



The T & T Foresight Project

NIHERST

Sector Foresight
Project:

BIOTECHNOLOGY

Chapter 3:

Overall T&T 'Best Bets'

Steve Maximay, Allan
Frazer & Nick Marsh



Final
October 17, 2006

CONTENTS

1	Introduction.....	3
2	Picking the best of the ‘Best Bets’	3
3	Best Bet 1	4
3.3	Title: Cacao – ‘Brown Gold’	4
3.4	Description.....	4
3.5	Rationale	4
3.6	Target Markets	5
3.7	The Market Offer	5
3.8	What we have.....	5
3.9	What we need.....	6
3.10	Key Best Bet Roadmap Considerations	6
4	Best Bet 2	8
4.1	Title: Novel Tropical Flowers and Seeds – ‘Tropiccolour’	8
4.2	Description.....	8
4.3	Rationale	8
4.4	Target Markets	8
4.5	The Market Offer	8
4.6	What we have.....	9
4.7	What we need.....	9
4.8	Best Bet Roadmap Considerations	10
5	Best Bet 3	11
5.1	Title: Leveraging Plants and Microbes – ‘Human & Environmental Wellness’	11
5.2	Description.....	11
5.3	Rationale	11
5.4	Target Markets	12
5.5	The Market Offer	12
5.6	What we have.....	12
5.7	What we need.....	13
5.8	Best Bet Roadmap Considerations	13
6	The Next Steps.....	14

1 Introduction

Altogether thirty-five first draft 'Best Bet' opportunities were developed at the five sector workshops – biotechnology, creative, food and beverage, manufacturing, and tourism - held during the last two weeks of July 2006.

Some of these 'Best Bets' offer greater commercial prospects for Trinidad and Tobago than others. In addition, there is a degree of overlap between 'Best Bets' in one sector with those in other sectors.

In this Chapter we have built a more detailed overview for what we consider to be the 'Best Bets' that offer the best prospects for the Biotechnology Sector. It should be pointed out that the 'Best Bet' descriptions and the associated indicative roadmaps in Chapter 3 are still relatively skeletal and have not been subjected to any in-depth analysis. Each is essentially a collation and expansion of the ideas put forward in the workshops that has been put together using a simple format that provides a platform for building more substantial business investment cases for each that will be reported in Chapter 4 of this project. Both Dr Steve Maximay and Professor Julian Duncan were involved in developing these 'Best Bet' descriptions.

2 Picking the best of the 'Best Bets'

The original 'Best Bets' developed at the sector workshops were reviewed with key stakeholder parties in order to determine which of the first draft 'Best Bets' might offer the greatest opportunities for Trinidad and Tobago.

Part of that process including a critical review of the first draft 'Best Bets' by a T&T based 'peer review' group that included the following people:

- Mr Ronald Ramkissoon – Republic Bank
- Mr Nicholas Galt – CEO of TCS
- Mr Bernard Dulal-Whiteway – CEO of Neal & Massy
- Professor Denise Thompson, University of T&T
- Ms Joan Feriera – CEO of the Trinidad Chamber of Commerce
- Ms Maureen Manchouck – President of NIHERST
- Ms Joycelyn Lee-Young – Registrar of NIHERST
- Dr John Soo Ping Chow – Business Development Manger, e-Teck
- Mr Maurice Moniquette

Also present were:

- Dr Keith Nurse – Creative Sector Research Team Leader
- Dr ColinDale Marcelle – Tourism Sector Research Leader
- Dr Larry Placide – Food & Beverage Sector Research Leader
- Dr Nick Marsh – NEXT Corporation
- Mr Ian Ivey – NEXT Corporation

In addition to this 'peer review', the various 'Best Bet' opportunities were also discussed with the sector team researchers, key players in the investment and banking sector, other specialist T&T stakeholders, and several offshore specialists and investors.

As a result of these review and discussion processes, the following overall 'Best Bets' have been chosen as being those which offer the best potential commercial prospects for T&T.

They are somewhat broader in focus than many of the original 'Best Bet' descriptions. The rationale for this is that different entrepreneurs and investors will see different potential opportunities within any one 'Best Bet'. Focussing too narrowly at this stage of the project may close out some potential areas that could be of interest.

We believe the following expanded 'Best Bet' options are built around areas that align well with growing global niche market opportunities and which could also be realistically commercialised in some form or other to the benefit of T&T.

