

# The IT Business Partnership: Exploring a Troubled Relationship

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## Abstract

Managing the business relationship between information technology (IT) and business professionals is critical to the success of an organisation. For the IT group to add value to the business, a healthy IT-business relationship is absolutely essential. Unfortunately though in many organisations, the IT-business relationship is riddled with problems. This paper first explores the troubled IT-business relationship, and then explores the troubled IT-business relationship through the application of a model to identify essential ingredients that are lacking in the IT-business relationship. Data is collected from interviews and a questionnaire administered to eleven IT and twenty-one business professionals in five Australian organisations. With knowledge of ingredients that are lacking in the IT-business relationship, practitioners can structure and facilitate actions leading to a more effective IT-business relationship, a healthier work environment, and ultimately greater success within the organisation.

## Introduction

In the last decade, the importance of an effective IT-business relationship received increasing emphasis, with the performance of IT being largely dependent on the IT-business relationship (Byers & Blume 1994; Nelson & Coopriider 1996). For modern organisations to fully exploit information technology and remain successful, closer links need to be forged between business and IT professionals (Broadbent et al. 1993).

In this study, the term *IT professionals* refers to those people who make IT work (Markus & Bjorn-Anderson 1987; Grindley 1992). This broad category includes CIOs, information systems managers, systems analysts, designers, programmers, database administrators, and external specialists such as hardware vendors and manufacturers, software firms and consultants (Laudon & Laudon 2000). The term *business professionals* refers to those people 'who use IT' (Grindley 1992). Thus, the expression *IT-business relationship* indicates the relationship between information technology professionals and business professionals.

## **The troubled IT-business relationship**

Provocative and sensational statements about the troubled relationship between business and IT professionals proliferate the literature. 'Management and users have a poor relationship with technologists' (Black 1997). 'The two tribes mentality is all too common' (Black 1997). 'There is an uneasy alliance between senior executives responsible for managing organisations and the IT people they hired to operate the organisations computers' (Wang & Barron 1995). 'Stop referring to us and them – we're all part of the one business' (Grindley 1992).

This dysfunctional relationship between business and IT professionals has existed since the first widespread application of computers to business problems in the late 50s and 60s (Doll & Ahmed 1983; Ward & Peppard 1996). Indeed, the arrival of the computer and the IT industry has challenged traditional forms of management, administration and authority. Management techniques developed over the past years have not been successful when applied to the management of IT (Grindley 1992). 'With IT being a relatively recent arrival on the managerial landscape, business managers have not developed the kind of experience and expertise that they have developed in other business disciplines such as Finance and HR' (Keen 1991). These problems have largely contributed to management 'discomfort' in dealing with and managing IT, leading to an uncomfortable relationship between business and IT.

Many attempts have been made to improve relations between IT staff and the rest of the business (Broadbent 1996). These attempts include increasing user involvement in systems development, establishing steering committees to gain senior management commitment to projects, developing information systems development methods, focusing on quality, improving technologies, decentralising IT and outsourcing IT. Such attempts have been largely focused on addressing technological issues (Wang 1995).

Despite these attempts, most organisations still feel that the IT-business relationship is under pressure. There is still the dilemma of mismatched expectations between business and IT (Broadbent 1996). In fact, tensions in the IT-business relationship have become self-perpetuating (Black 1997). Repeated project failures, project delays and cost overruns are the cause of much frustration regarding technology and destroy the credibility of IT (Doll & Ahmed 1983; Wang 1995). In turn, these credibility problems reduce the status and influence of IT, which may create further difficulties in gaining management co-operation, responsiveness, involvement and securing resources (Doll & Ahmed 1983). As a result, management becomes less willing to work with IT, leading to an uncomfortable relationship (Keen 1991). Once IT has lost its credibility, restoring business confidence in IT may take years. An IT group with low credibility may continue to experience low status and influence for several years (Doll & Ahmed 1983). Major sources of tensions result from differing beliefs about the value of IT in an organisation. As revealed, the values, beliefs, and assumptions IT and business have towards IT have a significant impact on the IT-business relationship.

