On Collaboration[i]

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> A small, grassroots initiative at Caterpillar has evolved into a successful, enterprise-wide process that has generated savings of US$75 million in five years. Caterpillar's *Knowledge Network* thrives as a web-based knowledge exchange that links over 3000 tightly focused communities of practice involving more than half of Caterpillar's 70,000 member global workforce. It has achieved a 200% ROI for its internally-focused communities and more than a 700% ROI for its external communities. *Vicki Powers, 2004*[ii]

Who says collaboration won't work, is too expensive or too time consuming? Certainly not that iconic Fortune 100 manufacturer of construction and mining equipment Caterpillar Inc.! Collaboration and knowledge sharing became important 'must haves' for the organization when it restructured itself in 1998, moving from a silo-based organization to an umbrella for 26 global business units. In the process many of its employees lost track of each other and the knowledge they needed to share. "We found we were repeating the same mistakes and doing the same research multiple times from different business units," said Reed Stuedemann, a 27-year Caterpillar veteran and knowledge sharing manager[iii].

Simultaneously, the importance of its intangible assets, such as intellectual capital, grew. Those assets now account for 85 percent of the company's overall value. This meant that collaboration and knowledge sharing had to become key elements of its value adding process. In response Caterpillar launched its *Knowledge Network* as a web-based system to reconnect its people and encourage knowledge sharing and working together.

Unfortunately, most organizations treat knowledge sharing and collaboration either as unwanted inducements to power sharing or as unnecessary and inefficient steps in the process of decision making. It is a view that was well captured by former US Surgeon General, Jocelyn Elders, who observed, "c*ollaboration is [seen as] an unnatural act between non-consenting adults*."[iv] For all those who've tried their hand at collaboration and working with partners, her comment may, in fact, seem all too familiar. It captures the frustration of needing to work together in the first place as well as the unfamiliarity most people have with the tools and practices that might make the collaborative experience easy and 'natural' for us.

Elders continues by bluntly naming that taboo assumption that we almost all share when we enter a room with potential partners: she says,

> "We all say we want to collaborate, but what we really mean is that we want to continue doing things as we have always done them while others change to fit what we are doing."[iv]

We know we can't do things by ourselves – that's why we're willing to engage in this "unnatural act". But convinced as we are of the completeness of our understanding and the 'rightness' of our proposed actions, our expectations are that others, once persuaded of our wisdom, will automatically adjust themselves to accommodate us. This is of course nothing short of delusional and self-aggrandizing and it is unfortunate that is so universally shared. Until we can face it for what it is, there is little chance the rhetoric of collaboration so popular in organizations today will yield much in the way of benefits.

What aided Caterpillar in this regard was its long established organizational culture of sharing[v]. For instance, Jim Coffey, a 31-year Caterpillar veteran and manager of the Quality and Reliability community, remembers how by buying a colleague a cup of coffee, employees could learn anything they needed to know. Now he says that sharing can also take place virtually while achieving significant savings for Caterpillar along the way.

Unfortunately, for most people collaboration is generally perceived as being hard, time consuming, unfocused and risky. It puts people in situations of potential conflict, when most people studiously avoid such situations. It may also suffer from big egos and free-loaders. So why do it unless you absolutely have to?

The answer to this is quite simple – more and more you absolutely have to.

Issues are more complex; governance is more distributed; and to achieve one's organizational and personal goals we need to work together more frequently because knowledge, resources and power are increasingly dispersed. Like it or not, collaboration is a crucial process for resolving just about any issue of significance today.

In fact, the absence of the capacity to collaborate is increasingly being identified as **the** major obstacle to solving society's problems. For instance, the Conference Board did so recently when it assessed governance and coordination as the main threats to Canada's emergency preparedness[vi]. The Naylor Report made similar comments after the SARS crisis of 2003, pointing out that "our *first* theme is that the single largest impediment to dealing successfully with future public health crises is the lack of a collaborative framework and ethos among different levels of government."[vii]

Nonetheless, while the picture painted by Elders of collaboration as "unnatural" may be representative, I believe it is fundamentally wrong, or at least woefully incomplete. Most people find collaboration difficult because they try and impose traditional management and leadership models on an entirely different mode of organizational coordination – one that requires the continuous re-affirmation of shared commitment and trust in order to affect voluntary cooperation. Collaboration is seen as difficult because partners are often jockeying to see who's 'in-charge' until they realize no one is or can be.

The pressure on public institutions exerted by the growing distribution of knowledge, resources and power has led to their increasing use of cooperative strategies – first with other governments but also with the private and civil society actors as well. It has also led to an increasing willingness by many governments to engage directly with citizens as partners in program implementation and more recently in forms of shared policy development. Says the OECD, "engaging citizens is a sound investment."[viii]

It has been observed (Gray, 1989[ix]; Goss, 2001[x]; Rubin, 2002[xi]; Strauss, 2002[xii]; Kahane, 2007[xiii]; Westley et al., 2006[xiv]; Romero, 2008[xv]; Born, 2008[xvi]; Block, 2008[xvii]; Senge, 2008[xviii]) that in these contexts, effective collaboration leads to shared community ownership, more comprehensive problem understanding, innovative solutions and subsequently to more successful implementations and program accountability.

