

Noosa Sustainability Institute

Defining a World Class Sustainability Research Institute in Noosa

Options and potential structures

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Land and Water

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Executive summary

This report provides the outcomes of the Stage 1 work for the initial assessment for the establishment of a “Noosa Sustainability Institute”. The development of such a Sustainability Institute could provide Noosa with an opportunity to take a leadership role in one or more aspects of global sustainability research and development.

The aim of this Stage 1 project was to investigate other sustainability institutes already in existence in Australia and internationally, how these institutes operate, and what factors of these institutes may be of use for a “Noosa Sustainability Institute”. Other activities also undertaken in this stage included interviewing Council staff and prominent local community members for their opinions and thoughts on the value of a “Noosa Sustainability Institute”. A set of three potential models were then formulated for consideration by the Noosa Council prior to going any further.

The on-line search of institutes identified a total of 54 sites that fitted the initial search terms and from this initial group, nine international and seven Australian “Institutes” were selected for a more detailed examination. The further analysis of the selected Institutes showed that there were two major types, community-based institutes and institutes run by Universities. A third smaller group of institutes were ones undertaken using a business-focused model run by a few like-minded people providing sustainability services to local communities and councils. None of the institutes viewed were considered to provide an absolute fit for a “Noosa Sustainability Institute” however, all had characteristics that were considered to be suitable for inclusion into the models developed. The Stage 1 activities also involved interviewing Council staff and an initial small number of local community members for their input on the need and operations for a Noosa Sustainability Institute. These interviews provided a range of perspectives which has been used for further inform the possible requirements for such an Institute.

Using all of the information obtained above, three initial different models of a potential Institute were constructed, from a basic model which merely organises the projects undertaken but does not attempt to set research topics or direction, through to more complex models that, to different levels, set research directions, call for projects, monitor research projects, handle research output data, and facilitate research outcomes. All of the options have pros and cons that need to be considered in the process of determining the most appropriate structure(s) for a Noosa Institute.

It is recommended that Council assess the merit of the three models provided and agree on a manageable number of structural options to take to the next stage of assessment and consultation. While three different model structures have been presented in this report, it should be understood that further refinement of any selected model would be needed to provide an Institute that meets the needs of the Noosa Community and Council. It should also be noted that there could be possible opportunity to consider starting with a simpler model structure with an aim to develop into a more complex but ultimately preferred Institute model as the Institute is developed.

Subject to consideration of Stage 1, it is intended that Stage 2 will provide more information and assessment of the preferred model/models including wider stakeholder engagement to reach the selection of a final appropriate Institute structure. Stage 3 would then undertake the development of operating protocols and a business case.

Figure 1 below provides an overview of the project stages.

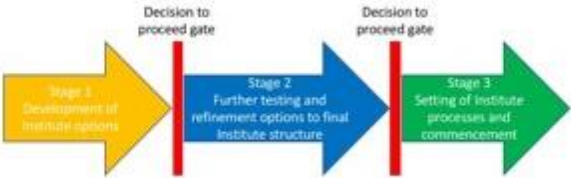


Figure 1. Noosa Sustainability Institute Project Stages

1 Introduction

Australia has one of the cleanest urban environments of any nation. Our cities are also regarded as among the most liveable in the world. Yet this liveability comes at a price as we also have one of the highest rates of resource consumption per capita in the world. While all new homes that are constructed in Australia are required to meet minimum standards for energy and water efficiency, almost half (45%) of Australia's existing housing stock is 30 years of age or older and was built with little consideration for sustainability. When this is coupled with significant commutes to employment, house sizes that are among the largest in the world, and considerable waste associated with overconsumption, many of Australia's citizens are leading a resource intensive and sedentary lifestyle. Our urban environments continue to be a sink for resources and a source of wastes into the environment. As the Australian population increases, this continues to place increasing pressure on our urban, peri-urban and natural environments.

Many of these issues can be overcome or mitigated but to achieve this, information and research is vital to inform on the mechanisms required. Done well, the research outcomes can provide essential data for governments and the community on what is needed on a range of urban, peri-urban and environmental sustainability measures. Such measures include investigating ways to maintain and improve the security of water and energy supplies in a changing climate; decreasing traffic congestion and travel times with a corresponding improvement in air quality; developing mechanisms to reduce the impact of development; and finding new ways for towns to be built with near-zero lifetime greenhouse gas emissions.

Sustainability measures such as these cannot be achieved without the active support of governments and the community. As a result, there is a continuing need to undertake research and develop tools that can model the triple bottom line implications of sustainability scenarios that combine natural resource use, carbon sequestration, emissions reduction, energy system performance, water use, urban form and density, liveability and access to housing and services.

A key challenge for Australia to plan, manage and invest in our settlements is the need to improve sustainability and resilience into the future. This will need to be done, however, in a way that does not devalue our standards of liveability. While the Federal and State Governments can provide input guidance on sustainability measures, the true leadership needs to come from Local Councils and communities, where "on the ground" sustainability efforts can achieve the greatest outcomes.

Improving sustainability is frequently thought of as being the recycling of wastes, along with safeguarding and improving in the local environment and essential services such as power and water. Important as these are, other activities in other sectors such as improving building and construction, development of resilience measures in our communities and in response to climate change, and fostering and enabling community sustainability activities are also important. Research into strategies such as using digital systems to monitor and report on infrastructure performance in real-time; the development of inbuilt fail-safe backups; "gold-plating"; using network stability theory to create resilience to multiple simultaneous failures; and ensuring infrastructure is designed with inbuilt flexibility for multiple potential uses can also have important positive influences on increasing sustainability measures while maintaining a high liveability index. Finally, many sustainability measures succeed or fail on the behaviour of the community. Research on community attitudes and acceptance is vital to ensure the success of all implemented sustainability programs.

Providing a means for local governments and the community to have input into, and take up of research outcomes involving broad ranging, interlinked activities is certainly a challenge. The Noosa Council already has made considerable investment and partnership into a number of research initiatives including investment into the Peregrine Digital Hub, the Noosa Biosphere Reserve Foundation and a range of community and university research activities. Noosa has an opportunity to take a leadership role in one or more aspects of global sustainability research and development through the establishment of a Sustainability Institute.

Such a Sustainability Institute could serve as a focal point for sustainability efforts that involve Council and the community, and further enhance new and existing partnerships with researchers and other partners (such as the Noosa Biosphere Reserve Foundation), leveraging technology, platforms and networks (Digital Hub) to maximise information and data sharing, the uptake of research findings and outputs and provide strategic direction(s) to research to maximise the benefit to the Noosa region.

1.1 Benefits to Noosa

In addition to the major advantages outlined above, the establishment of a Sustainability Institute in Noosa would benefit the Noosa community for example but not limited to the following number of ways:

1. world leading sustainability practises developed by the institute initially trialled for suitability under local conditions that provide the best outcomes for the local community;
2. providing a mechanism through which the community can be engaged in and take responsibility for sustainability initiatives;
3. be a focal point to attract additional sustainable investment into the community;
4. help facilitate the selection, testing and communication of sustainability measures;
5. provide a means for at least one high profile university to establish a physical presence in Noosa;
6. facilitate active partnering and sharing between different researcher groups to improve research outcomes of individual and groups of projects;
7. enhance Science Technology English, Arts and Maths (STEAM) activities with local schools;
8. reinforce Noosa's brand as a leader in Sustainability – complimenting "ZEN" and other initiatives;
9. raise the profile of Noosa and potentially attract highly qualified professionals and their families into Noosa, potentially from all over the world;
10. potentially seed an innovative start-up community focused on sustainability technologies and solutions.

2 Research Methods

2.1 Project Stages

The process to undertake this project was best achieved through breaking the work into set of stages. Importantly progression to the next research stage is contingent upon the previous stage demonstrating that it is suitable to progress, or requires adjustment prior to moving to the next stage.

This report focuses on Stage 1. The aim of this Stage is to examine what other sustainability institutes are already in existence in Australia and internationally, how these institutes operate, and what factors of these institutes may be of use for a Noosa Institute. Other activities also undertaken in this stage was to interview Council staff and a small number of local community members for their opinions and thoughts of the value on a “Noosa Institute”. From these activities, as set of potential models were to be formulated for consideration by the Noosa Council.

A Stage 2 is designed to follow on from Stage 1 taking the most preferred developed Institute models (which can be more than one at this stage) and further testing and developing these models with a broader range of the Noosa community, interest from Universities and other research institutes and Government agencies. This should result in the final selection of a preferred model (which may be a modification of one of the models developed in Stage 2).

Stage 3 will involve setting of the operating protocols, governance structures, management plan of the selected Institute model including business case development.

2.2 Assessment of Existing Sustainability Institutes

A web based search of institutes was conducted with a total of 54 case studies being identified. All of the identified sites are outlined in Appendix A.

Of the 54 sites, nine international and seven Australian “Institutes” were selected for a more detailed analysis based on an assessment of the information provided on the website and how this information fitted the criteria set out in Appendix B. This included whether the institute had a virtual or physical presence; the level of educational and research activities; funding sources; and the level of community engagement.

The information extracted from these shortlisted sites was then collated and analysed to determine the attributes that could either be useful or avoided for the prospective Noosa Institute.

2.3 Interviews with Selected Community Members and Council Staff

Two group meetings were held with Noosa Council staff who already had a role in research activities funded or supported by Noosa Council. These meetings were used to gauge the extent of current research undertaken or funded by Council and the perspectives of the staff members on the value of a Noosa Institute; what was important to be included; what should be avoided; and views on how the Institute could be structured and operated. The important salient points brought up in these meetings were recorded and added to the information gathered from the analysis of existing institutes.

In conjunction with the meetings with Council staff, a small number of community members were approached for their opinion on the possible structure and role of a Noosa Sustainability Institute and the value of such an institute to the Noosa community and environment. This information was gathered through face-to-face interviews. These interviews were covered under a CSIRO Human ethics approval. As the interviews were exploratory in nature there were no set questions approved by the Ethics Committee, instead, the approval covered the interview process which was provided to each interviewee in advance (see Appendix D for details). The interviews went for approximately 1 hour and covered the general opinion of the interviewee regarding the usefulness of such an institute and their thoughts on the relative merits of some preliminary Institute options developed from the review of existing national and international institutes and the first Council staff feedback meeting. The responses from the interviewees were compared and added to the information from the search of existing institutes and feedback from the Council staff.

3 Research Findings

3.1 Assessment of information from desk top research on Selected Existing Institutes

3.1.1 Examples of Australian and International Centres chosen as sources of information.

Australian Institutes

1. Centre for Education and Research in Environmental Strategies

<https://ceres.org.au/>



Institute model: Physical centre, located in Merri Creek, East Brunswick, Melbourne

Active organisation: Established in 1982

Background: CERES now stands where the Wurundjeri people lived on the land. The site was quarried for bluestone during the development of Melbourne and then turned into a landfill site. CERES has worked to revegetate and transform the site into a place that attracts around 400,000 visits each year through on-site education and training programs, Nursery, Organic Market & Grocery and the Merri Table. CERES also offers community programs, venue hire and events.

Mission: CERES is a place for community-based learning and action to create environmentally beneficial, socially just, economically satisfying, culturally enriching and spiritually nurturing ways of living together.

Governance structure: CERES is an incorporated not-for-profit organisation, governed by a Board of Management elected annually.

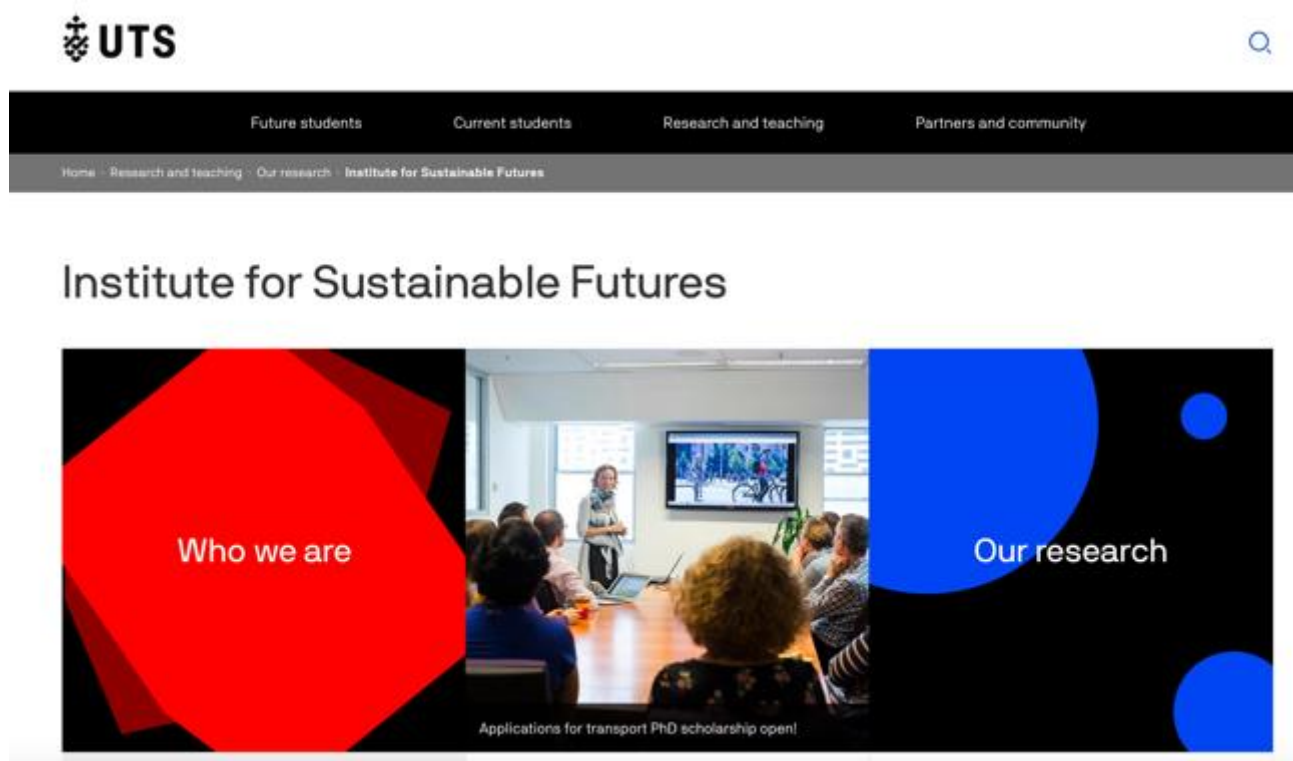
Funding: CERES aims to be financially sustainable, and to do so runs a collection of social enterprises that support their program development and enables it to remain independent, innovative and inclusive.

CERES also has multiple supporters and partners – both financial and in kind in nature.

Selection criteria: CERES is an excellent example of an education-based centre/institute with a very strong focus on both including and positively impacting the local (and global) community. The assessment of the Noosa project is that there is scope to consider incorporating some of the social inclusion and/or financial systems used by CERES alongside a strong research component to have a Centre that would enhance community engagement and financial independence.

2. Institute for Sustainable Futures

<https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures>



Institute model – Physical institute within University of Technology Sydney (UTS).

Active organisation – Founded in 1997.

Background – ISF is a University research institute that has been created with the aim of assisting change towards sustainable futures by conducting independent project-based research for Australian and international clients. University Researchers and staff come from varied backgrounds, including engineering, architecture, management, economics, science, the social sciences, international studies and political studies.

Mission – To conduct project-based, applied research to support communities, governments and businesses to create change towards sustainable futures.

