

**INTERNATIONAL CONFERENCE ON
GREEN CITIES: PUTRAJAYA URBAN
CONFERENCE SERIES 2010**

'Accounting's Contribution to Sustainable Cities'

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Goal of Prbadanan Putrajaya

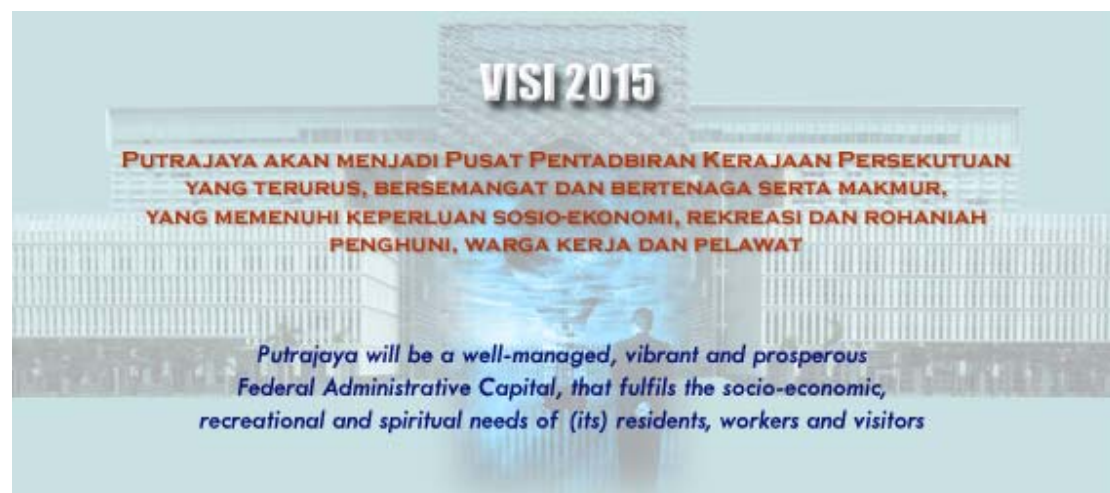
Perbadanan Putrajaya was established under the Perbadanan Putrajaya Act 536, 1995 for the purpose of managing and administering Federal Territory of Putrajaya. Perbadanan Putrajaya is also entrusted with the functions of a local authority and local planning authority by various orders and notifications under the Local Government Act.

To perform all functions of a local government in Federal Territory of Putrajaya

To promote, stimulate, facilitate and undertake commercial, infrastructure and residential development in the area

To promote, stimulate and undertake economic and social development in the area

To control and co-ordinate the performance of the above activities in the area



Aims of the International Conference on Green Cities

- To widen the understanding and shed light on the subject of green or eco cities, its definition, concepts, qualities and the challenges and issues of achieving such cities;
- Review and disseminate the available solutions, experiences and best practices for the development and implementation of green cities;
- Review of the latest developments, innovations and ideas that have been implemented or practiced in achieving a green city towards adoption/ adaptation to Putrajaya and other Malaysian cities;
- Define the role of government agencies in achieving green cities;
- Define the stakeholders involved in a Green City development and identify challenges and solutions;
- Facilitate partnerships amongst the people, government agencies, businesses and the local government towards finding solutions, action programmes and project implementation towards the realization of green cities.
- To prepare a Road Map towards a **Green Action Plan for Putrajaya**.

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Introduction

Putrajaya and Cyberjaya will be developed as pioneering green technology townships in the "shortest time possible" to reflect the Government's commitment to environmentally-sound and sustainable practices.
(27 Jan 2010)

Accountants can contribute to Putrajaya City achieving its objective of being a green technology township that fulfils the socio-economic, recreational and spiritual needs of its residents, workers and visitors.

Globally, accountants recognize that: "the global challenge is to ensure that organisations' sustainable development practices:

- (a) reverse the previous erosion of natural resources, and
- (b) improve their environmental, social and economic performance.

This requires radical changes in the way we do business and the way we live our livesⁱ. "

We know that "making decisions for sustainable development requires a broader perspective and longer timeframes than provided by financial accountingⁱⁱ."

Malaysia has long been involved in working towards sustainability. Through its involvement in Agenda 21, Malaysia has recognized since 2000 that commonly used indicators such as the gross national product (GNP) and measurements of individual resource flows do not provide adequate indications of sustainabilityⁱⁱⁱ (Hasan & Adnan).

Malaysia's Vision 2020 provides the vision within which Putrajaya City seeks to achieve its goals. The Government is seeking to develop Malaysia along all the dimensions: economically, politically, socially, spiritually, psychologically and culturally. It seeks to be fully developed in terms of national unity and social cohesion, in terms of our economy, in terms of social justice, political stability, and system of government, quality of life, social and spiritual values, national pride and confidence.

Sustainability indicators have been identified for Malaysia, at both the national and state level. For example:

- The Malaysia Quality of Life Index is one indicator of social health. It measures and reports on indicators such as life expectancy, infant mortality, and the percentage of piped water and electricity per household.
- The Environmental Performance Indicator, which places Malaysia 54 out of 132 nations, is an indicator of environmental health. It measures and reports on environmental health and ecosystem vitality.
- GDP growth is one indicator of economic health.
- Cultural sustainability – UNESCO rankings.

It is now accepted that focusing on the economy alone is insufficient. Humans have many needs. Material well-being can sustain only part of our humanity. We need also to sustain our society, its culture, mores and uniqueness. A vibrant environment can no longer be assumed and ignored. It must now be actively managed if human life on this planet is to be sustained. It is the cultural sustainability of a people that ensures their sovereignty.

