

# IMPLEMENTING BEST OF BREED Cloud-Based E-Government Solutions



4<sup>th</sup> Caribbean ICT Collaboration Forum 2020  
**Trinidad and Tobago**

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# Implementing Best of Breed cloud-based e-Government Platforms

- Cloud Carib **Overview**
- Cybernetica Overview
- Why This Collaboration?

# Implementing Best of Breed cloud-based e-Government Platforms

- Cloud Carib **Overview**

**Geographic Diversity (regional):** Cloud Carib operates a multisite, geographically diverse pool of data centres (CaribPod's) containing its fully managed cloud computing platform with scale to meet the most demanding client growth requirements

**Network Availability:** Multi-homed upstream partners supply the network from each CaribPod location to facilitate a highly available internet presence for clients

**Cloud Computing:** Cloud Carib provides hyper-converged virtualized and infinitely scalable infrastructure as a service; backed by global experts to meet the most demanding requirements

**Time to Market:** Infrastructure and applications deployed in hours vs. days or months

**Expertise:** Providing the region with an international team of expertise focused on providing quality, agility, and value



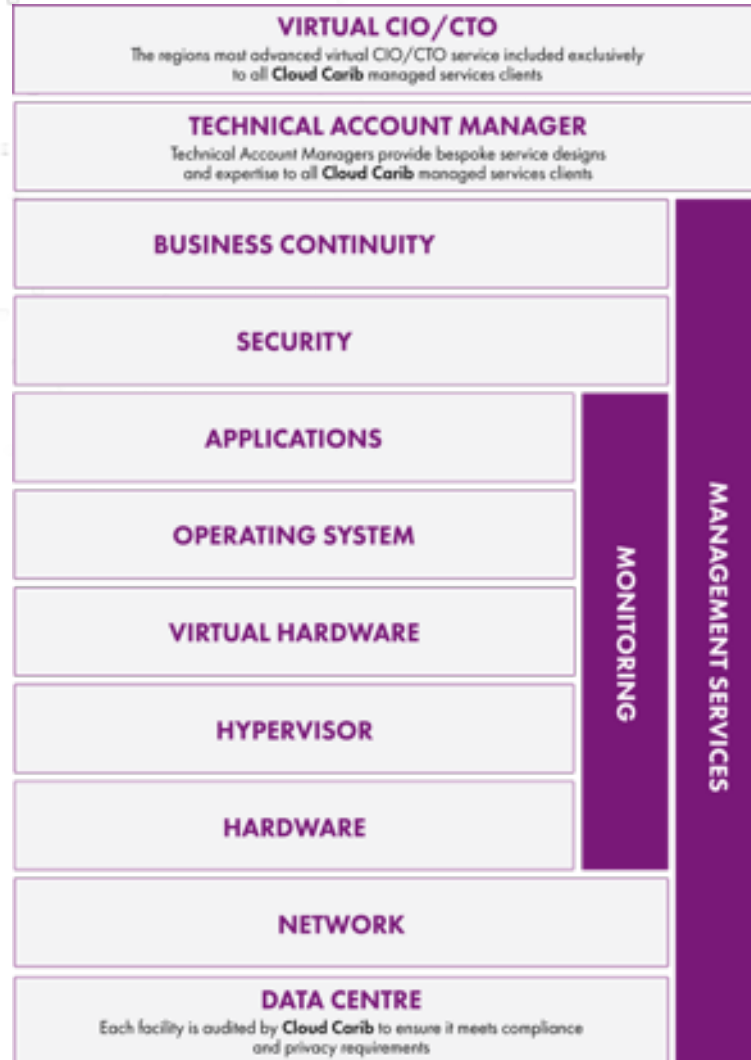


# SOLUTIONS OVERVIEW

Over 5000  
assets under  
management  
within the  
Caribbean  
and Latin  
America

Channel Futures.  
**Talkin'  
Cloud  
100**  
2019 WINNER

Cloud Carib  
42<sup>nd</sup> out of  
top 100  
Cloud Service  
Providers



*Moving up the stack, we provide advanced enterprise services that include professional services and dedicated account management.*

