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Preliminary Findings and Recommendations on Ethiopian Cookstoves Market



Introduction

- This Market Assessment was conducted by Accenture Development Partnerships (ADP), the not-for-profit arm of the global management consultancy, Accenture, on behalf of the Global Alliance for Clean Cookstoves (the Alliance).
- It is intended to provide a high level snapshot of the sector that can then be used in conjunction with a number of research papers, consumer surveys and other sources (most published on the Alliance's website) to enhance sector market understanding and help the Alliance decide which countries and regions to prioritize.
- It is one of sixteen such assessments completed by the Alliance to:
 - Enhance sector market intelligence and knowledge.; and
 - Contribute to a process leading to the Alliance deciding which regions/countries it will prioritize.
- Full slate of market assessments include studies in: Bangladesh, Brazil, Colombia, East Timor, Ethiopia, Ghana, Indonesia, Kenya, Mexico, Nigeria, Peru, Rwanda, South Africa, Tanzania, Uganda and Vietnam.
- Each assessment has two parts:
 - Sector Mapping – an objective mapping of the sector.
 - Intervention Options – suggestions for removing the many barriers that currently prevent the creation of a thriving market for clean cooking solutions.
- In each Alliance study a combination of ADP and local consultants spent 4-6 weeks in country conducting a combination of primary (in-depth interviews) and secondary research. They used the same Market Assessment 'Toolkit' for each country so that comparisons can be made. The Toolkit is available free of charge to all organizations wishing to use it in other countries.
- **The Alliance wishes to acknowledge the generous support of the following donors for the market assessments: Barr Foundation, Dow Corning Corporation, Shell Corporation, Shell Foundation, and the governments of Canada, Finland, and Spain.**

This market assessment was produced by Accenture Development Partnerships (ADP) on behalf of the Alliance. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the Global Alliance for Clean Cookstoves or its partners. The Alliance does not guarantee the accuracy of the data.

Framework and Approach

This presentation will focus on understanding the current issues, their cause and potential solutions. Analysis and planning will be the next steps and will rely on the input received.

Focus

Next steps

Understanding

Issues

What are the major issues?

Causes

Why do the issues exist?

Solving

Solutions

What can be done to address the issues?

Analysis

What are the details of the prioritised solutions?

Planning

How might solutions be implemented?

Observations and Research

- Interviews
- Focus groups
- Research

Workshop and Breakout Session

- Guidance on desired solutions and implementation approaches

Enabling a Market Based Solution

To reach the 9.4m target in 5 years through a market based solution it is necessary to build and foster all the components required for an efficient and effective market.

- The Ethiopian cookstove market has been able to **disseminate 4.4M stoves over the last 5 years.** ^[1]
- To increase dissemination, a focus is needed on building and creating the components required for a **holistic cookstoves market.**
- The goal should be to develop a market where **customer demand 'pulls' products through the value chain**
- A **joint and coordinated approach** is required from multiple stakeholders to achieve this.

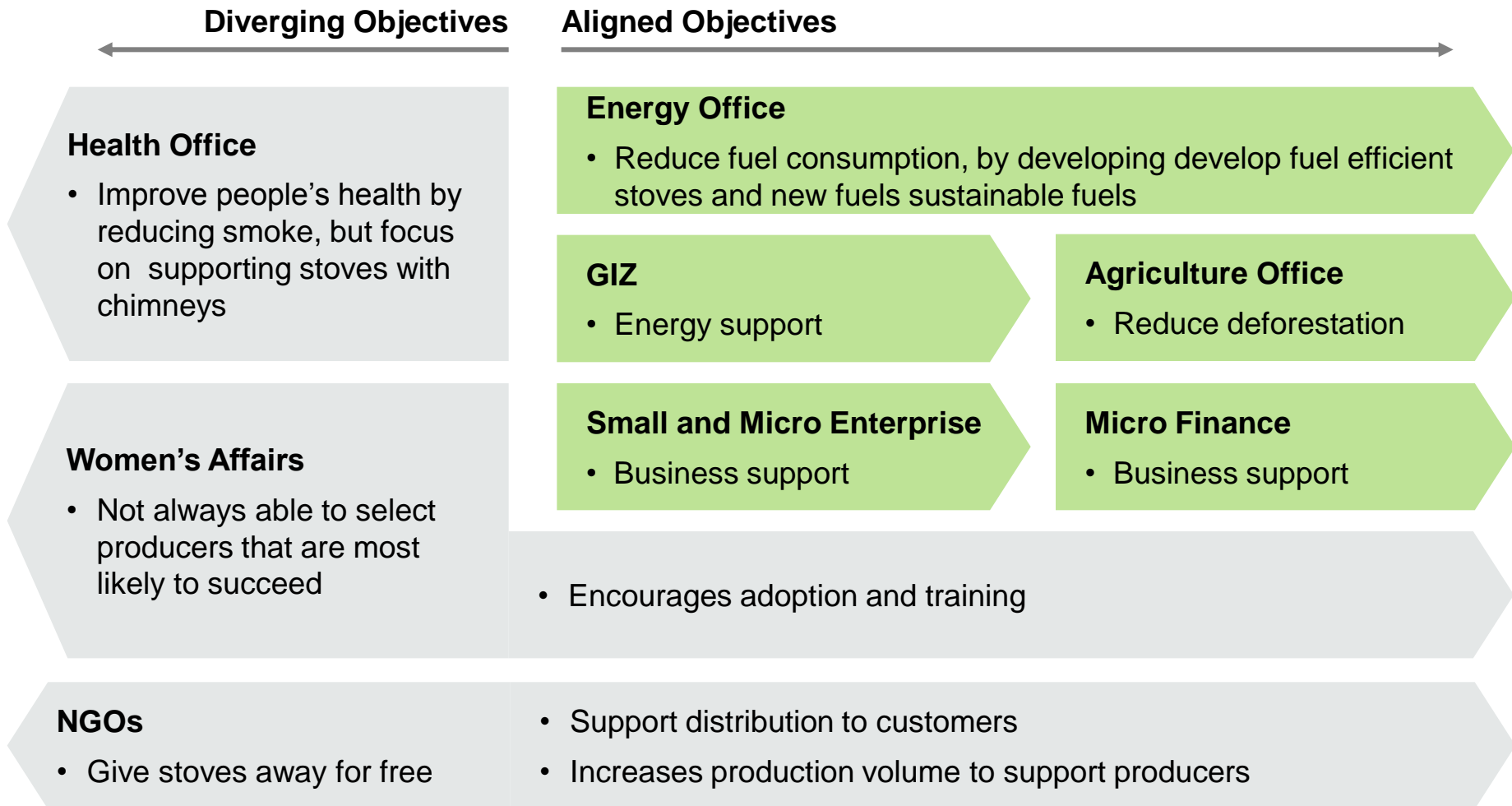
Market Components to be Addressed

1. Objectives
2. Products
3. Customer Demand
4. Information and Innovation
5. Government Intervention
6. End-to-End Supply Chain
7. Financing
8. Program Priorities

[1] RHEEIP report, 2011, (includes closed stoves)

