INVESTIGATING INTELLECTUAL CAPITAL AND ORGANISATIONAL VALUE CREATION

John C Dumay

PhD Student

Faculty of Economics and Business, University of Sydney, Sydney, NSW

Email: j.dumay@econ.usyd.edu.au

Associate Professor Suresh Cuganesan

Macquarie Graduate School of Management, Ryde, NSW

Email: suresh.cuganesan@mgsm.edu.au

Preferred Stream: Stream 6 - Knowledge Management and Intellectual Capital

Profile: John Dumay is currently finalising his PhD at Faculty of Economics and Business of the University of Sydney. His current research interest relates to the impacts of intellectual capital management. His writing on the topic of intellectual capital has been published in academic journals and presented at international conferences. John has an Executive MBA from the Australian Graduate School of Management and a MA in Business Research Methods from the Macquarie Graduate School of Management. When not working on his thesis, John works as an independent consultant advising business and government on how to make sense of their complex operating environments.
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ABSTRACT

The characteristics of intellectual capital (IC) make the identification of the inter-relationships between an organisation’s IC components and its value creation a difficult and challenging task. An emerging performative research agenda focuses on this issue in calling for research (Mouritsen, 2006) that investigates the following: “How does IC work in firms?”, “What is IC composed of?”, and “How is IC related to value?” We investigate these questions through a single case study of a financial services organisation. In so doing we highlight the multi-dimensional nature of IC and the value creation nexus. In addition we empirically ground the networked nature of IC as it is performed within an organisation, identifying both the extent of the manifestation of individual components as well as the strength of inter-relationships between various components.

KEYWORDS: intellectual capital, value creation, case study, research.

INTRODUCTION

Within the discipline of IC research, conceptual refinement, methodology consolidation and empirical research are seen as important elements of scholarly development (Petty and Guthrie, 2000; Marr et al., 2003; Andriessen, 2004). One area where there has been a stated need for more detailed and empirically grounded research involves the inter-relationships between the different components of IC and how these enable (or impinge upon) value creation. Attempts to investigate these issues empirically are few (Peppard and Rylander, 2001; Marr et al., 2003; Skoog, 2003; Fernstrom et al., 2004b) and present a stark contrast to the many calls for further work in the area (Petty and Guthrie, 2000; Collier, 2001; Mouritsen et al., 2001a; Marr et al., 2003; Skoog, 2003; Marr et al., 2004b; Martin, 2004; Mouritsen, 2004a)

This paper is organised as follows. First, a brief literature review is presented to provide the contextualisation of the paper. This is followed by outlining of our research site and methods. Next, the empirical results are explicated followed by a conclusion.
LITERATURE REVIEW

The concept and interest in intellectual capital (IC) is derived from the wide recognition that knowledge is important to organisations and that technology has allowed for greater dissemination of knowledge (Meritum Project, 2002; Unerman et al., 2007). In addition, the development of IC resources is advocated as it is espoused that this helps create value for organisations, especially since the majority of an organisation’s assets are intangibles which cannot represented on the balance sheet (Stewart, 1997). In response to trying to breakdown the individual components of intellectual capital a plethora of frameworks have been developed. Sveiby (2007) identifies 34 different frameworks for the measurement and reporting of IC and more frameworks are being continually developed. The main problem with the plethora of views about IC is that no one aspect, other than the concept of intangibility, has any form of agreeance among practitioners and researchers. The closest to any encompassing model of what IC should encompass seems to be founded in the general acceptance of the tri-partite representation of IC as human, structural and relational capital. Even here the terminology can differ (see Petty and Guthrie, 2000, p. 159), other categories may be added to the model (see Habersam and Piber, 2003, p. 767) or the whole model can be completely redefined (see Leliaert et al., 2003).