*With added management services and features, organisations can focus on more strategic business activities instead of maintaining their infrastructure and environment.*

*Our core Data Centre services provide an underpinning platform to allow organizations to expedite digital transformation.*

# SOLUTIONS OVERVIEW

## Data Center Services

- Facilities
- Network Services
- Virtual Data Centers (VDC)
- Managed Services
- Managed Backups
- Professional Services

## Security & Business Continuity

- Managed Security
- Intrusion Detection
- Disaster Recovery

## Mobility & Productivity

- Carib365
- Unified Communications
- Voice Services
- Enterprise Mobility Management

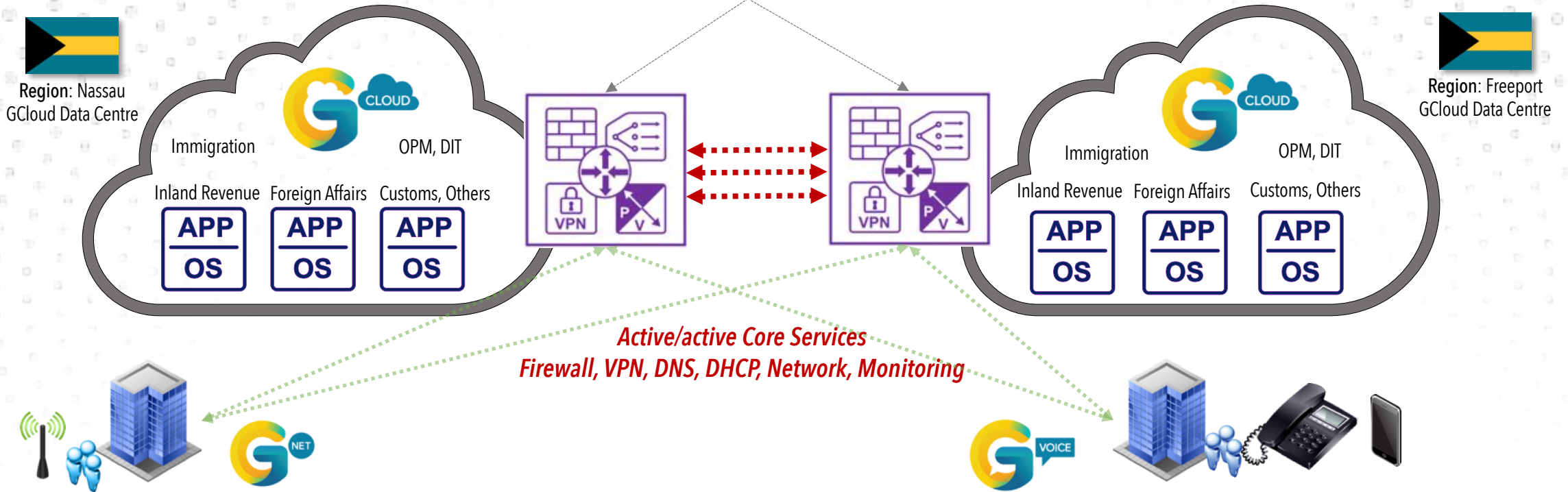


**Cloud Carib** 1 of only 300  
Certified vCloud Cloud  
Providers worldwide

**24x7 Command and Control Centre (C3)**  
dedicated to managed cloud services within  
the Caribbean and Latin America

# CASE STUDIES: Bahamas GCloud & GNet Initiative

## GCloud – Over 70 Applications in 2 GCloud Data Centres



Hundreds of users are connecting to the GNet from over 200 locations across 10 islands via LAN and Wifi  
Remote users are also connecting over VPN connection

Over 1500 desk phones or softphones on iOS/Android are connecting internally or externally for free, direct on-net phone calls & video calls

## CASE STUDIES: Bahamas GCloud & GNet Initiative



**GNet** > 280 Sites operational across 13 islands today

**GCloud** > thousands of services under management on the GCloud

**GVoice** > 20,000 user capacity

Together, the GNet, GVoice, and GCloud reduce cost, complexity, and underpin a national strategy for digital transformation