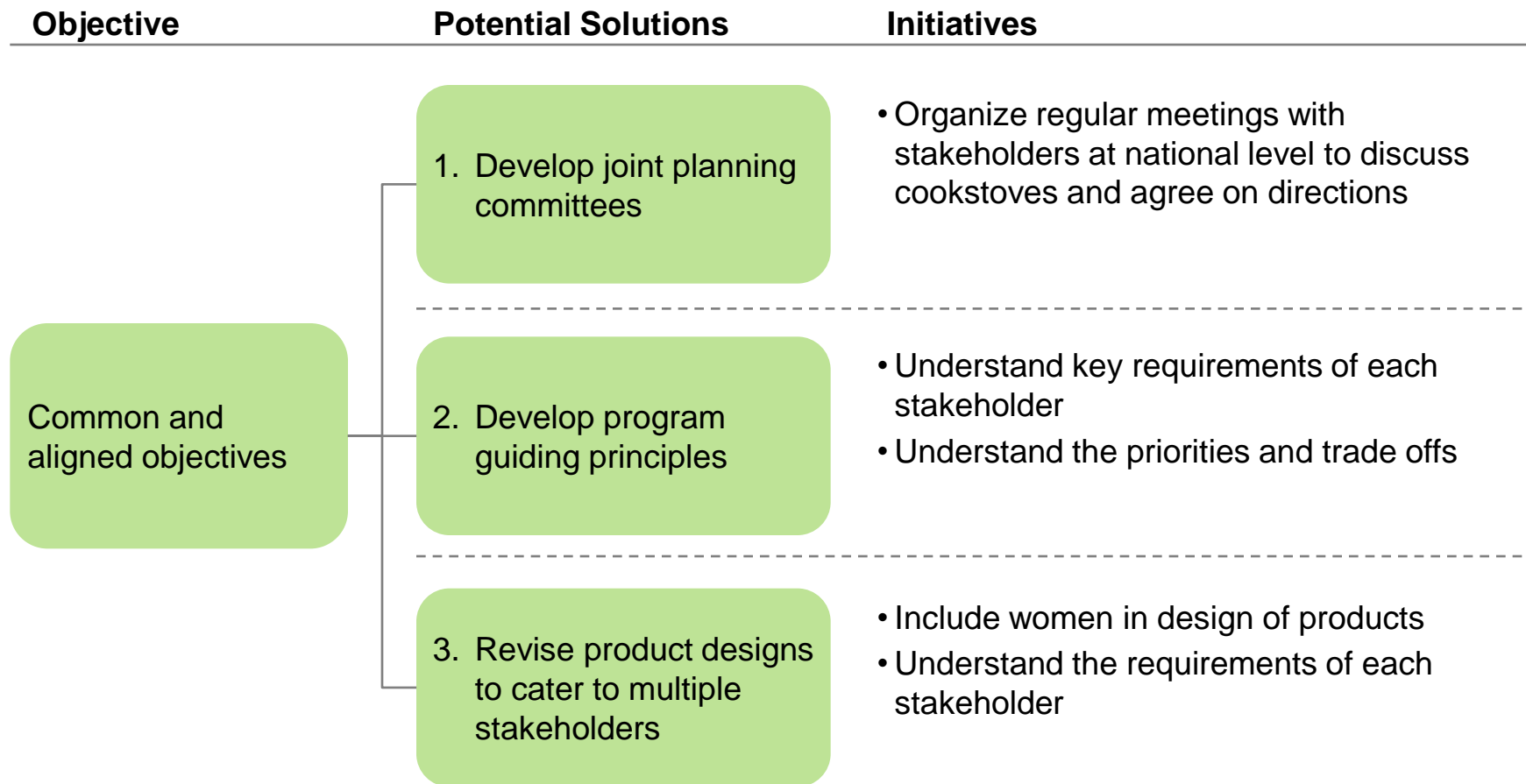
1. Objectives

There are multiple organisations supporting the cookstove market, each with different objectives and approaches that are not always aligned.



1. Objectives

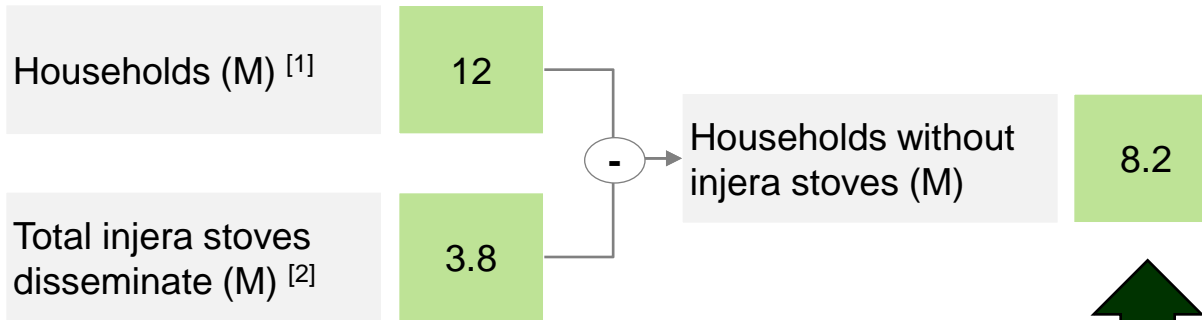
To get support from multiple organisations and effectively use resources, it is necessary to have common and agreed objectives.



2. Products

Preliminary analysis reveals that there are approximately 8.2M households without injera stoves. Hence, focusing on injera stoves alone will not be sufficient to reach the 9.4M target.

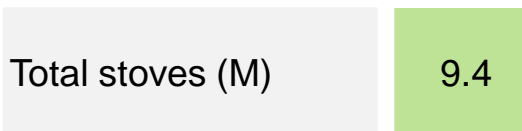
Current State of Injera Stoves



- This number will only reduce when non injera cooking households are considered
- This number does not consider broken or replacement stoves

5 Year GTP Target

- Target was calculated based on the total current capacity/volume



• Focusing on injera stoves alone will not be sufficient to get to the 9.4M target

• Additional data would be required to determine the exact market size and penetration of injera stoves