Subsequently, it is the characteristics of IC in relation to physical and financial capital that makes the identification of the inter-relationships between an organisation’s IC components and its value creation a difficult and challenging task. There are four reasons for this. First, IC is invisible in nature, making it difficult to examine, analyse and measure (Mouritsen, 2003). Second, creating value from IC is driven by multiple and varied interactions between its different elements (Cuganesan, 2005). Third, the non-additive nature of IC (Peppard and Rylander, 2001; Chatzkel, 2003) means it is difficult to know if investing leads to value as more IC does not necessarily translate into greater business benefits. Last, the economic value consequences of IC are indirect and often visible in the medium- to long-term only (Brennan and Connell, 2000; Abeysekera, 2006). Consequently, simple linear relationships of cause-and-effect between IC components and value cannot be assumed as doing so may lead to erroneous insights and actions. Thus, there is a growing need to acknowledge and empirically investigate the complexity of IC (Cuganesan, 2005; Bueno et al., 2006; Mouritsen, 2006).

Mouritsen (2006) points out there are two approaches to developing IC research; being the ostensive and performative perspectives. The ostensive approach is seen to be mainly aligned with the scorecard and narrative frameworks that currently proliferate the IC literature in that “…IC elements are connected to value creation and organisational results in one specific way” (Mouritsen, 2006, p. 822). In the literature that forms part of the ostensive approach, empirical studies depict IC from a cause and effect perspective
especially in relation to IC making a contribution towards increased market value (e.g. Pulic, 2000; Holland, 2003; Burgman and Roos, 2004). Cuganesan (2005) posits that this may be due to the popularity of the resource based view of organisational strategy found in the IC literature and that the studies of IC tend to focus on the IC resources of an organisation rather than the interaction of the resources in creating value. The resource based view of strategy identifies that there is ‘causal ambiguity’ in relation to which of these resources, or combination of these resources, create value for the organisation (Lippman and Rumelt, 1982; Dierickx and Cool, 1989). The ostensive approach is to IC research is thus seen as searching to identify the causes of value creation and to reduce ambiguities in relation to value creation. But to date, no ‘silver bullet’ can be claimed to have been found, suggesting that far more complex issues are at hand in the value creation process other than the ownership and control of firm specific resources.

On the other hand the performative research agenda espouses that there is “…no fundamental formula to understand the role of IC in organisations and society. IC is related to its effects fluidly in specific instance of interaction” (Mouritsen, 2006, p. 823). From this view there is little in the IC literature which reflects this approach with the visual representations of IC by Roos et al. (2005) and Marr et al. (2004b) going some way towards exemplifying the performative approach (Mouritsen, 2006, p. 826). Another example is the value map created by Fletcher et al. (2003, p. 514) to represent how intangibles are perceived to create value in the Australian Red Cross Blood Service.

The contrasting research agenda and theory of the performative approach opens the opportunity to develop research that, at an organisational level, begins to provide some answers to what Mouritsen (2006, p. 823) describes as the ‘big questions’ of; “How does IC work in firms?”, “What is IC composed of?”, and “How is IC related to value?” We investigate these questions through our case study of the BOP division of AusFinCo. In so doing we highlight the multi-dimensional nature of IC and the value creation nexus. In addition we empirically ground the networked nature of IC as it is performed within an organisation, identifying both the extent of the manifestation of individual components as well as the strength of inter-relationships between various components.

**RESEARCH SITE AND METHODS**

*Research Site*

The BOP division of AusFinCo performs the back office functions for AusFinCo’s products; they manage the overall information technology (IT) architecture, support and enhance software systems, and manage and implement major projects. They make available infrastructure support for cash management, fraud,
physical security, business services and records management. In addition, BOP manages AusFinCo’s
property portfolio and outsourcing contracts. BOP employs 16% of AusFinCo’s staff and is responsible
for 45% of AusFinCo’s expense base. Our research AusFinCo was conducted in two phases