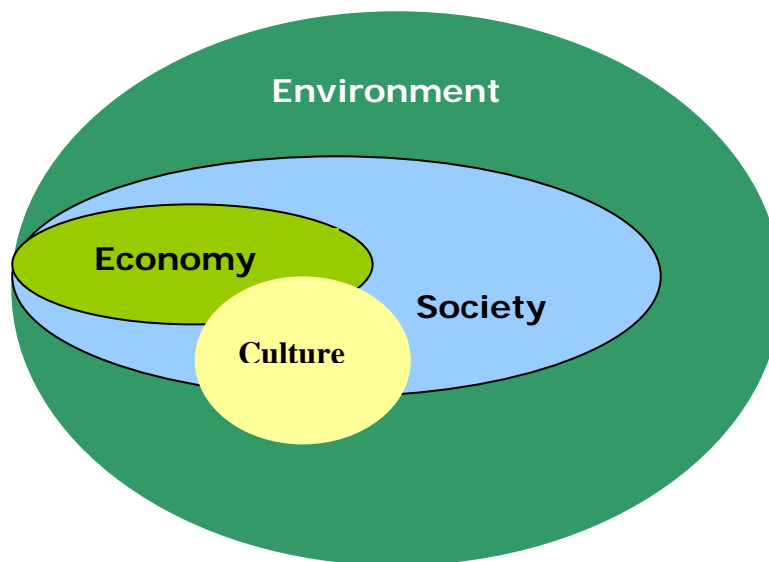


Figure 1: Sustainability refers to all of existence.

The Economy depends on a viable Society which, in turn, depends on a vibrant Environment. It is through our culture that we sustain ourselves, our society and our environment.

The challenge is to provide an increasingly higher standard of living to a growing population^{iv}.

The Malaysia Plans , supported by the Outline Perspective Plans, provide the framework within which Putrajaya City seeks to be a sustainable city.

In a sustainable city residents have access to planned development, control over trade, city beautification, health services, road systems, traffic management and public transportation^v, water, sewage and related water disposal and treatment plants, garbage removal and treatment, libraries, parks and gardens, community and cultural facilities, recreational areas and other services. They like each other. They live in peace in a vibrant and every changing city.

Collective infrastructure is operating efficiently, is valued, well maintained and upgrades are planned to maximise the standard of service residents receive over a lifetime. And creativity can bring lower costs with higher quality of life. For example, Hasselt, Belgium with 76,000 people, found it cheaper to provide free public transport than build more infrastructure for the growing car fleet of its residents. Curitiba, Brazil, with 3.2m people

found it received more value for money from a frequent and reliable bus service than from upgrading the railways and road network^{vi}.

Early work on urban sustainability indicators in Malaysia indicated that: "there was no common framework that seeks to unify sets of information into a coherent whole that specifically relate to any of the frameworks for developing sustainable development indicators (SDI) suggested by international agencies such as the United Nations^{vii}."

Creating a common framework is a challenge. Members of many professions are involved in creating sustainable cities. And we cannot overestimate the problems of multi-disciplinary teams, in which each person's professional competence is respected and appropriately applied to create a holistic result. For example, a framework through which data can be collected, collated and turned into information relies on detailed information retrieval skills. These are the skills of librarians. And sustainability requires creative, not just analytical skills. Managing different skill sets is a challenge that, once met, brings huge rewards.

In large-scale urban infrastructure projects, librarians and creative people are infrequently part of the project team. Yet, librarians are the key professionals with the skills to classify and retrieve information. Librarians organize and manage information services or materials for those with information needs. They have much to contribute to a city's management of its information. Creative people solve problems in ways not obvious from engineer's previous experience^{viii}. Accountants too rely on these other professions.

One of the challenges for cities is to bring together the contribution of all professions, harnessing the skills of all, wasting none and enabling the city to benefit from all. The task of achieving a sustainable city requires us all to collaborate in new ways^{ix}. And further, we must work together in a way that respects the culture of the people. Maori, in New Zealand, have developed a framework to assist organisations manage cultural sustainability^x.

The Malaysian government is aware of the need to coordinate disparate professions and stakeholders. It has created a Green Technology Council for high-level coordination among ministries to achieve effective implementation of green technology policies^{xi}.

Accounting has skills to contribute to the sustainability of Putrajaya City. It does not have the information management skills of librarians, the physical skills of engineers, the cultural awareness of indigenous groups or an understanding of the complexity of ecological systems within the city. But accountants can bring to the team:

1. Knowledge and skills in serving both internal and external stakeholders
2. An internationally recognised conceptual framework; and
3. Skills in preparing reports for use by the public and specialists; and
4. A long history in local government.

1. Skills in serving both Internal and External Stakeholders

*All forms of sustainability accounting have a common objective - to deliver better information to support sustainability initiatives and performance.
International Federation of Accountants^{xii}*

Accounting serves both internal stakeholders: managers and staff and external stakeholders. It provides internal stakeholders with budgets, costings, financial systems and reports. It provides external stakeholders with compliance reports (National Government, regulatory agencies, funding bodies) and other public accountability documents. All stakeholders are served by the independent audit of policies, systems, controls and reports.

The primary objectives that accountants bring to the internal control of a city are to ensure:

1. The reliability and integrity of information.
2. Compliance with policies, plans, procedures, laws, and regulations.
3. The safeguarding of assets.
4. The economical and efficient use of resources.
5. The accomplishment of established objectives and goals for operations or programs.

