Regional Seminar on the Economic and Financial Aspects of Telecommunications Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC)

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Enhancing Effective Broadband Access in the Caribbean
A Status Report and Recommended Strategic Approaches

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The Caribbean

Small size

Small populations

Severe resource constraints

Economic and physical vulner-abilities

Regional Telecom Reform

- Reform began at the turn of the century with market liberalisation

- This led to widespread access to mobile phones, to users in all segments

Photo Source:
http://en.wikipedia.org/wiki/File:Mobile_phone_evolution.jpg

The Road to Liberalization

- Market Liberalization in the Caribbean was influenced by global trends

- US, UK and Japan were leading players and influenced the international, regional and domestic policies

Impact of Regulation

"The most important factor that led to America's stunning success in information technology was not the free market but government regulation… These actions opened the door to competition and lower prices. More important, they changed the industry's structure, replacing monoliths with smaller, specialised companies which have to work with others with complementary skills. The result has been tremendous innovation."

Economist.com. June 2, 2009

Global Trends towards Liberalization

- The WTO Basic Agreement on Telecommunications was signed in 1997

- The 1998 pan-European Union liberalization

- The liberalization of Anglo-Caribbean jurisdictions took place at the start of the new century

Reform in Jamaica

- C&W held monopoly till 2038
- Policy leaders, business groups, local advocates lobbied for liberalization
- Global changes also initiated WTO/ITU leading to government policy shifts
- Negotiating the termination of the C&W monopoly that would have lasted till 2013 (renewable to 2038)

Legislative and Regulatory Framework (Jamaica)

- Telecommunications Act 2000 was a move towards independent institutional telecoms and spectrum regulators, price caps, interconnection, unbundling
- New regulatory/advisory bodies emerged
  - OUR
  - SMA
  - JTAC

Telecommunications Legislation and Policy(1)

| Country	Legislation	Policies
Jamaica	• Telecommunications Policy, 2000 • The Office of Utilities Regulation Act (1995)	•Telecommunications Policy, 2007 •National Information and Communications Technology Strategy, 2006
Barbados	•Telecommunications Act, 2001 •Fair Trading Commission Act (2001) •Utilities Regulation Act, CAP.282 (2002)	• VoIP policy (2007) • Barbados Unregulated Services Policy(2003).

Telecommunications Legislation and Policy(2)

Country	Legislation	Policies
Trinidad and Tobago	• Telecommunications Act (2001), Amended(2004)	• Draft Policy for Micro, Small and Medium Sized International Public Telecommunications Service and/or Network Providers in Trinidad and Tobago(2004) •National Information and Communications Technology Plan (Fastforward TT)

Telecommunications Legislation and Policy(3)

Country	Legislation	Policy
Guyana	•Telecommunications Act, 1990 •The Public Utilities Commission Act (1999) •Post and Telegraph Act Cap.47.01	• National Development Strategy (2001-2010)

OECS	• Telecommunications Act
	
	  - St. Lucia, 2000
	
	  - St. Vincent and Grenadines, 2000
	
	  - St. Kitts and Nevis, 2000 (Amended 2001)
	
	  - Dominica, 2000 (Amended 2001)
	
	  - Grenada, 2000
		•ECTEL makes policy recommendations to its member states, e.g.:
		
		 - St. Vincent and Grenadines' recent consultations on VoIP IP Telephony regulation policy,

# Eastern Caribbean Telecommunications Authority (ECTEL)

- Established by five EC states to promote market liberalization and competition in telecoms.

- National Telecommunications Regulatory Commissions (NTRCs) complement the work of ECTEL

St Kitts & Nevis

Grenada

St Lucia

Dominica

ECTEL

St Vincent & the Grenadines
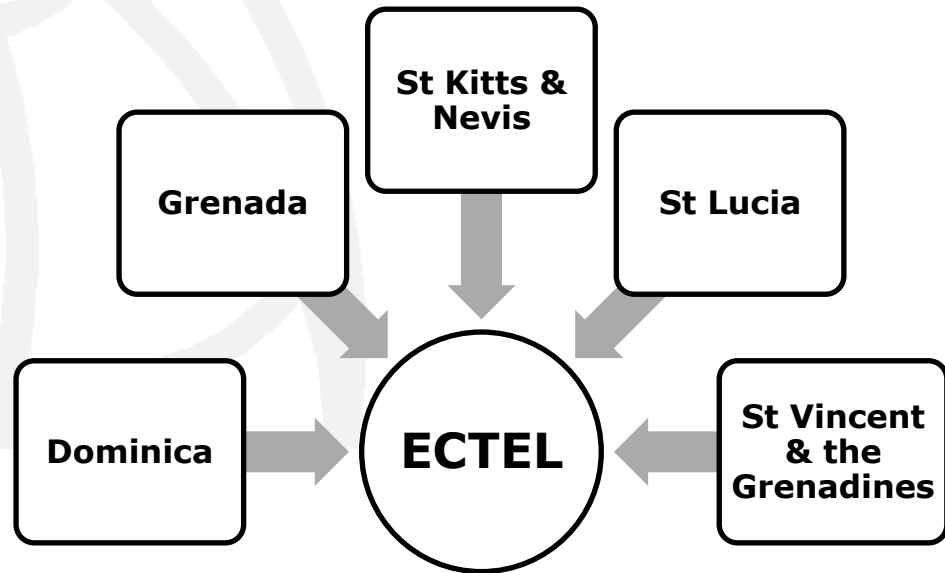
The Result of Liberalization

- Increased phone coverage in rural areas and inner city communities
- Competitive pricing
- Improved service provision
- Network expansion and modernization
- Explosion in mobile phone usage (eg. in Jamaica – 94% of individuals)