3 Best Bet 1

3.3 Title: Cacao – 'Brown Gold'

3.4 Description

Trinitario cacao is known for its special qualities. Demand currently exceeds supply. There are issues with growing and there has been little done to add value. This 'Best Bet' opportunity focuses on extracting that added value in several ways:

- By improving the basic genetic plant material - this could also be protected by international plant variety rights.
- By developing a system for measuring the PEA (phenylethylamine content) as a basis for extracting additional value from the 'feel good factor' of different lines of cocoa – the higher the content the higher the value.
- Developing an 'appellation system' in conjunction with the PEA measurement system.
- Including cacao growing in the 'Feel the Passion' Trinidad immersion tourism experience.

3.5 Rationale

- Trinitario cacao has an inherent quality that differentiates it from other cacao types.
- Chocolate is known for its feel good factor and high anti-oxidant content – which provides not only a pleasure connection but also a health and wellness (and performance) connection in people's minds.
- The use of herbal stimulants is increasing around the world as a form of legal recreational mind altering substances.
- The New Zealand honey sector, in conjunction with researchers at Waikato University, developed a scientifically based system for measuring the level of an anti-bacterial factor called UMF (unidentified manuka factor). The outcome was a rating scale that provides buyers with an indication of the UMF level contained in each batch of honey from different sources.

- This has leveraged the value of a kilogram of high active manuka honey (15+) to over ten times that received for standard commodity honey.
- Its prime selling point is in the health and wellness area and it is now being used in hospitals to help cure wounds that won't heal using normal antibiotics.
- In Nigeria, the Director of the Federal Agency for Food & Medicine is promoting cocoa not only for its health benefits but also as a replacement for Viagra because recent research found cocoa boosted libido ([Link](#))
- More tourists are searching for unique immersion type experiences. The concept of being able to visit a cacao growing enterprise and to be able to enjoy the end products in a convivial on site atmosphere is likely to be a strong tourist attraction – just in the way vineyards and themed parks such as 'The Big Pineapple' in Australia and 'Kiwifruit Country' in New Zealand have become

3.6 Target Markets

- High-end consumers in wealthy market niches in both traditional and growth economies.
- Both the personal pleasure (in all its senses) and the health and wellness consumer focuses would be strongly targeted.
- The high end developing markets in China and India.
- Women - who are particularly fond of chocolate.

3.7 The Market Offer

- Satisfying the need for fascination and more intense pleasure experiences.
- Improving personal health and wellness whilst indulging in pleasure.
- Cocoa/chocolate with a defined PEA measure that has an associated premium.
- Extended use into non-food areas such as cosmetics and 'feel good' products.
- An associated 'appellation system'.
- The total cacao immersion experience.
- Access to high value genetic material under an international plant variety right protected basis.

3.8 What we have

- A demand that far exceeds the current supply of high quality Trinitario cacao.
- Plant material, including the Trinitario strain.
- Some expertise in growing and cacao holdings and estates.
- R&D skills.
- Land and a unique environment for growing cacao.
- An existing marketing plan and branding.
- Some experience with estate related marketing.
- Knowledge of at least some of the components that make cacao/chocolate an 'essential' item for many consumers.
- Some innovative product developments based around cacao in the non-food sector.

- The Cacao Research Centre.
- A germplasm bank plus a breeding programme to boost mother stock quality and disease resistance.
- A historical association with cacao growing and processing.
- A capability to produce our own T&T based cacao-derived products.

3.9 What we need

- Improved genetic plant material.
- Development of a PEA measurement scale that can be used in practice.
- Identification of ways that Trinitario derived plant material could become protected through international plant variety rights.
- Top notch market research – especially with potential end users (traditional and non-traditional) – to identify mutually beneficial ways of leveraging extra value.
- Branding.
- Broadcasting the unique characteristics of Trinitario cacao more widely.
- Value chain analysis and optimisation.
- Identifying key alliances and relationships needed to make the whole thing work.
- Turning at least one cacao estate into a ‘living experience’ for tourists.
- Investors into land, plants, and machinery.
- A value upgrade from production through to consumption to extract greater value from the market.
- A move to fixed price contracts.
- Better dispersal of research knowledge.
- TQM at all levels including maturity and harvesting.
- A supply buffer in order to provide consistent supplies to premium end users.
- Developing higher value non-food uses for cocoa butter.
- Top notch R&D and support of the research arm at UWI.
- Increase the T&T production base.
- Preserve good agricultural land in T&T.
- Quality based incentive payments to producers.
- An industry marketing plan.
- Agro-tourism including cacao and link with TT experiential tours.
- Own storage in major markets such as Europe.
- Regional cooperation with producers e.g. in Jamaica.
- Labour saving devices and coverage of lack of skills.
- A new industry structure to handle production, processing and marketing to global buyers.

