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# Intellectual Capital Reporting by the New Zealand Local Government Sector

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## Abstract

This paper assesses the extent and quality of intellectual capital disclosures in the annual reports of the New Zealand local government sector. This paper makes use of an Intellectual Capital Disclosure index constructed through a participatory stakeholder consultation process to develop a disclosure index which measures the extent and quality intellectual capital reporting in the 2004/2005 annual reports of 82 local government authorities in New Zealand. The final index comprised 26 items divided into three categories: internal capital, external capital and human capital.

The results indicate that the reporting of intellectual capital by local government authorities is mixed. The most frequently reported items were joint ventures/business collaborations and management processes, while the least reported items were intellectual property and licensing agreements. The most reported category of intellectual capital was internal capital, followed by external capital and human capital.

The results identify a number intellectual capital items whose reporting could be improved to meet stakeholder disclosure expectations. In the internal capital category this included the disclosure of intellectual property. In the external capital category disclosure concerning ratepayer demographics and licensing agreements could be improved. While the disclosure of most items in the human capital category could be improved, particular attention should be given to disclosure of entrepreneurial innovativeness and vocational qualifications.

## Key words

accountability; intellectual capital; voluntary disclosure; annual reports; New Zealand; local authorities; public benefit entities; stakeholder consultation process; disclosure index

## **1 INTRODUCTION**

There is a general consensus among researchers and accounting practitioners that firms are leaving the industrial world and entering a new age driven by information and the knowledge economy (Bontis, Dragonetti, Jacobsen & Roos, 1999; Chatterji, 2000; Clawson, 1996; Guthrie, 2001; Sveiby, 1997). A key driver in this new world is knowledge (Bontis *et al.*, 1999; Petty & Guthrie, 2000). It has been suggested by Clawson (1996) and Bontis (2001) that a paradigm shift is occurring, bringing with it a new way of seeing the world and that the 'knowledge organisation' is the key to future financial success in the 'Information Age'. Brooking (1996) and Bontis (2001) attribute the shift in thinking to information-age technology, the media and communications which have provided tools with enormous intangible benefits to organisations.

Organisations began to realise that the key to success in the new strategic environment was the careful management of information and knowledge (Quinn, 1992). As a result, greater emphasis was placed upon the intangible assets of an organisation, particularly intellectual capital. The proliferation of conferences on intellectual capital, the myriad of books, working papers and journal articles that deal with the topic and the large number of consulting firms offering products and services centred around intellectual capital are testament to this (Petty & Guthrie, 2000).

Intellectual capital reporting began as an accounting/management practitioner-created concept. In the early 1990s organisations such as Skandia, Rambøll and GrandVision realised that existing financial accounting frameworks were unable to adequately address the measurement and recognition of the new value drivers in the economy. These organisations developed their own frameworks and methods for measuring and managing intellectual capital. It has only been more recently that scholarly contributions appeared to analyse and use the potential offered by intellectual capital reporting (Bontis, *et al.*, 1999; Bounfour,

2003; Brooking, 1996; Edvinsson & Malone, 1997; Guthrie, Petty & Johanson, 2001; Sveiby, 1997).

Researchers and analysts have not yet reached unanimous agreement on the definition of intellectual capital and its components (Bounfour, 2003; Kaufmann & Schneider, 2004; Petty & Guthrie, 2000). This has led to the development of a plethora of alternative intellectual capital disclosure, measurement and reporting models. While each model is different, each inherently recognises that organisational stakeholders require diverse types of information, extending beyond that delivered by traditional accounting practice (Collier, 2001; Guthrie & Petty, 2000; Guthrie *et al.*, 2001). Skandia's Navigator Scheme and the Balanced Scorecard are just two of the many models developed for the recognition and measurement of intellectual capital.

A number of international studies have focused on intellectual capital disclosures by private sector organisations in Australia (Guthrie, Petty, Ferrier & Wells, 1999; Guthrie & Petty, 2000), Canada (Bontis, 2003), Ireland, (Brennan, 2001), Italy (Bozzolan, Favotto & Ricceri, 2003), New Zealand (Wong & Gardner, 2005), Singapore (Firer & Williams, 2005), Sri Lanka (Abeysekera & Guthrie, 2004; Abeysekera & Guthrie, 2005), Sweden (Olsson, 2001) and the UK (Williams, 2001).

Public benefit entities differ from private sector organisations in that their main objective is not the creation of shareholder value, but rather the delivery of outcomes to stakeholders. Public benefit entities are built largely on intangibles (Dell Bello, 2006). These include the skills, competencies, procedures and information systems controlled by the entity. These generate intangibles of a collective nature such as public welfare, quality of life, protection of the environment and reputation of a territory (Del Bello, 2006). It is these significant intangible resources that are generated, controlled and managed by public benefit entities that are inadequately disclosed in traditional annual reports.

The objective of this paper is to develop a disclosure index for assessing the extent and quality of intellectual capital disclosures in the annual reports of the New Zealand local government sector. The index is then applied to the 2004/2005 annual reports of the local government sector to determine the level of current intellectual capital reporting.

An extensive literature review indicated that to date no studies have examined the level of intellectual capital disclosures by local government either in New Zealand or internationally.

In view of the financial management reforms that have taken place in the New Zealand public sector, and the extensive research attention that intellectual capital disclosures have received in the private sector, this paper aims to fill the gap in the literature by exploring the current extent and quality of intellectual capital reporting by the New Zealand local government sector.

This paper is structured as follows. The next section reviews the local government reforms including the adoption of commercial principles and accrual accounting that occurred in New Zealand during the late 1980's and early 1990's aimed at increasing local government accountability. Issues of accountability and transparency are considered to provide a theoretical framework within which this study takes place. Intellectual capital is then defined. Next, the development of the disclosure index used in the study and the allocation of 'importance' weighting for each item is described. Finally the results obtained through the application of the intellectual capital disclosure index to the annual reports of local authorities and the findings are discussed.

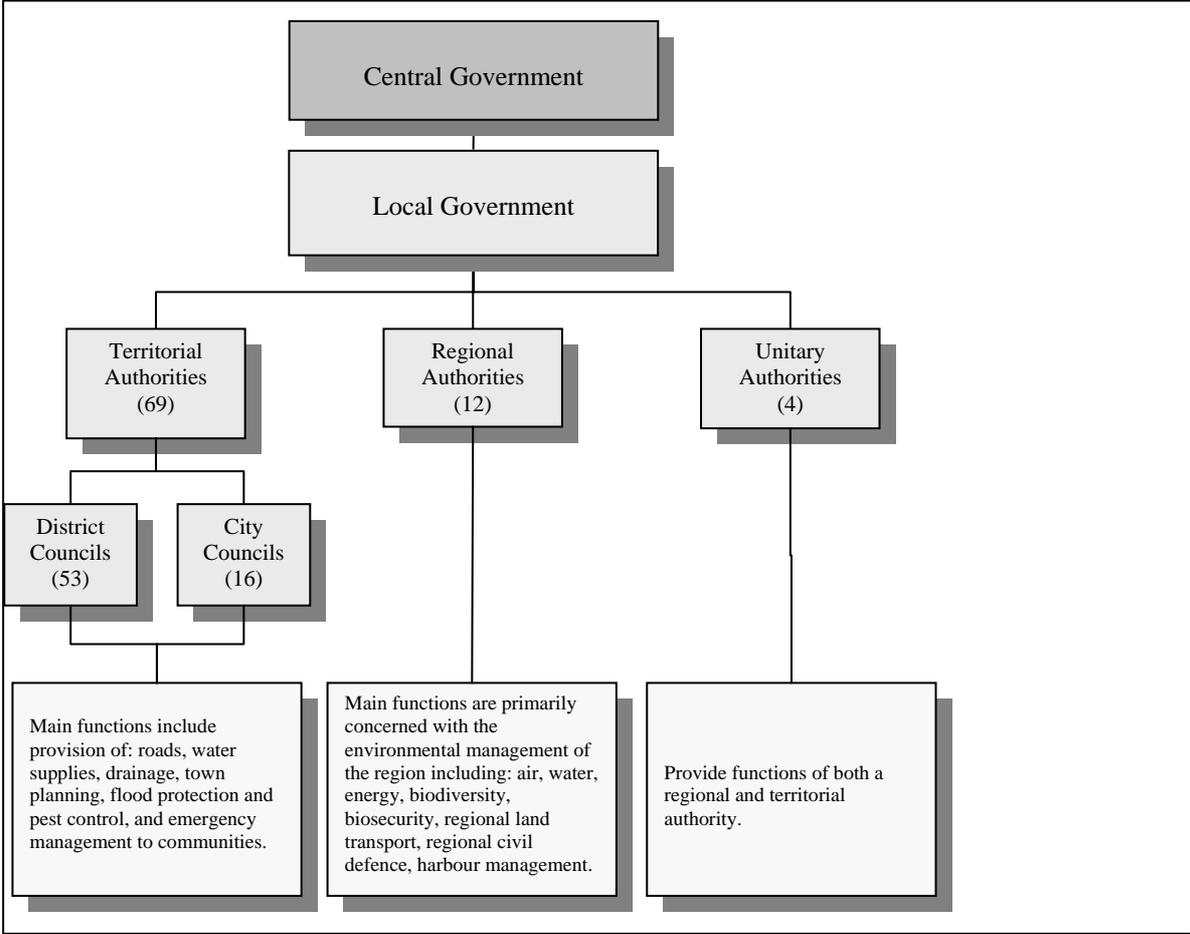
## **2 THE NEW ZEALAND LOCAL GOVERNMENT SECTOR**

