Four Innovative Companies in Trinidad and Tobago

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FOUR INNOVATIVE COMPANIES IN TRINIDAD AND TOBAGO

Tucker Energy Services Limited
Label House Group Limited
KC Confectionery Limited
Angostura Limited

Kieron Swift
Council for Competitiveness and Innovation
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CONTEXT

This document is the product of a modest initiative to discover innovative companies, to identify acts of innovation, and to record this information so that the interested public becomes aware. The VIII Americas Competitiveness Forum (ACF) 2014 has been a stimulus for this effort.

This particular project was undertaken by Keiron Swift, who is a Business Manager at the Council for Competitiveness and Innovation (CCI). The CCI was established in 2011. I was its first Chairman but I moved on to my Ministerial portfolio within months of taking up the Chair. The current Chair is Richard Lewis and the mandate of the Council is to raise consciousness about innovation, promote its practice and its benefits and drive the Innovation agenda of the Ministry of Planning and Sustainable Development and the Government of Trinidad and Tobago.

As an advisory body to the Ministry of Planning and Sustainable Development, the CCI is the national champion for innovation and competitiveness. Specifically, the CCI has been tasked with developing a strategy for improving the national competitiveness of Trinidad and Tobago with a view to improving the country’s ranking in the World Economic Forum’s Global Competitiveness Report. The CCI is also responsible for building national awareness of competitiveness and innovation, building local innovation capacity and supporting the development and implementation of a holistic National Innovation Policy.

A key collaborator with the CCI is Caribbean Industrial Research Institute (CARIRI) which actively supports and promotes innovation in practical ways. The CCI also works with the National Entrepreneurship Development Company Limited (NEDCO) in matters of finance related to support for innovative business creation.

CARIRI also supports the creation of new businesses but has a long history of working successfully with existing businesses. For instance, two years ago they commissioned a study on innovation readiness in about twenty companies in Trinidad and Tobago and, this year, these companies were revisited to assess progress or changes in receptivity to innovation initiatives. CARIRI is also working with over fifty companies in the manufacturing sector to improve their Information and Communications Technology (ICT) capability to enhance competitiveness of these companies.

Work on identifying companies in Trinidad and Tobago with demonstrable claims to innovation have been done previously by the National Institute for Higher Education, Research, Science and Technology (NIHERST) out of which came a publication several years ago. That was a pioneering piece of work, simply for the factual information that it provided of well-known companies, whose inner workings and genuine achievements were little known.

This particular project, focused on the inner workings of four (4) very successful companies—Tucker Energy Services Limited, the Label House Group Limited, KC Confectionary Limited and Angostura Limited—is an important contribution to the body of literature on successful companies in Trinidad and Tobago.
Competitiveness at the firm level is a vital factor for company sustainability over the long term. These four (4) companies, with very different areas of focus, and involved in widely divergent products and services are very good examples of the role of innovation in a company’s success and is very revealing on the simple but important things that actually contribute to innovation and ultimately to company success.

Each of these companies has achieved extended regional reach or global success. This fact alone makes them worthy of our attention. Secondly, they have achieved success on their own—without government help or active support. Thirdly, they have developed innovative capacity within their own companies which augers well for deepening of the innovation culture within these companies.

The case of Angostura perhaps needs some re-examination and deeper assessment—for instance over the last decade they have sought to innovate in bottling, packaging and product branding, and they have created a range of fruit-based rum drinks. They have also created new products such as Lemon Lime Bitters (LLB). So, this company may be worth a second look.

I take this opportunity to commend Kieron Swift on his work to bring the initiatives behind the success of these companies to light. And I take this opportunity to thank the CCI, CARIRI and NEDCO for the work that they are doing to stimulate innovation, entrepreneurship, business development and creation. And, I thank all institutions across the system that are working towards greater competitiveness and more innovation. But, most of all, I want all the innovators out there to put their heads down and get to work!

Bhoendradatt Tewarie

Minister of Planning and Sustainable Development
ACKNOWLEDGEMENTS

The author wishes to acknowledge the kind assistance of the following individuals in obtaining the data that informed this report:

- Mr. Roger Packer – Managing Director, Tucker Energy Services Ltd
- Mr. Richard Lewis – General Manager, Label House Group Ltd
- Mr. Ashmeer Mohamed – Sales Director, K.C. Confectionery Ltd.
- Mrs. Giselle Laronde-West – Corporate Communications Manager, Angostura Ltd.

The opinions expressed and arguments employed herein are of the sole responsibility of the author. They do not necessarily reflect the views of the CCI, of the Government of the Republic of Trinidad and Tobago, or of the other interviewed stakeholders.
INTRODUCTION

It is now widely accepted that firms compete, rather than nations. As such in any nation’s attempt to improve the competitiveness of its firms, it is instructive to assess the current state of innovation, since it is innovation (as driven by the human imagination) that provides the impetus for the perpetual improvement that makes firms more productive, and hence, more competitive.

This report is a small piece of a larger framework that is intended to assess the state of Trinidad and Tobago’s innovativeness by applying the case study method to interrogate in some detail the experiences of the firms examined here. The focus of this report is on the forms of innovation that each firm has been able to implement, paying special attention to the processes and culture of each organisation that has allowed them to do so. A brief discussion follows the case studies and highlights the similarities and differences across the four cases along the traditional dimensions of business innovation, before the report culminates by pointing towards other more comprehensive studies that paint a much more detailed picture of the innovation landscape in Trinidad and Tobago, and which underpin the National Innovation Policy that is currently in development.

