we thought about, and implemented, the environment they work in, the processes they use to get work done and the technology/ tools available for people to use to accomplish their work.

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A System for Getting Work Done

When these components are thought of as a comprehensive system it means we have to consider the interaction between the parts as well as the different roles the components play in the entire system. If we change one component it affects the others – and as with all systems, sometimes the affects of changing one part are known effects and other times the effects are unknown or unpredictable.



A Way of Working

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When thinking about designing collaboration we must first figure out if we are designing a way of working or an intervention. A collaborative way of working would be something that is embedded in the culture of an organization and impacts the behavior of everyone in that organization. A collaborative intervention is a distinct event which takes place over a distinct period of time that enables a group of people to work together focused on a specific outcome or set of outcomes.

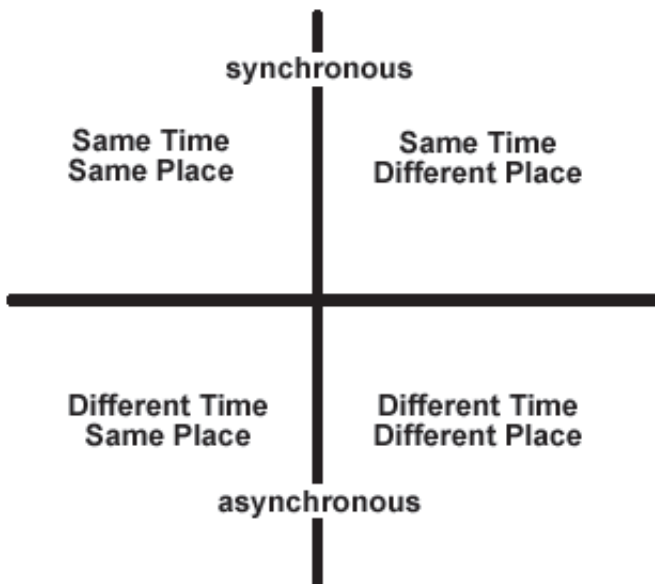
In either case, whether we are designing a system of collaboration or an intervention it is important for us to understand how people work in organizations and the impact of making changes to the way people work.

In most organizations, work is considered something that is accomplished by individuals. Individuals have job descriptions and a set of methods

and tools they use to accomplish their jobs. Most often these individuals are ‘trained’ in the methods and tools to use to accomplish the work of their jobs. Even when people are part of a department – the department might have a goal or aim but the people in the department, for the most part, are reviewed and measured by the work they do as individuals.

In the business climate we live in today we see increasing amounts of interaction between people. It seems that much of the work that needs to be done cannot be accomplished in isolation. People have to interact with other people in order to get their work done. When people interact they do so in various ways, in different size groups, in some place, and at some time.

Work gets done in some place, at some time.



There are really only a few ways for people to interact with other people. If we draw a matrix with place on one axis and time on another axis and use the value of same and different on each axis we find there are four



variations of ways for people to interact with each other.

- Same time, same place
- Same time, different place
- Different time, same place
- Different time, different place

In most organizations the way people interact with other people in same time, same place fashion is either ad-hoc or in formal meetings.

Ad-hoc interactions are typically small in size with a couple or three people getting together around the water cooler or in the break room.

Formal meetings take place in groups as small as two people and as large as hundreds of people (or in a rare case here and there possibly a thousand people or more get together in a meeting).

Each of these methods of interacting with other people has inherent limitations for accomplishing work.

Why Have a Meeting?

There are really only five reasons (or excuses) people use to have a meeting. The reasons people have meetings are:

- Messaging
- Conversation
- Dialogue
- Decision making
- Collaborative work

Messaging is typically done in one direction – someone wants all the other people in the meeting to know something about a particular subject or subjects. In the environment we live in today, having a meeting for the purpose of messaging isn't really a good use of people's time (especially a group of people) as there are much better ways to accomplish the goal of delivering a message.

Natural Groupings of People

To learn more about natural or spontaneous groupings of people in a group situation, let's do an experiment.

At the next gathering of people you attend whether it's a party, luncheon, or something like a hike, observe the way people group together. In almost 100% of the cases you will see that people end up in pairs or trios (twos and threes) with the rare case of a grouping larger than that for a short period of time. Rarely will we see a group of more than five or six people sitting and chatting together for any length of time.