Key issues facing IT groups in organisations have been extensively researched (Watson 1989; Galliers & Sutherland 1991; Broadbent et al. 1993), with the results highlighting the following as the more prevalent key issues:

- gaining business value from IT investment
- assigning business and IT strategies
- facilitating organisational learning of IS
- measuring IT effectiveness
- improved IS planning
- developing an IT architecture
- role and contribution of IT
- quality software development

Many IT professionals believe that these problems are management related, that the IT potential for improving business performance is not appreciated by top management, and that senior management does not recognise the importance of IT (Griffiths 1994; Grindley 1992; Hirschheim et al. 1988). IT professionals have a belief that business people don't understand what IT does to help the business, and if they did understand, then the business would place greater value on the IT function (Bashein & Markus 1997).

In response to these problems, IT managers are working hard at developing business knowledge and considering the organisational implications of their actions in order to work better with the business (Smith & McKeen 1992). However, despite attempts to improve relations between IT staff and the rest of business, few organisations have managed to successfully resolve this troubled relationship (Ward & Peppard 1996).

### **Research objectives and research question**

This research furthers previous attempts to resolve the troubled IT-business relationship. Following a comprehensive review of the research revealing that a troubled relationship indeed exists between IT and business professionals, research was conducted to further assess the IT-business relationship. The objective was to determine the source of problems in the IT-business relationship by investigating differences in the perceptions of IT and business managers regarding the IT-business relationship, addressing the research question: *What weaknesses exist in the IT-business relationship?*

### **Models for assessing the IT-business relationship**

There are many different viewpoints on ways and means to assess the IT-business relationship. This is not surprising, as much of the literature acknowledges that it is difficult to assess relationships in organisations. Despite this difficulty, considerable research effort has been applied to develop models to assess the status of the IT-business relationship.

For this research, nine theoretical models for assessing the IT-business relationship were assessed for their suitability to identify weaknesses in the IT-business relationship. These nine models were categorized into three broad categories: models for assessing the

*current* IT-business relationship; models useful for assessing the *evolving* IT-business relationship; and a model highlighting the different types of relationships that may exist.

Of these nine models discussed, many are purely descriptive and few have been widely applied. Table 1 provides a summary of the nine IT-business relationship models reviewed. Key components of an effective IT-business relationship recurrent in the models include: mutual benefits and goals; commitment from business and IT; communication and organisational linkages; shared knowledge, responsibility and risk; coordination; and mutual respect.

Table 1 Summary of IT-business relationship models

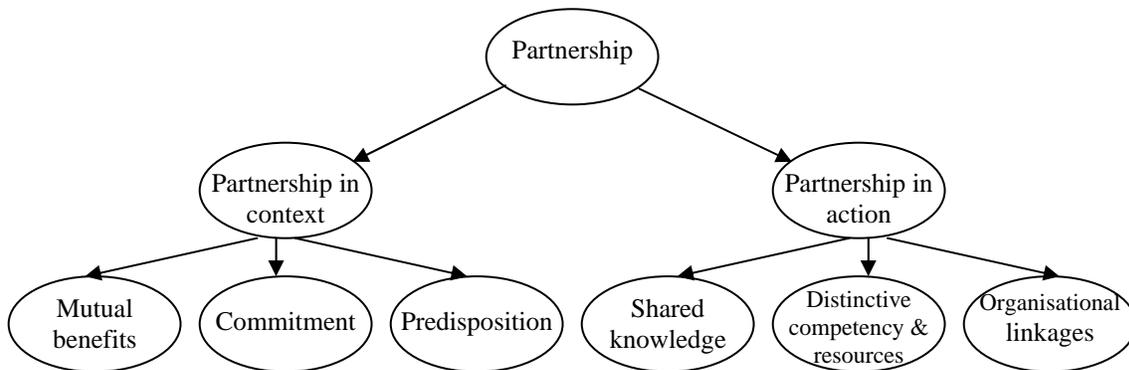
<b>Research models</b>	<b>Components of the relationship</b>					
Henderson (1990)	Partnership in context: mutual benefits, commitment, predisposition			Partnership in action: shared knowledge, dependence on distinctive competencies and resources, organisational linkages		
Feeny, Edwards and Simpson (1992)	CEO attributes		Organisational attributes		CIO attributes	
Jackson and Wilson (1999)	Mutual goals		Openness		Respect	
Ross, Beath and Goodhue (1996)	High levels of respect		Excellence in communication		Coordination and negotiation	
	<b>The evolving relationship</b>					
	<b>Early stages of the relationship ----- &gt; Mature relationship</b>					
Hirschheim et al. (1988)	Delivery		Reorientation		Reorganisation	
Galliers and Sutherland (1991)	Ad hococracy	Starting the foundations	Centralised dictatorship	Democratic dialectic and cooperation	Entrepreneurial opportunity	Integrated harmonious relationship
Hedberg (unpublished) in Ward and Peppard (1996)	Technologists explore technology		Technologists meet the needs of the business		Strategic change through application of technology	
Ward and Peppard (1996)	Support role		Operational role		Strategic role	
	<b>Types of relationships</b>					
Ward and Griffiths (1996)	Financial relationship		Contractual relationship		Organizational relationship	
					Intimate relationship	

