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Building Trust through Public Private Partnerships

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1 Public-Private Alliances and Cybersecurity

Introduction

- In the last decade, cybersecurity has gained importance to financial systems.
- As Digital Technologies have evolved and reached ubiquity, the cyber threats have become more sophisticated and harder to combat.
- To counteract them, a differential focus based on creativity, flexibility and agility.

Introduction

- Financial Institutions controls a large percentage of the critical market infrastructure that is vulnerable to cyber threats.
- FIs have developed cybersecurity frameworks and standards to protect themselves.
- The public sector, also control important critical infrastructure that interconects with the private sector infrastructure and have also developed technical capacities on cyber.

Public-Private Initiatives (PPIs)

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- No industry can face alone the growing and changing challenges that the cyber world brings.
- PPIs play a fundamental role in building a joint response to common problems that affect financial systems.

Trust.

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2 The Payment System of the Dominican Republic (SIPARD)

The Payment System of the Dominican Republic (SIPARD)

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- It's a public service exclusively managed by the CBDR.
- All the payment and settlement systems recognized are part, including the CBDR.
- All Financial Institutions and other authorized entities are part of it.

SIPARD

The SIPARD Today

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Oversight and final settler

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Payment Systems and Processors

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CARDNET
TodoPago
gcs | SYSTEMS
CEVALDOM
VISA
MasterCard
MRed
VisaNet Dominicana
AZUL
SERVICIOS DIGITALES POPULAR

SIPARD

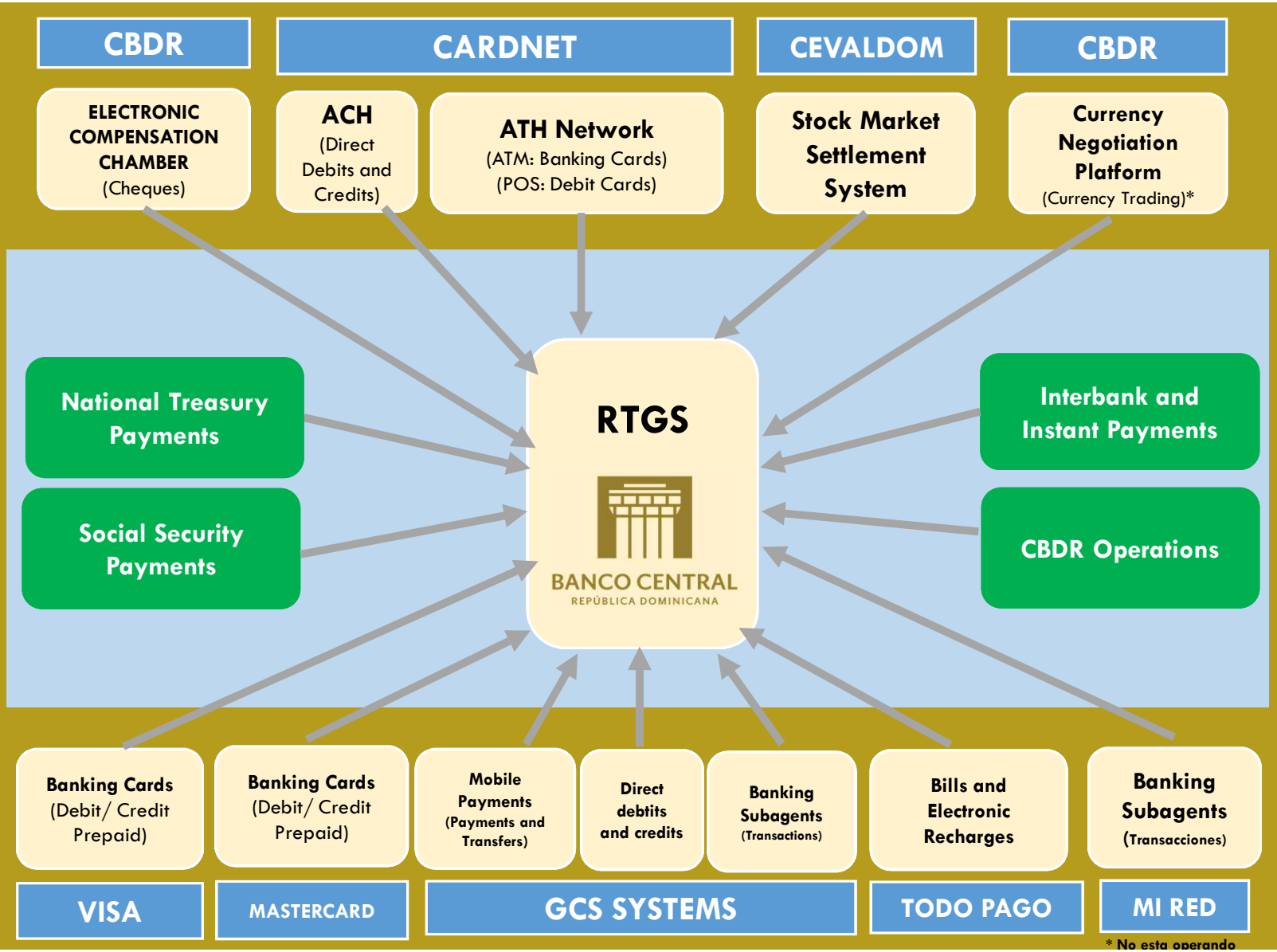
Participants

- CBDR
- Financial Entities
- Social Security Treasury
- National Treasury
- Brokerage Firm
- Indirect Participants (Service Providers)

Support and Linked Services Entities

- ISPs
- Printing Companies (Cheques)
- Software, scanners and other services providers.

