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**SUBMISSION INTO ACT GOVERNMENT PROCUREMENT
SUSTAINABLE PROCUREMENT: THE WAY FORWARD**

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INTRODUCTION:

Procurement should not only be about the lowest first cost. The traditional procurement focus on fit for purpose and first cost is not only short sighted but may well lead to the most expensive products over the whole of life being chosen. Furthermore as the need for increased sustainability outcomes become not just more obvious, but urgent achieving sustainability in purchasing means we must know not just about what constitutes sustainability from a theoretical point of view, or just from a broad practical standpoint, but to ensure we get what we want from any given purchase, we need know deeply from a whole-of-life-cycle impact perspective with economic and social inputs. Only then is one ensured that the correct decision has been made. The question is, 'how can we achieve this simply within day to day pragmatic organisational constraints?' This is particularly important as the role of Government at any level is surely to use the purchasing power of the public purse to the best end benefit of its constituents and no longer can this exclude environmental concerns or social equity issues.

This submission considers the implications of engaging organisation-wide processes in sustainability to deliver overall increases in productivity called 'Green Productivity' benefits, how to engage these processes and deliver simple easier procurement outcomes. The role of third party certification and life cycle assessment in reducing research time and effort and providing simpler solutions in sustainable procurement is also discussed.

KEYWORDS: sustainable procurement, green procurement, green productivity, third party assessment, verification, life cycle assessment, certification, corporate sustainability, integrative design process.

SUBMISSION:

According to Batsholom and Reid¹ Effective use of tools requires a good process, which depends, in turn, on supportive mental models. To deliver sustainable procurement outcomes that actually deliver real environmental, social and economic improvement in real terms, we must first share mental models of what is sought to be achieved. Then we need to have some 'sustainability compass' as a guidance tool and to employ detailed analysis processes such as life-cycle analysis to make sure we are getting as robust and holistic answer as we can get and decide what the important issues are and how important they are relatively. Then and only then, can we get down to the individual product comparison assessment level.

Green Procurement can however mean more than just modifying the specifications of the purchasing department, it can mean embedding the necessary mental models (understanding) and processes throughout the entire organisation or procurement process, then using measurement and benchmarking analysis (key performance indicators in organisational and staff performance and at a product specification level, life cycle assessment- LCA and life cycle impact analysis – LCIA and within projects such strategic and stretch targets in integrated design processes) and overall, this often requires engaging the whole organisation from the top down and generally overcoming obstacles and resistance along the way and providing other benefits such as increased productivity and decreased absenteeism. At this level it is described as Green Productivity.

Indeed organisations like Interface the global carpet manufacturer that started their sustainability journey in eco-efficiency have, according to its Asia Pacific CEO Robert Coombs at a recent Green Building Council of Australia 'Green Leaders' presentation², realized their maximum benefits are gained when the whole organisation is engaged in green procurement, across all sectors. This is how and where 'Green Productivity' is found.

Green Productivity is derived from finding synergy between sustainability initiatives engaged during green procurement processes. Whether it is using integrated design processes to design buildings or integrated policies and processes across major organisations to increase outputs, reduce costs and increase productivity, synergy delivers multiple benefits across multiple systems and allows the overall organisation, process, or system to be optimised – leading to larger overall savings by enabling and delivering different outcomes.

The focus of procurement in the ACT Government Procurement system should be to Generate Synergy and hence Green Productivity while driving overall ecological, social and economic costs down by identifying whole

of life cycle cost and accounting for all costs and benefits to the organisation using life cycle costing procedures. Some life cycle costs especially in building procurement have been seen as intangible, but good quality data is now available showing these 'intangibles' are quantifiable and show significant financial and social benefits if they are undertaken and implemented correctly.

Sustainability needs to be considered over the whole lifetime of buildings:

Case studies:

According to the most recent report by the Green Building Council of Australia, called "The Dollars and Sense of Green Buildings 2008", sustainable buildings can deliver productivity gains of more than 10 per cent and result in reduced sick leave and improved morale.