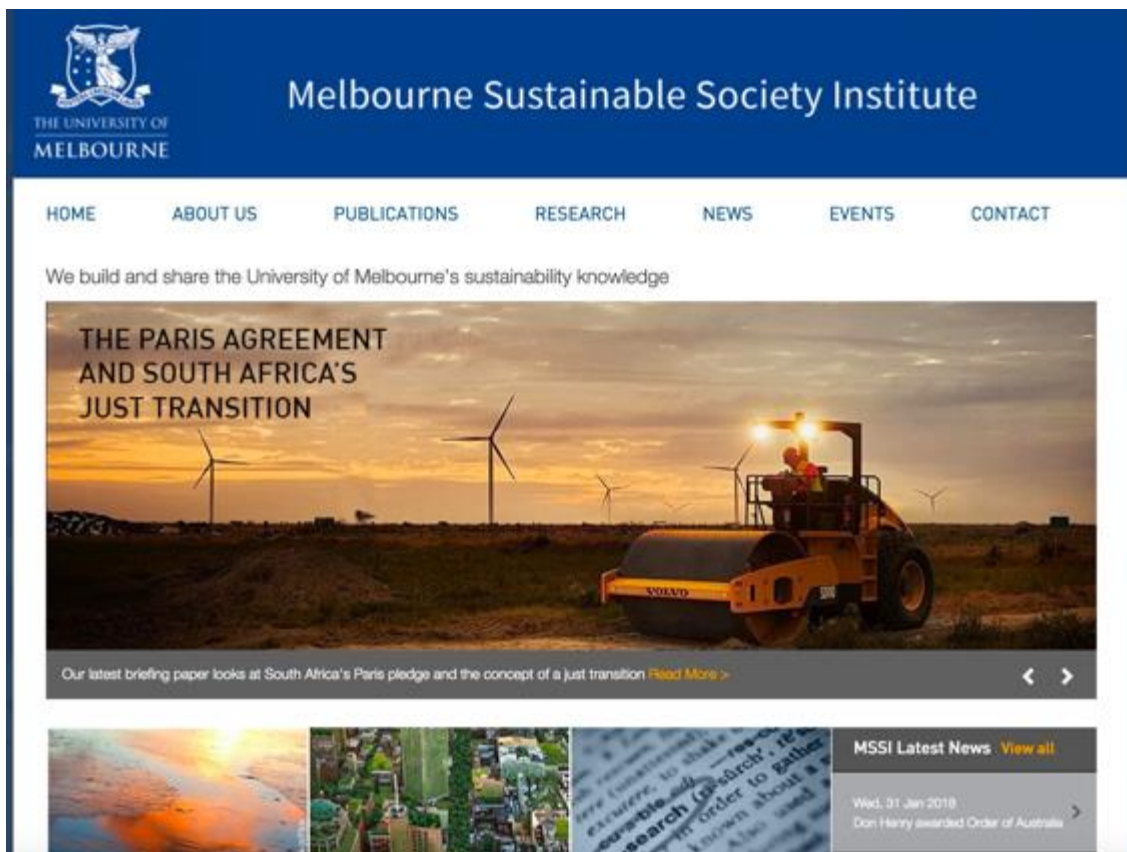
Governance structure – The governance at UTS operates within the framework prescribed by the UTS Act and By-law, and the rules, policies and procedures as determined by the authoritative decision-making bodies of the University. Decisions are implemented in accordance with the standing delegations as approved by the UTS Council. The institute is managed by a director and a number of dedicated researchers and support staff.

Funding – Base funding is through the UTS. Private clients fund specific projects.

Selection criteria – The institute is research focused. It is a premier example of a university-based institute conducting independent project-based sustainability research for Australian and international clients. It aims to deliver independent and practical solutions to suit the needs of a diverse range of clients. The institute also has mechanisms to support and foster postgraduate students on a range of sustainability projects.

3. Melbourne Sustainable Society Institute

<http://sustainable.unimelb.edu.au/>



Institute model – Physical institute within the University of Melbourne

Active organisation – Established in 2009

Background – MSSI aims to undertake research that makes a difference and has a strategic impact beyond the University. Started generating Impact Case Studies for some of their research projects, to show how they go about translating research into action.

Mission – To facilitate and enable research linkages, projects and conversations that lead to increased understanding of sustainability and resilience trends, challenges and solutions. MSSI has a particular emphasis on the contribution of the social sciences and humanities to understanding and addressing sustainability and resilience challenges.

Governance structure – The institute is managed by an executive committee of prominent University of Melbourne staff and guided by an advisory board of external experts.

Funding – The Institute acts on Government funding through the Faculty of Architecture, Building & Planning, at the University of Melbourne.

Selection criteria – The MSSI is a good example of a university-based institute that aims to have a positive impact on the local, and global, community. It supports a diverse range of interdisciplinary research projects and regularly hosts free events such as public lectures, seminars, workshops with guest speakers on topics that align with their research. The particular emphasis on the contribution of the social sciences and humanities to the understanding and addressing sustainability and resilience challenges is of particular note.

4. Adelaide Sustainability Centre

<http://www.adelaidesustainabilitycentre.org.au/>



Institute model – Physical centre located at The Joinery, 111 Franklin Street, Adelaide.

Active organisation – Active based in Adelaide

Background – The Adelaide Sustainability Centre is one of eight Natural Resource Centres based in the Adelaide and Mount Lofty Ranges region. These centres are community owned and operated groups that engage with the local community and respond to local needs and issues in a variety of ways.

Mission – The Centre provides a public space and community hub that works to connect with like-minded individuals and groups—together stepping into a sustainable future. A particular emphasis is on connecting with the local environment. As a community environment centre the centre aims to show the positive, creative and fun journey of the pathway to a more environmentally sustainable lifestyle.

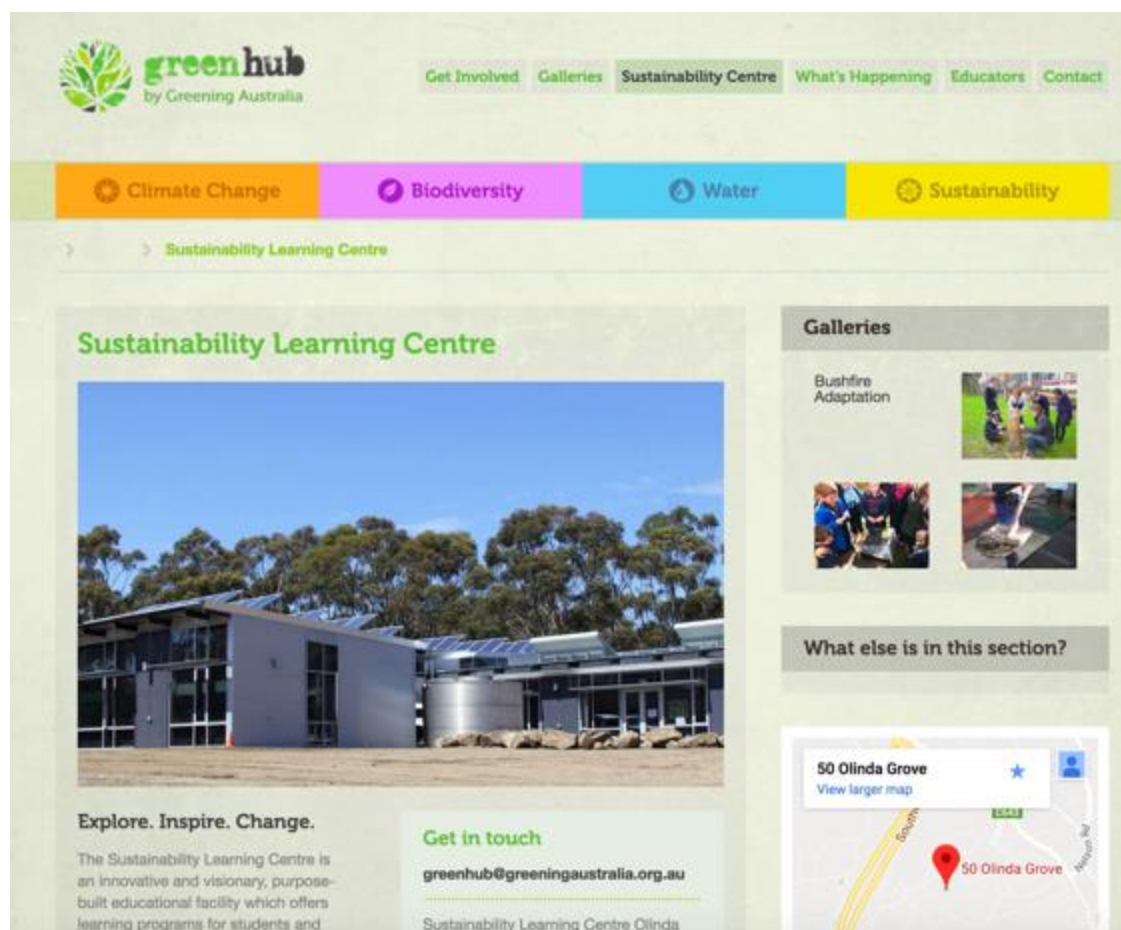
Governance structure – The centre is run by a Co-ordinator assisted by an advisory group of local notaries.

Funding – The Centre operates through partnership with the Government of SA via the Adelaide and Mount Lofty Ranges Natural Resources Management Board.

Selection criteria – This institute was selected as an example because of its very strong community focus. The institute is also very prominent for the promotion of the 'citizen scientist'. There is a strong focus on ways that the community can begin to improve their environment and the global environment. There is also useful information on how to provide a range of community and environmental services including reference material and referrals, volunteer programs, workshops, training and field days, meeting space, information, recycling, resources and equipment. This institute also provides resources and information that build the capacity of the community to undertake action to support natural resource management and sustainable urban living.

5. Sustainability Learning Centre (part of Greening Australia)

<http://www.greenhub.org.au/sustainability-learning-centre/>



Institute model – Physical centre: location Sustainability Learning Centre Olinda Grove, Mount Nelson, Hobart.

Active organisation – NA

Background – The Sustainability Learning Centre is an innovative and visionary, purpose-built educational facility which offers learning programs for students and the community.

Mission – Greening Australia engages with the community to sow the educational seeds of a healthy ecological future on site, on line and in the field.

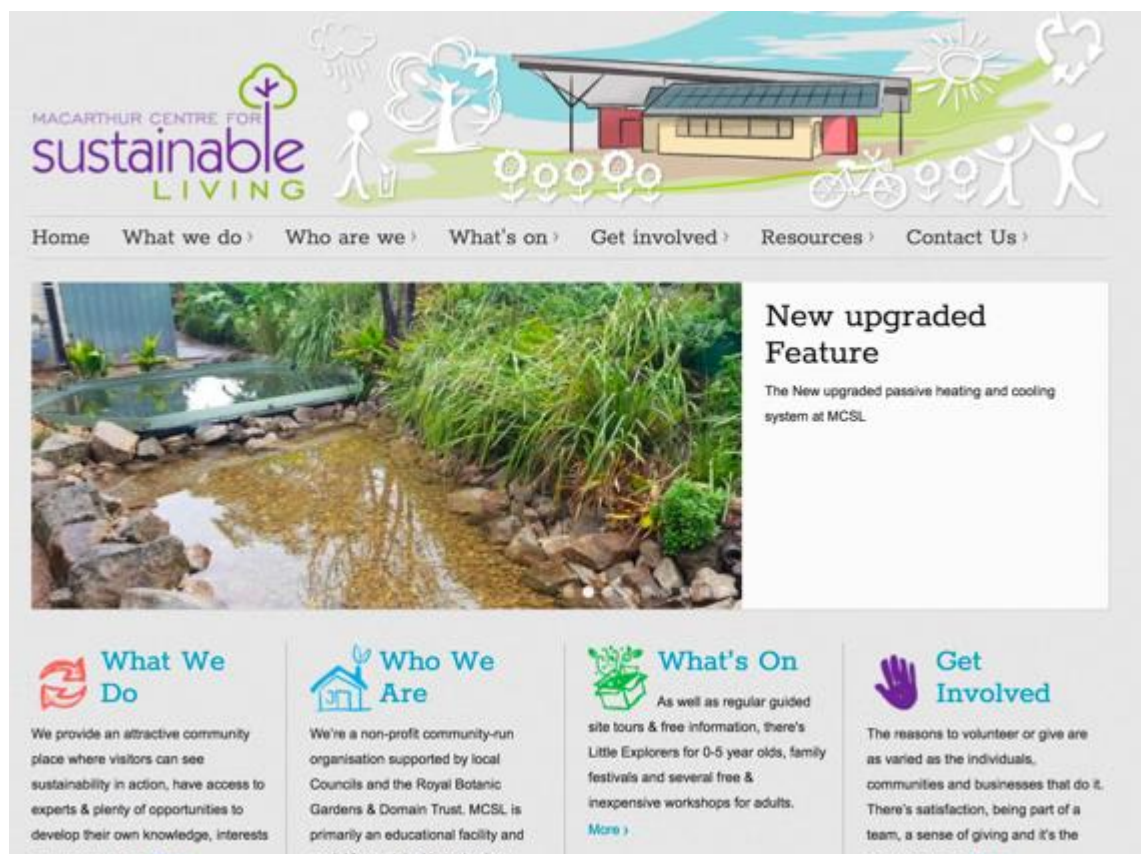
Governance structure – The Centre is part of Greening Australia. Other details on governance are unavailable on the web site.

Funding – Government funded through Greening Australia. The Centre operates as a unique partnership between Greening Australia, the Department of Education, Independent Schools Tasmania and the Catholic Education Office.

Selection criteria – This centre was selected as an example of how to work closely with the community, using education to show how people can achieve a healthy ecological future. The centre was also used as an example of how an on-site sustainable building with educational videos can be used for outreach to the community.

6. Macarthur Centre for Sustainable Living

<http://www.mcsl.org.au/>



Institute model – Physical centre: Macarthur Centre for Sustainable Living, 1 Mount Annan Drive, Mount Annan NSW 2567

Active organisation – NA

Background – The Macarthur Centre for Sustainable Living (MCSL, the Centre) is a not-for-profit, community-driven organisation supported by local Macarthur Councils and the Royal Botanic Gardens & Domain Trust. MCSL is primarily an educational facility and model for sustainable technology. They provide an attractive community place where visitors can see sustainability in action, have access to experts and opportunities to develop their own knowledge, interests and understanding in sustainability.

Mission – To develop MCSL into a regional place of excellence that inspires the community to embrace an environmental conscience.

Governance structure – The Macarthur Centre for Sustainable Living is a non-profit company limited by guarantee. The Board of Directors meets on a monthly basis to steer the project at a strategic level. There are six directors, three from the Royal Botanic Gardens & Botanic Gardens Trust and three representatives from Campbelltown, Camden, and Wollondilly Councils.

Funding – Principally Government (Campbelltown, Camden, and Wollondilly Councils). Sponsorships from the community and others are also sought.

Selection criteria – Selection was predominantly because of the very strong community focus, but there is the opportunity for a research component. The Centre focuses on being a showcase for sustainable homes and gardens, with the goal of promoting sustainable living. The Centre is entirely self-sufficient - generating its own power, recycles and reuses all rain and waste water, and manages all organic waste on site. For researchers there are opportunities to investigate, for example, aspects of the use of renewable building materials or organic gardening methods. It is an example on how the community can see sustainability in action, have access to experts, and have opportunities for visitors to develop their own knowledge, interests etc.

7. The Australian Sustainability Institute Pty Ltd

<http://www.theasi.com.au/>

ASI
energy efficiency education

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Welcome to The Australian Sustainability Institute Pty Ltd

The **Australian Sustainability Institute (ASI)** exists, to help inform and educate businesses, householders, schools, government and not for profit organisations, in sustainable principles.

We specialise in **Energy Efficiency Education** and we train commercial and home assessors to make recommendations that will reduce costs to householders, reduce energy use, streamline operations and increase profits for businesses.

Our aim is to ensure a **healthy environment**, a **healthy economy** and **healthy communities** for generations to come.

BOOK YOUR FREE
no obligation energy assessemnt

Name

Email Address

Institute model – Virtual: Online business

Active organisation – NA

Background – The Australian Sustainability Institute (ASI) exists to help inform and educate businesses, householders, schools, government and not for profit organisations, in sustainable principles, specialising in energy efficiency.

Mission – The institutes aim is to ensure a healthy environment, a healthy economy and healthy communities for generations to come.

Governance structure – The ASI is a corporation established by three energy and sustainability experts to provide energy assessments and sustainability training. The ASI does not appear to aim to broaden scope or training such as the larger institutes listed in this assessment.

Funding – Income from business generated

Selection criteria – This institute is an example of how small business can provide education and sustainability assessments. The Institute specialises in energy efficient education, providing a range of practical suggestions and solutions to help improve household efficiency and sustainability.

