

Climate Technology Cluster Development & Innovation Deployment



- Operational arm of the UNFCCC Technology Mechanism
- Consortium of organizations from all regions + Network
- Mission to stimulate technology cooperation and enhance the development and deployment of technologies in developing countries
- Technologies include any equipment, technique, knowledge and skill needed for reducing greenhouse gas emissions and for adapting to climate change effects
- Core services include:
 - Technical assistance to developing countries
 - Knowledge platform on climate technologies
 - Support to collaboration and partnerships



Support to remove barriers to technology transfer (financial, technical, institutional)

- ✓ Identification of needs and prioritization of technology, depending on country context
- ✓ Technical recommendation for design and implementation of technology
- ✓ Feasibility analysis of deploying specific technologies
- ✓ Support to scale up use and identify funding for specific technologies
- ✓ Support legal and policy frameworks

■ Country-driven

- Any organization from developing countries can express need
- Request endorsed and submitted by the NDE

■ Fast and easy access to assistance

- User-friendly access: 4-pages submission, in all UN languages
- Appraisal of request within 1-2 weeks and response design within 2-8 weeks

■ CTCN selects and contracts relevant experts

- Assistance provided through Consortium and Network (value up to 250,000 US\$)
- Collaboration with financial organizations to trigger funding





- **Join our network!**
- **Access commercial opportunities:** respond to competitive bidding for delivery of CTCN technical assistance services
- **Create connection:** network with national decision makers and other network members to expand your partnership opportunities and learn about emerging areas of practice
- **Increase visibility:** broaden your organization or company's global reach, including within UNFCCC framework
- **Exchange knowledge:** keep updated on the latest information and share via the CTCN's online technology portal

Examples of collaboration

- Co-host climate related events
- Twinning arrangements with research institutions
- Engage in new technology projects

How to Use GoToWebinar

- **To listen to the webinar** (select audio mode):
 1. *Listen through your computer.* Please select the “mic and speakers” radio button on the right hand audio pane display
 2. *Listen by telephone:* Please select the “telephone” option in the right-hand display, and a phone number and PIN will display.

- **To ask a question**

Select the “questions” pane on your screen and type in your questions, at any time during the presentation

- **If any technical difficulty**

Contact the GoToWebinars Help Desk: 888.259.3826

- **The presentations will be made available after the webinar**

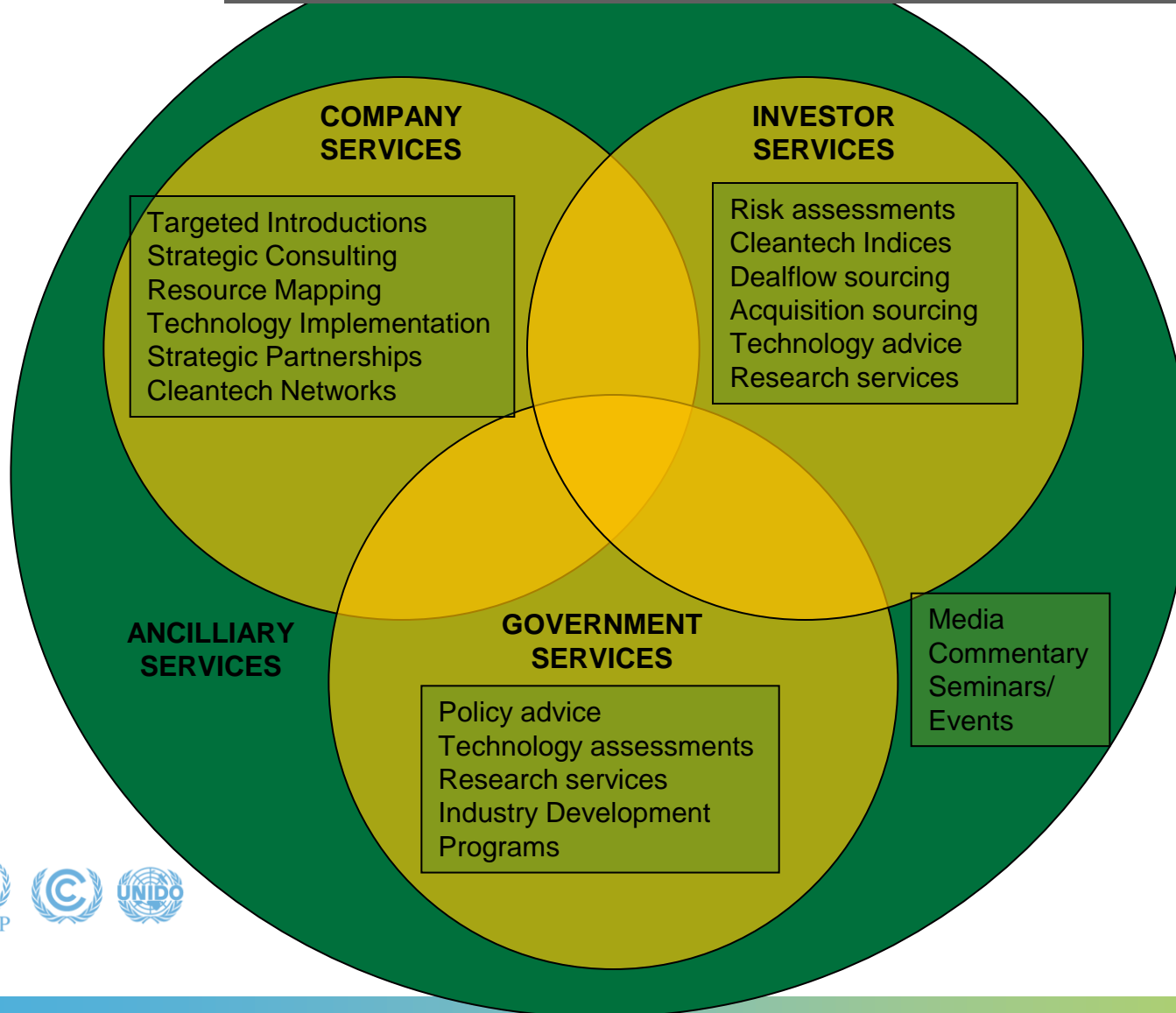
Cluster Development & Innovation Deployment