Mobile Usage and Access (DIRSI/TPM 2007 Study)
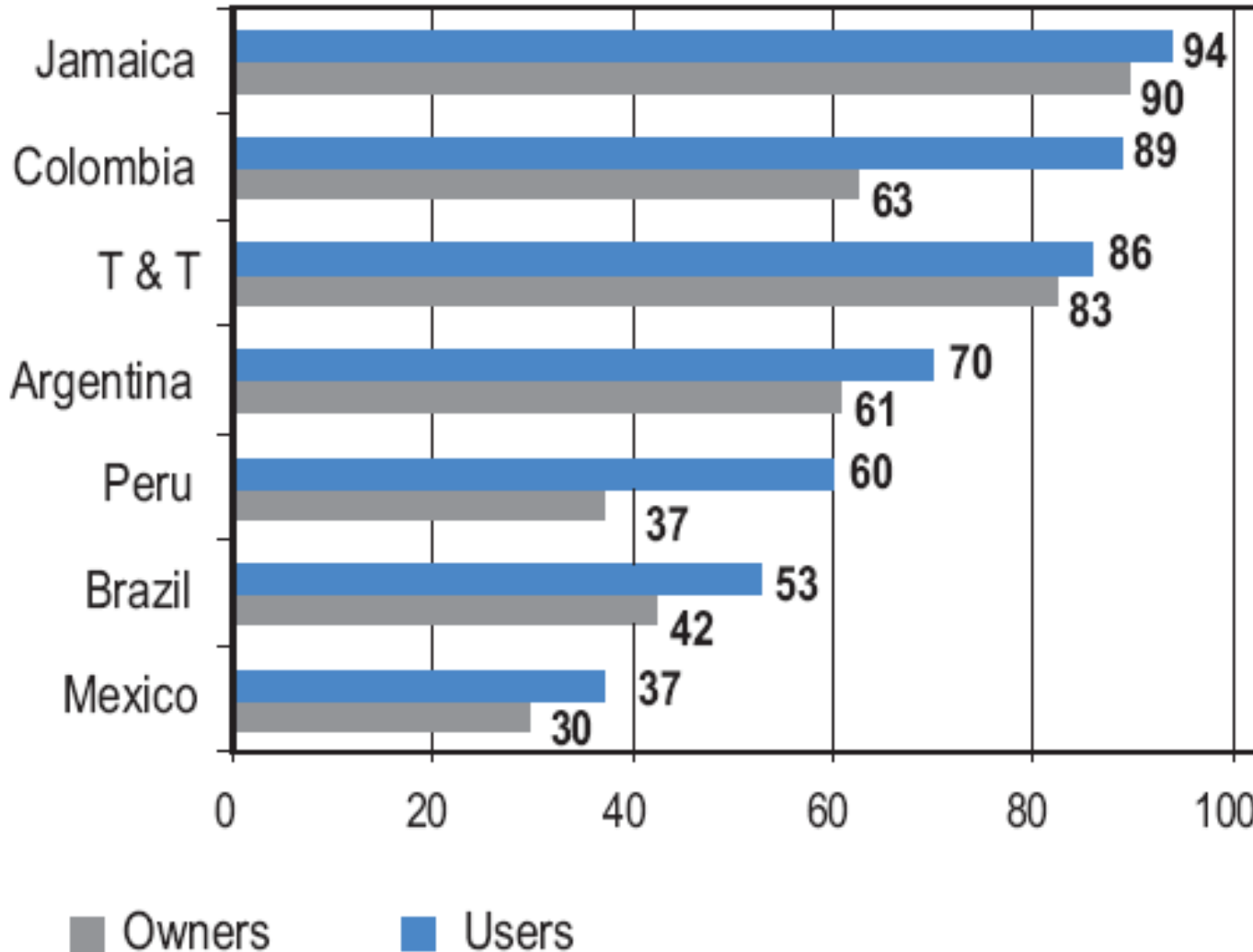
Global ICT Developments 2000-2010
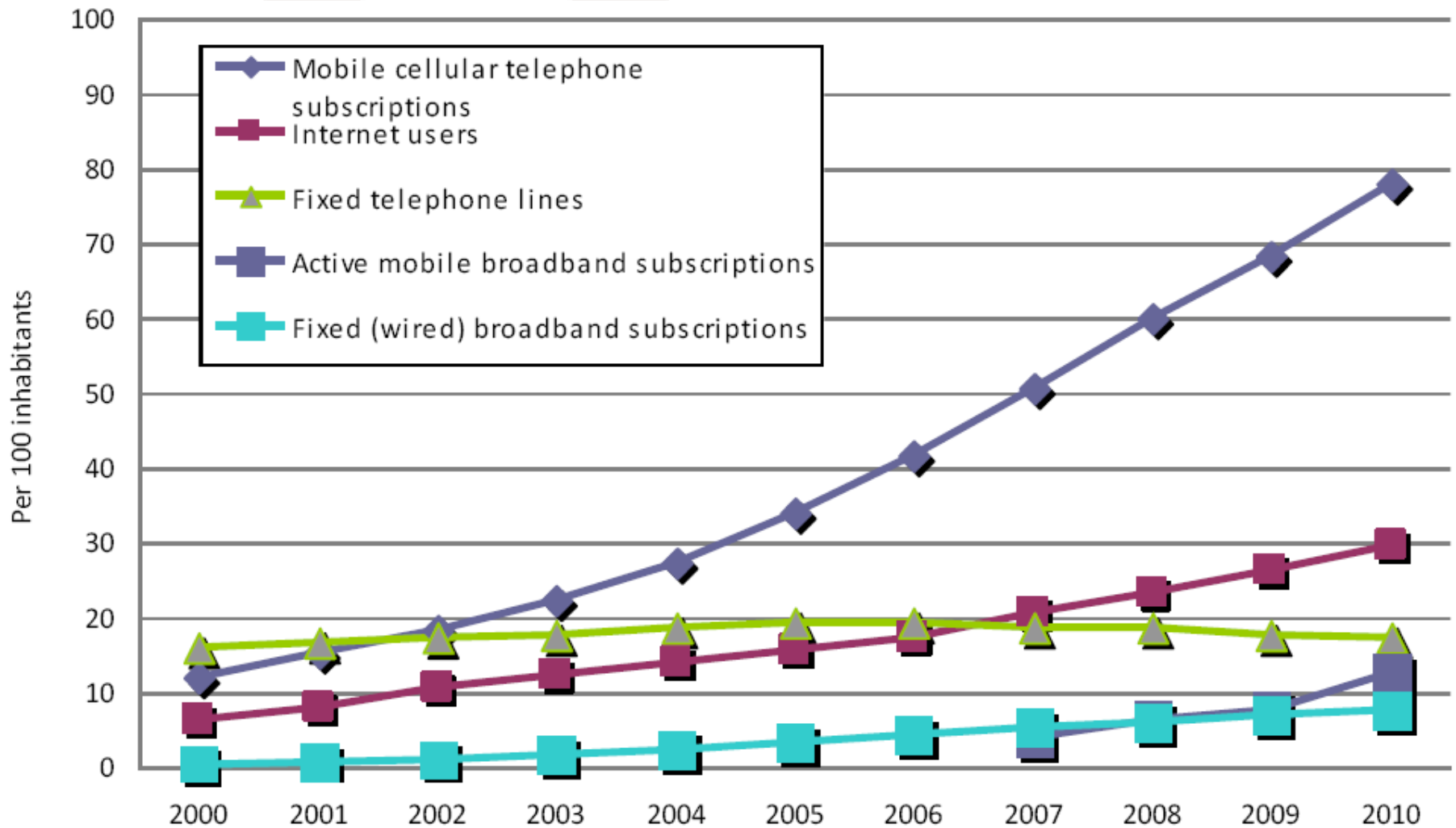
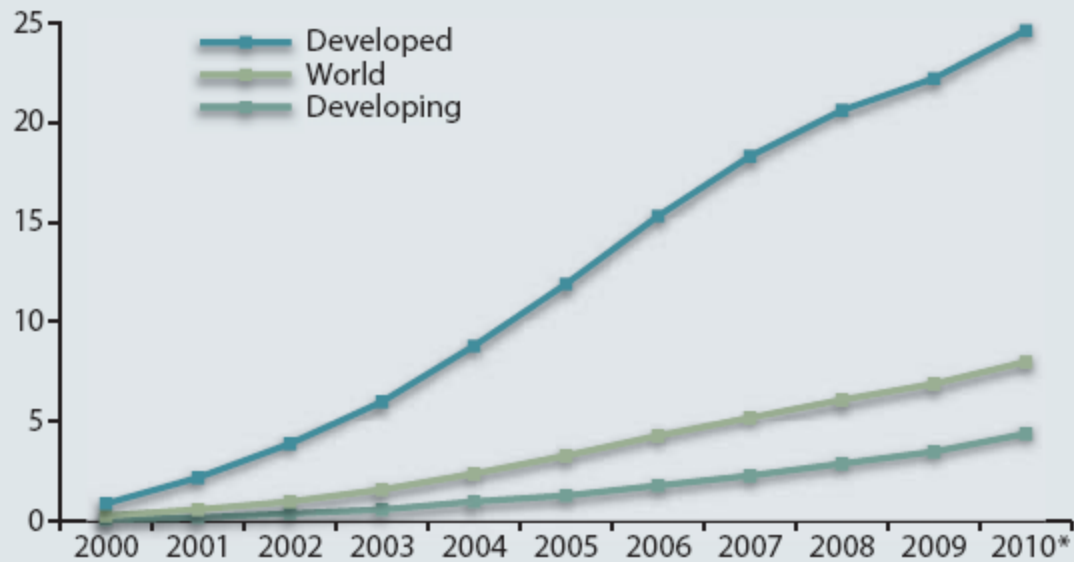
Source: ITU World Telecommunication /ICT Indicators database

But Internet Access Remains a Problem ...

The continuing broadband divide

Fixed broadband subscriptions per 100 inhabitants

- Developed
- World
- Developing

Note: *Estimate
Source: ITU World Telecommunication/ICT Indicators database

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Regional Indicators
(wider Caribbean)

Population	Internet Users	Facebook Users
41.4 million (estimated)	11.9 million Internet users or penetration of 28.7%	6.2 million Facebook or 15% penetration rate.

Where are we with Broadband?
The Case of Jamaica

- Largest of the English-Speaking Caribbean jurisdictions and a weather vane of regional trends

Caribbean ICT Indicators and Broadband Survey

JAMAICA

Hopeton Dunn
Richardo Williams
Michele Thomas
Allison Brown

A Publication of the
Telecommunications Policy and Management (TPM) Programme
Mona School of Business, The University of the West Indies, Mona
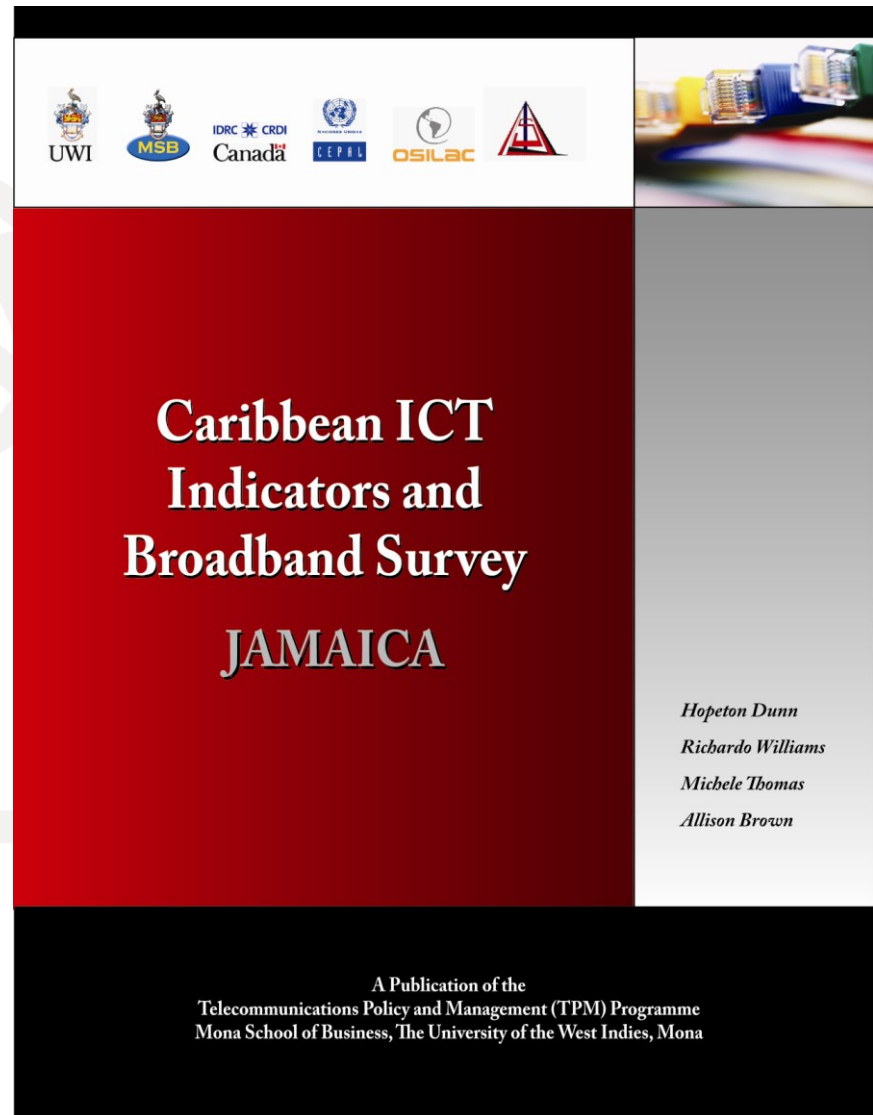
Caribbean ICT Indicators and Broadband Survey