## ***Centre of Excellence***

- **Dedicated facility** to promote cutting edge ICT in the Caribbean Region
- **State-of-the art infrastructure** for small conferences/workshops, etc.
- Available to **Caribbean governments and regional organizations** as well as commercial ICT vendors
- Cloud Carib wants to maximize its usage to promote strategies for **ICT sustainability and resilience in the region**





24 / 7 / 365

## Command & Control Centre (C3)



The only 24x7 Command and Control Centre (C3) dedicated to managed cloud services within the Caribbean

Service backed by industry leading Service Level Agreements (SLA) with guarantees beyond any other provider in Latin America and the Caribbean



# WHY Cloud Carib?

- 2019**
  - VMware Cloud Verified Badge
  - Channel Futures Talkin' Cloud 100 Change Agent Award
  - Ranked 160 in 12<sup>th</sup> Annual Channel Futures MSP 501
- 2018**
  - Recognized as a Change Agent for a CSP
- 2017**
  - Oracle's Top Public Sector Partner for revenue generation
  - Ranked 42 among Channel Futures Talkin' Cloud world's Top 100 cloud services providers
  - Cisco Collaboration Partner of the Year for the region
- 2016**
  - Recognized as a Top 100 Solution Providers by Talkin' Cloud
  - Veeam Impact Partner of the Year Award for the Caribbean
- 2014**
  - First Cloud Service Provider in the Caribbean with VMware vCloud Powered certification
- 2013**
  - First Certified Citrix Solution Advisor and Citrix Cloud Provider in The Bahamas
  - First in LATAM/Caribbean Certified with VMware's Cloud (IaaS) Competency



# INDUSTRY AWARDS



# Implementing Best of Breed cloud-based e-Government Platforms

- Cybernetica Overview



# Building a Digital Society: Architects of e-Estonia



# Architects of e-Estonia

Cybernetica has developed most of the critical e-Government components for Estonia, such as:

- First ID-card pilots

- Digital Signature Act

- Interoperability framework X-Road

- Internet Voting

- Customs and tax systems

- Nation-wide maritime radio communication

- Border Surveillance (external EU borders)

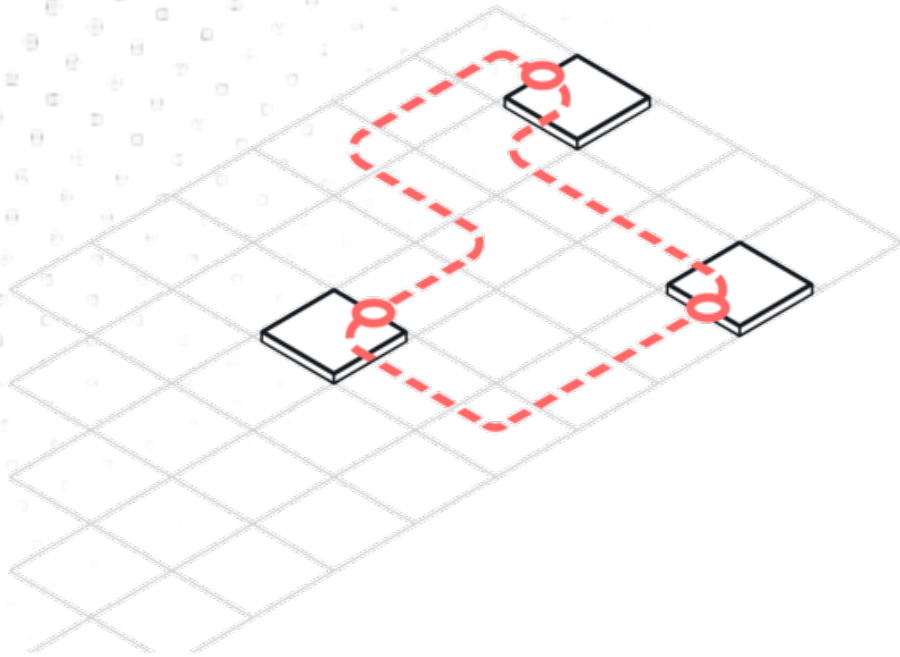
- ...and many others



CYBERNETICA

# Interoperability

Unified eXchange Platform® (UXP)



UXP enables secure data exchange between organisations over encrypted channels.