8. Sustainable Futures Australia

<http://www.sustainablefutures.com.au/>

The screenshot shows the homepage of Sustainable Futures Australia. At the top, there is a navigation menu with links: home, the team, services, tools & processes, projects & clients, sfa trust, and contact us. Below the menu is a header section with the organization's name 'sustainable futures australia' and a 'home' link. The main content area is divided into several sections. On the left, there is a paragraph about the organization being a multidisciplinary team of consultants. Below this, it mentions the organization was founded in 1987 on the north coast of NSW, Australia. Further down, it states they work in partnership with communities, government, and business. On the right, there is a 'sustainability services' section with links to strategic planning, communication, facilitation & mediation, education & training, environmental planning & design, and social research & evaluation. Below this is a 'sustainability tools' section with links to participatory planning tools, organisational change tools, environmental planning tools, and education & training programs. On the far right, there is a 'Login Form' with fields for Username and Password, a 'Remember me' checkbox, and links for 'Login' and 'Forgotten your password?'. At the bottom left, there is a green box with the text 'Environmental Excellence High School Awards' and a link to find the winners of the 2017 awards, along with a link to a YouTube video about the awards.

Institute model – Physical. Consultancy company in Byron Bay, NSW.

Active organisation – Founded in 1987

Background – Sustainable Futures Australia offers a range of professional sustainability services with 25 years of experience in a wide range of integrated land-use, resource management, settlement, conservation and recreation planning and design. The Centre also integrates their specific skills and experience with client project teams.

Mission – The Centre has a long-term record of delivering cost-effective and practical results to a wide range of regional to international clients. These clients include local, state and federal government; businesses and key community organisations. Sustainable Futures Australia has created a range of tools and processes to assist organisations and communities accelerate their move towards sustainability. We also offer training in the facilitation and use of these tools so that they can be applied directly by our clients.

Governance structure – Consultancy business

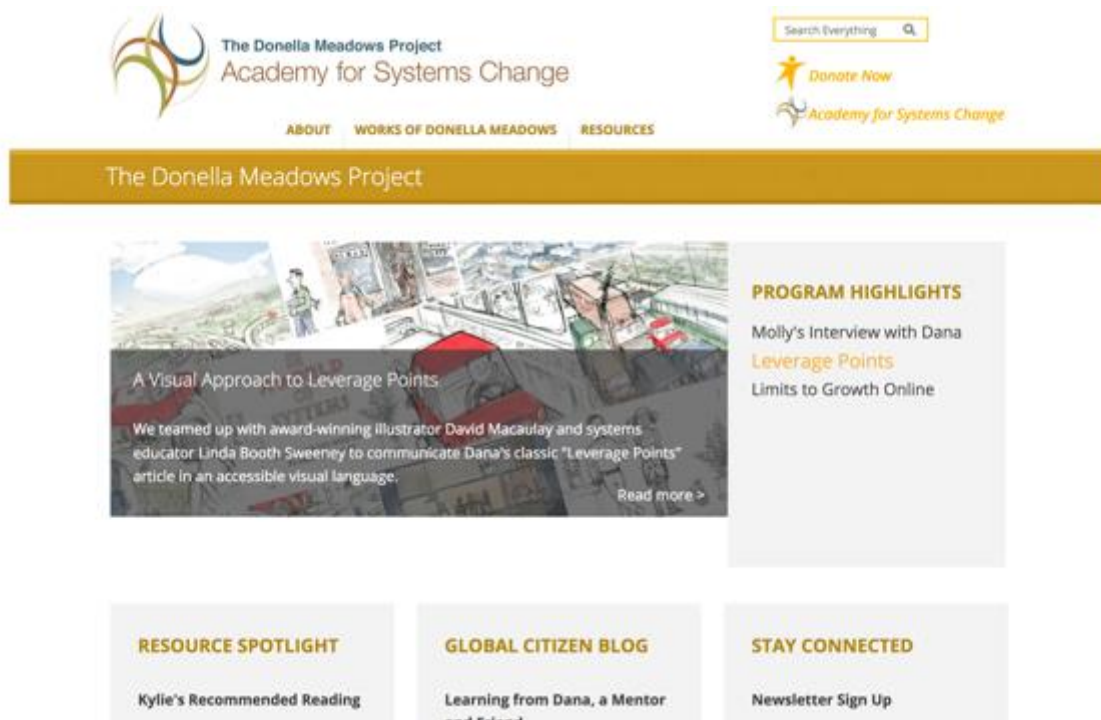
Funding – Income from business generated. Some of the efforts are then put into non-profit activities with local schools and communities.

Selection criteria – The reason for choosing this organisation is it's a good example of how a small business-based organisation can work in partnership with communities, government and business on sustainability issues. Sustainable Futures Trust is the not-for-profit arm of the organisation. And contributes time and financial resources to many different projects including organising and facilitating sustainability workshops and deep ecology retreats; rainforest restoration; green building; etc. An example is one of the Trust's major projects which is the annual Environmental Excellence Awards for high school students across the Northern Rivers region of NSW.

International institutes

1. The Donella Meadows Project

<http://donellameadows.org/>



Institute model - Web based enterprise. A project of the Academy for Systems Change, Norwich, Vermont, USA.

Active organisation – The Academy for Systems Change was founded in 1996. The Donella Meadows project was founded after her death in 2001.

Background – The Project was established to honour Dr. Donella H. Meadows, a Pew Scholar in Conservation and Environment and a MacArthur Fellow, who was one of the most influential environmental thinkers of the twentieth century. In 1996, Dana founded the Sustainability Institute (now called Academy for Systems Change) with the mission of fostering transitions to sustainable systems at all levels of society, from local to global.

Mission - To preserve Donella (Dana) H. Meadows's legacy as an inspiring leader, scholar, writer, and teacher; to manage the intellectual property rights related to Dana's published work; to provide and maintain a comprehensive and easily accessible archive of her work online, including articles, columns, and letters; to develop new resources and programs that apply her ideas to current issues and make them available to an ever-larger network of students, practitioners, and leaders in social change. The Academy provides resources for education – papers, videos, articles, studies.

Governance structure – The Academy is overseen by a Board including directors, treasurer, chair, vice chair, advisors, president and board members

Funding – Government funding; private funding through the Academy for Systems Change.

Selection criteria – The Academy was chosen as a good example of a web based, virtual institute that provides resources for education, including papers, videos, articles, columns and studies.

2. Institute for Sustainable Communities

<http://www.iscvt.org/>



Institute model – Physical. Headquarters located at Montpelier, Vermont, USA.

Active organisation – Founded in 1991.

Background – This Institute works to enable people to transform their communities, ensuring that solutions emerge from within the community, rather than being imposed from the outside, allowing creative solutions and lasting change. The Institute works with governments, foundations, and fellow non-profit organisations to find innovative and effective ways to help communities and local leaders make appropriate sustainability change. They also strive to partner with socially responsible businesses committed to addressing the impacts of economic growth on livelihood and the natural environment.

Mission – The ISC's mission is to help communities around the world address environmental, economic, and social challenges to build a better future shaped and shared by all. They work to give passionate, committed people the tools and skills they need to inspire active citizenship, protect the environment, and take on climate change by providing training and resources.

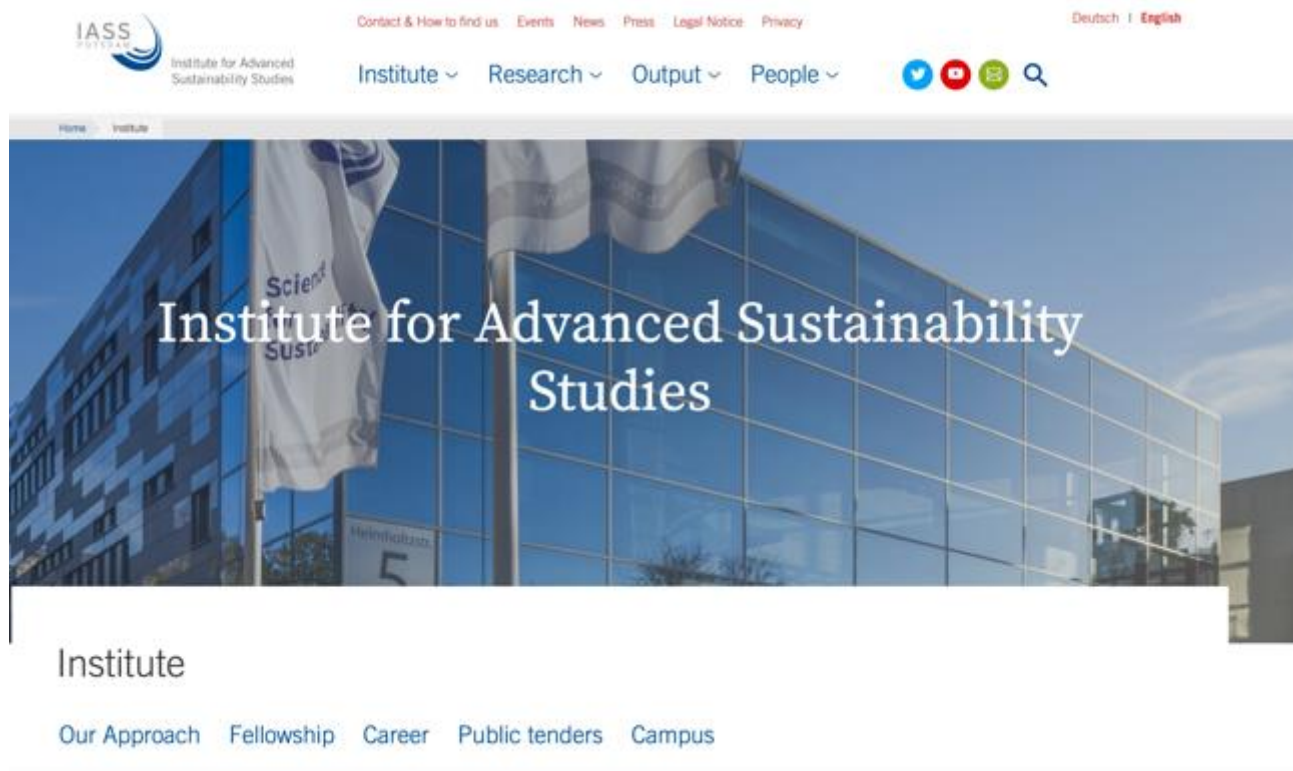
Governance structure – The ISC is run by a large team of staff overseen by a board is made up of people from a range of political and community sources who are passionate about community, sustainability, and the power of citizen action.

Funding – The ISC has a broad source of funding including Government; NGOs; Philanthropy; and Corporations.

Selection criteria – The Institute was chosen as it has a very strong focus on community and allowing communities to directly address sustainability issues and concerns and giving them the direction to make appropriate changes. This Institute is also an example of multiple linkages and collaborations.

3. Institute for Advanced Sustainability Studies

<http://www.iass-potsdam.de/en/institute>



Institute model – Physical institute located at Kleist Villa' Berliner Strasse, Potsdam.

Active organisation – Founded in 2009.

Background – The Institute for Advanced Sustainability Studies (IASS) is an international, interdisciplinary hybrid between a research institute and a transdisciplinary think tank, conducting research with the goal of identifying, advancing, and guiding transformation processes towards sustainable societies.

Mission – To gather together all relevant forms of knowledge from science, society and politics in order to initiate and support a transformation towards sustainable development that is grounded in scientific research.

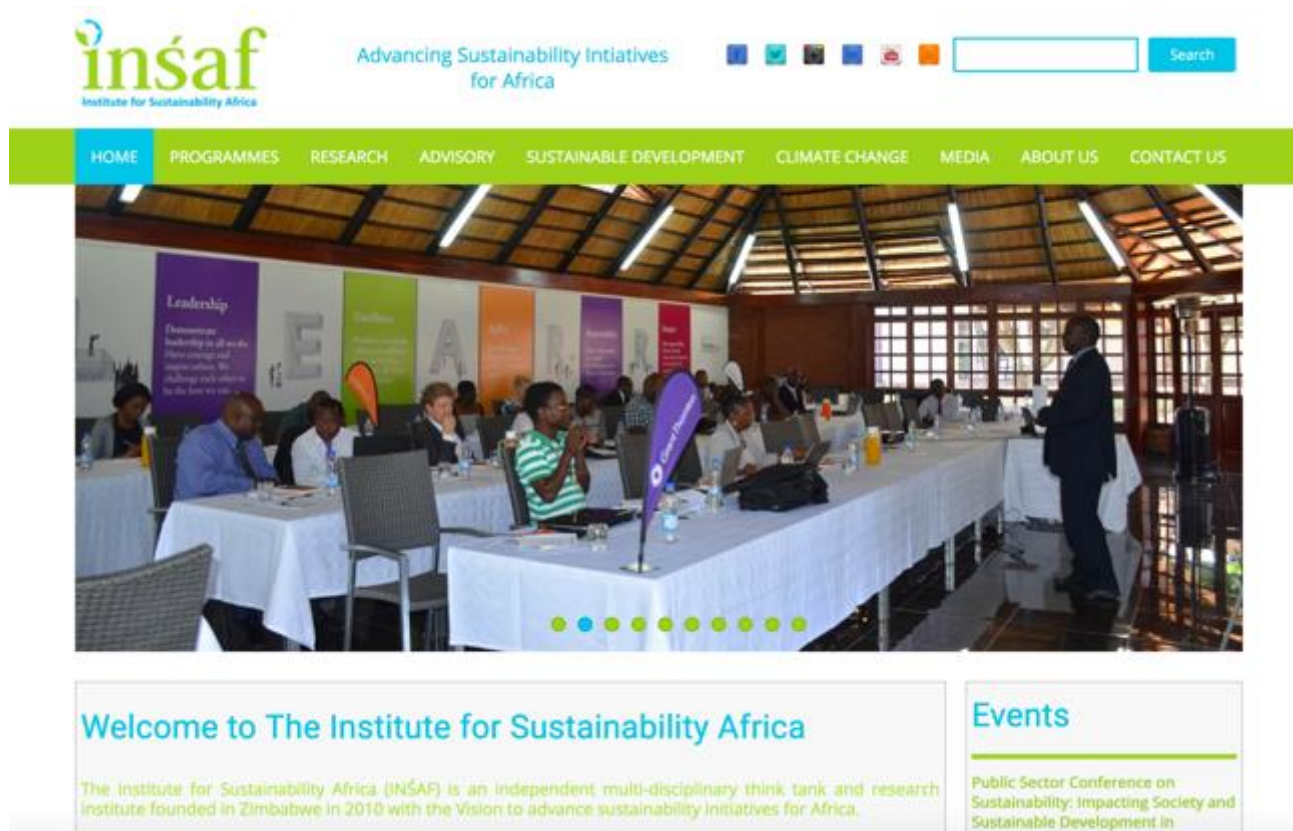
Governance structure – The Institute is run by a large research management staff and overseen by a General Assembly. There is a Board of Directors and an Executive Board of Directors.

Funding sources – The Institute is predominantly funded through government sources (Federal Ministry of Education and Research; Ministry of Science, Research and Culture). Collaborations with private investors and other research groups is also sought.

Selection criteria – This Institute was selected as an example of a hybrid between a research institute and a transdisciplinary think tank. The Institute collaborates and cooperates with partners in academia, political institutions, administrations, civil society, and the business community to understand sustainability challenges and generate potential solutions. The Institute has multiple research areas with multiple research projects/topics within each area. This institute also engages in Fellowship programs; Workshops and regularly held seminars.

4. The Institute for Sustainability Africa (INSAF)

<http://instforsustainafrica.org/>



Institute model – Physical institute located in Eastlea, Harare, Zimbabwe.

Active organisation – The Institute for Sustainability Africa (INSAF) is an independent multi-disciplinary think tank and research institute founded in Zimbabwe in 2010 with the Vision to advance sustainability initiatives for Africa.

Background – The Institute promotes achieving sustainable development goals in Africa. It undertakes applied research and thought leadership using a combination of innovative approaches, methodologies and tools to help stakeholders to understand and deal with subject matters that ranges from simple to complex.

Mission - To foster sustainability initiatives and innovations towards green economy, sustainable development and living. They strive to provide the strongest possible professional focus to sustainability and sustainable development initiatives by providing applied research, capacity development and technical support services across sectors in Africa. A key to their mission is transforming people, organisations and institutions towards sustainable economies and living in Africa.