In the context of this report, following the OECD Oslo Manual, innovation is taken to mean:

- **Product Innovation** - the market introduction of a new good or service or a significantly improved good or service with respect to its capabilities, such as improved software, user friendliness, components or sub-systems. The innovation (new or improved) must be new to the enterprise, but it does not need to be new to the industry sector or market. It does not matter if the innovation was originally developed by the enterprise or by other enterprises.

- **Process Innovation** - the implementation of a new or significantly improved production process, distribution method, or support activity for the enterprise’s goods or services. The innovation (new or improved) must be new to the enterprise, but it does not need to be new to the industry sector or market. It does not matter if the innovation was originally developed by the enterprise or by other enterprises. This category excludes purely organisational innovations.

- **Organisational Innovation** - Changes in the way the firm is organized and managed; changes in the organization and management of the production process; incorporation of significantly modified organizational structures and implementation of new or substantially modified strategic corporate orientations.


Innovative activities are all the scientific, technological, organizational, financial and commercial steps which actually, or are intended to, lead to the implementation of innovations.

The rest of this report is structured around four short case studies of innovative companies that originated, and operate in Trinidad and Tobago. The companies profiled here are: Tucker Energy Services Ltd, Label House Group Ltd, KC Confectionery Ltd, and Angostura Ltd. Company information in each case was compiled via a combination of desk-based research and interviews with senior executives in the firm.
Tucker Energy Services Ltd.

Tucker Energy Services (TES) is a privately owned multinational oil and gas services corporation providing innovative technology solutions with a strong commitment to customer focused service. While it was founded in Trinidad the firm is now headquartered in Houston, Texas. TES engages in proprietary technology development & training in their USA Technology Centre, through which they aim to create the best quality customer-driven solutions. Their globally recognized product lines provide answers to complex upstream and downstream customer problems.

TES has operations in Belize, Brazil, Canada, Colombia, Suriname, Trinidad, United States, and Venezuela.

Table 1 - Tucker Energy Services Company Milestones

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>Tucker Energy Services (TES) began by offering cementing and Cased Hole Wireline Services.</td>
</tr>
<tr>
<td>1957</td>
<td>Tucker Energy Services and Baroid established a joint venture, providing drilling fluid services in Trinidad</td>
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<tr>
<td>1967</td>
<td>Slickline services began in Trinidad</td>
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<tr>
<td>1976</td>
<td>Cased Hole services began in eastern Venezuela</td>
</tr>
<tr>
<td>1978</td>
<td>Coiled Tubing Services began in Trinidad</td>
</tr>
<tr>
<td>1979</td>
<td>Cementing Services began in Colombia, based out of Bogota</td>
</tr>
<tr>
<td>1986</td>
<td>Open Hole Services in Trinidad are started and in the US, TES begins providing Open Hole and Cased Hole Services</td>
</tr>
<tr>
<td>1990</td>
<td>TES added additional product lines and services to include Cementing Services in Eastern Venezuela, with bases in Anaco and Morichal</td>
</tr>
<tr>
<td>1992</td>
<td>Open Hole and Cased Hole Services are established in Brazil</td>
</tr>
<tr>
<td>1993</td>
<td>Cased Hole and Cementing Services are established in Western Venezuela, based in Ciudad Ojeda</td>
</tr>
<tr>
<td>1994</td>
<td>TES Canada was added to the list of countries when TES began offering Open Hole and Cased Hole Services. During 1994, Tucker Technologies was established in Tulsa, Oklahoma, to provide R&amp;D for Open Hole logging software, tools and systems development.</td>
</tr>
<tr>
<td>1997</td>
<td>TES executed its first coiled tubing job on Lake Maracaibo with a 200 ft class lift boat</td>
</tr>
<tr>
<td>2000</td>
<td>TES Canada successfully completes Open Hole and Cased Hole logging work project in the Canadian Arctic Region. During the same year, TES Trinidad became ISO 9001:2000 certified</td>
</tr>
<tr>
<td>2006</td>
<td>TES established a base in Denton, Texas where land coiled tubing services would begin</td>
</tr>
<tr>
<td>2010</td>
<td>TES began cementing services in Suriname</td>
</tr>
<tr>
<td>2012</td>
<td>TES expanded its product lines to include Hydraulic Fracturing, with operations throughout mid-continent US</td>
</tr>
</tbody>
</table>

1 http://www.tuckerenergy.com/
Corporate Strategy

TES is family-owned but professionally managed by outsiders of the family – a practice it has maintained for most of its 75-year history. (See Box 1 for additional company details)

Although originating in Trinidad, TES has operated as a global company from the start by identifying its main competitors as the Fortune 500-level firms in the energy services industry such as Schlumberger, Halliburton and Baker Hughes, rather than local firms.

The primary challenges they faced which spurred their innovative drive were: competing with these big firms in local and foreign markets simultaneously; and, distinguishing itself and its product lines from its large competitors. They have done so by finding and exploiting niche markets, and entering markets where their competitors do not excel.

Further, they recognised that to be considered equal to these multinational behemoths while servicing their customers (who were also largely international firms), TES had to perform “30% better than their competition” in delivering customer service. In doing so they also had to overcome the “third world limit”, that is, the perception that a company coming from a developing country would operate in a mediocre manner and therefore could not perform at the same level as a company from a developed country.

While TES offers an extensive range of products and services to the oil and gas industry (see Table 2), it claims significant expertise in the areas of cementing, directional drilling and mud engineering.

Their strategy to overcome their competition has hinged on excelling in three aspects of their business: **quality, safety and competence**.

