Trinidad and Tobago
Innovation Incubation: Diamond Buzz
CAPAM 2016 Submission

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Overview of Trinidad & Tobago

- **Area**: 5,128 sq km (1,980 sq miles)
  - **Trinidad**: area: 4828 sq km (1864 sq miles)
  - **Tobago**: area: 300 sq km (116 sq miles)

- **Population**: 1.3 million (approx.)
  - **Trinidad**: 1,250,000
  - **Tobago**: 50,000

- **Official language**: English; First official foreign language: Spanish

- **Major Religions**: Roman Catholic 26%; Other Christian 26%; Hindu 22%; Muslim 6%

- **Diverse Population**:

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Overview of Trinidad & Tobago

Trinidad and Tobago is:
- A Small Island Developing State (SIDS)
- A Westminster-style Parliamentary Democracy:
  - The President is Head of State;
  - The Cabinet, headed by the Prime Minister is appointed from Members of Parliament
  - A Bicameral Parliament comprises a 41-seat House of Representatives and 31 seat Senate
  - The Judiciary, headed by the Chief Justice, comprises the High Court of Justice and the Court of Appeals
- Primarily dependent on the Energy Sector but diversifying
- Highly integrated with the globalized international system
Trinidad and Tobago
Innovation Incubation:
Diamond Buzz

CAPAM 2016 Submission
The Government of Trinidad and Tobago, through its Ministry of Public Administration and Communications is committed to implementing modernization and renewal initiatives that improve the capacity and capability of the public service to better deliver government services to its citizens.

As a nation, our vision is to create a public service that observes the principles of **accountability**, **transparency**, **fairness**, and **social responsibility**: a public service known for its responsiveness to citizens’ needs.
The Trinidad & Tobago Diamond Standard (TTDS) is a national quality assurance certification programme designed to improve service delivery across the Public Service. The aim of the programme is to:

- Improve the ease of doing business with government agencies
- Make government agencies more responsive to the needs and concerns of citizens and other client groups
- Improve the quality and delivery of public services by government agencies
Citizen Lifecycle

- Receive ante-natal care
- Access maternity services
- Apply for a birth certificate

- Receive post-natal care
- Receive immunization
- Access family planning

- Register child in school
- Access public education
- ECCE Centres
- Primary Schools
- Secondary Schools
- Apply for GATE

- Apply for ID Card
- Apply for Passport
- Apply for Driver's Permit

- Apply for jobs
- Apply for BIR
- Apply for NIS
- File taxes (employer/employee)

- Make an appointment
- Attend clinic
- Receive medication

- Register death
- Apply for NIS benefit

- Improved Ease of Doing Business
- Improved Global Competitiveness
- Simplifying Life for Citizens
- Open Government
Insights from the TTDS Evaluation

In 2015, an evaluation into the pilot round of the TTDS programme revealed that many participants considered technology implementation to be a challenge due to:

- Inadequate technical capacity
- Lack of infrastructure
- Limited availability of funding.

At the same time, at a national level, the government was also seeking to move many services online, and with declining revenue from the energy sector, position Trinidad and Tobago towards diversification by making ICT a significant contributor to GDP.
Technology Driven Service Innovation

This was the genesis of Diamond Buzz.

Conceptualised as a 2-year innovation incubator project, Diamond Buzz was developed to leverage the talent of young citizens to solve problems facing public services using technology, in an effort to help these services meet the technology criterion in the Standard.

This was in alignment with smarTT - The National ICT Plan for 2014-2018 which placed significant emphasis on Innovation, Human Capital Development and ICT Sector Development, with priority focus on local content development, local skills training and transactional e-government services.
On July 21, 2015 the Diamond Division held its first iNter@CT Conference themed “Technology Adoption and Innovation in the Public Sector”, supported by both private and public sector partners including Caribbean Industrial Research Institute (CARIRI), Microsoft, F1RST and the National ICT Company.