**Research Methods**

**Phase I: Semi-structured BOP management interviews**

A series of semi-structured interviews were conducted with BOP management in October and November
of 2005. In all 11 interviews were conducted with senior management team. The purpose of the interviews
was to establish the major ‘management challenges’ that were evident in BOP’s attempt to deliver value
based on the current strategic objectives of the organisation. The use of interviews in case studies such is
seen as an important, method by which data is collected for case studies (Yin, 2003) and is a primary
method which is utilised across the spectrum of qualitative research methods (Creswell, 1998). Yin (2003,
p. 90) advocates the use of two interview styles - open ended and focused interviews. Our study used
focused interviews (also known as semi-structured interviews) as they allowed for the use of a specific set
of questions aimed at why particular processes occur. Semi-structured interviews are an interpretivist
approach to research. and are based on the assumption that “the actions of people, individually and
collectively, are based on their constructions of the nature of the world in which they operate” (Dunford,

Therefore, the meanings people attribute to situations determine the actions they take. Thus, the semi-
structured interview questions used in this research were designed (see Patton, 2002) to elicit insights into
how the organisation and its members understood the value-creation process and the challenges involved
in realising value. Doing so provides a dynamic perspective of value-creation from ‘inside’ the
organisation, as interpreted by the respondents.

**Phase II: Sense-Making analysis**

In this phase of the research, a sensemaking methodology referred to as ‘pre-hypothesis’ research was
utilised (see Snowden, 2006; Dumay and Cuganesan, 2007). At the heart the ‘pre-hypothesis’ method is
what Snowden (2006) refers to as a sense making item (SMI). A SMI is defined as “anything that helps
people make sense of the world they live in” (Snowden, 2006). The most common SMI form is that of an
anecdote or short fragments of fully formed stories that are seen as part of human discourse and are at the heart of how people transfer knowledge to each other (Czarniawska, 1998).¹

In the case of BOP we gathered 208 narratives from 41 employees who were selected using a random sampling process. Each of the employees was asked to provide at least five narratives based on open questions about their experiences of work life at BOP. Each of these narratives were indexed using a set of abstract indicators that were developed to elicit understanding about elements of IC that applied to the management challenges that were previously identified by BOP management.

**RESULTS AND DISCUSSION**

**Phase 1: Interview Analysis**

This series of interviews were conducted with BOP management in October and November of 2005. The purpose of the interviews was to examine how IC was implicated in management’s attempts to deliver customer value based on the current strategic objectives of the organisation. The main challenges facing BOP executives in managing its IC identified in the interviews were categorised in terms of structural and human capital components as presented in Figure 1.²

![Figure 1: IC Components in Delivering Customer Value](image)

1 Recent IC approaches emphasise narrative as a means of explicating the reasons behind an organisation's management of IC and offer some indication as to the structure required to manage IC (Mouritsen et al., 2003). These approaches prescribe narrative as a means of locating quantitative numbers about IC within a broader network of value creation and making IC statements intelligible (Mouritsen et al., 2002).

2 Given BOPs role as a back office service provider, the ensuing analysis focuses on areas that it was primarily responsible for, namely structural and human capital, and how this influenced end-customer value (relational capital)
While spatial limitations preclude a full discussion of each of these challenges, empirical data relating to the ‘Managing an ageing workforce’ challenge is presented below.

**Example: Managing an ageing workforce**

AusFinCo, along with many other organisations are faced with the challenges of an ageing workforce. This has been brought about by the fact the baby-boomer generation is fast approaching retirement age and because of falling birth rates since the mid 1960’s (APSC 2003; Gandossy and Effron, 2004; Kiyonaga, 2004). As a result, AusFinCo management is anticipating that there will be a shift in the employment marketplace as the pool for talent and jobs is expected to recede due to the aging workforce as the baby-boomer generation retires and because of falling birth rates since the mid 1960’s has not allowed sufficient population growth to allow for continued growth in the available workforce (Green, 2003; Brockbank and Ulrich, 2005; Geissler et al., 2005). This is seen by a number of managers to impact on the organisation in different ways, these have been identified as having a scarce talent pool available in the future, strategies for the retention of staff, the retirement of employees compounded by turnover rates and the innovative solutions that will be required to maintain sufficient human resources.

