Inter-organizational Excellence: 
A TQM Approach†

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Abstract

This paper concerns management of inter-organization collaboration. The author maintains that an advanced TQM approach helps to achieve inter-organizational excellence. The paper illustrates main themes of the current trends of inter-organizational collaboration and explores key issues raised in running the collaboration. While discussing the issues, the paper develops a theoretical framework on advancement of TQM concepts to achieve the best performance and results in inter-organizational context. A case study of Australian CRC Program is presented to illustrate how inter-organizational collaboration is coordinated and operates. The paper concludes with a proposal of standards for inter-organizational excellence through TQM, based upon the framework.

Key Words & Phrases: TQM, Inter-organizational Collaboration, Co-operative Research Centre

1.0 Introduction

In the 21st century, few organizations can rely on their internal strengths only to gain a competitive advantage in national and/or international markets. Inter-organizational collaborations, alliances, joint ventures, partnering and the like are gaining unprecedented momentum. Research is needed to replenish and develop new theory and knowledge base to help to sustain successful inter-organizational collaborations. This paper focuses on how to achieve inter-organizational excellence, that is, the best performance and best results of the collaboration. This author maintains that a quality approach leads to inter-organizational excellence.

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2.0 Inter-Organizational Collaboration: Current Practices

News Flash

Strategic alliances across organizations and industry have flourished more than ever. Here are some most recent news abstracts from the Australian press on alliances between big name companies:

• The Australian News Corporation LTD has forged an Internet and televisions joint venture with Singapore Telecom (The Australian, March 1st 2000, p23).
• Westpac Banking Corp and F2, the Fairfax Interactive Network, announced a three-year multi-million dollar online alliance (Nine MSN Business News, February 17th 2000).
• The ANZ Bank has announced it will join a strategic alliance with Free Net Corporation (Perth 6RN Radio News, February 1st 2000).

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Driving Forces

An organization’s resources are limited in one way or another. Forming an alliance becomes one of the most popular strategies available to an organization to share risks and capabilities with partners having the same need. The driving forces behind building an alliance may vary in different situations but the most common ones are:

• To gain a competitive advantage or market share in national and/or global markets;
• To minimize the risks, costs and time to develop a new product or technology;
• To prevent from competition loss;
• To tackle complexities of integration of technologies involving ever-wider range of expertise;
• To meet changing demands of customers and markets; and
• To gain core competencies from competitors (Sierra, 1994, Dussauge and Garette, 1999).

Overview of Australian CRC Program

Australian Co-operative Research Centre (CRC) Program is said to have reduced impediments to interaction between public sector research organizations and industry and other research users (Moore, 1998). CRCs have set up a formal co-operative research and research training model and brought together a number of participants from a wide range of organizations. This sub-section presents key features of CRCs.

The Australian Government launched the CRC Program in 1990. The overall objective of the CRC is said to strengthen long-term collaboration between research organizations, and between these organizations and the users of the research, in order to obtain better value from Australia’s investment in R & D (Mercer and Stocker, 1998). The first CRC was established in Australia in 1991. With the inclusion of the new Centres announced in April 1999, there are 65 CRCs across Australia today. All Centres fit within the six targeted industry sectors - manufacturing technology, information and communications technology, mining and energy, agricultural and rural-based manufacturing, environment, and medical science and technology.

CRCs are established through a Centre Agreement, a contract among core participants, and a Commonwealth Agreement, a contract between the participants and the Commonwealth. Of the 65 CRCs, the majority of them are unincorporated joint ventures and the remainder are incorporated companies. Those that have been incorporated are companies limited by guarantee and without share capital. The management structure of CRCs is mostly like that of companies, governed by a Board with an independent chair and led by a Director reporting to the Board. Most CRCs have advisory committees with oversight of different aspects of CRC activities – research, education and training, interaction with users, commercialization or administration. Some CRCs have their own incorporated companies that provide the Centres with administrative, commercial, financial and legal operations.

