

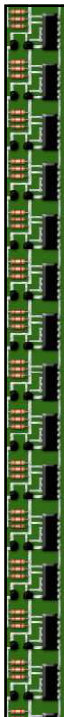
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Ministry of Public Administration

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## **NATIONAL BROADBAND PLANS: POLICIES, TECHNOLOGIES AND REGULATION**

The Honourable Carolyn Seepersad-Bachan  
Minister of Public Administration  
<http://www.mpa.gov.tt>

April 18, 2012



## **PRESENTATION OVERVIEW**

- Regional Context
- Overview of Trinidad & Tobago;
- T&T National Broadband context;
- Current Status of T&T ICT Sector;
- Legal and Regulatory Reform
- Draft National Broadband Plan



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## THE IMPORTANCE OF CONNECTIVITY



## PRIORITIZING BROADBAND

- **Connectivity (Broadband) increasingly viewed as a basic public service, along with potable water, electricity, etc.**

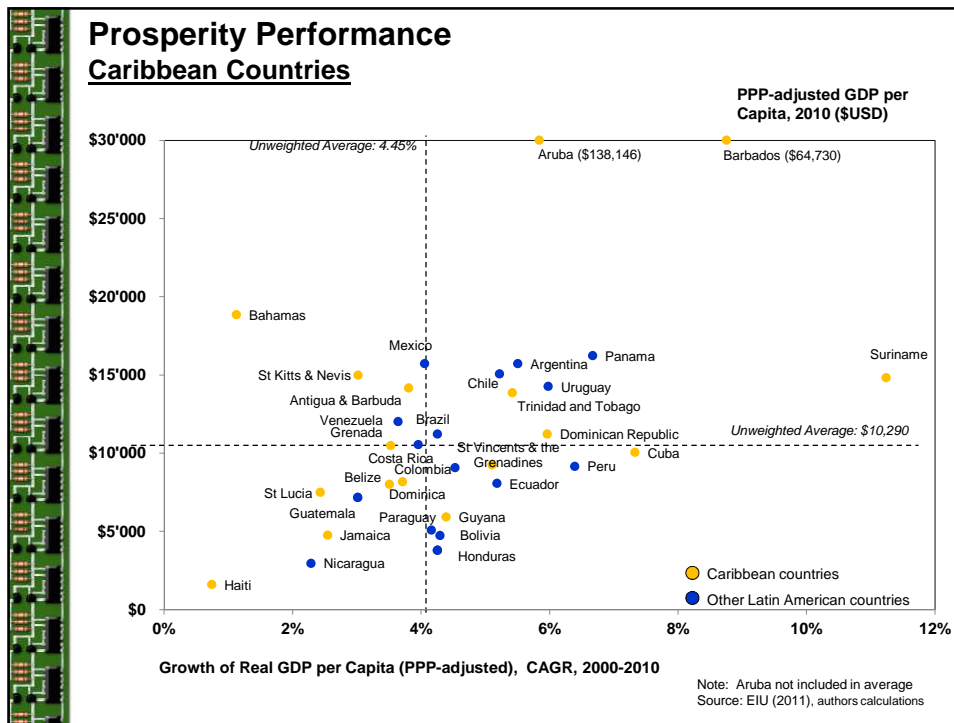
- **Broadband is an economic game changer:**

- *“for every 10 per cent increase in broadband penetration we can expect an average of 1.3 per cent additional growth in national gross domestic product (GDP)”*