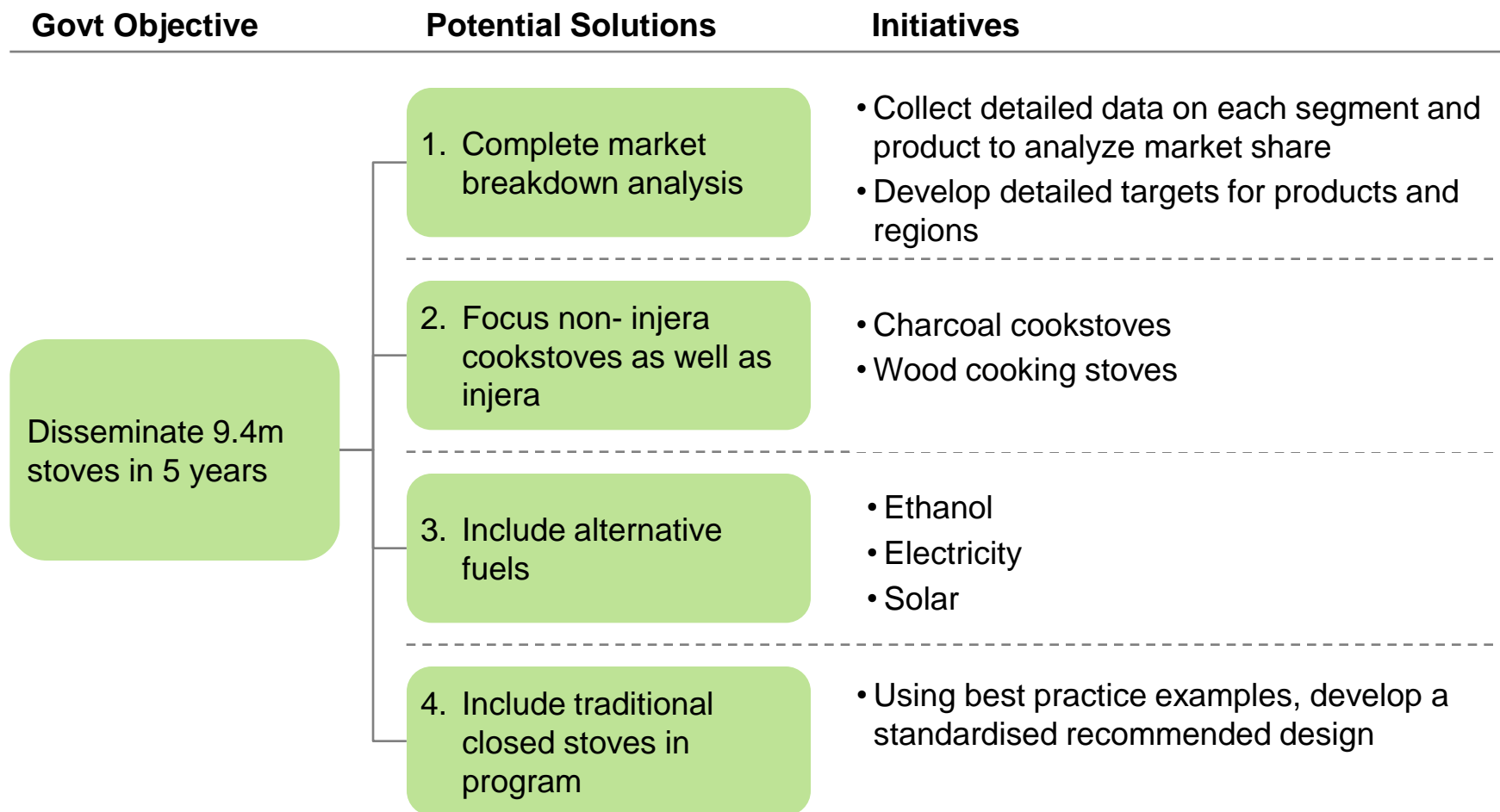
[1] World Bank, 2010, with total population = 83M and average household size =7

[2] RHEEIP report, 2011, 1.7M Mirt, 0.2M Gonzye, 1.9M Closed stove

[3] RHEEIP report, 2011, 181k Opesi, 11k Daily cooker, 57k Laketch, 343k, Concrete, 64k Tikiki

2. Products

A detailed understanding of the market share and product penetration is required. However, ultimately there needs to be a focus on a variety of stoves and fuels.



3. Customer Demand

There is mixed demand for clean cookstoves as some customers either; do not want the them, cannot access them, or cannot afford them.

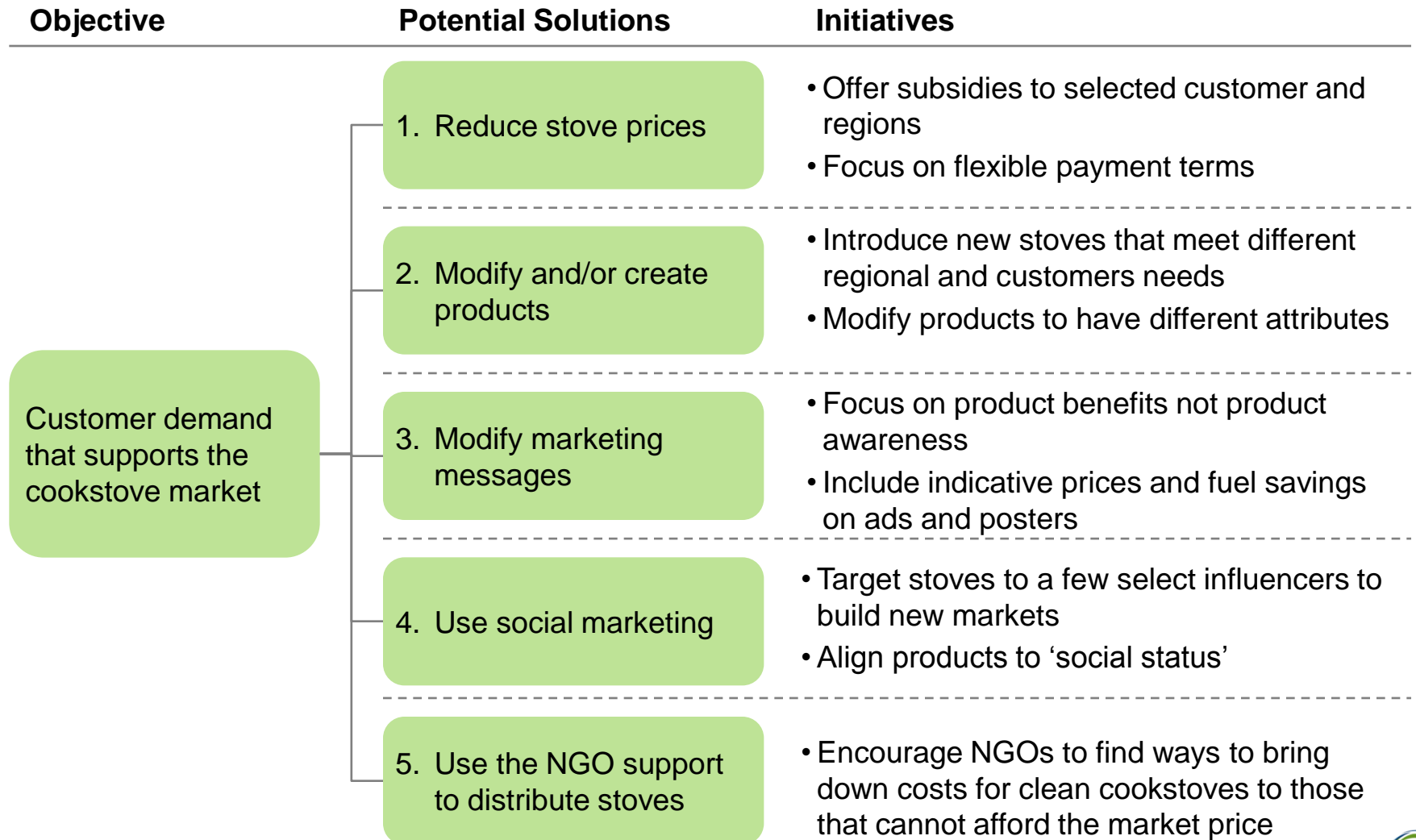
	Issues	Observations	Causes
<p>Value Do customers want it?</p>	<ul style="list-style-type: none"> • Products do not meet customer needs • Customers do not understand the product's benefits 	<ul style="list-style-type: none"> • Products can save more than 50% in fuel costs • Stove pay back period is only a few months • 71% of people collect wood 	<ul style="list-style-type: none"> • Product gaps • Poor marketing • Access to free fuel
<p>Price Can customers afford it?</p>	<ul style="list-style-type: none"> • Customers state that stoves are too expensive • However, many have purchased stoves at current prices 	<ul style="list-style-type: none"> • Price range from 60 to 170 Birr • Customer suggest prices should be between 50 to 100 Birr • 60% of households earn more than 6,000 Birr pa 	<ul style="list-style-type: none"> • High prices – raw materials and small scale • Poor value proposition • Lack of flexible payment terms
<p>Access Can customers get it?</p>	<ul style="list-style-type: none"> • Many customers do not have access to clean cookstoves and fuels 	<ul style="list-style-type: none"> • Focus on small scale, decentralised producers • Improved charcoal stoves are not widely distributed 	<ul style="list-style-type: none"> • Priority on producers • Lack of retailers and distributors • Lack of infrastructure

