ARIN

American Registry for Internet Numbers

CTU

Shaping Caribbean Communications

ARIN-CTU Caribbean Webinar Series

Local IXPs – No Longer an Option, Now an Imperative for 21st Century Governments

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AGENDA

- History of CTU's Involvement in Caribbean IXPs
- About CTU IXP Projects
  - Why Caribbean IXP Proliferation and Enhancement Project?
    - Project Vision and Objectives
    - CARIBIX project (French Territories)
      - (Saint Maarten, Saint Barthelemy and Guadeloupe)
  - IXP Survey
- Project Methodology and Stages

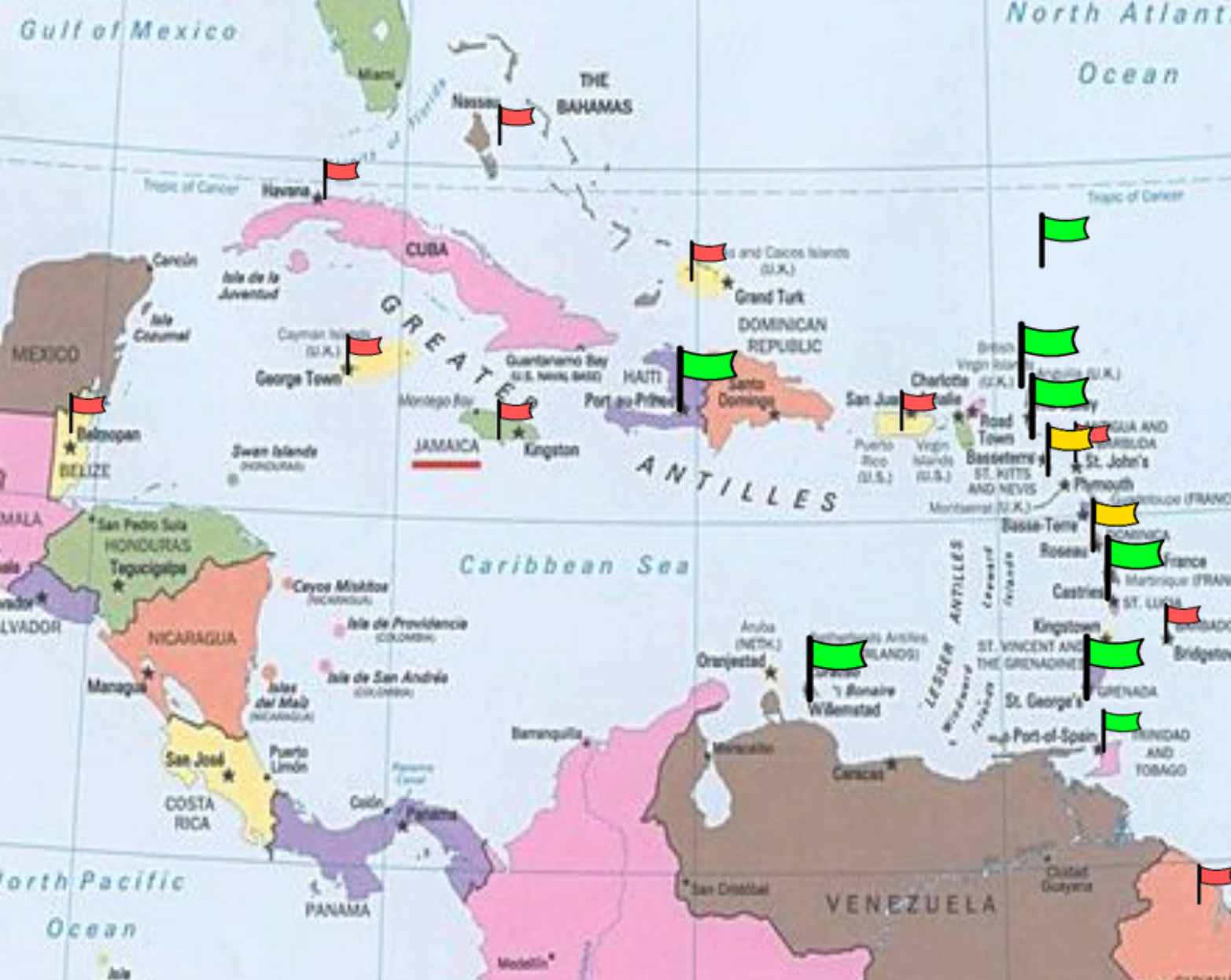# History of CTU's Involvement in Caribbean IXPs

