# The mechanics of eCollaboration and why it works- an empirical assessment of Australian SMEs

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## Abstract

This paper investigates factors conducive to the development of Small and Medium Enterprise (SME) innovation in the context of the adoption and use of electronic collaboration technologies (eCollaboration), to enhance business growth, competitiveness and future economic viability. A change from competition to collaboration is an imperative for many firms today. The current economic climate is one reason why firms should work together, but more driving than this are the ubiquitous effects of globalisation. Australian firms are facing fierce competition from many overseas nations which have the advantage of cost effective labour. Businesses must transcend from attitudes of competing to attitudes which support collaboration but how? This paper answers this question by presenting research which illustrates how SMEs can achieve successful collaboration utilising electronic tools to support and facilitate their cooperation. Qualitative data are acquired through a number of focus groups from both successful and unsuccessful collaborators in a variety of industries in the Southern Sydney Region. Analysis of these data reveal two major factors. These factors are unpacked and explored, and coupled together to provide a model of eCollaboration. They are introduced below: 1) What is needed to make collaboration and eCollaboration work? Five elements are discovered which either inhibit or enable collaboration (trust, reputation, culture, power, ownership). Of these, trust is found to be of greatest importance to the successful development of collaborative relationships. 2) What are the considerations (enablers and inhibitors) of successful collaboration and eCollaboration? There are many elements which comprise this factor. However, essential elements such as a focus on core business and limited intervention are among the more critical.

## Keywords

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# WHY IT WORKS – AN EMPIRICAL
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KEY WORDS: Collaboration, SME, eCollaboration, Competition

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# Introduction

It is becoming more and more important for smaller organisations with similar or complementary capabilities to collaborate in order to survive in today's increasingly competitive global market place (Cheng, Love et al. 2006; Lawson, Hol et al. 2007). Australian small to medium sized enterprises (SMEs), for example, are losing work to international competitors. This comes not only due to price competition, but also because of the inability of local firms to compete on delivery (Ginige 2004). Some of these firms, who work a traditional 8-10 hour day, find themselves competing against labour in Asian countries which are able to adopt a 24x7 work practice. Through collaboration some firms, toolmakers for example (Ginige 2004; Hol and Lawson 2004), have been able to combine their resources, especially labour, to accumulate 30 hour days (3x 10 hour shifts) and therefore win back some of their lost market share (Lawson, Alcock et al. 2002; Ginige 2004; Ginige 2006).

This type of collaboration is only possible through the use of Information and Communication Technologies (ICT). ICT allows individual SMEs to efficiently and conveniently communicate and share information related to the job at hand (Hol and Ginige 2004). In addition to enhanced and sustainable competitive advantage, the use of ICT in collaboration – or eCollaboration – provides a host of benefits. Competing in today's global economy means businesses need to embrace flexibility and innovation as they never have before (Narula 2004; Hol, Ginige et al. 2006). As a result of increased knowledge embedded in product content, the interchange of formerly disparate technologies, and the sudden ubiquity of electronic commerce, businesses must embrace a broader range of technologies at all levels. For example, manufacturing, distributing and marketing (Burgess and Cooper 1998). There is a need for firms to expand beyond traditional market boundaries, and a need to adopt simultaneous strategies for offence and defence as the pressures of globalisation encroach upon typical business domains (Mustaffa and Beaumont 2004). A proven means of acquiring flexibility and innovation is through collaboration. Collaboration provides synergies, economies of scale, market expansion, market power, and supply chain advantages. This means that businesses no longer need to be expert in every element of their business. Instead, they can partner with firms which are complementary to their needs. In particular, eCollaboration provides the benefits of traditional collaboration, but adds additional benefits such as: integrated systems, enhanced knowledge transfer and retention, and increased redundancy of labour and capital (Lawson, Hol et al. 2007). Further, with the adoption of eTechologies (to facilitate collaboration), firms are able to transcend the boundaries of space and time, allowing asynchronous communication and other virtual benefits (Burgess and Sargent 2007).