*The World Bank*

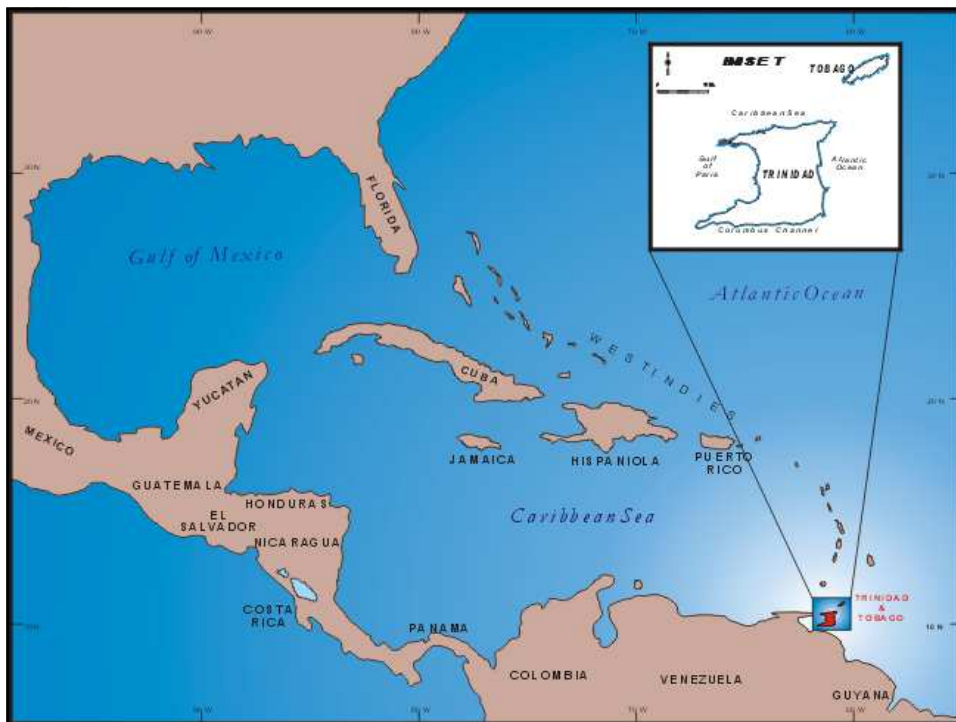
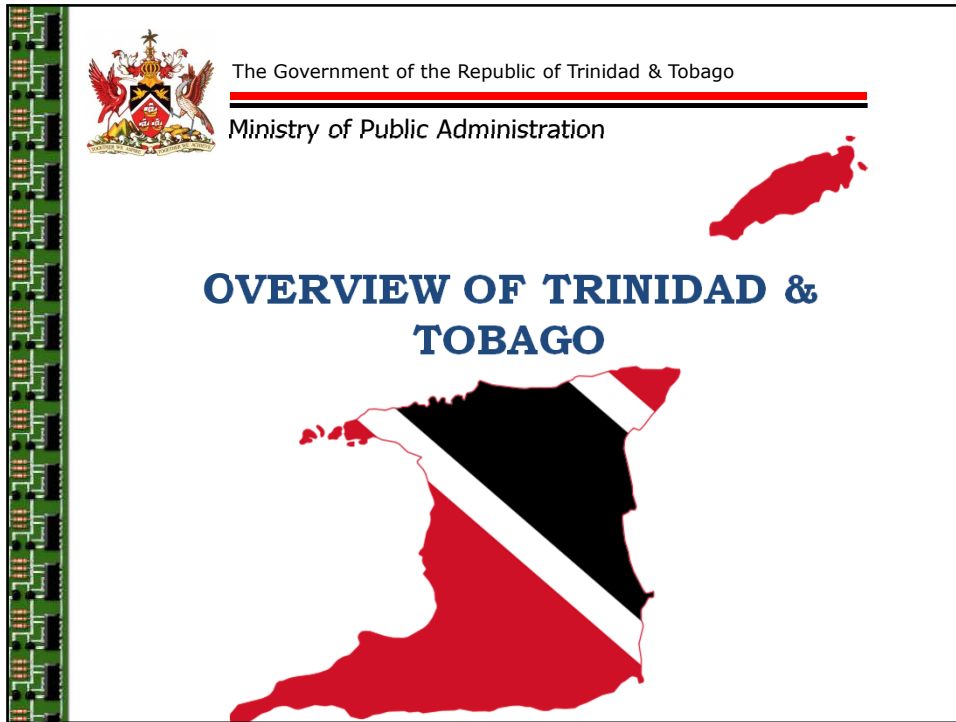
**The ITU has therefore prioritized connectivity:**