3.10 Key Best Bet Roadmap Considerations

Timing	What?	How?	Who?	By when?
Initial	<ul style="list-style-type: none"> • PEA measurement plan • Plant improvement plan • Tourist estate ID • Funding needs and sourcing 	<ul style="list-style-type: none"> • R&D • R&D • Evaluation • Consensus 	<ul style="list-style-type: none"> • S&T community • S&T community • Tourism groups? • S&T / commercial / govt 	<ul style="list-style-type: none"> • Within 3 mths • Within 3 mths • Within 3 mths • Within 3 mths

1st 6 months	<ul style="list-style-type: none"> • Have a PEA scale • ID alliances and partners • Plan for first tourist site + funding • ID ways of increasing plantings • Market research to ID value add opportunities 	<ul style="list-style-type: none"> • R&D + proofing • Networking • Benchmarking • ID barriers • Develop branding and marketing strategy 	<ul style="list-style-type: none"> • S&T + end-users • Market research • Tourism groups plus financier • Extension services / S&T • Market researchers / brand agencies 	<ul style="list-style-type: none"> • End of 6 mths • End of 6 mths • End of 6 mths • End of 6 mths • End of 6 mths
2nd 6 months	<ul style="list-style-type: none"> • All estates have PEA test • Prime genetic material ID • Complete stage 1 tourist site development • Agree pricing strategy for PEA scale • Expand production base 	<ul style="list-style-type: none"> • Line samples • R&D • Construction project • Negotiations • New plantings 	<ul style="list-style-type: none"> • S&T community • S&T community • Project manager • Sector / end-users • Public /private JV? 	<ul style="list-style-type: none"> • End of 12 mths • End of 12 mths • End of 12 mths • End of 12 mths • End of 12 mths
Year 2	<ul style="list-style-type: none"> • Branding /marketing strategy launched • First sales of PEA scale based product • First 10,000 tourists through cacao experience • Stage 2 tourist dev commences • Built 'best value' value chains 	<ul style="list-style-type: none"> • Smart networks and clever alliances • By agreement • Marketing and coordination • Construction project • ID best channels – real and virtual 	<ul style="list-style-type: none"> • Blogs, virtual networks, Diaspora • Premium buyers • Tourist operators • Project manager • Market / sector research and action 	<ul style="list-style-type: none"> • Early year 2 • Mid year 2 • End of yr 2 • End of yr 2 • End of yr 2
Year 3	<ul style="list-style-type: none"> • A doubling of revenues from all activities 	<ul style="list-style-type: none"> • Control the market for high end cacao differentiated to the main commodity market 	<ul style="list-style-type: none"> • S&T / Commercial / Government 	<ul style="list-style-type: none"> • End of yr 3
Year 4	<ul style="list-style-type: none"> • A doubling of revenues from all activities 			<ul style="list-style-type: none"> • End of yr 4
Year 5	<ul style="list-style-type: none"> • A doubling of revenues from all activities 			<ul style="list-style-type: none"> • End of yr 5

4 Best Bet 2

4.1 Title: Novel Tropical Flowers and Seeds – ‘Tropiccolour’

4.2 Description

- There are a number of novel tropical flowers and seeds in T&T which are seen in local houses, hotels and supermarkets.
- Some of these have been well researched, production systems developed and tested, and some degree of market testing done.
- Initial market research has found there is good potential for new fashion flower and plant products that command a premium.
- This ‘Best Bet’ offers a unique range of novel products to offshore buyers.

4.3 Rationale

- Consumers are increasingly searching for new and different floral and garden products.
- Both are in a growth sector driven by two main things – more people living in apartments and ageing populations (who tend to favour gardening more as a pastime).
- There are niches in global markets for quality new and novel products that are fashionable and provide a unique difference.
- Growers in T&T could increase their incomes by twenty times if a business could be developed in this area linking production with key markets.
- There are also opportunities for exploiting plant variety rights (PVRs) internationally for unique cultivars.