The International Federation of Accountants (IFAC) notes that "Sustainability accounting, or a narrower focus on Environmental Management Accounting (EMA), can help an organization to develop an information management approach that links its sustainability issues with business performance and success"^{xiii}.

EMA is broadly defined to be the identification, collection, analysis, and the use of two types of information for internal decision-making:

- Physical information on the use, flows and destinies of energy, water and materials including wastes; and
- Monetary information on environment-related costs, earnings and savings. (*UN Expert Working Group on EMA*)

Increased social and environmental performance requires information flows to support (a) sustainability reporting, and (b) the strategic and operational management of sustainability issues^{xiv}.

Environmental accounting is now becoming defined and codified. Environmental accounting comprises two principal elements:

- environmental accounting for management control information about an organisation's use of, interaction with and impact upon the natural environment that is integrated with the organisation's information systems and used in decision making,

- environmental reporting for accountability public statements (accounts) about an organisation's use of, interaction with and impact upon the natural environment.

Each is undertaken for fundamentally different reasons. The first is undertaken to help management manage the city through, for example:

- identification and exploitation of 'win-win', eco-efficiency opportunities;
- the identification of risks and opportunities arising from, for example, environmental impacts or environmental legislation; and
- strategically exploring and preparing for future changes in the city's environment.^{xv}

The second reason is undertaken in the interests of accountability, primarily as part of the organisation's democratic duty to society.

Creative eyes looking at city problems, for example traffic congestion, may lead to long-term savings.

Ten years ago, the city of **Hasselt, Belgium** was declining. A city of 76,000 people, it was deeply in debt, its population stagnating and its arterial roads choked with cars. It was congestion that dominated the list of problems. Hasselt, more than most Western cities, had a serious car problem.

They were going to build more roads. Instead the mayor considered building a pedestrian city centre, with ring roads around the city. He also considered replacing individual car usage with free public transport. Hasselt wanted fewer accidents, less congestion, more public transport users and fewer car drivers. They set out to reduce the space dedicated to cars and increase that dedicated to people. They found that improving the bus service and making it free was cheaper than upgrading the road system and building new roads. Many costs are external to the city but shifted to the residents.

The mayor made calculations and found it to be cheaper than building new roads. The accounting firm Price Waterhouse Coopers was invited to check his calculations. They proved his calculations had underestimated the savings.

When they did the costings, by taking into consideration indirect savings into account, the accountants came up with some surprising results. They calculated the cost of the lost productive time during working hours. They added the cost of hospitalization and death. They calculated the savings due to noise and air pollution. They accurately estimated the maintenance of the road network and the economic cost of accidents.

Their report proved that free public transport is not only viable, but it is far better than the road based system. It is financially responsible and saves lives and adds to the quality of life".

By fully costing the capital works, and the consequences (environmental, social, cultural and economic) of the works, real alternatives were identified and residents not only saved money, but also improved their quality of life.

Figure 2: Hasselt, Belgium's cost effective decision to replace congested roads with free public transport^{xvi}

By reporting to the residents, cities can gain credibility by subjecting their proposals to independent audit and review.

Internal auditors can audit the systems supporting sustainability decisions against international information management, IT, accounting and sustainability standards.^{xvii} They can also consider the full costs and manage teams of different professionals.

External auditors provide users of public financial reports with assurance as to the compliance, not only of financial reports but also of sustainability reports, with legislation, standards and conceptual framework.

2. Accepted Conceptual Framework

Accountants work within a conceptual framework, and adhere to professional standards and ethics. This framework provides a basis for comparing the financial statements of entities across sectors and across nations. It provides the principles against which transactions, reported in financial statements, are measured. These principles mean that users of financial statements can differentiate between actual transactions and contingent transactions. It means that only transactions controlled by the entity are reported in its financial statements.^{xviii}

Accounting Standards

Over the years accountants have developed accounting standards. These are the principles and rules that accountants apply in preparing financial statements. Each business would have its own accounting policies. These policies reflect the choices made when applying the accounting standards.

For example, does the business report only on cash received or spent out of bank accounts? This is a cash basis of accounting. Or does it report on resources used during a financial year? If bills are prepaid, are they recorded on the balance sheet as an asset? If bills are not paid, are they recorded on the balance sheet as a liability? This is the accrual basis of accounting.

Particular businesses enter into transactions specific to that business. For example, transactions of businesses in the aquaculture industry^{xix}, property development^{xx}, mining^{xxi}, and accounting for retirement benefit plans^{xxii} differ from those entered into by an individual. Specific accounting policies have been developed to guide those who prepare the financial statements of these types of industries.

As the Lembaga Piawai Perakaunan Malaysia / Malaysian Accounting Standards Board (MASB) states: "Financial Reporting Standards and prevailing International Accounting Standards (IAS) are useful in providing a structural framework for reporting, but they are inadequate to accommodate Shariah precepts, which form the basis of all Islamic transactions. The Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI), an accounting and auditing standards

setting body in Bahrain, has been active in developing and promoting Islamic accounting, auditing, and Shariah standards^{xxiii}.

Within each country, there are generally accepted accounting practices (GAAP). By complying with these practices, businesses ensure that users can reach reliable conclusions from reading their financial statements. The MASB approves accounting standards for private entities and for entities other than private entities. The International Accounting Standards Board provides accounting standards for use by public sector entities.

The MASB, together with the [Financial Reporting Foundation \(FRF\)](#), make up the new framework for financial reporting in Malaysia. This new framework comprises an independent standard-setting structure with representation from all relevant parties in the standard-setting process, including preparers, users, regulators and the accountancy profession.