The first impact perceived by managers is the reduction of the talent pool that the organisation will be able to choose from as it needs to fill positions in the future. There is a perception that the time will come soon when employers will no longer have a qualified batch of suitable applicants to choose from and the tide will turn to where potential employees will have a pool of employers to chose from as espoused by a senior HR manager;

“In the people front, from my perspective, the issues for me are longer term, we’re going to end up in this space of employees actually having the upper hand; they will be the ones looking for employers, i.e. all of the baby-boomers, they just run off. So instead of having a net employable population of 170,000 people a year, my net employable population is 20,000 a year. And if that table is going to turn very soon, 2008, ... it’s my responsibility then to make sure that, one, either I’ve got the jobs the most efficient that they can be, i.e. I’ve got the least number of people doing those jobs as possible. And I’ve also got to make sure that those jobs that are there are very meaningful jobs.”

Second, the retirement of staff will be compounded by the current and possibly higher turnover rates of employees. At present AusFinCo has only just begun to address the issues with the greatest danger being the loss of organisational knowledge that comes with high levels of turnover and retirement;

“To be honest we’re just doing the work to find out. I don’t think it’s been high on the sort of agenda until recently. And my guess is that it’s going to become more and more
important for us to understand that information and be able to cut that information up.
It’s not just at the retirement end; we lose about four and a half thousand people a year,
that’s temporary and permanent. It’s four and a half thousand out and four and a half
thousand in each year, that’s a huge quantity of intellectual capital that’s walking out of
our doors.”

As a result, AusFinCo is considering how to maintain and improve its human capital and the underlying
mix of skills and abilities as it competes with other organisations facing the same predicament. These
involve strategies to attract, develop and utilise human resources not only within the current organisational
framework, but through other organisations or even outsourcing partners as the employment and career
wants and needs of the upcoming Generation ‘X’ and Generation ‘Y’ employees will be much different to
the retiring Baby-boomers;

“So in an environment where you’ve got scarce talent and that talent is going to be very
actively sought, by not only our competitors, but others in the marketplace. What can we
do as an organisation now to start building that talent base? And what can we do to think
more broadly than AusFinCo in terms of resources and how you attract them, and use
them, and give them career opportunities, mobilize them; across potentially partners, or
industries, whatever it might be. As usual we are quite lacking in ideas. But necessity
being the mother of invention, I guess at some stage in the next few years we will have to
start looking how do you get a broader resource pool over multiple organisations.”

From the perspective of managing value creation two of the questions posed earlier, “How is IC related to
value?” and “What is IC composed of?” can be addressed. First, it can be seen that IC, as represented by
Human Capital in this example, is important not only for creating value, but if AusFinCo does not
maintain its Human Capital it may also lead to value destruction as not having the right people in the right
places at the right time will not allow it to carry on business as usual. Second, and more broadly, various
elements of human capital and structural capital have been identified which, according to the executive
management of BOP, will allow the delivery of customer value (relational capital). However, questions
relating to “How does IC work in firms?” remain unanswered. Specifically, how the various IC elements
are inter-related and the complex nature of the IC-value creation nexus remains under-described. As noted
earlier in the paper, the non-additive nature of IC means that, while a relationship between the IC elements
as presented in Figure 1 and value may well exist, how this relationship manifests may well change over
time. To provide some insights into “How IC works” at BOP, the results of the Phase II sense-making
analysis is presented next.
**Phase II: Making sense of IC and Value-Creation**

In this section the data collected using the SenseMaking research methodology to help answer the “How does IC work in firms?” is presented. First, BOP employees were asked to provide narratives about their work life from both positive and negative perspectives. These narratives were then indexed by the employees themselves in terms of the IC components that were most relevant in characterising the themes of the narrative. Classifying responses in terms of the prevalence of structural and human capital IC components provides an indication of the importance of the various factors. This is represented in Table 1.