The New Zealand local government sector is the product of the substantial economic reforms carried out in the late 1980s and 1990s. The reforms rationalised the number of local authorities from over 600 to 86, and introduced commercial principles that aimed to increase the transparency and accountability of local government to parliament and their respective local communities (Bale & Dale, 1998; Bush, 1995; Easton, 1997, Pallot, 2001; Wallis & Dollery, 2000)

### *2.1 The Local Government Sector: Structure and Function*

There are currently 85 local authorities that constitute New Zealand's local government sector. The local government sector is structured into two principal forms, regional authorities and territorial authorities. Regional authorities and territorial authorities have separate but complementary functions and should not be seen as two levels of sub-national government where one is subordinate to the other (Pallot, 2001).

**Figure 1** Structure of the New Zealand government



The 69 territorial authorities, comprising 16 city councils and 53 district councils deal with the day-to-day issues that “contribute to the well-being of the people that live in their community” (Local Government New Zealand, 2004, p. 2). There is no difference in the powers and responsibilities of city and district councils – both are territorial authorities. The difference only indicates that the population of a city is greater than 50,000 and the area is a predominantly urban centre of regional significance.

In addition to the territorial authorities, there are 12 regional authorities responsible for “managing the broad-spectrum well-being of the entire region they cover” (Local Government New Zealand, 2004, p. 2). Finally there are four unitary authorities which provide the functions of both a regional and a territorial authority (Peren, 2005).

Local councils communicate with central government agencies on behalf of their communities. This ensures that communities are able to identify well-being outcomes and to

build realistic expectations of what government can and should do to help (Peren, 2005). In turn, all central government agencies have opportunities to communicate government's roles and priorities, and to provide information they may have about communities and their agencies' activities (Peren, 2005).

## *2.2 Population and Geographical Size*

Local authorities vary considerably in size, both by population and geographical size. The largest regional council at the last Census of Population and Dwellings (Statistics New Zealand, March 2001) was Auckland Region with a population of 1,173,639 and the smallest was West Coast region with a population of just 34,464. Territorial and unitary authorities ranged from Auckland City (population 380,154) to Chatham Islands (population 714). Regional councils cover the greatest area, ranging in size from Canterbury (5,661,187 hectares) to Taranaki (1,263,982 hectares). In terms of districts, Tasman District council covers the greatest area (1,453,799 hectares or 14,538 square kilometres) while Kawerau District Council covers the smallest area of just 2,194 hectares or 22 square kilometres. City councils range in size from Dunedin City Council (334,184 hectares or 3,342 square kilometres) to Hamilton City Council of just 9,420 hectares or 94 square kilometres.

## **3 ACCOUNTABILITY AND TRANSPARENCY**

From a public benefit perspective, accountability by local governments is important. The public sector reforms of the 1980s and 1990s had a two-fold purpose. First, to ensure the public sector became more efficient and effective. Second, through increased transparency, improving the accountability relationship between local governments and the public (see Pallot, 1994; Lye, Perera & Rahman, 2005). Transparency is described by Pallot (2001) as referring to the availability of information to the public on the transactions of the government and the transparency of the decision making process, and is fundamental to expenditure management across all democracies (Premchand, 1993). The most common method of discharging accountability to stakeholders is through the annual report. This report facilitates a dialogue between the organisation and its stakeholder and serves as an accountability vehicle through which the delivery of outputs and outcomes are detailed to ratepayers and other stakeholders.

The reforms were based primarily on agency theory and public choice theory, and as such, there is an accountability element to the public at large. According to Coy and Dixon (2004), since the reforms of the 1980s, public sector annual reports have been produced with public sector accountability as an important espoused objective of reporting. Indeed, it could be argued that local governments should be more accountable to their stakeholders than their corporate counterparts, as they are in the powerful position to tax, rate and levy.

Transparency in policy making and accountability for the use of tax payers funds are fundamental principles of democratic government (Pallot, 2001). Accountability is described by Gray, Owen and Adams (1996, p. 38) as “the duty to provide an account (by no means a financial account) or reckoning of actions for which one is held responsible”. In order for the accountability relationship to exist, one party (the accountant) must be accountable to another party (the accountee) for an action, process, output or outcome (Steccolini, 2004). Accountability involves being “obliged to explain one’s actions, to justify what one does” (GASB, 1987 in Steccolini, 2004, p. 330) and is vitally important in a situation where one party has stewardship or control of another party’s assets.

Scott (1941), Normanton (1971), Chen (1975) and Coy, Tower and Dixon (1994), argue for open disclosure to all citizens who have the opportunity to make criticism. Accountability of local government is owed not only to central government and its ministers, but also to stakeholders such as ratepayers, employees, businesses and the wider community. Steccolini (2004, p. 331) agrees that the accountability relationship does exist in the public sector, and “the prevailing idea of public accountability changes over time as a consequence of changes in the social, cultural, political context”. Coy and Dixon (2004) explain that this accountability is discharged through reporting of comprehensive information about the condition, performance, activities and progress of the local government in the changing context within which it operates. The idea of open reporting of local governments can be extended to include intellectual capital disclosures. It is contended in this research, that the discharge of accountability to stakeholders is facilitated through the inclusion of intellectual capital information in the annual reports of local government.

Given that organisations are not required by accounting standards or by law to report on most of their intellectual capital, the majority of organisations that elect to disclose or report on their intellectual capital are doing so voluntarily (Petty & Cuganesan, 2005). Most of the literature focuses on intellectual capital reporting and disclosure by corporate entities. It can

be argued that this literature applies equally to the public sector due to the high level of accountability between the public sector and its stakeholders.

The primary incentive for most organisations to disclose their intellectual capital is to render the invisible visible (Cooper & Sherer, 1984). By identifying and valuing their intellectual capital, managers of organisations are better able to manage their intellectual capital. According to Guthrie and Petty (2000), if intellectual capital is not reported, then there is a risk that it is not receiving sufficient management attention.

Accountability of the government to the general public is an integral part of democratic society. Accountability of government departments is first and foremost to shareholding ministers, and then to Parliament. Ultimately however, the public is the most important stakeholder. In a democratic society the public is entitled to demand accountability from the government and local government authorities. Hyndman and Anderson (1991, p. 51) state that “public-sector organisations must be held accountable not only for the money entrusted to them, but also for results”.