The International Federation of Accountants (IFAC) is committed to protecting the public interest by developing high-quality international standards, promoting strong ethical values, encouraging quality practice, and supporting the development of all sectors of the profession around the world. The Malaysian Institute of Accountants (MIA), Malaysian Institute of Certified Practising Accountants (MICPA) and CPA Australia are members of IFAC. Malaysia is in the process of converging its accounting and auditing standards with international best practice.

Standards on Auditing and Assurance

The International Accounting and Auditing Standards Board (IAASB) has issued a standard to assist auditors auditing nonfinancial information. ISA 720, "The Auditor's Responsibilities Relating to Other Information in Documents Containing Audited Financial Statements" is designed to assist auditors to take into consideration the effect on users of non-financial information. These are, as yet, inadequate to cover the audit of sustainability reports. IAASB is revising this standard. It is taking into consideration changes over the last decade to the contents and form of annual reports, changes to auditing standards and the risks being faced by entities.

As there is an accepted conceptual framework and set of standards to guide those who prepare and audit financial statements, so too a set of guidelines is being prepared for those preparing and auditing sustainability reports.

Sustainability Guidelines

The United Nations, through its agencies, has worked to develop environmental management accounting policies and linkages and procedures and principles^{xxiv}. The OECD has prepared DAC Guidelines "Strategies for Sustainable Development: Guidance for Development Cooperation". The UN Conference on Trade and Development, in 2002 prepared guidance manual titled "Accounting and Financial Reporting for Environmental Costs and Liabilities".

Out of this initial work has grown a number of initiatives. The Global Reporting Initiative (GRI), begun in the US by CERES and its network of investors, has prepared its *Sustainability Reporting Guidelines*.

The World Business Council for Sustainable Development (WBCSD), with its head office in Switzerland, is run by Chief Executive Officers of 200 companies and has developed outlines of the measurements, or metrics, which are useful for reports and provide background information about how organisations move towards sustainability.

The British Prince of Wales established Accounting for Sustainability (A4S)^{xxv} to bring together key stakeholders: investors, business associations, inter-governmental organizations, regulators and standard setters, the accounting community, multi-stakeholder groups, NGOs and academics to develop a connected and integrated reporting model. He has called on the G20 nations to mobilise broad support for the proposals among key stakeholder groups internationally.

The above conceptual framework will continue to be developed. The aim is to provide users of reports with confidence that they can be relied on in making decisions with economic, social, cultural and environmental consequences.

If a city is to benefit from these frameworks, administration-wide policies, systems and procedures are applied. Changes in technology have led to the decentralisation of many functions. It can be tempting to allow each area to decide its own policies. As a common set of accounting policies and practices are used across the administration, so too a common set of sustainability principles and indicators can be applied

A city benefits from a central financial function with clear roles and responsibilities and formally delegated authorities. It also benefits from a central sustainability function with similarly clear roles and delegations. Electronic systems within an administration use and provide data to each other. Therefore, a careful mapping of business processes will minimise the duplication and maximise the benefits from e-business across the administration. Involving librarians, IT professionals and affected staff in the mapping and day to day management of data through all systems will make access to information much easier for all users. And reports will be easier to prepare and can be more useful.

3. Useful Reports

Accountants have built their conceptual framework on the assumption that financial statements are used by people to make economic decisions^{xxvi}.

Accountants contribute experience of knowing the users of reports to the preparation of useful sustainability reports. In designing sustainability reports, it will help to:

1. identify the users of sustainability reports;

2. identify the decisions (environmental, social and economic) the users are making;
3. identify the information in sustainability reports users rely on to make these decisions;
4. provide information users can rely on because it is independently audited or assured.

3.1. Users of Sustainability Reports

Individual users of sustainability reports can be identified. They obtain a copy of the sustainability report. They may seek paper copies, or download an electronic version of the sustainability report. Once the city can identify the key decisions being made to ensure sustainability, additional users of sustainability reports can be identified and their information needs assessed.

Who will use Putrajaya City's sustainability reports? They may include:

Internal stakeholders

- managers;
- suppliers and city staff;
- workers;

External Stakeholders

- residents (both households and corporations) and their groups;
- national government;
- international agencies;
- the media;
- religious bodies;
- recreational clubs;
- environmental analysts;
- non government organisations;
- others.

3.2 Decisions on Sustainability

What decisions do these groups make that keep Putrajaya City sustainable? What information will they find useful?

The City's vision 2015 is to be "a well-managed, vibrant and prosperous Federal Administrative Capital, that fulfils the socio-economic, recreational and spiritual needs of (its) residents, workers and visitors."

You are already monitoring water quality, traffic flows and resident numbers to enable the city to achieve this vision. But members of the city's staff are not the only ones whose decisions affect the life in the city. National and international guidelines can also be applied.

What other groups are making decisions that, had they the benefit of information held by the City, could work towards vision 2015?

Dunedin City in New Zealand has selected five principles to guide its management of the city's sustainability.

The central government's Local Government Act 2002 states that one of the purposes of local government is to:

'Promote the social, economic, environmental and cultural well-being of communities, taking a sustainable development approach' (section 10).

A sustainable development approach requires the Council to take into account: requires cities to take into account:

- The social, economic and cultural well-being of people and communities
- The need to maintain and enhance the quality of the environment
- The reasonably foreseeable needs of future generations (section 14).

The **principles** the council considers in all decision-making are:

- Affordable – Reasonable Cost. Value for Money. Today and future costs.
- Environmental Care – Clean energy. Biodiversity. Safe.
- Enduring – Forward looking. Future generations. Whole of life. Long term.
- Supporting People – Social connection. Social equity. Quality of Life. Safe.
- Efficient – Using less. Create less waste. Smarter use.