- Connect the Unconnected by 2015
- Broadband Commission



## CONNECTING THE CARIBBEAN

- **Many Caribbean States share a number of common characteristics:**
  - Small Island Developing States (SIDS)
  - Physically separated but committed to integration into one Caribbean Community (CARICOM)
- **This community of interest has led to the “Connect the Caribbean” sub-set of the Connect the Americas initiative.**
  - ICT is a critical tool to bridge Caribbean divides, unite communities and deliver regional services



## TRINIDAD & TOBAGO IS ...

- A **Small Island Developing State (SIDS)**;
- A Westminster-style **Parliamentary Democracy**:
  - The **President** is Head of State;
  - The **Prime Minister** is Head of Government, leading a **Cabinet**, 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**;
- A member of, *inter alia*, CARICOM, the Commonwealth, the ACP Group of countries, the OAS and the United Nations.

## TRINIDAD & TOBAGO: QUICK FACTS

- **Area:** 5,128 km<sup>2</sup> (1,980 miles<sup>2</sup>)
  - **Trinidad:** area: 4828 km<sup>2</sup> (1864 miles<sup>2</sup>)
  - **Tobago:** area: 300 km<sup>2</sup> (116 miles<sup>2</sup>)
- **Population:** 1.3 million (approximately)
  - **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:**

Indian	African	Mixed	Other	Unspecified
40%	37.5%	20.5%	1.2%	0.2%

## TRINIDAD & TOBAGO ECONOMY

Leading Caribbean producer of oil and natural gas

- Heavily dependent on Energy Sector:
  - Responsible for 40% GDP and 80% Exports
  - Major downstream energy-sector:
    - ❑ Methanol (#1 exporter from single site; #1 Exporter to USA)
    - ❑ Ammonia (#1 Exporter from a single site; #1 Exporter to USA)
    - ❑ Urea
    - ❑ Iron and Steel
  - Employs only 5% of the Labour Force

## TRINIDAD & TOBAGO ECONOMY

- Significant supplier of manufactured goods (food and beverages; cement etc.) to Caribbean region
- High priority placed on economic diversification and sustainable development
  - *ICT is one of the key sectors identified for development*

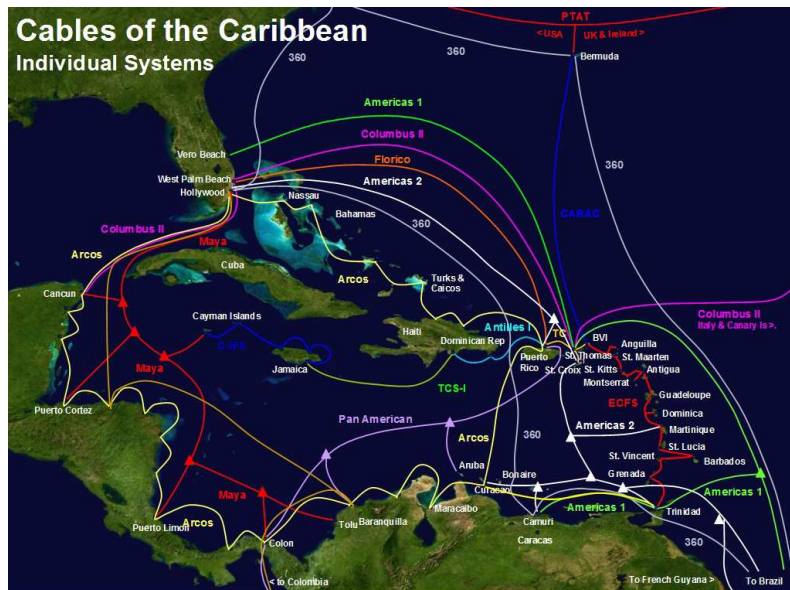


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## BROADBAND: THE T&T NATIONAL CONTEXT