The problem, however, is that a majority of SMEs are reluctant and/or incapable of adopting collaborative practices (Burgess and Sargent 2007; Hol and Ginige 2008). Enright and Roberts (2003) highlight the comparative weakness of Australian SMEs to embrace collaboration. They point to particular areas of failure including: business leadership, business networks and market intelligence systems. In fact, the literature presents a plethora of reasons for failure of collaboration: ignorance of the benefits (Simpson and Docherty 2004); fear of the technology or a shortage of skills (Simpson and Docherty 2004); Owners negative attitude (Fillis, Johannson et al. 2004); financial and resource constraints (Taylor and Murphy 2004); fears based on security and trust (Taylor and Murphy 2004; Lawson, Hol et al. 2007). Trust in particular, has been identified as being of paramount importance and a

significant factor in successful eCollaboration (Lawson, Hol et al. 2007). This is especially the case when trying to accomplish rapid and high level interaction amongst people who have often never met, let alone had the luxury of a long and established work relationship (Al-Hakim, Bali et al. 2008).

This paper reports the results of a study of a number of SMEs, located in Sydney's southern suburbs, which are operating at various levels of eCollaboration experience, ranging from those who have not delved into collaborative business relationships through to those who have a number of successful collaborations under their belt. The aim of the paper is to discover and understand the mechanisms that enable or inhibit successful SME engagement in eCollaboration.

## Research Method

A qualitative approach was used for data collection in this study. Three methods were employed throughout the research process: focus groups; semi-structured interviews; and observations.

### Focus Groups

Focus groups were conducted with representatives from three different industry clusters – a defence supply network; an information technology cluster; and a marine association. In total the focus groups involved more than 70 participants. Each encounter was facilitated by an experienced moderator and a scribe. The size of each group was kept between eight and ten participants to encourage equal participation (Krueger 1998). Group consensus was not sought during the session, instead each participant was encouraged to provide their opinion and experiences (Morgan 1997). The goal of each focus group was to allow candid discussion around a range of pre-organised topics. These topics were presented in the form of structured questions, presented in Figure 1.

Figure 1. Focus Group Questions
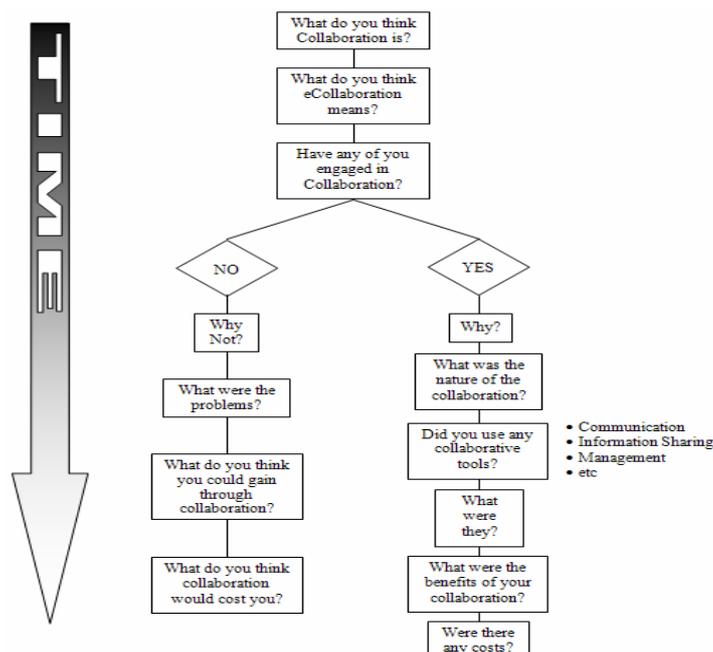
## Semi-Structured Interviews
Multiple interviews were conducted in person, ranging from brief informal discussions averaging around five-minutes in duration at cluster events, to planned 30 minute in-depth interviews. These interviews followed a semi-structured interview protocol that allowed probing on issues central to the interviewee's experience and background in eCollaboration. Semi-structured interviews can provide the researcher with a deeper understanding of the phenomenon under study (Rowan and Huston 1997).