- Funding support by IDRC, Canada
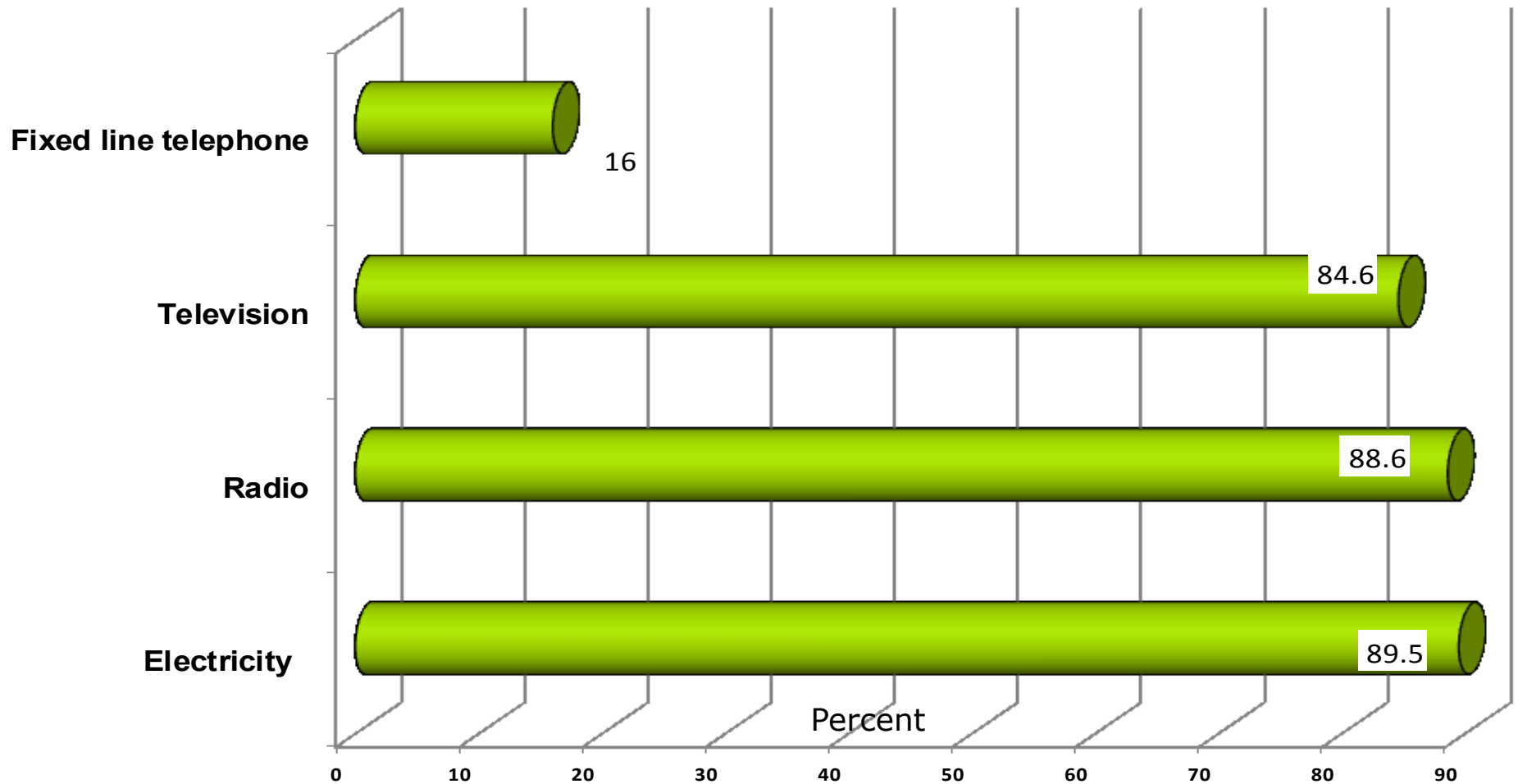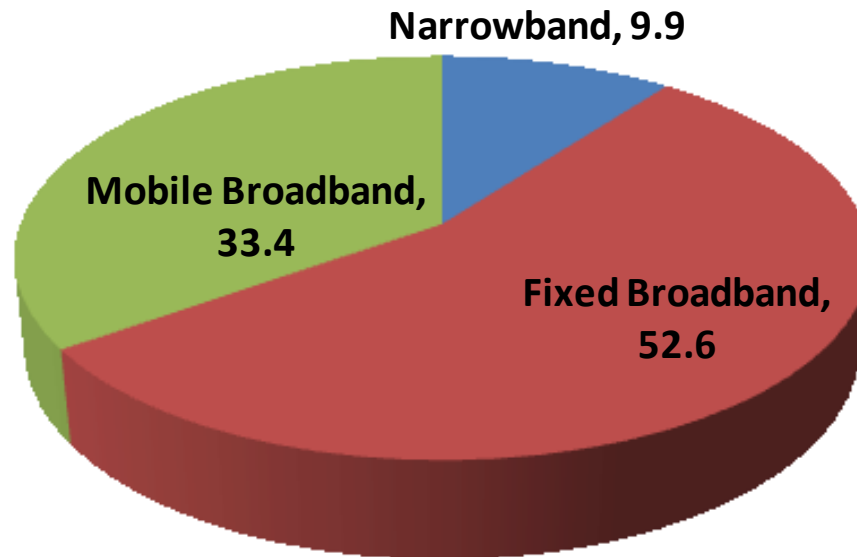- Partners:
  - STATIN
  - TPM, MSB, UWI, Mona
  - UWI St. Augustine
  - OSILAC
  - (ECLAC)

Household Access to Selected Media / ICTs

Category	Percent
Fixed line telephone	16
Television	84.6
Radio	88.6
Electricity	89.5

Percent

0 10 20 30 40 50 60 70 80 90

Main Internet Access Technology (Households)

Narrowband, 9.9

Mobile Broadband, 33.4

Fixed Broadband, 52.6

86% of Households with Internet had Broadband
13.4% of the population had access to Broadband

*Numbers indicate percentages

Location of Individual Internet Access

Home: 43

Place of Education: 36.6

Another person's Home: 28.4

Work: 22.5

Commercial Internet Facility: 18

Any place via a mobile telephone: 17

Community Internet Facility: 13.6

Other locations: 10.6

Other mobile access device: 4.9

Access in the home is critical to improving broadband reach
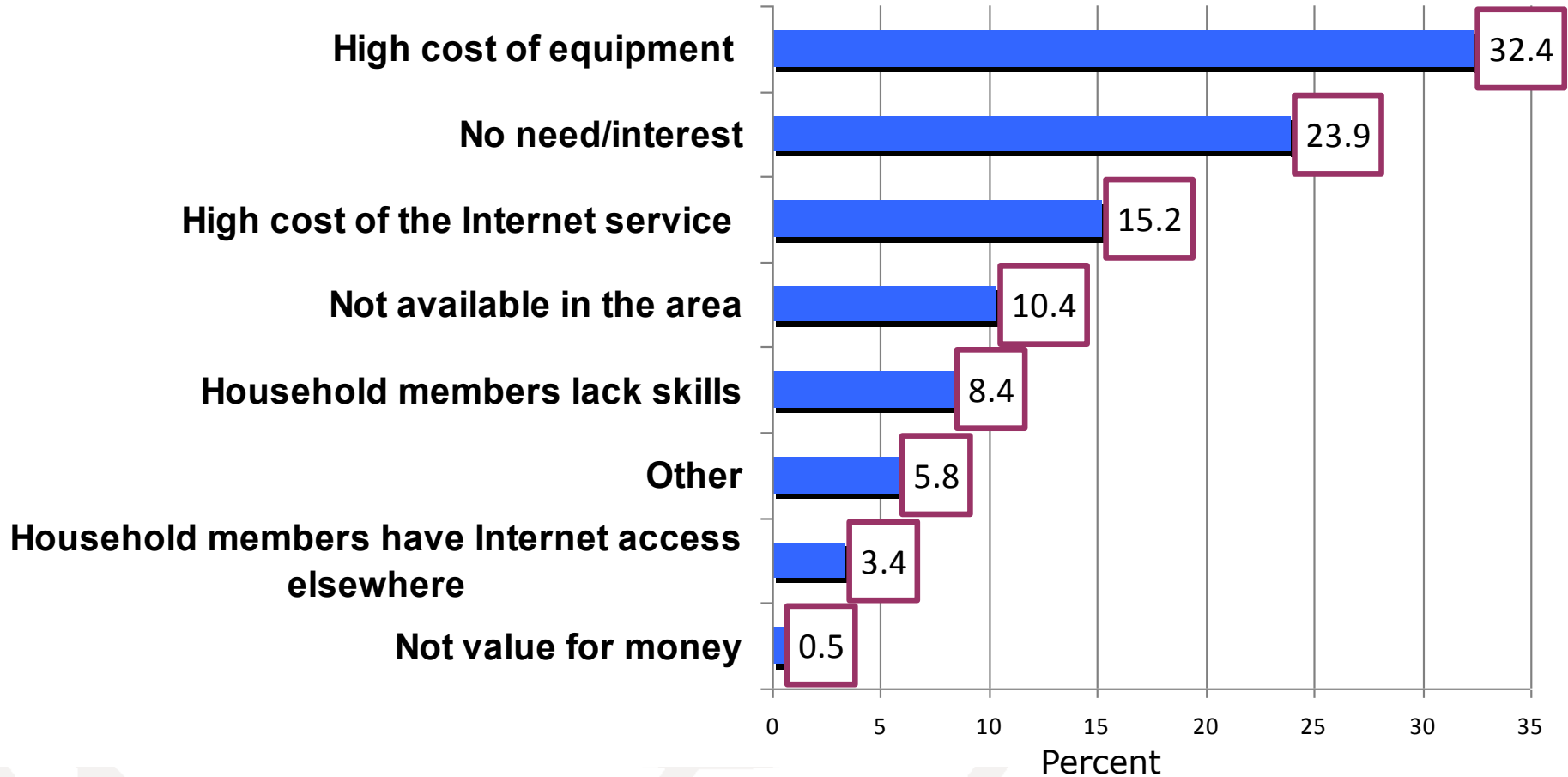
Percent
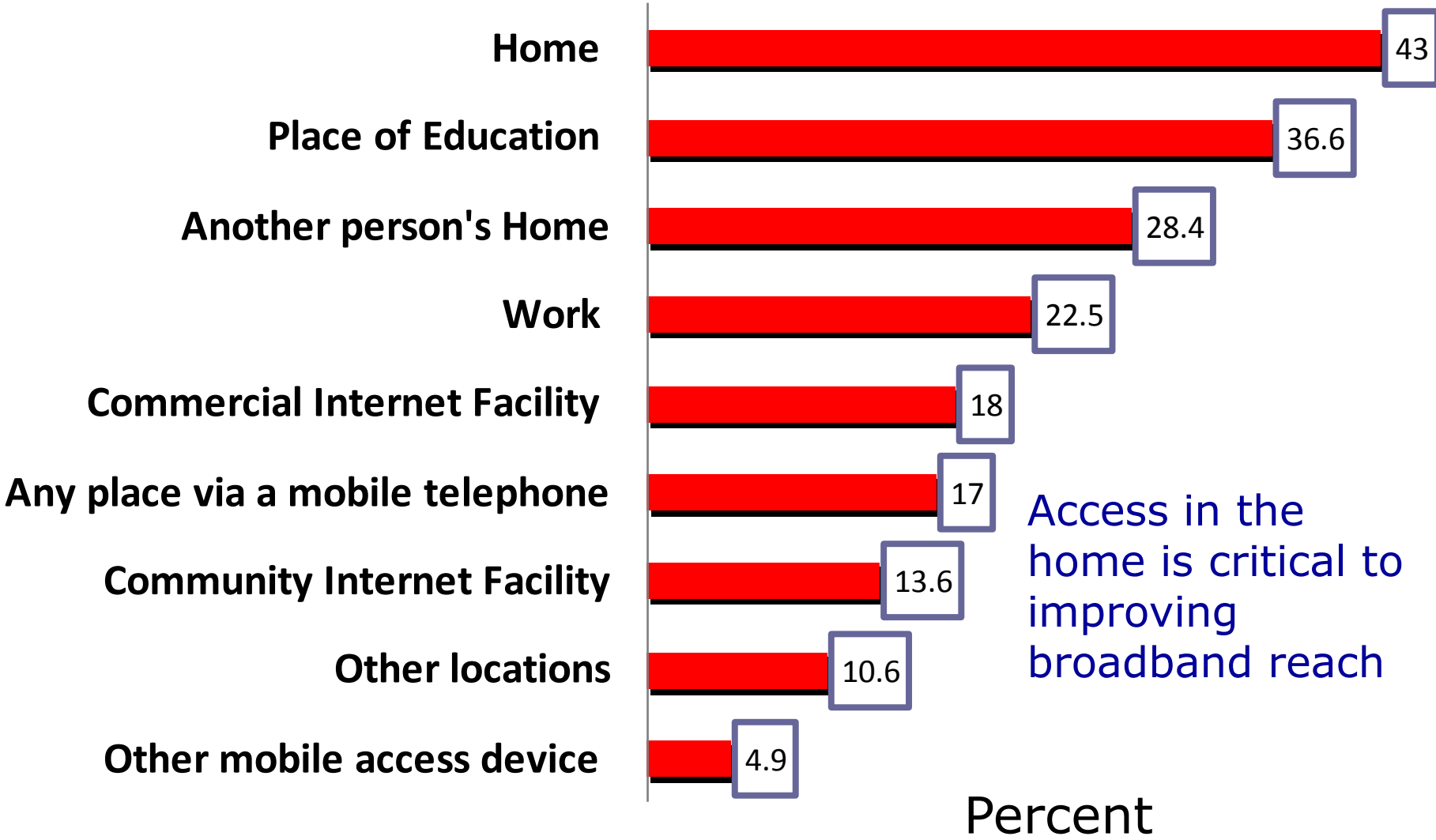
Selected ICT Indicators