*Source: developed from the literature*

From a review of the nine models, the Henderson (1990) model and the most prescriptive of all models reviewed, was selected as the preferred model to identify weaknesses in the IT-business relationship.

The Henderson model, illustrated in figure 1, was developed after conducting twenty-eight structured interviews with executives, highlights six essential ingredients of a healthy IT-business relationship. For an effective long-term relationship, three key ingredients were identified: mutual benefits, commitment to the relationship, and predisposition. An effective day-to-day relationship also required three key ingredients: shared knowledge, dependence on distinctive competencies and resources, and organisational linkages (Henderson 1990, p. 10).

Figure 1 Six determinants of partnership



Source: Henderson 1989

*Mutual Benefits:* For a relationship to be sustained over time, it is necessary for members to specify and agree on three types of mutual benefits: financial contribution, operations efficiency, and quality of work life (Henderson 1989). Articulating the financial contribution of IT (increases in revenue, decreases in costs or increases in efficiency) to achieve business objectives helps with the relationship. Also, improvements in product and service delivery, such as improved systems delivery times, help with the relationship, as does a positive working environment relating to the quality of work life.

*Commitment:* A commitment to achieving the goals and objectives of the firm from both sides helps sustain a partnership over time (Henderson 1990). There are three indicators of commitment: shared goals, incentive systems, and contracts. Shared goals provide both ongoing motivation and common ground for negotiation where goal conflicts arise. An appropriate incentive system reinforcing shared goals also fosters commitment. In addition, contracts, although ineffective as an enforcement mechanism, play an important role in a partnership, indicating some willingness of the members to commit to a relationship by providing a general sense of the responsibilities of the partnership.

*Predisposition:* Predisposition relates to the attitude towards cooperation of the business and IT groups (Subramani, Henderson & Coopriider 1998). Two conditions that indicate

predisposition are trust, and existing attitudes and assumptions (Henderson 1990). Trust is built on track record and personal relationships and is a shared expectation that IT and business will meet their commitments to each other (Henderson 1990; Nelson & Coopriider 1996). There are four dimensions of trust: similarity, prolonged interaction, appropriate behaviour, and consistent behaviour (Bashein & Markus 1997). People tend to trust others who are similar, that is other people who have common interests and a common language. Trustworthiness takes time to develop and is cumulative, hence the need for prolonged interaction. Repeated intergroup relations build trust, as does developing personal relationships at all levels of the organisation (Henderson 1990; Bashein & Markus 1997). Appropriate behaviour in the light of the other's expectations builds trust. Behaviour against the norm may result in negative impressions. Consistent behaviour makes people appear predictable, which can promote trust. Consistency includes a reputation for fulfilling past commitments and for matching promises with deliveries (Bashein & Markus 1997). The second condition of predisposition, existing attitudes and assumptions, is based on the belief that if members of the partnership believe they can help each other, then they will develop attitudes towards a cooperative relationship (Henderson 1990).