But, the ability to engage either partners or citizens in working together ultimately hinges on the quality of the participants' conversation or dialogue with each other. When successful, that conversation brings together different perspectives and organizing metaphors, which enrich understanding, foster ownership, secure commitment and increase innovation. As Block has captured so well:

> "community is fundamentally an interdependent human system given form by the conversation it holds with itself. The history, buildings, economy, infrastructure and culture are [artifacts] of the conversations and the social fabric of any community" (2008:30).

The effectiveness of collaboration rests, therefore, in our ability to foster these conversations in ways that are trust-affirming, inclusive, personal, non-paternalistic, open, authentic, learning-oriented, creative, that make use heuristic problem-solving approaches and that are mutually and equitably beneficial.

It is taken for granted that the practice of collaboration must be learned. Consequently it can be more costly and time consuming upfront than traditional leadership approaches of generating solutions. In the long run, however, collaboration actually saves more time and money, especially during any joint implementation phase. It does so because it builds commitment along the way[xix] instead of having to sell at the backend solutions to stakeholders who have had no hand in shaping them. It may not be necessary to state the obvious here, but what really counts is the implementation.

So how do we reconcile these comments with Elders'?

Collaboration is not only natural but it is 'hardwired' into us as human beings (Rilling et al., 2002[xx] & Hardin, 2006[xxi]). Robert Wright once wrote that our ability to cooperate is **the** defining trend of human history[xxii]. Yet for far too long we've been fed a myth of individualism that has limited both our willingness and our capacity to work together.

Just as the ability to speak is natural but still requires both training and a cultural context, collaboration too requires both training and culture. What's needed is greater familiarity with the skills, techniques, practices, and mechanisms of collaboration so that the whole thing becomes as 'natural' to us in our organizational lives as learning a language is with young children.

Of course with the advent of the Internet and social media, we have so many more collaborative tools at our disposal to help us connect and pursue our shared goals. But what tools should we be using and when should we use them?

As it turns out social media like Wikis, Facebook, Twitter, and Digg are part of a range of physical and social technologies that can help to foster connectivity and cooperation within a wide spectrum of social collaboration.

This spectrum of social collaboration ranges from (see Figure 1):

1. ***Small group collaboration*** that is based on direct, face-to-face communication and is dominated by social technologies;

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2. ***Mass collaboration*** that is based on mass communication and **is** dominated by the physical technologies such as computers, telecommunications and the Internet.

Small group collaboration, involves social technologies for networking, building trust, developing relationships, sharing decision making, building consensus, getting shared commitments, establishing performance monitoring, ensuring accountability, developing partnership agreements **AND ONLY THEN** do we actually getting around to doing something together. Once this pre-work is done the social costs of collaboration do decline but the need for relational governance continues as long as a collaboration exists.

We might characterize ***small group collaboration*** as:

- Slow to start up,
- Having relationships before action,
- Requiring high trust,
- Involving high partner monitoring,
- Focusing on tacit knowledge,
- Involving high customization,
- Using team decision making,
- Involving smaller scales & exposure, and
- Being driven by member dependent growth

To illustrate, let me draw from some previous work with the Ottawa-Carleton School Board where I was asked to reflect on the performance evaluation system for Trustees and senior staff[xxiii]. They in turn pointed me towards the Peel School Board outside of Toronto as a best practice of board-staff relations and effective collective learning.

I interviewed the Peel Board Chair and asked about their process of staff evaluation but was told they didn't do anything different from any of the other boards – strategic planning, creating annual targets, negotiating metrics, conducting year end assessments, and so on. Curious therefore I asked the Chair "how have you managed to create such a high level of trust and respect between staff and trustees?" "What kind of a knowledge exchange system do you have in place to head off things before they become problems? How have you managed such a high level of consensus? How do you keep focused on big picture issues?"

She thought for a moment, and then as if discovering it for the first time she said, "We have dinner! We all have dinner together every second week before Board meetings. So if you have an issue, you just sit with whoever you need to talk to. There's no pressure like there is under the glare of the media. There's just a conversation. People inform each other. They learn from each other. And they make plans with each other."