CRCs’ core participants are universities, public sector organizations and the users of new knowledge, from the private and public sector. Current participants include 250 companies, 35 universities, 61 State government departments and agencies, 24 CSIRO Divisions, 8 other Commonwealth research agencies, 8 rural research corporations, and numerous other organizations (Mercer and Stocker, 1998).

As shown above, Australian CRCs are typical of inter-organizational joint ventures and companies, particularly engaged in R & D collaboration. An in-depth study and discussion of their operation and performance are presented in the following sections.
3.0 TQM in Inter-organizational Collaborations

A Total Quality approach embodies vital principles that help to achieve the best practice within organizations. The key questions are

- Do TQM principles apply to inter-organizational collaboration as well?
- If yes, how to use TQM to achieve the best practice in an inter-organizational context?

The remainder of the paper attempts to answer the questions.

Vital Principles of TQM

1. Customers include investors/employees, suppliers and all the stakeholders.
2. Meeting and exceeding customer needs is a clearly stated aim and the highest priority.
3. Leadership of TQM stems from the top management and enlists individual and team commitment throughout.
4. The highest levels of integrity, honesty and trust and openness are essential ingredients of TQM.
5. Mutual respect, mutual trust and mutual benefit of all stakeholders are important factors within the development of any Total Quality organization.
6. Total Quality offers each individual the opportunity to participate, contribute and develop a sense of ownership.
7. TQM involves continuous and measurable improvement at all levels of an organization.
8. TQM requires consistent and precise performance to high standards in all areas of the organization.
9. An aim of TQM is to better use resources, to achieve effectiveness and efficiency (Hellard, 1995).

Developing A Theoretical Framework for Inter-organizational Excellence

As shown above, the vital principles of TQM have addressed some key factors that determine the success of inter-organizational collaboration. As does a TQM organization, achieving inter-organizational excellence relies primarily on customer satisfaction, strong commitment and leadership, effective communication, commonly shared total quality and corporate culture. In inter-organizational context, however, individuals and participating organizations require additional performance standards pertaining to their effectiveness and efficiencies in collaboration with other organizations. Managers need to take initiatives to develop additional TQM standards for the best practice in inter-organizational context. Obviously, such standards should address the following pivotal issues confronting inter-organizational collaboration.

Pivotal Issues

- Challenges and risks of inter-organizational collaboration;
- Appropriate management and organizational structures for the collaboration;
- Cost-effectiveness and productivity of the collaboration;
- Transferring and sharing core competencies between participating organizations;
- Sharing power and empowering amongst participating organizations; and
- Effective networking and communications

Addressing each of these issues has posed a formidable task in front of managers of various kinds of inter-organizational collaboration. The following discussion explores each of these issues and concludes with solutions based upon a TQM approach that help to achieve inter-organizational excellence in collaboration.

Issue 1: Challenges & Risks

While inter-organizational partnering or alliances in whatever form may entail optimization of organizational resources and attainment of competitive advantages of parties involved, managers are surely confronting management complexities of making cooperation work. The biggest challenges are conflict in different cultures and technological and commercial risks involved particularly in collaborative R & D.

Culture is about shared assumption, beliefs, values and norms. Each organization has its own culture developed from its own particular experience, its own role and the way its owners or managers get things done (Hellard, 1995). It has been well known that there exists a real difference between the culture of universities and that of industry/business, and that cultural change is developing both in the higher education and the industry/business sectors. The difference in culture generates problems and obstructs the development of university-industry...
cooperation in many cases (BHERT, 1992). Industry is seen to be profit-driven and profit-oriented whereas universities are a knowledge-based industry, seeking fundamental understanding of things. The different cultures lead to lack of mutual understanding between universities and industry in their cooperation. Intellectual property (IP) is a good case in point. From an industry perspective, universities usually have unrealistic expectation for commercial returns from IP because they do not fully appreciate the cost of commercialization of a research result among other issues. On the other hand, from a university perspective, industry is generally lacking in appreciation of the long-term value of investment in technology and research (BHERT, 1992, Turpin et al, 1996). Managing the cultural difference and cultural changes is one of high agenda items that challenge inter-organizational managers such as those of CRCs.

