Australian Government

GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

Report – Enhanced Landscape Wealth and Productivity - GV21 Region Open Innovation Workshop 2015

This project is jointly funded through the Goulburn Broken CMA and Australian Government Funding.

OUR VISION

Healthy, resilient and increasingly productive landscapes supporting vibrant communities.

GV21 – Summary Findings

KEY FINDING

On 10 November 2015 65 stakeholders from the GV21 region attended a one day Open Innovation Workshop.

Aim: Understand & Explore Options for using innovation practices to create new value from industries through collaborations in the region and beyond

Stimulus: The session included information briefings from four diverse thought leaders, highlighting opportunities, practices and case studies of regional innovation practices.

- Professor Ross Garnaut – Economic Imperative of Innovation
- Iffor Ffowcs-Williams – Using Clusters to Create Global Value from Regional Expertise / Conditions
- Professor James Clark – Green Chemistry, The rise of the Bio Waste Movement
- Monica Bradley – Innovation Eco-Systems, PwC Chair in the Digital Economy, QUT

Outcomes:

The participants worked in small groups to identify opportunities for adopting collective innovation.

The groups identified over 100 opportunities which centered around 7 Collective Interest Clusters

1. Food Cluster
2. Water Use Cluster
3. Green Energy Cluster
4. Green Chemistry Cluster
5. Experience cluster

Support & Enabling Activities for a Collective Model

In addition to the potential cluster themes the group identified the enabling tools that would be required to progress the cluster / s development.

- Create a Shared Vision, Brand, WHY for the GV21 Collaboration
- Investment Model – identify how to raise seed investment capital to fund start up, pilots, and new business collective models.
- New Business Models – design models for sustainable collaboration, shared risks, collective impact (social, ecological, economic)
- Comprehensive Mapping – identify assets, transportation networks, talents, digital infrastructure, content, communications channels, stakeholders, competencies, ideas, data, opportunities & problems worth solving
- Linkages – create, manage and engage globally, nationally with relevant universities, government, investors, industry and not for profits

- Innovation mindset – identify ways to develop innovation competencies in the region – how to make innovation visible, real and accessible to children, students, disadvantaged, residents and elderly.
- Identify experiment labs / spaces for innovation

The next steps to refine the regional innovation network and cluster themes include:

A. Identify one pilot / experiment that a committed group of stakeholders can start on NOW with limited or self-funding and using existing resources / relationships to get process started and build momentum

B. Assemble the "coalition of the interested" - stakeholders interested in the regional innovation eco-system in order to provide energy, guide a process to move forward, create governance, explore the WHY (Shared Values) for the regional and identify resources and investment to create the pilot or trial model
C. Invite stakeholders interested in the overall or individual themes to invest time into a working group – create basic communications channels
D. Identify resources to begin mapping/data/analytics gathering (possible university collaborations with industry groups and government)
E. Through further discuss explore the challenge (problems / opportunities) the clusters is would like to do (experiments which will provide evidence to refine the cluster and/or prove its ability to create new value for regional or NOT)
F. Produce draft models for consideration
    a. Governance
    b. Investment
    c. Values (Collective WHY)
    d. How to Act Collectively (Partner / Collective Participants)
    e. Innovation Practices and Competency Capacity Building
G. Assemble interested parties and begin refinement and identify interest/feasibility and program of innovation for the region.