[Insert Table 1 Here]

Examining Table 1 provides both a confirmation and more detail on the IC components that are relevant to the conduct of business activities that impact the customer, as envisaged by BOP employees. In examining structural capital IC components, there is a strong emphasis on knowledge communication, the use of technology and the right mix of human intervention and automation. The role of technology in creating value was confirmed with three of the top five indexes of employee narratives about their work life being about its impact on processes and customers. Importantly, the role of human intervention should not be overlooked with communication and people helping customers being seen as strong themes of work at BOP and AusFinCo. Finally, examining Human Capital components in Table 1 indicates the importance of attracting, engaging and retaining employees. Also confirmed were previous findings about the importance of knowledge workers, with employees also emphasising the need to learn through training and from knowledge sharing with other staff.

Given the complexities of IC, it was necessary to consider how each of the IC components influenced each other and the overall pattern of interaction. Thus, in addition to investigating the perceived importance of each IC component, the interaction between them was also analysed. The visual map of the interaction pattern of IC at BOP is presented in Table 2. The basis of this map is a pair wise correlation analysis of the ranking scores provided by the employees for each of the IC components (for more detail, refer to Dumay and Cuganesan, 2007). The table is coded to represent the strength of the inter-actions between the representations of elements of IC. Black denotes very strong interactions; grey denotes a strong interactions and white denotes little or no inter-action.
To simplify the analysis, the relational capital components considered to most identify with customer and shareholder value have been selected as “value dimensions”, and the relationships between the various IC components and these dimensions have been represented in Table 3. This analysis provides insights into how IC works within BOP and the complexities of the IC-value creation nexus.

First, there are strong inter-relationships between the four value dimensions, indicating ‘value bundling’ across customer and shareholder value dimensions. Employees perceive that delivering customer value will in turn translate into value creation for AusFinCo in a competitive context and its shareholders. Second, the importance of managing knowledge flows and knowledge workers is emphasised, with strong relationships not only between the requirement for knowledge workers and people helping customers and the four value dimensions as has been noted earlier, but also for the need to share knowledge externally and innovation in terms of products, both of which have strong and very strong relationships with the four value dimensions. Last, it confirms in more comprehensive fashion is the role of technology. While technology helping customers was not within the top five indices relevant to work life at AusFinCo as indicated in Table 1, it is an important enabler of customer and shareholder value, having very strong relationships with all four value dimensions.

Overall, a relationship between elements of Human Capital, Structural Capital and improvements in Relational Capital at AusFinCo is indicated from the perspective of BOP employees. The analysis indicates that people in BOP believe there is a relationship between a work environment that is seen to be attractive and engaging, develops competencies and offers employees a career that is both enabled by and allows the application of information and communication technology and the flow of knowledge. It is the view of BOP employees that the interaction of these intangible resources creates value for AusFinCo and its customers.
is the view of BOP employees that the interaction of these intangible resources creates value for AusFinCo and its customers. Thus from a value creation perspective, managerial interventions into the organisation that, for example, develops the work environment, develops career paths and ICT resources are seen to be beneficial and focussed.

Thus, it is demonstrated here is that it is possible to take a snapshot of an organisation at a desired point in time and report by way of organisational narratives, a visual display, which is supported by the analysis of the interaction of the organisations IC. This has the potential to disseminate information about the state of the interactions between the elements of the organisations IC. But what can add real value to the organisation is that it is also possible to take another snapshot of the organisation after interventions take place to see if the pattern of interaction of IC elements changes, whether it is for the better or for the worse. The benefit of taking a snapshot beforehand allows for the development and implementation organisational interventions or probes that have the potential to influence the development of patterns of interactions that are desirable for the organisation. The subsequent post intervention snapshot analysis will help the organisation understand what interventions were successful and those that were not and it is the reporting of these interventions that helps create value. Should the results of a specific intervention become reliably predictable it may be possible to move the intervention from the unknown to ‘good’ or ‘best practice’ (see Kurtz and Snowden, 2003).