1. Introduction
2. Four Key Elements in Cluster Development
3. Accessing Global Markets and Solutions
4. Next Steps

1. Introduction
2. Four Key Elements in Cluster Development
3. Accessing Global Markets and Solutions
4. Next Steps

AUSTRALIAN CLEANTECH – SINO CLEANTECH

Connecting People, Finance and Technology throughout Asia



Economically viable products, services and processes that harness renewable materials and energy sources, dramatically reduce the use of natural resources and cut or eliminate emissions and wastes.

OR

Products and Services with Economic and Environmental Benefits

Cleantech Subsectors

SOLAR

Solar thermal, traditional photovoltaics, concentrating photovoltaics, nanotechnologies.

BIOGAS GENERATION

Biomass
Digester gas
Landfill gas

ENERGY EFFICIENCY & BIOMATERIALS

Energy efficiency services and products & Organically based materials and plastics that bio-degrade and/or replace oil based products.

WIND

Onshore, offshore, urban turbines, developers, tower and blade manufacturers, community wind farms.

ENERGY STORAGE FUEL CELLS

Battery technologies for use with renewable technologies, fuel cell technologies and applications.

GREEN BUILDINGS

Green building design, products and construction processes that provide building stock with lower environmental impacts

BIOFUEL

Corn ethanol, sugar ethanol, cellulosic ethanol, biodiesel, algae production, biotech providers.

VEHICLE TECHNOLOGIES

Hybrid, plug-in hybrid, flex fuel & electric vehicles – cars, scooters - recharging infrastructure.

CARBON TRADING

Environmental offsets through tree planting, trading companies.

WAVE TIDAL HYDRO

Surface and submerged wave technologies, tidal, major and mini-hydro, pumped storage schemes.

WATER

Utility management, treatment technologies, desalination, water reuse, sensor technologies, water efficiency.

ENVIRONMENTAL SERVICE PROVIDERS

Environmental engineering, specialist service and equipment providers.

GEOTHERMAL

Hot fractured rock, conventional geothermal, technology and equipment providers.

WASTE MANAGEMENT RECYCLING

Residential and industrial waste collection and disposal, recycling operations, waste to energy projects.

OTHER

Other companies that improve sustainable outcomes through their products – eg green energy retailers.

Australian Cleantech Market

	Listed	Unlisted	TOTAL
Number of Companies	84	1,363	1,447
Market Capitalisation (A\$m)	\$15,291	N/a	N/a
Revenue (A\$m)	\$19,053	\$13,478*	\$32.5 bn
Average Revenue per Company (A\$m)	\$209.5	\$9.9	\$21.4
NPAT (A\$m)	-\$336	N/a	N/a
Employees	23,000*	35,396*	58,396
Average Employees per Company	267	26	40
Capital Transactions (A\$m)	\$3,298m	\$990m	\$4.3 bn
No. of Capital Transactions	66	54	120
Average Capital Transaction (A\$m)	\$50.0	\$18.3	\$35.7