**Quality** – TES began pursuing ISO 9001 (quality management system) certification in 1998, which entailed instituting world class quality systems and processes, and being audited on each service the company provided in every location in which that service was provided. Achieving this certification in the year 2000 set them apart from even their multinational competitors (who generally did not bother to undergo the rigour necessary to pursue such certification in smaller markets such as Trinidad), as TES became the first energy service company operating in the upstream service sector in Trinidad and Tobago that was so certified. Practically speaking, ISO 9001 certification guarantees that the company performs the same job to the same standard each time, reliably. Maintaining this certification over the past 14 years has involved being regularly audited, with more in-depth evaluations taking place each year, both at their own locations as well as their operations at client locations. This focus on quality is embodied not just in their certifications, but in the Statement of Excellence in Quality published by the company (see Box 2).

**Safety** – In 2002 TES brought in a specialist in upstream safety to audit their safety systems and processes and used the result to establish a safety management system which was created to meet the standards of all their major multinational customers. The next step involved inculcating this safety system throughout the organisation. This system has been able to withstand the rigorous audits of their customers and thereby inspire confidence that TES operates at a world class level. Specifically, TES recognised that what their customers looked for in selecting them for a job was highly trained personnel, the lack of introduction of risk to the job site, and a very high standard of service quality.
\textit{Competence} – TES has invested in its human resource via training to ensure competence in all the company’s operational areas. TES was also a pioneer of the Energy Chamber’s “Safe TO Work” (STOW) initiative\(^2\), becoming the first company to be certified in this area, and having been re-certified three times since. Twenty four of the most prominent upstream, midstream and downstream energy producer companies operating locally signed on to the STOW Charter which thereby set a common HSE standard across the industry and mandated all contractor companies serving the sector (such as TES) to acquire the certification. STOW also facilitated these contractors in working towards a single standard rather than trying (and often failing, due to excessive cost) to meet the individual standards of each producer company while tendering for jobs. Because the STOW standard is set to meet or exceed the highest possible international HSE standard (to accommodate all the upstream companies) the service companies that are STOW-certified have improved their ability to operate in overseas markets – the bar has been raised and STOW is on its way to being fully recognised as an international standard in its own right. Finally, TES recently acquired ISO 14000 (environmental management) and OHSAS 18001 (occupational safety and health management) certifications as well.

\textbf{The People Factor and the TES Organisational Culture}

As in many other successful firms, TES cites its people as its most important asset and claims a very low staff turnover rate as a consequence of how well staff are treated. Because of how long they’ve been in business this means that TES retains on staff people with upwards of 20 years of relevant experience who are then utilised as mentors to more recent staff. This important practice of mentorship ensures that the company culture of service excellence, safety and quality is sustained through tacit means to complement the training and certification discussed above. TES believes this also gives them an advantage over competitors.

\textbf{Manufacturing and R&D}

TES manufactures parts and tools to support its service portfolio and for sale to other clients. Owing to their small size in relation to some of their competitors, they realised that competing on R&D expenditure for product development was not a feasible option as some competitors’ R&D budgets exceed TES’ total revenue. Instead, they opt for importing and adapting the necessary technology where it exists, and reserving their R&D for those areas in which pre-existing technology to match their service needs does not exist. TES’ R&D is conducted both locally in Trinidad and in Tulsa, Oklahoma. Trinidad provides a rich test bed for developing new technology and adapting existing technology as the oil and gas production fields present in this country range from very low to very high yielding (in terms of equivalent barrels of oil per day), which thus requires different tools and different approaches in each case. By being adaptable to both types of environments, TES has been able to use this diversity in production environments to specialise and build up expertise in selection of “fit for purpose technology” i.e. the right tools for the job. Via its Houston office, TES works closely with suppliers, whether established large firms or small ones, to ensure that their outlook on technology is not limited to an internally-orientated view. By working with small supplier firms in particular, TES is sometimes able to leverage some very cutting edge technology that would not normally get the attention of their competitors because of how small size the suppliers were. In return,

\footnote{\textit{A Certification Programme for Contractors’ HSE Management Systems that was established in 2004 (www.stowtt.info)}}
TES is able to offer these small suppliers complementary testing and other product refining services, as well as an avenue for getting their products to market.

Besides the technological considerations, TES also applies valuable marketing insight to its product development process by way of a dedicated resource based in Houston who ensures that the products they manufacture have a market. While brand new product developments are not a daily occurrence, when they do happen, TES products are able to be sold in over 50 countries around the world.

Finally, when it comes to sales and actual delivery of the products, TES uses its in-depth knowledge of the manufacturing process and the variability of supply chains to stockpile particular raw materials that generally have long lead times, so as to offer total order times that are a fraction of what their larger competitors offer (e.g. weeks instead of months).

**Business Expansion**

TES has been able to expand out of Trinidad by going into markets where their services are most demanded or needed, such as areas where some of their top tier competitors already operate but are delivering sub-optimal quality levels or in locations where other competitors don’t want to go (such as Venezuela). In this way TES operates by focusing on opportunities where others perceive problems.

TES describes its expansion model as “build Trinidad first, then take spare capacity internationally”. Some examples of markets that TES expanded into in this manner include Suriname and Belize.

**The Value of Information Sharing**

TES cites its willingness to share ideas with customers and suppliers, and even competitors, as a strength that contributes to the quality of its products and services. One way in which it accomplishes this is through its participation in the Energy Chamber, such as via conducting training programmes for customers and foreign delegations of firms. They call this “spreading the Trinidad Model” and credit this approach for building a huge amount of trust that redounds to the benefit of their customers, the industry and ultimately, their business.