In the public sector, the relationship between accountor and accountee is much broader than the conventional shareholder-manager relationship. It extends to complex web of interrelationships with government and non-government groups (Burrirt & Welch, 1997). The reason for this is that there are “multiple stakeholders with an interest in the accountability of government, and hence, a number of accountees, each with a different interest in the outcomes of public sector activities” (Burrirt & Welch, 1997, p. 533).

The stakeholders identified by Burrirt and Welch (1997) are all users or potential users of the local government annual report. The annual report is the statutory formal communication vehicle between an entity and its interested constituencies (Stanton, Stanton & Pires, 2004) but it is seen as more than just a formal requirement. Many organisations use the annual report as communication tool to discharge accountability to their stakeholders (Steccolini, 2004).

#### **4 INTELLECTUAL CAPITAL**

The intellectual capital literature yields many interchangeable terms for intellectual capital accompanied by a spectrum of definitions. A review of current literature by Kaufmann and

Schneider (2004) shows that there is no consensus on any one set of terms and definitions. Bounfour (2003) agrees that researchers and analysts have not reached unanimous agreement on the definition of intangible investment and its components. Table 1 details a number of definitions of intellectual capital which illustrate the difficulty that researchers have when determining the components of intellectual capital.

**Table 1 Definitions of intellectual and human capital**

Author	Definition
Roos, Roos, Dragonetti and Edvinsson (1997)	Intellectual capital is classified as structural and human capital, thinking and non-thinking assets. The authors make the distinction primarily on the premise that human capital requires different management approaches than other types of capital.
Sveiby (1997)	Intellectual capital consists of the invisible assets of the organisation which include: employee competence (skills, education and experience) and their capacity to act in a wide variety of situations; internal structure (management, structure patents, concepts, models, research and development capability, software); and external structure (image, brands, customers and supplier relations).
Stewart (1997)	Intellectual capital is defined as intellectual material - knowledge, information, intellectual property and experience - that can be put to use to create wealth.
Brooking (1996)	Intellectual capital consists of four components: market assets, human-centred assets, intellectual property assets, and infrastructural assets.
Edvinsson and Malone (1997)	Intellectual capital consists of human, system and market components. Employees and managers in the organisation represent human capital. Human capital refers to what people can do individually and collectively. The system component represents the knowledge in the firm which is independent of people and includes patents, contracts, databases, and information and production technology. The market component consists of the relationships between the organisation and outsiders, e.g. suppliers, distributors and customers.
Kaplan and Norton (1992)	The intellectual capital component of the balanced scorecard consists of three linked perspectives: customers, internal business processes, learning and growth.
Sullivan (1999)	Intellectual capital is knowledge that can be converted into profits. It comprises two elements: human capital and intellectual assets. Human capital consists of the firm's individual employees who possess skills, abilities, knowledge and know-how. The employee is an individual 'unit' of human capital that must be positioned where these attributes can be used effectively. Within each employee resides the tacit (uncodified) knowledge the firm seeks to utilise. Intellectual assets are created whenever human capital is codified. At this point the firm can move the intellectual asset rather than the individual to wherever it is needed.
Mayo (2000)	Author focuses on a definition of <i>human capital</i> and defines it as: a capability, knowledge, skill, experience, and networking, with the ability to achieve results and the potential for growth; individual motivation in the form of aspirations, ambition, drives, work motivations and productivity; work group effectiveness in the form of supportiveness, mutual respect sharing and values; leadership in the form of clarity of vision and ability to communicate that vision; organisational climate in the form of culture particularly the freedom to innovate, openness, flexibility and respect for the individual.

Author	Definition
Haanes and Lowendahl (1997)	A distinction is made between the intangible resources of competence and relationships. Competencies are conceptualised as the ability to perform. They are manifested at the individual and organisational levels. Relationship-type intellectual capital is manifested in the reputation of the company and customer loyalty. Both exist in an individual and collective fashion.

**Source:** Garavan, Morley, Gunnigle & Collins (2001).

Most definitions of intellectual capital tend towards including the knowledge of the firm and the recognition that intangibles can constitute claims to future benefits. This is consistent with the generally accepted definition of an asset. Intellectual capital then can be described as the value generated from resources not conventionally found on the balance sheet (Mouritsen, Bukh & Bang, 2005; Sveiby, 1997).

One of the most workable definitions of intellectual capital according to Guthrie and Petty (2000) is that offered by the Organisation for Economic Co-operation and Development (OECD, 1999). The OECD describes intellectual capital as “the economic value of two categories of intangible assets of a company: (a) organisational (‘structural’) capital and (b) human capital”. Structural capital can be further disaggregated into internal and external capital.

The definition adopted by the OECD is supported by a number of authors in the intellectual capital literature who have divided intellectual capital into three dimensions: external capital, internal capital, and human capital (see for example Edvinsson and Malone, 1997; Kaplan & Norton, 1992; Rodgers, 2003; Roos, Roos, Dragonetti & Edvinsson, 1997; Stewart, 1997; Sveiby, 1997). This classification of intellectual capital has become commonly known as the *Intellectual Capital Approach* and is used by many organisations including Skandia, Rambøll, GrandVision, and Sys-Com as a basic framework to measure and report intellectual capital.

Mouritsen *et al.* (2005) recognise that by describing an organisation using the three dimensions of intellectual capital: human capital, internal capital and external capital, the three categories are separated from each other and boundaries for a framework are established. This paper uses the Intellectual Capital Approach as the foundation of the Intellectual Capital Disclosure (ICD) index developed to measure intellectual capital disclosure by the New Zealand local government sector. The three dimensions of the Intellectual Capital Approach are detailed in Table 2.

**Table 2 Intellectual Capital Approach**

Intellectual Capital Approach	Alternative label(s)	Description
Internal capital	Organisational capital Structural capital Internal relations	Refers to the knowledge embedded in organisational structures and processes, and includes patents, research and development, technology and systems.
External Capital	Customer capital Relational capital External relations	Comprises elements of an organisation's patrimony-related customer relations: relationships with customers and suppliers, brand names, trademarks and reputations.
Human Capital	Employee competence	Refers to the set of all the knowledge and routines carried within the minds of the members of the organisation and includes skills/competencies, training and education, and experience and value characteristics of an organisation's workforce/employees.

Source Adapted from Petty & Guthrie (2000).

## 5 DEVELOPING THE DISCLOSURE INDEX

An empirically developed weighted disclosure index known as the Intellectual Capital Disclosure index (ICD index) was constructed in collaboration with a local government stakeholder panel. The ICD index was considered a 'best practice' intellectual disclosure model and was used to assess the extent and quality of intellectual capital disclosures made in the 2004/2005 annual reports of New Zealand local authorities. A disclosure index is defined by Coy (1995 p. 121) as:

A qualitative-based instrument designed to measure a series of items, which when scores for the items are aggregated, gives a surrogate score indicative of the level of disclosure in the specific context for which the index was devised.

Financial disclosure is an abstract concept which cannot be measured directly (Cooke and Wallace, 1989). However, researchers have used disclosure indices as a proxy measuring tool to measure the levels of voluntary disclosure by organisations in annual reports. (See for example; Botosan, 1997; Buzby, 1975; Cerf, 1961; Chow & Wong-Boren, 1987; Coy & Dixon, 2004; Craig & Diga, 1998; Firer & Meth, 1986; Firth, 1978; 1979; Hooks, Coy & Davey, 2002; Singhvi & Desai, 1971; and Zarzeski, 1996).