Cluster Development & Innovation Deployment

1. Introduction
- 2. Four Key Elements in Cluster Development**
3. Accessing Global Markets and Solutions
4. Next Steps

Four Key Elements in Cluster Development

1. Build the Ecosystem
2. Strengthen Capabilities
3. Create Local Demand
4. Provide Data

JUNE 11


DATING AGENCY: CYRANO



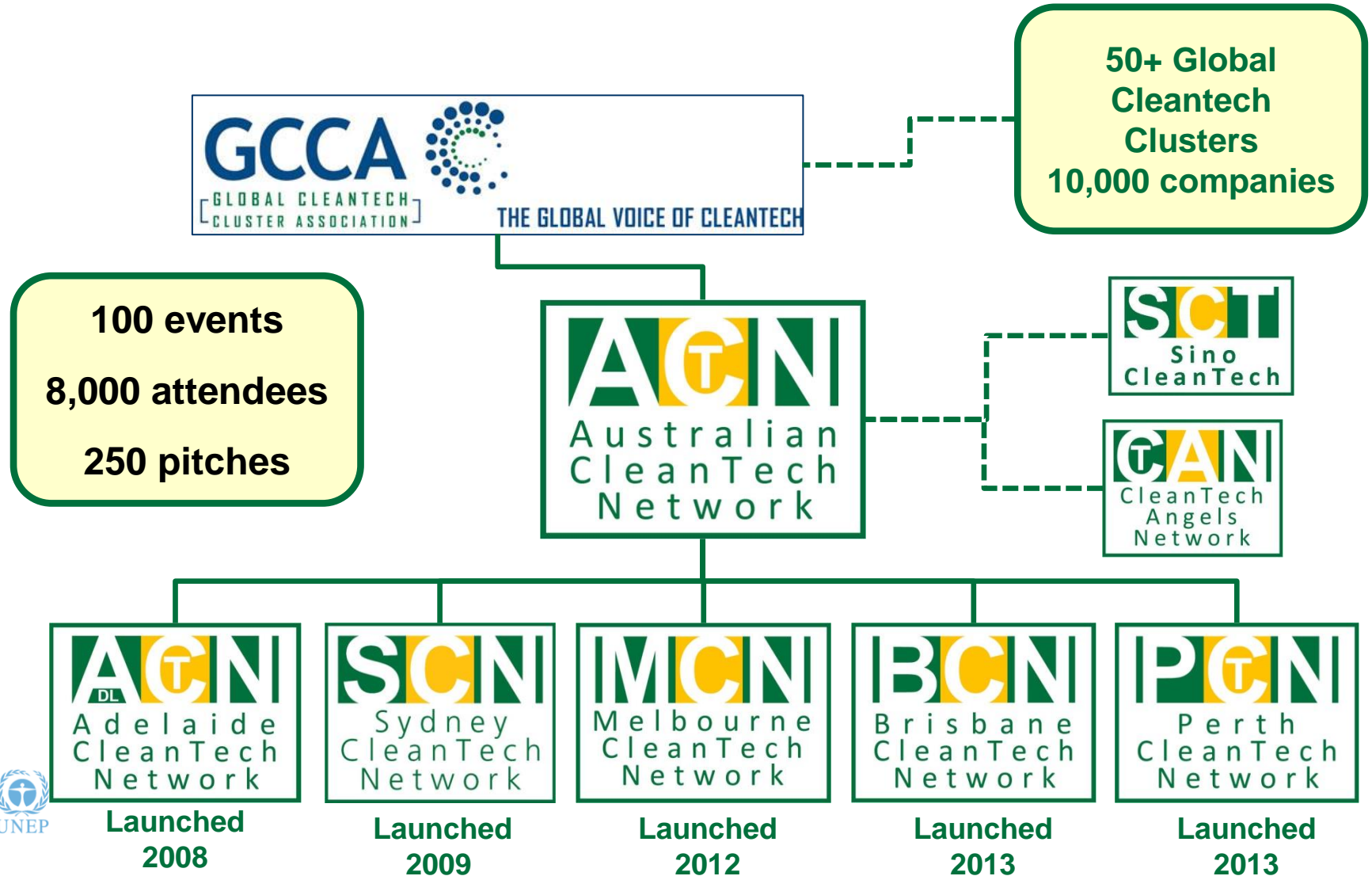
Advisor
Minssi



Leader
Eunhyuk

 DRAMAFEVER

1. Build the Ecosystem





2. Strengthen Capabilities



AUSTRALIAN TECHNOLOGIES COMPETITION

Mentoring and Awards Program that:

- **Builds Capacity, Credibility, Confidence & Resilience**
- **Connects with Investors, Partners & Customers**
- **Profiles Solutions to Industry and Government**
- **Celebrates Success**