Dunedin City also runs a blog called "Sustainable Dunedin City: Looking to Dunedin's future". It's a space for people to collaborate on sustainability, view council plans, comment on them and to advertise events.

Figure 3: Dunedin City - Sustainability Principles^{xxvii}

3.3 Information to Report

Once Putrajaya Corporation has identified the types of decisions required to make Putrajaya city sustainable, it can identify the types of information to report from the myriad of possible indicators.

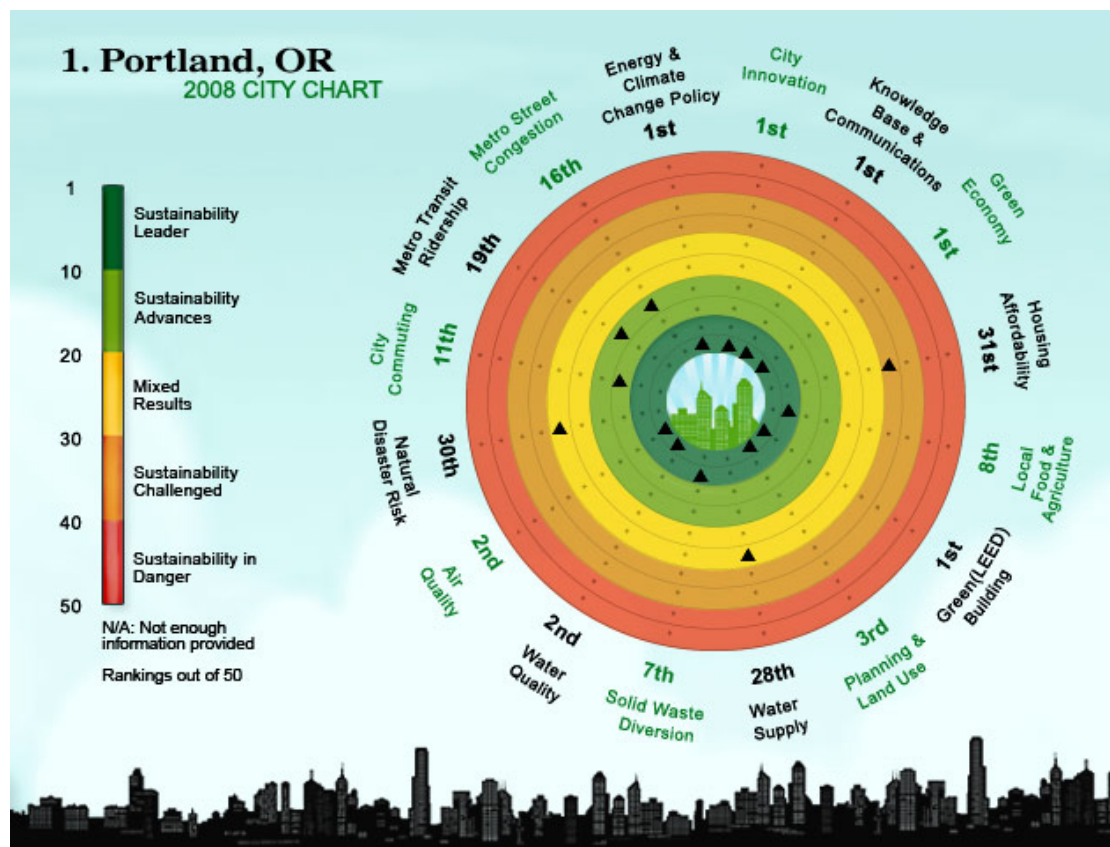
It is possible to provide a plethora of information, down to energy usage per machine, landfill contents, water quality measurements and yet to miss reporting on the overall health of the environment. While many decisions are made to ensure sustainability, the reports of Putrajaya City can provide information on how it meets the resident's socio-economic, recreational and spiritual needs. Usually entities report progress in achieving their objectives. Each city is different and each will select different paths to sustainability. The Global Reporting Initiative (GRI) has identified indicators of economic, environmental and social performance,

divided into “core” and “additional”^{xxviii}. Each entity selects those that most reflect its path to sustainability.

The GRI reporting guidelines contain:

1. Organisation profile disclosures
2. Management approach disclosures – these being descriptions of strategies and outcomes designed to improve outcomes in key areas of corporate non-financial performance
3. Performance indicators (and where relevant, sector supplement performance indicators)^{xxix}.

An example of Portland, Oregon’s way of reporting its sustainability follows:



Source: <http://www.sustainlane.com/search.do>
 Figure 4: Portland, Oregon, USA's 2008 City Chart^{xxx}

Portland, Oregon, USA established an **Office of Sustainability** (OSD) within its administration. The city describes its function this way:

The OSD provides leadership and contributes practical solutions to ensure a prosperous community where people and nature thrive, now and in the future.

OSD provides technical and financial services to businesses, residents, non-profit organizations, and public agencies, and serves as a meeting ground for community efforts to advance sustainability.

It pursues options to protect the City's economic, environmental, and public interest goals. OSD also oversees and regulates solid waste and recycling programs that operate within the city limits. The city allocates funds to achieve sustainability. It uses 0.4% of the city budget.

The OSD was established in 2000 during a time of prolonged economic downturn, with the Mayor stating:

the City then faced a \$15.7 million deficit and a sixth straight year of budget cuts. Since then, Portland's economy has become vibrant again, and the city is routinely—and rightly—hailed as one of the nation's most liveable, sustainable, and special places to live.