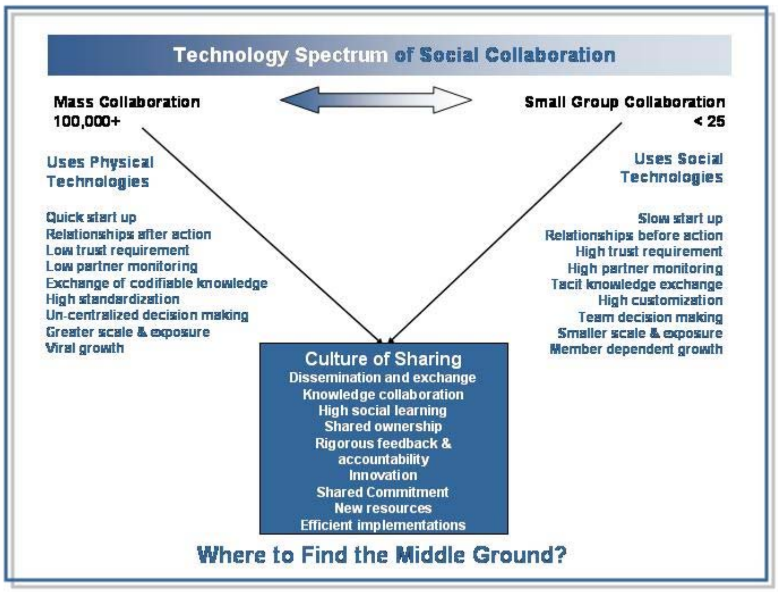

Figure 1: Technology Spectrum of Social Collaboration

The Chair identified the simple practice of having dinner as the distinguishing factor in fostering a more collaborative environment among her staff and trustees. In small groups, collaboration is often facilitated by such practices which **bring the right people together in conversation**. Because of their capacity to facilitate relationships, small things like having dinner, or coffee or a beer after work can gain seemingly undue importance as tools for constructing small group partnerships.

On the other hand, ***mass collaboration*** does not require relationship building as a prerequisite. While it does require a few basic rules, *action comes first*. Collaborators then react to some initial action by accepting it, modifying it or rejecting it. This is the premise of the well known 'open source' technologies such as Linux or Wikis. Complete strangers can collaborate without having to invest anything in establishing a relationship. Hence, from the perspective of the collaborative costs of small groups, this form of collaboration is often considered quite efficient.

In contrast to collaboration in small groups, however, ***mass collaboration*** may be characterized as (see Figure 1)**:**

- Quick to start up,
- Having relationships after action,
- Requiring low trust,
- Involving low partner monitoring,
- Focusing on codifiable knowledge,
- Involving high standardization,
- Using un-centralized decision making,
- Involving potentially large scales & exposure, and
- Being subject to viral growth

What's really interesting is that, although polar opposites in many respects, these two forms of collaboration both produce a similar **culture of sharing,** one which includes:

- Effective dissemination and exchange of information,
- Knowledge collaboration and frame reconciliation,
- Collective learning,
- Shared ownership and decision making,
- Rigorous feedback & accountability,
- Innovation,
- Shared commitment,
- The development of new resources, and most importantly
- The effective and efficient implementation of collaborative endeavours

The key differentiator between these forms of collaboration is scale. Research has shown that **small group collaboration** works best in groups less than 25 people. If for example, there are *n* number of partners, then in small group collaboration there are $n(n-1)$ relationships in need of attention, leading some[xxiv] to the conclude that the manageable upper limit for effective collaboration is 25 (requiring 600 relationships to be maintained).

On the other hand, **mass collaboration** requires access to large audiences[xxv], ideally over 100,000, which is why this form of collaboration was not particularly prevalent until the advent of the Internet (see footnote[xxvi]). Without that reach, mass collaboration tends to be weak, unreliable or lacking in quality. For instance, the basic premise of *open source*, famously captured in Linus' Law (after Linus Torvald the originator of Linux), is "Given enough eyeballs, all bugs are shallow[xxvii]. Of course, its corollary is also true -- fewer eyeballs, more bugs! But does it work? As an example of mass collaboration Linux software is cheaper, faster to produce and better quality – just ask Michele Weslander, Principal Deputy Associate Director of National Intelligence at the US Department of Defence who says the Linux choice is based on "speed, efficiency and flexibility."[xxviii]

Some enthusiasts have promoted social media as if simply putting the technology in place will magically generate collaboration, while they ignore the huge audience scale and the basic rules needed for social media to be an effective source of collaboration. Anyone who has ever tried to create an online chat space or discussion forum knows what 'white elephants' these can be.

Conversely, some groups using relational forms of collaboration have tried to extend their reach by simply involving hundreds or thousands more people and then, when the task of relationship management becomes unworkable, they are surprised by how fruitless and ineffectual their collaboration has become.

Both types of collaboration have well known rules and practices. Trouble is, many initiatives are not purely one type or the other. Their scale is somewhere in between. So what do you do with groups larger than 25 and smaller than 100,000 that might want to work together? How do you bridge that middle ground? The answer lies in the mixing of physical and social technologies.

At Caterpillar, says Powers, the company structured its system "so community members could communicate to others through community discussions and knowledge entries. Communities also provided space for reference materials that relate to the topic and users within a community. Community managers can select documents and links to add under Tools and Guides."[xxix] But most of the heavy lifting for the *Knowledge Network* was done by the managers within each of its 3000 communities of practice who facilitated the communication work within their community. It is interesting to observe that as big and as important as the initiative became, the staff for the *Knowledge Network* remained actually quite small - a team of six.