Found its genesis in

2006 - 2008

CTU began promoting IXPs as critical Internet infrastructure in keeping with the provisions of the Caribbean Internet Governance Policy Framework

> > >

Forged Partnerships

2009 - 2010

Forged several strategic alliances with **CaribNOG**, and **Packet Clearing House** to raise awareness, educate and advance IXP development in Member States

> > >

Leverage Regional Capacity

2011 - 2019

Continued pioneering work with regional organisations like **CaribNOG** and **Caribbean Peering Forum** in Internet Governance to establishment 14 Internet Exchange Points in the Caribbean

TERRITORIES

ACTIVE IXPs (16)
BARBADOS
BELIZE
CUBA (2)
CURACAO
DOMINICA
DOMINICAN REPUBLIC
GRENADA
HAITI
JAMAICA
MARTINIQUE
PUERTO RICO
ST. LUCIA
ST. VINCENT & THE GRENADINES
SINT MAARTEN
TRINIDAD & TOBAGO

IN PROGRESS
ST KITTS AND NEVIS

COMING SOON! (FRENCH TERRITORIES)
SAINT MAARTEN
SAINT BARTHELEMY
GUADELOUPE

Internet Exchange Points in the Caribbean

Why Caribbean IXP Proliferation and Enhancement Project?

Some Success Stories!

- Currently, most of the IXPs merely exchange traffic but some have progressed to hosting content and services

Opportunity for Growth

- To establish initiatives to strengthen and enhance the value of existing Caribbean IXPs and establish a new generation of IXPs
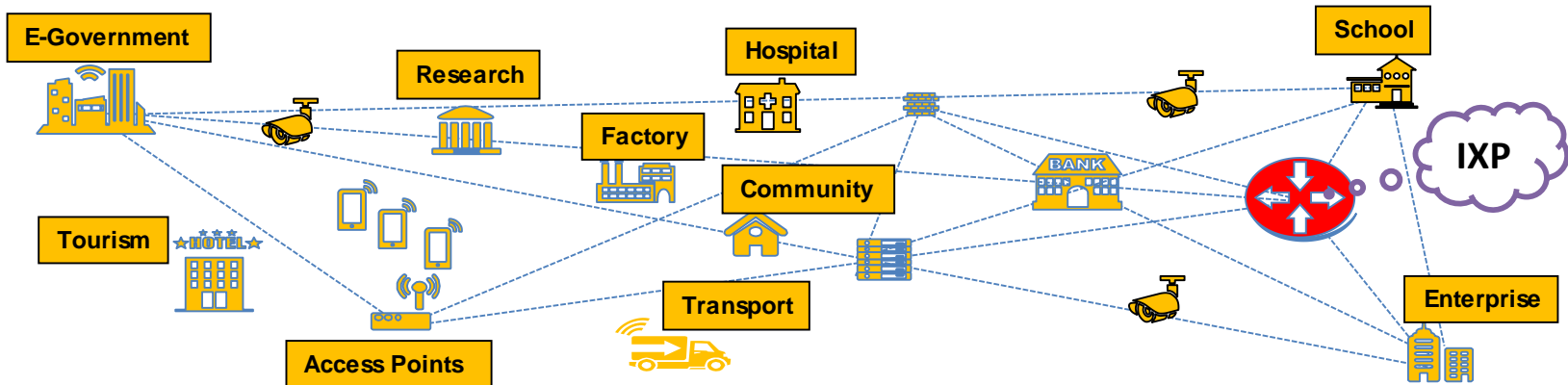
Potential for Economic Development

- Catalyze entrepreneurial activity and leap into the development of a Caribbean content industry

We believe that obstacles to the proliferation of strong and vibrant Caribbean IXP deployments can be overcome through collective and well-coordinated regional efforts.