Annual Savings from Green Building Strategies

Category	\$/sf	50,000 SF Building
Energy	\$0.44	\$22,000
Water*	\$0.047	\$2,350
Cx O&M	\$0.68	\$34,000
Total		\$58,350

*Unit value based on \$3.50/kgal

20-Year Net Present Value

Category	\$/sf	50,000 SF Building
Energy Value	\$6.09	\$304,500
Water Value	\$0.51	\$25,500
Cx and O&M Value	\$8.47	\$423,500
Green Cost Premium	(\$4.00)	-\$200,000
Total		\$553,500

Note: All \$/sf values from Kats 2003 - The Costs and Financial Benefits of Green Buildings

Note: NPV assumptions: Discount rate: 7%, Inflation 2%, 20 year term (from Kats 2003)

Figure 5: Portland Oregon's Office of Sustainability^{xxxi}

While accountants contribute information to Sustainability reports, the usefulness of reports also benefits from input from creative staff.

Capetown, South Africa also provides a colourful report on its sustainability^{xxxii}:

Public sector agencies are being challenged to report on the long-term sustainability of public finances^{xxxiii}. But managing finances alone is not sufficient. Dunedin has shown how to integrate long-term financial viability with overall sustainability.

Putrajaya City's administration's role is to formally select those indicators that demonstrate to internal management and to key external stakeholders that its decisions will result in the city achieving Visi2015.

The aim of reporting is to communicate a story that is fully supported by evidence and supporting documentation.

By knowing the information being used or for which proxies are being used, the city can select the indicators against which it will collect data to enable it to prepare sustainability reports at the level required by general users. More powerful users can ask Putrajaya City to prepare reports on specific information.

Accountants can contribute one very useful concept to the design or reports. It is called "materiality".

Materiality – Sifting the Husks from the Rice

Accountants determine what to include in a report based on what is "material" to a user making a decision. Thinking this way helps us determine the level at which information is separately reported. The inclusion of information which is not material or the exclusion of information which is material may impair the usefulness of the information reported to users.

The formal definition states: "Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to:

- a) influence the economic decisions of users taken on the basis of the financial statements; or
- b) affect the discharge of accountability by the management or governing body of the entity" (AASB 1030 Materiality)^{xxxiv}.

For example: a city's financial statements will contain information on the total cash at bank. They do not contain information on the balance at year end of each and every bank account. Users of financial statements need to know the liquidity of the city. If too much detail is provided, their attention is drawn to details that do not affect their decisions. Put simply, they are distracted. However, experience has shown that users need to know the difference between liquid assets that turn over within 12 months (current assets) and those that are held for longer (Non-Current Assets).

The aim of a sustainability report is to inform the city's residents and other external stakeholders of the activities, achievements and the challenges faced as a community. People look to it for information to

assist them make decision to achieve Visi2015. They are not served well if the report is unnecessarily cluttered by lots of detail. Where users require more detail, this can be reported in notes to the reports or obtain separately. For example, staff will have access to detail not in the sustainability reports. Detail can be posted on the city's website.

"Materiality" is a concept that helps make financial reports easy to read and understand. It can similarly be applied to the preparation of sustainability reports. And external auditors of assurers can apply it in auditing the sustainability report.

3.4 Independent Audit and Assurance of Reports

Independent audit provides users with assurance that the financial statements are reliable. A clear audit report means independent professionals have had full access to the management and financial systems and have reached the opinion that the report is supported by documentation, and has been prepared in accordance with nationally recognized standards and policies.

The accounting profession, in 2003, issued its "International Framework for Assurance Engagements", for use in the audit of corporate responsibility reports of large companies, and the standard ISAE 3000 "Assurance Engagements other than audits or reviews of historical financial information"^{xxxv}. The profession is also developing an assurance standard for green house gas engagements^{xxxvi}. AA1000AS "Guidance for Reporting Organisations seeking Assurance" has been developed by the non-profit organisation AccountAbility^{xxxvii}. AA1000AS and ISAE3000 are widely recognized assurance standards to guide assurance providers whereas the GRI Guidelines guide reporting companies.

The aim of accountants is to provide useful reports to both internal and external stakeholders so that economic resources are well applied. The manner in which a city is administered has changed over time. What follows is a description of the relative competence of local governments, using a scale between one and five.

4. Accountants have been serving Local Government for 100s of years

The contribution of accountants to local government varies in accordance with the environment (economic, ecological, cultural, social and legislative). What follows is a summary of the stages of evolution of accounting for local government activities in all countries.

LEVEL 1: Local Government part of National Government

At this level, local governments are part of the national or state government. In some countries, local governments exist in name only. Residents in each local government area do not have the funds and cannot attract funding for infrastructure projects. National government remains the main source of funding to local infrastructure and other local services. There may be few services for residents, and those may be

unreliable. At this level local governments need merely to account for the funds allocated within the national government accountability framework. Sustainability is not actively managed.

LEVEL 2: Local Government Separate Entity

At level 2, the population within each local area increases and national governments respond to the local community's desire to control their own services and infrastructure by legislating for local government. Once formed in accordance with national legislation, the local government raises funds from residents, levying fees for charges, e.g. rubbish removal, and may manage smaller services. Rarely do local governments at this level fully fund their own infrastructure, which continue to be managed and funded by national or state government. At this level local government may prepare their own financial statements. They manage sustainability through planning processes and bylaws.

LEVEL 3: Local Government raises Revenue

At level 3, the wealth of the population is sufficient for local governments to raise revenue through levying rates and charges. The local government, as a result of this reliable revenue stream, is able to provide reliable services. The national or state government may continue to manage infrastructure projects and provide capital funding. At this level, local government will generally have their own accounting personnel and actively manage the standard of living of residents. National / State governments retain the power to overrule local government decisions.