This strategy of local delegation was also seen recently at Natural Resources Canada[xxx] in the development of its wiki, where promoters insisted that the corporate wiki have **no budget** and employees were encouraged to build it themselves for their own purposes, which, as it turned out, proved to be largely social – connecting groups of people and communities of practice within the organization. By letting staff take ownership, they created a network of small group communities linked together by wiki technology. In effect this was a relationship building process augmented by technology.

In addition, however, NRCan employed a ***mass collaboration*** technique that minimized the number of rules that would apply to the wiki's development. This was achieved by negotiating a handful of rules with Treasury Board (NRCan now refers to them as its *guardrails)* in order to guide the behaviour and content on the wiki without being overly prescriptive.

As a counter example, the senior partners at a major US consulting firm[xxxi] tried implementing Lotus Notes as a platform for firm-wide collaboration only to see it fail. Although the partners themselves were in agreement about its use and collaborative potential, only later did they discover their mistake in overlooking the different dynamics present among their more competitive junior associates. These associates had: no culture of sharing, no incentives to cooperate, little mutual trust and no way of knowing if their cooperation would ever be reciprocated. Further, the imposed solution was not their solution. By not paying attention to these basic internal relationships, the firm virtually guaranteed the well-intended initiative would never get traction.

Given that collaborations usually involve unique combinations of issues, people, organizations, goals and resources, successful collaborations are usually resistant to templates and recipe-like formulations. Says David Straus, "there is no one right way to collaborate. At best collaborative problem solving is an educated, trial-and-error process."[xxxii] As a consequence, partners and collaborators need to be able to draw on a range of techniques, mechanisms and practices to apply in any given situation. This heuristic approach to collaboration demands a lot of tools in the toolbox, and so in keeping with the philosophy of collaboration I have listed below some of the practices I've encountered for both **small group** and **mass collaboration**.

Key Practice Areas for Small Group Collaboration

In my study and observation of collaboration, the following represent eight key practice areas that can help promote collaboration in small groups:

1. Dating Practices

These are the initial socialization or pre-collaboration exchanges that help shape shared purpose, and create a basis of trust for partners to move forward on. These might include: shopping the idea around to potential partners; using a value-networks approach to stakeholder mapping; setting an agenda together with potential partners or initiating an invitational conversation that is a call to create an alternative future, and allowing people to "self-enrol" in the process without penalty if they say "no". As Block has dryly put it, "what good is their yes, if they can't say no."[xxxiii]

2. Engagement Practices

These are the conversations that take place that include people, empower them, build ownership, help to personalize their involvement and generate shared commitments. One might begin by involving those people most directly involved – people who have power to make things happen; people who can stop things from happening; people with relevant knowledge and those who may be directly impacted. Partners can work towards reducing or eliminating entry and exit barriers to encourage inclusivity and focus relationships on what is essentially the contingent cooperation among the partners. By understanding the premise behind "I will if you will" and knowing that the partners can leave at any moment, the partners will tend to be much more focused on ensuring a positive experience for everyone.

As Peter Drucker is often quoted as saying, "the best way to predict the future is to create it". An important engagement practice is, therefore, to refocus participants away from trying to fix the problems of the past towards defining the future possibility that they all share and want to live into from today. This generates the possibility conversation[xxxiv] and its result is a powerful coordinating force that will help guide stakeholders and encourage their cooperation throughout.

3. Trust Building Practices

These are the practices you might undertake to construct sufficient confidence to begin interacting, or to affirm your trustworthiness and willingness cooperate if others cooperate as well. In the early stages make more use of formal and informal face-to-face interactions. You can use more electronic interactions later when trust is established. Given that collaboration is essentially an agreement between people, it may also involve practices that create moral contracts that help to bind participants to one another.

One such practice is to make a public commitment together with your partners standing side by side. Also, make use of well connected and trusted brokers to help bring people together.

Establish a process of information exchange early on – possibly through the use of social media tools. Define early on the unacceptable conditions that will occur if your collaboration should fail. While you want to demonstrate that people are free to say "no", don't be afraid to deal with deception and misinformation. Don't say or doing anything that suggests you are taking exclusive ownership – for by definition in a collaboration you are all in charge.

4. Design Practices

One of the most important design notions I've come across is to recognize that how we are together today, determines how we will work together tomorrow. How we choose to be together is in essence the seed of the possibility we want to create. If we want a future which we have had an opportunity to shape and contribute to and which reflects our aspirations, then we need to bring together those who are willing share that vision in an honest, open, creative, and collaborative process.