*Shared knowledge:* Shared knowledge, an element of partnership in action, relates to knowing how the other member of the partnership works (Henderson 1990; Nelson & Coopriider 1996). Having an understanding and appreciation of the work environment of the other member in the partnership can lead to a better relationship (Henderson 1990). However, this shared knowledge must be more than pure communication of facts and knowledge of each other's activities and skill bases, it must extend to a deeper level of understanding of the other's needs, constraints and contribution to organisational goals (Nelson & Coopriider 1996). Knowledge gaps can lead to differences of interpretation, which in turn, may lead to conflict (Hirschheim, Klein & Newman 1991).

*Dependence on distinctive competencies and resources:* The second ingredient necessary for an effective day-to-day relationship is achieved when members of the partnership *accept* dependence on each other's skills and resources (Henderson 1990). Organisational groups are often dependent on each other for achieving goals (Nelson & Coopriider 1996). In organisations today, business people are highly dependent on IT resources. Similarly, the IT group would not exist without the business (Smith & McKeen 1992).

*Organisational linkages:* The final element necessary to achieve an effective day-to-day partnership is organisational linkage. Organisational linkages result when organisational processes intertwine, information is freely exchanged between groups, and social relationships are established (Henderson 1990). For an effective relationship to develop, both business and IT people must be part of the decision making process. For example, one IT executive exclaimed that his measure of the IT-business partnership was whether or not one of his IT people was in the room when a key business decision was made (Henderson 1990, p. 14). Opportunities for social interaction between groups in organisations can help develop group relations, as social activities provide an environment for workers to interact and talk about their work, which in turn can lead to a

greater understanding and appreciation of the work environment of each group (Nelson & Coopriider 1996).

Henderson's model was selected as the preferred model to identify weaknesses in the IT-business relationship for three reasons. First, models that discuss and describe the *evolving* relationship were eliminated, as they were considered inappropriate for this research. Models assessing evolving relationships would be difficult to apply as this would require a longitudinal study of the evolution of IT in an organisation and involve data collection techniques such as reviewing historical records and interviews with past employees. Research suggests it is difficult to undertake longitudinal studies in organisational environments, as staff, and their attitudes and beliefs, change over time (Franz & Robey 1987). Models used to assess the CEO/ CIO relationship were also excluded, as in some organisations, access to the CEO/ CIO may have proved difficult. Additionally, the scope of this research was to address the IT-business relationship in general, not just the relationship between two roles in an organisation. Of the remaining models, Henderson's model is the most prescriptive and is often cited in the literature on IT-user relationships. Additionally, this model and was adapted by Subramani, Henderson and Coopriider (1998) to test if a consensual view between IT and business users on each of the six determinants of the relationship was positively related to the performance of IS providers.

## **Methodology**

A case study approach was adopted to identify weaknesses in the IT-business relationship using Henderson's (1989) model. A total of eleven IT and twenty-one business professionals from five Australian organisations participated in the case study, providing sufficient data to demonstrate replication logic and therefore provide sufficient support for insights into weaknesses in the IT-business relationship.

The profiles of each of the five organisations selected for this case study and the position titles of the 32 staff interviewed are presented in table 2. These five organisations were selected as cases for this research because it was predicted that they would produce similar results, provide rich information, and because of their diverse characteristics in terms of industry and size.