Project Vision and Objectives

Effectively Connecting Public and Private Institutions, Touches All Aspects of Life

E-Government

Research

Hospital

School

Factory

Tourism

Community

IXP

Transport

Access Points

Enterprise

Clusters of National IXPs Facilitating Connectivity of Critical Broadband Internet Infrastructure

Harmony	Efficiency	Entrepreneurship
• Enhanced routing infrastructure and services supported through enhanced regional collaboration and coordination • Promote the social and economic benefits of IXPs among Caribbean Member States	• Enhance regional traffic routing options in the Caribbean • Improve the resilience, capacity and efficiencies of Caribbean networks (COVID-19 pandemic example)	• Local and regional facilities for content delivery to improve user experience • Incentivise new regional Internet-based growth and development opportunities

INTERREG CARIBBEAN - CARIBIX SPONSORS

- In keeping with the priorities of the INTERREG Carribean program **CARIBIX** is a digital technology innovation sector project which aims to:
  - improve access to critical Internet infrastructure and in so doing;
  - create an environment for fostering social and economic development in French Caribbean countries.
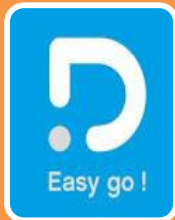
CARIBIX PROJECT - STAKEHOLDERS AND PARTNERSHIPS

Coordinate implementation of IXPs in the French territories. provide progamme management oversight, technical advise and guidance on all aspects of the set up and ongoing operations of the IXPs

Telem : In charge of the implementation of the bridge between SoualigaIX and OCIX

The Collectivity of Saint Barthélémy: In charge of the creation of Saint Barthélémy's GIX, BarthIX

Lead the implementation of the IXP Saint Martin, SoualigaIX

The Guadeloupe Tech Association : In charge of the implementation of the IXP of Guadeloupe, GuadIX

CARIBIX FRENCH TERRITORIES PRIORITIES

Saint-Barthélemy is to create an internet exchange point on the island which is intended to improve the reliability and service experience of the operators and users of the telecommunications network

Guadeloupe and the association of Guadeloupe Tech is to create a simple and inexpensive tool to identify and route the internet traffic of the territory locally

Saint Martin and Sint Maarten is to create a digital bridge and connectivity to the existing Sint Maarten IXP, establishing one 'geographic unit' which will facilitate easy inter island traffic exchange

Caribbean IXP Survey Results - IXP Governance Perspectives

Q1: Is there an appointed dedicated IXP coordinator?

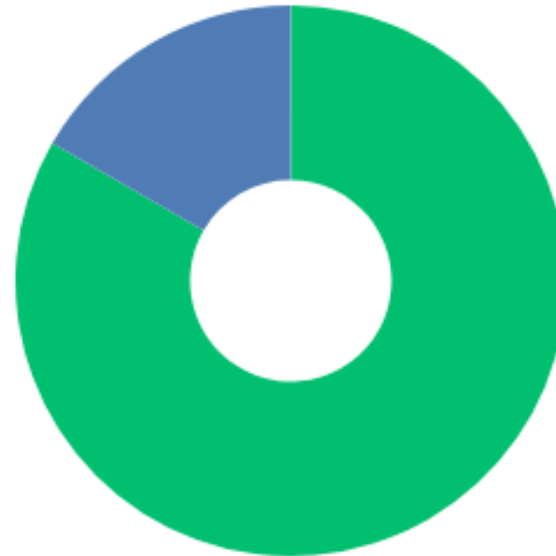| ANSWER CHOICES	RESPONSES	
Yes	66.67%	4
No	33.33%	2
TOTAL		6

Caribbean IXP Survey Results - IXP Governance Perspectives

Q2: Is there an IXP oversight team?