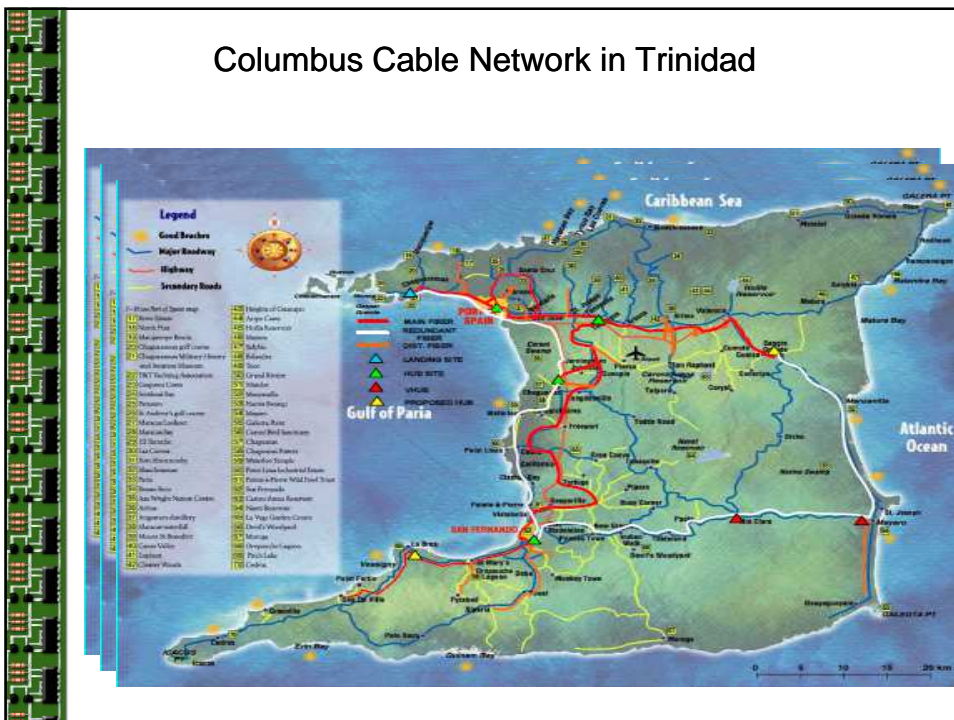
## FROM CARIBBEAN CONNECTIVITY...



# Fixed Network Coverage

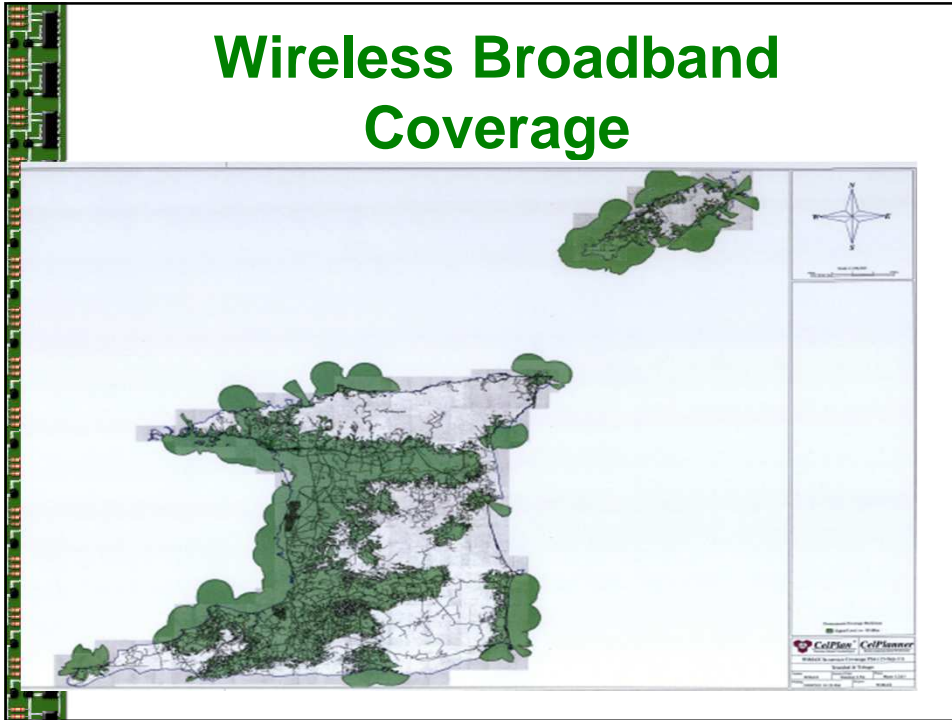


# Columbus Cable Network in Trinidad





## Wireless Broadband Coverage



## NATIONAL DEVELOPMENT STRATEGY

- **ICT is integral to T&T's National Development Strategy:**
  - Key Sector for economic growth & diversification
  - Critical tool to improve national competitiveness
  - Cross-cutting enabler for sustainable development
  