Bohm Dialogue or Bohmian Dialogue is a form of free association conducted in groups, with no predefined purpose in mind besides mutual understanding and exploration of human thought. It aims to allow participants to examine their preconceptions, prejudices and patterns of thought. Bohm Dialogue was developed by David Bohm, Donald Factor and Peter Garrett starting in 1983. Bohm published his views on dialogue in a series of papers between 1985 and 1991.

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Conversation holds the potential to be a good reason for a same time, same place meeting but typically does not live up to this potential with a group of people as conversations are often only of value when they take place between two or three people at the most. Having a conversation with more than three people is highly unproductive and often finds additional people disengaging or getting distracted (or more likely striking up a conversation with the person next to them).

Dialogue is a specific kind of conversation that can be valuable for a group of people. In the last decade dialogue has emerged as a formal process – often facilitated. In a formal dialog process there is a topic to be discussed, explored, or understood by a group. The purpose of dialogue is to uncover the mental models of the people engaged in the dialog and to see where the dialog leads the group. This kind of process often does not have an end point and can continue for an undefined length of time – over many dialog sessions and possibly over many years.

Decision-making is one of the reasons people use to have a same time, same place meeting but most decisions need to be made in context of achieving some aim or goal. It's often the case that decision making requires information (messaging), conversation and/or dialog and if those things are done outside of a meeting then all that really happens for decision making is voting – and that can be better accomplished in other formats.

When we think about decision making we see decisions as an inherent part or a sub-set of the collaborative process or as part of a design process. For that reason we see decisions as by-products of a good collaborative design process. See more about collaborative design below.

Collaborative work is the most valuable, and potentially most fruitful, reason for a same time, same place meeting of a group of people. To engage in collaborative work, a group of people must have an aim, a goal, and/or an objective to achieve – the group must want to accomplish something. The size of collaborative work groups can vary from small groups to larger groups that could include hundreds of people.

With the right methodology, collaborative work has the potential to bring out the wisdom and genius that exists within the group. The best

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collaborative work demonstrates the power of combination and often produces a result that is far greater than what could have been created either working individually or in traditional fashions.

Collaboration and Traditional Meeting Formats

Traditional meeting formats are very limited in their usefulness when a group of people want to engage in collaborative work. Most people are familiar with traditional meetings and how they work. The following explanation of a traditional meeting format is simplified and presented here for illustrative purposes.

Typical meetings have a set of topics which are outlined in an agenda for the group to ‘discuss.’ These ‘discussions’ often take place as a large group with all participants in the meeting engaging in one discussion at a time. After each discussion, the topic or agenda item either ends with action items or tabled items that need further discussion or research before actions can be taken.

Definition of design: (1) to conceive or fashion in the mind; invent (the purposeful or inventive arrangement of parts or details); (2) to plan out in a systematic, usually graphic form; (3) to have as a goal or purpose; intend; (4) to create or execute in an artistic or highly skilled manner; (5) a basic scheme or pattern that affects and controls function or development.

Without going into more detail than this, the reader can extrapolate from their own experiences how traditional meeting formats have impacted the process of getting work done – particularly in a group of smart people.

Collaborative Work and the Process of Design

If collaborative work is a good reason for gathering a group of people, it might be valuable to look a little deeper at how a group of people can be productive and accomplish the aims and goals they have in a collaborative way.

We think of collaborative work as being synonymous with a design process. When we talk about collaborative work we use the language pattern ‘collaborative design’ to describe what we are talking about – and we do that with considerable purpose. In our terminology, “design” is a word with a lot of depth and meaning behind it. It means looking at issues comprehensively, promoting “out of the box thinking,” looking at the hidden factors, and developing solutions that are meaningful and enduring.

When we design collaborative work as an intervention, we incorporate all of the above as part of the process.

- We enable the participants to bring focus to their intent;
- to promote inventiveness;
- to plan systematically;
- to execute in a highly skilled manner;
- and to find those underlying threads that allow ideas to develop like woven tapestries.

In order to enable groups of people to experience all these things we need a comprehensive approach to designing collaboration.