In structuring that process, two commonly used design practices include, creating the right meeting architecture[xxxv] and making ample use of a meeting facilitator. With these we become more capable of structuring a positive, conversational process without structuring its outcomes. Some groups develop maps of their collaborative process as a good way to reduce the uncertainty about what collaboration will eventually produce[xxxvi]. Participants can then see a concrete path of action, even if they don't know how the whole thing will ultimately unfold. In addition, partners can develop a sense of co-ownership by engaging in joint agenda setting, which also helps steer conversations to be more inclusive of multiple perspectives.

And, once again, small things can have a big impact. One community leader I have worked with always brought home baked cookies to important meetings because she said it helped shift the conversation into a more informal and personal mode, more typical of a living room than a boardroom.

5. Governance Practices

Collaborative governance is the way in which we can bring the whole problem system into the room. We begin by establishing the purposes and principles by which we will agree to work together; then identifying the people we need to work with (as inclusively as possible); and then the meeting concepts, structures and processes that follow will allow us to achieve the purposes we want using the principles and people we bring together.

In any collaboration, where participation is voluntary, there is no such thing as being almost equal. Collaboration always involves some form of contingent cooperation, and consequently participants will always be alert to a sense of being peers or not. If not, don't expect them to stay around long or to be serious about their commitments. These peer-to-peer interactions, therefore, demand that decision-making be by consensus, meaning agreement by most, and acquiescence by the rest. Be sure and avoid voting and arbitrary decision making that create winners and losers, except possibly as failsafes in cases where decisions are needed and consensus can't be reached.

When you meet together, structure the majority of your time for learning rather than deciding. How else can you be sure you're able to capture the different perspectives of your stakeholders?

Focus on asking questions rather than providing answers. Questions always have more potential for transformation than answers. Answers are things you already know.

Collaboration can present a confusing web of accountabilities. You will be accountable to your own organization as well as to your partners'. On public issues you may also be required to be accountable to various publics. While your accountability to your partners will inevitably reflect your learning together, the onus will be on you, as the representative of your organization, to adequately convey the learning you've experienced while working with your partners. If results are what you want, then don't make accountability about compliance. Make it about learning[xxxvii]. You learn together, you act together, you assess and then you learn some more. Trust your partners to keep you honest and your home organization to set your boundaries.

6. Operational Practices

Working together inevitably means you've engaged together and defined an appropriate and fair sharing of risks, rewards, and workload. This is usually structured as some form of MOU or partnership agreement. But beyond this there are a number of practices which might be helpful at strengthening the collaborative relationship. These might include:

- creating single partnership teams;
- co-locating team members; and
- empowering day to day decision-making to the team members directly involved.

7. Learning Practices

MOU's and partnership agreements can also be seen as initial tools for partners to begin learning about each other. From a number of practitioners, I've heard that once contracts and MOUs are in place they can also be useful for measuring progress. Rarely, however, are they used to enforce compliance. Most times these contracts are just put on the shelf as the partners learn and evolve new ways of working together. If a collaboration needs to resort to a contract to enforce a certain behaviour, the collaboration is pretty much dead anyway.

Each participant in a collaboration brings with him or her unique organizing metaphors for making sense of the information regarding the problem or opportunity. Reconciling these different metaphors and developing a capacity to translate from one to another should be an early focus of collaborative activity. Partners need to evolve their own common language and shared metaphors. The effect of this 'clash of metaphors' can be seen in Caterpillar's 700% ROI for its externally-focused communities of practice vs. the 200% ROI for its internal communities. Since the outsiders think differently, bringing them in adds more to collective learning.

Initially learning can be catalyzed by initiating summary reporting on behalf of the partners and asking them to reflect on its implications and meaning. Subsequently, learning is usually accomplished by practices of 'learning-while-doing' that involve opportunities for double-loop learning[xxxviii]. Joint action among partners in this regard ceases to be simply a matter of implementation, but it becomes a means of reification, that tests participants' theoretical understanding as it is brought into the real world.

8. Information Dissemination Practices

Information practices serve three primary functions:

- satisfying the partnership needs for social learning;
- re-affirming partner trust and their continued willingness to cooperate; and
- the need to be accountable to multiple groups and authorities.

There are always two components to this information – one has to do with issue-related content and the other has to do with the partner relationship.
The provision of content information will not, of itself, be enough to address the need of partners to confirm whether their cooperation is being sufficiently reciprocated. For this people need more than codifiable information they also need tacit, endogenous feedback – the eyeball-to-eyeball type – that improves partners' ability to predict the behaviour of other participants. The previous example of the Peel School Board using dinner as a mechanism for information exchange is one that combines both the dissemination of issue content and endogenous feedback to promote social learning and mutual accountability.

Key Practice Areas for Mass Collaboration

The following represents seven key practice suggestions for ***mass collaboration*** that can improve the likelihood of success. They include:

1. Define minimal rules
When trying to maximize the number of contributors to a given collaborative endeavour, it's a good idea to minimize the number of entry barriers. Participation should be seen by potential users as essentially barrier free. For instance, Wikipedia now appears to be struggling because of a growing number of rules being imposed on potential contributors. The new rules have discouraged some 50,000 contributors in the first quarter of 2009 compared to the same period of 2008[xxxix].