A number of research studies have focused on the number of disclosures (whether an item in a pre-prepared checklist has been disclosed or not). These items have been scored dichotomously (0 for non-disclosure, or 1 for disclosure). This study is more sophisticated in that it assesses the quality of the information disclosures by allocating weightings for the importance of each item among the sub-elements relating to its disclosure (see for example Barrett, 1977; Wiseman, 1982; Wallace, 1988; Tong, Kidam, & Wah, 1990; Adhikari and Tondkar, 1992; Coy, Tower & Dixon, 1993; Wallace & Naser 1995; Botosan, 1997; Hooks *et al.*, 2002)

The ICD index makes allowance for the relative importance of disclosure items and variations in the quality of individual disclosures in two ways. First, the relative importance of each item in the index is established by using a weighting system developed in collaboration with a local government stakeholder panel. Second, the index can be used to identify differences in the quality of reporting of individual items.

### 5.1 *The preliminary ICD index*

The literature provides a number of examples where intellectual capital disclosure was measured through content analysis of the annual reports of corporate organisations (Bozzolan *et al.*, 2003; Brennan, 2001; Guthrie & Petty, 2000; Petty & Guthrie, 2000; Williams, 2001). Previous studies that had used disclosure indices (Williams, 2001; Firer & Williams; 2005) to measure intellectual capital disclosure were able to adopt or refine existing indices. However none of the studies identified in the literature used a disclosure index as the primary tool for measuring intellectual capital disclosure in the *public sector*. This required a new index to be created specifically for this paper. It was decided to apply a disclosure index constructed according to the stakeholder consultation principles espoused by Coy and Dixon (2004).

A thorough review of the intellectual capital literature yielded a preliminary list of items which provided the foundation for the ICD index. This list, detailed in Table 3, was developed from previous content analysis studies of intellectual capital disclosure by corporate organisations (Bozzolan *et al.*, 2003; Brennan, 2001; Guthrie & Petty, 2000; Wong & Gardner, 2005).

**Table 3 Preliminary list of intellectual capital items**

Human Capital	External Capital	Internal Capital
1. Know how	1. Brands	1. Intellectual property
2. Education	2. Customers (names, purchase history)	2. Patents
3. Vocational qualification	3. Customer loyalty	3. Copyrights
4. Work-related knowledge	4. Customer Satisfaction	4. Trademarks
5. Work-related competencies	5. Customer penetration/depth	5. Infrastructure assets
6. Cultural diversity	6. Company names	6. Corporate culture
7. Entrepreneurial spirit	7. Distribution channels	7. Management philosophy
8. Employee Career development	8. Business collaborations (joint ventures)	8. Information systems
9. Employee productivity	9. Licensing agreements	9. Networking systems
10. Employee benefits/compensation	10. Franchising agreements	10. Research projects
11. Employee involvement in the community	11. Quality standards	11. Financial relations
12. Employee numbers		
13. Employee turnover		
14. Employee safety		
15. Equal Employment Opportunities		
16. Executive compensation plan		
17. Training programs		
18. Union activity		

As the preliminary list of items was based on previous studies in the private sector, the list had to be modified to ensure the indicators would be more applicable to local governments. References to ‘customers’ were changed to ‘ratepayers’ as these are the primary stakeholders in local government. Some elements were removed from the list altogether as they were deemed to be not applicable to local governments. Items removed from the list were: franchising agreements, customer loyalty, company names, and infrastructure assets.

Although infrastructure assets (such as roads and water networks) form a substantial part of the assets of local government, it was considered that disclosures concerning these items would more appropriately be captured under item ‘distribution channels’.

The following items from the preliminary list were modified:

Customers (names, purchase history) was changed to ‘ratepayers database’.

Customer penetration and depth was changed to ‘ratepayer demographics’.

Customer satisfaction was modified to ‘ratepayer satisfaction’. This category was further defined as ratepayer and/or residents’ satisfaction with municipal services e.g. library, parks and recreation facilities, animal control, resource management consent processes, and noise control.

‘Backlog work’ was added to the list under the external capital category. This refers to whether spending targets and completion dates were met for projects undertaken by local governments, or whether the work was carried over to the next financial year.

Patents, copyrights and trademarks were combined under the heading ‘intellectual property’.

In order to simplify the human capital section of the list, a number of indicators relating to employees were condensed under the heading of ‘education programs’ and ‘know-how’.

A brief description was added to all items on the list to provide further explanation of the terms to ensure that all members of the stakeholder panel had a comparable understanding of the items in the list.

The modified list and item description is detailed in Table 4.

**Table 4 Modified list of intellectual capital items**

<b>Item</b>	<b>Description</b>
<b>Internal Capital</b>	
1. Intellectual property	Detail of patents, copyrights, trademarks held by local authority
2. Management philosophy	As evidenced by vision/mission statements
3. Management processes	Relating to processes within local authority
4. Corporate culture/values	Comprises the attitudes, experiences, beliefs and values of the local authority
5. Information/networking systems	Details on the development, use, application and influence of information systems
6. Financial relations	Relationships between the local authority and finance providers
7. Promotional tools	Advertising the local authority does to promote its services or its region
<b>External Capital</b>	
8. Brands	Details of brands associated with the local authority
9. Ratepayers database	Database of all ratepayers
10. Ratepayer demographics	Information relating to ratepayers
11. Ratepayer satisfaction	Indicators of ratepayer satisfaction
12. Backlog work	Relating to unfinished/un-started projects
13. Distribution channels	Information on how local authority services/products reach users
14. Business collaborations (joint ventures)	Involving the local authority
15. Licensing agreements	Held by the local authority
16. Quality standards	Adherence to quality assurance programs/standards

## Human Capital

17.	Know how	Employee knowledge
18.	Employee education programs	Education/ongoing programmes initiated by local authority
19.	Vocational qualification of employees	Non academic qualifications held by employees
20.	Work-related knowledge of employees	Gained 'on the job' or as part of ongoing training
21.	Cultural diversity	Demographic information of employees
22.	Entrepreneurial innovativeness	Focusing on cost-minimisation rather than profit-maximisation
23.	Equal Employment Opportunities	Details of EEO programs/initiatives
24.	Executive compensation plan	Details of executive remuneration
25.	Training programs	Undertaken/provided by the local authority
26.	Union activity	Details of unions representing employees

### 5.2 *Constructing the weighted ICD index*

Following the modification of the list, a local government stakeholder panel was asked to assign weightings to each of the items in the revised list of intellectual capital items. The 14 member stakeholder panel comprised an audit partner, a manager of human capital, an associate director of a professional accounting firm, a chief financial officer of a local authority, an academic, a financial controller of a local authority, an accountant at a professional accounting firm, a finance manager of a local authority, the chief financial officer of a local authority, a manager of a stakeholder/watchdog group, an advisor to a local authority, a systems analyst of a local authority, a consultant solicitor, and a senior policy analyst of a local authority. The stakeholder panel was selected based on their involvement with local government, knowledge of the local government sector, knowledge of what might be included in the annual reports of local government authorities, personal experience, or by membership of the local government stakeholder group.

The stakeholder panel was asked to review the list of items in the disclosure index through an online questionnaire. The panel was asked for their opinion on the 26 intellectual capital annual report items, divided into three categories as shown in Table 4. For each item the stakeholder panel were to decide whether the item should or should not be disclosed. For items that should be disclosed, the stakeholder panel were asked to rate the item's importance based on the following 'Likert-type' rating scale.

0	1	2	3	4
Should <b>not</b> be disclosed	Should be disclosed but is of <b>minor importance</b>	Intermediate importance	Should be disclosed and is <b>very important</b>	It is <b>essential</b> to disclose this item

A five point scale was chosen based on the extent of its use in previous research. According to Hooks (2000) most of the previous research using disclosure indices used a five point scale either: one to five (Adhikari and Tondkar, 1992; Baker and Haslem, 1973; Firth, 1979; McNally, Eng & Hasseldine, 1982; Firer and Meth, 1986; Tong *et al.*, 1990) or zero to four (Barrett, 1977; Benjamin and Stanga, 1977; Buzby, 1975).