Table 2 Summary of Case Study Participants

<b>Case</b>	<b>Description</b>	<b>Business professionals interviewed</b>	<b>IT professionals interviewed</b>
<b>A</b>	Financial organisation  400 employees 20 IT staff	Customer Services Manager Call Center Manager Credit Manager Audit Manager	Systems Manager Operations Manager
<b>B</b>	State Government agency  6,500 employees 80 IT staff	CEO Deputy CEO Director, Communications Centre Audit Manager	IT Director Project Manager
<b>C</b>	Travel company  30,000 employees 800 staff	GM Projects Office GM Commercial Systems GM Revenue Accounting GM Engineering & Maintenance GM Australian Sales	Group GM Systems Delivery GM Infrastructure and Operations
<b>D</b>	National Government agency  4,000 employees 100 IT staff	National Manager National Manager Policy/Products Manager Financial Operations/Accts Network Editor	Applications Manager Client Liaison Manager
<b>E</b>	Retail company  80,000 employees 250 staff	National Administration Manager Electronic Trading Manager National Systems Accountant Project Manager Traineeships	Project Manager Manager Communications and Infrastructure Planning Manager

Semi-structured interviews were conducted to gain an understanding of the IT culture and the effects of this culture on the IT-business relationship. Each of the thirty-two participants in the study completed a questionnaire about the IT-business relationship in the presence of the researcher. These questions were derived from previously compiled lists of indicators for the six determinants of the IT-business relationship (Henderson 1989; Subramani et al. 1998). To help focus and scope this research, it was necessary to operationalise the six determinants of the IT-business relationship. Table 3 shows how each of the six determinants of the IT-business relationship was operationally defined.

The questionnaire statements are included in appendix A at the end of this paper. The 26 questions related to the six determinants of the IT-business relationship: mutual benefits, commitment, predisposition, shared knowledge, dependence on distinctive competencies and resources, and organisational linkages.

Table 3 Indicators of the determinants of the IT-business relationship

IT-business relationship determinant	Indicators of determinants
<b>Partnership in context (indicators of an effective on-going relationship)</b>	
Mutual benefits	Financial contribution Operations efficiency and increased innovation Increased quality of work life
Commitment to relationship	Nature of formal agreements or contracts Extent of shared goals Organisational incentives to cooperate
Predisposition	Trust Existing attitudes based on track record
<b>Partnership in action (indicators of an effective day-to-day relationship)</b>	
Shared knowledge	Knowledge of each others task environment, decision environment and social environment
Dependence on distinctive competencies and resources	Dependence on partner's personnel, skills and physical assets
Organisational linkages	Creation of joint processes Joint involvement in operational processes Information exchange Social linkages and good personal working relationships

For each statement on the questionnaire, respondents were requested to indicate their viewpoint using a five point ordinal Likert scale: 'not at all', 'a little', 'some extent', 'a lot', and 'a great extent'. An additional category of 'don't know' was included to provide respondents with an option should they not be able to offer a viewpoint.

To prepare the attitudinal responses to questionnaire statements for analysis, scores, as shown in table 4, were assigned to the Likert scale response categories. The completed questionnaires were then coded and keyed into SPSS for analysis.

Table 4 Likert scale conversion

Likert scale	Not at all	A little	Some extent	A lot	A great extent	Don't know
Score	1	2	3	4	5	Missing value

Descriptive statistics in the form of frequency distributions were then derived to display the frequency of business and IT responses for each statement on the questionnaire. Weaknesses were identified in the IT-business relationship if a pattern emerged showing that IT and business had opposing views on a statement, or if there was a low presence of some ingredients of the relationship.

*Opposing views.* The literature suggests that a cooperative relationship results when the views of business and IT converge (Subramani et al. 1998). An opposing view was

apparent if members of the business group shared a similar viewpoint, which was different to the shared view of the IT group.

*Essential relationship ingredients lacking.* The literature suggests that there are a number of essential ingredients for a healthy relationship (Henderson 1990). If responses to the questions tended towards the lower end of the Likert scale, then this suggests a lack of presence of an essential ingredient, and as such a weakness in the IT-business relationship. This rule applies for all questions except question 5, where a weakness was identified if viewpoints tended towards the higher end of the Likert scale.

The results of the analysis are included in appendix B. This table indicates, for each ingredient, where IT and business had opposing views, and where essential ingredients of an effective IT-business relationship were lacking.