Furthermore, environmentally-sustainable workplaces are emerging as key issue for the hiring and retaining of staff. A survey conducted in 2008 found that 84 per cent of employees want to work in an environmentally friendly office, and that those lucky enough to already work in one sing their employer's praises, according to the Green Building Council of Australia.¹

Another 2008 study, in Australia, focused on comparative post-occupancy evaluations, based on occupant surveys for 22 'green design intent' buildings and 23 conventional buildings. The study found that the best sustainable buildings consistently outperformed the best conventional buildings, from the occupants' perspective. Across the buildings studied, the researchers identified significant associations between perceived productivity and overall comfort levels (in relation to lighting, ventilation, thermal comfort, noise, etc.) especially for the case of thermal comfort.²

Sustainability Victoria Refurbishment

The offices belonging to 'Sustainability Victoria', recently undertook a sustainable refurbishment, and a study yielded quality data (with a very useful level of detail) about the very high levels of increased productivity. The results of this study are shown in the next image.

Meeting Room Productivity	Overall Performance
> Concentration up by 34%	> Productivity up 45%
> Participation up by 41%	> Workplace performance up 13%
> Perception air quality up by 15%	> Informal interaction supported
> Perception ambience up by 19%	> Reflects SV sustainability values: 96%
> Sick leave down by ~ 30%	> More comfortable office: 69% (light, air quality/temp, ergonomics)

Table 1 - Productivity benefits from the sustainable office redesign for 'Sustainability Victoria', Australia³

500 Collins St Refurbishment

In another study of 500 Collins Street Melbourne, an office building was refurbished and the tenants were polled before and after the 6 star Green Star renovations. Two separate companies were polled and the results found:

¹ Newspoll Australia

² <http://www.yourbuilding.gov.au>

³ Sustainability Victoria

- *Average sick days per employee reduced by 39%;*
- *Sick leave costs reduced by 44%;*
- *Speed and accuracy of typing increased; and*
- *Lawyers' billing ratios increased, even as the average hours declined (i.e. they worked more efficiently).⁴*

Sustainability also needs to be considered over the whole lifetime of Products

We must also realize that the characteristics that make a product sustainable do not just relate to the materials that they are manufactured from but involve all aspects from a products' design and raw materials sourcing to the way it is used, deconstructed and re-used or disposed. It is also an emergent quality of one or more systems:

- 'supply' systems;
- 'construction' & 'manufacturing' systems;
- 'procurement' systems;
- 'demand' processes;
- 'disposal' systems;

such that the overall life-cycle impact is minimised over more than one life-cycle or as the US Architect William McDonough and German Chemist Michael Braungart have coined in their book by the same name, the 'Cradle-to-Cradle'⁴ cycle.

In general terms it relates to products that not only:

- are not harmful ecologically (cradle to grave);
- require minimal maintenance in use;
- don't cause human illness;
- minimise resource demand because they are:
 - salvaged, or contain recycled materials;
 - reusable or recyclable with minimal additional energy or processing
 - Designed for Disassembly (DfD);

but are also:

- durable & low maintenance;
- minimise resource demand e.g. energy ,water, rare & non-renewable resources;
- use renewable resources;

and come with manufacturer:

- extended responsibility commitments; and
- corporate social responsibility reporting.

However, if we considered all these reductive aspects of sustainability to be the full extent of a sustainable product description, we will be missing any chance of real or actual sustainability. While we have only vague ideas of what will constitute a truly sustainable city of the future, we cannot even get there by only reducing the impacts of growing demands when the natural systems are in such decline as a result of human actions.

Biodiversity has plummeted by almost a third in the 35 years to 2005... land species have declined by 25 per cent, marine life by 28 per cent, and freshwater species by 29 per cent... the current extinction rate is now up to 10,000 times faster than what has historically been recorded as normal.

The Convention on Biological Diversity in Bonn, pledged a "significant" reduction in biodiversity loss by 2010...global inaction has already made such a goal totally unattainable⁵

Key examples of the failure to control biodiversity loss is presented in a 2005 Australian Government report⁶ that showed up to 80% of timber imported into Australia from some countries is illegally harvested and a 2004 American Forest Products and Plywood Association report⁷ that found worldwide illegal timber trade to be worth US\$22.5 billion with a 16 country survey finding 20-80% of exports from every country in the study were illegal.