4.4 Target Markets

- High-end niche markets in North America (East Coast), Europe and the Caribbean – possibly also in India, Singapore, China and other wealthy parts of Asia.
- The tourism sector in the Caribbean (for hotels, restaurants and venues).
- The seeds and plant material wholesale and retail markets in specific niche areas – could be anywhere in the world.
- The international nursery industry through alliances in key markets and exclusive plant variety rights use agreements.
- Plant producers for the cut flower growing sector in key production areas – e.g. Columbia, Ecuador.

4.5 The Market Offer

- Novel tropical flowers as a cut flower product.
- Plant material for propagation under exclusive licensing arrangements.
- Specialised seed and plant lines for the international nursery sector.
- Specialised cut flower production and delivery to the accommodation, restaurant and venue sectors in the Caribbean – possibly even further afield.

4.6 What we have

- Human, biological and financial resources
- Indigenous knowledge
- 10 – 15 species of neo-tropical animals
- Existing development programmes for flowers, plants and seeds – including many years of work with Anthurium.
- Good micro-propagation and seed production facilities.
- Well developed research resources and capabilities.
- Highly experienced R&D personnel who are experts in the field.
- A regional trade framework and ready access to markets.
- Markets that are prepared to pay a premium for unique products – locally and globally.
- A global flower and plant based fashion sector that is always searching for new products.
- An ideal low-cost growing environment.

4.7 What we need

- Increased capacity (human and infrastructure) for R&D.
- Linkages between research and technology institutions, and the commercial sector.
- Consortiums to drive development of the sector and prioritise R&D initiatives.
- R&D policy and funding initiatives.
- Increased private sector involvement.
- Efficient quarantine and quality control systems.
- A marketing presence in Europe and North America.
- Handling facilities that can ensure products meet importing country standards
- Highly developed branding and marketing strategies.
- Market research to establish connections in key target markets.
- Value chain definition and development.
- IP protection and plant variety rights licensing capabilities.
- Commercialisation – both investment and business entity components.
- Improved freight connections to key markets – in particular airfreight space.

4.8 Best Bet Roadmap Considerations

Timing	What?	How?	Who?	By when?
Initial	<ul style="list-style-type: none"> Choose two species with greatest potential Value basis – production or licensing Short list potential target markets Quarantine requirements in import countries Funding needs and sources 	<ul style="list-style-type: none"> Assess market prices and demand and ease of producing Economic studies ID possible target markets Find out standards that need to be met Consensus 	<ul style="list-style-type: none"> Market research S&T players S&T, commercial players Market research, commercial? Govt. agencies Commercial / govt. 	<ul style="list-style-type: none"> 3 months 3 months 3 months 3 months Within 3 mths
1st 6 months	<ul style="list-style-type: none"> Do an in depth assessment for 6 key niche markets – ID any import barriers Have QA/QC in place for exports Develop a brand and marketing strategy Develop an plant improvement and PVR strategy Set up the first specialist production units 	<ul style="list-style-type: none"> Market research and networking By matching import countries needs Scope out what is needed Strategy session Through a JV? 	<ul style="list-style-type: none"> Market research, commercial, government Government / sector Marketer / sector S & T / sector S&T + farmers 	<ul style="list-style-type: none"> End of 6 mths End of 6 mths End of 6 mths End of 6 mths End of 6 mths
2nd 6 months	<ul style="list-style-type: none"> Send first sample product to selected key markets Assess improvements needed Strategy for volume production and logistics Licensing strategy – on and offshore Best fit for purpose value chain development 	<ul style="list-style-type: none"> Marketing Assess feedback and reactions Market development strategy building IP strategy building Market/sector research 	<ul style="list-style-type: none"> Marketer / commercial S&T community / commercial Market researcher / commercial S&T community / IP expert Market / sector researcher 	<ul style="list-style-type: none"> End of 6 mths End of 6 mths End of 6 mths End of 6 mths End of 6 mths
Year 2	<ul style="list-style-type: none"> Branding /marketing strategy launched First sales of high value product First PVR license agreement Build 'best value' value chains' 	<ul style="list-style-type: none"> Smart networks and clever alliances Through exclusive arrangements Contract negotiation ID best channels – real and virtual 	<ul style="list-style-type: none"> Networker / marketer Premium buyers S&T community / sector / legal Commercial / govt 	<ul style="list-style-type: none"> Early year 2 Mid year 2 End of yr 2 End of yr 2
Year 3	<ul style="list-style-type: none"> 3 more PVR licenses A doubling of revenues from all activities 	<ul style="list-style-type: none"> Contract negotiation Expand the opportunities in niche markets 	<ul style="list-style-type: none"> S&T / sector S&T / commercial / govt 	<ul style="list-style-type: none"> End of yr 3 End of yr 3
Year 4	<ul style="list-style-type: none"> 7 more PVR licenses A doubling of revenues from all activities 	<ul style="list-style-type: none"> Contract negotiation Expand the opportunities in niche markets 	<ul style="list-style-type: none"> S&T / sector S&T / commercial / govt 	<ul style="list-style-type: none"> End of yr 4 End of yr 4
Year 5	<ul style="list-style-type: none"> 12 more PVR licenses A doubling of revenues from all activities 	<ul style="list-style-type: none"> Contract negotiation Expand the opportunities in niche markets 	<ul style="list-style-type: none"> S&T / sector S&T / commercial / govt 	<ul style="list-style-type: none"> End of yr 5 End of yr 5