Distribution of Households with Selected ICTs
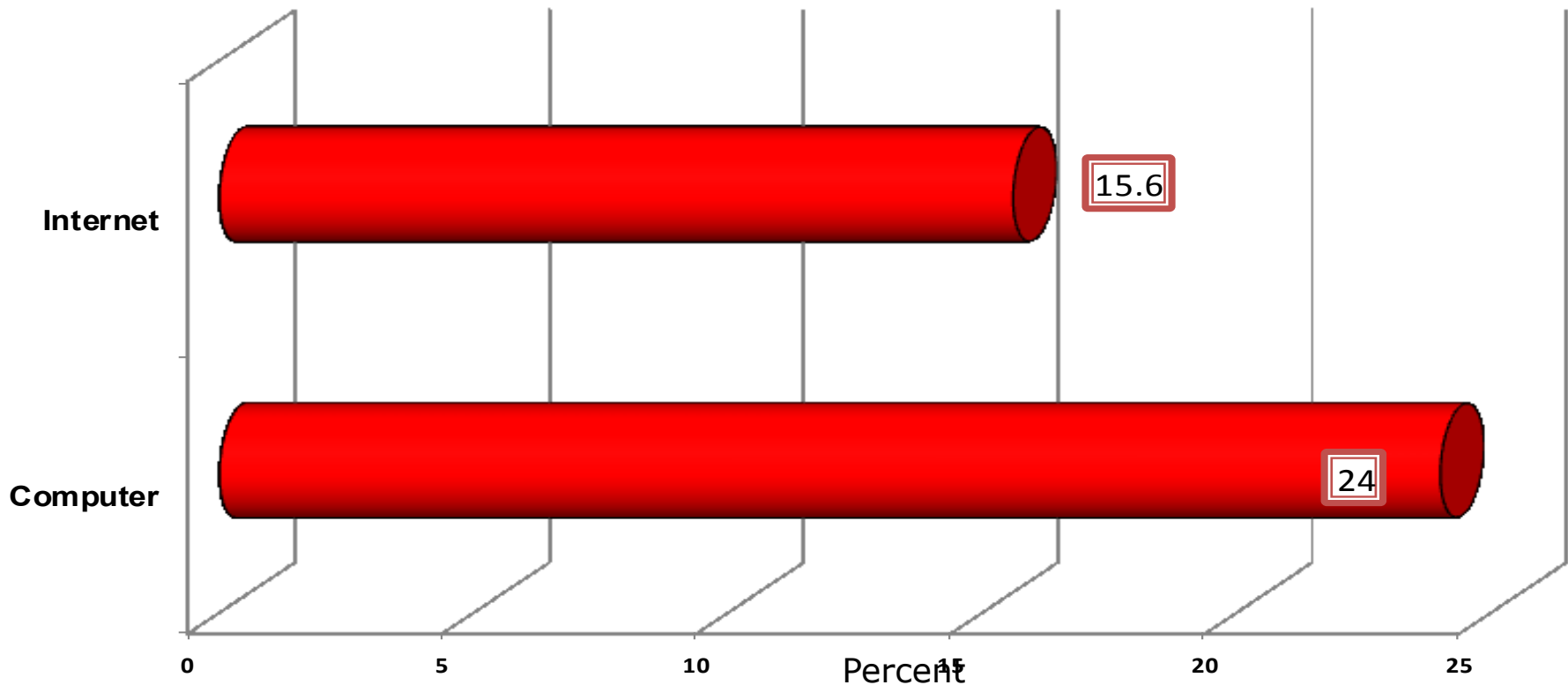
- 24 % of Households have computers at home
- 84 % of households do not have Internet access at home

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Barriers to Access (Households)

Barrier	Percent
High cost of equipment	32.4
No need/interest	23.9
High cost of the Internet service	15.2
Not available in the area	10.4
Household members lack skills	8.4
Other	5.8
Household members have Internet access elsewhere	3.4
Not value for money	0.5