The allocated scores became the weightings of each item in the index. The weighted index was used as a ‘best practice’ disclosure model and was used to score how well local authorities disclosed intellectual capital items in their annual report. The weights were determined as the mean score of the 14 panellists’ opinion. Where 0 = the item ‘should not be disclosed’; to 5 = ‘It is essential to disclose this item’. Although the panel was not involved in the initial selection of the items to be disclosed they were requested to add any intellectual capital items they felt should be included in the annual reports. The panel was also asked to assign a weighting to any additional items they may have included in the list. No additional intellectual capital disclosure items were added by any of the stakeholder panel in any of the three categories.

### 5.3 Differences in quality of reporting

In addition to establishing the importance of disclosure of each item, the ICD index makes allowance for differences in the quality of reporting of individual items. Previous studies on intellectual capital disclosure have incorporated quality aspects. For example, Guthrie *et al.*, (1999) scored disclosures on a scale of zero to three, with three being the highest score for monetary disclosure, a score of two for numerical disclosure, a score of one for disclosure in narrative form, and a score of zero for non-disclosure. Similar scales have been used in intellectual capital disclosure studies (Bozzolan *et al.*, 2003) and other annual report disclosure studies (see for example Cormier & Magnan, 1999; Giroux, 1989; Walden & Schwartz, 1997; Wiseman, 1982).

Although attempts to measure disclosure quality has been criticised (see Marston & Shrides, 1991; Firer & Williams, 2005; and Botosan, 1997) it was decided to incorporate quality criteria into the disclosure index as it was felt that the importance of measuring the quality of disclosure outweighed the difficulty of doing so. A six-point scale modified from Shareef (2003) and Firer & Williams (2005) was used in this research. The scale is presented in Table 5.

**Table 5 Quality criteria for scoring disclosure**

5	Quantitative/Monetary and Descriptive	The disclosure item is clearly defined in monetary or actual physical quantities and descriptive statements are made
4	Quantitative/Monetary	The disclosure item is clearly defined in monetary or actual physical quantities
3	Descriptive	The disclosure item was discussed showing clearly its impact on the local authority or its policies
2	Obscure	The disclosure item was discussed in limited references or value comments whilst discussing other topics and themes
1	Immaterial	The local authority states that the disclosure item is immaterial to the financial well-being and results of the local authority
0	Non-disclosure	The disclosure item does not appear in the annual report.

**Source:** Adapted from Shareef (2003); Firer & Williams (2005)

Some items in the disclosure index are of a descriptive nature and assigning quantitative or monetary value for those items was not possible. For example, ‘corporate culture’ and ‘management philosophy’ are items that are very difficult to quantify and indeed it would be nonsensical to try and do so. For these items, a maximum score of three was allocated according to the criteria presented in Table 5 above. Items that are allocated a maximum quality score of three are: 1.1 ‘intellectual property’, 1.2 ‘management philosophy’, 1.3 ‘management processes’, 1.4 ‘corporate culture/values’, 3.4 ‘work-related knowledge’, and 3.6 ‘entrepreneurial innovativeness’ (these items are *italicised* in Table 6).

The final disclosure index consists of 26 items divided into three main categories: internal capital, external capital and human capital. The resulting index, weightings and maximum scores for each item is shown in Table 6.

**Table 6 Final ICD index items and weightings**

<b>1.0</b>	<b>Internal Capital</b>		<b>Weighting</b>	<b>Maximum Score</b>
1.1	<i>Intellectual property</i>	Detail of patents, copyrights, trademarks held by local authority	<b>2.3</b>	<b>3</b>
1.2	<i>Management philosophy</i>	As evidenced by vision/mission statements	<b>2.7</b>	<b>3</b>
1.3	Management processes	Relating to processes within local authority	<b>2.1</b>	<b>3</b>
1.4	<i>Corporate culture/values</i>	Comprises the attitudes, experiences, beliefs and values of the local authority	<b>2.5</b>	<b>3</b>
1.5	Information/networking systems	Details on the development, use, application and influence of information systems	<b>1.5</b>	<b>5</b>
1.6	Financial relations	Relationships between the local authority and finance providers	<b>3.0</b>	<b>5</b>
1.7	Promotional tools	Advertising the local authority does to promote its services or its region	<b>1.6</b>	<b>5</b>
<b>2.0</b>	<b>External Capital</b>		<b>Weighting</b>	<b>Maximum Score</b>
2.1	Brands	Details of brands associated with the local authority	<b>1.7</b>	<b>5</b>
2.2	Ratepayer database	Database of all ratepayers	<b>0.9</b>	<b>5</b>
2.3	Ratepayer demographics	Information relating to ratepayers	<b>2.6</b>	<b>5</b>
2.4	Ratepayer satisfaction	Indicators of ratepayer satisfaction	<b>3.3</b>	<b>5</b>
2.5	Backlog work	Relating to unfinished/un-started projects	<b>2.5</b>	<b>5</b>
2.6	Distribution channels	Information on how local authority services/products reach users	<b>1.8</b>	<b>5</b>
2.7	Joint ventures/collaborations	Involving the local authority	<b>3.1</b>	<b>5</b>
2.8	Licensing agreements	Held by the local authority	<b>1.9</b>	<b>5</b>
2.9	Quality standards	Adherence to quality assurance programs/standards	<b>2.6</b>	<b>5</b>
<b>3.0</b>	<b>Human Capital</b>		<b>Weighting</b>	<b>Maximum Score</b>
3.1	<i>Know-how</i>	Employee knowledge	<b>1.2</b>	<b>3</b>
3.2	Education programs	Education/ongoing programmes initiated by local authority	<b>1.4</b>	<b>5</b>
3.3	Vocational qualifications	Non academic qualifications held by employees	<b>1.2</b>	<b>5</b>
3.4	Work-related knowledge	Gained 'on the job' or as part of ongoing training	<b>1.3</b>	<b>5</b>
3.5	Cultural diversity	Demographic information of employees	<b>1.6</b>	<b>5</b>
3.6	<i>Entrepreneurial innovativeness</i>	Focusing on cost-minimisation rather than profit-maximisation	<b>2.7</b>	<b>3</b>
3.7	Equal Employment Opportunities	Details of EEO programs/initiatives	<b>1.9</b>	<b>5</b>
3.8	Executive compensation plans	Details of executive remuneration	<b>2.9</b>	<b>5</b>
3.9	Training programs	Undertaken/provided by the local authority	<b>1.4</b>	<b>5</b>
3.10	Union activity	Details of unions representing employees	<b>1.3</b>	<b>5</b>

The index was applied to the 2004/2005 annual reports of 82 local government authorities. The annual reports of four local authorities were not included because of their non-availability.

## **6 SCORING THE ANNUAL REPORTS**

This research used sentences as the preferred unit of analysis for coding intellectual capital items in the annual report of local authorities. As Milne & Adler (1999, p. 243) explain

As a basis for coding sentences are far more reliable than any other unit of analysis... Individual words have no meaning to provide a sound basis for coding social and environmental disclosures without a sentence or sentences for context. Likewise laying a plastic grid sheet over a body of text and trying to code the contents of each grid square would result in meaningless measures.

Only voluntary disclosures and those not required by accounting standards or legislation were analysed as part of the content analysis. Sections of the reports that were analysed included the Mayor's report, the Chief Executive Officer's report, and the Statements of Service Performance.

The following decision rules were strictly applied to the annual reports during coding:

Do not code for graphs, pictures, or diagrams.