The Diamond Buzz project was formally launched at this event:

- As an incubator to designed to drive the development of innovative, technology based solutions within the public sector;
- Supported by a team of young software developers working alongside targeted public service agencies to conceptualize and create information and communication technologies.
In addition, a key element of Diamond Buzz will be a shift towards open data and the promotion of the release of government data sets, enabling greater citizen participation in developing public sector innovations.

Citizens will be encouraged to become co-creators, working with government to uncover and define existing problems while also actively conceptualizing novel and feasible solutions to these problems.

Parallel initiatives undertaken to support this include the ODRA Delivery Mission, GoRTT Open Data Portal (www.data.gov.tt), Code Sprints and competitions.
Goal
Greater citizen satisfaction when doing business with government

Objectives
• To create ICT solutions for public services and their users
• To help gather requirements for complex projects
• To help develop ICT skills amongst young citizens
• To identify existing technologies within organizations that can meet their needs
• To drive a user/citizen centric approach to public service delivery
How does Diamond Buzz work?

Diamond Buzz projects start during the service improvement phase of TTDS where project ideas are generated and ‘diagnostics tools’ are applied to evaluate project ideas.

Approved technology ideas are given the ‘green light’ to proceed with development and implementation.
How does Diamond Buzz work?

Each Diamond Buzz project is executed in 5 stages.

1. **Conceive** – Client submits a project idea for consideration
2. **Discover** – Initial research and feasibility studies conducted
3. **Define** – Project charter and proposals are created
4. **Develop** – Solution is developed
5. **Deliver** – Solution handover to client for operationalization
Diamond Buzz Team Working Structure

- Team Lead – Service Improvement Specialist, Diamond Division
- Senior IT Analyst/System Administrator
- Diamond Buzz Junior Developers x 2
- Business Analyst/ICT Documentation Specialist
- Counterpart project team members x 3
A key premise of Diamond Buzz is that many problems can often be addressed using innovative, open and simple technologies.

Examples of open source software used:

- Joomla! – Content Management System
- Drupal – Content Management Platform
- OpenMaint – Computerised Maintenance Management System

As best practice, Diamond Buzz always seeks to develop solutions using open source software or readily available in-house resources as opposed to more expensive proprietary software, which often includes additional costs such as licensing, maintenance contracts and consultancy support.
Benefits of Diamond Buzz

PROJECT COSTS (DIAMOND BUZZ VS. MARKET RATES)

CLIENT/PROJECT NAME

SATD - Scholarship Calculator
NWRHA - Virtual Hospital Maps
TITL - Online Class Registration
SWRHA - Health Facility Website
NATT - Asset Management System
NAPS - Student Management System
ERHA - CRM System

Diamond Buzz Cost (TTD$)  Average Open Market Cost (TTD$)
Benefits of Diamond Buzz

TOTAL PROJECT COSTS BY SOLUTION CATEGORY

SOLUTION CATEGORY

- E-Payment Solutions
  - Average Open Market Cost: $100,000
  - Diamond Buzz Cost: $67,000

- Enterprise Application Development/Customization
  - Average Open Market Cost: $102,545
  - Diamond Buzz Cost: $110,000

- Website Development & Upgrades
  - Average Open Market Cost: $52,907
  - Diamond Buzz Cost: $50,000

- Web Applications
  - Average Open Market Cost: $50,000
  - Diamond Buzz Cost: $28,700

COST (TTD$)

- $0
- $100,000
- $200,000
- $300,000
- $400,000
- $500,000
- $600,000
Risks and Potential Benefits increase exponentially with expanding scope of Diamond Buzz Projects.
Initial Diamond Buzz Project Ideas

- Scholar Indebtedness Calculator
- Financial management database
- E-ticketing system
- Online Registration & scheduling system for IT Literacy Classes
- Development of a Stores Management System
- Websites and website upgrades
- Client feedback management system
- Student Information Management systems
- A virtual map for health service centres
- Requirements gathering (customer case management system)
- Intranet or monitoring dashboard
- Police e-ticketing system
- Medication availability application
Diamond Buzz Project Highlights

SCHOLARSHIPS & ADVANCED TRAINING DIVISION

Objective: To allow for speedier scholar estimate of repayment balances; estimated obligatory service etc. by creating a system that estimates the length of obligatory service and determines repayment amounts/schedule