Percent

Other Reasons for Non-Access (Household)
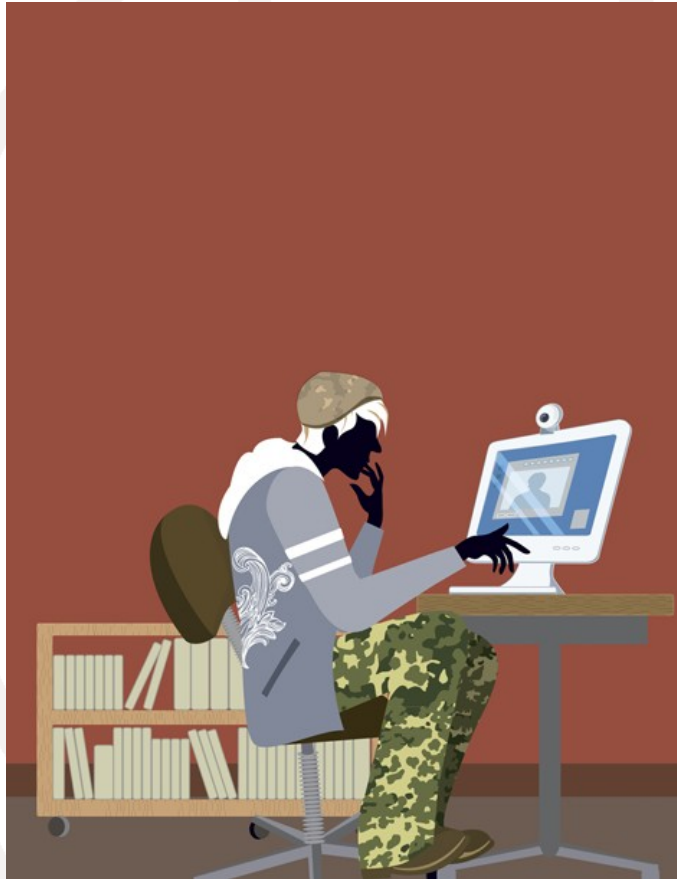
- "I applied and still awaiting response from service provider"
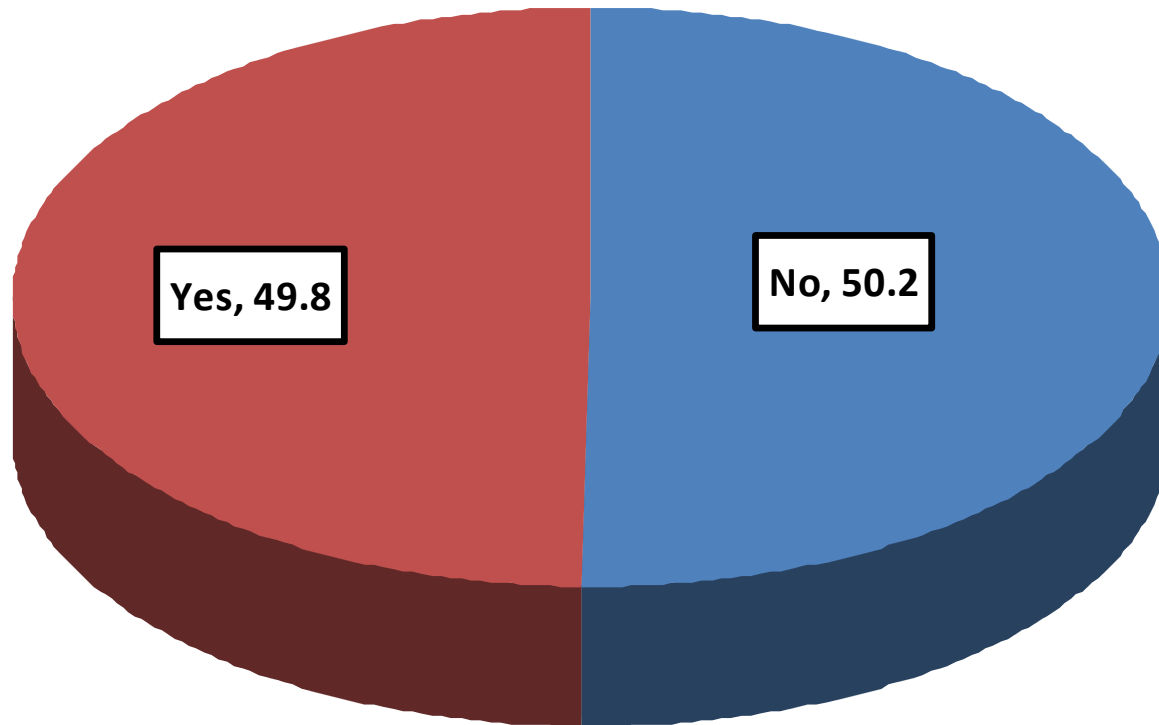- " Not interested in having Internet at home"
- "Don't ready for Internet"
- "Never heard of it"
- "No electricity"

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Individual Computer Usage

Yes, 49.8

No, 50.2

*Numbers indicate percentages

Individual Internet Usage

Yes, 42.1

No, 57.9
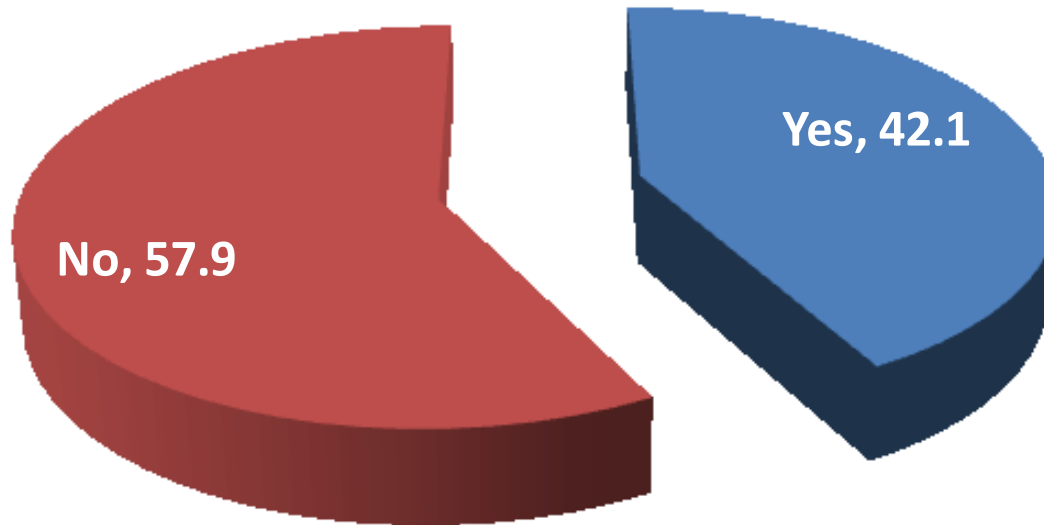
*Numbers indicate percentages

Individual Internet Usage by Gender

Individual Computer Usage by Gender
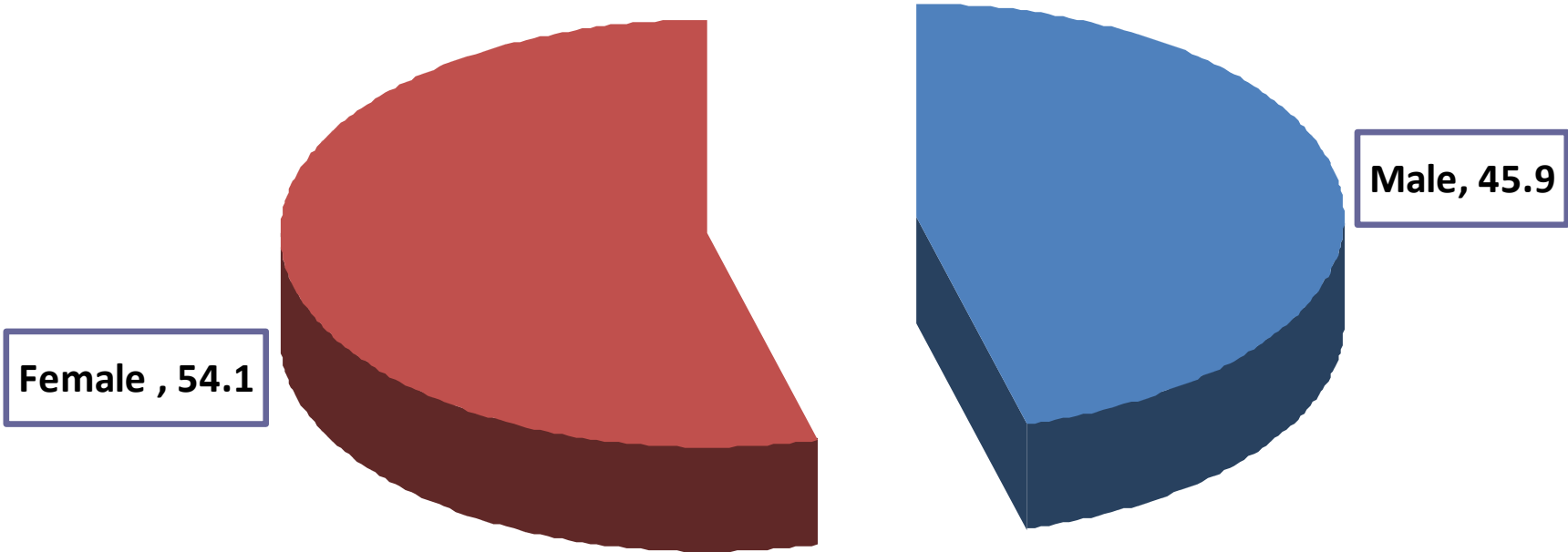
Rural/Urban Disparities

Percent

Individual Internet Activities (1)

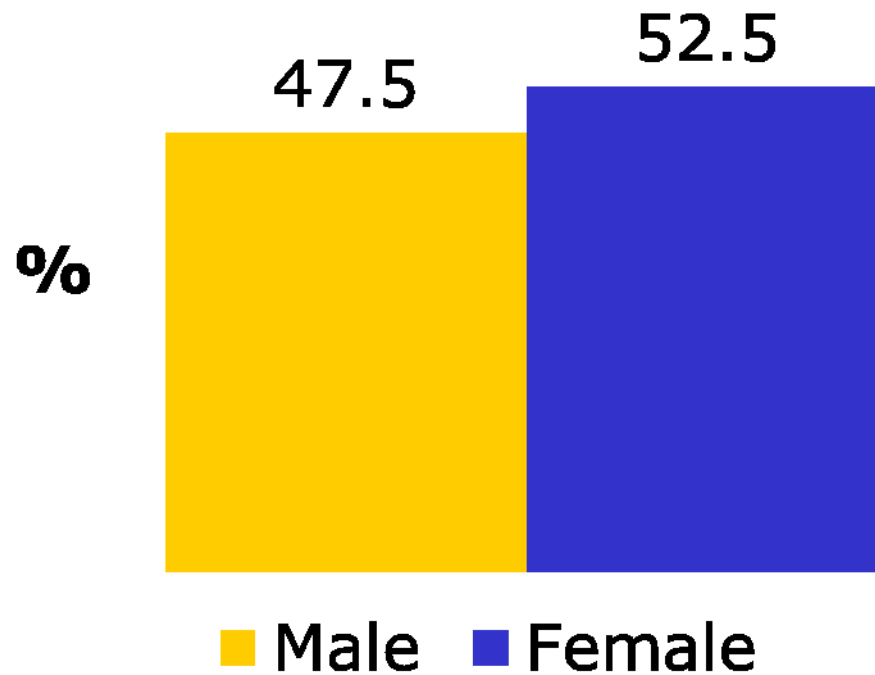| Activity	Percent
Sending/receiving emails	76.9
Social networking	71.7
Formal education/learning activities	65.4
Posting information/instant messaging	54.9
Downloading/streaming media	52.3
Playing/downloading video/computer games	45.2
Getting information about goods and services	41.8
Reading/downloading online newspapers	33
Downloading software	27.5

Percent

Individual Internet Activities (2)