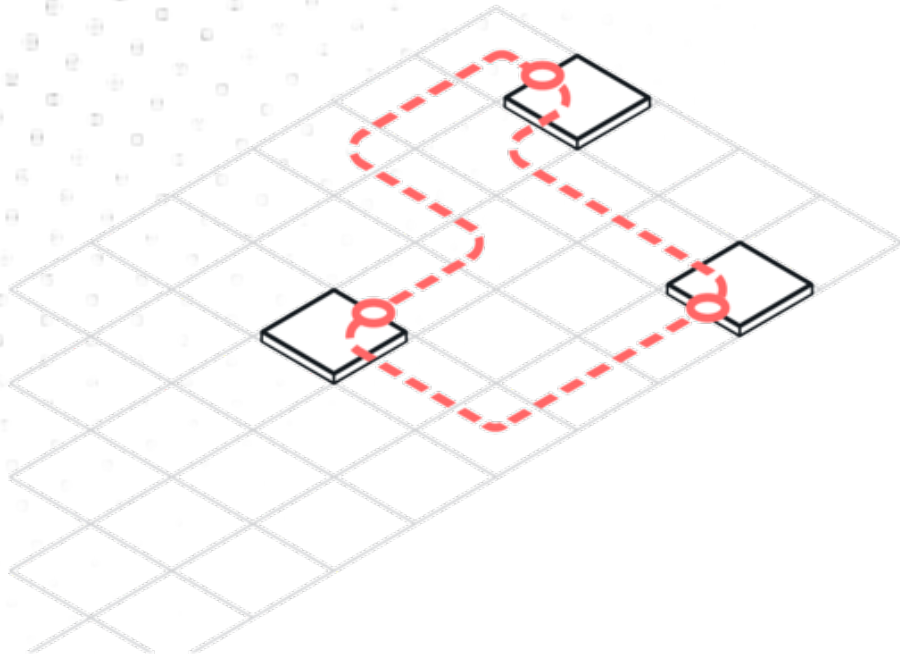
UXP is the basis of the Estonian X-Road and has been implemented in several countries across the world.

Seamless Data Exchange. UXP connects any amount of databases in an efficient and secure way, helping you build a network of agreements that allows controlled exchange between any members in your ecosystem.

Less is More. UXP means less paperwork, less bureaucracy, less time spent on futility. In Estonia, digital services save every citizen one work-week per year. What would you do with your week?

# Interoperability

Unified eXchange Platform® (UXP)

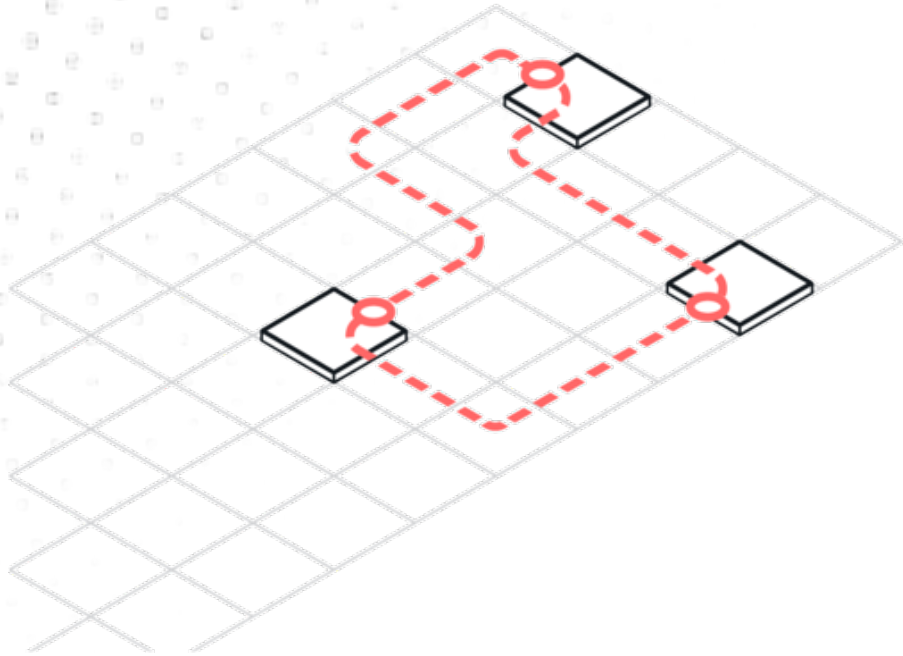


Affordable. UXP can be implemented into any ecosystem – be it a tiny country or a supranational association. With very low maintenance cost and marginal implementation investment, UXP is cost-effective and allows you to move ahead one step at a time.