## **Findings**

This section presents the themes and patterns that emerged from the data analysis. For each of the five cases, the strengths and weaknesses of the IT-business relationship are reported. These results are then summarised in relation to the determinates of an effective IT-business relationship.

### ***Case A – Financial Organisation***

Overall, the IT-business relationship in Case A was moderately effective. As shown in appendix B, few weaknesses were identified in the relationship. Those weaknesses that were identified relate primarily to the disagreement between business and IT in relation to IT's financial contribution to business objectives, the reputation of business meeting their commitment to IT, the understanding business has for the IT work environment, and the extent to which IT makes themselves available to meet the needs of the business. Other contributing factors to weaknesses in this relationship include the lack of regard given to implementing service level contracts between business and IT, and the lack of training undertaken by the business in order to work more effectively with IT.

Key strengths in the IT-business relationship in Case A result from IT not pursuing their own interests, the high level of trust the business has in the capabilities of IT, and the organisation's high dependence on IT. This is reflected in the comment from business: 'Without them (IT) it would be impossible for us to run the business'.

The overall assessment of the relationship as moderately effective in Case A is confirmed by a business manager: 'It's not us and them. It's us as a team' and also by an IT manager: 'It's a fairly close knit group'.

### ***Case B – State Government Agency***

It was evident that the IT-business relationship in Case B was ineffective. As shown in appendix B, many weaknesses and few strengths were identified. These weaknesses stem

from opposing views by business and IT on many aspects of the relationship, including IT's financial contribution to business objectives, contribution to improved business efficiency, and the extent to which IT supports the goals of the organisation. Another weakness related to the extent to which IT people pursue their own agenda. One IT professional remarked 'I am in the IT industry'. Another claimed 'We're concerned about the business and how its operating, but we'd like to see some other technologies being used'. Lack of trust between IT and business was confirmed during the interviews, 'There's distrust on both sides'. The IT group was not willing to involve business people in IT planning activities and had a poor level of understanding of the business work environment. IT believed they understood the business extremely well, 'I would rate myself about a nine out of ten'. However, business disagreed, 'They (IT) lack an understanding of the department generally'. Finally, IT and business had opposing views about the extent to which the IT group made themselves available to meet the needs of the business.

Despite several weaknesses, two key strengths in the relationship were identified. These being the extent to which service level contracts are used, and the high dependence on IT in this organisation, although one business person strongly disagreed.

The ineffective IT-business relationship in Case B is confirmed by the following statements from business people: 'IT is not effective in terms of meeting the operational needs of this organisation', and 'IT isn't working anywhere near efficiently as it should be'.

### ***Case C – Travel Company***

The IT-business relationship in Case C was also considered to be ineffective. As shown in appendix B, many weaknesses and only two strengths were identified. IT rated their contribution to the quality of work life higher than business perceived IT's contribution. There was also disagreement about the extent to which IT makes a financial contribution to business objectives, the extent to which IT supports the goals of the organisation, and the extent to which IT pursues its own agenda. IT was perceived by business as unwilling involve business in IT planning activities and as having a lack of appreciation for the accomplishments of the business. Other weaknesses related to the extent to which business controls and monitors IT activities, and also the extent to which business makes itself available to meet the needs of IT.

Weaknesses also resulted from little use of service level contracts, lack of training by the business to work more effectively with IT, lack of training by the IT group to work more effectively with the business, and the lack of social linkages between business and IT.

The key strength areas in this relationship relate to the high dependence each group has on the other group, as suggested by the following statement from business: 'It (IT) is highly, highly, highly critical'.

The following statements from business staff confirm the poor IT-business relationship in Case C, 'IT are fairly slow to respond, are not customer focused, are a big overhead, and are not particularly efficient', 'IT has not been very successful in meeting the business needs', and also 'IT have missed the boat'.