A Comprehensive Approach to Designing Collaborative Work

If we refer back to the system view of work presented earlier, we must consider the four components of the system – the people, the environment, the technology and tools, and the methods/processes – when thinking about a comprehensive approach to collaboration.

All work happens in some place – whether it is physical or virtual. Can virtual environments be created to support the same level of flexibility to accommodate the various types of work as well as the different configurations of collaboration? Does the emotional environment support honest conversations? Does the organization recognize the value of the results created by the group?

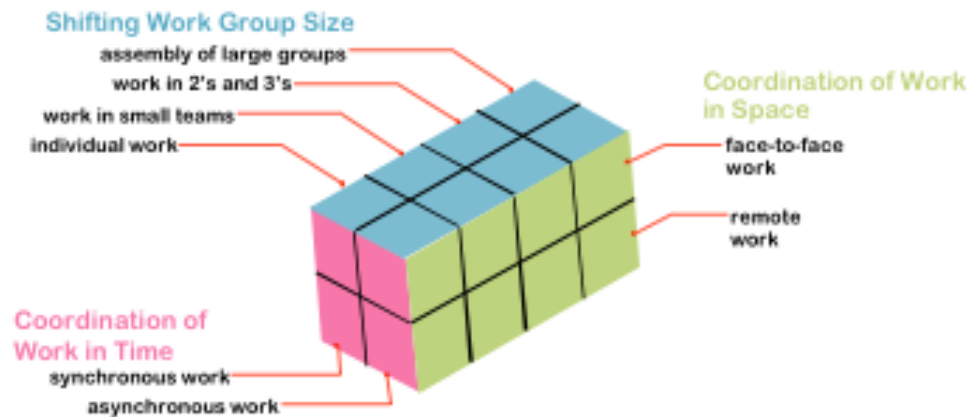
Collaborative Environments

When we think about designing collaborative environments we think about having environments that can be flexible enough to accommodate the various types of work people will do – as well as the various configurations of how they will do that work.

Even if the predominant way of working is collaborative people will still need to do individual work at times. Environments must be flexible enough to accommodate individual work, small group work, work in pairs and trios, as well as large groups getting together to collaborate.

Environments also must support different types of work – from operationally oriented work to project work, to research and development, to product and service design, to the work of innovation and strategy design.

Earlier we mentioned the need to consider virtual as well as emotional environments. All work happens in some place – whether it is physical or virtual. Can virtual environments be created to support the same level of



The primary principle to consider when thinking about collaborative technologies is whether or not the technology makes it easier for people to interact with each other and to get work done. Does the technology facilitate the interaction of people in the various permutations: one to one, one to many, many to one and many to many?

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Collaborative Technologies

When we design environments for collaboration we want these environments to enable concentration and focus on the work at hand. We design in appropriate levels of distraction – distraction that fosters more creativity and participation between people.

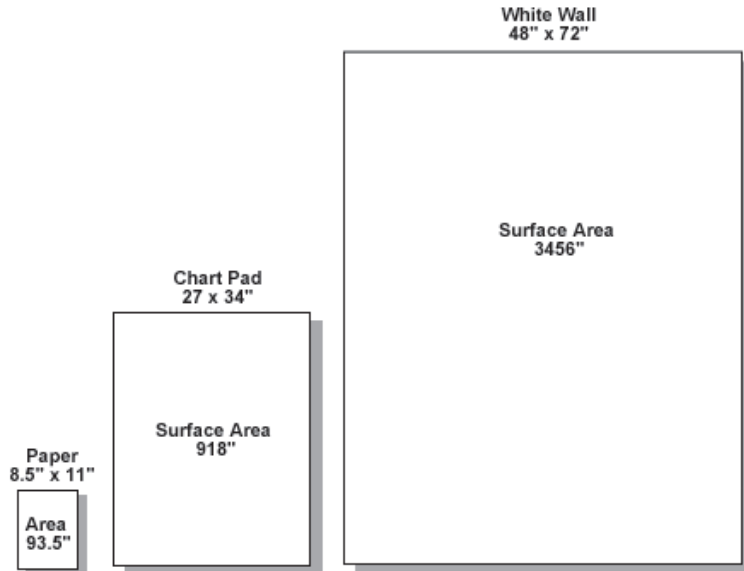
Technology can be used in a way to enable people to accomplish work – and it can be a distraction. When we think of technologies we think of both physical and virtual tools however much, if not all, of the virtual tools are really not enablers of face to face, same time, same place collaboration.