LEVEL 4: Local Government raises Capital

At level 4, with a reliable revenue stream, local governments seek to meet residents' expectations by planning and raising loans to fund infrastructure. This infrastructure may be funded by the national or state government or raised using debt instruments. There is usually a good asset management system that records all infrastructure and other assets of the local government^{xxxviii}. At this level local government will have their own specialist professionals (engineers, accountants, librarians, community development workers) and will set their own standards. Sustainability is managed by complying with laws and national / state legislation.

LEVEL 5: Local Government manages Social, Cultural, Economic and Environmental Sustainability

Infrastructure has a finite life cycle. When local governments are new, most of their infrastructure is also a new. At this stage, the life cycle cost of local government infrastructure is incorporated into the costing structure underpinning revenue policies. Local government is able to manage the intergenerational equity by ensuring the future generation is not charged for infrastructure consumed by a previous generation^{xxxix}. In addition, it is able to ensure that the current generation provides infrastructure to the next generation sufficient to meet its needs. At this stage of evolution local government will have, in addition to engineering and accounting personnel, environmentalists, community development workers, artists and experts in reporting on sustainability. The local

government works in partnership within a common framework of laws and internationally accepted standards.

Level	Attributes
<p>5. City is demonstrably sustainable</p>	<ol style="list-style-type: none"> 1. City managers are responsible for selecting indicators and demonstrating achievement of sustainability goals. 2. The city contributes to the setting of standards and guidelines for sustainability reporting for local governments. 3. The City is accountable to residents and other stakeholders through formal accountability reports. 4. City staff members have the skills to manage sustainability through principles, policies and systems within an approved common framework. 5. Good practices are followed and sustainability reports are independently audited / assured.
<p>4. City raises its own capital</p>	<ol style="list-style-type: none"> 1. City managers are responsible for strategically planning infrastructure and obtaining sources of funds. 2. The city complies with internationally recognized standards for sustainability. 3. The City is accountable to funders and other major national and international stakeholders. 4. City staff members manage the city's assets, maintenance, operation and disposal. 5. Internal policies, systems and procedures are followed and comply with generally accepted practice for the management of infrastructure, finances and local government services..
<p>3. City raises its own revenue</p>	<ol style="list-style-type: none"> 1. City managers budget for revenue needs and levy rates, fees and charges to fund the city's annual operations. 2. The city complies with national government legislation and guidelines for sustainability. 3. The city is accountable to the residents through election of its governing body. 4. City staff members manage revenue raising and expenditure. 5. The city complies with local government procedures and accounting standards.
<p>2. City is politically independent</p>	<ol style="list-style-type: none"> 1. City managers approve the budget before it is submitted to national government for funding. 2. The city develops its own sustainability policies, systems and procedures. 3. The city is accountable to the national government and local government guidelines and regulations. 4. City staff members are appointed by the city administration. 5. The city develops its financial policies, systems and procedures.
<p>1. City is part of national government.</p>	<ol style="list-style-type: none"> 1. City managers submit the budget to national government for funding. 2. The city complies with national sustainability policies, systems and procedures. 3. The city applies the national government guidelines and regulations. 4. City staff members are appointed by the national government. 5. The city applies national financial policies, systems and procedures.

Figure 6: Model of City's growing capability to sustain itself

Conclusion

Putrajaya City has a wonderful opportunity to create a city that not only is economically viable, has the support of the national government and offers wonderful recreational activities. It also has the opportunity to create a vibrant society that integrates its cultural uniqueness through all aspects of its administration.

Accountants' contribution to city administration has evolved over time. With the introduction of sustainability reporting and its underlying principles and systems, accountants can offer their skill set in working closely with internal and external stakeholders. Skills developed in preparing budgets, managing financial systems, costing alternatives, preparing reports and auditing the same systems and reports can also be applied to the management of sustainability.

Accountant's conceptual framework is being adapted to meet the needs of organisations and public sector agencies managing their sustainability. And accountants, being used to applying nationally and internationally recognized principles, guidelines and policies has much to offer the city in applying sustainability principles, guidelines and policies.

Accountants know the importance of reports, we know that users rely on the reports and we are careful in their preparation. One of the most useful concepts that accountants can offer in the preparation of sustainability reports is the concept of "materiality". By applying the concept of materiality to the preparation of sustainability reports, the city will ensure the reports are easy to read and understand, and that users can rely on the reports in making decisions that affect the city's sustainability.

Independent auditors provide assurance to both users of reports and to staff.

As local governments develop, they develop the skill sets of their staff. The skills learned from estimating revenue, preparing budgets, planning and costing infrastructure projects, and costing proposals from the governing body can similarly be applied to managing a city's sustainability.

Many cities throughout the world have found it beneficial to include accountants in their deliberations about the city's sustainability. Hasselt investigated creative options to managing its congestion, and obtained independent advice on the cost of its policy from accountants.

Curitiba used accountants to cost its proposed shift from rail to bus transport. Dunedin involved accountants in the long-term costing of infrastructure and to identify the effect on its revenue targets. Portland found that, by involving accountants, that it obtained general support for its plans to make the city sustainable.

A city's management of its sustainability and of its reporting on sustainability depends on the existence of many skills. It is now accepted that focusing on the economy alone is insufficient. Humans have many needs. Material well-being can sustain only part of our humanity. We need also to sustain our society, its culture, mores and uniqueness. And, a vibrant environment can no longer be assumed and ignored. It must now be actively managed if human life on this planet is to be sustained.