#### ***Case D – National Government Agency***

The relationship between business and IT in Case D was assessed to be moderately effective. There were few weaknesses, as shown in appendix B. These weaknesses related mainly to disagreement between business and IT on the extent to which IT contributes to improved business efficiency, the extent to which IT supports the goals of the organisation, and the extent to which the business makes itself available to meet the needs of IT. The lack of training undertaken by the business in order to work more effectively with IT is a further weakness in this relationship.

Key strengths in the IT-business relationship arise from the high degree of willingness by IT to involve business with their IT planning activities, and also the high dependence by the business on IT. As stated by an IT manager: 'People are starting to see how important the whole IT business is to a corporation just to survive'.

The following statement from business confirms this assessment of the IT-business relationship as being moderately effective, 'IT aren't getting the flogging that they used to get'.

#### ***Case E – Retail Company***

In Case E, an ineffective relationship stemmed mainly from the lack of many of the essential ingredients of a healthy relationship, as shown in appendix B. One weakness in the IT-business relationship at Case E related to business and IT having opposing views on the extent to which IT contributes to improved business efficiency. A strong view emerged that IT pursues its own agenda to a great extent and there was a lack of recognition by the organisation for the efforts of IT. IT professionals received low rewards and there was a feeling by the business that IT did not trust the business. Unfortunately, there was little to no training undertaken by both business and IT to work more effectively with each other. Business had little control over the activities of IT; and there were few social linkages, not surprisingly, as it was observed that the IT group was located in an entirely different building, several suburbs away from business groups.

The following statement from IT confirms the absence of many essential ingredients in the IT-business relationship in Case E. 'I don't think we have a feeling of excellence in [Case E]. I think we have a feeling of, "well it's working, we don't have any problems", or "it's hanging together". But, even though we have put some big systems, no one has come away feeling good, only the business. I'm not really aware of anybody patting us on the back'. Business staff also confirmed is the ineffective relationship. 'I think it's just an ongoing poor relationship'.

## **Assessment of the IT-business relationship**

To summarise, not one of the five cases analysed had a healthy IT-business relationship. Weaknesses were identified in four of the six essential ingredients of an effective IT-business relationship: mutual benefits, commitment, shared knowledge, and organisational linkages. The key strength of the IT-business relationship identified was the dependence the business group has on the distinctive competency and resources of the IT group.

Weaknesses existed because:

## **Contributions of the research and conclusions**

The literature suggests that the relationship between business and IT professionals is not healthy. This research confirmed the literature, and found that in the five Australian organisations studied, the IT-business relationship was not healthy. Further, the literature indicates that there are six essential ingredients of a healthy relationship: mutual benefits, commitment to the relationship, predisposition, shared knowledge, dependence on distinctive competencies and resources, and organisational linkages (Henderson 1989). In addition, it is noted that a cooperative relationship results when IT and business converge on views (Subramani et al. 1998). This research identified that the following four ingredients of a healthy IT-business relationship were lacking from the IT-business relationship in five Australian organisations: mutual benefits, commitment, shared knowledge, and organisational linkages.

It is imperative for IT and business professionals to form a strategic alliance in order to achieve excellence by strengthening those weaknesses in the IT-business relationship determined by this research. Furthermore, IT managers are urged to follow tested models to develop a desirable partnership between IT and business professionals. Key components for consideration that were identified in the research results as weaknesses in the IT-business relationship and recommendations that will lead to a healthier relationship include:

*Mutual benefits:* The business group perceived that IT did not make a contribution to the bottom line of their organisation, and did not contribute to improved business efficiency. To improve the IT-business relationship, the contribution of the IT group should be articulated and communicated. Strategies should be implemented to measure the contribution of IT.

*Commitment from both IT and business:* Business and IT groups had different viewpoints in relation to the extent to which the IT group supports organisational goals and pursues its own agenda. This implies a lack of commitment to the relationship by the IT group. IT management should ensure that the goals of the IT group are aligned with the goals of the organisation. Priorities should be revisited and IT staff involved in business decision making to secure commitment from IT to organisational goals.