## Observations
Notes were taken at two regional cluster meetings. This research method focused on the interaction between cluster members and how that dynamic contributed to or inhibited successful collaboration during the session.

The method of recruiting participants for the study was based on purposive sampling taking an opportunistic focus (Patton 1990). This allowed for flexibility in directing the research to interesting topics that arose during the process. This method of recruitment was also appropriate for researching a wide range of opinions on eCollaboration rather than limiting collection to one subset of the conventional collaboration framework (e.g. just businesses). Individuals and groups with some experience in collaborative projects were engaged to elicit their voluntary participation in the research in an endeavour to uncover greater depth in an appropriate topic.

Opportunities were also sought to speak with businesses, cluster facilitators and others involved in collaboration and to observe clusters and collaborative projects in action. Parties were generally very willing to cooperate and assist the research in any way they could.

Data were analysed using NVivo and adopting methods of constant comparison and theoretical saturation espoused by Glaser and Strauss (1967). The object of analysis is to deconstruct blocks of data through fragmentation and then have them coalesce into collections of categories which relate conceptually and theoretically, and which make assumptions about the phenomenon being studied (Jones 2005). This is a process of "decontextualizing and recontextualizing" (Richards 2002, 200). The emerging sets of data are thematically abstract and provide objective insights and meaning relevant to the research question.

The qualitative method adopted here provides rich insight and in-depth information on the topic. However, the nature of the exploratory qualitative research presupposes that results cannot be generalised for a population (Onwuegbuzie and Leech 2007; Hanson 2008). Reductive assumptions would have to be made to do this that would sacrifice validity of the data. Furthermore, the opportunistic approach to recruiting participants means that no specific or representative sample is taken. This suggests that results can only be compared using subjective judgements of the context in which respondents provided answers.

The value of the diverse, in-depth information collected by these methods on an exploratory basis, justifies these methodological limitations. Further research will utilise supporting research methods to establish more complex relationships between the concepts discovered by this initial research.

# Findings

The overall findings of the study are illustrated in Figure 2. This figure depicts four themes that were discovered after analysing the data from the focus groups, interviews and observations. These themes are discussed below.

Figure 2. An NVivo Analysis of eCollaboration
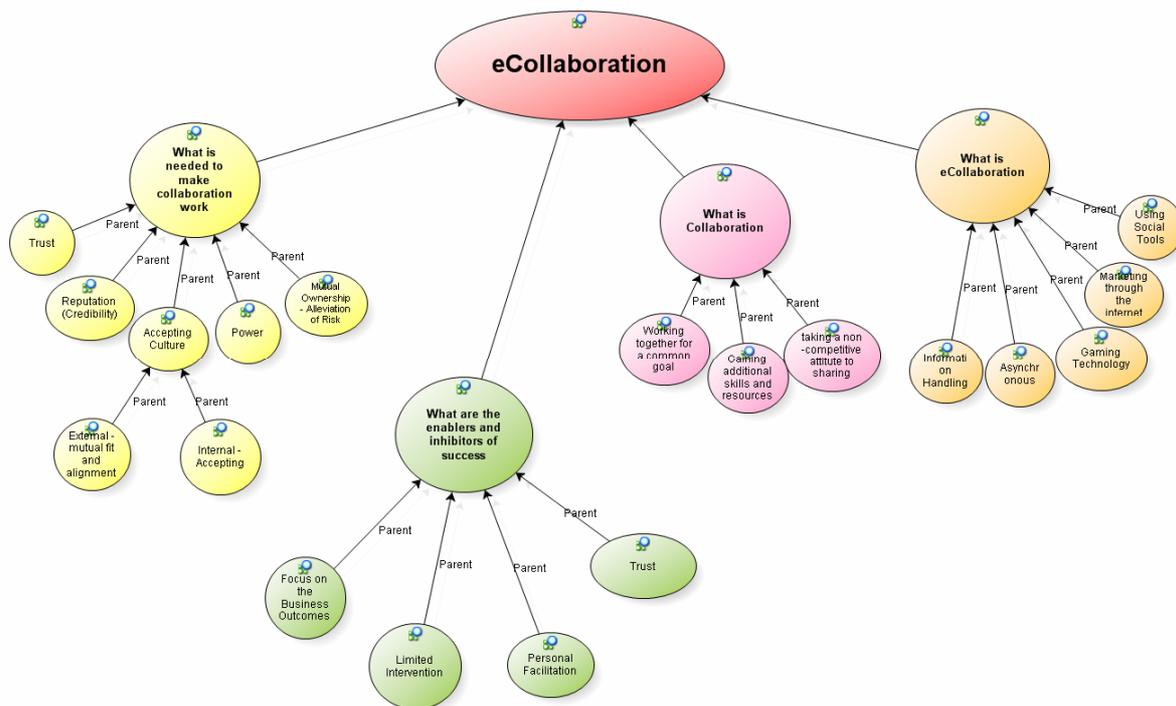


