# Gippsland Bioenergy Project Development Framework: Project Startup Guide

in A3 with printable canvases.

# Gippsland Bioenergy Project Development Framework: Project Startup Guide

Welcome to the Gippsland Bioenergy Project development framework. Within the Project startup guide  we will be exploring the integration of design thinking and practical thinking, to develop a number of canvas documents that will support your project or venture to start capturing information about how it will take shape.

## What is in this guide?

**Design Thinking for Bioenergy – An introduction**
**Canvas 1 Empathize – Understanding the drivers for Bioenergy**
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**Canvas 3 Bioenergy Framework Checklist**
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# Design Thinking for Bioenergy Projects

## EMPATHIZE

Understand what does the biomass / bioenergy situation / problem look like. Why is a project wanted?

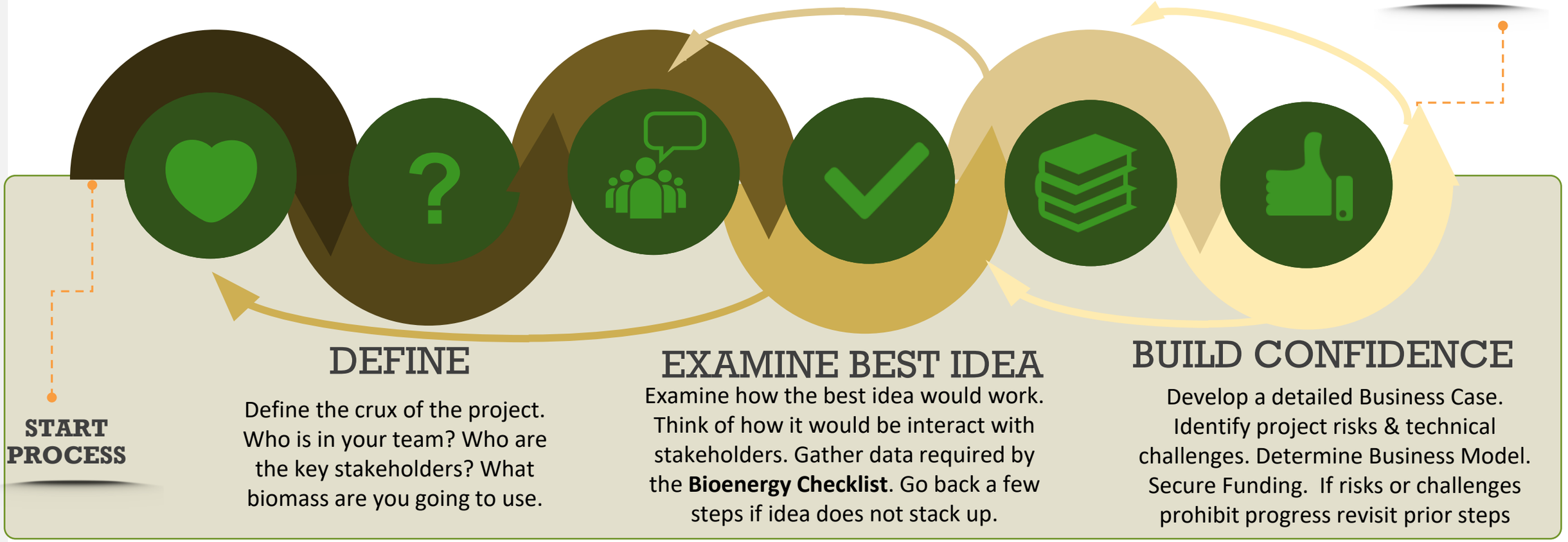
## IDEATE

Create as many possible ideas as you can to help supply diverse options. Be creative. Examine Where and Who will participate. What other benefits are desired? How could it be funded?

## TEST

Do the Bioenergy **Decision Tree Activity**
Locate Case studies. Read technical information. Engage experts to comment.
Gauge Community Support.
Reach out to Sustainability Victoria
Go back to Ideate step if testing has poor outcomes

**ON TO FULL FEASABILITY & DESIGN PHASE**



**START PROCESS**

## DEFINE

Define the crux of the project. Who is in your team? Who are the key stakeholders? What biomass are you going to use.

## EXAMINE BEST IDEA

Examine how the best idea would work. Think of how it would be interact with stakeholders. Gather data required by the **Bioenergy Checklist**. Go back a few steps if idea does not stack up.

## BUILD CONFIDENCE

Develop a detailed Business Case. Identify project risks & technical challenges. Determine Business Model. Secure Funding. If risks or challenges prohibit progress revisit prior steps

The Design Thinking process allows a project group to brainstorm ideas by starting with a problem statement. This problem statement then requires the project to be defined, before ideating many solutions that can be brainstormed to help create a model for your project. Once this idea is examined through the Bioenergy checklist, the project will be required to be tested and iterated before finalising a business model.

# Empathize – Understanding the drivers for Bioenergy

Traditionally in the empathize exercise, we are encouraged to think of the potential customers and their drivers for wanting a product. These are the potential customers that will buy the bioenergy or community members who will invest in a bioenergy plant, or those with biomass which we want to encourage to join.