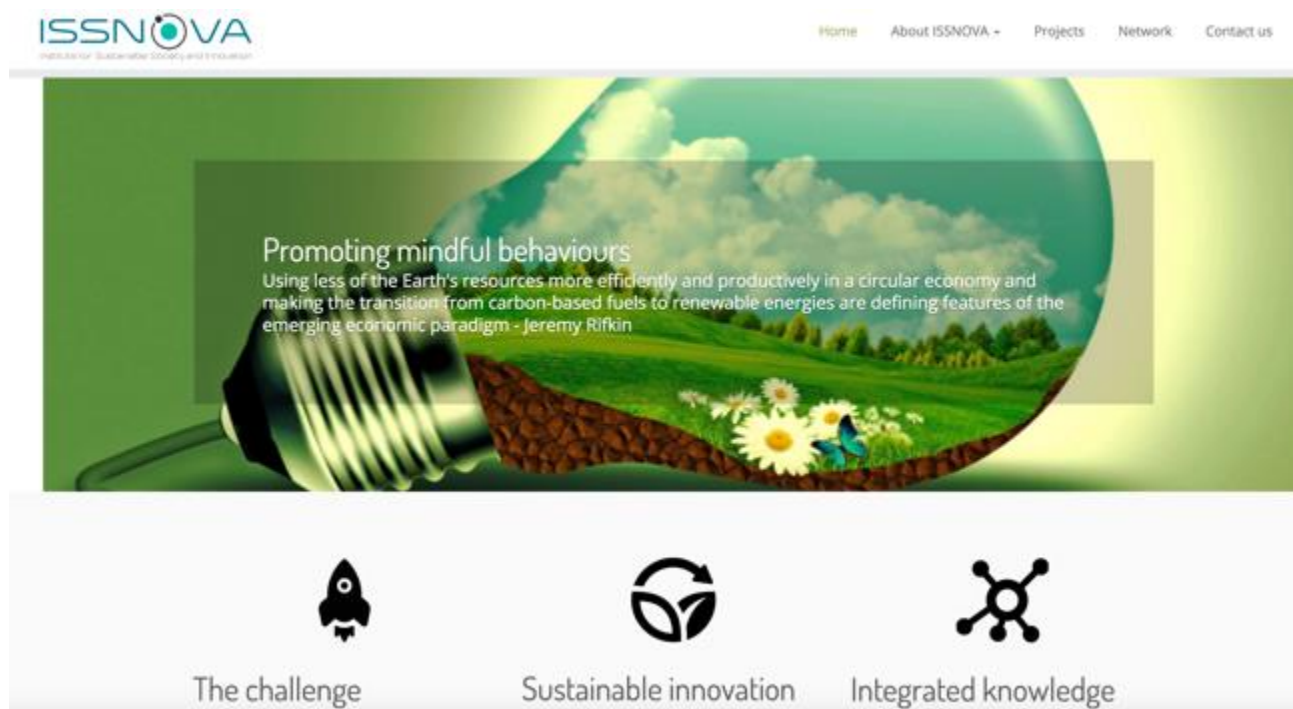
Governance structure – The institute is run by a management team working with an operational team. All activities are overseen by a Board of unaligned trustees.

Funding - The Institute operates on a sustainability business model drive by implementing sponsored or donor funded programmes and providing technical support services to stakeholders across sectors. The model rest upon three strategic units: Programmes, Research and Advisory.

Selection criteria – This selection was based on the Institutes focus on value-based and results driven research projects that advance sustainability initiatives of our stakeholders and inform policies. Other information on the institute providing training and capacity development; technical advisory; sustainable investment advisory; stakeholder engagements; monitoring and evaluations.

5. Institute for Sustainable Society and Innovation

<http://www.issnova.eu/>



Institute model – Physical institute located in Nola, Italy

Active organisation – NA

Background – ISSNOVA is an independent, not-for-profit organization aimed at delivering viable solutions to integrate environmental and social priorities with economic development. It works with citizens, associations, public administrations and business companies to assess and design systems, technologies and policies for local development, optimizing tangible and intangible resources and delivering social innovation.

Mission – ISSNOVA aims at facilitating and promoting evidence-based design practices, planning and policy making for sustainable growth. It is engaged in cross-cutting fields such as responsible research and innovation, social innovation, resilient, inclusive and smart communities, knowledge integration, circular economy, safety and security for water, energy, food, transport, land use, climate change, mitigation and adaptation, environmental management systems, adaptive planning.

Governance structure – This Institute is overseen by a President, treasurer, directors, advisors, scientists all from several Italian Universities.

Funding – The Institute is an Interdepartmental Research Centre funded through an association for the Scientific Development in Europe (ASDA). Other funding is through the University of Naples Parthenope, Dept. of Science and Technology; Integro Nomia – Research and Consulting in Ergonomics and Sustainability. In addition, the Institute is a partner of the EUBE Project.

Selection criteria – Selection was based on the global community focus that adopts a human centred approach and applies service design and multi criteria assessment techniques matching needs and expectations of multiple stakeholders, community and single persons. Additional useful information was the activities undertaken on scenario analysis, case study and demonstrations, seminars, workshops, scientific and general publications on all topics concerning sustainable development.

6. Sustainability Institute – Penn State

<http://www.sustainability.psu.edu/>



Institute model - Physical institute within The Pennsylvania State University

Active organisation – Founded in 2013

Background - The Sustainability Institute (SI) was created to lead Penn State toward the University's sustainability mission: a comprehensive integration of sustainability into the University's research, teaching, outreach and operations that prepares students, faculty and staff to be sustainability leaders in their professional, personal and civic lives.

Mission - The Sustainability Institute's mission is to lead and support Penn State in the pursuit of sustainability across all functions (teaching and learning, research and discovery, outreach and engagement, administration and operations). Their aim is to achieve this mission by developing lifetime competencies for sustainability in their faculty, staff, and students; enabling transformation and alignment of systems, policies, and opportunities around sustainability; inspiring others through the communication of our successes, failures, and learning; and demonstrating the value of this approach at the individual, institutional, and global scales.

Governance structure – The Institute is run by a Director and Associate director.

Funding – Funding is predominantly through the University, in addition, there is an internal reinvention fund. Funds are also sought from Private investors and funding bodies.

Selection criteria – Selection was based on an example of a university-based institute undertaking research with a positive outcome for the community. It has a Living Laboratory concept that seeks to embrace campus grounds, regional eco-systems, and local social networks as assets for learning and experimentation in the advancement of sustainability.

7. Sustainability Institute

<http://www.sustainabilityinstitute.net/>



Institute model – Physical institute located at Lynedoch, South Africa.

Active organisation - Established in 1999.

Background – The Institute is linked to the University of Stellenbosch and the Lynedoch Ecovillage. Lynedoch works to pioneering approaches to creating socially diverse ecological communities. At the core of the SI's work has been finding ways of living that sustain rather than destroy the ecosystem within which all society is embedded. The SI is now an international living and learning centre providing learning experiences in ecology, community and spirit. Learning programmes start in the Baby Centre and Creche, are extending through partnership with SPARK Schools in Lynedoch, are practically oriented in the Learning for Sustainability FET College and promote both research and practice through the University of Stellenbosch degrees.

Mission – The Institute looks to build our understanding and learning in core areas we recognise as critical in supporting the transition to equitable, just and thriving futures. The focus is on flourishing food systems, social innovation, optimal resource flows and transformative learning from birth, supported by meaningful partnerships, will continue through embedded and relevant research, teaching and practice. There is a strong focus on community and family.

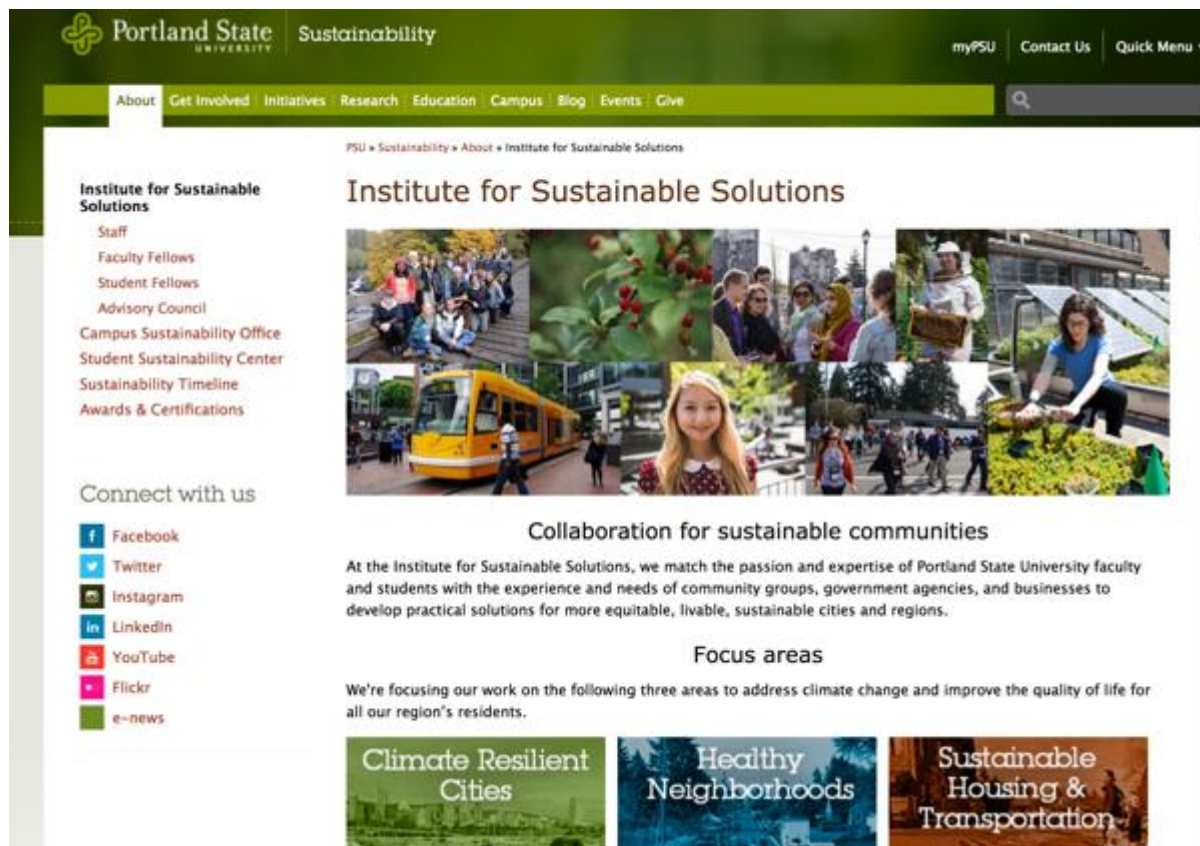
Governance structure - The Institute is run by a director and administration staff. Other support is provided by consultants and University coordinators.

Funding sources - The Sustainability Institute is a non-profit trust, with core work investing into transformative learning for the children and youth in the local community. Philanthropy (Bill and Melinda Gates Foundation; Green Fund) is a core source of funds. Other local and international sources of funds are also sought.

Selection criteria – This Institute is an excellent example of an emerging ecologically designed, socially mixed community built around a learning precinct. The Institute has a very strong community focus, supported by a growing research consulting programme. There is a complete education program starting from baby centre and crèche through to parent programmes on nutrition and maternal health.

8. Institute for Sustainable Solutions

<https://www.pdx.edu/sustainability/institute-for-sustainable-solutions>



Institute model – Physical institute within the Portland State University

Active organisation – Founded in 2010.

Background – The Institute for Sustainable Solutions is a hub for integrating and accelerating sustainability research, education, and practice across campus and in the community. The Institute for Sustainable Solutions is matched to the passion and expertise of PSU faculty and students to develop practical solutions for more equitable, liveable, sustainable cities and regions.

Mission – The Institutes mission is to develop solutions to complex sustainability challenges in our city, region, and world by convening partners and co-designing projects that leverage student and faculty expertise and add capacity to help community organizations and government agencies advance their goals.

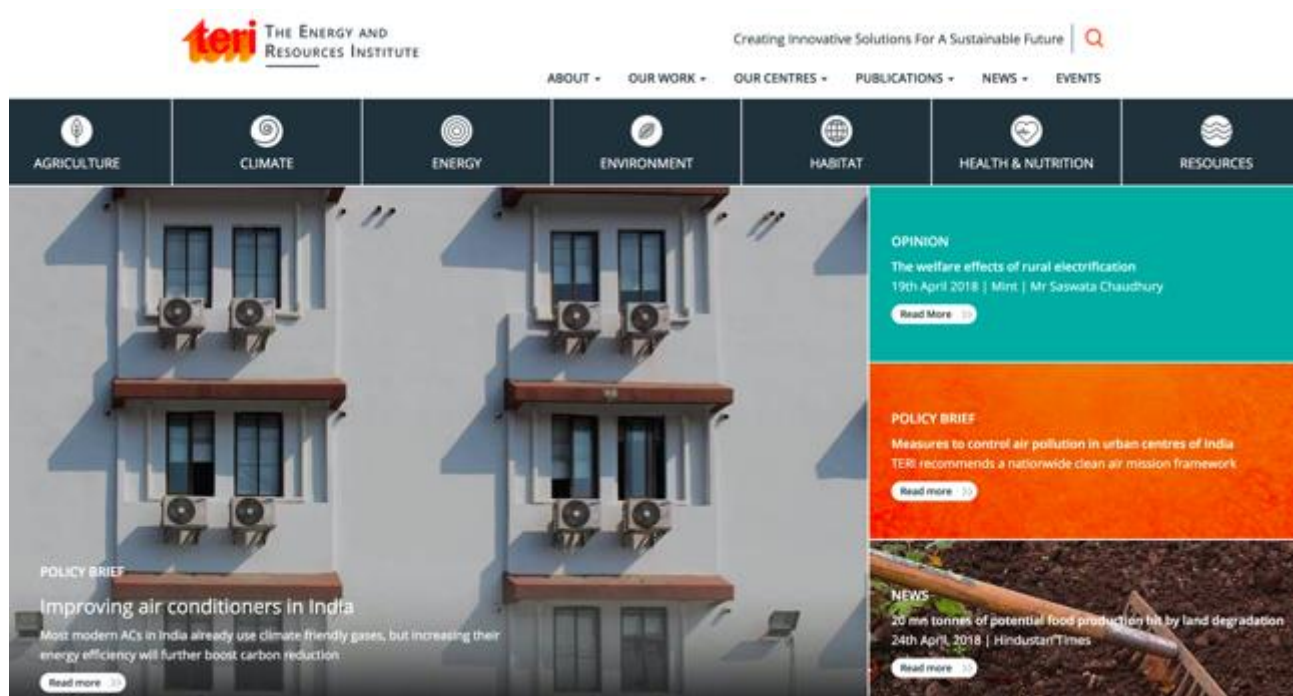
Governance structure – Advisory council

Funding sources – A major funding is through philanthropy sources. Tax deductible donations from the public are also accepted.

Selection criteria – Selection was based on the example of a university-based institute with a focus on improving the campus, as well as positive impact in the local community. Offers provided include seminars; information sessions; harvest share (free fresh fruit and veg); research rounds speaker series; sustainability conference; elevating impact summit.

9. The Energy and Resources Institute (TERI)

<http://www.teriin.org/>



Institute model – Physical institute located in New Delhi, INDIA.

Active organisation – TERI was established in 1974 as an information centre on energy issues.

Background – The Energy and Resources Institute (TERI) is a leading think tank dedicated to conducting research for sustainable development of India and the Global South. TERI's key focus lies in promoting clean energy, water management, pollution management, sustainable agriculture and climate resilience.

Mission – The Institutes mission is to usher transitions to a cleaner and sustainable future through the conservation and efficient use of Earth's resources and innovative ways of minimizing and reusing waste.

Governance structure – The Institute is managed by a Governing council and advisory board overseen by a Committee of Directors. Distinguished Fellows are used in an advisory capacity.

Funding sources - A major part of TERI's income is generated from funds and research grants from multilateral and bilateral organizations, government agencies, grant-making bodies, and international academic institutions. They have a large partnership network and multiple linkages.

Selection criteria – Selection was based on being an example of the positive impact a non-university-based institute can have both locally and globally. The focus on formulating both local and national level strategies, to developing global solutions was also deemed important.

3.1.2 Summary of the attributes of different existing institutes

All of the existing institutes selected for analysis were divided into Community based Institutes; University based Institutes and those institutes that were non-aligned (usually with a business focus). Appendix C provides further detail on the common or important information extracted from the analysis of these institutes. The following provides a high level summary of the attributes of the considered institute further analysis of these attributes in forming potential model options is considered later in this report.

Community based/focused institutes

There are a large number of community-based Institutes that were able to be assessed for their purpose and operations. The varying aims and activities of these community-based Institutes is presented in Figure 2.

