Business Papers and Journal Articles

School of Business

2008

Evaluating virtual organisational preparedness

Peter Gall

University of Notre Dame Australia, Peter.Gall@nd.edu.au

Janice Burn

THE UNIVERSITY OF
NOTRE DAME
AUSTRALIA

Creating a Framework to Develop and Test an Operational Preparedness Strategic Alignment Instrument

Peter Gall, Janice Burn

Edith Cowan University, Perth, Western Australia, {p.gall@ecu.edu.au}

Edith Cowan University, Perth, Western Australia, {j.burn@ecu.edu.au}

Abstract

This paper reviews the literature in relation to virtual E-business models and strategies. From this the authors develop a framework to test a new strategic alignment instrument designed to measure the espoused preparedness to operate more virtually. The results can assist organisations in identifying strategies that fully leverage the value of their ICT assets.

Keywords

ICT, Strategic Alignment, Virtual Organisation, Virtual Preparedness

1   Introduction

In the spirit of continuous ICT Information Communication Technologies adaptation and change, this paper seeks to confirm that strategic alignment can be improved by treating internal functional integration and external strategic fit, separately. Organisational performance firstly depends on structures and capabilities that support the successful realisation of strategic decisions, secondly alignment is a two way process, where business and IS strategies can act as mutual drivers; thirdly strategic IS alignment is not an event but a process of continuous adaptation and change (Henderson & Venkatraman, 1993).

2   Theories of Virtual Organisations

Organisations that exploit the potential to develop their own 'automated network' according to noted authors are variously described as virtually organising or virtual organisations. Virtualisation allows one organisation to appear as many or many to appear as one, becoming increasingly adaptive, focussing on dramatically improving the speed and economics of business change to meet new market conditions (Yockelson, 2004).

This paper introduces a new framework designed to provide a more comprehensive view of the strategic context of VO. It is modelled on the early work of Venkatraman and Henderson (1993) that developed the concept of strategic alignment as being based on two building blocks, strategic fit and operational integration. They considered that strategic positioning required the alignment of both internal and external domains.

The Venkatraman and Henderson model has featured prominently in subsequent literature as noted authors attempt to help organisations grapple, especially in the 21st century, with the issue of global competitiveness. As organisations enter an era of information superhighways, expanded electronic commerce, and 'virtualness' executives increasingly realise that in addition to business strategy influencing IT, IT now influences business strategy (Rockart et al., 1996).

The framework introduced in this paper as Figure 1 reinforces this view and seeks to identify a distinction between internal operational integration initiatives and external strategic positioning initiatives. This paper focuses on the Operational Integration side of the framework.
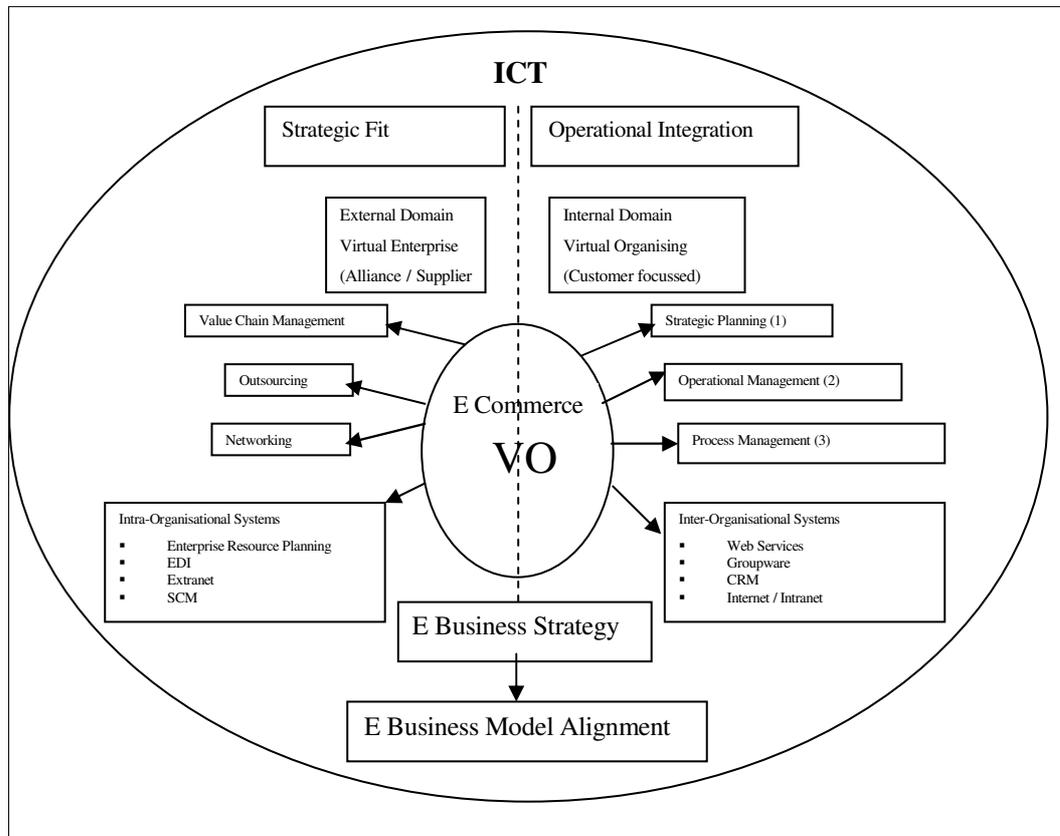