ANSWER CHOICES	RESPONSES	
Yes	83.33%	5
No	16.67%	1
TOTAL		6

Caribbean IXP Survey Results - IXP Governance Perspectives

Q3: If yes to question 2 above, how often does team meet?

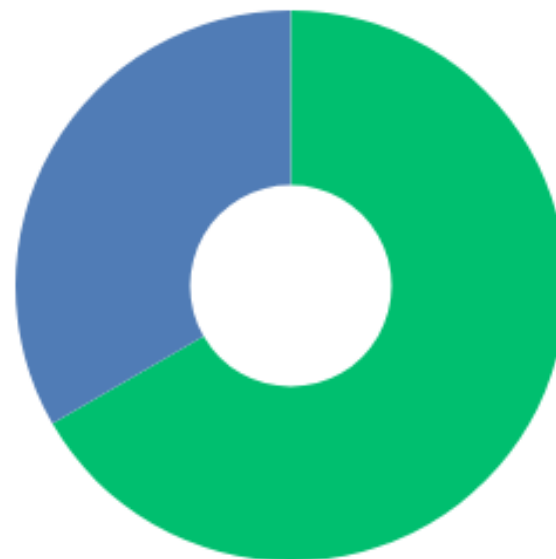| ANSWER CHOICES	RESPONSES	
Once a month	16.67%	1
Every quarter	16.67%	1
Every six months	16.67%	1
Once a year	33.33%	2
Not at all	16.67%	1
TOTAL		6

Once a month   Every quarter   Every six months   Once a year   Not at all

Caribbean IXP Survey Results - IXP Policy Perspectives

Q4: Is there a written peering agreement?

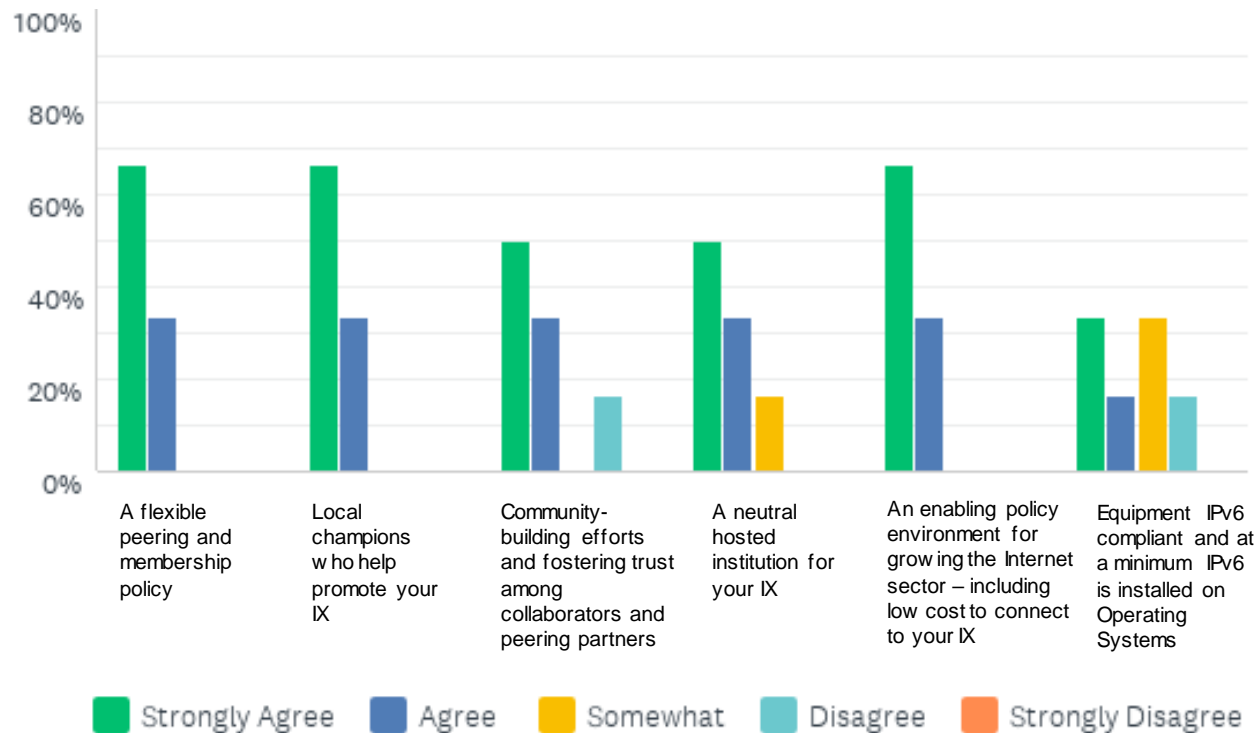| ANSWER CHOICES	RESPONSES	
Yes	66.67%	4
No	33.33%	2
TOTAL		6