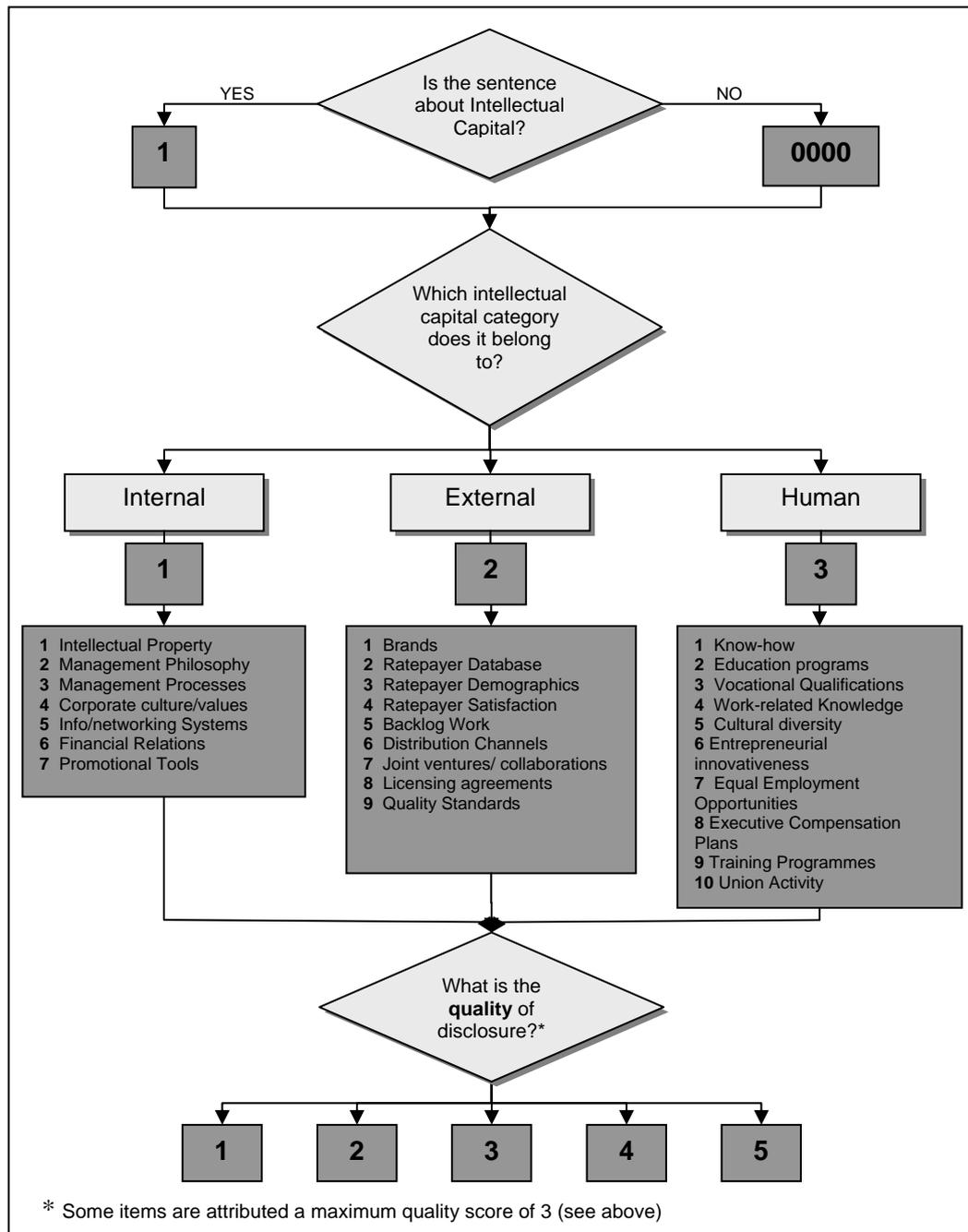
Code only voluntary disclosures i.e. do not code for Auditor's Report, Statement of Responsibility, Financial Statements, or Notes to the Financial Statements.

Code for meaning rather than looking for exact words as some concepts are broad and exact word may not be enough.

Do not code as an intellectual capital item if concept is implied.

Figure 2 presents the scoring framework used to assist in the coding of the annual reports.

**Figure 2 Scoring framework**



Source Adapted from Wong & Gardner (2005).

Each sentence in the annual report was assigned a four digit numerical code (or five, if the sentence related to ‘union activity’) according to the coding framework presented in Figure 2. The quality score (final digit of the four/five letter code) was allocated for each sentence relating to intellectual capital, on a scale of either one to three or one to five using the quality

criteria established earlier. Sentences with no intellectual capital disclosures were allocated the code **0000**.

An example of a coding sentence is: “to promote the well being of the people of the Waipa District through timely provision of services and sustainable management of natural resources” (Waipa District Council, 2005, p. 2) would be assigned the code **1123**. The first **1** indicates that the sentence is about intellectual capital, the second **1** categorises the sentence as belonging to the internal capital category, **2** recognises the sentence as being concerned with ‘management philosophy’ and the last digit, **3**, represents the quality score (out of a maximum of three for this particular item).

Once the coding of all sentences in a report was complete, the codes were analysed and aggregated into the three intellectual capital categories presented in the disclosure index. In some instances there were a number of sentences regarding the same intellectual capital item but which had different quality scores (as indicated by the last digit in the four letter code). The researcher analysed the group of scores and allocated a quality score based on the aggregate of group. The quality score for the group of codes was taken as the ‘allocated score’ (raw mark) which was reported for that particular intellectual capital item in the disclosure index. The allocated score for each item was multiplied by the weighting for that item to obtain the ‘weighted score’ for the item.

## **7 EXTENT AND QUALITY OF DISCLOSURE**

This section presents the results of the analysis. Results from each of the three categories of intellectual capital (internal, external and human capital) are discussed in turn, followed by an item-by-item analysis of scores for each category. The following tables (Table 7 to Table 9) compare the mean score and the quality of disclosure allocated to each item by the stakeholder panel. The mean score was calculated as the average of the score awarded to each local authority for each intellectual capital disclosure item in the ICD index.

The awarded scores range from between 0 (no disclosure) and 5 (full disclosure). If a local authority achieved a high disclosure score (4 or 5) for an item that was considered important by stakeholders then the disclosure was consistent with stakeholder opinion of ‘best practice’ disclosure. Similarly, if a local authority achieved a low level of disclosure for an item (1 or

2) that was considered relatively important for disclosure (indicated by stakeholder allocated weighting) then the local authority did not meet ‘best practice disclosure’.

Where there is a significant difference between the mean score achieved and the level of importance, the item is printed in italics indicating the presence of an ‘information gap’. Where a column contains ‘n/a’ the item was only scored out of a maximum of three due to its narrative nature.

7.1 *Internal capital*

Table 7 presents a frequency analysis of the internal capital category. The table shows the number of local authorities who achieved each score (frequency).

**Table 7 Frequency analysis of the internal capital category**

1.0	Internal Capital	Frequency						Mean Score	Level of Importance
		0	1	2	3	4	5		
1.1	Intellectual property	82	0	0	0	n/a	n/a	0.0	<i>intermediate</i>
1.2	Management philosophy	16	0	2	64	n/a	n/a	2.4	very important
1.3	Management processes	3	0	2	77	n/a	n/a	2.9	intermediate
1.4	Corporate culture/ values	7	0	1	74	n/a	n/a	2.7	intermediate
1.5	Information/networking systems	24	0	12	21	5	20	2.5	intermediate
1.6	Financial relations	9	0	6	10	3	54	4.0	very important
1.7	Promotional tools	10	0	4	20	7	41	3.7	intermediate

‘Management processes’ was the highest scoring item on average in the internal capital section with 94% of local authorities achieving the maximum score. This level of disclosure exceeded stakeholder panel ‘best practice’ who only rated this item as being of intermediate importance. The item ‘financial relations’ also had a relatively high level of disclosure, with 70% of local authorities achieving a score of four or five. This was consistent with the stakeholder panel ‘best practice’ score, who rated financial relation disclosure as being very important. The item ‘promotional tools’ was also disclosed well by most local authorities with 59% of local authorities gaining scores of four or five. This level of disclosure also exceeded stakeholder ‘best practice’ disclosure which rated promotional tools as being of intermediate importance. No local authorities disclosed any information about intellectual property which was rated as being of intermediate importance by the stakeholder panel.

Overall, this category of intellectual capital was well disclosed. ‘Management philosophy’, ‘management processes’, and ‘corporate culture/values’ scored well but information about intellectual property and networking/information systems was under-disclosed according to the stakeholder panel ‘best practice’ disclosure.