Activity	Percent
Speaking over the Internet (VoIP)	27.1
Getting info.Related to health/health services	25.7
Getting information from Govt. organisations	23.3
Viewing pornography	15.3
Purchasing/ordering goods/services	14.7
Interacting with Govt. organisations	11
Internet Banking	8.4
Other	2.1

Percent

The Typical Jamaican Internet Users

- **Pays between US$23 – US$49**

- **Paid Employee**
- **15 - 35 years old**
- **Service worker**

Female (1)

Male (2)

Urban (1)
Rural (2)

Uses Internet Daily

At Least Secondary Level Educated

- **Generally Sends and Receives email**
- **Social networking online**

Lives in Separate House Detached

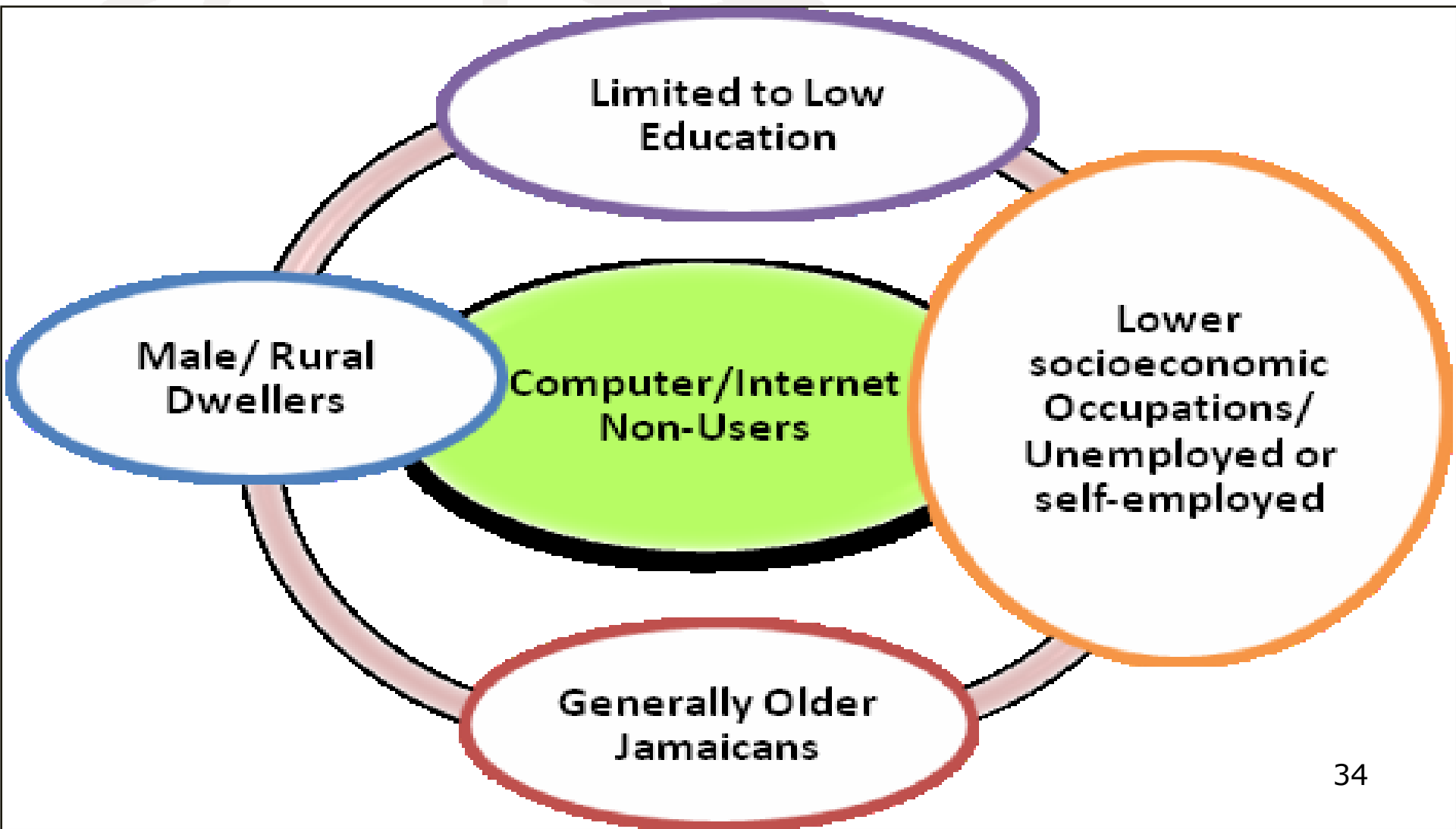**Accesses Internet at Home**

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The Typical Jamaican Internet Non-Users

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Other Impacts: Qualitative Responses

Economic / Educational

- "flights are now easier and cheaper to book"
- " it has helped to increase my knowledge base"
- " I can now bank online"

Social / Leisure

- "Entertainment!"
- " I get to meet new people"
- " I can shop for fashion online"

Qualitative Study Outcomes (2012)

- Literacy is a major hindrance to access
- Greater emphasis on educational technology
- Expansion of ICT curricula into vocational and skills training centres
- The Government should undertake a massive public education campaign on the merits of ICTs

ICTs and Persons with Disabilities (2012)

- There is a digital divide within the disabled community. "Access to ICT and broadband technologies by and large is dominated by the elites of the disabled community who have the opportunity of being employed."

- Issues include:
  - Cost of equipment, hardware and software
  - Infrastructural Access
  - Awareness of the society
  - Education and employment levels

Mobile Phone Usage
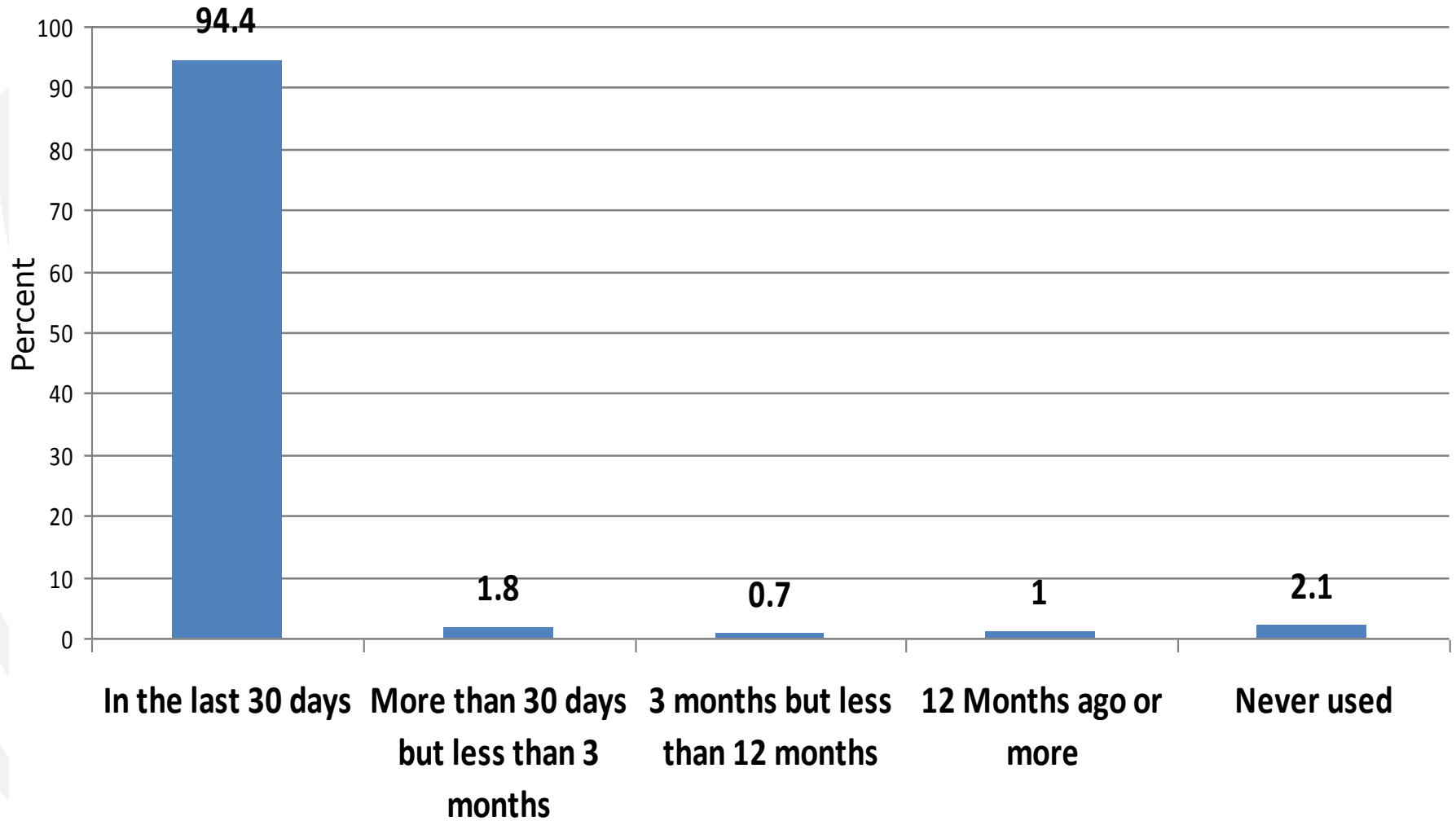
Mobile Service Provider Standing (April 2011)