**Innovation Drivers and Obstacles**

TES cites the following as its top three reasons for innovating: needing to overcome the perception of being from the “third world” in the highly competitive energy services industry; an overriding drive for quality in its products and services; and, a commitment to safety for its staff and customers on every job and at every job site.

Conversely, the main obstacles to innovation cited by TES were: the perception that it was “just another third world company”; inefficient government bureaucracy; and lack of access to LIBOR financing.

It should be noted that, according to TES, Government support played little to no role in their approach to innovation.
Box 1. Tucker Energy Services Corporate Profile

MISSION
We are an integrated service company providing solutions, services and products to the energy industry. We are committed to continuously creating value for our Customers, Employees and Shareholders.

VISION
Our vision is to be the multi-service provider of choice by our customers and employer of choice by our employees, balanced with long-term growth and profitable results.

VALUES
- CUSTOMERS
  • We will work with our clients to develop and implement solutions through excellence in design, implementation and post evaluation.
  • We are committed to client satisfaction as our most important business objective.
  • We value and pursue long-term relationships with our customers.
- PEOPLE
  • We seek to recruit, develop and retain the most talented people who are accountable, creative, entrepreneurial, profit-conscious, highly skilled and quick.
  • We are committed to training - our only sustainable competitive advantage.
  • We will create multi-functional, cross-trained teams dedicated to achieving a high standard of customer service.
  • We will empower people with responsibility and accountability at all levels.
  • We will reward people based on merit, teamwork, results and shared values.
  • We will develop management which is customer-focused, urgent, empowering, embraces change and eliminates waste and bureaucracy.
- TECHNOLOGY
  • We will bring to market innovative new products and services through internal development and external partnerships.
  • Our focus will be on providing solutions to our customers through the application of appropriate technology.
  • We will aggressively pursue innovative ideas and technologies to achieve exceptional results.
- HEALTH SAFETY & ENVIRONMENT
  • We are dedicated to the health and safety of all personnel and the protection of the delicate environment.
- QUALITY
  • We will focus on continuous improvement in all our business processes, so that every time we do something again, it will be done better than the last time.
  • We are committed to providing our customers with products and services which conform to agreed upon requirements at all times.
  [See also: Statement of Excellence in Quality]
- INTEGRITY
  • Our success depends upon honest, thoughtful and ethical relationships with customers, employees and suppliers.
- BUSINESS ORGANIZATION & PROCESS
  • We will encourage an atmosphere of open communication.
  • We will continuously focus on cost-effective methods of doing business through a lean, functional organization.
  • We encourage innovation and entrepreneurial ideas throughout the organization to continuously improve our business processes, practices, products and services.
  • We will maintain strategic and organizational flexibility to meet the challenges associated with the dynamics of the ever changing energy industry.
Box 2. Tucker Energy Services Statement of Excellence in Quality

We are committed to delivering exceptional performance, while protecting our people, the environment and the assets in our operations.

This is demonstrated by our obligation to:

- Ensure that all managers and employees are accountable for the execution of the operations within the framework of our Business Management System.
- Deliver consistent QUALITY PRODUCTS AND SERVICES.
- Continuously assess and manage risks in our operations and take steps to prevent injury and ill health to all personnel.
- Prevent negative impacts to the environment from our activities, services and products.
- Implement and maintain an Asset Management System to achieve stakeholder’s expectations.
- Implement and maintain an Information Security Management System (ISMS) to protect information assets and its supporting system from all threats, whether internal or external, intentional or accidental.
- Comply with all applicable legislation, on occupational health & safety, environment and other requirements to which we subscribe.
- Provide our employees with continuous training and awareness to ensure competence and deliver exceptional job performance.
- Openly communicate, consult and encourage participation with our stakeholders to address any concerns.
- Continually improve our Business Management System and its performance to ensure continued adequacy, suitability and effectiveness.

We recognize that to achieve operational excellence and long term success we must have the commitment, cooperation and involvement of all stakeholders.

Wayne Tucker
Director

Christopher Tucker
Director

August 19th, 2013.
Table 2 - Tucker Energy Services Product and Service Portfolio

<table>
<thead>
<tr>
<th>Open Hole Services</th>
<th>Cased Hole Services</th>
<th>Pipe Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perforating Services</td>
<td>Tubing Conveyed Perforating</td>
<td>Production Logging</td>
</tr>
<tr>
<td>Slickline Services</td>
<td>Cementing Services</td>
<td>Coiled Tubing</td>
</tr>
<tr>
<td>Stimulation Services</td>
<td>Completion Services</td>
<td>Drilling Tools</td>
</tr>
<tr>
<td>Treating Chemicals</td>
<td>Tucker Technologies</td>
<td></td>
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</tbody>
</table>

Section Summary

Tucker Energy Services Ltd engages in innovative activities across the innovation spectrum, namely:

- Product – pioneering and specialisation in cementing services
- Process – emphasising safety and quality, and pursuing specialist certifications in each area
- Organisational – establishing R&D units in Tulsa, OK, USA and Chaguaramas, Trinidad, to focus on wireline services and technology, and production chemicals, respectively
- Marketing – pursuing business expansion into regions in which they directly competed with much larger firms by focusing on specific niche areas of specialisation.
LABEL HOUSE GROUP LTD.

The Label House Group is “the leading supplier of packaging solutions within the Caribbean and South American region”³.

Label House Limited was started in 1978 as a Flexo-Graphic label converter for the beverage and brewery industry. In 1989 it set up Digi Signs Limited to provide a full range of Quality Signs and related services. Label House later set up Visual Solutions Limited to produce large format print, Package House Limited to sell equipment, supplies and services and Jemila Electronic Displays to sell and service indoor and outdoor LED signs.