Source: Based on qualitative analysis from interviews with customers, producers and institutions

[1] CSA, Ethiopia 2005, [2] Mirt Assessment, GIZ, 2008

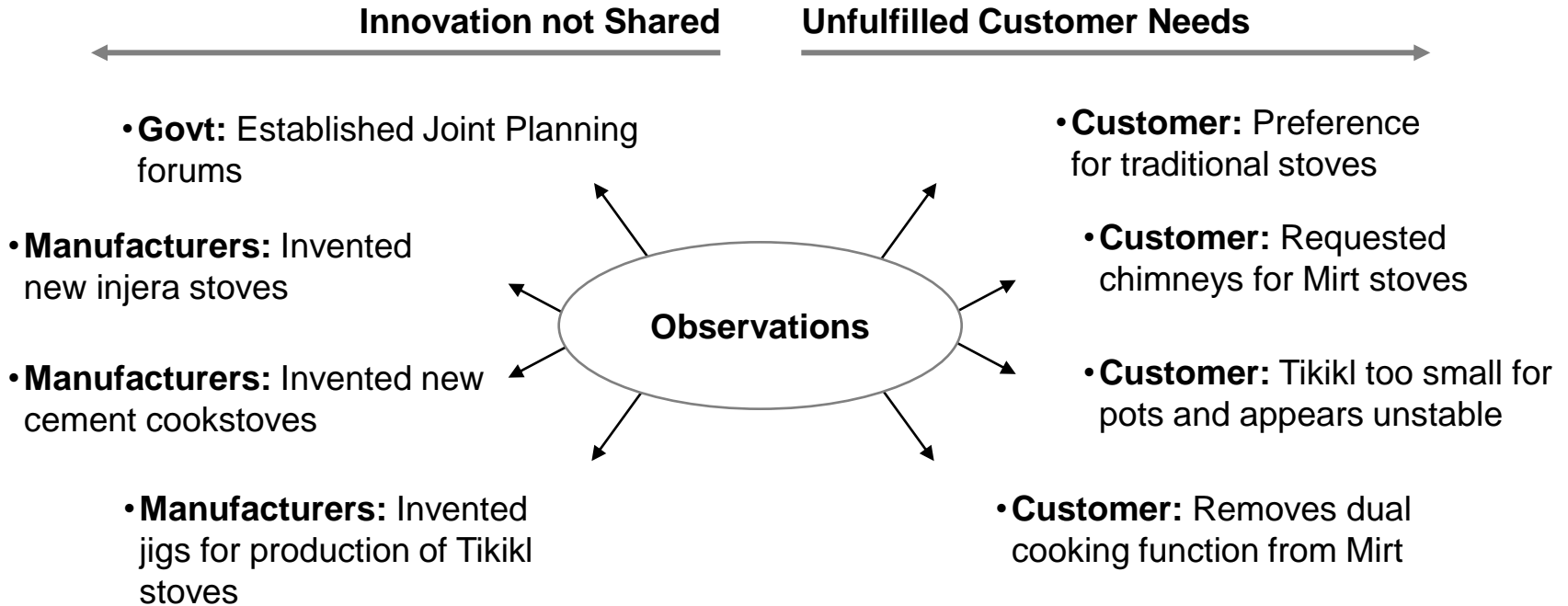
3. Customer Demand

Increasing demand should focus on improving the customer value proposition and communicating it more effectively.



4. Information and Innovation

Enhanced sharing of information between different organisations and different layers of government, would promote innovation and help better meet customer needs.



4. Information and Innovation

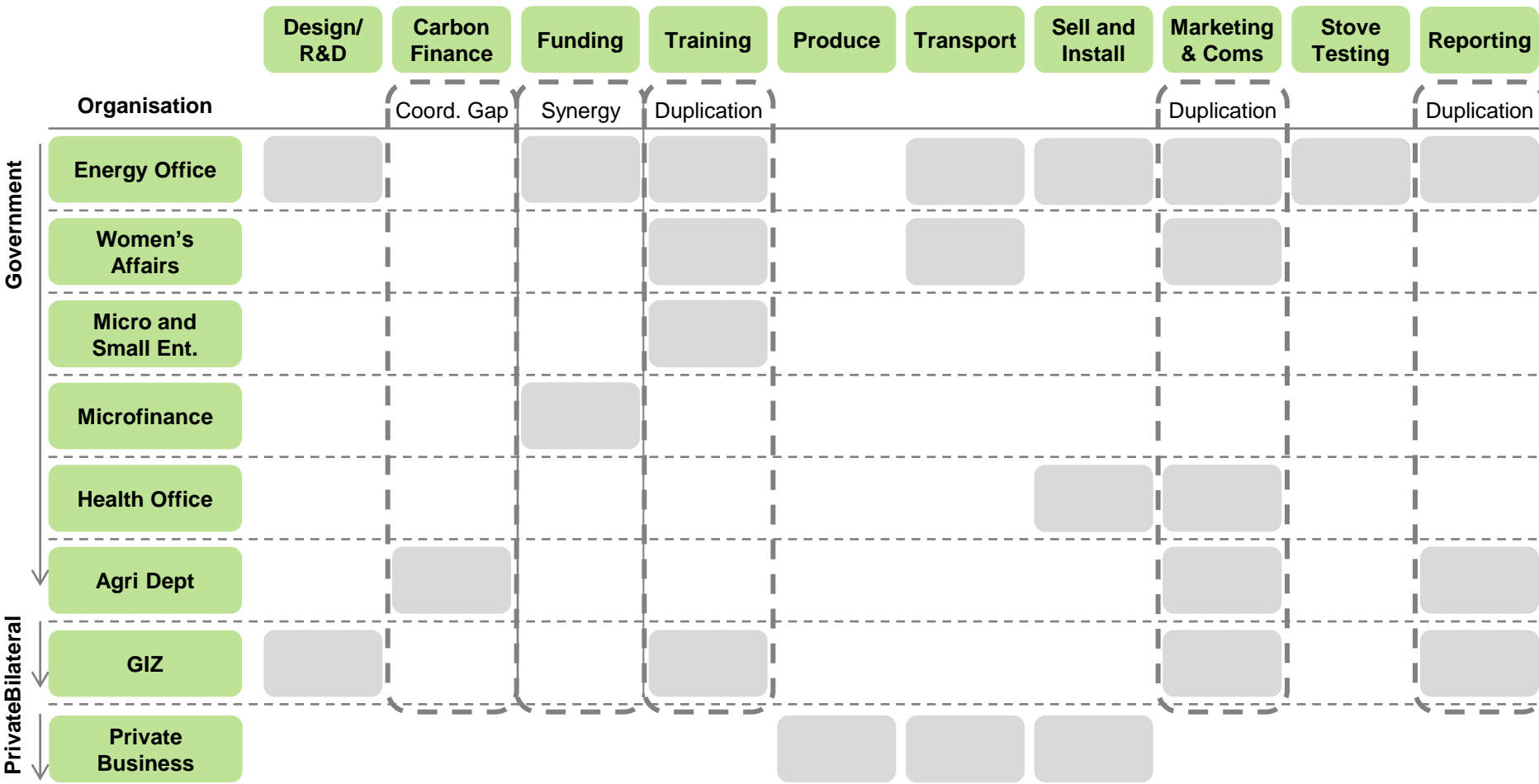
Improved frameworks, tools and processes can capture information from customers and producers and allow for more informed decisions on the direction of the market.