- **ICT specific developmental "Pillars"**
  - Connecting Trinidad & Tobago and Building the New Economy
  - More diversified and Knowledge-Based Economy

## **NATIONAL CONNECTIVITY AGENDA (2003)**

- Objectives of T&T's National Connectivity Agenda:
  - To provide all citizens with Internet access;
  - To focus on the development of children, and adult skills to ensure a suitable solution and a vibrant future;
  - Promote citizen trust, access and interaction through good governance;
  - Maximize the potential within all citizens, and accelerate innovation, to develop a knowledge based society.

## **NATIONAL ICT STRATEGY (2003)**

### ***fastforward***

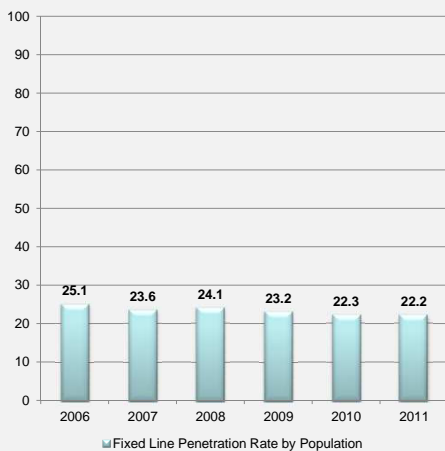
- Launched at same time as WSIS Phase I
- Focused on Connectivity.
- Objectives:
  - Liberalization of the Telecommunications Sector;
  - Connectivity to homes and citizens;
  - Connectivity to business houses;
  - Connectivity of Government Agencies
  - Connectivity schools and libraries;
  - ICT Skills Development
  - Development of an ICT Industry.

## Number of Operators in the Market

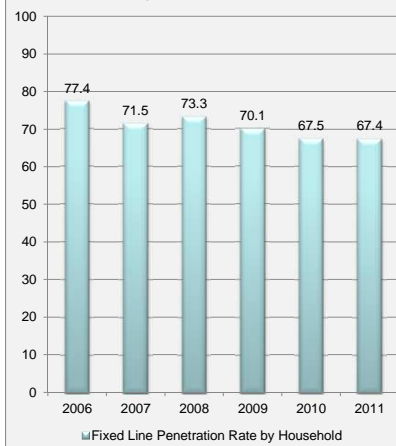
Network Category	Service Provided	Operational Concessionaires
<b>International Telecommunications</b>	Facilities only	1
	Facilities and/ or Services	8
<b>Mobile Telecommunications</b>	Mobile Voice and Internet services	2
<b>Fixed Telecommunications</b>	Fixed Telephony	2
	Fixed Internet	7
<b>Subscription TV (Pay TV)</b>		9
<b>Free to Air Radio Broadcasting</b>		37
<b>Free to Air Television Broadcasting</b>		9

## Fixed Voice Penetration

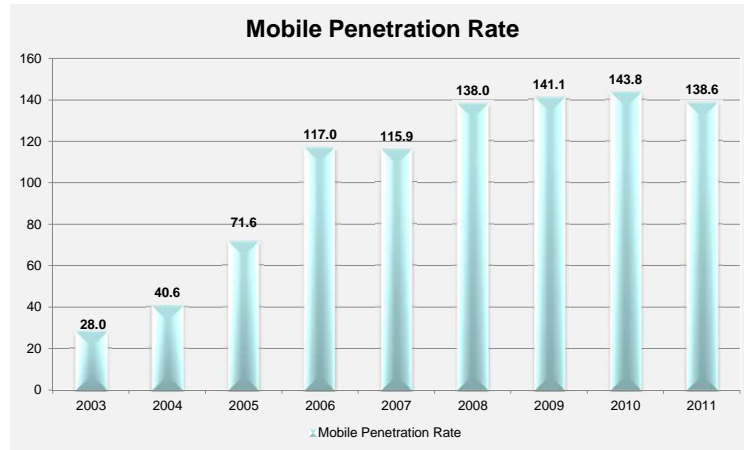
**Fixed Line Penetration Rate by Population**