The majority of the community-based institutes are led by segments of the community and run by a small team of employees. The management of some of the larger institutes is overseen by a board of local experts or notable community members. Funding is achieved from a range of funding sources varying from Government grants through to community memberships.

The role of the community institutes is almost always focused on community education and providing training and resources to help the local community with the means to achieve a more sustainable local environment and living. Some also have a legacy preservation or indigenous recognition component. A number of the Community Institutes have a research focus; however, the research activities undertaken tends to be via very localised, small projects with a significant community science motivation.

The majority of the community institutes examined have a physical presence as well as web presence that provide facilities for training, venue hire and community gardens. Many also have café facilities or other revenue raising means (e.g., markets and plant sales) as a mechanism to assist with funding.

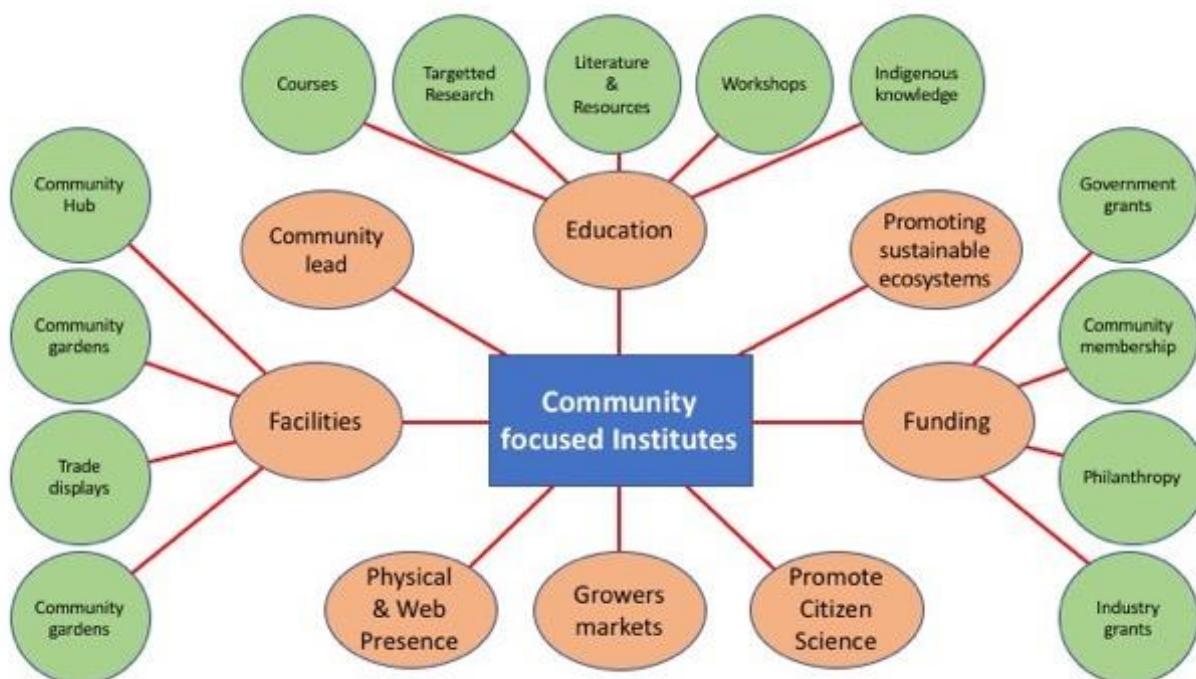


Figure 2. Aims and functions of Community-based Institutes

University based institutes:

University based institutes were the most common form of institute of all the case studies examined. The major aims and activities of these university-based institutes is presented in Figure 3. While not explicitly stated in any of the websites, the Institutes also provide an important role in promoting the research capabilities within the University in general.

Almost all of the university institutes have a designated director (usually an academic from the department or school hosting the institute). Some of the larger entities also have designated research staff directly attached to the institute. The activities of most of these Institutes are also overseen by a board and/or advisory committee(s), predominantly made up of senior university academics (although some also have notable community members).

The predominant activity of these University Institutes is related to student-based education and research. The majority of the research undertaken has at least some component linked to postgraduate student training. Some of the Institutes have a function of bringing together researchers from different departments to provide a range of research skills to investigate sustainability issues. A number also had access to dedicated research facilities targeting specific areas of sustainability (e.g., energy efficiency studies). Many of the university institutes also promote external education through the provision of targeted workshops, seminars and lectures.

Funding is sourced from a range of sources with the Universities providing much of the base funding. Other sources included client funds, research granting agencies and scholarships.

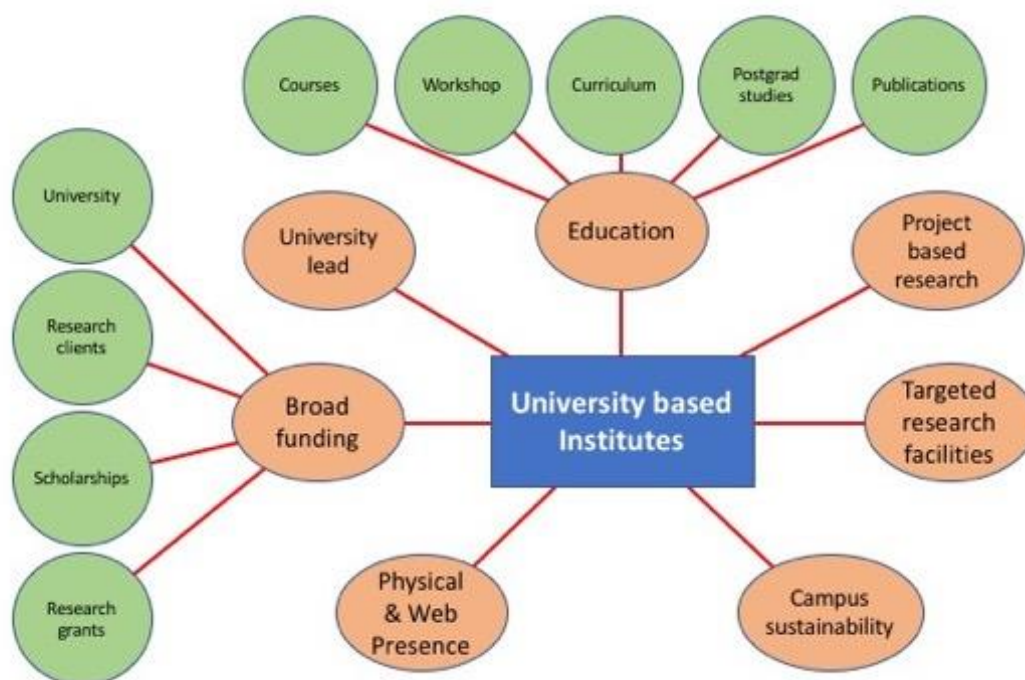


Figure 3. Aims and functions of University-based Sustainability Institutes

Other Institutes that are non-Community led or University Based:

The third form of Institute examined were the non-aligned Institutes. These are institutes that are directly linked to a company (usually a consultancy company) or are individually incorporated. Their aims and activities are presented in Figure 4. The majority of these institutes exist as a web presence only.

The organisational structure of these institutes tends to be very lean with a few like-minded people setting up and running the organisation. There is little or no input from a board or such like overseeing the management and activities.

These institutes provide a series of targeted research activities, usually through the capabilities of a parent company, or training and information services on sustainability issues such as energy and water efficiencies. Research undertaken is almost always for clients and may bring together partnerships from other sources such as universities. Projects undertaken by these non-aligned institutes are commonly for local councils, state government agencies and local communities (including individual residents).

Funding is predominantly sourced through funded research activities and educational activities such as courses and workshops. Some of these centres and institutes also undertake not for profit activities such as school children education activities etc.

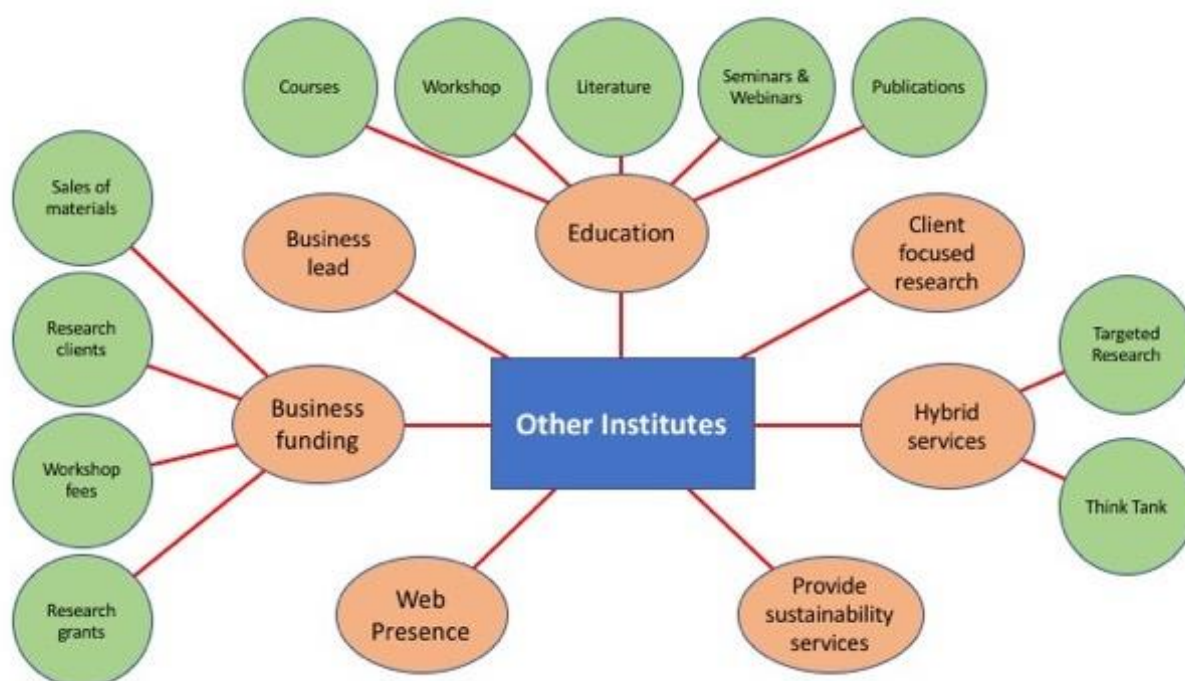


Figure 4. Aims and purpose of non-aligned Institutes

3.2 Feedback from Community Interviews and Council Staff Meeting

3.2.1 Council Staff feedback

A group of Noosa Council staff who have responsibilities in areas that have current related research or have had previous experience in research activities and other initiatives participated in two workshops to garner their thoughts and opinions about the potential and opportunities that could be provided by the establishment of a Noosa Institute.

A detailed summary of the feedback is provided in Appendix E. But a summary of the workshop outputs in brief were:

- Have a clear purpose of what the Institute would be and what it shouldn't be.
- Any institute should take into account what has been done before in the Noosa region (previous initiatives and projects) and build from or leverage this rather than repeat.
- Have an open structure that has broad accessibility and high return for the local community and builds on partnerships.
- Focus on applied research with impact for the local community.
- Need to avoid duplication with what has already been done.
- Sustainable funding is critical.
- Take a contemporary and future view of research opportunities and sustainability challenges.

3.2.2 Community Interviews

The Feedback from the interviews with the community members was varied with a variety of opinions provided on the different preliminary Institute concepts. This difference in opinion was based on individual consideration on the ability of an institute to succeed outside of the direct control of the Council. It was suggested that to succeed, the institute would need to have sufficient size to have a critical mass to achieve in 3 or 4 critical specialist areas that benefit the region. Regardless of size, the institute would also need to be agile and flexible to cope with any necessary changes to research needs.

All three respondents noted that Noosa had an advantage of a highly talented, well connected community that is already well engaged around Council and community, environment and sustainability activities. It was noted by all three interviewees that it is important for any further stages of this assessment and investigation to find out from the broader community what they want Noosa to look like in the future and what challenges Noosa will face.

It was also agreed by all the community members interviewed that active partnering with other research entities and activities could only be of value to all those involved and for the Noosa region in general. It was also noted that it will be important to ensure that there are some boundaries set to ensure that there is limited overlap between any Institute and other non-institute activities in the Noosa region. The success of the Institute could be enhanced (regardless of the model selected) by developing a communication strategy that provides real-time information and communication on research activities.

Suggestions included, "Can the current Noosa Plan be the backbone of the Institute structure as this is already setting the direction for development and progress for the next 10 years?"; and "Can the Institute add value to the Noosa Plan by being a place to provide advice on activities that can add value to the objectives of the Noosa Plan".

Another common opinion was that research outcomes should be of use to a broader area than just the Noosa Shire. Also, it is important that the research is not just for the coastal areas but engage and be a benefit for the entire Shire. Worth considering is the increasing movement of semi-retirees to farmland. Can the Institute set the Noosa region as a “Noosa Demonstration Area” using the research to form a version of an Urban Living Lab.

It was commonly noted that funding was an important issue that needed to be resolved. It was felt that the more complex initial Institute concepts provided would need to ensure that there was another source of funding outside of that provided by Council to (1) to provide a secure financial basis, and (2) to enable an institute to seek funding (such as philanthropic funding) that can provide tax benefits for the donors.

Some other areas identified as pertinent for consideration for study by the community stakeholders included:

- A systems approach is important
- Investigating liveability issues
- Transport
- Social research
- Affordable housing
- Sustainable construction
- Circular economy
- Energy
- Jobs, especially for the young

3.3 Summary of factors most important or useful for the Noosa Institute

3.3.1 What’s in a name?

The use of an appropriate name is important for setting the expectations of what an entity such as the Noosa Institute of Sustainability can and will do. In addition, the name needs to be able to distinguish the Institute from other groups and activities in the local area.

The discussions with the Council staff and the local community members indicated that the term “Sustainability Institute” was not well received. No suggestions are provided in this Stage 1 report for an alternative name, however, it is apparent that an alternative, appropriate name will be important and it must be one that clearly defines the purpose and intent of the Institute. Should this research proceed to Stage 2 which involves community and stakeholder engagement, potential names can be canvassed as part of this stage in the process. The important consideration at this stage in the investigation is ensuring the ‘idea’ and concept of an institute are sound and to provide an initial indication of what it could be and do that has merit for further consideration.

3.3.2 Boundaries

From the discussions with the external community members and Council staff it was apparent that the Institute should set itself to focus on a few well-defined issues/challenges and avoid having too broad a focus. Some suggested issues for consideration included:

- Traffic
- Population impacts and opportunities
- Technology and job changes as part of the 4th Industrial revolution.
- The rivers and estuarine system within the Shire
- Food and food security
- Unknown unknowns
- Issues relating to the use of a circular economy
- Development issues (in particular refurbishment and updating opportunities for existing older buildings)

3.3.3 Important factors to aid function of Institute

The important factors taken from the analysis of the existing Institutes and the interviews with Council and community members were distilled into a series of Non-negotiable, Important and Desirable factors that need to be considered in the formulation of a Noosa Sustainability Institute (Refer to Table 1). These factors were then used in different combinations to establish the basic frameworks of three different institute models for consideration (Refer to Section 4 and Table 2).

In addition, a series of critical success factors could be formulated from the assessment of the existing institutes as well as drawing on CSIRO experience of engagement in a wide range of institutes over many years (not necessarily “Sustainability Institutes”).

Critical Success Factors for assessing how an Institute could develop are:

- The involvement of one or more research entities (e.g., Universities or Government Research agencies) that provide a strong research basis for the institute.
- A strong boundary and definition of the area of research or problem/challenge to focus research activities, thus maximising research outcomes and uptake.
- The potential for a physical presence as a focal point for the research and to guide community engagement.
- A well organised means of storing research data and sharing the research learnings with other projects within the Institute and with other entities.
- Strong community engagement, both in helping guide the development or selection of research subjects, as well as by assisting researchers through direct engagement in research projects (i.e., citizen science).
- A broad funding base, in particular using funding sources such as a café, market garden, native nursery etc. to assist funding the base operation of the institute.