DETAILED GROUP IDEAS

Table 1

1. FOOD Cluster – new specialized products
    a. Test the market for opportunities of using local produce / facilities to develop specialist food streams
    b. Value add using specialist compounds
    c. What is new in food
    d. New Industries – what else can we grow / harvest / grow differently for green chemical production
2. WASTE to Energy (Chemistry)
    a. Methane Capture and use from dairy farms
    b. Investigate scaling bio-fuel systems to run irrigation
    c. Identify best practice for our industries for waste stream mgmt. / reuse
    d. Bring together multiple waste streams to process
3. WATER Centre of Excellence
    a. Find out what people want to learn about water (why do overseas people come here)
    b. Work in the region to deliver more of what is needed in Water COE
    c. Water Irrigation Summer School & Online MOOC
    d. Can we build cluster of global recognition for low energy irrigation
4. Finances
    a. Regional investment bank / Shepparton stock exchange
    b. Tax deductibility for local business to business lending
5. Research
    a. Test mode3ls of engagement Business / Academia / Government
    b. Test a CEO's Network
    c. Can we get the CEO of all the major companies here in Shepparton
    d. Analysis of high tech manufacturing in German regional centres / implications limitations for Shepparton

Table 2 the Co-opetition Collective

1. Identify Clusters
    a. What is the region good at already
    b. How can we develop and attract a mindset of prosperity and abundance
2. Collaboration
    a. What have we got & what do we need
    b. Reaching in and reaching out
3. Resource Mapping
    a. Materials
    b. Waste
    c. People
    d. Transport – movements in and out – what is moving and what is it moving in / on – what could we digitize and or 3d print in Shepparton

e. Infrastructure
f. What activities are already attracting prosperity
g. Are there Clusters we can open up and expand
h. Seek EOI from stakeholders interested in collaborating and willing to determine next steps for clusters

4. Create Regional Shared Vision
    a. Collective Vision / Brand / Values / WHY
    b. What about a "Big Something" same as the Big Pineapple
    c. Collective procurement processes and improve procurement policy to support local industries and seed funding for eventual imp/export opportunities
5. Waste – change attitude towards waste
    a. Audit industry for green waste opportunities including hospitals / pulp etc.
    b. Rethink western compositing and removing food waste streams for bio fuels / chemicals
    c. Grow an agricultural crop as fuel phytocap on landfill
    d. Extract chemicals from waste Cosgrove
6. Education – link back to potential clusters (e.g. health, water agriculture
    a. Introduce kindergarten kids to coding and app development
    b. Fund digital scholarships to capitalize on billions of animation / app industry for regional areas.
7. Social – improve the social commentary
    a. Change language – not waste = resource
8. Communications
    a. Website / u-tubes lips of the processes done by locals industries and run on their websites so kids / people can understand local industry and processes
9. Transport
    a. Airport for Shepparton to export like Wellcamp (QLD) – direct to china / Asia
    b. Support efficient logistics
    c. Could the major food exports invest in Airport
    d. Melb privatization

Table 3 - eternity

1. Bio Refinery
    a. Using byproducts form food processing and out of spec food for chemical additives into food chain
    b. Focus on high value products not just feed stuff
    c. Consider saline water conversion to useable water
    d. Food utilization of waste – e.g. tomato waste and livestock are options
    e. Maize cobs b3eing burnt to clean paddocks
    f. Peach seeds are being burnt – extract chemistry
    g. Quantify volumes of waste production in the region
        i. Difficult to obtain this confidential info
        ii. Focus on opportunities to utilize materials
    h. Identify main waste products and investigate opportunities to convert to higher value
2. Clusters

    a. Bring together knowledge and skills in area to encourage innovation to create higher value
3. Renewable Energy
    a. Bio Mass
    b. Hydro – from GMW channel
4. Research Funding – where will we get investment to research

Table 4 - #1

1. Energy
    a. Could solar/wind be used to run a small town?
    b. What are the economics
    c. How to run base load power
2. Utilization of wood waste - What can we use to replace residential firewood collection?
3. Fruit Waste – all waste over large areas
    a. What are the waste products of all the region
    b. How can they be used
    c. What industries can be created – where is it being done already 30-40k tonnes of fruit tree waste each year
4. Transport
    a. What is the most efficient way to improve our export infrastructure
5. Education / linkages – how do we link with universities
    a. What technologies do we need and where do we find and fund them
6. Water – open centre of excellence for water use technologies attract interest and investment from overseas
7. Waste – investigating the use of waste and by products in soil health and better mgmt. of soils
8. Mapping of land use that makes the best use of land / e.g. areas of intensive production / environmental waste industries / proximity to power/water
9. Recognition and utilisations of build resources e.g. buildings / infrastructure and use cooperatively