The limitation on rules also has the effect of encouraging contributor ownership as potential contributors are free to define for themselves why and how they can contribute. Said researcher Felipe Ortega who conducted the recent research on Wikipedia, "The articles are very tightly controlled by others now, and that makes it hard to jump in and contribute."

Developers of online collaborative tools should minimize the 'hardwiring' of specialized functionalities into shared software[xl]. This maximizes the flexibility and adaptability within the data model and allows users to invent new functions as a product of their collective learning. Since both content and its representation online are likely to change as the partners learn from each other, this flexibility is important for ensuring the continued relevance of online knowledge exchange tools.

2. Prototyping
One of the maxims of *open source* is "release early and release often". It is presented as a means of encouraging stakeholders to become co-developers of ideas and tools with the originator. Rather than waiting to release an idea to the public until it is perfected, as is the traditional practice in organizations, the ***mass collaboration*** approach tries to release drafts as early as possible with the clear assumption that they are incomplete, inaccurate and 'buggy'. Stakeholders are then encouraged to respond with improvements and fixes.

The potential loss of efficiency due to work duplication by many stakeholders is almost never an issue in the ***mass collaboration*** world because of the customary presence of quick feedback mechanisms. Online stakeholders will see the problems, flag them for you and others, and quite likely identify ways to correct them. The practice of continued, quick update releases and new versions actually works to encourage stakeholders to remain engaged. In this environment, version tracking becomes essential to permit users to be able to choose which version they want to use – the current one or a more established one.

However, while relying on crowd sourcing can be very beneficial, there remains an important caveat: even if you don't come up with a good idea, you have to be able to know a good one when you see it in order to properly reward the contributor. Nothing will shut down collaboration faster than the perceived slight of using someone's contribution without their appropriate recognition.

3. Self-organization & Ownership Practices
It's very hard to originate a project in ***mass collaboration*** mode. Therefore to engage a nascent community requires having some form of 'straw dog' for them to begin playing with. Recall that **mass collaboration** begins as a response to the action of one person. That action must be sufficiently developed to represent a *plausible promise* of something better. So you need to be able to put something credible out there. But from there, the process of online collaboration begins to react to that promise as people now have a concrete focus for their attention. This idea of having a *plausible promise* is important to underscore because even when the path forward is not clear at times, the group should never lose sight of the possibility of where their work might one day go.

Over at Caterpillar Stuedemann says, "We don't have a set goal for number of communities, but we do have a goal for engagement. We try to increase and grow the amount of discussion and activity in the system because people can leave anytime. That's a very direct way of measuring whether people are satisfied. Currently, about 80 percent of participants are highly satisfied."[xli]

One should engage both users and developers in this process of community building, but it should be primarily about the overlapping interests of potential user partners. Avoid the siren calls to standardization and uniformity and try and create spaces for unique community and sub-community designs. For example, after a long standing conflict between Ontario's Oxford County and its numerous municipalities over the look and feel of its regional web portal, stakeholders opted for a single regional database of information operating in the background which municipalities can now draw upon and present in unique municipal formats that foster a sense of local identity and belonging.

The design of online collaborative networks should enable this sense of shared identity and belonging. As a "socially centered" culture evolves, the practice of sharing what you know and what you're experiencing becomes an integral part of how people relate to one another. The more formal aspects of knowledge sharing and data collection then sit on top of this social functionality. As NRCan did with the development of its wiki, the interactive social needs of employees drove the development of the wiki, creating ever new opportunities for intra-organizational sharing.

The sense of ownership this generates among users and stakeholders also encourages them to contribute to the shared resourcing of the initiative because users and stakeholders see it as directly beneficial. For the people at Caterpillar involved in those online communities, “it's about their day jobs," says Stuedemann. "It's not something in addition to.”[xlii] This is also how NRCan’s wiki could be developed with no budget! One might even consider that the provision of a budget sends entirely the wrong message -- that the problem belongs to someone else and not to the people you want to engage.

4. Awareness Practices
Build in as many ways as possible to listen to your stakeholders. Ask them about what works and what doesn’t and thank them for their contributions. Listening to stakeholders doesn’t necessarily mean relinquishing total control to them. If, however, you do not accept their contributions then be prepared to offer a good explanation as to why.

For example, the fans of the Ebbsfleet United Football Club in the UK[xliii] are involved online in all the major coaching decisions of the team, but it still remains the job of the coach to make all final decisions. This approach has led to a much improved performance and financial viability of the team. If the coach now goes against the crowd-sourced decisions of the fans, however, then he knows he has to have a good reason or risk the future contributions of the fans for improving the team.