## <u>What is Collaboration?</u>

The participants' provided a practical insight into what collaboration meant to them. This was relatively consistent with the view of other scholars: "joint effort toward a group goal" (de Vreede, Briggs et al. 2009, 122); "staying connected to the people, documents, and information users need to make well-informed decisions and get their job done" (Stalters and Julien 2008, 63); "a process of decision making among interdependent parties; it involves joint ownership of decisions and collective responsibility for outcomes" (Liedtka 1996, 21). The research found three elements central to the understanding these participants held for collaboration:

(1) <u>Working together for a common goal</u>. The element of mutual (or equal) benefit was important in this principle. If a firm was going to benefit to a greater degree in the long term, then the feeling was that the collaboration was not sustainable: "There must be mutual benefits overall – sometimes it's going to benefit one party more than another but that isn't sustainable in the long run" (participant from the defence network). This finding implies that even if benefits are reaped by all participants, there is a need for equal proportional distribution for long term sustainability.

(2) <u>Gaining additional skills or resources</u>. It is not sufficient to collaborate with someone who has nothing additional to offer. There is a need for synergy where each party is adding something the other cannot: "Being able to do a job that we couldn't do ourselves" (participant from the IT cluster).

(3) <u>Taking a non-competitive attitude to sharing</u>. This found was the most difficult principle for firms to adopt. Firms grow in an environment of competition – stemming from survival of the fittest. However, it is acknowledged that in order to survive and embrace a collaborative framework firms must take a new, non-competitive stance: "there needs to be a willingness to share information as opposed to competitiveness" (participant from the defence network).

## What is eCollaboration?

There is a large but subtle difference between collaboration and eCollaboration. The difference being that the latter engages technology to facilitate and enhance the processes of collaboration. Schooler defines eCollaboration as "the computer mediated process of two or more (dislocated) people working together on a common purpose or goal, where the participants are committed and inter-dependent and work in a common context using shared resources, supported by (web-based) electronic tools" (1996, 210).

Our participants basically agreed with this variation, however, they found that eCollaboration contained five elements.

(1) <u>Information Handling</u>. The participants found that the electronic side of eCollaboration greatly assisted in the handling of information, especially when quantities were copious. "Large amounts of information that are available fast and can be broken down [and shared]" (participant from the defence network).

(2) <u>Assynchronicity</u>. Great benefits were realised through the ability of collaborators to communicate and share information while not needing to share the same time or place.

(3) <u>Gaming Technology</u>. This point was not shared by all participants. However, a few saw an opportunity to further enhance collaboration, in the electronic sphere, by using game/avatar technologies where collaboration could occur in a truly virtual environment. This, it was expressed, could accelerate trust relationships.