6 years

160 companies

In 2016, \$190m invested
and seeking \$80m more

THE AWARDS //





Specialty Coatings

Thin film solar bonded to long span roof sheeting for integrated solution



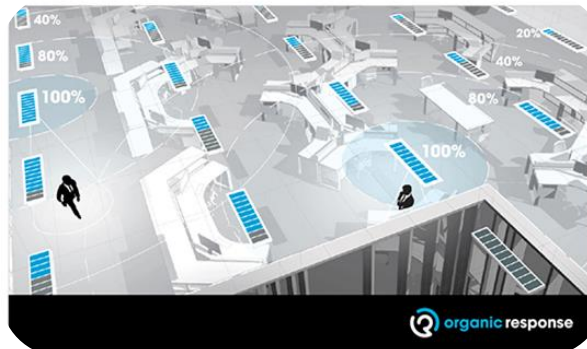
F Cubed

Using solar distillation to produce potable water



RayGen Resources

Clear low emissions glass that generates electricity



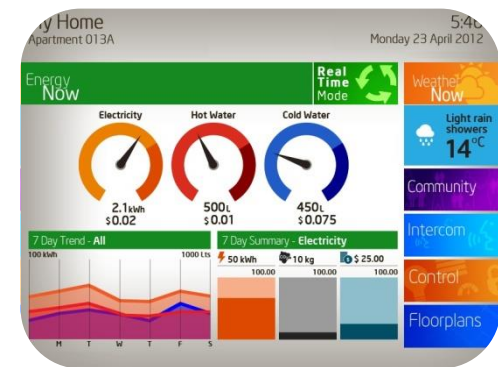
Organic Response

Lighting control system that predicts movement and lights as needed



enLighten Australia

LED Luminaire and control system that can reduce energy consumption by up to 93%



Switch Automation

Building management monitoring and management

RECYCLING TECHNOLOGIES



AUSTRALIAN
TECHNOLOGIES
COMPETITION



MaxSil

Silicon fertiliser
produced from
recycled glass



Polymeric Powders

Tyre recycling
technology



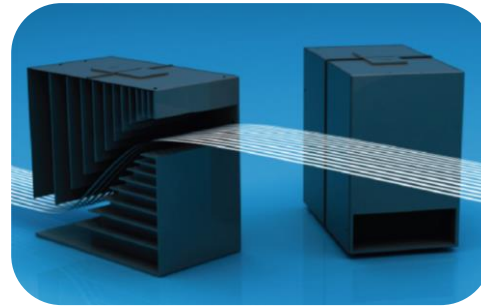
Recycling Solutions

Manual plastic bottle
crusher



SMAC Technologies

Retrofit air-conditioning technology that reduces energy consumption by up to 85%



SilenceAir

Fresh air ventilation and sound proofing in a single unit



AERATRON 503

Aeratron

Aerodynamic ceiling fan that silently provides greater and more even air flow



MicroHeat Technologies

High efficiency point-of-use instantaneous hot water system



CINTEP

Recycling Shower that saves 70% of water & energy

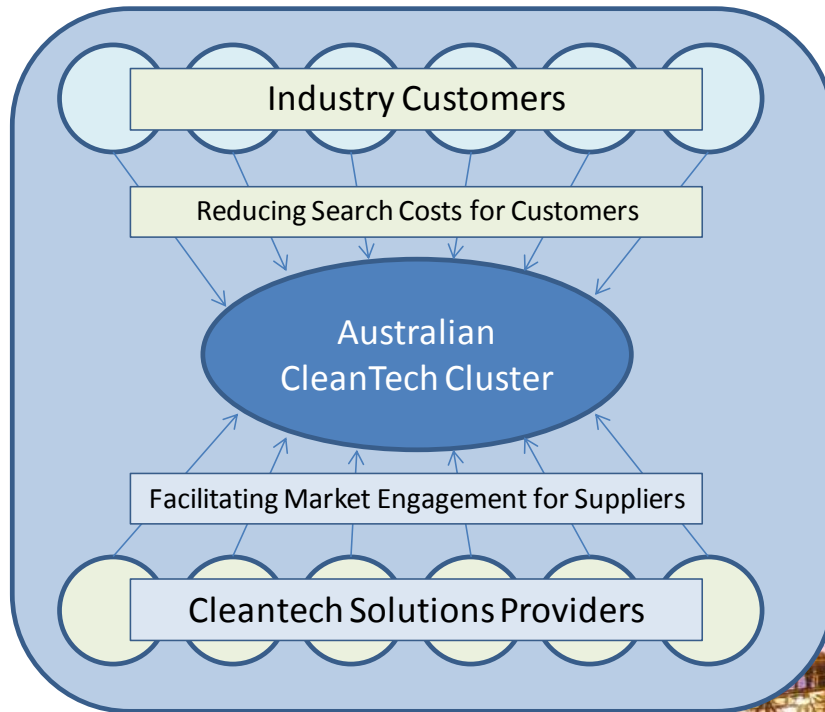


Z-Filter

Z-Filter, separates solids from liquids, by trapping them inside a single, zippered, filter element a 'Sock'.



Australian Cleantech Cluster




- 300 companies
- Targets key industries
- Solves industry challenges
- Ongoing training
- Online directory









4. Provide High Quality Data... ...and Thought Leadership





Australian CleanTech
8 Arunga Close
Goodwood, SA 5034
ABN 66 124 940 491
www.auscleantech.com.au



Report Supporters:

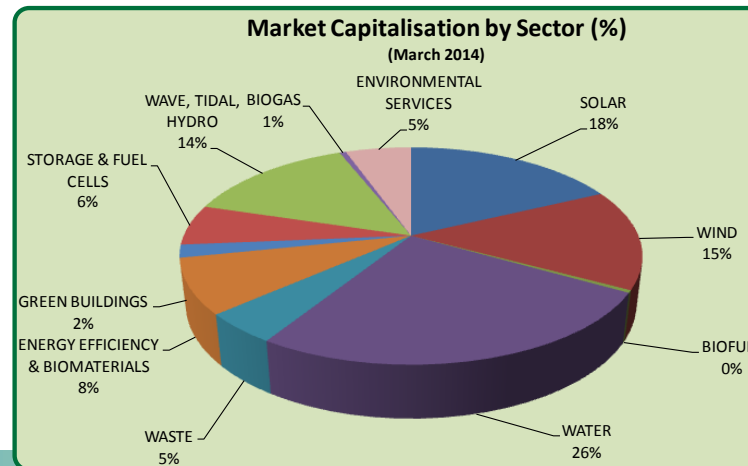
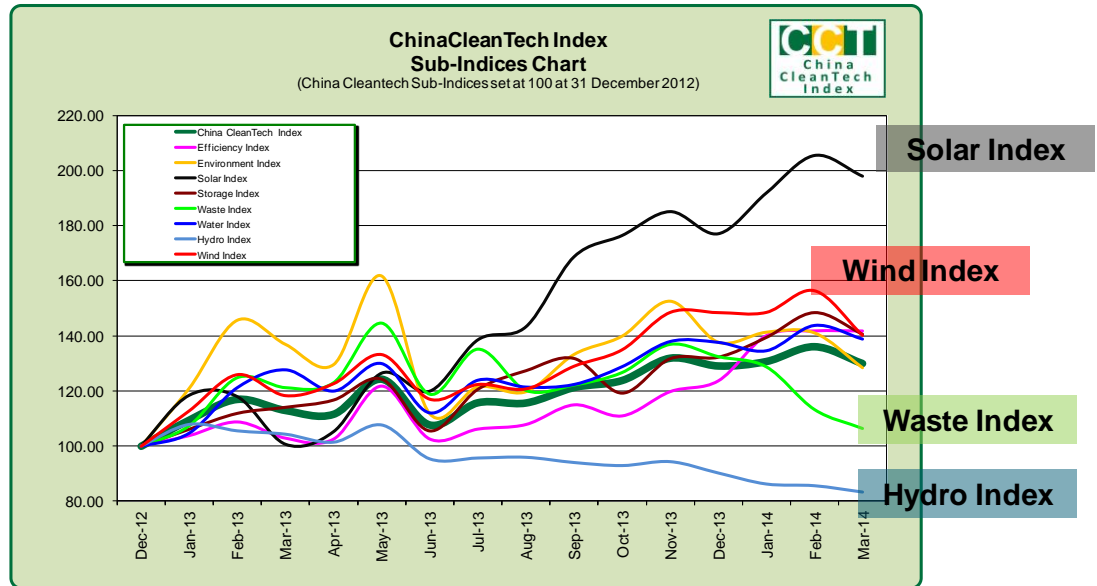


Australasian Cleantech Review, 2014
Asia Drives Investment & Trade
Industry Status & Forecast Trends, March 2014

Facilitating and Delivering Clean Technology Investments





V I S / I O N S 2 1 0 0

Stories from Your Future

JOHN O'BRIEN

80 AUTHORS
80 Stories from *Your Future*

What future do you want?

**Learn why environmental
communications have been futile...&
how to do it better.**

Cluster Development & Innovation Deployment

1. Introduction
2. Four Key Elements in Cluster Development
- 3. Accessing Global Markets and Solutions**
4. Next Steps

1. Build Export Capability
2. Source Global Solutions
3. Cluster Collaboration

1. Build Export Capability

Export Readiness Training for Cluster members

Help them to understand:

- Research
- Product Differentiation
- Target Market Customer Demand
- Market Entry Strategy

Before you get on a plane...

- Do your research – each market is different
- What works here may not there – be adaptable
- Know what you want – Target Market & Value add
- Cultural awareness - Look in front of you
- Be prepared to invest the time in Relationships
- What does success look like for you?
- The importance of The Pitch

- Why will there be a demand for your product in preference to local products?
- What alternatives are currently available in that market?
- What is the USP (Unique Selling Proposition)?
- Is there an understanding of the price that might be paid and the cost to acquire each customer?

- How does the company's solution solve a specific 'pain' being suffered by the customer?
- Have customer types been segmented effectively to understand differing needs and ways to enter the market effectively?
- Has the customer need been tested and feedback included in the end-solution design?
- Is the overall market attractive and justified based on size, growth and market trends?



**BUILT ENVIRONMENT
TECHNOLOGIES**
AWARD



**AUSTRALIAN
TECHNOLOGIES**
COMPETITION

2014 Built Environment Winner...



CINTEP
Showers that do more with less



- Understand the value chain for your product in that market.
- Who are the incumbents and how will they react? Can you partner with one of them?
- What is the regulatory environment and how is it changing?
- What cultural aspects might drive ‘non-rational’ behaviour?



Ready to Export?

- 1. Product Differentiation**
- 2. Target Market Customer Demand**
 - a) Market research
- 3. Business Model**
 - a) Export strategy
 - b) Agents and distributors
- 4. Resourcing for the Long Term**
 - a) Export marketing
 - b) Financing your export business
 - c) Managing sales enquiries
- 5. Risk Management**
 - a) Export pricing
 - b) Visiting the market
 - c) Risk management
 - d) Freight and logistics
 - e) Getting paid
 - f) Legal issues