Table 6

1. Transition energy
    a. Wind/solar / micro hydro
    b. De-centralise solar pilot
    c. Integrated facilities for solar and manufacturing
    d. Simplify the economics of energy
    e. New funding models for seed/pilot and start up future funds model – how to do raise it
2. Ideas for next step
    a. Create a taskforce
    b. Fund an experiment
    c. Champion to lead
    d. Need a longer term view
    e. Sustainability vs profitability
3. Map major waste streams (what, volume, storage life, expe3nsive to import, local use

4. Identify what else can we make
5. Trial / test and create innovation labs for experiments

Table 7 – the fight to be equal first

1. Strengths
    a. Water, Knowledge, Policy, Industry around water, national recognition, climate is sunny
    b. Climate – sunny
    c. Manufacturing – food dairy
    d. Land – abundant
    e. Networks (research, transport, willingness, small towns, friendly, assessable)
2. Opportunities
    a. Branding
    b. Strategic Alliance / network via bodies like C4GS needs to be coalition of the willing
    c. Local $$ resources (our own innovation, bank and back ourselves, use our own super/investments, disrupt the current financial models
    d. Get the region recognized by values based (great place for youth/diversity, invest in our own, environmentally sustainable, tell our story better so we attract talent, $$, education sectors, works visitors (innovation tourism), political power and influence
    e. Capturing waste (Production opportunities from our intensive primary industries, do an audit, find value, find markets, create business model
    f. Decentralize power (ener3gise our modernized irrigation systems to be energy renewable but not forgetting our efficient gravity systems
    g. Glass house/hydroponics
    h. Offset opportunities to create markets (native vegetation, water quality, carbon credits)

Table X

1. Waste
    a. Bio / gas generation
    b. Water use / reuse improve efficiency
    c. Feedstock agnostic plant
    d. Identify other opportunti3esw from waste water
    e. Challenge – how to move / transport in zero carbon economy
    f. Store power= opportunities for business
    g. Experiment – all users of waste in plastics – land fill rubbish
2. Clusters
    a. Horticulture industry pair up the poultry industry
    b. Ice cream – fruit and dairy
    c. GV Water / Tech and ag cluster (improve on-farm efficiency, sustainability – 40% reduction and water 2 degrees hotter
    d. Experiment – what are the higher value industries that can justify scarce water resources to be used on – water will cost more so needs to directed to higher value

Table 8

1. Student Engagement – social entrepreneurship
2. Identify core competencies
3. District energy solutions (waste/renewables/efficiencies
4. Gravity Fed Irrigation (develop education products and applications / that can be marketed for $$
5. Transport – trial Triple B's
6. Develop Draft Business Case
7. Gather Community Engagement
8. Mandate and regulation for develops for sustainable usage off grid
9. Resources Map – bio mass think there is 175-200k tones

Table 5 – the open minded table

1. Challenges
    a. 33000 tonnes clipping from fruit trees
    b. Need to reduce cost per KW / Hr. for green waste
    c. Need to know chemistry is in waste and what to do with the post bio chemistry extraction (2000 tonnes burn?)
    d. Industry doesn't want to pay to convert to green chemistry or waste
    e. Culture of burning waste
    f. Need to shop Landfill culture
    g. Need localised solutions / build critical mass look at a radius
2. Opportunities
    a. Convert Ardmona site to green bio mass power station
    b. Need to change opinion culture to build share ownership
    c. Education Y7/8 students to this way of innovation / systems thinking NOW
    d. Jobs in Energy / Waste and note dynamic benefits
    e. Extract green chemistry from 20000 tonnes of green waste
    f. Water is currently only used once – how do we use multiple times
    g. Need to manage competing interests
    h. Need education / skills / new mindsets and / processes/tools to innovation
    i.