Yes   No

Caribbean IXP Survey Results - Growth and Sustainability of IXP Operations:
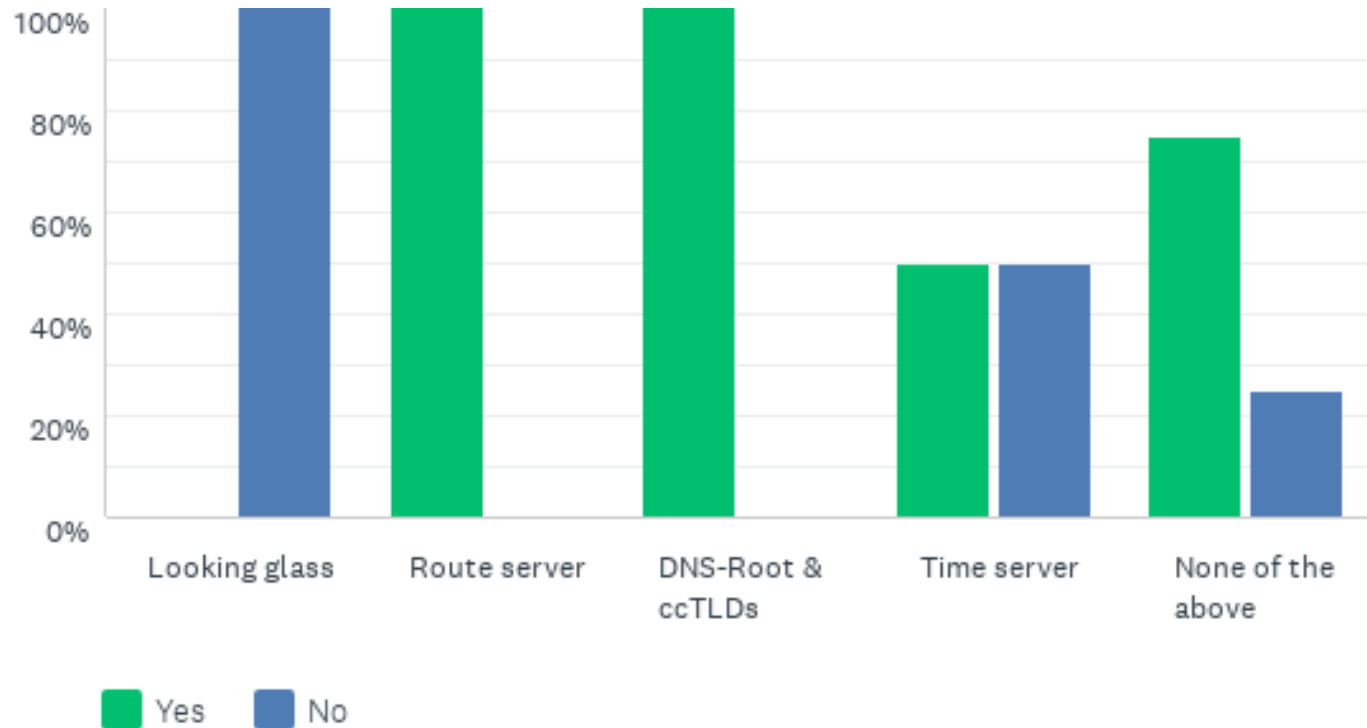
Q5: To what extent do you agree that the following growth enablers have been adopted at your IXP?