⁴ Accessed at http://www.resourcesmart.vic.gov.au/documents/500_Collins_Appendix_3.pdf

To ensure sustainability, the natural systems that have been so significantly degraded will need proactive support. This support has been broadly characterized by this author as 'Restorative Sustainability'⁸ and products and processes that support restorative sustainability can be identified by one or more of the following features or abilities:

- promote ecological restoration by:
 - reducing past concentrations substances from within the earth;
 - reducing past concentrations substances produced by society in the ecosphere;
 - repairing and restoring ecosystems and increasing the diversity of nature;
- are perpetual or self perpetuating;
- create net positive influences;
- provide multiple ecological benefits; and
- long lasting effects.

So to move towards a truly sustainable future it is recommended the ACT Government place emphasis on moving toward organisational and behavioural patterns that support the whole gamut of sustainability characteristics including net positive outcomes and introduce strong change management support to confront the inevitable skeptic/s within any organisations relating to any change

Barriers to Green Procurement:

There are a wide variety of potential barriers that are likely to be experienced by individuals within organisations trying to create change towards sustainability. To overcome these the ACT Government should support internally and act towards:

Organisational:

- clear and supportive green procurement and productivity policy;
- gain commitment for green procurement and productivity at senior levels;
- identify and support internal sustainability champion/s;
- increase understanding of issues;
- determine appropriate organisational structure and delegations; plus
- use change management processes to overcome:
 - intrinsic conservatism;
 - automatic assumption of increased costs;
 - identified sources of funding (if necessary);
 - perception that green 'is not a business concern'.

Individual:

- work to overcome
 - individual 'butt protecting' – fear of failure ;
 - culture of conservatism;
 - lack of time (or will) to research alternatives;
 - bias in specifications towards 'tried & true';
 - over-focus on first cost not whole-cost;
 - specifications preclude innovative solutions
 - perception that 'second hand is second class'
 - unwillingness to take responsibility for change;
 - lack of information on alternatives;
 - lack of creditable eco-assessment of products.

While these are all real concerns many are a result of a lack of understanding of the reality of the benefits of an integrated approach to sustainability resulting from the view that 'sustainability' is something that is added to the status quo rather than integrated into new processes from the beginning.

The Way Forward - Green Productivity

Green Purchasing is a purchasing strategy. Green Productivity (GP) is an organisation level strategy for enhancing productivity and environmental performance (including purchasing) simultaneously and integrates the adoption of innovative practices, processes, technologies and products as a key tool. Innovation is a primary driver of economic growth. Green Productivity greens the process of innovation to deliver not just cost effectiveness but savings. 'Green Profits' can be generated via savings generated by:

- delivering greater raw and recovered materials resource efficiency;

- improved productivity in processes and people;
- increased quality in products and services;
- intangible benefits to constituents etc

Beneficial, green advantage translates into organisational and societal benefits because Green oriented ACT Government procurement processes will support volumes in the green manufacturing sector and provide consequent benefits in pricing, eco-preferred quality and, the demand generated within the marketplace from the integration of environmental improvements creates new business and product innovation and opportunities.

Up until now, "Quality vs cost" has been the focus. Extending this concept to include environmental quality is not difficult, it is logical...and the ACT Government should, like the growing demands within society demand it.

However the first step on the ladder towards implementing Green Productivity is to start with a Green Purchasing program with a focus on Life cycle assessment, third party certification and for buildings and complex design processed- the use of Integrative Design Process..