**Fixed Line Penetration Rate by Household**

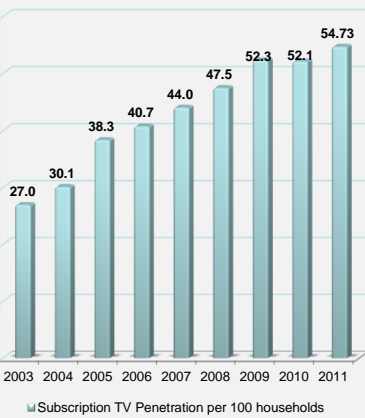


## Mobile Voice Penetration

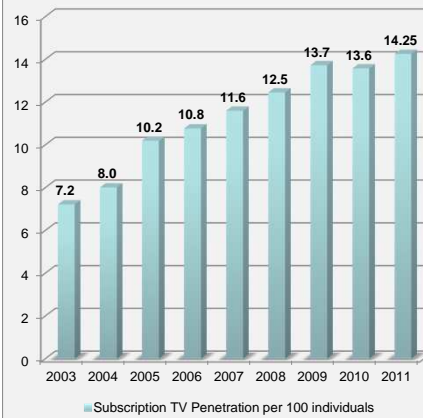


## Subscription TV Penetration

Subscription TV Penetration per 100 households

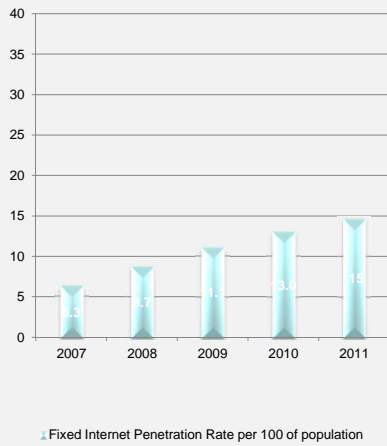


Subscription TV Penetration per 100 individuals

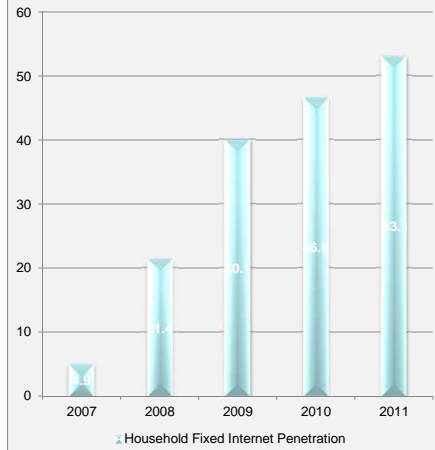


## Fixed Internet Penetration

Fixed Internet Penetration Rate per 100 of population

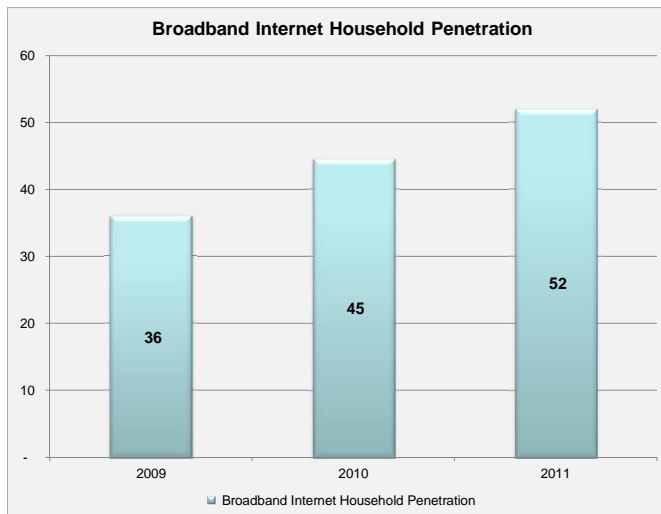


Household Fixed Internet Penetration



## Broadband Penetration

Broadband Internet Household Penetration





### **BROADBAND AND THE NATIONAL ICT PLAN 2012-2016**

- Launched a Consultative Process for the development of the National ICT Plan:
- Focused on *creating opportunities for people and business and improving the quality of life.*