In contrast, there can be considered a series of **Danger Points** that are the antithesis of the above Critical Success Factors. The major danger points include:

- A direct reliance on Council for funding and management of the Institute. This would not be seen as transparent by many in the community and leaves both the Institute and the Council vulnerable to funding shortfalls and political changes.
- The lack of involvement of an external research entity in the running and research direction setting would make it difficult to attract high calibre projects, researchers or postgraduate students and any plans for long term research focus on specific sustainability issues of concern (e.g., traffic/transport, climate change etc.).
- Allowing research to progress with limited structure, definition or boundaries. This would devalue the relevance of the Institute, both locally and more broadly and have a potential negative impact on the uptake of research outputs.
- Not having a transparent and regular rotation of the management/steering group. This can lead to entrenched “lines of control” which can impede new research ideas and cause unwanted empires or closed networks to be established.

Table 1. Factors most important or of use for a Noosa Institute

Importance	Issue	Comments and Identified Institutes that use or highlight each issue
Non-negotiable	1 A focus on local issues/challenges/opportunities	<p>The role of the Institute and hosted research can have a broader impact but the base aim is to benefit the local community.</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Melbourne Sustainable Society Institute - http://sustainable.unimelb.edu.au/</p>
	2 Demonstrated outcomes for Noosa community/ or environment	<p>Not research for research sake. Any projects hosted by the institute must demonstrate the return to the local community and or environment prior to commencement. Research that only produces papers or scientific presentations should be avoided.</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Sustainability Learning Centre (part of Greening Australia) - http://www.greenhub.org.au/sustainability-learning-centre/</p> <p>Sustainability Institute - http://www.sustainabilityinstitute.net/</p>
	3 Outputs are produced in a form that facilitates effective uptake	<p>Outputs of research must be organised and presented in a manner that is “Tech ready” or has defined processes to enable the efficient and quick uptake by the local community & businesses. Where appropriate, outputs are to be provided in a manner that seeks to provide outcomes for the future not the present.</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Institute for Sustainable Futures - https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures</p> <p>Adelaide Sustainability Centre - http://www.adelaidesustainabilitycentre.org.au/</p>
	4 Data repository established	<p>For research outputs to be of direct value to the Noosa region, it is important for the Institute to set up a data repository to hold all research outputs and data.</p> <p>Melbourne Sustainable Society Institute - http://sustainable.unimelb.edu.au/</p> <p>The Donella Meadows Project - http://donellameadows.org/</p> <p>Institute for Advanced Sustainability Studies - http://www.iass-potsdam.de/en/institute</p>

Importance	Issue	Comments and Identified Institutes that use or highlight each issue
	5 Partnering within projects the default position	<p>Partnering with groups or industry by the Institute and projects within should be the usual position to aid uptake of research outputs. Any variation from this position should be for specific reasons only (e.g., commercial IP issues) and only be granted with the full agreement of Institute members.</p> <p>Institute for Sustainable Communities - http://www.iscvt.org/</p> <p>Institute for Sustainable Society and Innovation - http://www.issnova.eu/</p> <p>Institute for Sustainable Solutions - https://www.pdx.edu/sustainability/institute-for-sustainable-solutions</p>
	6 Well defined boundaries of effort and clear definition	<p>The activities undertaken within the Institute should ensure any research undertaken is well defined and fits within well-defined boundaries to prevent overreach or competing with the activities of other groups.</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Adelaide Sustainability Centre - http://www.adelaidesustainabilitycentre.org.au/</p> <p>Sustainability Learning Centre (part of Greening Australia) - http://www.greenhub.org.au/sustainability-learning-centre/</p> <p>Macarthur Centre for Sustainable Living - http://www.mcsl.org.au/</p> <p>Sustainability Institute - http://www.sustainabilityinstitute.net/</p>
Important	7 Institute management structure and purpose well defined	<p>The Institute should have a well-defined management structure that is also somewhat independent of the Councils day-to-day activities. This protects the integrity of the Institute and does not rely on having to extend the work activities of the existing Council staff. This structure should not be so complex as to cost more than the benefits provided.</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Institute for Sustainable Communities - http://www.iscvt.org/</p> <p>The Institute for Sustainability Africa (INSAF) - http://instforsustainafrica.org/</p> <p>Institute for Sustainable Solutions - https://www.pdx.edu/sustainability/institute-for-sustainable-solutions</p> <p>Sustainable Futures Australia - http://www.sustainablefutures.com.au/</p>

Importance	Issue	Comments and Identified Institutes that use or highlight each issue
	8 Strong focused research programs	<p>Research hosted by the institute should be interdisciplinary, that is involve not just (academic) researchers but also local community members, industry and/or government (council) staff. Examples of transdisciplinary projects in the below institutes have included living laboratories, sustainable agriculture and food production/systems. Transdisciplinary research has been shown to create greater community/client engagement and ensures greater uptake of research findings.</p> <p>Institute for Sustainable Futures - https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures</p> <p>Melbourne Sustainable Society Institute - http://sustainable.unimelb.edu.au/</p> <p>Sustainability Institute – Penn State - http://www.sustainability.psu.edu/</p> <p>Sustainability Institute - http://www.sustainabilityinstitute.net/</p>
	9 Call for define research areas	<p>Selection of research focus areas ensures that subjects of concern or interest to the Noosa Community and or relevant to the Noosa environment are the major topics of research. Aids uptake of research outputs.</p> <p>Melbourne Sustainable Society Institute - http://sustainable.unimelb.edu.au/</p> <p>Sustainable Futures Australia - http://www.sustainablefutures.com.au/</p> <p>Sustainability Institute – Penn State - http://www.sustainability.psu.edu/</p>
	10 Partnering between projects and other groups.	<p>Partnering ensures enhanced exchange of ideas and information, thus increasing the outputs of individual projects and ultimate uptake. Partnering and sharing of information also ensures that there is no duplication of research and new projects can build upon the findings of previous activities.</p> <p>Institute for Sustainable Futures - https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures</p> <p>Melbourne Sustainable Society Institute - http://sustainable.unimelb.edu.au/</p> <p>Adelaide Sustainability Centre - http://www.adelaidesustainabilitycentre.org.au/</p> <p>Institute for Sustainable Communities - http://www.iscvt.org/</p>

Importance	Issue	Comments and Identified Institutes that use or highlight each issue
	11 Systems approach to research	<p>Any research hosted under the institute should be undertaken in a manner that considers the impact of any research outputs on other elements of the Noosa environment and community (e.g., the impact of energy efficiency on water use, housing densification on transport needs etc.).</p> <p>Institute for Advanced Sustainability Studies - http://www.iass-potsdam.de/en/institute</p> <p>The Institute for Sustainability Africa (INSAF) - http://instforsustainafrica.org/</p> <p>Institute for Sustainable Society and Innovation - http://www.issnova.eu/</p>
	12 Use the entire shire region as a demonstration area	<p>It was very apparent that there is a strong need to ensure that any research hosted by the institute must focus on needs of the broader Noosa shire rather than just the Noosa Headlands location or coast focus.</p> <p>Sustainability Institute – Penn State - http://www.sustainability.psu.edu/</p> <p>Institute for Sustainable Solutions - https://www.pdx.edu/sustainability/institute-for-sustainable-solutions</p> <p>The Energy and Resources Institute (TERI) - http://www.teriin.org/</p>
	13 Direct community engagement	<p>The direct engagement of community members in the institute and any research activities should occur to aid uptake or research outputs.</p> <p>Sustainability Institute – Penn State - http://www.sustainability.psu.edu/</p> <p>Sustainability Institute - http://www.sustainabilityinstitute.net/</p> <p>Institute for Sustainable Communities - http://www.iscvt.org/</p> <p>Sustainable Futures Australia - http://www.sustainablefutures.com.au/</p>
	14 Physical presence	<p>Most of the successful community-based institutes had a physical presence that was a focal point for hosted research activities but also attracted the community for other reasons (café, gardens, venue etc.). Web pages were used for additional outreach and information provision.</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Macarthur Centre for Sustainable Living - http://www.mcsl.org.au/</p> <p>Sustainability Institute – Penn State - http://www.sustainability.psu.edu/</p>

Importance	Issue	Comments and Identified Institutes that use or highlight each issue
	15 Transdisciplinary approach	<p>The Institute promotes research that Transdisciplinary, transformative and co-creative style of research with partners from diverse backgrounds (e.g., academia, political institutions, administration, community members, industry) with a key aim of understanding sustainability and generating potential solutions to issues of concern.</p> <p>The Energy and Resources Institute (TERI) - http://www.teriin.org/</p> <p>Institute for Sustainable Solutions - https://www.pdx.edu/sustainability/institute-for-sustainable-solutions</p> <p>Sustainability Institute - http://www.sustainabilityinstitute.net/</p> <p>Institute for Sustainable Society and Innovation - http://www.issnova.eu/</p>
	16 Broad funding base	<p>The largest and evidently most successful Institutes have fund sourced from a variety of sources. Funding should be sought from a broad variety of sources including Council, State Government, Industry, government grants and other sources.</p> <p>Institute for Sustainable Futures - https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures</p> <p>Institute for Sustainable Communities - http://www.iscvt.org/</p> <p>The Energy and Resources Institute (TERI) - http://www.teriin.org/</p>
Desirable	17 Physical presence provides broad community services	<p>The provision of services such as market gardens, café, school-based education facilities has been demonstrated to attract regular visitors to community-based institutes</p> <p>Centre for Education and Research in Environmental Strategies - https://ceres.org.au/</p> <p>Sustainability Institute - http://www.sustainabilityinstitute.net/</p> <p>Institute for Sustainable Solutions - https://www.pdx.edu/sustainability/institute-for-sustainable-solutions</p>
	18 Collaborative Research Agreements	<p>CRAs reduce the amount of administration required for commencement and operation of projects. CRAs cover common legal arrangements such as IP and partnership arrangements. This provides a system where all individual projects from researchers belonging to a research centre (e.g., University) are run under a CRA and therefore do not have to be set up under a full research legal agreement each time they are established as all the legal issues have been covered by the existing CRA. In addition,</p>

Importance	Issue	Comments and Identified Institutes that use or highlight each issue
		<p>CRA's can state the aims and limitations of research to be undertaken, which ensures that proposals submitted to the institute fit within these established boundaries.</p> <p>The Energy and Resources Institute (TERI) - http://www.teriin.org/</p> <p>Sustainability Institute – Penn State - http://www.sustainability.psu.edu/</p> <p>Institute for Advanced Sustainability Studies - http://www.iass-potsdam.de/en/institute</p> <p>Institute for Sustainable Communities - http://www.iscvt.org/</p>
	19 Provides general resources on sustainability	<p>Many of the institutes examined provided a range of on-line resources on sustainability. This helps with community engagement.</p> <p>The Donella Meadows Project - http://donellameadows.org/</p> <p>Sustainability Learning Centre (part of Greening Australia) - http://www.greenhub.org.au/sustainability-learning-centre/</p> <p>Adelaide Sustainability Centre - http://www.adelaidesustainabilitycentre.org.au/</p>

4 Institute Structure Options

The information collated from the search of existing international and Australian institutes combined with the information from the Community interviews and Council feedback were used to develop three options for a potential Institute model. The models have been structured from a virtual model through to a version that involves oversight by a formal Board with a strongly structured research agenda.

The general characteristics of each of the three models are summarised in Table 2. The detailed description for each option is detailed below including an assessment of the pros and cons of each option.

All of the model options meet the non-negotiable factors listed in Table 1 and model options 2 & 3 cover all (or can cover all) of the listed important factors. Only Model option 3 covers all of the desirable factors as well, although Model option 2 has the potential to also do so for several of the desirable factors.

4.1 Institute Model 1.

Synopsis

This option is the simplest of the three provided. Information about, and promotion of the institute to the community and to researchers would be predominantly through a web presence, potentially hosted on the Council website. The Institute could be managed part time by a Council staff member. This person would be responsible for maintaining the Institute web page(s), accepting project submissions, communicating with successful projects and ensuring research outputs are released on the Institute web pages.

The Institute would rely predominantly on researchers approaching Council with proposed projects and any accepted projects would automatically be located under the Institute banner. The Institute would not normally seek out specific projects directly, unless directed by Council. Acceptance of projects would be done through an assessment by Council staff with appropriate understanding of the proposed research topic.

Funding for projects could come from any source, however, it is anticipated that the Council would be a significant funding source for many of the projects undertaken under the Institute banner.

Due to the minimal management structure and the fact that projects are predominantly accessed through approaches from researchers, the Institute does not directly decide on the types of projects undertaken as it would remain reliant on direct approaches from researchers with their projects or calls by the council on internal issues (similar to what occurs with the council currently). As a result, the institute also has less control on the research outputs, as well as on any on-going or follow-on research.

By its virtual nature, the Institute could also maintain web pages on sustainability information that would be useful for the Noosa community as well as promoting sustainability activities undertaken or supported by Council. This structure, however, would only support limited engagement with the community and community members would have limited direct input into the type or selection of projects undertaken, or in participation in projects being undertaken (unless the project is deliberately set up for this by the researchers).

Basic Structure

- No requirement to develop a detailed strategy to ensure outputs are taken up by Noosa community/ businesses/ Council etc. Could use existing strategies to provide guidance and alignment for proposed research.
- Funding is predominantly sourced from Council and/or the institution (e.g., University) associated with the project.
- Project approval requirements are simplified as the Institute is a “shop front” only with a predominantly web-based presence.
- The Institute only takes project submissions submitted by researchers. The Institute does not directly set any research agendas or objectives (leaving this to the Council and Researchers).
- Projects are approved by select Council members.
- Institute has a part time Manager/officer to help run the basic elements of the Institute.

Aims

- To promote research projects that are undertaken by individual or small groups of researchers from research and/or education institutions.
- Limited or no interactions between research projects or uptake of previous research outcomes required.
- The Institute can facilitate some community education information on sustainability measures.
- The Council can use the Institute to promote activities undertaken by, or supported by Council to improve the Noosa environment or community.

Pros

- Simple management requirements.
- Project approval requirements are simplified as institute operates as a shop front only.
- Limited input required from the Council as a whole.
- No requirement for a board or steering committee.
- Institute structure can be run predominantly using a virtual, on-line structure.
- Low funding requirements for operation of the Institute.
- Only a simple communication model via the Institute’s web pages is required.
- Data management costs is modest as it would be expected that this would be provided by the researcher’s institution.

Cons

- There is limited or no interactions between research projects.
- The limited oversight due to the limited management means that the Institute has only modest control on the research undertaken or the outputs obtained.
- Can be difficult to gain community input or uptake of research findings.
- Transfer of information to Council or the community is not directed and therefore may be limited.
- The short-term engagement of researchers means that there is limited retention of background IP and research knowledge in the Noosa region.

4.2 Institute Model 2.

Synopsis

Under this model there is a more formal structure with a Steering Committee overseeing the operations and having input into the selection or approval of project proposals submitted, as well as assessing research outputs. The structure and membership of the Steering Committee would not necessarily require a broad scope of knowledge in different research domains but should be comprised of suitably qualified persons who are able to assess the general quality of proposals and research outputs. The Steering Committee would predominantly comprise a number of senior Council staff and potentially Councillor representative but could also include noted members of the community and volunteer researchers from allied research institutions.

The general operation of the Institute would be controlled by a dedicated part-time Institute Manager with a significant time commitment to the institute (which could become full time as the Institute develops). The Manager position would be supported by other Council staff on an as-needs basis. The Manager would be responsible to the Council via the Steering Committee for regular engagement with active research projects, be a main contact point for the community and be responsible for all communication activities. The Institute itself could operate as either a virtual on-line model or have a physical shopfront with a virtual capability behind it.

Research projects would be sourced through a mixture of calls for research proposals in areas deemed important by the Council. The Council could also use the Institute to obtain opinions on specific potential research topics from the community or allied research agencies. In addition, the Institute can accept unsolicited submissions from researchers on topics that are believed to further the broad sustainability goals of Council and the community.

Council will be a major funding source but the Institute, through the Steering Committee and Council would seek funding from other sources including Government, industry and other potential partners. The Institute Manager would have a major role in sourcing external funding for the Institute.

A Sustainability Institute run using this model could seek to ensure that projects undertaken under the carriage of the Institute have a reporting structure that provides information and data directly back to the Council and the community. The community should have full and open access to all research outputs. The Institute structure would encourage the uptake of the research outputs for the benefit of the local community through direct community engagement on the project, linkages to industry and the Council and a means to track the outcomes and potential impacts from the research. If sufficient resources were made available, or as the model develops, the institute could also provide support for related non-research activities that are linked to the general sustainability aims of the Institute (e.g., school and adult educational classes, an on-line library of resource materials). These non-research activities would be provided by community and research volunteers but overseen by the Institute Manager with additional support from Council as required.