The primary principle to consider when thinking about collaborative technologies is whether or not the technology makes it easier for people to interact with each other and to get work done. Does the technology facilitate the interaction of people in the various permutations: one to one, one to many, many to one and many to many?

In the collaborative environments we design we prefer to use a just in time approach to technology and have the various technologies hidden until they are needed. In this way technology is used in context with the required work. Once a technology has served its purpose they disappear until they are needed again. This goes for the physical technology as well as the digital technologies.

In the environments we design we employ a principle we call working big. If you think about it, much of the work people engage in is on an 8.5 x 11 inch piece of paper.





Most people have come to use chart pages as an alternative in meetings. We prefer to use white walls – and we prefer to large white walls, and to use white walls on wheels so we can change the environment and move the work around. Working with white walls on wheels can allow the physical environment to be configured to accommodate different types of collaborative work. If we string these rolling white walls together we can have 30 to 60 linear feet of space for people to work on. In this way we can create environments that support

different configurations of work and we can engage a large number of people in working together collaboratively.



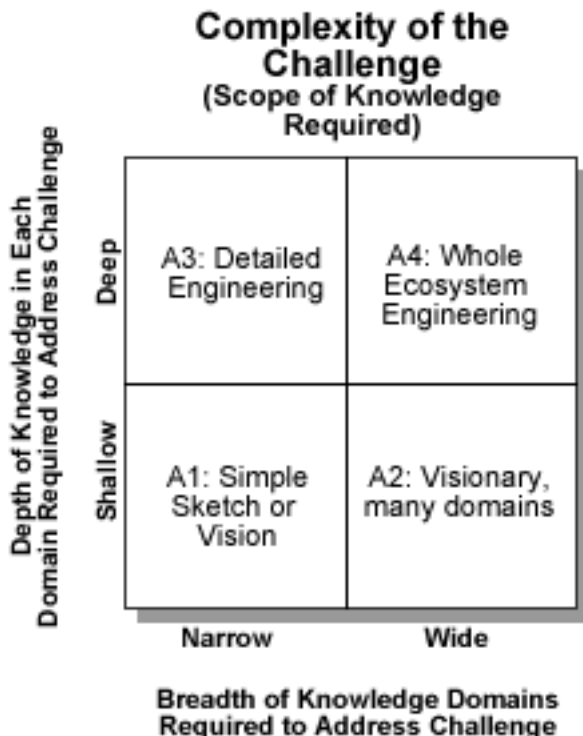
Collaborative Processes

When we design collaborative processes we use a methodology that has evolved over the last 20 years from working with a wide range of organizations on a broad set of challenges. In all of these situations there was a need to bring diverse groups of people together to accomplish a lot in a short period of time. When we talk about designing collaborative processes we are not thinking in terms of controlling people or behavior. We are instead thinking of how to create the right conditions for people to interact in a highly productive and satisfying manner.

What follows is a description of the methodology we use for the design of collaborative processes. The principles and ideas used in this methodology carry over very nicely to the design of a system of collaboration.

There are three main questions we consider when designing collaborative work.

- How complex is the challenge?
- How unique is the challenge?
- How much design and facilitation is required?



As one moves through a process of answering these questions the challenge as a designer becomes more difficult because it is here we will find a high degree of unknowns.

How Complex is the Challenge?

Reviewing and clarifying the objective(s) the group wants to achieve will help us begin to determine the breadth and depth of the knowledge required by the group. Do the participants need a lot of specialists in the room from one particular discipline, or do they need a more broad representation of people from a variety of disciplines? The more detailed the model or solution demanded by the objective, the deeper the knowledge that needs to be in the room. The more domains that the model or solution touches upon, the broader the knowledge required.

Do participants need to interact within their domain of expertise or do we need to encourage collaboration with



others outside of our domain? If a group of collaborators are drawn from within the same department or organization they will likely create solutions they have created in the past. Sometimes that is all that is necessary. Some times it is advisable to expand the participation to include the organization's customers, investors, and suppliers (and some times even competitors).

If a solution requires detailed engineering or financial analysis it will be important to have people with a depth of knowledge to build models and solutions – preferably in real time.