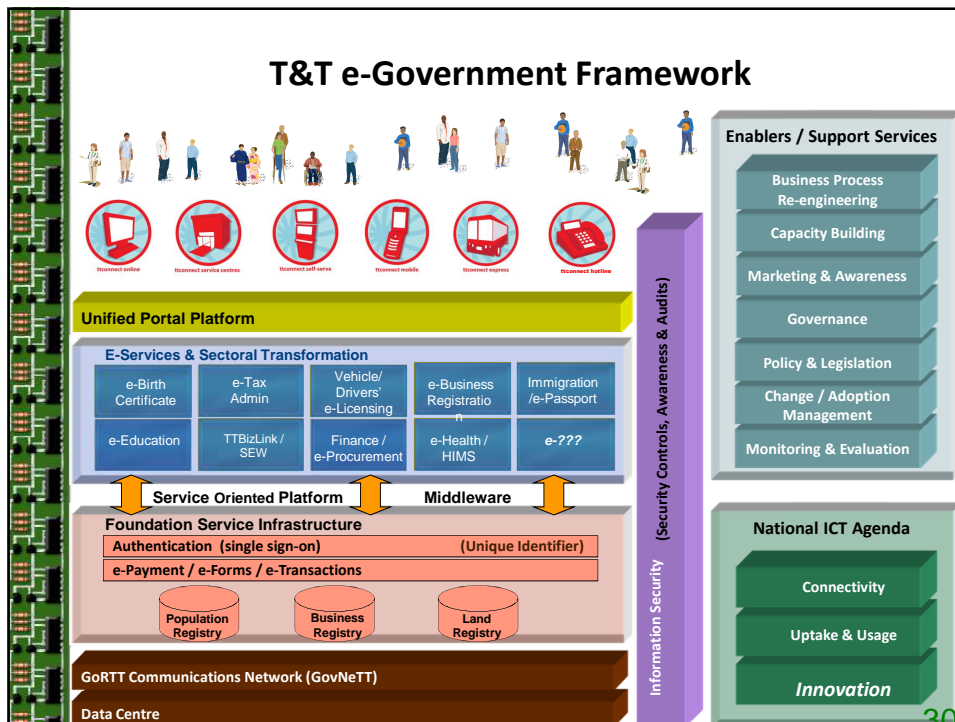


### **THE NATIONAL BROADBAND STRATEGY**

- Draft Broadband Strategy prepared by the Telecommunications Authority of Trinidad & Tobago (TATT) (2011)
- Several Ministries collaborating on ensuring alignment of national broadband agenda with National ICT Plan
- World Bank engaged to advise Government on Broadband

## BROADBAND DEMAND: A FEW CONSIDERATIONS

- Broadband - A key enabler for **Innovation**
- Shifting from **connectivity** to **uptake**
  - **local digital content**;
  - **software** development;
  - New opportunities for **creative industries** (entertainment, music, film, etc.)
- **Open Data Initiative**
- **e-Commerce:**
  - Allow for affordable **e-Commerce Platforms** while
  - Ensuring Information Security and Privacy
  - Promoting MSME development





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## **BROADBAND AND LEGISLATIVE AND REGULATORY REFORM:**



### **Reform Legislative and Regulatory Frameworks**

#### Objectives:

- Discourage destructive competitive behaviour
- Encourage investment, innovation, and consumer confidence;
- Shift from Licensing and ex-post reactionary regulation to *Market Supportive mix of frameworks that support innovation in service delivery*

#### Expected Outcomes:

- Build-out of Capital Intensive Infrastructure nationwide;
- Improved Quality of Service (Global Standards);
- Expanded range of service offerings



## **ISSUES**

- Convergence.
- Effective and Efficient spectrum management
- Full Competition (encouraging new entrants to the market);
- Open Access: Interconnection and shared facilities
- Number portability
- Consumer Protection (Quality of Service: Dispute Resolution; establishment of more stringent administrative penalties for non-compliance; etc.)
- Universality:

## **Work in Progress**

- ❑ Legislative Framework:
  - Short term: Amendments to encourage investment.
  - Medium Term: Complete review and revamp aligned to new policy agenda.