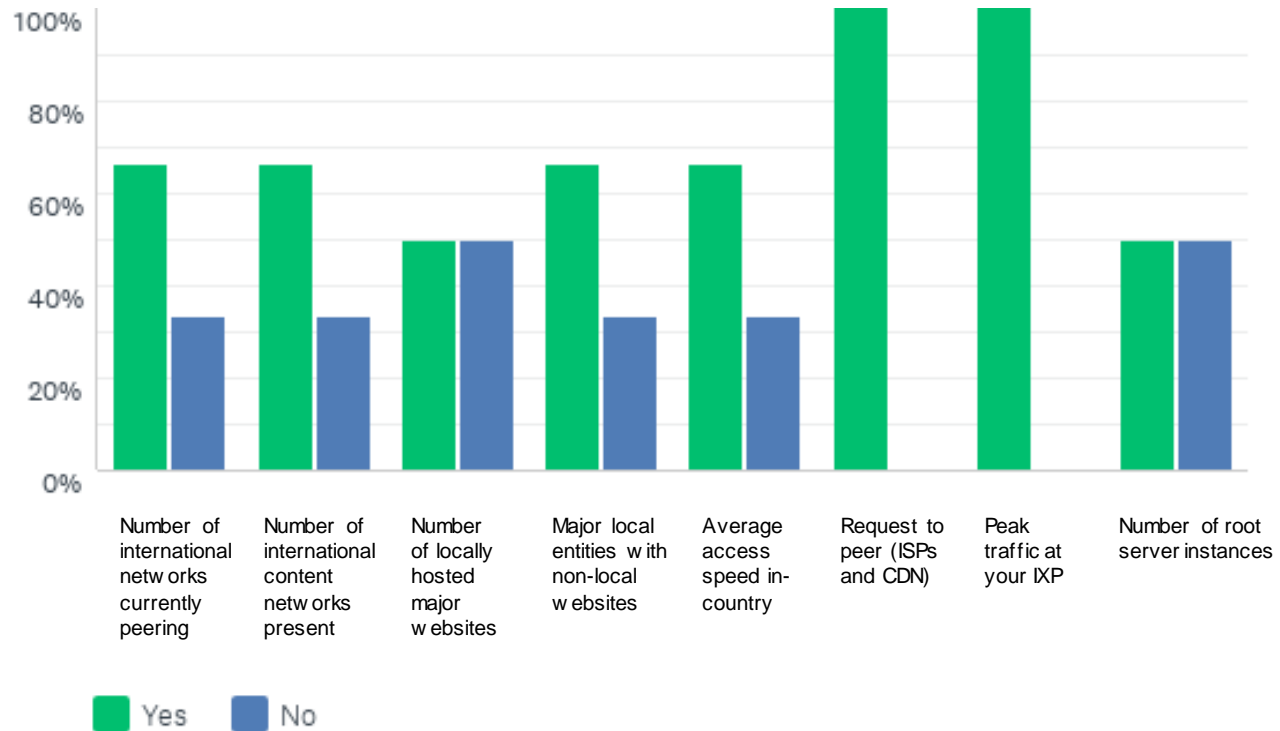# Caribbean IXP Survey Results – **Technical Considerations to support Caribbean IXP Development:**

Q6: Which of the following secondary services does your IXP provide?