## Who are we empathizing with?

### WHO ARE THEY

Who is the person?
What situation are they in?
What is their role in the situation?
Do they have a waste, nutrient, or energy problem?

### WHAT DO THEY DO

What does this person do?
What do they need to do differently?
What do they want to achieve long term?
What are key decisions?

### SEE & HEAR

What does this person see?
What do they and hear from their friends.
What doe they see in the media.
What do their colleagues / peers say?

### SAY

What does this person say?
What does their purchasing say?

## HOW DO THEY THNK AND FEEL

### PAIN

What are this person's fears, frustrations and anxieties.

### GAIN

What are this person's hopes, needs, wants and dreams?

# Define & Ideate

Define yourself as a group.  Do not be afraid to re-define later.
Create as many possible ideas as you can to help supply diverse options.

## Define

?

### WHO ARE YOUR TEAM

Who else could you ask?
Who has experience?

### WHO ARE THE KEY STAKEHOLDERS?

### WHERE? WHAT ARE THE LOCAL CIRCUMSTANCES?

### WHAT DO THE TEAM WANT TO DO?

## Ideate

### WHAT BIOMASS CAN YOU USE?

### HOW COULD IT POSSIBLY BE FUNDED?

### WHAT OTHER BENEFITS ARE DESIRED?

W

### OTHER SOLUTIONS

THINK LIKE THERE ARE NO FINANCIAL / PHYSCAL LIMITATIONS

# Bioenergy Framework Checklist

The checklist is intended to act as a prompt for you to gather some essential information about the biomass at your disposal and the potential site for your project.  It is by no means an exhaustive list of required information, but it should help you to start thinking about the most important factors.

| Bioenergy Checklist |
| --- |
| Do you intend to grow an energy crop?  If so which one suits your conditions? |
| Is the main project driver to do with waste, nutrient, water or energy? |
| How much organic material do you have? What is it on a dry weight basis? |
| What are the waste or biomass material characteristics? |
| Is the biomass liquid, wet or dry? What are handling implications of this? |
| What is your moisture content? |
| Is it readily combustible? |
| Is it a continual supply, or seasonal in nature? If seasonal can you store it?  What is the cost associated with this? |
| Do the biomass properties change over the year? |
| Where is your biomass compared to where you want to use it?  What equipment is required to gather and handle it? |
| Are there any potential OH&S issues with the biomass? (for example, sulfide production, flammability, biohazards) |
| Is there potential contamination (metals, trace organics, asbestos, plastics / glass, PFAS)? |
| Are there other sources of biomass in the area which may complement your biomass? |
| What energy demands are there on your site? |
| Is the network in your area capable of receiving generated electricity. |
| Is your site located in a ‘sensitive area’ (environmentally, culturally, socially, historically, proximity wise). |

# Choosing a Business Model

Choosing a Business Structure to engage in a biomass to bioenergy project can be difficult. It largely depends on the groups involved and the complexity of the aims of the project.  It is however important part of building confidence in your idea.

## WHO ARE WE?

### WHO ARE THE KEY PARTNERS / CUSTOMERS

Who are your key partners/ suppliers /customers?
What are the motivations for the partnerships?
Are they capable of supplying capital or only to use your service?

### VALUE PROPOSITION

What core need do you deliver for the customer?
Which community needs are you satisfying?

### WHAT ARE THE KEY ACTIVITIES

What key activities does your value proposition require?
What activities have to be undertaken to build the plant, do you have this expertise?
What activities are important to maintain operation? Do you desire to perform these activities?

### REVENUE & RESOURCES

What are bioenergy customers willing to pay?
Can you charge gate fees to accept waste?
Can those with waste put up capital?
Can grants and public money be used?
Identify other revenue streams (by-products).
Identify major costs

### COST STRUCTURE

What are the major costs to build?
What are the major costs during operations?
Which key resources/ activities are most expensive?
What are the major risks to the cost structure?

## OPTIONS

- INCORPORATE INTO EXISTING COMPANY
- FORM A PARTNERSHIP
- FORM A COMMUNITY COOPERATIVE
- FORM A SOCAL ENTERPRISE
- FORM A NEW COMPANY
- CONTRACT ARRANGMENT WITH OTHER COMPANY(S)

# The Marketing Canvas

The marketing canvas brings an understanding of how you can market and promote your brand, service or product (or attract investors). This canvas will also help you to position the value of the product or service that you are creating.

## TARGET CUSTOMER

What customer groups can be identified. Are there more than one targets (eg those for whom you dispose of waste, and those who buy the energy)

## CUSTOMER NEEDS

What customer needs must be met by the bioenergy plant?

## VALUE VISION

What is the outcome to prove that the customer needs are being met?

## STORY

What is the story of the company. How does the service help to overcome / surpass the current status.

## ESSENTIAL MESSAGES

What are the essential messages that speak to the customers needs.

## STRATEGIC LEVERS

What must be done to attract customers. What levers (policy, price, PR etc) have to be used?

## MARKETING CHANNELS

Where do potential customers congregate physically and virtually. What is the best way to target them?

## WORK & COSTS

What needs to be done to grow the market? How much is it going to cost?

## RESULTS

What needs to be done to grow the market? How much is it going to cost?