## Work in Progress

- Regulatory Frameworks:
  - Interconnection
  - Access to Facilities
  - Spectrum management
  - Numbering Plan
  - Pricing
  - Accounts separation
  - Information Requirements for Providers
  - Quality of Service
  - Universality

## e-LEGISLATIVE REFORM

Legislation	Status
e-Transactions Act	Assented to 2011; partially proclaimed 2012
Data Protection Act	Assented to 2011; partially proclaimed 2012
Audit and Exchequer Act	Amendments being drafted
e-Payments Legislation	In preparation
Cyber-Security Legislation	Under development as part of the national Cyber-Security Agenda



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## TRINIDAD AND TOBAGO: DRAFT NATIONAL BROADBAND PLAN



### T&T Conceptual Network Topography



5/8/2012

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## BROADBAND TARGETS

- Draft Broadband Plan under consideration
- Proposed Targets
  - By 2014: minimum of **5 Mbps** to all citizens.
  - By 2016: minimum of **10 Mbps** to all citizens.
  - By 2020: minimum of **100 Mbps** to all citizens.
- Targeted capacities already available on wired networks.

## BROADBAND CONSIDERATIONS

- **Objective: 100% Broadband coverage in T&T**
- **Public Private Partnership (PPP) :**
  - approach preferred involving public and private funds both foreign and private.
- **3 separate PPP Projects:**
  1. Submarine cable landing station (both International and Tobago) including carrier hotel;
  2. Open Access Backbone Network (wholesale broadband provider)
  3. Access Networks

## BROADBAND CONSIDERATIONS

- Solutions (incentives and regulations) to encourage **cross-sector infrastructure sharing**
- In the Pipeline:
  - Working with existing providers to establish a National IXP
  - Possible introduction of a third mobile provider to bring advanced technology to market (e.g. **4G Technology**)

## UNIVERSALITY

- **Universal Service Fund** to be managed by **the independent Regulator (trend in the region)**
- Currently: Surplus funds from TATT
- Finalization of the **Universality Framework**
- **Governance Framework .**
- Providers to fund USF:
  - Contribution to USF will be from 0.5-1.5% of gross revenue

## UNIVERSALITY

### ■ Priority uses :

1. Connecting **unserved and underserved** areas
2. Connecting **community access centers**
3. Providing access for **special needs groups**, including the differently abled and young entrepreneurs

## DRAFT BROADBAND PLAN 1/2

No.	Proposed Initiatives	Proposed Timeframe for Implementation
1	Establishment of a broadband backbone network for core, sub-tended core and inter-island transmission capacity.	Short Term: within in next 1 – 3 years.
2	Exploration of new submarine cable system, a second landing point and carrier hotel.	Medium to Long Term: next 3 – 7 years.
3	Broadband satellite service capacity.	Short Term: within in next 1 – 3 years.

## DRAFT BROADBAND PLAN 2/2

No.	Proposed Initiatives	Proposed Timeframe for Implementation
4	Development of an incentive regime: <ul style="list-style-type: none"> <li>• Incentive regime based on level of investment</li> <li>• Waiver of spectrum and licence fees</li> <li>• Removal of duty on smart/handheld devices</li> </ul> Incentives for development of mobile applications	Almost immediately
5	<ul style="list-style-type: none"> <li>• Investment encouraged in three areas:</li> <li>• External connectivity</li> <li>• Domestic connectivity</li> <li>• Last mile</li> </ul>	Short Term: within 1 – 3 years

## CONCLUSION: THE WAY FORWARD

For T&T and other Caribbean SIDS:

- ICT is a CSF for sustainable development
- Broadband is a CSF for ICT uptake

ICT (and Broadband) rollout in the Caribbean:

- Collaborative approach by Government; Private Sector and Civil Society

T&T and the Caribbean therefore places a high priority on creating the necessary **enabling environment** to encourage:

- ICT Infrastructure development
- Attracting Investment (Domestic and Foreign)
- Foster ICT uptake and Innovation



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*Thank You*