Caribbean IXP Survey Results - Results-Based Measures of Impact on IXP:

Q7: Are any of the following indicators used to aid in tracking the growth and impact of your IXP?
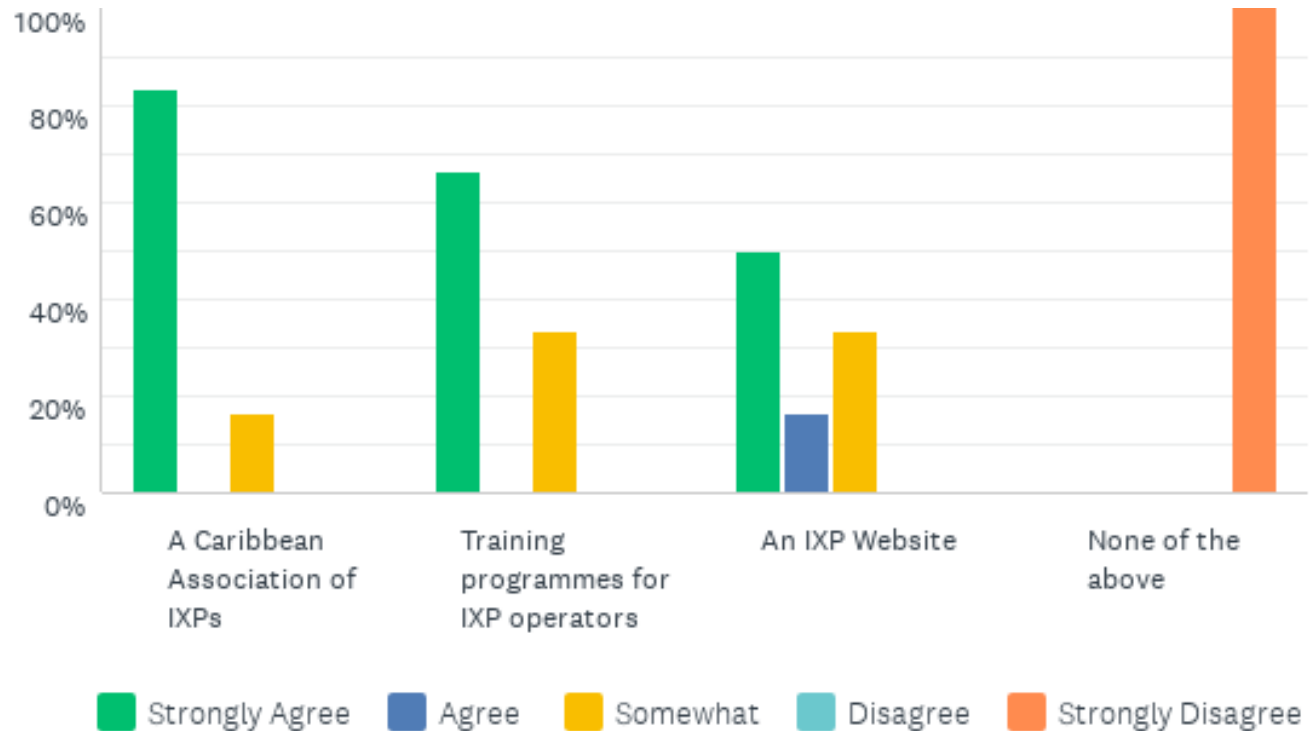
Caribbean IXP Survey Results – Interest in Regional Collaboration:

Q8: Please rate the extend to which you agree that any of the following will be beneficial for strengthening IXPs.

PROJECT STAGES & METHODOLOGY:

IXP SURVEYS	FOCUSED INTERACTIONS	WIDENING IXP COLLABORATIONS	GENERAL CONFERENCE OF MINISTERS
An initial survey was distributed to IXP Operators to establish baselines for our existing IXPs	Schedule a combination of discussions and focus group meetings, to strengthen regional networking and collaboration	Widening the discussions to include English and non-English speaking stakeholders (January 2020)	Policy proposals and prescriptions will be taken to the General Conference of Ministers for ratification and affirmative action as required.

Thank you
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