Proportion of Respondents by Mobile Service Provider

Provider	Percent
Digicel	88.2
LIME	18.4
CLARO	15
Not stated	1
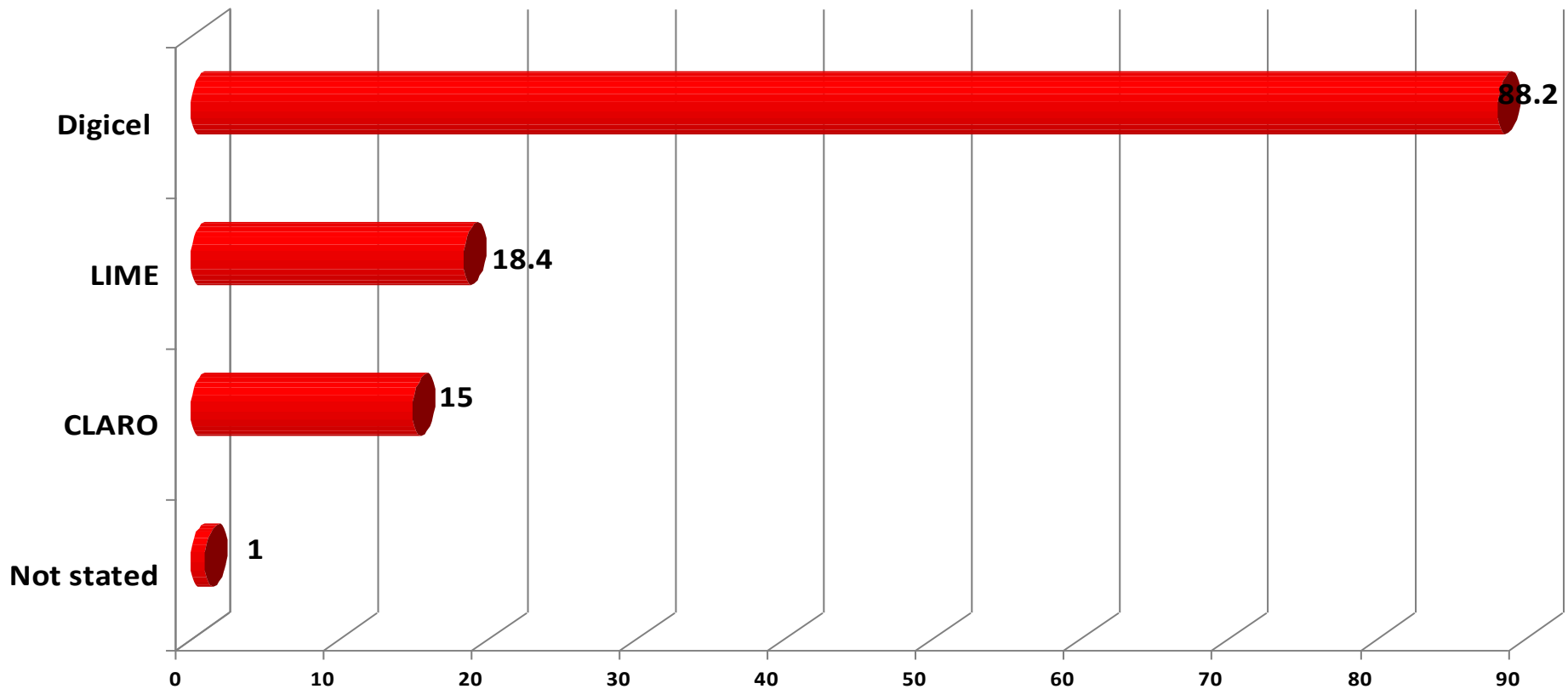
Percent

The Challenge:

Converting the Achievements of Mobile Telecom Liberalization into Meaningful, Effective Universal Access to the Internet, specifically Broadband

The Development Agenda (1)

- The UN MDGs - poverty alleviation is a key target

- Internet as key enabler of poverty alleviation

WE CAN
END POVERTY
2015 MILLENNIUM DEVELOPMENT GOALS

1

ERADICATE EXTREME POVERTY AND HUNGER
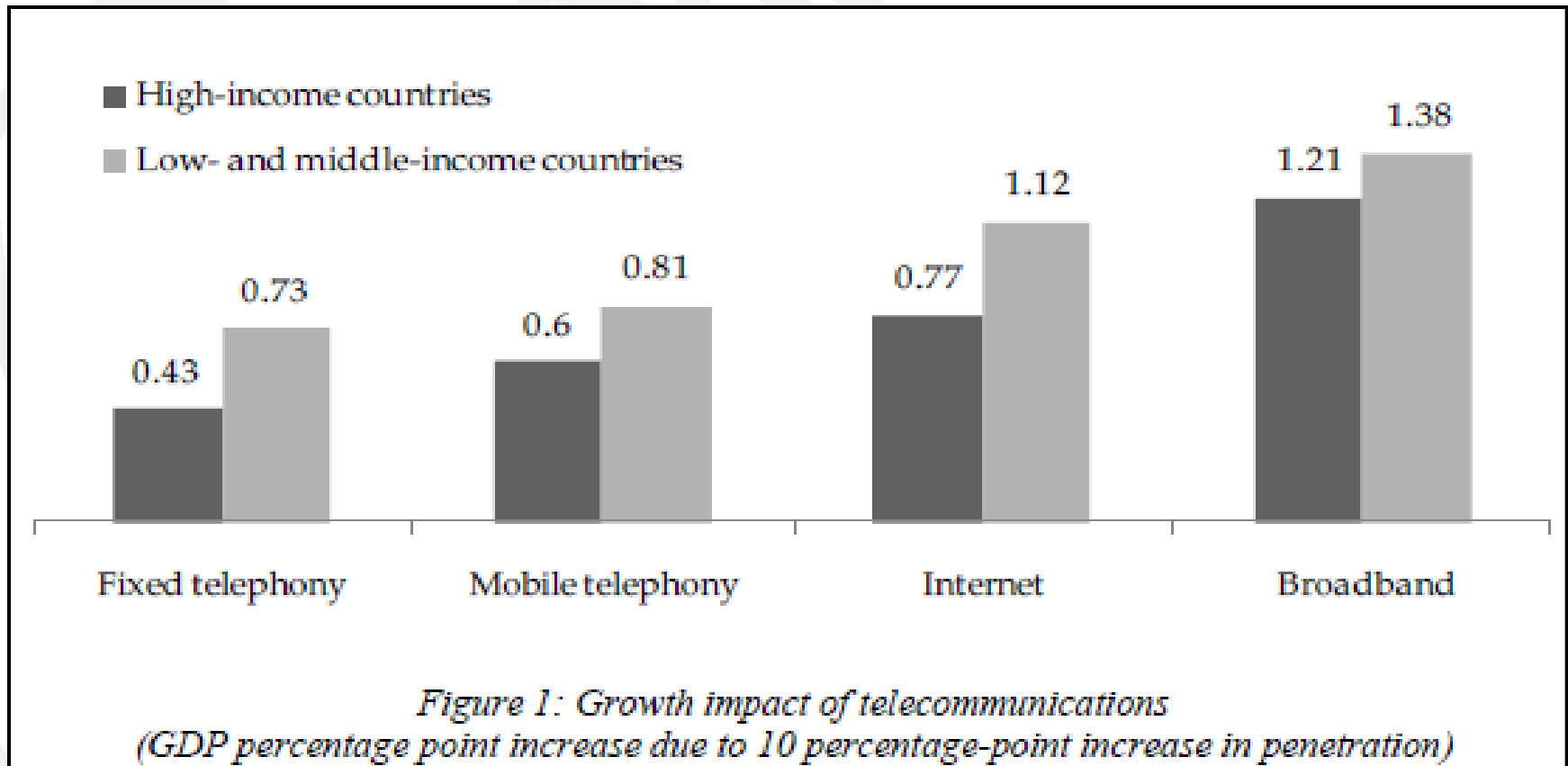
The Development Agenda (2)

■ WSIS Declaration of Principles:

➡ create a "people-centred, inclusive and development-oriented Information Society"

➡ A person or community without access to the information society would be at a disadvantage

working together towards
2015

World Summit Geneva 2003 Tunis 2005
on the Information Society
Turning targets into action

Economic Impact of Broadband Investment

Figure 1: Growth impact of telecommunications
(GDP percentage point increase due to 10 percentage-point increase in penetration)

Broadband is considered a key driver of economic growth

Effective Access

"Conference participants recommended policy action not only on infrastructure improvements but also *to achieve 'effective access'* of people to Internet services through: the generation of high quality local content online; arrangements for better training of the region's workforce and technical personnel; and improvements in the policies and regulatory arrangements governing the ICT industry."

CIF-7 Rapporteur's Report

Formal vs Effective Access

- Access needs to go further than simply making the tools available
- We understand a distinction between 'formal' and 'effective' access to ICTs (Wilson 2006).
- In making the technology available we only provide 'formal access'
- using it towards improving the situations of students, inspiring learning and wealth creation, is where 'effective access'.

Requirements for Effective Access

Afford-ability

Physical Access

Effective Access
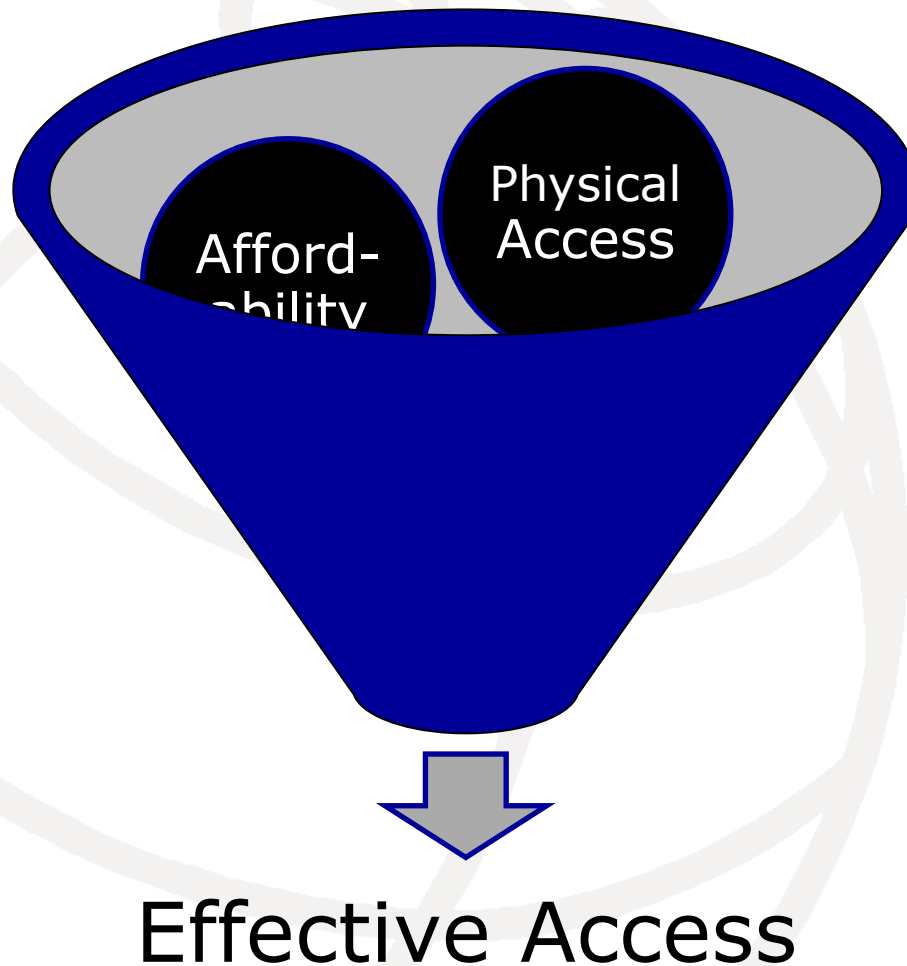
The Importance of Broadband Access