5 Best Bet 3

5.1 Title: Leveraging Plants and Microbes – ‘Human & Environmental Wellness’

5.2 Description

Trinidad and Tobago has a number of plant and microbial species that offer unique products and solutions for global growth niches. The key is going to be in identifying the unique selling points, including associated IP protection opportunities that will provide a price leveraging advantage in those niches in areas such as:

- Health and wellness – with a particular emphasis on herbal derivatives which can also be protected using IP
- Bio-remediation – through identifying and commercialising microbial solutions for pollution remediation projects which can also be protected through the use of IP.
- Biological control agents – including natural pesticides which can be identified, protected through IP and commercialised.

5.3 Rationale

- The global personal health and wellness market is a strong growth area
- T&T already has a well-developed inland herbal remedy business. However, a significant part of it is based around generation-to-generation ‘hand-me-down’ recipes and associated views of effectiveness.
- Bois bande and seamoss are two well-known herbal ‘remedies’ said to enhance male virility.
- Angostura Bitters has become an international product and is built upon a natural plant derived ingredient for part of its ‘mystique’.
- Pernod grows aniseed as a key ingredient for their alcoholic beverages in T&T.
- There are plants that offer possibilities for essential oils and dehydrated derivatives, some of which are already being used.
- The global focus on redressing pollution problems is strengthening – cleaning up old industrial sites in developed economies and dealing with growing pollution problems in rapid growth economies such as India and China.
- There are indigenous microbes that have been identified which could help provide an effective natural solution to pollution problems caused by heavy industry and the oil and gas sector.
- Sales of organic products are increasing rapidly in wealthy markets e.g. Sainsbury’s in the UK had 18% growth in the past year and so there is an increasing need for bio-control agents for pests and diseases that are compatible with bio-certification systems.

5.4 Target Markets

- For herbal derived health and wellness products – consumers at the higher end of the market in both developed and developing economies in the personal health and wellness areas in products that are either consumed, applied to the body or enhance the ‘ambience’ of areas people live and work
- For the bio-remediation area – pollution clean up opportunities in both developed and developing countries through companies and agencies that have a specialist role / focus in dealing with such problems with a particular focus on the green responsible corporation.
- For the biological control agent – producers and producer groups with a strong focus on biological and integrated pest management strategies.

5.5 The Market Offer

- Satisfying a growing need for improved health and wellness and a desire for natural products that provide more than just a nutritional or basic functional benefit. This includes attributes that provide people with a perceived and/or real benefit in terms of the way they feel and includes cosmeceuticals, herbal-based beverages and foods, possibly nutraceutical type products, and ambience enhancing products such as essential oils and natural air fresheners.
- Satisfying a growing need to remediate complex inherited pollution problems on old ‘blackfield’ and ‘brownfield’ sites and collateral damage occurring in sectors such as oil and gas and rapid industrialisation in fast growth economies by using natural agents that have a high degree of efficacy
- Satisfying the growing need for organic products by providing new naturally derived biological pest and disease control agents that are stable and provide a high degree of efficacy and are also accepted by bio-registration systems such as ‘Biogro’ and ‘Demeter’.

5.6 What we have

- Food and beverage companies (such as Angostura) who have experience in developing and marketing health and wellness related products.
- A strong local traditional herbal sector.
- Centres of excellence at UWI and CARIRI that can develop the product concepts.
- Sources of pollution to test naturally derived bioremediation solutions.
- Indigenous microbes that have the potential to provide bioremediation-based pollution solutions.
- The T&T Green Fund which, by 2005, had risen to TT\$ 465 million and is intended to be used for environmental improvement projects.
- Trained bio-scientists and research infrastructure at UWI and UTT.
- Biodiversity, which provides a source of derivatives for health and wellness, bioremediation and biological control agents.
- A reputation as a leader in the field of biological control.