Objective	Potential Solutions	Illustrative Interventions
<p>Create feedback loops to generate new ideas and improvements</p>	<p>1. Implement a product management framework</p>	<ul style="list-style-type: none"> • Products managers • R&D capability • Pilot programs for new markets and/or products
	<p>2. Introduce a rewards and recognition program</p>	<ul style="list-style-type: none"> • Financial incentives for new concepts • Preferred Govt support for innovative producers
	<p>3. Introduce product and producer standards</p>	<ul style="list-style-type: none"> • Marketing support for those producers that meet standards • Annual quality checks
	<p>4. Introduce tools to support information flow</p>	<ul style="list-style-type: none"> • Include observations and ideas in reports • Introduce web-based reporting tool • Mobile phone reporting

5. Government Intervention

Overlap among many of the same functional activities among government organizations can result in duplicated efforts and coordination gaps.

- Cookstoves Market Activities -



Source: Based on qualitative analysis from interviews with producers

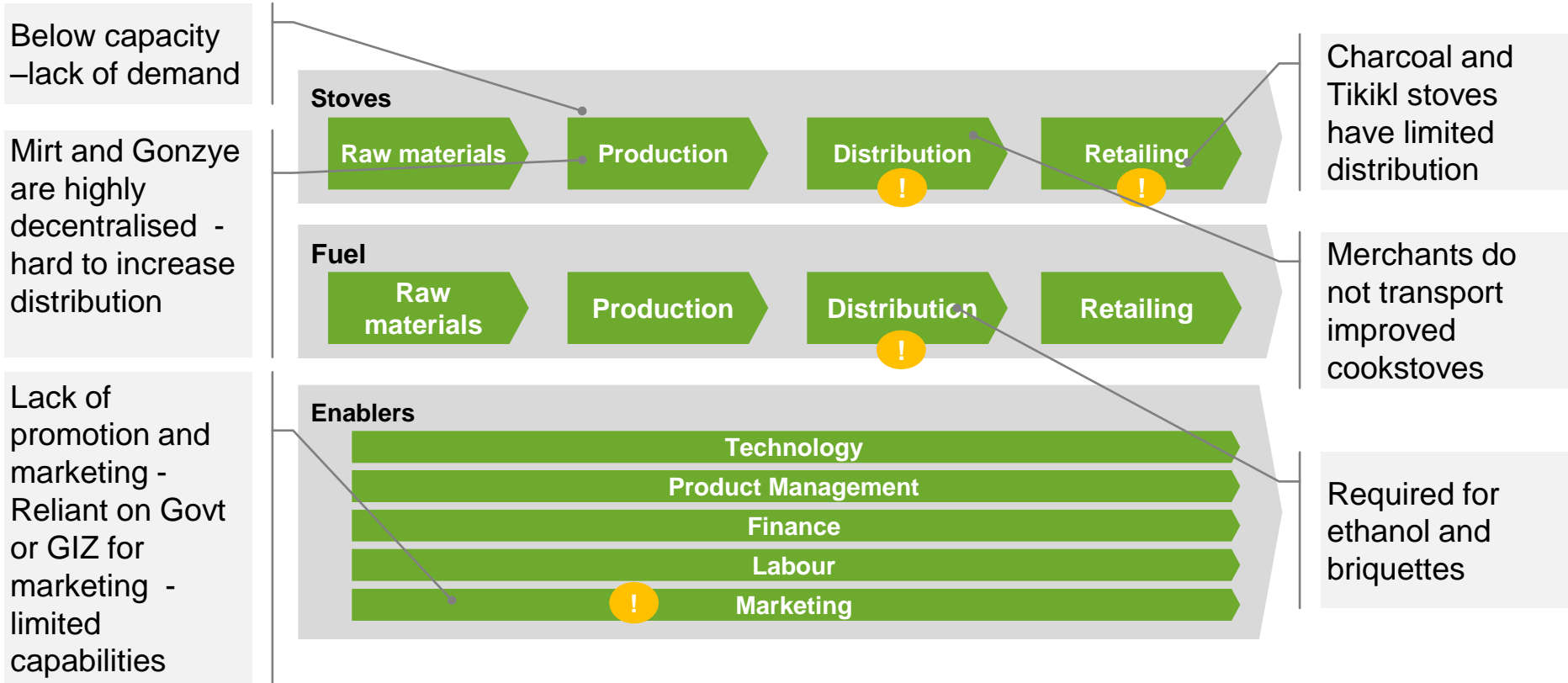
5. Government Intervention

There needs to be increased coordination between Organisations, and more consideration of needs of stove businesses.



6. End-to-End Supply Chain

There has been a heavy emphasis on developing manufacturing capacity, but limited focus on the end-to-end supply chain, namely sales, marketing and distribution and retailing capabilities.