E-Commerce / E-Banking
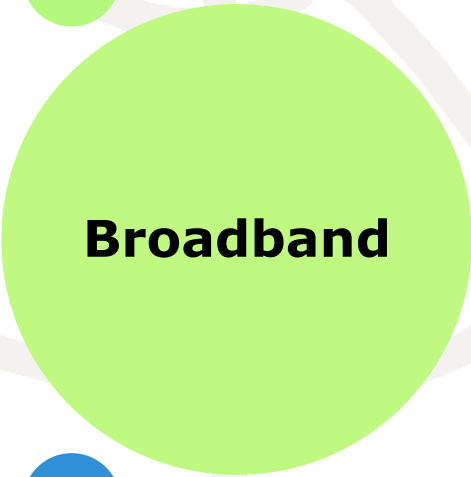
E-Government

Education

Entertainment and the
Creative Industries

Broadband

Development

The Importance of Broadband Access (cont'd)

- Improved efficiencies through cloud and hosted services

- Promotes Job Creation, Entrepreneurship, Workforce Development, Innovation

- Greater access to content

- Seamless interconnection for business and government, including facilitation of centralized databases

ICTs and the Environment

- ICTs act as a double-edged sword as they can both contribute to and provide solutions for environmental degradation

- ICTs can be harnessed for energy conservation, minimizing use of paper, etc.

Some ICT / Broadband Strategies

US Broadband Network Planning

- Obama's target is for 4g broadband to reach 98% of the population by 2016

- Questions have been raised whether it should be at public or private cost

- Special efforts to be made towards improving access in Puerto Rico
  - 1/6 of Americans without broadband live in PR
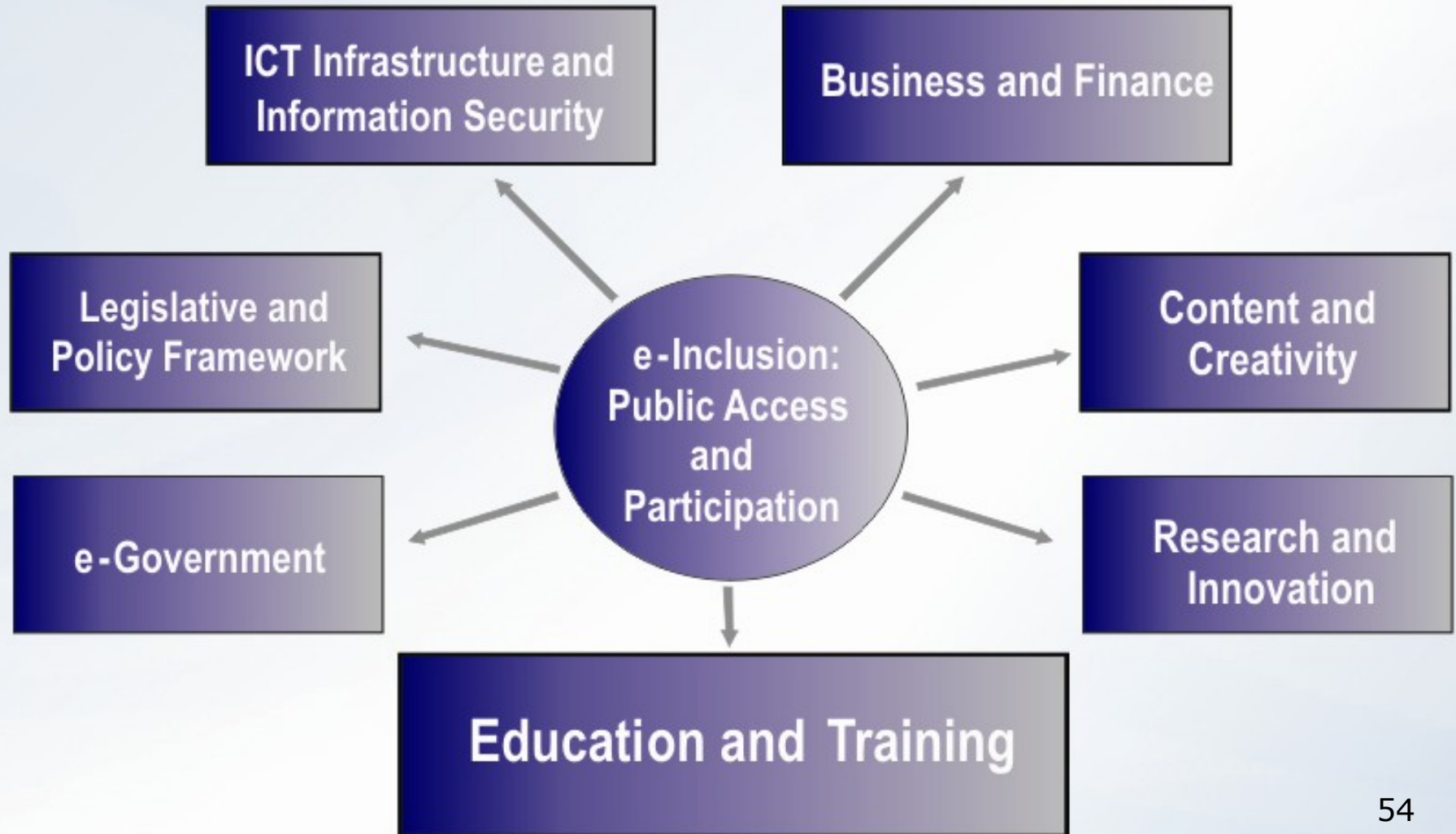 - Only 27% of PR households have access to the internet

Rural Broadband Planning

- UK Government, Fujistu, Virgin Media, TalkTalk and Cisco and others in partnership
  - This public / private partnership is to address the non-inclusion of rural and remote citizens

- Both Trinidad and Jamaica are executing ICT plans to help rural farmers/fishermen

Vision 2030: Jamaica's National Development Plan

- Vision: to make "Jamaica the place of choice to raise families, live, work and do business"

- ICTs is considered an area that will drive the country's development.

- The ICT sector plan aims at integrating ICTs at all levels for a knowledge based and educated society in order to arrive at all around access to broadband

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E-Powering Jamaica: National ICT Strategic Plan (2007-2012)

ICT Infrastructure and Information Security

Business and Finance

Legislative and Policy Framework

e-Inclusion: Public Access and Participation

Content and Creativity

e-Government

Research and Innovation

Education and Training

Trinidad and Tobago's Fast-Forward Plan

■ Target Outcomes:

➡ Provide all citizens in our country with affordable Internet access

➡ Focus on the development of our children, and the skills of adults to ensure a sustainable solution and a vibrant future

➡ Promote citizen trust, access, and interaction through good governance

➡ Maximize the potential within all of our citizens, and accelerate innovation

➡ To develop a knowledge-based society

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Fast-Forward: Initiative

- Establishment of a champion organization – the National ICT Company – iGovTT
- Broadband Access stands at 46% (households)
- In September 2011, the Government announced plans are to introduce broadband for all citizens

connected

committed

competitive

creative

caring

community

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Physical Access

- Infrastructure is not problematic in urban areas

- Rural and remote Areas to be addressed

- Generally, higher speeds are needed to support educational, entertainment and business information flows

- Seamless broadband connectivity needed among Government agencies

Columbus Communications Network Mapping

Affordability

- Public / Private partnerships needed to improve rollout

- Cost of equipment must be reduced including in the case of assistive technologies

- Taxation on ICT equipment and services to be re-assessed

- More pre-paid options to be considered

Skills and Training

- Improvements needed in
  - Language and Literacy
  - Math and Sciences
  - Foreign Language

- Encouragement of Innovation and Technology

- ICT and Information Literacy

- High-level ICT skills including regulation, economics, policy and management

Critical Transitions: IPv6

- Training and sensitization efforts underway

- But not enough public discussion

- Regional harmonization of this process is recommended to avoid duplication of efforts

- IXPs are a related and key concern

Critical Transitions: Digital Switchover

Analogue

Digital

- Jurisdictions such as Jamaica and Trinidad are working towards the 2015 deadline

- Public Buy-in and sensitization and critical

- Cost factors for media organizations, consumers and regulators are also key issues

- Technical Standards to be decided

Conclusions and Recommendations

- CARICOM ICT Strategy touches on critical points

- Implementation across the region must be undertaken in a systematic and consistent manner

- Financing to be tackled through public / private partnerships

- A consistent policy framework to be applied and communicated effectively with governments as the champions

When will we overcome the challenge of Universal Broadband Access?

Thank You!

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