Compounded on the challenge are particular risks facing inter-organizational R & D, such as technological and commercial risks. In the case of CRCs, research projects usually involve new technologies and innovative development, which creates a high level of risks for every organization involved. However, it is the motivation of sharing and minimizing the risks that entail partnering and alliances in R & D.

Dealing with these challenges and risks by resorting to a TQM approach means that the highest levels of commitment, integrity, honesty, trust and openness are required of managers of inter-organizational entities at the top and of the individuals and teams throughout the joint entities. Conflict caused by cultural differences and cultural changes could be eased if every participant in collaboration could maintain the highest levels of mutual understanding, respect and trust and maintain a flexible and realistic attitude towards the differences. The continuous support of government, universities and industry for Australian CRC Program after its nine years’ operation indicates that the cultural differences and changes can be managed and that technological and commercial risks involved in collaborative R & D can be successfully dealt with in CRC context (Couchman and Fulop, 2000). Although there is much room for improvement, the following set of evaluation criteria used by CRCs helps to sustain inter-organizational cooperative arrangements. The relevant criteria include,

- The degree to which the CRC has built links between the participating research groups and organizations, and integrated and enhanced their activities in research and education;
- The commitment shown by participants to the CRC, and to the provision of adequate resources for it;
- The degree to which key user groups, including industry, have been integrated into the CRC as core participants, and have made substantial commitments of resources (DIST, 1998).

The evaluation criteria emphasize participants’ commitment of resources and participation in decision making. While these elements are definitely important to successful collaboration, achieving inter-organizational excellence requires more than tangible resources as such. It needs the highest levels of intangible commitment of trust, respect, openness, and efforts to understand the needs and values of collaborative organizations. They are the foundation for success in dealing with the challenges and risks of inter-organizational management.

Issue 2: Management and Organizational Structures

There are a range of management and organizational structures from which inter-organizational collaboration can choose. As shown in this paper, Australian CRCs take the form of joint ventures and companies for their inter-organizational partnerships. The entirely new entity is financed by government funding, covering about 30 percent of a CRC budget, and by participants’ in kind and cash contribution to the CRC. The Board and the Executive Committee of CRC comprise representatives of core participant stakeholders, which direct and are responsible for every aspect of CRC operation. As a separate legal entity, a CRC maintains its own identity and management structure. It is claimed that one of the main strengths of CRCs is the seamless integration between all participants from every organization and their comprehensive communications network and system between projects and across participants (CRC Annual Reports, 1997-1998).

If such a joint venture or company is able to contribute to the seamless integration, it should be one of the options for running inter-
organizational collaboration. Nevertheless, there is no single recipe for how to structure and manage inter-organizational collaboration. There are other popular management and organizational structures, such as, functional agreements, project-based pacts, consortia and networks, depending on the goals and objectives of collaboration.

Issue 3: Cost-Effectiveness and Productivity

Better use of resources and higher performance in productivity are no doubt central issues to tackle for all organizations. Like that of a TQM organization, the aim of building inter-organizational excellence is to achieve cost-effectiveness and high productivity, in other words, the best results. In an inter-organization domain, the best results come primarily from the quality of inter-organizational partnerships and collaboration. This quality embraces the highest standards of performance and support from every participating organization and the highest standards of personal and organizational commitment to collaboration. In addition, as does intra-organizational collaboration, inter-organizational collaboration needs managerial skills to optimize resources and maximize productivity. (A further discussion of intra-organizational management is beyond the scope of this paper.)