Accountants have much to contribute to Putrajaya being a sustainable city.

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- ⁱⁱ The SIGMA Guidelines Toolkit – Sustainability Accounting Guide, p 9
<http://www.projectsigma.co.uk/Toolkit/SIGMASustainabilityAccounting.pdf>
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- ⁱⁱⁱ Mohd Nordin Hasan and Admad Hezri Adnan (2001) "Sustainable Development Indicator Initiatives in Malaysia – Novel Approaches and Viable Frameworks" Institute for Environment and Development (LESTARI) Universiti Kebangsaan Malaysia.
- ^{iv} The accounting firm Price Waterhouse Coopers have reported on "Cities of the future: global competition, local leadership" to create a tool for strategic development and knowledge sharing that they hope will result in added value for people in cities, organisations or companies. See: http://www.pwc.com/en_GX/gx/government-public-sector-research/pdf/cities-final.pdf last accessed 19th February, 2010.
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- ^{viii} <http://www.ppm55.org.my/> last accessed 17th February, 2010. See also: http://www.sundaystandard.info/news_item.php?NewsID=6365&GroupID=5 last accessed 19th February, 2010.
- ^{ix} Selangor, in *Agenda 21 Selangor*, addressed the issue of sustainable development indicators, and considered the conceptual framework and the implementation plan in considerable detail.
- ^x http://www.landcareresearch.co.nz/sustainability/sustainability_details.asp?Sustainability_ID=120 last accessed 19th February, 2010.
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- ^{xii} <http://web.ifac.org/sustainability-framework/imp-improvement-of-information> last accessed 16th February, 2010.
- ^{xiii} See: <http://web.ifac.org/sustainability-framework/imp-improvement-of-information> last accessed 10th February, 2010.
- ^{xiv} IFAC Sustainability Framework, Internal Management. <http://web.ifac.org/sustainability-framework/imp-improvement-of-information>
- ^{xv} Advances in Environmental Accounting Proceedings of the ACCA/Environment Agency Seminar May 2001, Certified Accountants Educational Trust, London.
- ^{xvi} http://en.wikipedia.org/wiki/Public_transport_in_Hasselt last accessed 19th February, 2010.
- ^{xvii} The scope of internal auditors includes:
- Reviewing the reliability and integrity of financial and operating information and the means used to identify, measure, classify, and report such information.
 - Reviewing the systems established to ensure compliance with those policies, plans, procedures, laws, and regulations which could have a significant impact on operations and reports and whether the organization is in compliance.
 - Reviewing the means of safeguarding assets and, as appropriate, verifying the existence of such assets.

- Reviewing and appraising the economy and efficiency with which resources are employed.
- Reviewing operations or programs to ascertain whether results are consistent with established objectives and goals and whether the operations or programs are being carried out as planned.
- Reviewing specific operations at the request of the Audit Committee or management, as appropriate.
- Monitoring and evaluating the effectiveness of the organization's risk management system.
- Reviewing the quality of performance of external auditors and the degree of coordination with internal audit.
- Review the internal control statement by senior management and the related opinion by the attest auditor for audit planning. (see: <http://www.theiia.org/guidance/additional-resources/audit-committees-board-of-directors/internal-audit-department-charter/> last accessed 16th February, 2010).

^{xviii} Information is the foundation of efficient markets. The information currently covered by accounting standards and listing rules does not reflect all the non-financial factors fundamental to the assessment of the current or future performance of a company and its contribution to the creation of a sustainable economy. This impairs the ability of investors and others to take informed decisions.

(<http://www.accountingforsustainability.org/files/pdf/Governance%20&%20Collaboration.pdf> page 2)

^{xix} MAS 5 [Accounting for Aquaculture](#);

^{xx} MASB 32 [Property Development Activities](#)

^{xxi} FRS 6 [Exploration for and Evaluation of Mineral Resources](#)

^{xxii} FRS 126 [Accounting and Reporting by Retirement Benefit Plans](#)

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^{xxiv} UN Division for Sustainable Development, Environmental Management Accounting Procedures and Principles, United Nations, New York, 2001.

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^{xxxiii} IFAC, in November 2009, issued a consultation paper on "Reporting on the Long-term Sustainability of Public Finances". Comments are requested by April

30, 2010. <http://www.ifac.org/Guidance/EXD-Details.php?EDID=0133> last accessed 17th February, 2010.

xxxiv http://www.aasb.com.au/admin/file/content102/c3/AASB1031_9-95.pdf last accessed 17th February, 2010.

xxxv <http://web.ifac.org/sustainability-framework/ohp-external-review-and-assurance> last accessed 17th February, 2010.

xxxvi <http://www.ifac.org/Guidance/EXD-Details.php?EDID=0132> last accessed 17th February, 2010.

xxxvii <http://www.accountability21.net/> last accessed 17th February, 2010.

xxxviii The challenge of managing a city's infrastructure has existed throughout time. Urban Rome in 97C.E. had challenges in managing its water infrastructure. Problems of unauthorised access to water, poor maintenance of above ground and below ground pipes and the confusion resulting from some maintenance teams paid by the city and other teams paid directly by Cesar are recorded in "De aquis urbis Romae" written by the Water Commissioner, Frontinus. He "paints a picture of himself as a faithful, responsible servant called to an office long wretchedly mismanaged and tainted." See: http://muse.jhu.edu/login?uri=/journals/technology_and_culture/v043/43.3koloski-ostrow.html and <http://www3.iath.virginia.edu/waters/frontinus.html> last accessed 19th February, 2010.

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