Effective Organisation

It is important that the ACT Government continue to develop and implement plans and strategies to ensure Green Productivity delivers all the potential benefits it can. Some key recommendations towards green procurement for ACT Government to consider are:

- ensure Senior Management 'buy-in'
- identify internal champions – appoint Sustainability Director or Officer
- develop, adopt & promote Corporate Sustainability Policy to drive Green Productivity based on a 'continuous improvement model' e.g. ISO 9001, or 14001.
- consider all aspects of organisational activity
 - governance
 - operations
 - social responsibility

Within the Corporate Sustainability Plan:

- develop a Green Purchasing Plan with category specific green tender specifications and assessment processes;
- that uses metrics the market will understand e.g. based existing: Minimum Energy Performance Standards (MEPS), Green Star, Life-cycle Assessment etc.
- Plan for & assess Green Purchasing outcomes across whole-of-organisation:
 - integrate Green Procurement KPIs into relevant staff performance criteria and reviews;
 - collect & publish Statistics – internally and externally;
 - use corporate influence in market as a consumer to drive market change;
 - analyse procurement processes and modify – products & materials, buildings, services (particularly specifications & contracts);
 - use weighted assessment processes based on key environmental priorities – not just cost & fit-for-purpose issues, to choose between dislike products;
 - use Life-cycle Assessment as an information source;
- Require Integrative Design Process as a fundamental aspect of any complex design related project (see below);
- Require whole of life costing to be a pre-requisite for any Value Management process;
- Require third party certification of environmental and health claims of products (see below).

Integrative Design Process (IDP)

IDP is the sole key to driving green building first costs and operational life cycle costs down while driving the sustainability outcomes up. It is a workshop or charrette based process that sets targets and stretch targets for the project and then works the whole team to conceptualise, design integrate systems to identify synergy and hence savings. The success of IDP at driving costs down is such that the *Abu Dhabi Government on 1st February 2009, mandated evidence of an IDP be submitted progressively with each stage of the 3 stages of Development Assessment within the Emirate for any project requiring planning approval.*

The typical Business as usual linear design process approaches each problem directly and separately, while an integrated process approaches each problem from the varied viewpoints of multiple participants and the issues they represent. IDP is a continuous and circling process, one that encourages exploration in order to

ensure discovery of the best opportunities, while permitting continuous adjustments as more understanding emerges.

Three to five charrettes is the typical number of large meetings required to move integration forward, in conjunction with many additional sub-meetings. When and how the team members interact is the responsibility of the project manager or the integration facilitator. Nevertheless, unless the project team meets with some level of intentional integration (and updated analysis) at least every two weeks, the momentum of exploration will diminish.

The foundation of an Integrative Design Process is the Discovery Phase. An understanding of the invisible relationships between the basic systems of a project needs to be gained before the design of any tangible, physical relationships can begin. These basic systems are the aspects and relationships that are engaged within and around a specific project. Every key issue needs to be brought into play – the more the better. This requires that the client, the design team members, the construction team members, the community and other stakeholders (representing key issues and interest) all be brought into a relationship with each other so that co-discovery can take place.

The design process should begin by determining, as best as possible, how to increase the beneficial interrelationships between human, biotic, technical, and earth systems. This understanding will become the foundation for any design aimed at saving resources, restoring the health and benefits of natural system processes, and engaging humans in an understanding of these functions (so that they can serve as effective stewards). Participants in the design, construction, and operations phases of the project must actively seek to optimize the interrelationships between these systems over time – in other words, making sustainable (and best) use of resources, both technical and natural.

The IDP process for projects that embrace the larger systems of which they are a part, can be summarized with the “Three E’s” – Everybody engaged, Every issue considered, Early in the project.

It requires:

- i) life cycle costing- ‘tunnelling through the cost barrier’
- ii) Experienced Facilitators and design team
- iii) Innovation- in design, products, processes and management
- iv) Risk management- using management procedures to reduce risk to acceptable levels.

Innovation: A key pathway to achieving real synergy and savings in sustainability is innovation. This can be a foreign concept for some builders and developers. However the importance of innovation is underscored by the following quote from Björn Stigson, President of the World Business Council for Sustainable Development in Geneva, Nov 2004¹⁴

Technology is a key part of the solutions for sustainable development... Innovation and technology are tools for achieving higher resource efficiency in society.