2. Source Global Solutions

Global partners can strengthen local markets

Provides innovative market entry solutions

Can deliver on economic development outcomes for local governments

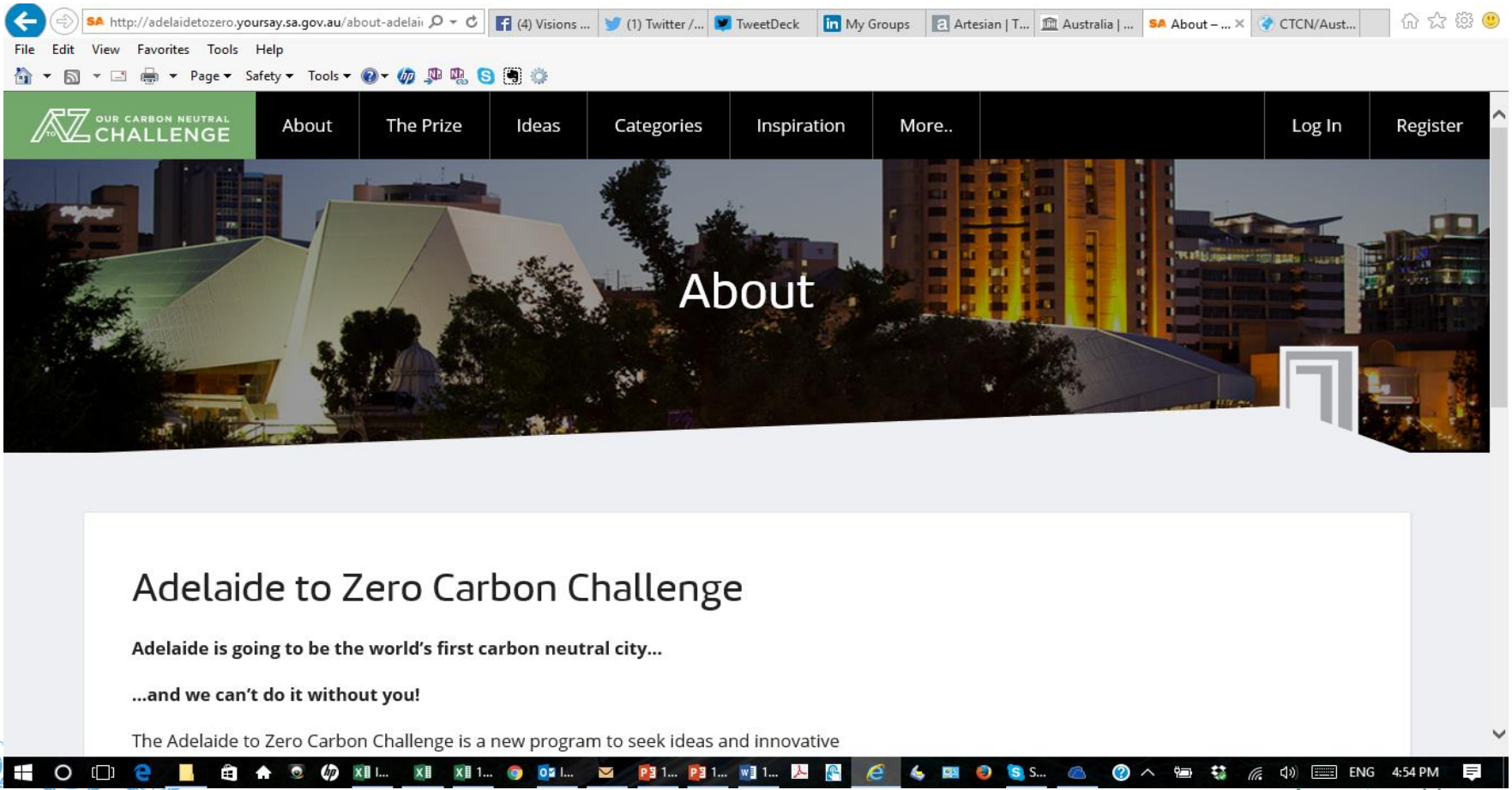
Delivers Technology Transfer Outcomes



Signing \$60m investment and trade deal in Shanghai 2014



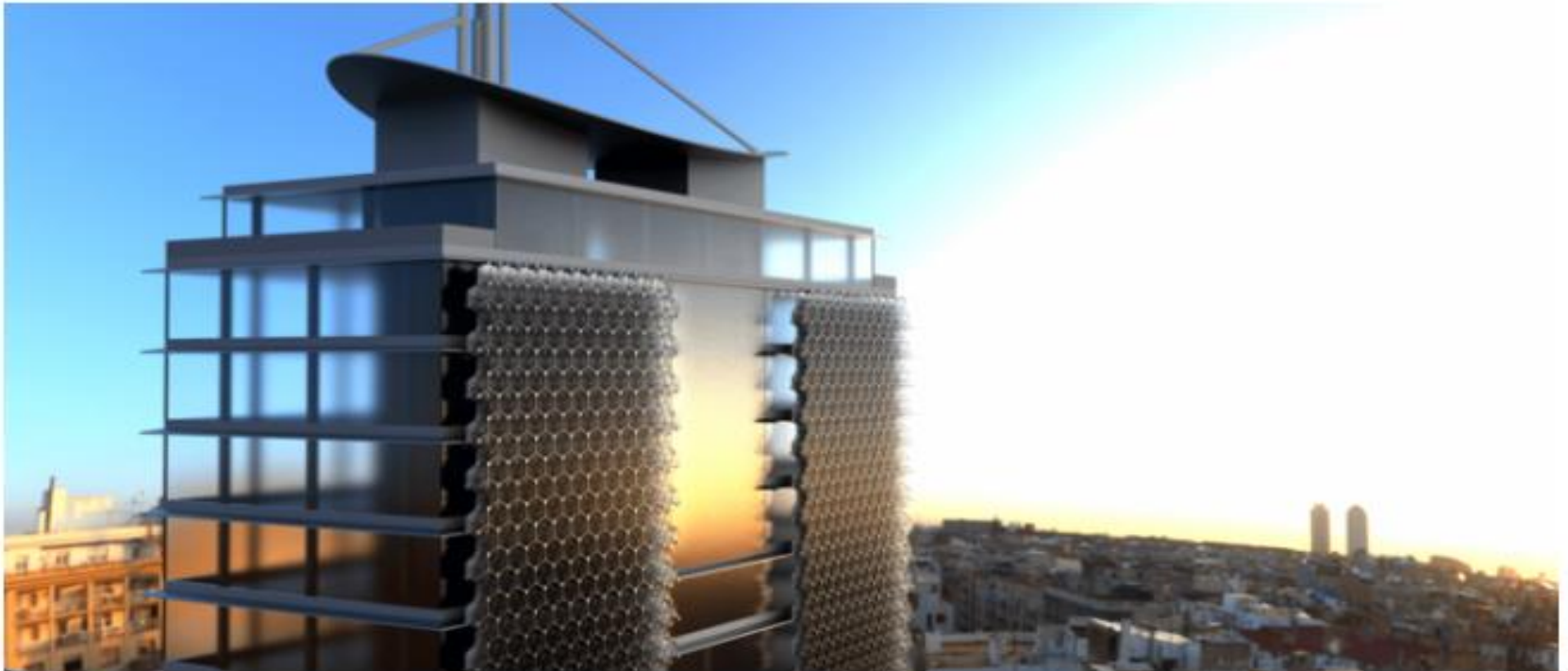
Attracting the best Companies to partner with locals...



The screenshot shows a web browser window displaying the website for the Adelaide to Zero Carbon Challenge. The browser's address bar shows the URL: <http://adelaidetozero.yoursay.sa.gov.au/about-adelai>. The website's navigation menu includes: About, The Prize, Ideas, Categories, Inspiration, More.., Log In, and Register. The main content area features a large image of a modern building at night with the word "About" overlaid. Below the image, the text reads: "Adelaide to Zero Carbon Challenge", "Adelaide is going to be the world's first carbon neutral city...", "...and we can't do it without you!", and "The Adelaide to Zero Carbon Challenge is a new program to seek ideas and innovative". The Windows taskbar at the bottom shows various open applications and the system tray with the date and time: ENG 4:54 PM.