7.2 External Capital

Table 8 presents a frequency analysis of the external capital category. The table shows the number of local authorities who achieved each score (frequency).

**Table 8 Frequency analysis of the external capital category**

2.0	External Capital	Frequency						Mean Score	Level of Importance
		0	1	2	3	4	5		
2.1	Brands	68	0	2	5	1	6	0.6	intermediate
2.2	Ratepayer database	75	0	3	2	1	1	0.3	minor importance
2.3	Ratepayer demographics	38	0	10	8	16	10	1.9	very important
2.4	Ratepayer satisfaction	16	0	0	4	0	62	3.9	very important
2.5	Backlog work	24	0	2	22	9	25	2.8	very important
2.6	Distribution channels	4	0	0	3	1	74	4.7	intermediate
2.7	Joint ventures/ collaborations	3	0	1	10	2	66	4.5	very important
2.8	Licensing agreements	80	0	1	0	0	1	0.1	intermediate
2.9	Quality standards	5	0	2	6	3	66	4.4	very important

‘Distribution channels’ was the highest scoring item on average in the external capital section with 90% of local authorities achieving the maximum score. This level of disclosure exceeded stakeholder panel ‘best practice’ disclosure which only rated this item as being of intermediate importance. Eighty percent of local authorities achieved level five disclosure in the ‘joint ventures/business collaborations’ item. This level of disclosure met stakeholder ‘best practice’ disclosure levels of very high importance on the disclosure of business collaborations and joint ventures. Disclosure of ‘quality standards’ was also high, with 80% of local authorities achieving the maximum score of five out of five for their disclosure. This level of disclosure met stakeholder ‘best practice’. ‘Ratepayer satisfaction’ was also disclosed well with 81% of local authorities making some sort of disclosure in this category. This item was rated as being very important to disclose by the stakeholder panel which indicates that ‘best practice’ is being met by the majority of local authorities.

Three items in the external capital category did not meet stakeholder ‘best practice’ standards of disclosure. ‘Brands’, ‘ratepayer demographics’ and ‘licensing agreements’ were poorly disclosed. Stakeholder best practice levels of ‘brands’ disclosure was that it was of

intermediate importance, but this was not reflected in the actual level of disclosure. Ratepayer demographics was rated as very important for disclosure, but the majority of local authorities made no or only limited disclosures of this item. Licensing agreements were characterised by a general lack of disclosure, with only Napier City Council disclosing information about this item. Stakeholders indicated this item was of intermediate importance, which indicates a gap between the level of disclosure by local authorities and stakeholder ‘best practice’.

Overall, ‘ratepayer satisfaction’, ‘distribution channels’, ‘joint ventures/business collaborations’ and ‘quality standards’ scored well but information about ‘brands’, ‘ratepayer demographics’ and ‘licensing agreements’ was under-disclosed, highlighting a gap between the level of disclosure and the importance of disclosure as indicated by the stakeholder panel.

7.3 Human Capital

Table 9 details the frequency analysis of the human capital category. The table shows the number of local authorities who achieved each score (frequency).

**Table 9 Frequency analysis of the human capital category**

3.0	Human Capital	Frequency						Mean Score	Level of Importance
		0	1	2	3	4	5		
3.1	Know-how	43	0	16	23	n/a	n/a	1.2	minor importance
3.2	Education programs	14	0	1	15	7	45	3.7	minor importance
3.3	Vocational qualifications	60	0	8	8	0	6	0.9	minor importance
3.4	Work-related knowledge	54	0	5	18	2	3	1.1	minor importance
3.5	Cultural diversity	59	0	7	4	7	5	1.0	intermediate
3.6	Entrepreneurial innovativeness	75	0	4	3	n/a	n/a	0.2	very important
3.7	Equal Employment Opportunities	46	0	0	4	0	32	2.1	intermediate
3.8	Executive compensation plans	65	0	4	5	1	7	0.8	very important
3.9	Training programs	26	0	3	10	4	39	3.0	minor importance
3.10	Union activity	74	0	1	3	0	4	0.4	minor importance

‘Education programs’ was the highest scoring item on average in the human capital section with 55% of local authorities achieving the maximum score. This level of disclosure exceeded stakeholder ‘best practice’ disclosure which rated this item as being of minor importance. Forty eight percent of local authorities achieved level five disclosure in the

‘training programs’ item. This level of disclosure also exceeded the stakeholder panel’s ‘best practice’ disclosure level, which placed only minor importance on the disclosure of training programs.

Two items in the human capital category did not meet stakeholder ‘best practice’ levels of disclosure. There was a lack of disclosure of ‘Entrepreneurial innovativeness’ and ‘executive compensation plans’. The stakeholder panel placed a very high importance on the disclosure of these items which was not reflected in the actual level of disclosure. Entrepreneurial innovativeness was not disclosed by 91% of all local authorities. Seventy nine percent of local authorities did not disclose any information on ‘executive compensation plans’.<sup>1</sup> This paper does not examine the information presented in the financial statements where the majority of remuneration disclosure takes place. Those local authorities which scored highly for this particular item provided disclosures in addition to those required in the financial statements.

‘Union activity’ was regarded as being of minor importance by the stakeholder panel. This level of importance was not reflected by the actual level of disclosures with 90% of local authorities not disclosing any information of this item. ‘Vocational qualifications’ was also deemed to be of only minor importance by the stakeholder panel. Seventy three percent of local authorities did not disclose any information on this item.

Overall, disclosure in this category of intellectual capital was low. ‘Education programs’, ‘training programs’, and ‘Equal Employment Opportunities’ scored the highest in the human capital category. Information about ‘vocational qualifications’, ‘entrepreneurial innovativeness’, ‘executive compensation plans’ and ‘union activity’ was under-disclosed, highlighting a gap between the level of disclosure and stakeholder ‘best practice’ disclosure levels.

## **8 RESULTS**

This section reports the final report scores achieved by the local authorities. First, the final scores of the highest scoring and lowest scoring local authorities are presented and discussed.

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<sup>1</sup> This point requires further clarification. Disclosure of executive remuneration is required by the *Local Government Act 2002* and the accounting standards, *FRS-2 Presentation of Financial Report*, *FRS-9 Information to be Disclosed in Financial Statements* and *SSAP-22 Related Party Disclosures*.

Second, the final scores of the local authorities are discussed according to type of local authority (territorial authorities, regional authorities or unitary authorities). Finally, the scores are presented according to rates value which is used as a proxy for size of the local authorities.

The highest scoring local authority was Manukau City Council with an overall intellectual capital score of 76%. Manukau City Council's annual report provided a one page mission statement that was presented both in English and in Maori. The Mayor's report and the City Manager's report provided an informative discussion of the year's results in all areas of council operations which provided disclosures on a variety of different intellectual capital items. The section entitled 'Manukau People' provided much of the information in the human capital category. The Statement of Service Performance provided extensive detail of council activities and ratepayer satisfaction for the year as well as containing most of the external capital disclosures.

Manukau City Council received a score of 89% for its internal capital disclosures. A total of six out of seven items were disclosed, all of which received maximum marks for each item. Only 'intellectual property' was not disclosed, however, this item was not disclosed by any of the other local authorities. A total of six out of nine external capital items were disclosed, with each disclosure item receiving maximum scores. This resulted in a score of 78% for the external capital section. No disclosures of 'brands', 'ratepayer database' or 'licensing agreements' were made in this section. Finally, Manukau City Council achieved a score of 64% for the human capital section. Two out of 10 items were not disclosed, 'vocational qualifications' and 'union activity' both of which were considered by the stakeholder panel to be of only minor importance.