Management of risk: There is an only sometimes correct perception that innovation increases risk. However without utilising innovation we will not progress towards sustainability- we cannot expect to progress and change if we only ever continue to do things the way we have always done them. The problem is most organisations particularly Government organisations are quite risk averse and this tendency must be overcome. Working with innovation does not always have to be as risky as it seems- risk can be managed and minimised. Some key questions that might assist in determining how real the risk is, whether it is worthwhile and whether it can be minimised:

- Is the risk real or perceived?
- In who’s opinion?
- Are they expert in the appropriate field, if not who is?
- Is the risk worth the returns?
- How can any identified risk be externalised? Via e.g.
 - Extended or modified Warranties
 - Insurances
 - Performance Guarantees etc

Use smart tools & collaborate: Learning from other peoples’ experience and mistakes reduces time and costs. Use online facilitation resources such as:

- **Viridus:** an forum for green business professionals that allows online sharing through forums, polls, blogs and facilitates direct connection through profiles, one-on-one and group collaboration.

- see www.virid.us
- **The Greenleap Network:** An extensive email forum among green practitioners in Australia run by Philip Sutton of Green Innovations Inc. Membership to the Greenleap forum is free for first 12 months, then generally after that, a small fee is charged:
 - see www.green-innovations.asn.au/greenleap.htm
 - see also www.green-innovations.asn.au for information on Green Innovations & resources on creation of an ecologically sustainable economy & sustainability-promoting firms:

Use third party verified information: Using or specifying products or criteria based on third party verified or certified information is a powerful, strategic tool to reduce overall research time in:

- understanding the issues and priorities;
- creating specifications; and
- weighting and tender assessment systems;
- ensuring the products you purchase will deliver the benefits you need to drive productivity;
- finding leading edge, innovative products;
- reducing risk in the purchasing process.

Examples of third party schemes include:

- **Minimum Energy Performance Standards (MEPS):** is a Federal Government star based mandatory differential rating system for:
 - Fridges and Freezers
 - Dishwashers
 - Dryers
 - Air Conditioners
 - Clothes Washers
 - Hot water systems
 - And gas appliances
 - see www.energyrating.gov.au
- **Window Energy Rating Scheme (WERS):** run by the Australian Window Association, is a star based mandatory differential rating system for analysis of heating and cooling benefits of windows and glazing for residential and commercial buildings.
 - see www.wers.net.au
- **Renewable Energy Certificates (RECS):** a numerically based mandatory differential rating system that assesses the efficiency of energy generating systems relevant to locality/conditions undertaken by the Federal Government's Office of the Renewable Energy Regulator. Products registered for RECS include:
 - solar hot water heaters
 - small generation systems e.g. photovoltaic, wind, hydro
 - see www.orer.gov.au
- **'Greenhouse Friendly' Scheme:** run by the Federal Government's Department of Climate Change verifies the embodied carbon offsets for products and companies to ensure that carbon neutrality claims made via offsets or abatement are genuine.
 - see www.climatechange.gov.au/greenhousefriendly/index.html
- **Water Efficiency Labelling Scheme (WELS):** like MEPS is a Federal Government star based mandatory differential rating system for some categories of water consuming fixtures and fittings such as:
 - taps
 - shower heads
 - dishwashers
 - clothes washers
 - toilets, cisterns and urinals
 - see www.waterrating.gov.au
- **Forest Stewardship Council (FSC):** A global sustainable timber certification scheme with full chain of custody certification to ensure the timber being purchased with the logo is actually sourced from controlled sustainable forestry operations. Scheme certifies:
 - FSC 100% Certified sources;
 - FSC Mixed Sources (% mix nominated)
 - FSC Recycled sources
 - see www.fsc.org

- **Australian Forestry Standard (AFS):** An Australian Timber Industry initiated standard that is a member of the Global PEFC system also with full chain of custody certification. AFS (and other PEFC based timber certification schemes from overseas) are a way to ensure the timber is not illegally sourced, however certain aspects of their system are likely to lead to lower environmental outcomes than FSC.