(4) <u>Internet Marketing</u>. Additional benefits were seen with eCollaboration through the initialisation stages with the use of shared internet space. "The networking required to begin collaboration can start with something as simple as getting your logo on someone else's website and vice versa" (participant from the marine association). The internet could also provide collaborators a 'one-stop-shop' where clients could go to deal with the team in one location "A front website is used to give quotes and it is then diverted to one or a number of businesses behind the front depending on the details of the quote" (participant from the defence network).

(5) <u>Use of Social Tools</u>. Common social networking tools like chat, Skype, email, SMS, Google Docs, etc are being used to enhance the collaborative abilities of individuals. The

use of these tools alone indicate the transition of many collaborators into the domain of eCollaboration.


## What is needed to make collaboration work?

There are many factors individuals and firms require in order to commit to a collaborative project. Fundamental among them is trust. In addition, factors such as an accepting culture and reputation are also important.

(1) <u>Trust</u>. In collaborative relationships trust is based on a number of conditions. First there needs to be a developed and strong personal relationship between key people within the collaborative venture. Secondly, the key people need to share strong personal ethics. Thirdly, all parties need to have a shared concern for the well-being and success of their partners in the collaboration. Fourthly, there needs to be a strong emphasis placed upon organisational ethics and responsibility. Lastly, there needs to be an ability for all partners to rely on their team for the delivery of high quality products and services on time, in budget and according to specifications.

Trust needs to be built up over a period of time and once developed can facilitate a stable collaboration into the future.

(2) <u>Reputation (Credibility)</u>. The reputation a firm holds works in a number of ways to assist collaboration. Firstly firms can trade reputation (or credibility) for skills. This is often the case for larger firms who may decide to collaborate with a smaller firm which may have required expertise: "Organisation A wishes to 'break-in' to an area of commercial operation and seeks collaboration with Organisation B which has a successful track record in that area of operations while Organisation B wishes to gain access to certain expertise that Organisation A possesses" (participant from the defence network). Reputation can also work to prevent potentially successful collaborations from emerging: "Customers will want to see that collaborative partners within any bid have a track record of successful collaboration, well integrated management systems for collaborative activity and good prospects for a continued successful organisational partnership. Customers will be cautious about newly hatched collaborative ventures which have not yet had to bear the test of time" (participant from the IT cluster).

(3) <u>Accepting Culture</u>. The culture of firms wishing to collaborate must also be supportive of the costs and risks involved. There is also a learning curve – a steep one when considering eCollaboration. Firms must be willing to commit and be aware of all of the pitfalls before beginning. As such, companies face two levels of hurdle. Internally, the firm's leadership must be willing to accept the tradeoffs, and externally, there must be a good fit between organisational cultures. "A good fit exists between potential collaborators in organisational culture, leadership and management styles" (participant from the marine association).

(4) <u>Power</u>. Collaborative partnerships must be democratically structured so that when issues arise they will be treated with equal input from all parties. A situation which has firm A dictating to firm B is not a collaboration, rather it is merely a supply chain. "Power is one party dictating how the partnership will operate. It must be on mutual terms – Democracy rather than dictatorship" (participant from the IT cluster).

(5) <u>Mutual Ownership – Alleviation of Risk</u>. Similar to 'Power' a collaborative relationship must provide an overall reduction in risk. This means that all partners must share the risk equally. Even a proportional share of risk which is commensurate with cost and return will fail in the long term as all parties are ultimately held responsible, and are at risk of prejudicing their individual reputations.

## **What are the enablers and inhibitors of success?**

Four recurring factors were uncovered which participants in the study believed contribute to the success of collaboration, or if not given due consideration will inhibit SMEs in successfully collaborating. Collaborative projects must focus on business outcomes, must not be driven by external objectives, must have a personal relationship element and must foster trust.