*Shared knowledge:* Neither the business group or the IT group took training in order to work more effectively with each other. Teams should be developed with both IT and business skills. Organisations can accomplish this by recruiting individuals with both IT and business skills and by providing on-going training programs.

*Organisational linkages:* Business and IT groups were not jointly involved in business processes, limiting organisational linkages. Also, the business group did not believe that the IT group was meeting the needs of the business. The relationship between business and IT professionals can be improved through the joint involvement by business and IT groups in business and IT planning activities. In addition, social interaction between the two groups will improve organisational linkages.

With this knowledge, practitioners can structure and facilitate actions to build more effective IT-business relationships, thus enjoying a healthier work environment and ultimately greater success within the organisation.

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## Appendix A: Questionnaire Statements

1	To what extent does IT contribute to the quality of work life in your organisation (ie. has it contributed to greater job satisfaction, made jobs easier)?
2	To what extent does IT make a financial contribution to business objectives (ie. has it helped with the bottom line)?
3	To what extent does IT contribute to improved business efficiency?
4	To what extent does IT support the goals of the organisation?
5	To what extent does IT pursue its own agenda?
6	To what extent are formal service level contracts in place to clarify working relationships between business and IT?
7	To what extent does your organisation recognise the efforts of IT?
8	To what extent does your organisation reward the efforts of IT personnel?
9	The degree to which the business trusts IT is?
10	The degree to which IT trusts the business is?
11	The willingness of the business to involve key IT people in their business planning activities?
12	The willingness of IT to involve key business people in their IT planning activities is?
13	The reputation of the business for meeting its commitment to IT is?
14	The reputation of IT for meeting its commitment to the business is?
15	To what extent has the business undertaken training in order to work more effectively with IT?
16	To what extent has IT undertaken training in order to work more effectively with the business?
17	The level of understanding by the business of the IT work environment is?
18	The level of understanding by IT of the business work environment is?
19	The level of appreciation the business has for the accomplishments of IT is?
20	The level of appreciation IT has for the accomplishments of the business is?
21	To what extent does the business depend on the resources of IT (ie. people, technology, skills) to accomplish its goals?
22	To what extent does IT depend on the resources of the business (ie. people, skills, technology) to accomplish its goals?
23	To what extent does the business control and monitor the activities of IT?
24	The extent to which the business makes itself available/ approachable to meet the needs of IT is?
25	The extent to which IT makes itself available/ approachable to meet the needs of the business is?
26	The extent to which there are social linkages between business and IT is?

Appendix B: Overall status of the IT-business relationship

<b>IT business relationship determinant</b>	<b>Quest. No.</b>	<b>Ingredient</b>	<b>Case A</b>	<b>Case B</b>	<b>Case C</b>	<b>Case D</b>	<b>Case E</b>
<b>Mutual benefits</b>	1	Quality of work life			O		
	2	Financial contribution	O	O	O		
	3	Business efficiency		O		O	O
<b>Commitment</b>	4	Support organisational goals		O	O	O	
	5	IT pursue own agenda	P	O	O		L
	6	Service level contracts	L	P	L		
	7	IT recognised					L
<b>Predisposition</b>	8	IT rewarded					L
	9	Business trusts IT	P	O			
	10	IT trusts business		O			L
	11	Business planning involvement					
	12	IT planning involvement		O	O	P	
<b>Shared knowledge</b>	13	Business meeting IT commitment					
	14	IT meeting business commitment		O			
	15	Business training in IT	L		L	L	L
	16	IT training in business			L		L
	17	Business understanding of IT	O				
	18	IT understanding of business		O			
<b>Dependence</b>	19	Business appreciates IT					L
	20	IT appreciates business			O		
	21	Business dependent on IT	P	P	P	P	
<b>Organisational linkages</b>	22	IT dependent on business			P	O	
	23	Business controls IT			O		L
	24	Business available for IT			O		
	25	IT available for business	O	O			
	26	Social linkages			L		L

Legend: O – Opposing views by business and IT groups  
P – Strong degree of presence of an essential ingredient  
L – Low degree of presence of an essential ingredient