Reliable. UXP has been heavily tried and tested since its launch as Estonia's X-Road in 2001. No downtime has been observed since and the system survived the world's first cyber conflict in 2007.

# Interoperability

Unified eXchange Platform® (UXP)



**Secure.** We use extensive security measures to guarantee the protection and integrity of your data. UXP is secure-by-design, as its decentralised architecture has no single point-of-failure. All traffic is encrypted with 2048 bit keys.

**Scalable.** UXP is scalable to any size of infrastructure. Unlimited amount of security servers can be linked together, making it fit for local and international applications.

**Private.** We use a distributed architecture, eliminating the creation of a superdatabase, which could be prone to exploitation. All transactions are signed and timestamped, making it possible to monitor all queries made by officials against private citizens.



# UXP References

- ⊙ 2015 - Haiti Financial Management System
- ⊙ 2015 - National Crime Agency (UK)
- ⊙ 2016 - Namibian NamX data exchange
- ⊙ 2016 - technology pilot and partner solution in Japan
- ⊙ 2016 - technology pilot for Ukraine
- ⊙ 2017 - technology pilot for NATO HQ, Nigeria, US
- ⊙ 2018 – Ukrainian Trembita data exchange,
- ⊙ 2018 – Greenland Pitu data exchange
  - ⊙ Pilots in Japan
- ⊙ 2019 – Tunisia Financial Management System
- ⊙ 2019 – Benin Citizen Portal and national data exchange
  - ⊙ Active pilots in several countries in Africa, Asia, South-America and EU



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- Why This Collaboration?