Bringing Outside Knowledge In

If necessary, to spark new thinking or to insure a successful outcome of the work, we will include people or content from a wide array of disciplines, ways of thinking and lexicons in the collaborative process. The following is a short list of the kinds of models that can be brought to the design of collaborative work:

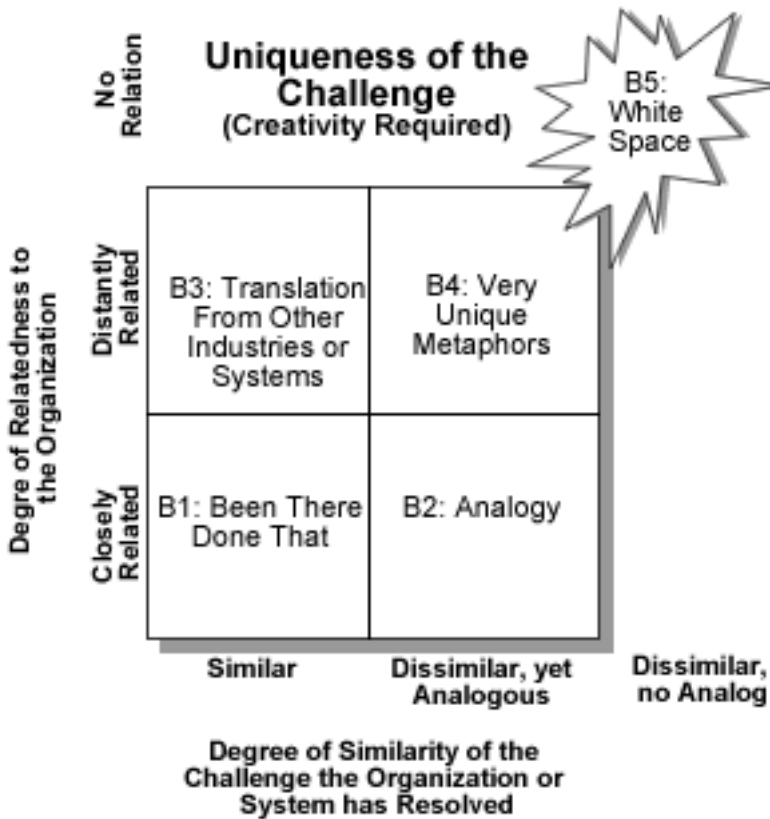
- Appreciative Inquiry
- Architecture
- Blue Ocean Strategy
- Complex Adaptive Systems
- Continuous Quality Improvement
- Engineering
- Innovation
- Network Design
- Positive Deviance
- Psychology
- Rapid Prototyping and Rapid Application Development
- Supply Chain Management
- Strategic Modeling
- System of Profound Knowledge
- Systems Dynamics, Theory and Design
- Viable Systems Model

Including these and other models in the way of thinking about and designing collaborative work, gives the designer a rich suite of options to consider and produces a broad range of possibilities for solutions and application.

How Unique is the Challenge?

Again, using the objectives the group wants to achieve, we can review the challenge for its uniqueness. This review helps us to determine the solution space – the

pace from where the likely solution(s) will come from.



If the objective represents a challenge that the participants or similar organizations have faced before and met, and are satisfied with the past approach and results, there’s no need to reinvent the wheel. Just replicate the past experience, taking into account the usual types of changes.

If the challenge has been addressed by unrelated organizations (another industry, another sector of the economy, or a different living or natural system), then it may be useful to translate the principles and practices from those organizations into the participant’s organization.

If closely related organizations have addressed dissimilar challenges, it still may be of value to examine their practices and procedures as analogies to solving the challenge at hand.

In some cases, the challenge is so unique that participants must look farther a-field to discover solutions and the combinatorial process becomes more metaphorical. In extreme cases, the solution lies in a white space that no one has ever investigated before. All challenges can be resolved by a process of combination within the framework of a context that is carefully defined: the parameters of the challenge are compared with other ideas from similar or different types of challenges.