Figure 1 – Strategic & Operational Context of VO

3   Research Approach

Three existing models have been used to develop a new instrument; the Virtual Operations Preparedness Instrument (VOPI). The (Venkatraman & Henderson, 1998) model focuses on Strategic Planning (1). The model developed by Guha and others explores the concept of e-business Operational Management (2) (Guha et al., 1997). The model created by Zigurs and others looks at Process Management in a networked world (3) (Zigurs et al, 2006). All three of these strategic change theories seem to focus on conceptualising organisational virtual preparedness strategically aligned their operational integration strategies.

Table 1 pinpoints the four key dimensions identified in the three supporting models while the fourth column; the VOPI extrapolates out the commonalities and creates a set of six new headings and dimensions.

Strategic Planning (Venkatraman & Henderson, 1998)	Operational Management (Guha et al., 1997)	Strategic Process Management (Zigurs et al, 2006)	New Instrument VOPI
Customer Interaction	Relationship Balance	Coordination	**Communications**
			Shared goals
Multi stage distribution	Dialectic of cooperation	Trust	Trust / Cooperation / Coordination
Efficiency	Dialectic of competition	Competence Based	Open communications
Linear value chain	Cooperative behaviour	Experts	Asset leverage
Innovation	Conflict level	Liaisons	Strategic direction
Customisation	Inter organisational linkage		
Communities	Cross functional cooperation		
Asset Configuration	IT Leverage	Knowledge	**Efficiency**
			Value creation
Sourcing	Information	Attributions	Organisational efficiency
Integration	Imperatives	Non Linear	Effectiveness
Dynamic Portfolios	Bidirectional relationships	Complex	Knowledge sharing
Relationships	Socio/technical relationships	Intelligence Repositories	Process driven
Assembly	Coordinated interaction		**Viability**
Co-ordination			Long / short term ROI
Knowledge Leverage	Cultural Readiness	Innovation	Sustainable profitability
			Economic value
Source diversity	Change agents	Dynamics	Customer centric
Value Creation	Leadership	Web Networked	Visibility
Organisational efficiency	Shared organisational goals	Diverse Culture	**Supply & Value**
	Trust / Cooperation / Coordination	Adaptive Interfaces	Linear value chain
	Exchange relationships		Innovation
	Risk Aversion		Customisation
	Open Communications		Integration
	Shared output process controls		Coordination
			Linkages
			Cooperative interpersonal behaviour
Work Unit Expertise	Learning Capabilities	Process Management	Inter-functionality
			Inter organisational linkages
Distributed tasks	Positive outcomes	Emergent Tasks	Cross functional cooperation
Decomposition	Adaptation to environmental change	Non Linear	Interdependence
Effectiveness	Cross functional entities	Ubiquitous	**Adaptability**
Knowledge capture	Core competencies	Self Organising Systems	Change agents
Knowledge sharing	Technical gatekeepers	System Re-organisation	Core competencies
Process driven	Deutero learning		Adaptable Imperatives
	Causation		Coordinated interaction
	Adaptability		

Table 1

4   Methodology – Case Study

The methodology chosen was to undertake a case study in a GDE (Geographically Dispersed Entity) that plays a critical role in providing essential services to a division of the Australian Defence Force (ADF). The entities workforce of 150 is highly trained and disciplined with very specific role designations. Fifteen (15) group managers were chosen as subjects for the case study as these senior managers represented all the key drivers of an organisation charged with responsibility for critical and essential services. The case study process consisted of three phases; Phase 1, the Pre-Interview Audits, Phase 2, the one on one Interviews and Phase 3, the Post Interview surveys.