In 2003 The Label House Group was formed by an amalgamation of all of its companies as a single company selling and servicing all of the Group’s products and services. The Group has demonstrated its Regional Market Leadership over its 36 years of operations.

In 2006 The Group formed a joint venture with a Mexico firm for the production and sale of sleeves in Mexico for the Mexico and Central American markets. The plant commenced production of sleeves early in 2007.

In 2006 The Group started a joint venture called Click Media TT Limited which is designed to promote brands.

The Label House Group exports to over 25 countries servicing beverage, brewery, tobacco, petroleum, personal care, household, liquor, and banking industries. They have won many awards for Quality, Customer Service and Export Sales which demonstrates their position of Regional Market Leader for the past 15 years.

At present, the firm’s product portfolio spans the categories: labels, branding (various types of displays and signage), machinery (for filling of containers, labelling and related applications), packaging, and digital signage (via the joint venture with Click Media).

Marketing and Product Development

Label House have a department, not dedicated to innovation or R&D in the traditional sense, but to business development. That department takes into consideration new markets and new products, and the associated research needed to develop those two areas. They do not have a fixed R&D budget. The Business Development department is run on the basis of project management. They take business development as the growth engine of the company, and they look at it in terms of the market and/or products.

Rather than create markets, they focus more on products and adapt technologies for their manufacturing process, as well as to meet the needs of current and prospective customers. Label House also applies the knowledge of specialty equipment on the downstream end. As a result, they mainly engage in process innovation based around adapting and building [as opposed to new-to-the-world product development].

³ http://www.labelhouse.com
The Business Development team is composed of four persons for whom business development is actually their secondary role, not their primary role. The team is composed as follows: a resource responsible for Applied Machinery in the factory; a representative from the Process area that knows their manufacturing processes inside out; the person in charge of the Quality Systems which governs all the processes; and finally, the executive in charge of Sales who would determine whether the product is viable. The CEO is highly involved in the whole process; taking a wide scope on various aspects of the business.

Production Processes

The majority of product development that Label House engages in (at least 80%, according to the General Manager) is either taking a global, mature product and reinventing it for the local market, or taking a new technology or product that has not yet reached this Region and introducing it. An example of this is plastic sleeves, a product which Label House was the first to bring into the Caribbean market in 2004. They take time to re-develop the products for the Region and then launch them with a large conglomerate like Nestle or Coca Cola – firms that are at the level where they are amenable to following global trends. These large companies, if not already using the new technologies and products, are likely to be quick to move to such new products. So, Label House’s approach centres on having an “anchor tenant” for a given technology.

The sources of information Label House uses to learn about new products that have the potential to be introduced to the local market include: expositions and conferences; product magazines; and the original manufacturers themselves. Having investigated these sources they turn their attention to looking at the equipment they have. Since their core competence is to have a very efficient print operation for packaging, they use equipment that is attached to that core competence.

Innovation Drivers and Obstacles

Label House’s top three reasons for innovating include: getting and staying ahead of competition; increasing profit; and, manoeuvring around local logistics challenges within Trinidad and Tobago of moving goods from place to place in a timely and efficient manner.

They identified their top three biggest obstacles to innovation as: the mentality and culture of people in general; the lack of sophisticated and demanding customers (not including their large multinational clients); and the problem of convincing investors.

As detailed above, Label House draws on a range of information sources for innovating: networks arising from conferences, product exhibitions and manufacturing associations; their suppliers; and their “global brand” customers.

Government support was not cited as a key determinant of their success, but the lack of efficiency of government bureaucracy was noted as a problem.

Section Summary
Label House Group's major innovative strength is in their ability to streamline and upgrade their production processes. They consider expenditure on top-of-the-line equipment, maintaining technical relevance and regular networking with suppliers and customers to be vital for success in their industry. Organisationally, the firm focuses on new product adaptation by drawing on specialists from across the organisation, including top management. Finally, by drawing on the range of experience and expertise found among the various companies that make up the Group, they are able to offer a strong portfolio of marketing competencies to meet the diverse needs of their customers.
KC Confectionery Ltd.

K.C. Confectionery Limited (KCCL) is a 100% locally owned limited liability company that is the largest manufacturer of sugar confectionery and bubble gum in the Caribbean. 30% of its products are sold domestically and the other 70% are exported to a range of countries, including: all of CARICOM, the US, Canada, Netherlands Antilles and the UK. KCCL’s product range includes gum, hard candy, lollipops, candy mixtures, toffees and chews, and bars.

KCCL began in June 1922 as a cottage industry and has diversified and expanded today to a fast-paced, people driven company that considers itself foremost in technology and innovation. The family-run company developed into a factory in 1957. By 1968 it commenced transitioning to industrial production facilities to satisfy growing demand through partnership with German multinational Bosch. KCCL became fully automated by the early 1990s. In 2009 KCCL completed a project with Bosch that saw its automated production facilities become one of the most up-to-date anywhere in the Americas (according to Bosch), including remote maintenance, touchscreen controls and reduced heat and noise.

The firm employs 170 persons and through investments in its human resource, benefits from a cadre of staff with advanced expertise of their products and processes, thereby propelling the company into a household name at national level and obtaining notable recognition within international markets. The firm has received numerous awards in the areas of Tourism, Economic Growth in Trinidad, Work Place Safety, and in 2014, the World Intellectual Property Office (WIPO) Award for Effective Use of IP.