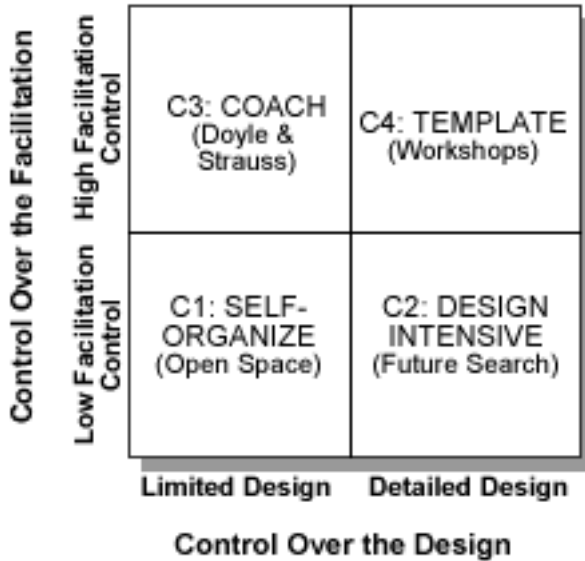
How Much Design and Facilitation is Needed?

Every organization has to decide how comfortable they are with providing workers the freedom to explore and discover solutions. Most organizations based on a hierarchic model of organization have control as an underlying principle. The degree to which control based management practices



influence the culture of an organization will likely influence the design and facilitation of collaborative work – with the rare exception of one-off interventions. One way of looking at these various approaches to design and facilitation is to think of this as a spectrum of collaboration – with more control and less freedom on one end of the spectrum and less control and more freedom on the other end.

Facilitation and Design Approach (Degrees of Freedom in Facilitation and Design)



Traditional training classes might be considered on the far end of the spectrum of collaboration with more control and less freedom – as typical training does not allow for much, if any, collaboration.

On the other end of the spectrum we find something like self-organizing teams. Self-organization places the responsibility for finding the path to the solution on the shoulders of the participants. They become responsible for navigating themselves to the solution and for crafting the solution. The facilitation team (if any) provides merely a safe and productive environment in which this can take place. Depending on the culture of an organization, this approach should be the default choice since it makes the participants more active players in their work.

A design-intensive approach relies upon a rigorous approach to the flow of work as well as the process along with a light hand on the active facilitation. If there is great complexity in the process, this approach should be considered.

If the collaboration required is more like a meeting with a loose agenda that needs a referee, then use the coaching style where a facilitator is present at the front of the room at all times and also leads each team if the larger group breaks into smaller groups.

If the process steps are complex and the skills required to direct the participants to a solution are such that a great deal of attention needs to be paid to the design and active facilitation by process/content experts then the template-style approach works well in these situations.



Even if collaborative work is seen as an intervention within the enterprise everything we've discussed above can be applied to enhance and augment existing capabilities.

Collaboration Services as an Intervention

Typically the kind of work or thinking we have been discussing resides with HR Professionals, internal facilitators or training departments. In these cases collaboration or collaboration services are seen and used as an intervention in 'normal ways of working.' With this mind-set of seeing collaborative work as an intervention, collaboration is used as a tool in the toolkit of the HR Professional and is applied where needed to specific opportunities within the firm.

There is nothing wrong with this approach. Every organization today has the need to improve the interaction between and among the participants in the enterprise. Even if collaborative work is seen as an intervention within the enterprise everything we've discussed above can be applied to enhance and augment existing capabilities. To get the most out of these types of interventions, taking a comprehensive approach to collaboration holds the potential to add significant value to the enterprise.

If an organization does not have this type of capability already they can either develop a collaboration services capacity in-house or outsource this work to professional facilitators.

There is however an opportunity for the enterprise to raise the profile of collaborative work and make it a strategic asset.

Collaboration as a Strategic Asset

There is however an opportunity for the enterprise to raise the profile of collaborative work and make it a strategic asset. If the enterprise can build a capacity to move beyond simply delivering collaboration services as interventions and embed collaborative ways of working into the culture (in the way of working) it stands to gain significant strategic advantage.

Every organization in the world faces similar challenge in terms of finding ways to keep requisite with the rate of change in their industry and in the world. Improving the ability for the people in an organization to interact, collaborate and accomplish their goals is one way of addressing this challenge.

Embedding collaboration in the way of working can improve the speed in which the enterprise responds to market pressures, increase the agility of the enterprise and can unleash the creativity of the firm to discover new markets.