As part of the demonstration of the benefits of the research, any project undertaken would be encouraged to demonstrate how it builds upon the outputs of previous projects or initiatives undertaken within or even prior to the formation of the Institute where relevant and if previous relevant research or projects were undertaken. It would not be absolutely necessary to have direct links to other non-Institute led initiatives in the Noosa region (or even broader) but there should be at least an awareness of these other initiatives.

Basic Structure

- Would require at least a part time Institute Manager and the formation of a Steering Committee that meets on a semi regular basis at least a few times a year. The Manager need not have strong research experience.
- The Steering Committee helps Council determine the broad research objectives and assess submitted research proposals.
- The Institute is developed in a manner that could partner but is not dependant on partnering with other activities and organisations in the Noosa area, but shares information and data where appropriate.

Aims

- All projects must demonstrate that the outputs will have benefit to the Noosa region.
- Input of community members in research projects is encouraged.
- The community and research groups have the opportunity to suggest ideas and concepts for research topics to the Steering Committee.
- Interactions with other projects and activities is encouraged.
- The broader scope of projects encourages funding and support from a wider base of potential support agencies.
- Community communication, engagement and broad community uptake is encouraged.
- Can incorporate a range of activities apart from the research projects that encourage and enhance the community engagement.

Pros

- Cross-project engagement increases the potential for successful outcomes that have strong links to the Noosa environment and community.
- Institute structure can be run with a mix of a physical and virtual on-line structure.
- A Steering Committee overseeing the Institute increases the rigour of the research outcomes.
- The potential for return and follow-on projects increases.

Cons

- Increased management costs.
- Greater data management and storage requirements.
- Increased complexity for project approvals and support, including contractual requirements such as IP agreements, etc.

4.3 Institute Model 3.

Synopsis

This is the most detailed of the proposed models for the Sustainability Institute. While the Institute is established and owned by Council, there is direct involvement of the community and research partners in the decision-making processes and a Board is established to oversee operations. This provides a transparent level of independence from the day to day activities of Council. Such a structure also ensures that research activities can take a broad, long-term view of sustainability of the Noosa region, rather than being seen to be tied to the current needs or targets of the Council. The day to day operations of the Institute is administered by a full-time dedicated Manager who reports directly to the Board.

The Board oversees the operations of the Institute and approves all of the research and associated activities undertaken within the Institute. The composition of the Board comprises Council members or staff, noted community members and senior research representatives from Research Agencies. The membership of the Board is approved by Council although nominations are sought from the community and research partners. The Chair of the Board should be an appropriate non-affiliated member of the Noosa community (i.e., not from Council or a partner research agency). The Board can also directly invite affiliate members to participate for short-term periods where needed for their expertise on specific topics, e.g. indigenous matters or specific community issues. Membership of the Board is for set for fixed time periods (e.g., two years) after which nominations for new members is sought. Existing Board members are free to renominate at this time.

While consideration of submitted unsolicited projects is a possibility, the majority of approved research is through calls for proposals by the Institute. The Institute Board periodically sets preferred research topics after close consultation with Council and the community. Members of the community are actively encouraged to put forward ideas and concepts for research topics.

The Institute actively encourages the development of Collaborative Research Agreements (CRAs) with research agencies interested in engaging in research within the Institute. This assists the quick awarding of projects to researchers belonging to these research agencies as the CRAs already cover all the background research legal approval requirements. Researchers from agencies that do not have a CRA with the Institute are not precluded from being awarded research projects but will be required to comply fully with the usual Institute requirements.

Under this option the Institute potentially has a physical location that can be used as a place by researchers to work on research projects while in Noosa; a place to display active and completed research projects; and a site that provides a location where the community can interact with researchers and research projects. While not essential, this location can also be used as a site for other community activities on topics relating to the broad sustainability goals of the Institute (e.g., school activities, community sustainability classes, etc.). All non-research activities are approved and overseen by the Institute Manager

In addition to the physical location, the Institute maintains a strong virtual presence and leverages other Council-supported initiatives such as the Digital Hub and associated networks. This on-line presence provides a gateway to others both within Australia and internationally by promoting the research undertaken within the Institute and advertising upcoming research topics and calls for proposals. The on-line activities of the Institute also provide links to other sustainability activities occurring elsewhere in Queensland, Australia, and internationally. This platform provides the community, amongst other things, with an opportunity to bench mark the activities of the Institute with what is happening elsewhere.

All research projects undertaken within the Institute are overseen and advised by Project Steering Committees consisting of people with expertise, knowledge or understanding in the topic area associated with the research project. The Project Steering committee is selected by, and reports to the Board (usually through the Institute Manager) and ensures that an active research project remains on track or approves any required variation from the original project plan.

While not essential, proposals that seek to have the direct involvement of Council staff and/or members of the community in the research activities (i.e., citizen science) will be considered as the preference for awarding research projects. This community engagement will greatly assist in the uptake of the research outputs turning these outputs into outcomes and which then can provide impacts much faster than is traditionally achieved. In addition, the Board and any Project Steering Committees must ensure that research outputs and data are stored in a way that can be easily accessed by the community and other research projects. Direct links between research projects within the Institute and with activities undertaken by others outside of the Institute are considered the norm.

Funding of the Institute and the projects undertaken is obtained from a diversity of investment sources that is controlled and driven by the Board. Council assists with the financial management of the Institute.

Basic Structure

- Institute is overseen by a Board whose members rotate on a regular basis. Board membership should include representatives of the Council, at least two research entities and significant members of the Noosa community. The Chair of the Board is a non-aligned significant member of the Noosa community.
- The Board sets the research agenda and calls for expressions of interest into research topics identified as priorities by the Council and/or community as well as determining the appropriateness of and approving any unsolicited research submissions.
- The Institute potentially has a physical presence than is not only used as a focal point for research but also a place for community activities, art and science fairs/presentations.
- The Institute actively promotes educational activities that are linked to the research undertaken. The educational activities are focused both at the school level (both primary and secondary) and at the adult and community level.
- A funding structure is established that seeks funding from all levels of government and encourages input by industry and other benefactors. Broad sponsorship is sought.
- Research agencies are encouraged to enter into Collaborative Research Agreements that enable on-going multiple research projects. CRAs should be set for a determined minimum time period and cover all legal aspects of research undertaken under the Institute.
- The institute is managed by a person with strong research knowledge, supported by other staff on at least a part time basis.
- Data and other research outputs are to be stored in a manner that enable long-term access by the Council, community and other research activities.
- The Institute has strong links to other activities in the Noosa region as well as broader links with other Councils and State Governments. Information sharing and joint research topics are common. A common data sharing network is established that has broad partnership at least within the South of Queensland.

Aims

- Research topics must demonstrate a system approach that links not only environmental or physical research but also social, ethical and economic analysis of research outputs.
- Research topics should also demonstrate how the research activities and aims are linked to other existing and concurrent research.
- There is a strong requirement for research to include citizen science and reporting back to a dedicated Project Steering Committee. The membership of Project Steering Committees should have a representative of the funding source, a researcher with knowledge of the area of research and a member of the Noosa community.
- Research must demonstrate the links and benefits to the Noosa community and environment.
- Research outcomes are to be reported on a regular basis to the community.

Pros

- The longer-term engagement of research agencies increases the retention of the knowledge base relating to research undertaken within the Institute and the region.
- Encourages groups such as research agencies to enter into longer term Collaborative Research Agreements to assist and simplify approval of multiple projects being run from the same research group.
- Significantly increases the potential for the Noosa region to be positioned both nationally and internationally as place of innovation leveraging the Noosa Brand and Biosphere status.
- Multiple projects with interlinked research objectives is possible.
- Individual projects can learn and build upon outcomes from concurrent and previous research projects.
- Enables large multi-disciplinary projects with multiple research aims.
- Encourages citizen science and the engagement of industry, community and Council.
- Can aid Council with operational and regulatory decisions.

Cons

- High management requirements with a corresponding higher overhead cost than the other Model options.
- The legal requirements are more complex than the other structure options and would require effort to set up (requires more investigation in next stages).
- May take longer to establish and become fully functional.
- There would need to be considerable on-going activity by Institute staff to manage project data and to encourage and monitor uptake of the research outputs by external parties (e.g., industry, Council or community).
- There is a need to develop a long-term funding base. If not developed carefully, there is a risk that Council could be left as the only major funding benefactor for the Institute.
- A complex management structure can be vulnerable to external and internal interferences/ criticism.
- The structure will need to be carefully developed to ensure that it does not become too complex for the community.

4.4 Summary of Features of Different Noosa Institute Model Options

Table 2 provides a comparison “at a glance” of the main features highlighted as essential or potentially important for the structure and operation of each of the three model options described above.

Table 2. Noosa Institute Options

Features	Model 1	Model 2	Model 3
Council Staff Managed	● 1*		
Dedicated part time manager		● 1	
Full time dedicated manager			● 1
Steering Committee oversight		● 1,2	
Board oversight			● 3,7
Steering committees for projects		○ 3	● 3,7
Virtual web-based presence	●	●	●
Physical presence		○ 14	● 14
All projects and activities designed to ensure uptake by Noosa Community, businesses and/or council		● 2,3	● 2,3
Institute sets regular research topics or agendas		○ 2,3,6	● 2,3,6,7,8
Institute actively partners with other, non-institute organisations and activities			● 10
Institute shares data and information partners with other, non-institute organisations and activities		● 10	● 10
CRAs are set up with research partners to facilitate project agreements			● 7,8,18
Research agendas require community input		○ 13	● 13
Community has opportunity to suggest research topics and agendas		○ 13	● 13
Call for proposals for Targeted projects		● 8	● 8
Accept unsolicited proposals	●	●	●
Community involvement sought for participation in projects		○ 13	● 13
Preference for large multidisciplinary or multi-agency projects			● 11
Submitted proposals approved by Council	● 1,2	● 1,2	
Submitted proposals approved by Board			● 1,2,7
Project progress and completion approved by Council	● 2,7	● 2,7	
Project progress and completion approved by Institute Board			● 2,7
Project outputs and findings are actively made publicly available		● 2	● 2
Active Project Data Storage within the institute structure		○ 4	● 4

Features	Model 1	Model 2	Model 3
Requirement for linkage to previous projects to demonstrate building on existing knowledge		○ 8	● 8
Active links between projects		○ 8	● 8
Active links or partnerships of projects and researchers to external projects and activities		○ 8	● 8
Funding from Council	●	●	●
Funding from sources external to Council		● 16	● 16
Institute supports activities other than research		○ 17,19	● 17,19

● = Required or considered essential for successful operation

○ = Optional or could occur but not essential for successful operation

* = Numbers in red reference Non-negotiable issues in Table 1;

Numbers in blue reference Important issues in Table 1;

Numbers in magenta reference Desirable issues in Table 1.

5 Conclusions and Recommendations

5.1 Summary

A variety of opinions were obtained relating to the potential concept for a Sustainability Institute. The search of existing Institutes both within Australia and Internationally showed that there were two major Institute types, the community-based institutes and the institutes run by Universities that had important information that could be used for consideration for a “Noosa Sustainability Institute”. There was also a smaller business led group of institutes considered. The community institutes focus on building sustainability in the local community while the University institutes are more intent on providing a research focus for students and staff and education of students. The business-led Institutes operate on a greater fee for service model. None of the institutes examined provided an absolute match or fit for a Noosa specific Institute. Instead a range of points were able to be garnered from across the examples examined.

Along with examining the characteristics of existing Institutes, the opinions of Council staff and some local community members on the need and operations of a “Noosa Sustainability Institute” were sought. These opinions ranged from “an institute shouldn’t be formed and all work should be done just through the Council ” ,through to “an Institute should have a physical presence that is not only used as a focal point for research, but also a place for community activities, art and science fairs/presentations”.

One factor that everyone agreed upon was that any effort needs to work to ensure that the outputs of any research directly adds value to the Noosa region. No “research for research’s sake”.

Using all of the information obtained above, three different models of a potential Institutes were constructed, from a basic model which merely organises the projects undertaken but does not attempt to set research topics or direction, through to a complex model that set research directions, calls for projects, monitors research projects and facilitates research outcomes. All of the options have pros and cons that need to be considered in the process of advancing the idea of a research institute choosing up the most appropriate structure for a Noosa Institute.

The most complex model (Option 3) has the best potential to create an international reputation for the Noosa region and attract funding outside of the Council, however, the complexity of the Option 3 means that effort and time would be required to become established from a base start. The simplest model (Option 1) is the easiest to get underway but is essentially a formalisation and centralisation of the research activities already undertaken within the Council. The middle model (Option 2) is more similar to Option 3 than it is to Option 1. This was deliberately done with the consideration that the Council could consider commencing the Noosa Institute under the Option 2 model with the aim to progress to the Option 3 model as the Institute became successfully established. However, there could be a progression from Option 1 to 2, or from Option 2 to Option 3 should it be determined that this is the most appropriate way to go.

5.2 Conclusions

This report provides the findings of the first stage of a process to develop a “Noosa Sustainability Institute” by determining what is already occurring both in Australia and Internationally around sustainability Institutes and obtaining opinions from Council staff and a few community members. The project team have brought together a series of Institute options for consideration. The information obtained from this stage of the project has been used to consider what may work for Noosa and what will not work. It is recommended that the Council consider which of these may provide the basis for a suitable model structure to be advanced in Stage 2. Stage 2 of the project would provide more information and assessment to reach a final appropriate Institute model and structure.

It is recommended that the Council assess the merit of the three models provided, consider the proposed attributes and determine a preferred potential model or number of options to take to the next stage of assessment and consultation.

Should Council wish to proceed to stage 2, clear aims for the institute must be developed and communicated to assist in the formulation of any institute structure and inform the operating model.

5.3 Items for consideration

- Institute model 3 has the greatest complexity and management requirements but removes the requirement for Council to be the major driver of such an institute. This differs from the University-based institutes studied where the University maintains direct control (and costs).
- Setting boundaries and clear definition on research topics and efforts helps maintain the reasons for an institutes operation and existence.
- The most successful and active community Institutes use funding sources such as cafes, function centres and educational facilities to help cover operating costs. This also increases community engagement and participation in activities, which in-turn helps attract external sponsorship.
- Much of the research undertaken by the community-based institutes is small scale, localised research. This is not an ideal set up for a Noosa Institute. The University -led Institutes tend to focus on internal university capabilities which can narrow research outputs. Again, less than ideal for Noosa. Encouraging broad partnership research activities will provide greater research outputs and outcomes.
- Citizen science is an increasing activity in large, complex research projects. This improves “ownership “of research outcomes in the community.
- Data storage and dissemination is important to foster improved uptake of research outputs and improves knowledge retention in the region.
- Leveraging technology and emerging capabilities across digital platforms is expanding the potential to engage and increase participation of citizens, talent and knowledge on a global scale.

5.4 Potential Activities for a Stage 2 of the Institute Development

Stage 2 is designed to follow on from Stage 1 taking the most preferred Institute model(s) (which can be more than one at this stage) and further test and develop the preferred option(s) with a broader range of the Noosa community, interest from Universities and other research institutes and the potential input from other neighbouring local councils and the State and Federal Governments. This would enable further refinement or modification of the most likely models listed in this report and should result in the selection of a final preferred model.

Activities in Stage 2 would most likely include:

- A broader discussion of the model structures identified in this report with the community, stakeholders and business groups and researchers and or research institutes.
- Exploration and determination of the community expectations of a sustainability institute.
- Discussions with South East Queensland universities as the local universities to seek interest in involvement in the institute. (Other universities could be engaged or invited to be involved at a later date as development of Institute progresses if agreed by the Council and/or initial board).
- Discussions with the Queensland State and Federal Governments on potential support of the Institute.
- Finalisation of the preferred Institute structure, initial operational plans and management structure and exploration of funding models.

Appendix A.