KCCL’s factory has a maximum production capacity of 32 tonnes per day. The firm has met and adheres to international quality standards such as GMP, HACCP, ISO 22000 (food safety management) and it is also registered with the US Food and Drug Administration. Further, KCCL has implemented a Total Quality Management (TQM) approach to ensure optimum product quality and high customer satisfaction.

The aspects of its products that differentiate KC from its competitors are unique Caribbean flavours, specialised products with homeopathic properties and specialty packaging that is environmentally friendly and biodegradable.

Marketing

To date, all but one of their products is an indigenous creation. The one exception is Hacks cough drops (which the company manufactured under licence from Cadbury since 1980, before changing the formulation and the name to ‘AX’ after 2005 when the licence expired). KCCL produces customised packaging for the different markets it serves to meet the disparate packaging standards of each country. There are also some notable claims of unique products that the company holds to, such as: Frenzi Pop, the only lollipop with a vanity sticker inside; maintaining the largest assortment of mints in the world; and keeping secret formulas for mango and other Caribbean flavours of mints, to name a few. KCCL has also demonstrated marketing savvy by introducing unique features of particular products to match the target market, such as the painted faces on its Sour Face gum thatretails in the

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4 http://www.kccandy.com/
5 Good Manufacturing Practice
6 Hazard Analysis and Critical Control Points
US and is changed to match the current festive season (e.g. Halloween) or major event (e.g. 4th of July); the Cosmic Double Play gum which appeals to the US fixation with baseball by having the product shaped as miniature baseball bats and balls.

Marketing innovations aren’t unique to US-focused products, however, as KCCL also produces the “Sweet Pan” line of souvenir and candy which is sold at duty-free merchandisers in Trinidad and Tobago and takes the form of a miniature metal steel pan (Trinidad and Tobago’s indigenous musical instrument), complete with stand, so that it can be used to adorn a shelf after consumption of the candy.

KCCL was also the first confectionery manufacturer in the region to employ Retail Ready Packaging for a selection of its products. This decision arose from its attempt to enter large chain supermarkets such as Tesco in the UK.

After acquiring rival confectionery SSN Pereira around 1979, KCCL disposed of the other firm’s equipment but has maintained the brand separately from its KC products to this day.

Production Processes

According to their Sales Director, KCCL expends a considerable amount of man hours and capital on flavour development for its products. A team headed by the CEO and comprising representatives from across the company is dedicated to R&D towards new product development. They also directly elicit customer feedback via school tours, for example. KCCL also uses another team that is focused on Manufacturing to look for unique and different materials as well as process improvements for cost savings.

All products manufactured by the company (except Hacks) were developed in-house, either as a totally original formulation or as an adaptation of a foreign product (e.g. “Fruit Chew” which is an adaptation of The Wrigley Company’s popular Starburst. The relationship with Wrigley was a mutually beneficial one, however, as Wrigley’s also licenced one of KCCL’s products for manufacture and sale in the US during the 1990s). In 1966 KCCL became the first company in the Caribbean to manufacture bubble gum.

Besides the advanced nature of KCCL’s manufacturing plant as discussed earlier, since 1986 the company started placing emphasis on environmental sustainability by switching to natural gas as their fuel. This switch necessitated the firm running its own lines and metering.

The People Factor

KCCL maintains good relationships with its major export customers by visiting each one once or twice a year to collate feedback that is redirected into product or process refinement. KCCL maintains the quality and competence of their staff through continuous in-house training and certification. Employee morale is boosted with a generous suite of benefits as the company treats their employees like family. This, they claim, results in high employee loyalty and relatively low staff turnover, with some people maintaining 40 year careers with the company. While KCCL’s staff has been unionised for over 30 years, management realises that unchecked pay increases hamper productivity. During school vacation periods, student interns are also given opportunities to be exposed to areas of the business that are relevant to their studies.
Innovation Drivers and Obstacles

The factors cited by KCCL that contribute to its innovative performance are its application of advanced technology, reinvestment of profits into R&D and the good working relationships between employees and management.

One notable obstacle to KCCL’s innovation was its poor relationship with the Chemistry, Food and Drugs Division of the Ministry of Health which is a major stakeholder in terms of food standardisation.

In terms of Government or public support mechanisms for innovation, KCCL commended recent improvements in Customs (the firm is a user of the ASYCUDA World system) and ports that contributed to transparency and efficiency, but suggested a lot more work still needed to be done. ExporTT was singled out as particularly helpful to KCCL in their service of foreign markets, with CARIRI also being noted for its assistance in testing.

Section Summary

KC Confectionery Limited has leveraged a consistent eye for quality and business expansion to turn a small family business into the largest producer and exporter of confectionery in the Caribbean. The company has introduced new product varieties that are inspired by local flavours, they have invested in protecting their intellectual property and made efficient use of that protection by licensing it out to other firms, and they have adapted (and continue to adapt) the company’s image as well as that of its products to suit the various export markets they serve.
Angostura Ltd

Angostura is cited as one of the Caribbean's leading rum producers with a superb collection of rum brands and is the world's market leader for bitters. Its products include: rum brands like Angostura® 1824, Angostura® 1919, Angostura® Single Barrel Reserve, White Oak, Forres Park Puncheon, Black Label, Royal Oak, Angostura® Reserva, Angostura® 5 year old, Angostura® 7 year old rum and; the Angostura® aromatic bitters and a signature beverage Angostura® Lemon Lime and Bitters. Angostura® aromatic bitters has not been changed since the first bottle was introduced to the world in 1824.