Embedding collaboration into the way of working has the potential to raise the engagement level of all employees. This is a natural consequence of engaging people in meaningful work, getting their voices heard and allowing their talents to become a source of pride.

If the firm uses collaboration as a strategic asset it could engage customers in the design process. As a natural outcome this can improve the customer experience and serve to develop higher levels of trust and loyalty.

Traditional ways of working have limited the amount of creative energy that can be expressed within a firm. Collaboration, embedded as a way of working, has the potential to unleash significant creativity and innovation for the strategic benefit of the firm.

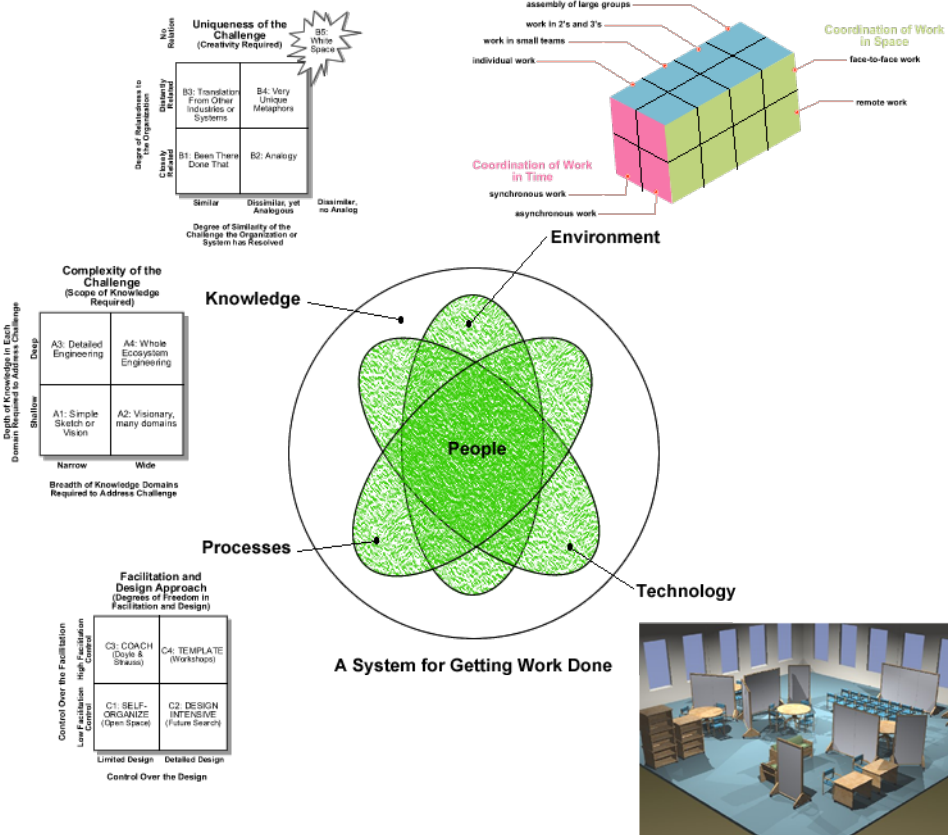
Summary

If we want to take a comprehensive approach to collaborative work

we should create an environment that is conducive to high levels of interaction and knowledge sharing. The environment should be flexible enough to support different types of work and different combinations of people doing the work.

This environment should be equipped with technology that supports collaborative interactions. The technology should be both physical and virtual and enable creativity and productivity by being easily accessible – but only accessible when it is needed.

Collaborative work between people can be designed



and purposeful. It does not have to rely on ad-hoc interactions at the water cooler or the break room.

Collaboration, embedded as a way of working, has the potential to unleash significant creativity and innovation for the strategic benefit of the firm.

The design of collaborative work should consider the complexity of the issues/challenges, the uniqueness of the situation, what knowledge is required to explore the challenge, and what degree of facilitation is required.

Finally, it is important to consider whether this capability will be used as an intervention or as a competitive asset of the organization. As an intervention, even traditional meetings can benefit from considering the ideas expressed above. Designing interactions between people that are fruitful and satisfying is very possible and can be a worthwhile endeavor for any organization.

As a core capability embedded in the culture of an organization, collaborative work has the potential to add significant value to the creativity, productivity, and strategic benefit of the firm.

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