Attracting the best Companies to partner with locals...

BISTEG



BISTEG solar thermoelectric modules shade buildings to maximize energy efficiency while producing solar thermal energy to power them.

Taking the most appropriate technologies and expertise and allowing step change performance in developing countries

- Transport solutions
- Water solutions
- Lighting solutions

UV-EXPRESS FOR OPTIMUM PASSENGER LOADS & RMC



UV-EXPRESS 18 SEATER-LPG, CLOSED WITH AIR-CON



UV-EXPRESS 18 SEATER-LPG, HIGH ROOF, WITH AIR-CON



UV-EXPRESS 12, 14 & 18 SEATER-LPG, OPEN



UV-EXPRESS 8, 10 SEATER-LPG, AIR-CON

TRICYCLES & 3-WHEELERS

LPG TRICYCLES



E-TRIKES – 100% ELECTRIC



REFUELLING INFRASTRUCTURE

C.A.T.S. In-house LPG dispensing equipment

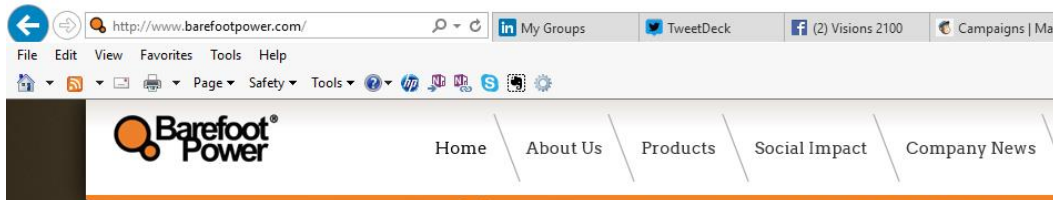


C.A.T.S. skid-mounted mobile & fixed LPG dispensing facilities





Barefoot Power products have provided light to 2 million people in 22 countries.



I Have Power

Diana, an African mother is checking on surroundings before retiring to bed. With Firefly mobile lamp, Diana ensures that no tools or utensils are left outside overnight. Before she acquired the Firefly lamp, she would lose tools to any passer-by as a kerosene lamp could not be used outside due to wind and other elements.