Issue

- A market based solution requires each stage of the supply chain to function most effectively

Cause

- Emphasis on production and technical aspects
- Limited distribution infrastructure

6. End-to-End Supply Chain

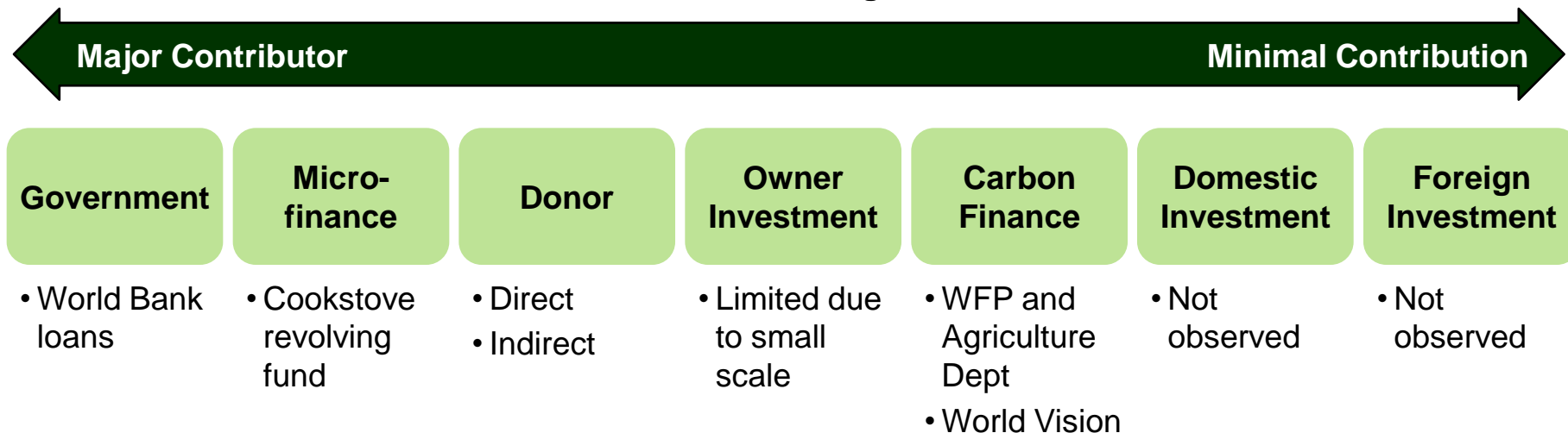
To build a self sufficient market there needs to be support across all areas of the supply chain.

Objective	Potential Solutions	Initiatives
<p>A self sufficient supply chain</p>	<p>1. Less focus on training new producers and more on support for existing producers</p>	<ul style="list-style-type: none"> • Limit the number of new Mirt producers until demand increases • Provide more business training to producers
	<p>2. Leverage existing distribution networks</p>	<ul style="list-style-type: none"> • Energy Experts to collaborate with Development and Health Ext Workers to distribute stoves
	<p>3. Provide additional support to distributors and retailers</p>	<ul style="list-style-type: none"> • Encourage Mirt producers to stock and sell other stove models • Offer commissions to customers that sell stoves to neighbors
	<p>4. Increase marketing and promotions</p>	<ul style="list-style-type: none"> • Increase product demonstrations • Give a few free or subsidised products to new communities to increase 'word of mouth'
	<p>5. Co-develop stove and fuel supply chains</p>	<ul style="list-style-type: none"> • Targeted support for advanced and clean fuels

7. Financing

The expansion of the current market has relied on Government and Donor financing, with some carbon financing being explored.

- Observed Funding Sources -



Issue

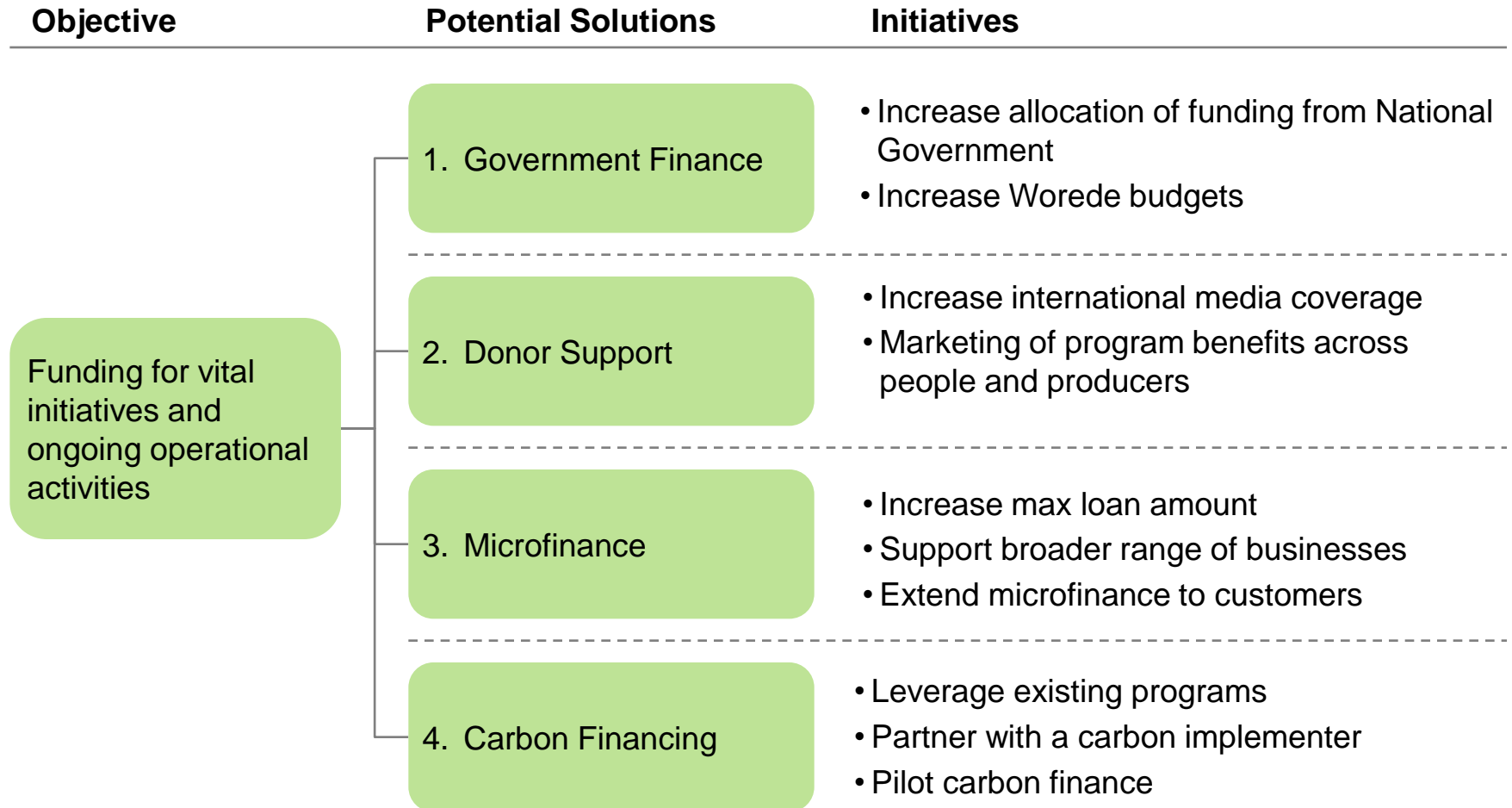
- Lack of budget and resources at Worede level
- Additional finance will need to be found to implement initiatives