Issue 4: Transferring and Sharing Core Competencies

According to Lei, core competencies comprise a company’s specific and special knowledge, skills and capabilities to stand out amongst competitors. They are intangible and an integrated part of a company’s intellectual capital and untradeable asset rather than legally-protected intellectual property (Lei, 1997: 211). As shown in the previous section, one of the drivers for partnerships is to gain core competencies from competitors. Inter-organizational collaboration provides an opportunity for participating organizations to acquire and absorb the core competencies of each other. This opportunity is particularly valuable for innovative R & D as innovation is getting more inter-disciplinary and trans-disciplinary in nature. However, transferring and sharing core competencies will not just happen – participants have to work, and work hard, to overcome barriers to the transferring and sharing. The greatest barrier is competitive concerns over technological leakage. This is an unavoidable dilemma facing inter-organizational collaborators and makes it difficult for organizations to collaborate openly and effectively. The possible solution to overcome the barrier depends on the highest levels of trust, corporate ethics and integrity. This is particularly true when participants are normally competitors. Moreover, transferring and sharing core competencies helps to achieve inter-organizational excellence. It is reported that many Australian CRCs benefit extensively from their inter-organizational collaboration in R & D through the integration of complementary expertise across participants (CRC Annual Reports, 1997-1998).

Issue 5: Sharing Power and Empowering

It is normal that a decision-making body of inter-organizational collaboration is proportionately represented by participating organizations in terms of equity holdings in the collaborative entity. In the case of Australian CRCs, the Board comprises representatives of the Centre and major participant stakeholders, as well as interested external groups. The Management (or called “Executive”) Committee comprises representatives of Centre participants according to their equity in the Centre. While each participating group is allowed to retain its autonomy, a collaborative team approach is strongly encouraged within the Centre (CRC Annual Reports, 1997-1998). It should be noted that due to difference in equity holdings, power disparity occurs and is likely to affect performance of inter-organizational collaboration, although division of power and responsibility has been clearly defined in legally-binding agreements between participants. This writer holds that a TQM approach helps to solve the problem through offering each individual and/or organization an opportunity to participate, contribute and develop a sense of ownership in collaboration.

Issue 6: Effective Networking and Communications

Networking and communications play a key role particularly in coordinating and liaising inter-organizational collaboration. Achieving effective networking and communications amongst participants has been regarded as a priority by most Australian CRCs. Many CRCs operate at several sites, including all capital cities and
about 40 locations all around Australia. For instance, CRC for Satellite Systems has 12 participating organizations located at 18 sites across the country. Many CRCs have devised communication strategies to sustain strong and durable communications among programs, participants and sites through developing IT networks. It is reported that close interactions between CRC participants and collaborators within programs are ensured by regular meetings in person and via multi-node teleconferences and video-conferencing (CRC Annual Reports, 1997-1998).

Like culture and commitment, communications are soft outcomes of TQM and the foundation for inter-organizational excellence. Effective networking and communications help to eliminate barriers to collaboration. Therefore, continuous improvement of communications helps to achieve business excellence in inter-organizational context.

### 4.0 Standards for Inter-organizational Excellence

The previous section discusses the extension of TQM concepts to inter-organizational collaboration while addressing major issues affecting the collaboration. Based upon that, this section proposes a series of standards to help participants in collaboration to achieve the best performance (results) in inter-organizational context. The proposed standards include,

- Highest levels of individual and organizational commitment to collaborative arrangements
- Highest levels of mutual trust, understanding, respect and openness
- Highest levels of corporate ethics and integrity
- Proper management and organizational structures that ensure seamless integration between participants
- Highest levels of mutual benefit
- Highest levels of performance and productivity of every participant
- Actively pursuing and sharing core competencies
- Willingness to share power and empower amongst participants
- Effective networking and continuous improvement of communications

### 5.0 In Conclusion

As illustrated in this paper, TQM embodies the fundamental principles for managing collaborative partnerships and can be developed and extended to help inter-organizational collaboration to achieve the best. Inter-organizational collaboration is sometimes coordinated in a joint venture by bringing together several organizations that may be in different sectors and industry and remain independent entities, like the case of Australian CRCs. In this regard, managing inter-organization collaboration is more complex than dealing with intra-organizational one. Running inter-organizational collaboration implies multiplication of decision making bodies from each participating organization and potential clash of interest and values amongst participants. With the intention to contribute to the development of theory on inter-organizational excellence, this paper proposes general standards to guide inter-organization collaboration to perform well and achieve its best.

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**Autobiographical Note**

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