The lowest scoring local authority was Whakatane District Council with an overall score of 33%. In the internal capital category, only 'management processes', 'corporate culture/values', and 'promotional tools' were disclosed. This category generally produced the highest scores for most local authorities, which highlights Whakatane District Council's weakness in disclosure in this area. A total of only four items out of nine were disclosed in the external capital category: 'ratepayer demographics', 'backlog work', 'distribution channels', 'quality standards', however disclosure of these four items achieved scores of five, four, five, and five respectively. A total of 3 out of 10 items were disclosed in the external capital category: 'vocational qualifications', 'equal employment opportunities' and 'union

activity’ which achieved scores of three, five, and two respectively. However Whakatane District council was one of only eight local authorities to disclose any information on ‘union activity’.

### *8.1 Final score by local authority types*

This paper seeks to investigate whether intellectual capital disclosures varied according to different local authority types. As indicated earlier the local authorities that comprise the New Zealand local government sector are classed as being territorial authorities, regional authorities or unitary authorities. For the purposes of this analysis, regional and unitary authorities are combined into one group.

An independent t-test carried out on the mean scores indicate that there is a significant difference between the external capital scores of territorial authorities (61%) and regional/unitary authorities (48%) at ( $p = 0.05$ ). There were no statistically significant differences between the internal capital, human capital and overall scores of territorial authorities and regional/unitary authorities.

### *8.2 Final scores by rates value*

Previous studies (Buzby, 1975; Williams, 2001) have shown that the level of disclosure is affected by firm size. While this research is not focused on listed companies it was thought that the size of local authorities would affect the level of intellectual capital disclosure in the annual reports.

In order to investigate whether the size of a local authority has any affect on the level of intellectual capital disclosure, the local authorities were split into two groups: ‘large’ and ‘small’ on the basis of their rates income for the 2004/2005 financial year. Rates income was used as a proxy for size because this figure was directly comparable across all local authorities. An arbitrary value of \$50million was used to differentiate between ‘large’ and ‘small’ local authorities.

The ‘large’ group comprised those local authorities that had rates income of \$50million or more during the 2004/2005 financial year, and the ‘small’ group comprised those local authorities with rates value of less than \$50million. The ‘large’ group was made up of 13 local authorities, with the remaining 69 local authorities allocated to the ‘small’ group.

An independent t-test was carried out revealed that at  $p = 0.05$  the 'large' local authorities' scored higher than the 'small' local authorities for all four scores: internal capital (78% vs. 67%), external capital (67% vs. 58%), human capital (40% vs. 27%), and overall scores (61% vs. 50%).

Prior research (Cerf, 1961; Craig and Diga, 1998; Singhvi and Desai, 1971; Wallace and Naser, 1995; Zarzeski, 1996) into annual report disclosures found a positive relationship between firm size and the amount of information disclosed in the corporate annual report. Despite this research not being based on corporate entities, the 'size effect' may offer a possible explanation for the higher level of intellectual capital disclosures by local authorities with rates value of \$50 million or more ('large' local authorities) compared with 'small' authorities. The size effect would indicate that larger local authorities would disclose more information than small local authorities, which appears to be the case in this research.

## **9 SUMMARY AND CONCLUSION**

The New Zealand local government sector is characterised by a high level of accountability to stakeholders. The local government sector reforms of the late 1980s and early 1990s were set within a broad framework of public accountability. This accountability relationship acknowledges due to the legislative power of local authorities to rate, levy and tax, it is the responsibility of managers and elected representatives give an account, not just to central government ministers and ratepayers, but to all those who are interested in or affected by the activities of the local authorities, including groups with non-economic relationships with the local authorities.

Local authorities receive the bulk of their funding from ratepayers (identified stakeholders) to whom they are required to deliver outcomes. As such, accountability is based on the proper and efficient use of resources. This includes the requirement to communicate outputs and outcomes to stakeholders. This paper promotes the 'public interest' concept of accountability, and recognises that there is considerable scrutiny of, and interest in the activities of local authorities. Local authority accountability obligation is discharged through the provision of information about the conditions, performance and activities undertaken in their annual reports thereby enabling stakeholders to assess the accountability and performance of local authorities.

The voluntary disclosure of intellectual capital in the annual report facilitates the discharge of accountability to stakeholders. By providing information regarding intellectual capital in the annual report, stakeholders are able to scrutinise local authority activity in regards to intellectual capital measurement and management.

An ICD index was applied to the 2004/2005 annual reports of the local government sector to assess the extent and quality of intellectual capital reporting. A total of 82 reports were scored against the disclosure index which incorporated the stakeholder panel's importance weightings and the quality criteria.

The most frequently reported category of intellectual capital was internal capital with an average score of 69%, followed by external capital with a score of 59% and then human capital with an average score of 29%. The average overall score for the entire report was 52%. The most frequently reported item was 'management processes' followed by 'distribution channels', 'joint ventures/business collaborations' and 'quality standards'. The least frequently reported items were 'intellectual property', followed by 'licensing agreements', 'ratepayer database', 'entrepreneurial innovativeness' and 'union activity'.

The results revealed several areas of intellectual capital disclosures that did not meet stakeholder 'best practice' standards of disclosure. Although 'intellectual property' and 'licensing agreements' were considered 'very important' by the stakeholder panel, disclosure of these items was low. Items considered of 'intermediate importance' by the stakeholder panel including 'ratepayer demographics', 'entrepreneurial innovativeness' and 'executive compensation plans' were also disclosed at low levels.

The final scores were used to assess whether there was any differences in scores by local authority type and size. Local authorities were split into two groups depending on whether they were territorial, regional or unitary authorities. As there were only three authorities that were unitary authorities, they were grouped with regional authorities. The analysis revealed that there was a significant difference between the external capital disclosures of territorial authorities compared with regional/unitary authorities. Territorial authorities disclosed on average more information on external capital than territorial/regional authorities.

The analysis split local authorities into two groups based on their size. Rates income for the 2004/2005 financial year was used as a proxy measure for size as this figure is directly comparable across all local authorities. Local authorities with rates income of \$50million or

more were classed as 'large' authorities, while those with rates value of \$50million or less were classed as 'small' authorities. It was found that 'large' local authorities disclosed significantly more internal capital, external capital, human capital, and overall intellectual capital information than 'small' local authorities. These results supported the position of several previous studies on intellectual capital disclosure that indicated size influenced the level of disclosure (Brennan, 2001; Craig & Diga, 1998; Zarzeski, 1996).

The exploratory nature of this research and the use of a disclosure index to measure disclosure levels contribute to certain limitations in this study. Hooks (2000), Hooks, Coy and Davey (2002) and Marston and Shrivs (1991) acknowledge subjectivity in, and difficulty of, constructing a disclosure index. In addition the lack of prior literature relating specifically to intellectual capital disclosure by the local government sector made selecting the items to include in the disclosure index challenging. The disclosure items for the index were selected from previous intellectual capital disclosure studies in the corporate sector and validated by a panel of relevant local government stakeholders. The stakeholder panel was also used to determine weightings for each item. This ensured that the index placed greater emphasis on items considered important by local government stakeholders and users of the annual reports. Despite these limitations this paper offers a valuable contribution to the lack of prior research in this area and provides a useful framework through which intellectual capital disclosures can be made in the annual report of local authorities in New Zealand.

This research has provided an initial insight into the extent and quality of intellectual capital disclosure in the annual reports of the New Zealand local government sector. This area has been relatively unexplored in the literature to date both in terms of subject (intellectual capital reporting by local governments) and situation (in New Zealand or internationally).

The results showed that intellectual capital reporting by local authorities was varied. In addition, the disclosure is not occurring within a consistent framework for the measurement and reporting of intellectual capital. Consultation with a panel of local government stakeholders identified aspects of intellectual capital that were considered important for inclusion in the annual report and were used to determine a 'best practice' disclosure model (ICD index). The research highlighted a number of areas that were not being adequately disclosed in the annual reports of local authorities.

This research suggests that by incorporating disclosure of intellectual capital items into the annual reports of the local government sector, the discharge of accountability to stakeholders is enhanced. The intellectual capital disclosure index used in this study can be used by local authorities as framework for future intellectual capital disclosures to ensure they are meeting the information needs of their stakeholders.

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