CONCLUSION

This study presents a single case study of IC in action. In so doing, it addresses contemporary calls in the IC literature for empirical investigations of the complex inter-relationships within and between IC and value creation in organisations. We consider this paper to make two contributions to the literature on IC.

First, this paper provides empirically based understandings of the tangible and intangible assets of the firm as a highly inter-dependent bundle of resources (Marr et al., 2004a) and explanations of how IC resources ‘entangle’ and act productively (Mouritsen, 2004b). Specifically, we highlight the fluid and networked nature of IC, comprising complex inter-relationships between various elements and value (as presented in Table 2 and Table 3 for BOP). Thus, we begin to investigate the emerging ‘performative’ research agenda in IC (Mouritsen, 2006) and the ‘big questions’ of “How does IC work in firms?”, “What is IC composed of?”, and “How is IC related to value?”

Second, our findings have implications for the practices of measuring and managing IC. A number of models have been proposed that claim to explicate the nature of IC inter-relationships and value creation.
One such is the IC accounting system proposed by Mouritsen et al (2001b) that has since been both empirically illustrated and incorporated into international guidelines for the development of intellectual capital statements (Mouritsen et al., 2003). Measurement-focused models have also been advanced as a means of focusing on IC and value creation. These include the Value-Creation Index (Baum et al., 2000) and the Value Creation Scoreboard (Lev, 2001), both of which identify a set of non-financial measures or drivers that are statistically associated with indicators of value such as share prices. Competing with these measurement models are a number of visualisation approaches. These include strategy maps (Kaplan and Norton, 2004), value creation maps (Marr et al., 2004a) and IC-navigators (Fernstrom et al., 2004a).

While the above models and frameworks represent important advances within the IC discipline, they silence the problematic nature of utilising IC to create value. IC inter-relationships and their consequences for value creation are unstable and precarious, being contingent upon the manner of their deployment and use within organisational processes. Thus, managing IC based on insufficient ‘measurement’, representations and understandings of how IC is enacted to create value can have adverse effects for organisations, giving rise to intellectual liabilities (Caddy, 2000), orphan knowledge (Caddy, 2001; Caddy et al., 2001) or value dilution (Cuganesan, 2005).

We contend that in revealing the complex and fluid nature of IC and value-creation, that there is also a need to consider how IC is deployed and utilised in value-creating activities. To this end, ‘measures’ of IC such as those provided in Table 2 and Table 3 for BOP help. While these might not be conventional ‘key performance indicators’ or performance measures as normally understood, they represent the relationships and importance of IC elements in organisational value creation processes. Furthermore, if repeated over time, the ‘numbers’ (correlation coefficients) will change as managerial interventions occur, environmental change takes place and what IC is and how it works to effect value creation itself changes. Single and double-loop learnings could thus occur in much the same way as is claimed by popular measurement frameworks such as the Balanced Scorecard (Kaplan and Norton, 2004). As such, we propose the representations of IC developed herein as presented in Table 2 and Table 3 as means of ‘measuring’ IC within organisations. It is from this new ‘measurement’ front that organisational interventions into the development of IC resources and value creation can be informed, and if successful, stabilised, thus allowing for some of the ambiguity, surrounding how intangible resources create value, to be reduced.