PHASE 1

The group managers were required to circle the response which most closely reflected how important they felt each of the questions was to their group. Table 2 provides an example of one of the 6 dimensions surveyed in the pre-interview audit (Phase 1) of the VOPI. Each complete audit comprised six dimensions, five questions per dimension making a total of thirty questions per audit. It is important to state that the questions were devised from the enablers of each dimension in the VOPI (See Table 1) and reflect only the first phase of the triangulation of methods. The first box in each table identifies the Phase, the acronym of the instrument and it full name. The second area denotes the question that was posed. In the case of Phase 1 of the pre-interview audit the question relates to importance. Below this the letters used for the survey are explained e.g. SA Strongly Agree, Agree etc. Next is the wording for the dimension. In the case of Table 2 the example given is Efficiency. There are 30 questions for each audit; the questions under Efficiency are numbers six to ten.

PHASE 1: VOPI - VIRTUAL OPERATIONS PREPAREDNESS INSTRUMENT
PRE-INTERVIEW AUDIT

If the group under my control were to work effectively with <u>other internal groups</u> using

Information Communication Technologies it would be important that:

KEY   *(Circle the response below which is closest to your opinion)*

SA = Strongly Agree A = Agree D = Disagree   SD = Strongly Disagree DK = Don't Know

Efficiency

6	I understand my groups value creation strategies	SA	A	D	SD	DK
7	Efficiency strategies are effective	SA	A	D	SD	DK
8	My group operates effectively and efficiently	SA	A	D	SD	DK
9	Knowledge is shared openly and effectively	SA	A	D	SD	DK
10	Processes are in place that aid efficiency	SA	A	D	SD	DK

Table 2

A simple method was devised to identify the priority from most important to least important and the subsequent gap. A scale of five being strongly agree down to 1 was used. There were 15 respondents, consequently the highest score achievable was 75 (15 x 5) and the lowest 15 (15 x 1); the higher the score the more the importance.

Grade	Code	Value	X 15
Strongly Agree	SA	5	75
Agree	A	4	60
Disagree	D	3	45
Strongly Disagree	SD	2	30
Don't Know	DK	1	15

Figure 2 provides the results obtained from the 15 respondents to the 30 questions posed for the VOPI and reflect Phase 1 data analysis.
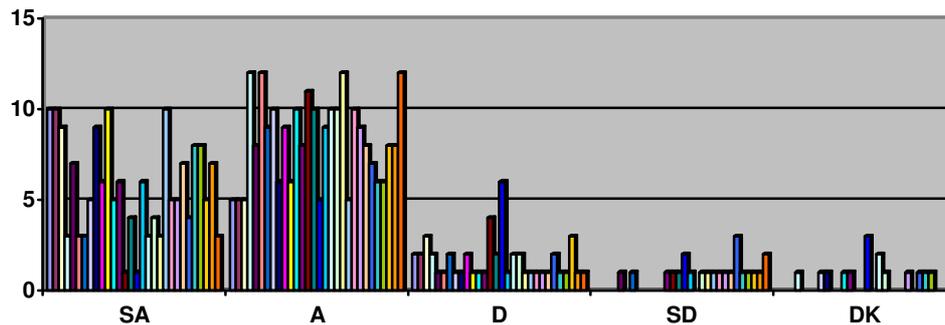

Figure 2

The chart clearly illustrates that the vast majority of the respondents, out of the 15 surveyed Strongly Agreed or Agreed that the dimensions and the questions posed were important. This is a significant initial outcome. The electronic version of these charts provides a colour coding for each of the thirty questions asked. One example of an outcome of the VOPI was that for Question 6 under the Dimension, Efficiency, 1 Strongly Agreed, 12 Agreed and 2 Disagreed that this question was important.