Institutes Examined for Information

International institutes

Institute type	Institute name	URL
Virtual	The Donella Meadows Project	http://donellameadows.org/
Physical	Institute for Sustainable Communities	http://www.iscvt.org/
Physical	Institute for Advanced Sustainability Studies	http://www.iass-potsdam.de/en/institute
Physical	The Institute for Sustainability Africa (INSAF)	http://instforsustainafrica.org/
Physical	Institute for Sustainable Society and Innovation	http://www.issnova.eu/
University	Sustainability Institute – Penn State	http://www.sustainability.psu.edu/
University and physical	Sustainability Institute	http://www.sustainabilityinstitute.net/
University	Institute for Sustainable Solutions	https://www.pdx.edu/sustainability/institute-for-sustainable-solutions
Physical	The Energy and Resources Institute (TERI)	http://www.teriin.org/

Australian Institutes

Institute type	Institute name	URL
Physical	Centre for Education and Research in Environmental Strategies (CERES)	https://ceres.org.au/
University	Institute for Sustainable Futures	https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures
University	Melbourne Sustainable Society Institute	http://sustainable.unimelb.edu.au/
Physical	Adelaide Sustainability Centre	http://www.adelaidesustainabilitycentre.org.au/
Physical	Sustainability Learning Centre (part of Greening Australia)	http://www.greenhub.org.au/sustainability-learning-centre/
Physical	Macarthur Centre for Sustainable Living	http://www.mcsli.org.au/
Virtual	The Australian Sustainability Institute Pty Ltd	http://www.theasi.com.au/
Physical	Sustainable Futures Australia	http://www.sustainablefutures.com.au/

Additional Institutes investigated but not directly used in assessment

International

Institute type	Institute name	URL
Physical; business	Nevada Green Institute	http://nevadagreeninstitute.org/?gclid=EAlaIQobChMIzu21mtW81wIVITUrCh12lgfKEAAYAAEgJcD_D_BwE
Physical; business	International Institute for Sustainable Development	http://www.iisd.org/
University	Environment and Sustainability Institute	https://www.exeter.ac.uk/esi/research/
College	The Sustainability Institute	https://si.tcnj.edu/
University	Graham Sustainability Institute	http://graham.umich.edu/
University	Global Sustainability Institute	https://www.anglia.ac.uk/global-sustainability-institute-gsi
College	LACCD Sustainability Institute	https://www.laccd.edu/Departments/DistrictResources/DistAcadSenate/Pages/Sustainability-Institute.aspx
University	Sustainability Institute	http://willamette.edu/about/sustainability/sustainability_institute/index.html
University	Institute of the Environment and Sustainability	https://www.ioes.ucla.edu/
Physical; business	Gnarly Tree Sustainability Institute	http://bloomingtoneei.com/
University	Golisano Institute for Sustainability	https://www.rit.edu/gis/
University	Global Innovation Exchange	https://www.globalinnovationexchange.org/organizations/global-sustainability-institute-purdue
Physical; business	The Sustainability Institute	http://www.socialventurepartners.org/charleston/sc/profiles/the-sustainability-institute/
University	Cambridge Institute for Sustainability Leadership	https://www.cisl.cam.ac.uk/
College; blog	Hope College Sustainability Institute	https://blogs.hope.edu/sustainability-institute/
Business	Sustainability	http://sustainability.com/
University	Institute for Sustainability	http://www.ncl.ac.uk/sustainability/
University	Sustainability Research Institute	http://www.see.leeds.ac.uk/research/sri/
University	Sustainable Consumption Institute	http://www.sci.manchester.ac.uk/
University	St Andrews Sustainability Institute	https://www.st-andrews.ac.uk/sasi/
University	Sustainability Research Institute (SRI)	https://www.uel.ac.uk/sri/

Australian

Institute type	Institute name	URL
Physical; Community	Bulimba Creek Catchment Coordinating Committee	http://bulimbacreek.org.au/sustainability-centre/
University	Institute for Sustainable Futures	https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures
Physical; business	The Australian Sustainability Institute Pty Ltd	http://www.ecogeneration.com.au/business-directory/1564/the-australian-sustainability-institute-pty-ltd/
University	Melbourne Sustainable Society Institute	http://sustainable.unimelb.edu.au/
University	Sustainable Development Institute	https://www.monash.edu/sustainable-development
Physical; Business	The Australian Sustainability Institute Pty Ltd	http://www.theasi.com.au/
University	Australian Institute for Sustainable Communities	http://www.canberra.edu.au/research/faculty-research-centres/aisc
University	Institute for Sustainability & Innovation (ISI)	https://www.vu.edu.au/institute-for-sustainability-and-innovation-isi
University	Sydney Environment Institute	http://sydney.edu.au/environment-institute/
University	The Australian Research Institute for Environment and Sustainability	https://aries.mq.edu.au/
Physical; business	Centre for Sustainability Leadership	http://www.csl.org.au/
University	Research enterprise within the Monash Sustainable Development Institute	http://www.behaviourworksaustralia.org/
University	Sustainability Research Centre (SRC)	https://www.usc.edu.au/research-and-innovation/sustainability-and-environment/sustainability-research-centre
University	Barbara Hardy Institute	http://www.unisa.edu.au/Research/Barbara-Hardy-Institute/
University	Griffith Centre for Sustainable Enterprise	https://www.griffith.edu.au/business-government/griffith-business-school/griffith-centre-for-sustainable-enterprise
Physical; Govt.	Sustainability Learning Centre	https://www.education.tas.gov.au/parents-carers/programs-and-initiatives/sustainability-learning-centre/
Physical; community	Randwick Sustainability Hub	http://www.randwick.nsw.gov.au/environment-and-sustainability/get-involved/sustainability-education-hub

Appendix B Institute analysis criteria

Institute Name		
URL		
Type of Institute	Virtual	
	Physical presence	
	University	
	Other	
Country of origin		
Focus of activities	Broad	
	Targeted	
Activities	Research	
	Education	
	Workshops and seminars	
	Community	
	Advocacy	
	References and library	
	Printed material	
	Consulting	
	Other	
Governance structure		
Funding sources	Government	
	NGO	
	Community	
	Philanthropy	
	Other	
Impacts and references	Self-claimed	
	From others	

Appendix C

Data from Assessment of Existing Institutes

Community based/focused institutes:

- Provide online resources for education; factsheets available; reference lists of local sustainable eco-businesses and tradesmen.
- Preservation of a legacy in some instances.
- Assistance provided to communities globally, to address environmental, economic and social challenges to build and shape a better future for all.
- Provide education and training to community members to provide them with the skills and tools required to inspire active citizenship, protect the environment and take on climate change.
- Actively engage members of the local community and work with local non-profit organisations.
- Pioneering approaches to creating socially diverse ecological communities.
- Space for people to explore approaches to creating more equitable society.
- Promoting ways of living that sustain rather than destroy the eco-system within which society is embedded.
- Living and learning centres, with strong focus on individuals and small groups.
- Green houses and buildings on display; observe off grid houses and homes in action.
- Public space and community hub, connecting like-minded individuals and groups.
- Focus on the strength of the individual and small groups – making a difference through living and promoting a sustainable lifestyle.
- Citizen science promoted.
- Community owned and operated centres/groups that engage with the community and respond to local needs and issues.
- Provide a diverse range of community and environmental services, including reference material, referrals, volunteer programs, workshops and seminars, training and field days, meeting space, information, recycling, resources and equipment.
- Focus on driving behaviour change, sustainable living and environmental connection.
- Workshops focus on eco-friendly lifestyle such as clothing as medicine, textile jewellery making, flower workshops for children, bee keeping, permaculture, film nights, campfire nights etc.
- Some offer purpose built educational facilities offering learning programs for students and the community.
- Online presence for programs such as 'Water Warriors', bird counts, catchment care programs, build-your-own self watering, self-contained vegetable garden.
- Indigenous knowledge programs.
- Showcasing sustainable homes and gardens.
- Some offer research opportunities such as utilising the facilities to investigate aspects of renewable building materials, organic gardening methods etc.
- Offer or support local growers and makers markets.
- Display spaces available in some for companies with an eco-friendly and sustainable outlook to promote themselves.
- Funding through some government groups, NGOs, philanthropists, partner organisations.

University based institutes:

- Strong focus on promoting sustainability within the universities. Aim to integrate sustainability into all aspects of campus and curriculum – demonstrating the value of an inclusive approach at individual, institutional and global scales.
- Strong focus on promoting the development of lifetime competencies in sustainability within students.
- Project-based applied research to support communities, governments and businesses to create change towards sustainable futures (evidence for changes to policy, practice and focus).
- Strong, focused research programs - interdisciplinary; living laboratory; sustainable agriculture and food production/systems – strategically linking classroom education with experiential education, research and community outreach.
- Workshops and seminars available for staff and students.
- Focus on publications and showcasing sustainability related stories.
- Hubs for integrating and accelerating sustainability research, education and practice across campuses, with provision for a flow on effect into the community.
- Allows connection of a diverse range of research partners and permits the creation of a package of learning opportunities to prepare students to incorporate their acquired sustainability knowledge into their lives and careers.
- Clients can approach with specific research questions/projects – researchers can create practical and useful outcomes that can be adapted to a range of situations by various clients.
- Award winning RHD programs – grants allow projects to be completed with minimal outlay.
- Governance generally operates within the framework of the host university.
- Opportunities for interns and volunteers.
- Facilitate and enable research linkages, projects and conversations – leading to increased understanding of sustainability and resilience trends, challenges and solutions.
- Research publications readily available to the public and broader research community.
- Funding through grants and governments.
- Income stream from clients.

Other Institutes that are non-Community led or University Based:

- To gather relevant forms of knowledge from science, society and politics in order to progress society towards sustainable development.
- Conducts research with the goal of identifying, advancing and guiding transformation processes towards more sustainable societies.
- Transdisciplinary, transformative and co-creative style of research with partners from diverse backgrounds – academia, political institutions, administrations, civil society, business community – with a key aim of understanding sustainability and generating potential solutions to issues of concern.
- Workshops and seminars held.
- Publications, policy briefs, fact sheets, brochures and annual reports available.
- Hybrids between research institutes and transdisciplinary think tanks.
- Research based, though not affiliated with university.
- Foster sustainability initiatives and innovations towards green economy, sustainable development and living.
- Provide applied research, capacity development and technical support services across sectors; accelerate sustainable practices and values.
- Value based and results driven research projects.
- Aim to deliver viable solutions to integrate social and environmental priorities with economic development.

- Support community improvement that is fair for people and respectful of the environment.
- Work with a diverse range of clients and stakeholders to assess and design systems, technologies and policies for local development, optimise tangible and intangible resources and deliver social innovation.
- Human centred approach.
- Future scenario development, scenario analysis, case studies, seminars, workshops, publications on all topics concerning sustainable development.
- Finding ways of living that sustain rather than destroy the eco-system in which society is embedded.
- International living and learning centres.
- Some focus from infant right through to adult.
- Flagship projects for demonstration of how green technologies can be used appropriately in a variety of environments and socio-economic status.
- Consultancy work.
- Non-profit trusts; independent think tanks.
- Funding through government departments, and collaborations with private investors and other research groups, as well as international academic institutions and multilateral and bilateral organisations.
- Some run as small businesses – offering education programs in sustainable principles for schools, government, businesses, householders and not for profits.
- Home sustainability assessments.
- Clients include local, state and federal government, businesses and key community organisations.
- Offer 'action learning' programs, focus groups, surveys, interviews.
- Training in management tools, processes and systems with regards to sustainability.

Appendix D Ethics Declaration Notice

Background

CSIRO is assisting the Noosa Council with the possibility of setting up a Sustainability Institute in Noosa. In brief, the aim of developing an institute is to bring together researchers and the community to undertake research on a range of issues that can add value to the local Noosa region.

The current activities of this project are predominantly focusing on looking at the different examples of institutes both within Australia and internationally that can be used to develop concepts to put to the Council of what may be a suitable structure for the Noosa Institute. The outcomes of this stage will enable the Council to make a decision on a preferred format that will then go for further development prior to being established.

Participation in this project

We are inviting you to participate in this project by participating in either a one-on-one consultation or as part of group meetings, in order to determine your views on the potential need and structure for a Noosa Sustainability Institute. This information will assist in developing a framework of what such an institute should look like, how it should operate, and what it should aim to achieve. By participating in any of these events, you are giving your consent to participate in the project.

Participation in the project is completely voluntary and you do not have to participate if you do not wish to. You can stop at any point or choose not to answer any question that you are uncomfortable with. You do not have to provide a reason for not participating.

The information that you provide for this research project may be used for the following purposes: to inform the team in developing the options of institute structures and to write project reports and other communication materials.

All information collected through the meetings will be treated confidentially and reports and other syntheses of the information will be done at the aggregate level; that is, information given in interviews or meetings will not be attributed to individuals in any materials produced from these activities. A list of individuals who participate in the project may be included in a part of the final reporting of the project but no names will be linked to any particular information or activity. Please contact a member of the research team if you have any concerns about this.

Information provided by you will only be accessed by the CSIRO research team and used for the purposes outlined above. It will be stored securely by CSIRO and retained for the period of the project after which it will be destroyed.

You are welcome to contact the Project Leader (Dr Simon Toze) undertaking the research project at any point during the project.

We thank you for your agreement to participate in this research.

Contact:

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This study has been cleared in accordance with the ethical review processes of CSIRO, within the guidelines of the National Statement on Ethical Conduct in Human Research. If you have any questions concerning your participation in the study feel free to contact the researchers involved. Alternatively, any concerns or complaints about the study can be raised with CSIRO's Social Science Human Research Ethics Committee by email at csshrec@csiro.au or by contacting the CSIRO Manager of Social Responsibility and Ethics on (07) 3833 5693.

Appendix E Detailed Staff Feedback

Workshop 1: Initial Thoughts and Input

Some of the most notable suggestions and points were that the Institute should:

- Have any research undertaken translate to action or implementation.
- Must be accessible across the life stages of community members (i.e., from pre-school to retirement, thus creating life-long learning opportunities).
- Have a clear purpose and maintain integrity to its purpose including what it's not.
- Seek to understand and identify Noosa challenges and is transformative in how it seeks to address those.
- Have a form and/or function that is determined by what it's seeking to do.
- Have an open structure that has broad accessibility.
- Take a strengths-based approach, leveraging Noosa's talent, networks, community ecosystem.
- Build on genuine partnerships, linking problems through systems approach and applies design thinking.
- Have a scope that is large, a scale that is local yet has an impact that is global.
- Any Institute needs to have a level of autonomy from the Council or any other entity.
- Be set up to avoid being driven by individual agendas.
- What is the distinction from the Noosa Biosphere Reserve Foundation? Could any suggested structure be placed under their banner?
- How would this be funded and resourced?
- Any institute structure should focus on applied research, bridging the gap from research and actual impact on the ground outcomes.
- Another gap is about behavioural change.

Workshop 2: Feedback on preliminary report

- If the project goes to Stage 2 of the formulation of a research Institute, then a topic of work should be on how this is different or complimentary to the NBRF.
- Could we have a closer look at what other key groups are already doing, sets the context more. It would then be a gap analysis which will help identify where we need to go. How this model could deliver of the gap?
- A high level of concern was raised about the potential for duplication and a risk of this has been done before, what's the difference?
- We really need an overarching Sustainability Framework – Targets – then a mechanism to monitor and regularly report – so we know whether our interventions/investments are moving us towards these or not? How we collectively know if we are making a difference or moving towards our targets.
- Do we start with a virtual network that could be resourced to solve problems? How do we leverage the Peregrine Digital Hub and associated network?
- Any model must have community input/engagement.
- The report looks at universities to create a physical presence within Noosa, although with the current higher education funding cuts, is this still realistic in the short term or is this a longer-term possibility?

- The report benefits highlight STEM subjects as enhanced. Why is STEM so heavily focused when there are non-STEM activities that could prove to be really effective in sustainability initiatives.
- The Benefits look to the seed start-up communities. There are start-up incubators in Maroochydore and at USC, has CSIRO reviewed the success of these to provide value to the community?
- Funding needs to be more extensively fleshed out for these models, at current it is hard to understand how that works.
- A review of what current institutes align with each of these models and their success might be useful.
- Have these models been in the context of the legality of the framework and how it might work within a local government?
- Showing the structure in a diagram could assist in seeing the differences and whether it was possible to start small with option 1 and then upscale or have some flexibility as we need to escalate through to option 2 and 3 etc.
- The real gap is the application of the science/research into something that can be tested and applied is really important and it should be something that benefits the community as well as the organisation.
- Any mention of Tourism should focus on sustainable tourism.
- There should be a connection between what is happening at the Peregrine Digital Hub with the institute and how to leverage this.
- Sustainable funding is critical what consideration has been given to sustainable funding.
- There needs to be adequate recognition of previous good work in sustainability programs (Ecobiz, Living Smart Homes, Cities for Climate Protection (CCP) program, Travelsmart, Glossy Sustainability Awards).

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