In closing, we recognise the limitations of a single case study for generalising the findings to other empirical settings across organisations and other industries. Avenues for future research comprise the investigation of IC as a complex phenomenon and investigations of how IC management, measurement and reporting takes place within organisation and the consequent effects of this for firm performance.
Table 1: Ranking of IC components

<table>
<thead>
<tr>
<th>IC Component</th>
<th>Frequency of Self-Indexing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relational Capital</strong></td>
<td></td>
</tr>
<tr>
<td>Creates value for AusFinCo</td>
<td>187</td>
</tr>
<tr>
<td>Beating the competition</td>
<td>148</td>
</tr>
<tr>
<td>Creates value for customer</td>
<td>146</td>
</tr>
<tr>
<td>Requires a knowledge worker</td>
<td>145</td>
</tr>
<tr>
<td>Positive customer experience</td>
<td>140</td>
</tr>
<tr>
<td>Technology helping customers</td>
<td>117</td>
</tr>
<tr>
<td>Requires a process worker</td>
<td>109</td>
</tr>
<tr>
<td>Sharing knowledge externally</td>
<td>98</td>
</tr>
<tr>
<td>I can see the customer</td>
<td>94</td>
</tr>
<tr>
<td><strong>Structural Capital</strong></td>
<td></td>
</tr>
<tr>
<td>Effective lines of communication</td>
<td>159</td>
</tr>
<tr>
<td>Technology supports processes</td>
<td>135</td>
</tr>
<tr>
<td>People helping customers</td>
<td>131</td>
</tr>
<tr>
<td>Easy to use technology</td>
<td>126</td>
</tr>
<tr>
<td>Technology supports customers</td>
<td>117</td>
</tr>
<tr>
<td>Performance is product based</td>
<td>107</td>
</tr>
<tr>
<td>Innovative products</td>
<td>99</td>
</tr>
<tr>
<td>Product focussed</td>
<td>87</td>
</tr>
<tr>
<td><strong>Human Capital</strong></td>
<td></td>
</tr>
<tr>
<td>An attractive place to work</td>
<td>172</td>
</tr>
<tr>
<td>Trained and competent staff</td>
<td>159</td>
</tr>
<tr>
<td>Learning from others</td>
<td>146</td>
</tr>
<tr>
<td>The work is engaging</td>
<td>145</td>
</tr>
<tr>
<td>Long term career</td>
<td>134</td>
</tr>
<tr>
<td>Set in their ways</td>
<td>108</td>
</tr>
<tr>
<td>The new generation</td>
<td>92</td>
</tr>
<tr>
<td>Looking to retire</td>
<td>75</td>
</tr>
</tbody>
</table>
Table 2: Map of inter-relationships of IC

<table>
<thead>
<tr>
<th>IC Elements</th>
<th>Relational Capital</th>
<th>Structural Capital</th>
<th>Human Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive customer experience</td>
<td>Creates value for the AusFinCo</td>
<td></td>
<td></td>
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<tr>
<td>I can see the customer</td>
<td>Sharing knowledge externally</td>
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</tr>
<tr>
<td>Looking to retire</td>
<td>The new generation</td>
<td></td>
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</tbody>
</table>
Table 3: Value dimensions and inter-actions with IC components.

<table>
<thead>
<tr>
<th>IC Elements</th>
<th>IC Components</th>
<th>Positive customer experience</th>
<th>Creates value for AusFinCo</th>
<th>Beating the competition</th>
<th>Creates value for customer</th>
</tr>
</thead>
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<tr>
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<td>I can see the customer</td>
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<td>Sharing knowledge externally</td>
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<td>Requires a knowledge worker</td>
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<td>Beating the competition</td>
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<td>Creates value for customer</td>
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<td>Requires a process worker</td>
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<td>Technology helping customers</td>
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<td>Structural Capital</td>
<td>Product focussed</td>
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<td>Innovative products</td>
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<td>Performance is product based</td>
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<td>Easy to use technology</td>
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<td>People helping customers</td>
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<td>Effective lines of communication</td>
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<td>Technology supports customers</td>
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<td>Human Capital</td>
<td>The work is engaging</td>
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<td>Trained and competent staff</td>
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<td>Learning from others</td>
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<td>Long term career</td>
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<td>Set in their ways</td>
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<td>An attractive place to work</td>
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<td>The new generation</td>
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<td>Looking to retire</td>
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REFERENCES