SCHOLAR INDEBTEDNESS CALCULATOR

PROJECT STATUS

- Initial prototype developed
- Testing completed
- SATD Team amendments incorporated
- New Foreign Exchange API to be approved
- Project to be transferred to MOE by end of Sept 2016
SOUTH-WEST REGIONAL HEALTH AUTHORITY

**Objective:** To make it easy for patients to find information about SWRHA services online and to improve the existing structure and aesthetics of the entire website

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**WEBSITE UPGRADE**

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**PROJECT STATUS**

- Alternative Analysis presented to client
- Client approved option to build new site in Drupal 7
- User experience research completed
- Next steps:
  - Website to be developed by August 2016
  - Project to be transferred to SWRHA by September 2016
Diamond Buzz Project Highlights

NATIONAL ARCHIVES

Objective: To implement a solution that can manage storage and access to inventory

PROJECT STATUS

– Open source solution identified: OpenMaint
– Customization of workflows, security configurations and testing in progress
– Next steps:
  • Client to view a demo of solution by end of August 2016
  • Project to be transferred to National Archives by Sept 2016
Objective: To develop new modern website for TITL including a feature that allows persons to register for TITL’s IT Literacy classes online without having to visit a learning centre.

PROJECT STATUS

- Change request approved to include website upgrade in project scope
- Proposal for website redesign and online registration module completed and submitted to client
- Next steps:
  - Client to provide website content
  - Website to be developed by October 2016
  - Project to be transferred to TITL by November 2016
Diamond Buzz Project Highlights

**E-TICKETING SYSTEM**

**WATER TAXI SERVICE**

**Objective:** To develop functional requirements for a solution that would allow for the purchasing of sailing tickets online, with options for mobile boarding passes and/or smart card swipe access.

**PROJECT STATUS**

- Interviews with staff at ferry terminals completed, process maps developed and initial requirements drafted and submitted
- Project on hold as funds to procure the e-ticketing system are not available
- Next steps:
  - Option being explored to change the scope of the project to a website development project
  - Decision on final project scope to be made by client in September 2016
NAPARIMA COLLEGE

Objective: To enhance functionality of the school’s existing student information system so that the system will also be used to generate transcripts and teacher records with different access levels.

CLIENT NEED MET BY EXISTING SOLUTION

NWRHA

Objective: To make it easier to find health services within hospitals via an online mapping service showing the location of different services. **APPROVAL NOT GRANTED TO INITIATE PROJECT**

ERHA

Objective: To develop a system to manage client feedback. **DISCOVERED A SIMILAR SYSTEM USED BY A CLOSE PARTNER THAT COULD BE UTILISED**
Challenges and Opportunities

Need for stronger technical team working on projects

Team members with diverse technical experience and backgrounds will improve quality of solutions and project delivery timeframes.

Lack of counterpart support in client agencies

Actions are being taken to strengthen integration and partnerships with client agencies.

Partnerships with Universities

Partnerships with universities will help to get more young coders involved.

Replicability and Adaptability

Solutions can be adapted for re-use across a variety of government services.
The Diamond Buzz incubator has not been operating long enough for a thorough final project evaluation. Nonetheless, oversights, due diligence and risk management practices have been put in place to control projects in order to achieve objectives as much as possible.

At the end of the 2 year incubation period, an evaluation will be undertaken by an internal audit division of the Ministry of Public Administration and Communications. It is expected that an evaluation will yield deeper insights into the performance of Diamond Buzz and help to shape decisions for its future.
The Future of Diamond Buzz

PLANS FOR THE FUTURE
In the immediate future, we envision that the work of the Diamond Buzz team will focus on:
• Developing solutions to solve public sector problems
• Harnessing open data sets to deliver public value
• Adapting successful past projects for replicability and scalability across the public sector
• Partnering with universities and other academic bodies for future work

UPCOMING PROJECTS
• Development of a CRM solution for regional municipality
• Mobile app for locating vehicles towed by TTPS and POS City Corporation