Cause

- Small scale producers
- Shortage of funds

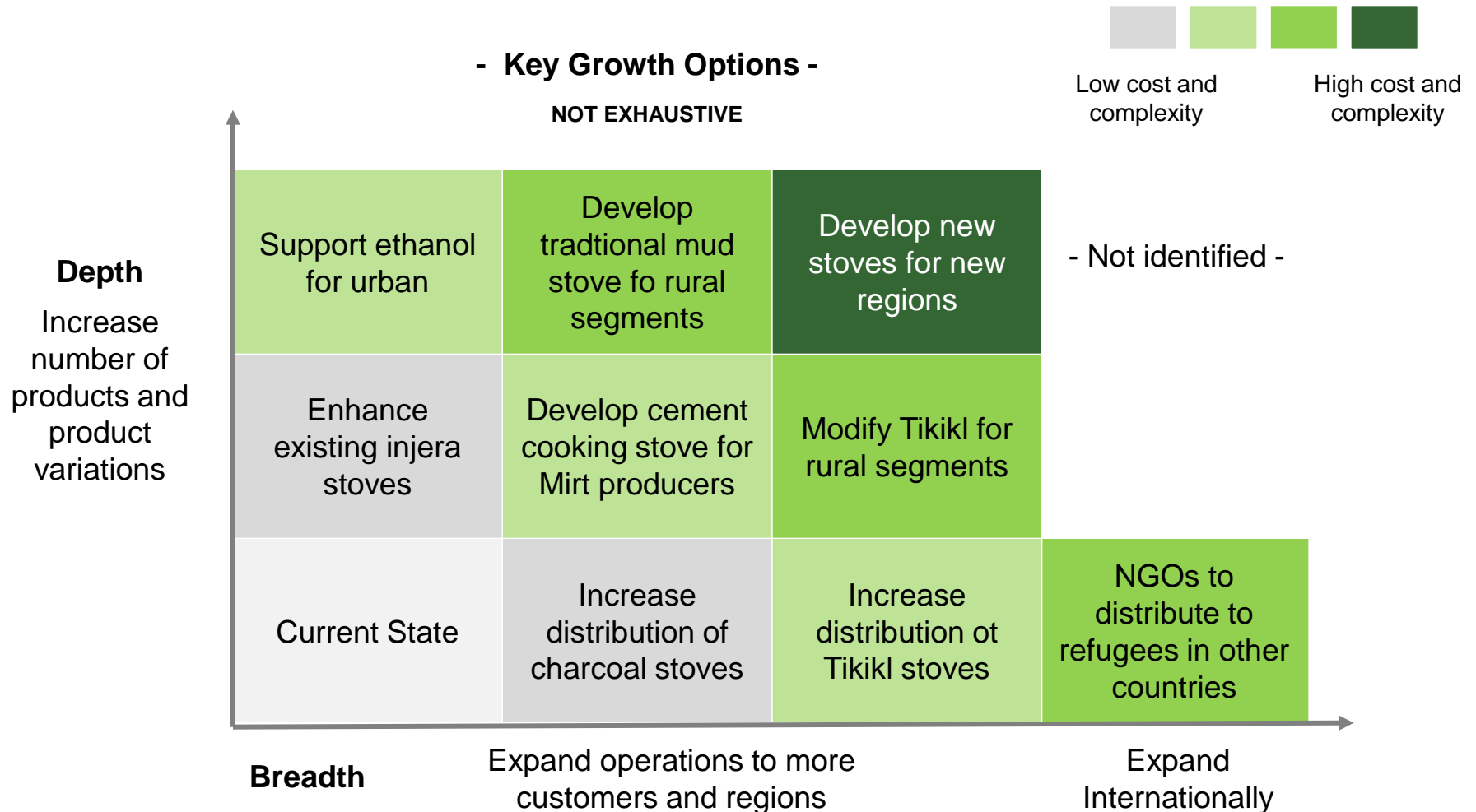
7. Financing

Additional funds could come from increased donor support, international investment, or carbon finance. However, there will likely need to be multiple funding sources for the program.



8. Program Priorities

The Ethiopian cookstove market can grow in a variety of ways, through new regions, new customers, new products, and new fuels. Hence, it is critical that priorities are understood.



8. Program Priorities

To achieve the 9.4M target it is important that strategic priorities are set and pilot programs are used to explore different options before mass implementation.



- Recommendations -

- Encourage cooperation and collaboration between participants
- Understand guiding principles and priorities
- Support innovation in products, distribution channels and business models
- Focus on understanding the customer and use this information to guide product and marketing strategies
- Build capabilities and capacity across all stage of the supply chain
- Enhance business skills and knowledge

GTP Quotes

The GTP direction should drive the approach for cookstoves

Emphasis on road infrastructure

- Proportion of areas further from 5km of all weather roads from 64% to 29%
- Road density from 0.64 to 1.54 km/1000 people



- Centralized production and distribution channels is possible

Emphasis on electricity

- Electricity coverage from 41 to 75%
- Power generating capacity from 2,000 to 8,000 mw



- Greater potential for electric stoves

Key Market Statistics

Basic calculations reveal the following about the Ethiopian Cookstove Market

Current production

- 2.6M stove over 5 years ^[1]
- 1.9M stoves last year
- 25,000 people trained ^[1]



- Ave 21 stoves per person per year
- 76 stoves per person last year

Current sales

- 30 – 300 stove per month per producer ^[1]
- 600 Mirt producers ^[2]
- 45 Tikiki producers ^[2]



- Max production capacity of 11.6M stoves over 5 years
- Excludes other products

Current market size

- 12M households ^[3]
- 3.8M injera stoves sold ^[1]



- 8.2M household without injera stoves

Target stoves

- 9.4M stove in 5 years
- 83M population
- 12M households ^[3]



- 80% of households buy one stove or
- 40% of households buy two stoves or
- 20% buy two stoves, and 40% buy one stove