1 2 3 <>



KWFT & BAREFOOT POWER: The Partnership of Solar Expansion

Exciting partnership between Lutheran World Federation and Barefoot Power

Inspector Mwala and Radio Citizen's 'Chief Noise Maker', Francis Luchivya" at Barefoot Power offices

3. Cluster Collaboration

Benefits of clusters multiply with cluster level collaboration

Two calls to connect to any one of 50,000 collaborating companies!

Combine local knowledge with world's best technologies.

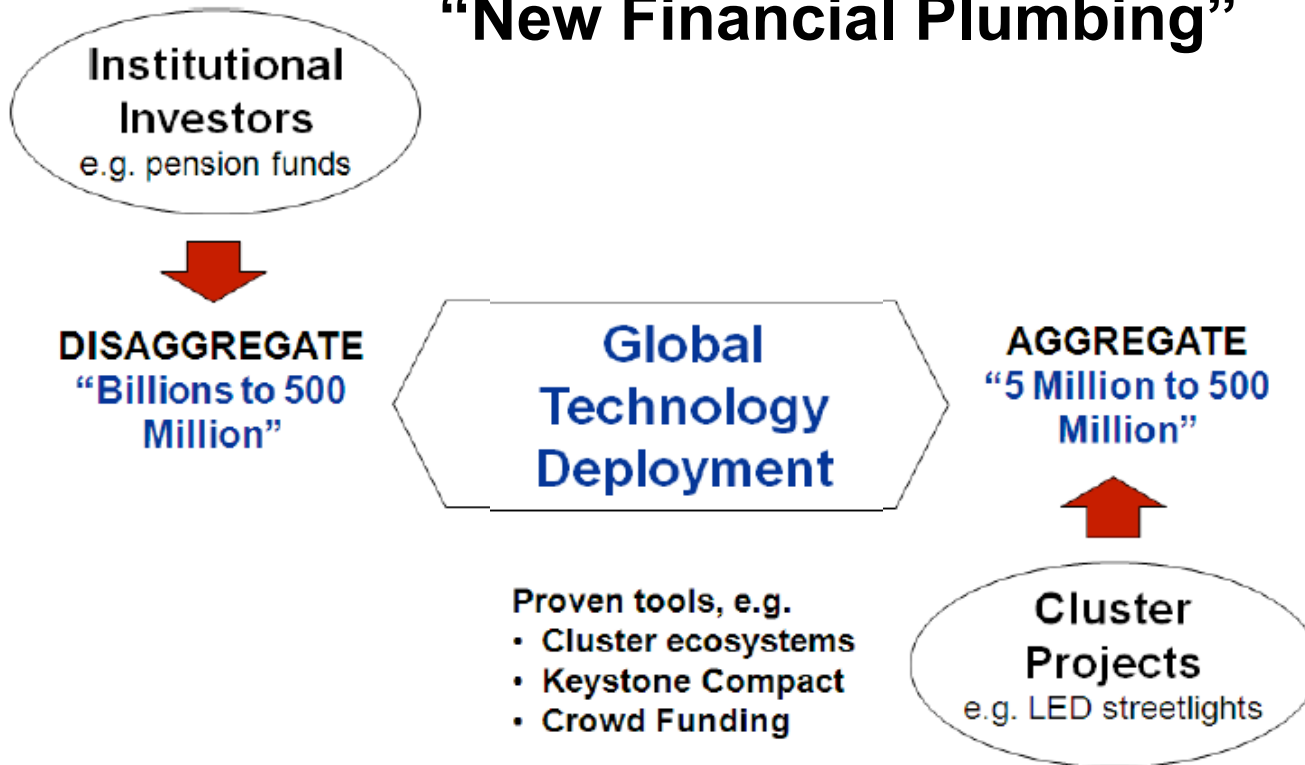
GCCA is a Nonprofit Organization which is a gateway for global collaboration.

50 clusters representing 10,000 cleantech companies

Annual Late Stage Cleantech Awards - \$500m+ global investment secured by Award Winners

Global Technology Deployment Initiative

“New Financial Plumbing”



Global Demonstration Hubs

GCCA and the GTDI will soon announce a global demonstration village in Little Rock, Arkansas.

An opportunity to prove leading global technologies and source global investment.

Cluster Development & Innovation Deployment

1. Introduction
2. Four Key Elements in Cluster Development
3. Accessing Global Markets and Solutions
- 4. Next Steps**

2. Four Key Elements in Cluster Development

Build the Ecosystem

Strengthen Capabilities

Create Local Demand

Provide Data

3. Accessing Global Markets and Solutions

Build Export Capability

Source Global Solutions

Cluster Collaboration

Thank you



CLIMATE TECHNOLOGY CENTRE & NETWORK



Norwegian Ministry
of Foreign Affairs



European
Commission

UDENRIGSMINISTERIET

DANIDA

Canada



METI
Ministry of Economy, Trade and Industry



環境省

Ministry of the Environment



MINISTRY FOR FOREIGN
AFFAIRS OF FINLAND



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Governments of Switzerland
and Germany

www.ctc-n.org

ctcn@unep.org