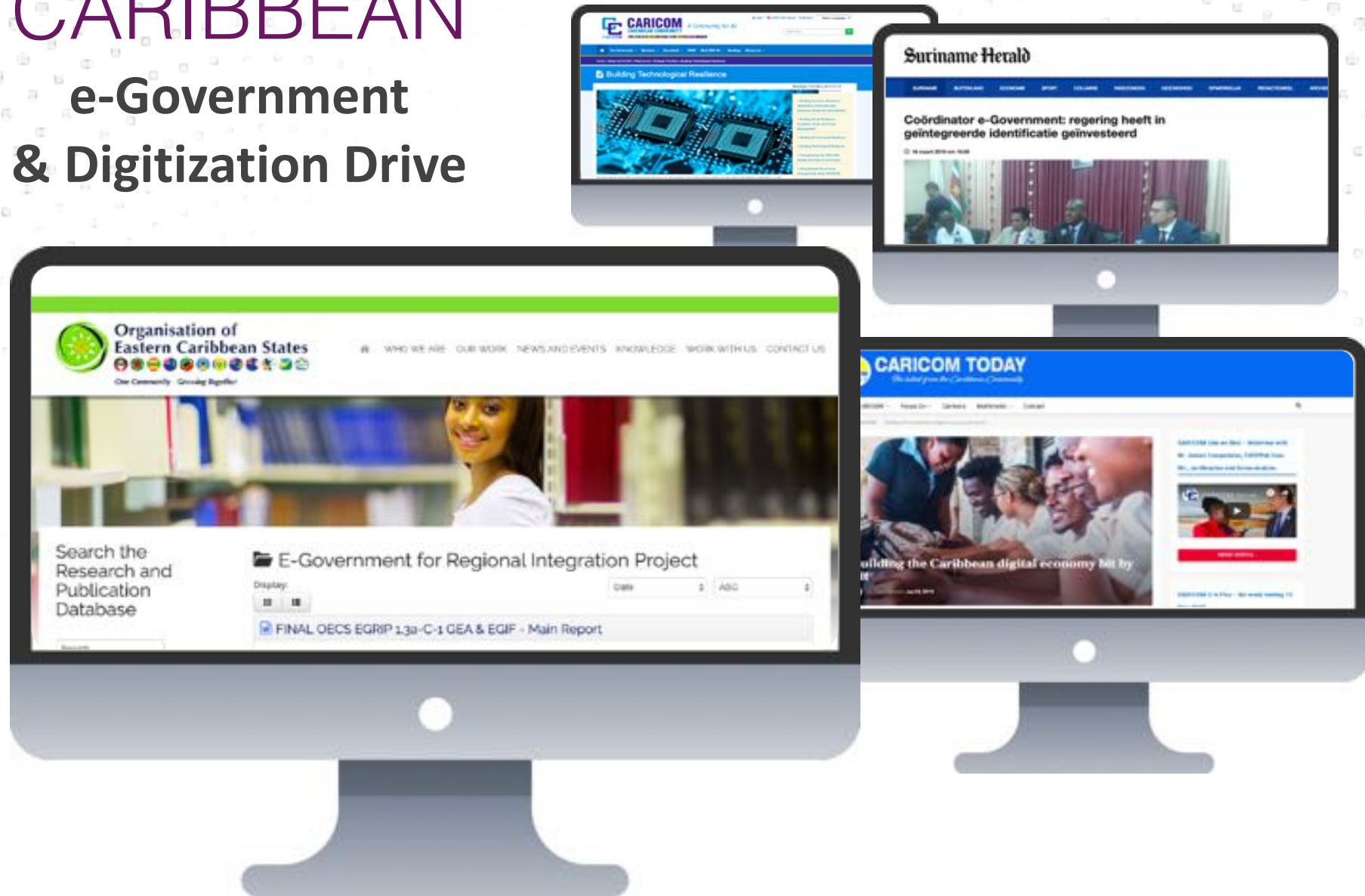
# CARIBBEAN

## e-Government & Digitization Drive



# CARIBBEAN

## e-Government & Digitization Drive



# COMPLEX ICT ENVIRONMENTS

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These can only be sustained through strategic and systematic approaches to the design, implementation and maintenance of ICT environments.



# E-Government Platforms

- Availability
- Accessibility
- Integrity
- Security

**WHAT ARE  
THE KEY  
REQUIREMENTS**



# Complimentary Service delivery

- Complimentary Services
  - ✓ Cloud Carib provides the secure cloud platform
  - ✓ Cybernetica supplies the e-government UXP application
- Common philosophy on service delivery
- Each enterprise is recognized as an expert in their service domain
- Working closely together Cloud Carib and Cybernetica can ensure a consistency of approach and secure implementation of the complete e-government stack, etc.

**BEST OF  
BREED**



# SUSTAINABLE E-GOVERNMENT IMPLEMENTATION



E-Government  
Technology  
STACK (UXP)



- Automated on-demand allocation of resources
- Cyber security at all levels
- SLA KPI
- 24/7 pro-active management
- C3 (Command, Control, Communicate) operation
- Elastic environment growth strategy
- Implementation of international operational standards
- Multiple OS/DB/APPLICATION SUPPORT

# Single ICT Space

- Understanding and Recognition of the potential for shared resources across a single Caribbean ICT Space
- Potential to deploy a common cloud environment for shared resources
- Potential for deployment of UXP on a regional / country group or individual country basis

**BEST OF  
BREED**

# Partnership Approach

The main goal of the cooperation between Cloud Carib and Cybernetica is to set up a fault-tolerant and secure data exchange network that will enable governments in the region to establish cutting edge e-government solutions

This agreement is a statement of intent that we are committed to working towards making integrated regional transformation happen

## BEST OF BREED





# Partnership Approach

Intent is to develop a strong foundation for local governments to establish e-government environments

We are hoping to establish pilot projects to lay the groundwork for the implementation of an interconnected Caribbean, based on Estonian expertise, and experience adding practical solutions to augment the vision of a single Caribbean ICT space.

## BEST OF BREED





# IMPLEMENTING BEST OF BREED **Cloud-Based E-GOVERNMENT SOLUTIONS**



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