The management of shared contexts among stakeholders, joint workflow, contingent cooperation and goal congruence requires practices which permit partners to maintain a high level of awareness of each other. Some of this can be done using social media tools like Facebook, wikis and Twitter. However, some of this will require face-to-face contact to allow partners to re-affirm their commitment and trustworthiness to each other. This could be accomplished through formal business meetings, the use of a trusted champion who moves among partners, or even shared social events. The more complex and interdependent the work together becomes, the more you and your partners will need to re-affirm your shared understandings and your appreciation of each other’s evolving organizational and environmental contexts to offset the risks of misunderstanding. More on this later.

5. Generosity Practices
The next best thing to having a good idea yourself is publicly recognizing the good ideas of your stakeholders and users. In fact, most *open source* advocates[xliv] would say that the latter is in fact better. Interestingly, in a world where collaboration is prominent, you will likely find that if you are completely honest and truthful about how much you owe to the work of others, then they and the world at-large will likely act as if you yourself were responsible for the innovation and are just trying to be modest[xlv].

Benjamin Zander, conductor of the Boston Philharmonic, puts this idea of generosity in another way, he says that as a leader “to be powerful, you must make other people powerful”[xlvi]. So always be sure to thank your contributors and never fail to profile them for their valued contributions.

6. Coordination Practices

The challenge in ***mass collaboration*** is not in trying to maintain control because you can't. The challenge in **mass collaboration** is coordination and that requires as many practices as possible to move information around so that everyone is potentially working from the same base of information.

This will sometimes require a variety of offline supports for such things as technical training but also the provision of face-to-face meetings, knowledge mobilizers or 'champions', and always frequent regular information updates. Facebook and Twitter are especially good at providing almost immediate feedback, but more thoughtful feedback may require the more delayed contributions of wikis or face-to-face meetings.

Be sure and build in mechanisms to measure ongoing progress and provide a regularized weekly or monthly dissemination of revisions. As **www.couchsurfing.com** illustrates, it is possible to build in statistics on users, their profiles, their activities and their online contributions. This can generate a real-time updates for any user or stakeholder on the progress of the online initiative. These measures could also include indications of senior management support, public demonstrations of support among partners, or periodic re-affirmations of the existence of fail-safes (what will occur if the collaboration fails).

7. Exchange Practices for Codifiable Knowledge
Collaboration is all about exchange and that exchange can be either around subject matter information or information that supports further partner collaboration. Successful ***mass collaboration*** ensures that there are repositories of both types of information. While subject matter repositories are straightforward, repositories for collaboration support information might include such information as contributor rules and behaviour policies, privacy policies, MOUs, joint business plans, reports, minutes, etc.

Bottom line, however, says Caterpillar's Coffey, "No tool is going to make people share something they don't want to share, but if people are willing to share, a good tool that supports the community of practice and knowledge sharing increases the velocity of that sharing in a worldwide organization."[xlvii]

Finding the Balance

The oft assumed conclusion in all of this is that the more people involved (the more your audience resembles an Internet audience) the more you need to apply the practices of mass collaboration AND that the fewer people involved the more you need to apply the practices of small group collaboration. However, the choice is rarely so cut and dried.

A better guideline might be to consider that the more you become interdependent, the greater the risk of fallout from misinterpretation and mistrust and therefore the more you need to attend to the tacit / relational elements of a collaborative exchange.

Nonetheless, there is no clear cut recipe to achieve this balance. The approach is very much trial and error. One might consider practices which use the networking capability of technology to scale up small group interactions. Alternatively, one could think of approaches which scale down large technology facilitated interactions through the introduction of various small group activities and practices. The one sure thing is that the more practices you know, the better off you'll be. And the more you collaborate, the better at it you'll be and the more enjoyable and "natural" it will become.

If creating a culture of sharing is the goal, then how much social media should we be using? How much face-to-face communication is enough??

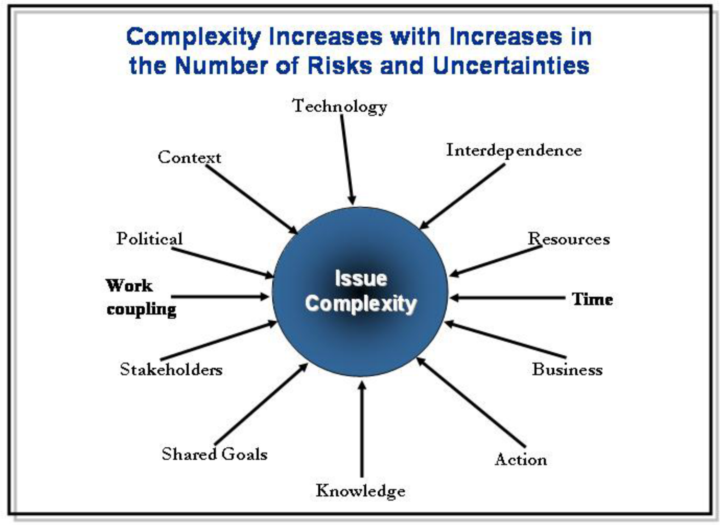

Figure 2: Complexity Factors

The answer to these questions lies in the degree to which collaborators need to be aware of each other to align their actions. Research shows that in any collaboration, partners consciously or unconsciously pay attention to the activities of each other and that the more complex and interdependent their work becomes, the more the partners must pay attention to each other. That complexity can arise from numerous sources that generate risk and uncertainty in the collaborative work (see Figure 2).