These results are significant because they validate the instruments in terms of whether or not the organisation felt that overall, the dimensions and the questions posed were important. As you can see the results are heavily weighted to the strongly agree and agree, indicating that the majority felt that the questions being considered were important to their organisation. Once this was established Phase 2 of the triangulation commenced.

PHASE 2

The second phase of the process involved one-on-one interviews with each of the respondents. Due to security considerations the interviews themselves all had to be paper based as the organisation was not in a position to approve the use of voice recorders. Consequently, all the transcripts were written up by hand during the interviews and later converted to spreadsheets. An excerpt of the questionnaire is set out in Table 3.

The questionnaire was designed to allow respondents to provide feedback about the pre-interview audit process. The overarching question remains the same as for the pre-interview audit in asking would it be important. But asks the subject to comment on whether he or she felt that the statement made sense; if not why not, then follows the dimension heading. The subject was then asked to comment on the five questions under the dimension regarding whether it made sense or not, what was missing or the subject would have liked to have seen added. Finally the subject was asked if he or she had any other comments to make about the dimension.

Questionaire - VOPI

If the group under my control were to work effectively with <u>other internal groups</u> using

Information Communication Technologies it would be important that:

Did the statement make sense? If not / why not?

_____

Efficiency

Perception across those surveyed is that "efficiency" is important

_____

		SA	A	D	SD	DK
6	I understand my organizations value creation strategies	SA	A	D	SD	DK
7	Efficiency strategies are effective	SA	A	D	SD	DK
8	My group operates efficiently and effectively	SA	A	D	SD	DK
9	Knowledge is shared openly and effectively	SA	A	D	SD	DK
10	Processes are in place that aid efficiency	SA	A	D	SD	DK

What was good / made sense about the checklist for this heading?

_____

What didn't make sense?

_____

What would you have liked to have seen covered / or added, felt was missing?

_____

Any other comments you would like to make about efficiency?

_____
_____

Table 3

The next step was to collate all the input from the interviews and develop a consensus across the respondents of their reactions to the dimensions and the questions posed. During the interviews a problem was identified in the second dimension; Efficiency. Even though overwhelmingly the 15 group managers felt the questions were important, the consensus was that in Question 6, the terminology 'value creation strategies' did not mean much to the them, consequently the question was changed based on this input to 'efficiency is recognised and rewarded'. The revisions appear in Table 4, in bold type.

PHASE 3

Phase 3 consisted of the distribution of the revised documents to the 15 group managers, as depicted in Table 4. Again the respondents were required to circle their responses to the 6 dimensions and thirty questions. The critical difference in phase 3 was that the overarching question that applied to all dimensions, changed to whether the respondents felt that they were actually **doing the things** they previously agreed were important.

PHASE 3:	**VOPI - VIRTUAL OPERATIONS PREPAREDNESS INSTRUMENT POST INTERVIEW SURVEY**

How effectively does your group work with <u>other internal groups</u> using Information Communication Technologies under the following headings?

KEY *(Circle the response below which is closest to your opinion)*

SA = Strongly Agree **A** = Agree **D** = Disagree	**SD** = Strongly Disagree **DK** = Don't Know

Efficiency – Competence, Effectiveness

Efficiency is recognized and rewarded	SA	A	D	SD	DK
Efficiency strategies are effective	SA	A	D	SD	DK
My group operates efficiently and effectively	SA	A	D	SD	DK
Knowledge is shared openly and efficiently	SA	A	D	SD	DK
Processes are in place that aid efficiency	SA	A	D	SD	DK

Table 4

The true power of the instrument is reflected in the Phase 3 results shown here in Figure 3, which provided a very different picture of the organisation. In the vast majority of cases across the 30 questions, group managers were less confident that the organisation was actually **doing the things** it thought were important.
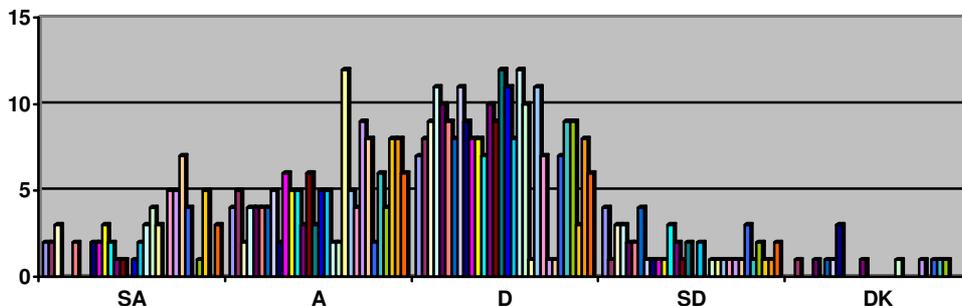