[1] Ethiopian – Stove Dissemination Performance

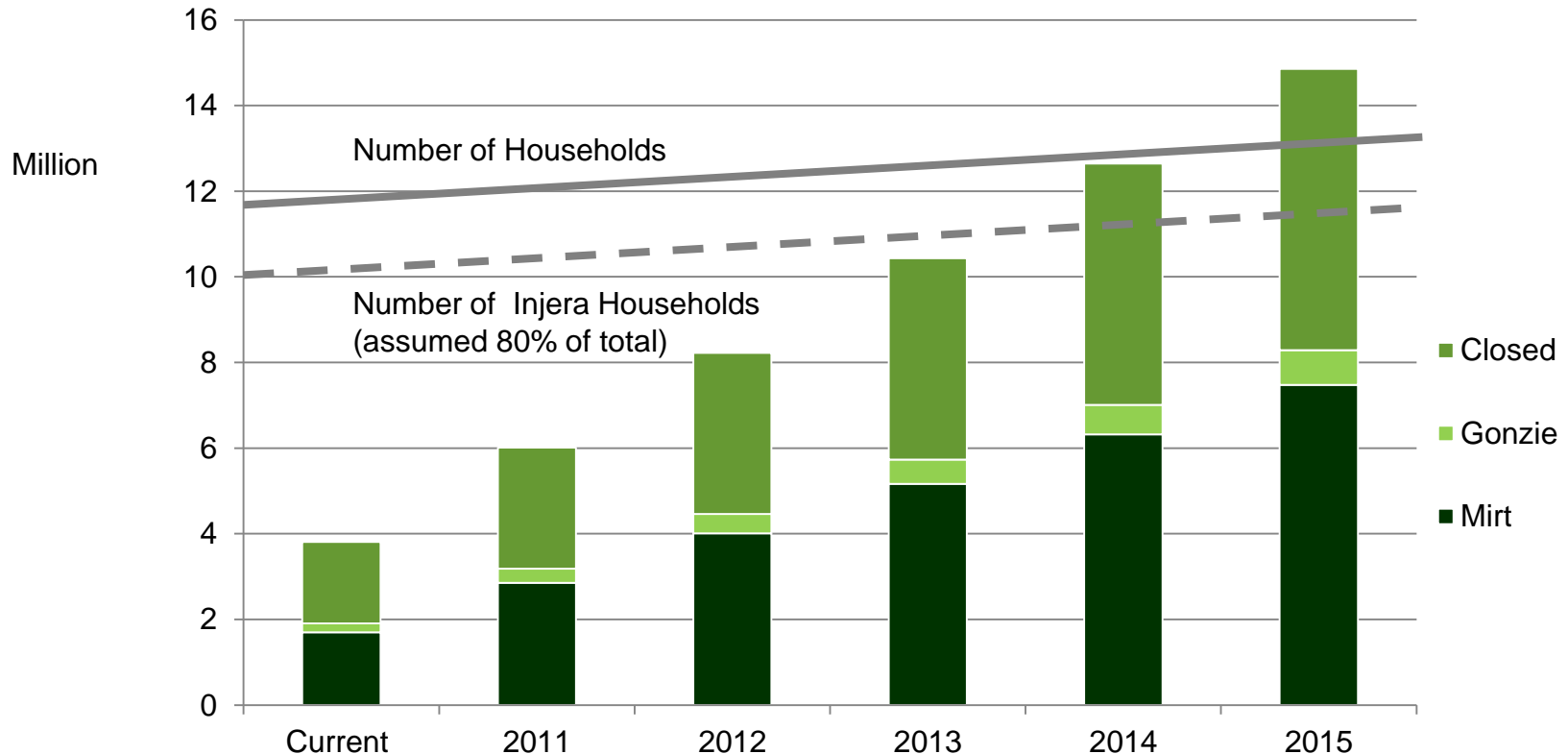
[2] GIZ discussion

[3] World Bank, 2010, with total population = 83m and average household size =7

Injera Stoves

The current 9.4M target was based on existing sales/production and used to forecast out for the 5 years. At this rate every household in Ethiopian will have an injera stove in 2014.

- Total Injera Stoves Disseminated -



Forecast sales per year are based on per 2010 (current year)

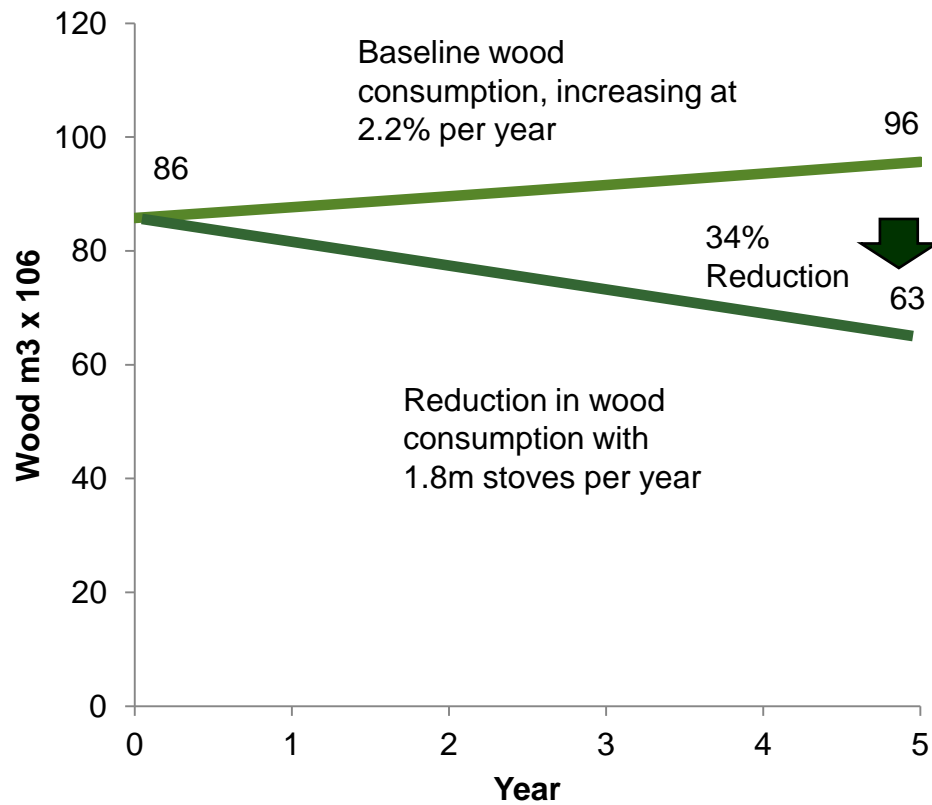
This method was used to forecast the 9.4 M GTP target

Stove: Closed 0.9 M, Gonzye 0.1 M, Mirt 1.2 M

Impact on Wood Consumption

The 9.4m target would result in a very large decrease in wood consumption, which may be difficult to achieve – it is necessary to understand the exact composition of the 9.4m target.

- Ethiopian Fuel Wood Consumption -



Issues

- This is a very dramatic decrease that may be difficult to realise
- It is necessary to understand how the 9.4m stoves will be distributed in terms of what stoves, regions, and fuel usage to ensure that targets are achievable

Assumptions

- Use of wood consumption increases proportional to population growth, which is 2.2%
- 85% of people use wood and 85% of stoves sold will use wood
- 7 people per household
- Baseline is 8.5m³ of wood used per household per year
- 1.8m stoves disseminated per year
- 50% saving in fuel per stove
- No change in behaviour or usage of different fuel types
- Assumed existing data includes stoves already sold

9.4M Target

The 9.4M 5 Year target is based on multiplying the current stoves sales/production (2010) by 5 years.

Stove	2010	x 5 years →	Plan
Mirt	1.2		5.8
Gonzie	0.1		0.6
Opesi	0.1		0.7
Daily Cooker	0.0		0.0
Laketch	0.1		0.3
Concrete	0.3		1.7
Tikikl	0.1		0.3
Total	1.9		9.4
Closed	0.9		4.7
Total (including Closed)	2.8		14.1

5 Year GTP Target

Implementation Plan

The implementation model should aim to build capabilities, with each capability comprised of a series of activities and initiatives.