Table 3 - Angostura Ltd Company Milestones

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1824</td>
<td>Dr. Johann Siegert perfects the formula for aromatic bitters – “AMARGO AROMATICO” to use in his medical practice as Surgeon General to the armies of Simón Bolivar. He resided in the town of Angostura in Venezuela, now known as Ciudad Bolivar.</td>
</tr>
<tr>
<td>1875</td>
<td>By 1875 the family business – called Dr. J.G.B. Siegert &amp; Híjos - moves to Trinidad, now being run by Carlos, Alfredo and Luis Siegert, sons of Dr. Siegert. Bitters manufacturing commences in a small factory in Port of Spain. By this time Angostura bitters was being sold internationally.</td>
</tr>
<tr>
<td>1903</td>
<td>Carlos Siegert died, leaving Alfredo Siegert and his youngest brother, Luis, in possession of the formula and the firm. By 1904, Alfredo Siegert was appointed purveyor of Angostura aromatic bitters to the King of Prussia and in 1907 to King Alfonso XIII of Spain. In 1909 the partnership of J.G.B. Siegert &amp; Hijos was converted into a public limited liability company registered in England. In 1912 the company was appointed purveyors of AAB to His Majesty King George V.</td>
</tr>
<tr>
<td>1921</td>
<td>Angostura Bitters (Dr. J.G.B Siegert &amp; Sons) Limited was formed on August 30, 1921. In 1992, the company changes its name to Angostura Limited which it retains to date.</td>
</tr>
<tr>
<td>1949</td>
<td>Trinidad Distillers Limited is established, a state of the art multi-column commercial distillery located in Laventille. Although rum blending began as far back at the 1900s by the Siegert’s, the company stepped up its expertise in 1936 when Robert Siegert, a qualified chemist joined the company. Additional skills were added in 1942 when Albert Clyde Gomez, a sugar technologist joined the company, and in 1944 when Thomas Gatcliffe, an industrial chemist joined the company all now in place to position the company as a leader in the manufacture of fine rum.</td>
</tr>
<tr>
<td>1955</td>
<td>The company is appointed manufacturers of Angostura aromatic bitters to Her Majesty Queen Elizabeth II. This followed their 1952 appointment as manufacturers of Angostura aromatic bitters to His Majesty King Gustav VI Adolph of Sweden.</td>
</tr>
<tr>
<td>1971</td>
<td>Trinidad Distillers Limited (TDL) now largest non-oil exporter in Trinidad &amp; Tobago winning the Prime Ministers' Exporter of the year trophy in 1972 for bulk rum exports. Angostura rum brand White Oak successfully marketed in Trinidad. By 1973, FernandesDistillers Limited is acquired. In 1985 Angostura Limited became the proud recipient of a National Award, the Humming Bird Gold Medal, for its contribution to industry in Trinidad and Tobago, the first company to be so honoured.</td>
</tr>
<tr>
<td>1997</td>
<td>The CL Financial Group acquires 78% of Angostura Holdings Limited. Company engaged in series of international drink company acquisitions. By 2003, CL World Brands is formed to market and distribute rum and bitters internationally.</td>
</tr>
<tr>
<td>2010</td>
<td>Domestic rum marketing positioning enhanced, new packaging and premiumisation strategy leads to super sales performance. Company now an established niche player in the international rum market and wins many rum awards globally. Angostura aromatic bitters still the global leader now sold in 165 global markets.</td>
</tr>
</tbody>
</table>

As outlined in the Company Milestones table above, Angostura Ltd has a long and illustrious history in the rum distillery business in Trinidad and Tobago and is now comfortably established internationally.

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as a niche rum manufacturer. Angostura Aromatic Bitters in particular is a global brand and undisputed leader in its product class. However, given that the formulation for Bitters hasn’t changed since its creation in 1824 the question therefore becomes - what of Angostura’s innovative performance lately? According to the company, in recent times their focus has shifted primarily to improving organisational productivity and efficiency via the implementation of annual IT projects (such as a recently instituted mobile sales solution which allows sales persons to capture and transmit customer orders to SAP remotely and real time). There is a New Product Development Committee (which consists of personnel across the organisation structure) but despite its name it appears to primarily deal with improvement of input materials on existing products. Process improvement is undertaken by the relevant departments, except for significant new projects where a team is assembled, for example with responsibility for their area, such as food safety certification. Specific recent marketing introductions include packaging changes to improve presentation and efficiencies, for example moving away from a two part label to one label, which was a new innovation in the local and regional market.

To protect its intellectual property Angostura holds local and international patents on some products, while using trade secrecy to protect others (most notably, the recipe for Bitters).

Angostura cites its top reason for innovating as the need to improve business processes to lead to efficiency, thus reducing operational costs and improving customer service. To achieve this goal, the main sources of information they draw upon include digital media (web, social media), attending IT conferences and the knowledge held within team members and clients. As such, the company did not provide any info on upcoming planned product innovations, which is not surprising given that it appears to be primarily in a business process and marketing improvement mode.