Figure 3

These results are significant because they validate the instrument in terms of whether or not the organisation felt that it was actually doing the things it felt were important. As you can see the results moved from a heavy concentration in the Strongly Agree and Agree columns to Agree, Disagree and in some cases even Strongly Disagree. It is this mixed response which was of most interest to the researcher and raised an interesting question; could the gap between Importance and Doing be used to set priorities for the organisation to focus on in terms operational integration? Table 5 converts the charts provided as Figures 2 and 3 into the top five priorities for the case study organisation.

VOPI	No	Imp 15 - 75	Doing 15 - 75	Gap I-D	P	Comment
Communication	1	71	53	18	**2**	
	3	72	57	15	**5**	
	5	67	51	16	**3**	
Supply & Value	16	47	60	-13	30	Doing / not Important
Adaptability	27	67	48	19	**1**	Important / not Doing
	29	65	50	15	**4**	

Table 5

The Number one priority was question 27 under the dimension of Adaptability. Another significant outcome was that of the top 5 priorities identified, three fell into the Communication dimension, reflecting the concerns the group managers felt about how their organisation communicated. The dimension considered as having the lowest priority was Viability with five of the questions falling in the last 10 of 30. At the other end of the scale scores that were also significant were the negatives, especially question 16 under the dimension Supply and Value. This organisation regarded this as something they were doing, but did not regard it as important. Engaging in activities that are unproductive could have a serious impact on overall productivity.

Findings

These outcomes prompted the development of Phase 4; reporting the results to the case study organisation. The top 3 results are provided in Table 6. The first column indicates the priority the case study organisation (as distinct from any other organisation) should give to the issue identified. Column 2 identifies the dimension it falls under. Column 3 denotes the number of the question. Column 4 calculates the gap between importance and doing, and column 5 provides potential solutions.

P	Heading	No	Gap	Solutions
1	Adaptability	27	19	Intelligent Software Agents, Enhanced Systems Capability Flexibility, Agility, Procedure models, Open Source Systems, Enterprise System LX-Office
2	Communication	1	18	Operational Integration Internet/ Intranet strategies
3	Communication	5	16	Issues may well be addressed by additional training in how to maximise the effectiveness of the mediums.

Table 6

Conclusions

The most significant conclusions that can be drawn from the first three phases of the case study are that the instrument did achieve a number of substantial objectives. Firstly the pre-interview audits did confirm that this part of the process was relevant to the case study organisation. Secondly, the interviews themselves were potent in that they confirmed that group managers had very real concerns about their areas of responsibility. Thirdly, the post interview surveys reflected the input gained and added real 'value' to ensuring that the final survey was organisation centric. The significance of the findings means the authors can test this applicability more broadly. The next stage is to identify at least six other organisations and undertake secondary case studies designed to test the potential modularity of the instrument.

References

Guha, S., Grover, V., Kettinger, W. J., & Teng, J. T. C. (1997). Business Process Change and organisational performance: Exploring an antecedent model. *Journal of Management Information Systems; Armonk, 14*(1), 119-154.

Henderson, J. C., & Venkatraman, N. (1993). Strategic Alignment: Leveraging Information Technology for Transforming Organisations. *IBM Systems Journal, 32*(1), 4-16.

Rockart, J., Earl, M., & Ross, J. (1996). Eight Imperatives for the New IT Organisation. *Sloan Management Review; Cambridge, 38*(1), pp 43-55.

Venkatraman, N., & Henderson, J. C. (1998). Real strategies for virtual organising. *Sloan Management Review; Cambridge, 40*(1), 33-48.

Yockelson, D. (2004, June). The Adaptive Organization. *Optimize. Manhasset,* S2.

Zigurs, I., & Kozar, K. (1994). An Exploratory Study of Roles in Computer-Supported Groups. *MIS Quarterly*, pp 277-294.