The increased complexity forces partners to pay greater attention to any changes to their shared understandings or common ground as well as to their evolving individual operating contexts (see below Figure 3[xlviii]).

Since people tend to act together **as if** they shared the same background understanding (whether or not they actually do), collaboration *inevitably* encourages conflict when that assumption ultimately proves false[xlix]. The very distributed nature of collaborative organizations tends to fracture the shared understanding of partners -- something which social media can only partially address. The tacit, trust-oriented dimensions of this mutual awareness require a more direct, face-to-face level of communication. The diagonal line in Figure 3 represents the increasing need for mutual awareness through both on- and off-line interactions.

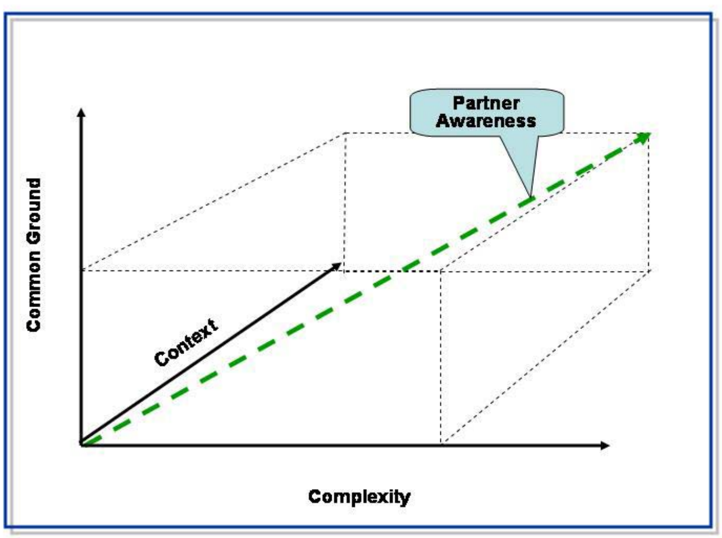

Figure 3: Partner Awareness Model

Putting up a website and simply dumping a lot of content into it, probably won't require much face-to-face interaction, but creating an online space where different disciplines need to interact to create new innovation, or developing the capacity to respond to an emerging new viral pathogen -- these types of online tools are likely to require much more personal contact to coordinate and align partner assumptions.

Even that icon of mass collaboration, Wikipedia, needs face-to-face communication at times, as one of my students pointed out to me. When a heated debate emerged over Wikipedia's definition of "fair trade", the various contributors eventually organized their own off-line workshop to try and resolve their differences together.

Conclusion

Collaboration offers neither a standard template to be adhered to nor a recipe to be followed. It is essentially a process of heuristic learning that is linked to the unique combinations of partners, issues and context. What works in one situation will not always work in another. This lack of transportability frustrates many, especially policy makers. What that leaves us with is the need to develop a collaboration toolbox of the skills, techniques, practices and mechanisms that are likely to make a given collaboration more successful than not. The more tools available to any practitioner, the more likely his or her success.

The Catch-22 in all of this is that building of a toolbox is itself the product of collaboration of sorts. We need exposure to a wide range of case experience to build our respective toolboxes. Therefore, we need more opportunities to share our stories – the good, the bad and the ugly – for each story will likely reveal some new tool or practice that we might apply to our next experience of collaboration.

"The real strength of [Caterpillar's] *Knowledge Network* is its bottom-up approach. People are using what they really need to use in a way they need to use it."[l] In the end, good collaborative practitioners are like connoisseurs able to distinguish the subtle flavours and differences in relationships so that they can apply just the right intervention at the right time, whether it be a mass collaboration tool or a small group practice.

Until that day, I would urge you to collect your stories and tools and begin experimenting with the partners you've developed. If you do so, you'll be well on your way to becoming a collaboration connoisseur yourself.

Finally, in a recent speech by Wayne Wouters, the Clerk of the Privy Council, to federal public servants the Clerk gave a clear 'green light' to experiment with both social media and the notion of collaboration in the Public Service.

> "I'm engaging your Deputies and have called on them (in the 2010-11 public service renewal action plan) to tell me what they've done to build strong employee and managers' networks, *develop collaborative work environments*, and *experiment with web 2.0 technology*."[li]

To an audience that is largely risk averse, this means it is no longer even necessary to ask forgiveness for experimenting with collaborative techniques. All public servants have been given what amounts to permission from the top to test out what mix of mass and small group collaboration that works best for them. It's a degree of freedom most public servants may be unused to, but as an old friend once told me, sometimes you just have to jump in and see where you land.

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