(1) <u>Focus on the Business Outcomes</u>. All businesses are essentially concerned with their core business objectives and their place in the market. Firms considering collaboration must be able to directly see the benefits outweighing costs for undertaking such a project or their involvement is not sustainable. As many SMEs have a tactical, day-to-day business focus with less emphasis on long term strategic objectives, the decision for collaboration cannot be based on an abstract proposition for business development. Benefits must be tangible and relevant to the core business of members. This is especially the case with eCollaboration where implementing technology may involve structural changes and a significant commitment of firm resources.

(2) <u>Limited Intervention</u>. Particularly evident in our interviews with cluster facilitators, success was attributed to a 'hands-off' approach to collaboration. Collaboration will occur naturally if it is beneficial for the business. A major enabler for business collaboration is facilitation that is primarily concerned with bringing SMEs together and providing the framework for business networking. Third parties that attempt to force collaboration and drive cluster goals independent of members, will inhibit collaboration by breaking down relationships and limiting the involvement and commitment from members.

(3) <u>Personal Facilitation</u>. The development of electronic communication tools that can assist collaboration enhances the opportunities for business networking that enables effective collaborative partnerships. eCollaboration addresses the barriers of distance and time that may have traditionally been inhibitors. However, a physical presence is still imperative in forming productive relationships and overcoming barriers to collaboration. Businesses must still maintain personal contact to form and maintain relationships. ICT tools must be seen as facilitators which augment successful collaboration rather than being relied upon to ensure successful collaboration. The changes involved in keeping up-to-date with technology inhibits collaborative relationships if this technology is seen as an end in itself rather than just a means of making collaborative communication easier.

(4) <u>Trust</u>. There are many factors individuals and firms require in order to commit to a collaborative project. Fundamental among them is trust. Trust is established in the beginning and is best facilitated through personal, face-to-face meetings between stakeholders. The organisation of collaborative meetings and functions which encourage the development of relationships is important for maximising the potential for collaboration. The issues of mutual ownership in projects and democracy in decision-

making are central to successful collaboration and these elements are streamlined by the trust that develops over time. Trust between stakeholders and trust of technological and organisational systems is essential for the effective use of technology to support collaboration. In addition, factors such as an accepting culture and reputation are also important.

# Discussion

Of the businesses interviewed those who had experience with collaboration were successful and were hoping to continue current relationships or embark upon new collaborations when opportunities arise. Those who hadn't ventured into collaboration were mainly under the impression that there was greater strength in 'going it' alone; that they didn't have a need to involve others. The differences between these two categories of SME was *knowledge* and *exposure*. These false assumptions of solitary power came down to an agreed ignorance, and after sharing stories during and after the focus groups most businesses were keen to develop their networking skills and were hoping to seek greater opportunities for future collaboration.

The single most important message for academics, scholars, consultants, and government agencies, and generally those who are able to assist firms develop their networking and collaboration skills is the need to assist firms with functions and networking events which work to facilitate collaboration. During this research project the authors spent time at many of these events, and it was amazing to see the way successful networkers were able to build trust and support and through a methodical approach inveigle themselves into mutually beneficial business opportunities. The problem is not all firms see these opportunities, attend these events or are seasoned networkers. The burden therefore lies on those aforementioned groups to create opportunities which maximise exposure and success for all.

# Conclusion

eCollaboration contributes greatly to the success of SMEs today. However, it is a function of business that does not come easily in most cases. In the first instance business leaders need to attend functions which facilitate networking. At these events managers need to create and build trusting relationships. They need to create synergies with like-minded firms with whom they have a commonality of purpose and principles. Managers need to be aware of the costs inherent in pursuing collaborative relationships and develop a 'yes' culture which can adapt to, and embrace, collaboration. Given sufficient time and opportunity, relationships will develop and during this time partners must manage their collaboration carefully to maintain trust and equity and to complete tasks as agreed.

Finally, ICT tools should be embraced where possible. Firms should start at the simple end of the spectrum, using tools for social networking in the first instance. Use of these tools will increase efficiencies and will yield higher returns through increased data management and better use of time and location.

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