5.7 What we need

- Scoping of the biodiversity to identify areas of potential, protection and development.
- Phytochemical analysis to identify potential products and active ingredients.
- Examination of traditional herbal products and the development of QA/QC systems and market opportunities.
- Value chain and market development.
- A legislative framework that is in tune with global standards and requirements.
- Trained personnel – both from local and foreign sources.
- Industry structure and certification schemes – especially for bioremediation but also applies to the other areas.
- Roll out and commercialisation expertise.
- Sources of investment.
- Regional marketing structure.
- IP protection for sources, processes and products where appropriate.
- International legal archives.

5.8 Best Bet Roadmap Considerations

Timing	What?	How?	Who?	By when?
Initial	<ul style="list-style-type: none"> • Identify the top 6 prospect areas for each focus • Agree funding needs • Agree who will do what • Funding needs and sourcing 	<ul style="list-style-type: none"> • Collaborative effort • Consensus • Consensus • Consensus 	<ul style="list-style-type: none"> • S&T community commercial • S&T community / govt • S&T community / govt • S&T community / govt 	<ul style="list-style-type: none"> • By 3 mths • By 3 mths • By 3 mths • By 3 mths
1st 6 months	<ul style="list-style-type: none"> • Initiate research projects with at least 2 in each focus area on 'low hanging fruit' • Investigate IP needs • Initiate legislation review to meet international needs • Initiate market development initiative 	<ul style="list-style-type: none"> • Consensus • Review • Review • Market research 	<ul style="list-style-type: none"> • S&T community / commercial • Govt and S&T community • Govt and S&T community • Market researcher / sector specialists 	<ul style="list-style-type: none"> • By 6 mths • By 6 mths • By 6 mths • By 6 mths
2nd 6 months	<ul style="list-style-type: none"> • First herbal product ready for commercial development • First bio-remediation agent through to initial trial stage • First BCA undergoing lab-tests • IP review completed and action plan developed • Legislative review completed and action plan developed • Initial market development plan completed 	<ul style="list-style-type: none"> • R & D • R & D • R & D • Review • Review • Market research 	<ul style="list-style-type: none"> • S & T community / commercial • S & T community • S & T community • Govt and S&T community • Govt and S&T community • Market researcher / sector specialists 	<ul style="list-style-type: none"> • By 12 mths • By 12 mths • By 12 mths • By 12 mths • By 12 mths • By 12 mths

	<ul style="list-style-type: none"> • Search for potential alliance partners and value chain components initiated and completed 	<ul style="list-style-type: none"> • Market research 	<ul style="list-style-type: none"> • Market researcher / sector specialists 	<ul style="list-style-type: none"> • By 12 mths
Year 2	<ul style="list-style-type: none"> • Sales of first herbal product initiated • Second herbal product ready for commercial development • First bioremediation product in commercial trials • Second bioremediation product through initial trial stage • First BCA in certification programme • Second BCA undergoing lab-tests 	<ul style="list-style-type: none"> • Commercialisation • R&D • R&D • R&D • R&D • R&D 	<ul style="list-style-type: none"> • Commercial • S & T community / commercial • S & T community / commercial • S & T community • S & T community/ govt? • S & T community 	<ul style="list-style-type: none"> • Mid year 2 • End year 2 • Mid year 2 • End year 2 • End year 2 • End year 2
Year 3	<ul style="list-style-type: none"> • First commercial revenue of US\$500,000 			<ul style="list-style-type: none"> • End year 3
Year 4	<ul style="list-style-type: none"> • Commercial revenue of US\$ 5 million 			<ul style="list-style-type: none"> • End year 4
Year 5	<ul style="list-style-type: none"> • Commercial revenue of US\$15 million 			<ul style="list-style-type: none"> • End year 5

6 *The Next Steps*

In Chapter 4 of this project, these overall sector ‘Best Bets’ will be developed to a much higher level to enable the finalisation of a business investment case for each one.

The process of building these cases will include more detailed consultation with key stakeholders to test and refine the assumptions made, the building of 5 – 10 year financial projections, a more detailed roadmap, and the identification of key players, both on and offshore, who would be required to help realise each ‘Best Bet’.