However to deliver sustainability outside these quite narrow bands of products other third party systems that consider products more holistically using standards and LCA are needed and include:

- **Good Environmental Choice Australia (GECA):** A standards based assessment system including energy efficiency and some life cycle impacts- standards in general set to allow top 25% of market to meet the Standard. Standards have been developed across a range of consumer, office and building industry product sectors, but not all. No differentiation between products is made once the standard has been met.
 - see www.geca.org.au
- **Good Environmental Choice New Zealand:** A similar standards based assessment system including energy efficiency and some life cycle impacts- standards in general set to allow top 25% (or more) of market to meet the Standard. Standards have been developed across a range of consumer, office and building industry product sectors, but not all. No differentiation between products is made once the standard has been met. Standards are not necessarily harmonized with GECA and historically some have been set lower so careful comparison is warranted before relying on GECNZ labelling.
 - see www.gecnz.gov.nz
- **Ecospecifier:** Ecospecifier is a 'one stop' online knowledge and database that encompasses all the above systems and a standards based assessment and product claim verification process covering all products sectors relating to development, construction, infrastructure, interiors, building maintenance and some building operations products.

Product assessment is based on whole-of-life impacts using a combination of quantitative and qualitative LCA and LCI data including embodied greenhouse and energy data. To be considered for inclusion the products must meet threshold criteria and strict eco-toxicity, health and biodiversity standards. The data, standards assessment results and risk analysis data is all transparently published on the site to allow not just the top 25% category products to be identified, but the leading products to be determined. Ecospecifier's GreenRate green building rating scheme pre-assessment service also assesses products against the Technical Manual standards of the various green building rating schemes such as the Green Building Council of Australia's Green Star™ system, NABERS, BASIX etc. and connects them to tool and credit specific search functions to make finding products relevant to certain credits easy to find.

Ecospecifier also are experienced IDP facilitators, sustainability consultants and Green Building Policy developers. Ecospecifier has an extensive e-learning portal content and in-house training capacity for all aspects of IDP, sustainable development and green productivity.

Ecospecifier GreenTag:

Ecospecifier operates The Global GreenTag program, a green product rating scheme and its subset LCARate and GreenRate product assessment services that together:

- verify supplier environmental and health claims relating to a product or products;
- certify that the product/s meet this Standard (Program Rules);
- award a license that authorises the use of a label on products;
- is based on multi-criteria standards;
- takes an overall 'cradle to cradle' product lifecycle approach;
- indicates overall environmental preferability of a product within its particular product category and in accordance with particular threshold levels of performance and a specific eco-point number rating;
- provides written product Environmental Performance Declarations (EPDs) in accordance with AS NZS ISO 14021 as a minimum, but for all levels above 'GreenTag Tier 1' conformance, is also in accordance with ISO 14024:1999 ie is a Type 1 Ecolabel;
- once they achieve 'GreenTag Tier 1' conformance products will be awarded a graded achievement label that, when relevant, will via the GreenRate Certification process, also

demonstrate conformance with the Green Building Council of Australia's (GBCA) Green Star Technical Manual Credits (once Accredited by GBCA) including but not limited to: Mat-5 Materials Calculators for Fitout and other relevant tool Credits generally such as IEQ-Formaldehyde, IEQ-Volatile organic compound (VOC) and Mat-Recycled Content credits as relevant;

- include (but are not limited to) green building and development issues such as:
 - buildings & services;
 - interior fitout, furnishings and equipment (FF&E);
 - facilities management;
 - building maintenance and operations;
 - landscape design; and
 - infrastructure sectors;
- are intended for use in both Business to Business and Business to Consumer context;
- involves both Management Committee, Expert Panel and broad stakeholder participation in the Standard setting process.
 - see www.ecospecifier.org

CONCLUSION

While green procurement is superficially about buying ecological, health and socially beneficial products in an economically efficient way, if the ACT Government engages fully with green procurement strategies across all aspects of the organisation, planning and design systems in an integrated way and focuses on ensuring quality whole of life outcomes, Green Productivity can provide substantial benefits.

Ecospecifier recommends the ACT Government implement Green Productivity strategies in all aspects of its Policy, Management Plans, Staff KPIs, Tendering and Specifications strategies across all aspects of its business.

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