Section Summary

Angostura Ltd has successfully exploited a niche in the beverage industry with a special formulation that has been secured as the firm’s intellectual property through secrecy. While they have continued to produce new products and expanded into related product lines (such as non-alcoholic beverages), and engaged in specific marketing efforts to promote them, the firm does not appear, by and large, to be well structured to facilitate innovative activities at present, though this is not certain to remain the case.
DISCUSSION

Table 4 - Categories of Innovation Implemented

<table>
<thead>
<tr>
<th></th>
<th>Product</th>
<th>Process</th>
<th>Organisational</th>
<th>Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tucker Energy Services</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Label House Group</strong></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>KC Confectionery</strong></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>House of Angostura</strong></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

General comments

Of the four companies examined during the production of this report, only one (Tucker Energy Services, TES) engaged in innovation right across the board in all four categories. Given the primary importance of the energy sector in this country, and the stiff competition within it this is not at all surprising. TES distinguished themselves in their industry by setting out to compete with much larger foreign multinationals on quality, safety and competence despite their small size. They did so by building up niche expertise and ensuring that their organisational structure and culture allowed that expertise to be transferred effectively among staff through the use of mentorship. While they did not introduce new products often, they did so occasionally and their product development was as a result of the funnel of marketing and technological considerations. Their two R&D centres, one locally based and one in the US, made the difference in terms of having dedicated resources and structures for turning scientific, technological and practical knowledge into new or improved products that brought value to their customers.

Label House Group certainly puts a focus on process innovation as evidenced by their expenditure on up-to-date machinery and training of their human resource so as to improve and tailor their processes and thereby increase productive efficiency. However, they do so admittedly to adapt existing products and be the first to introduce them in local or regional markets, rather than to introduce brand new products. While they lacked specific R&D resources, they do have a dedicated business development team that is cross-functional and includes representation from the highest level of management, thereby illustrating the importance the firm places on that activity. Finally, while they are traditionally a printing and packaging company, they have adapted over recent years to now incorporate an emphasis on the full range of branding which thus gives them the ability to offer a wider range of services to their customers.

KC Confectionery is a good example of a small family-owned business successfully scaling up by emphasising the importance of introducing appropriate technology. Additionally, their focus on customer satisfaction drives them to invest in product development and a high degree of standardisation. KC’s example is also notable for their effective use of Intellectual Property (IP) – both that which is created in-house and that which they licence from others. With their drive to ensure their customers are totally satisfied and their fearlessness in going into external markets (as demonstrated by the distinct balance of their production towards export), they are poised to continue demonstrating innovation as they become more competitive.
Angostura Ltd continues to be a world leader in one very specific product category, and is comfortably exploiting a niche position in the global rum market. However, their apparent lack of emphasis on creating new products or significantly disrupting existing product categories (their introduction of 1919 and 1824 brands a few years ago notwithstanding) suggests that they have settled into the routine of being a mature firm in a mature industry. Add that to the fact that the IP behind their world leading product (Angostura Bitters) was created almost two centuries ago and you have the making of a very non-innovative company at first glance. That being said, Angostura certainly has the heritage and, one would think, the resources to make a serious dedicated push towards being more innovative, but to do so would require vision and sustained effort on the part of the firm’s leadership. At this point it should be noted that unlike the other companies chronicled in this report, the author was unable to speak directly with a senior executive of Angostura so this characterisation cannot be considered conclusive. Instead, it may be that, like their Bitters recipe, this company prefers to keep its growth plans a secret.

A notable point across all four cases is the distinct lack of reference to university or public research (whether local or foreign) as a source of information, knowledge or technology for the innovation within the companies. This does not bode well for a functional national innovation ecosystem, but it is also not surprising, given recent analyses of said ecosystem (see Conclusion below).

What is also distinctive about these companies’ experiences is the general lack of acknowledgement of any useful support afforded them by government in the pursuit of their innovative activities. With the exception of KC, none of the firms could identify any form of public support for innovation that they could have drawn upon. By now it is well accepted that to ensure sustainable development via innovation, the “triple Helix” of the private, public and academic sectors must work in conjunction with each other. That this is not yet the case in Trinidad and Tobago should be seen as an opportunity for productive engagement and collaboration between all actors in the ecosystem - starting with the ACF in October; carrying through to the finalisation and implementation of the National Innovation Policy after that; and supporting the establishment and continued growth of innovative, globally competitive firms upon whose success the country’s economic and societal wellbeing depends.

In 2014, the Government of Trinidad and Tobago announced a TT$50 million Innovation Fund for Business-Research Collaboration. Since 2011, an Innovation Promotion Initiative has supported the Idea to Innovation programme and, through this, 145 projects have received grants. In 2014, this initiative will be expanded to support social innovation projects. In 2011, a Centre for Enterprise Development (CED) was established to support incubation of new enterprises and a hatchery for projects beyond incubation stage. At this facility managed by CARIRI, World Bank Funding has been secured to support innovative projects in Climate Change and a partnership has been established with Microsoft to establish a Microsoft Innovation Centre. These initiatives are all driven and supported by the Ministry of Planning and Sustainable Development.
CONCLUSION

This report is not intended to be, nor should it be construed as a conclusive assessment of the innovative performance of any of the surveyed firms in particular, nor of the state of innovation in Trinidad and Tobago in general. The methodology applied here is not suitable for that objective. This report serves instead as a focal point of discussions in the context of the VIII Americas Competitiveness Forum.

To get a more detailed and broader picture of the state of innovation in Trinidad and Tobago the reader is encouraged to remain on the lookout for the imminent publication of two seminal research reports that are (at the time of writing) currently being finalised – the National Innovation Survey, and the Mapping and Assessment of the National Innovation Ecosystem. Both research projects are being executed on behalf of the Ministry of Planning and Sustainable Development by independent consultants hired through the Compete Caribbean programme. Those reports will provide the relevant and timely information and assessment that is a necessary component of policy in such a crucial area.

This is a transitional period for innovation in Trinidad and Tobago. The moves that are made next, building on key initiatives since 2011 and capitalising on the momentum of the VIII Americas Competitiveness Forum, will have a vital impact on Trinidad and Tobago’s progress in innovation achievement.