A Big Payments Ecosystem



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Real Time Gross Settlement System (RGTS)

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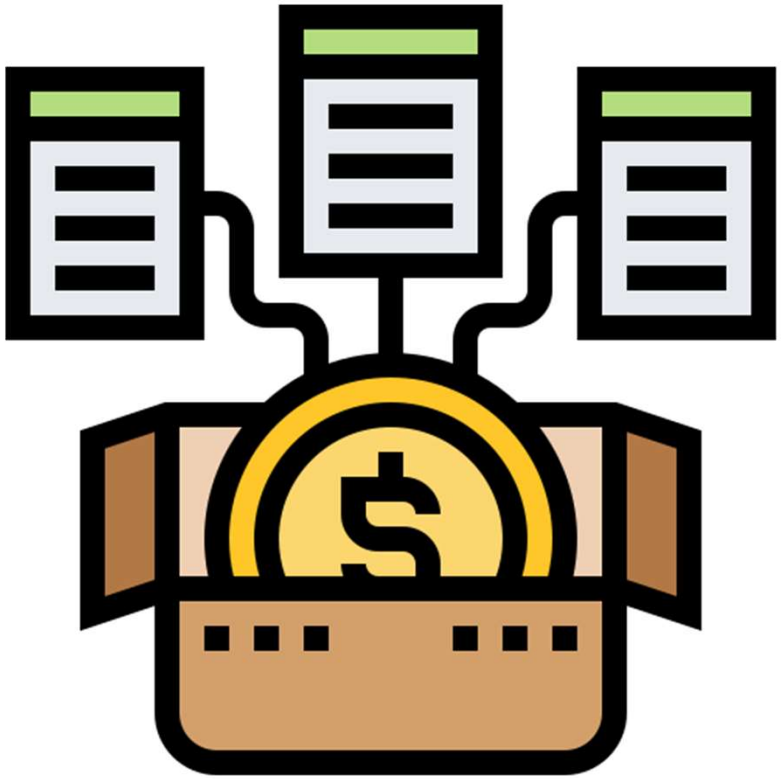
- Is an electronic payment system administered by CBDR. Participants of the RTGS can:
  - Make electronic funds transfers with each other and with CBDR.
  - Settle payment instructions or orders, continuously, in real time and gross terms, that is, transaction by transaction, in checking accounts at CBDR.



Regional Settlements Interconecction System (SIPA)

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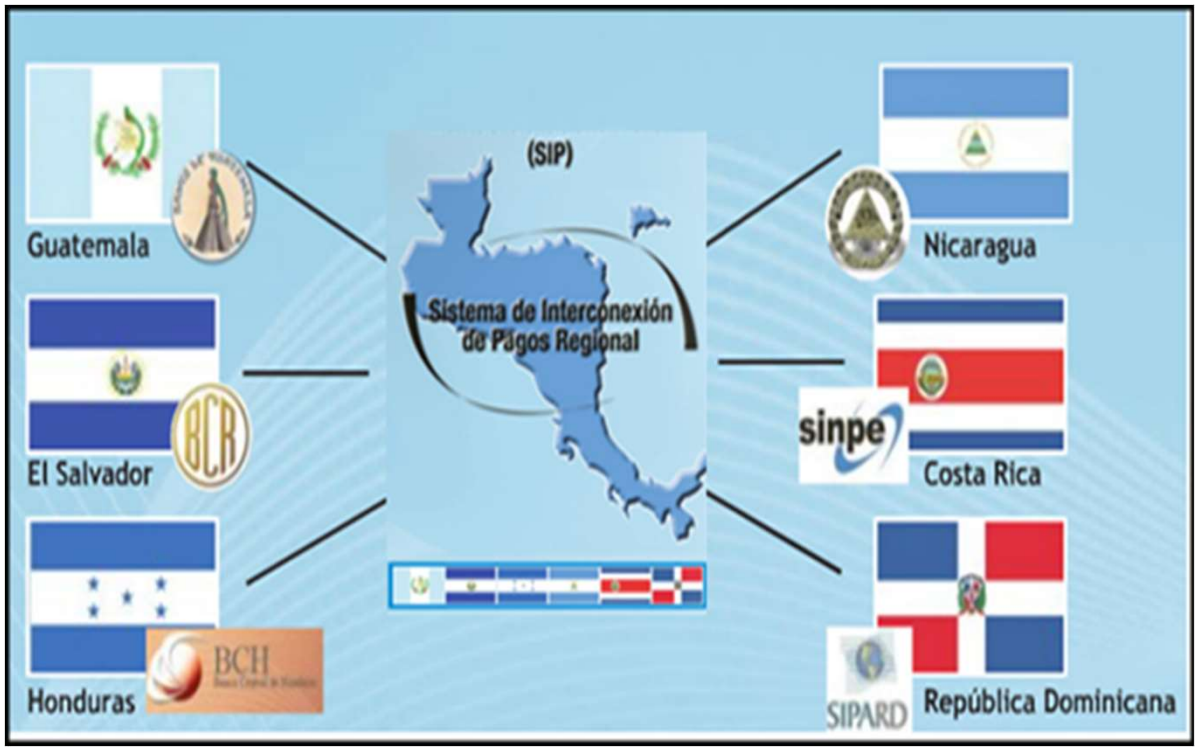
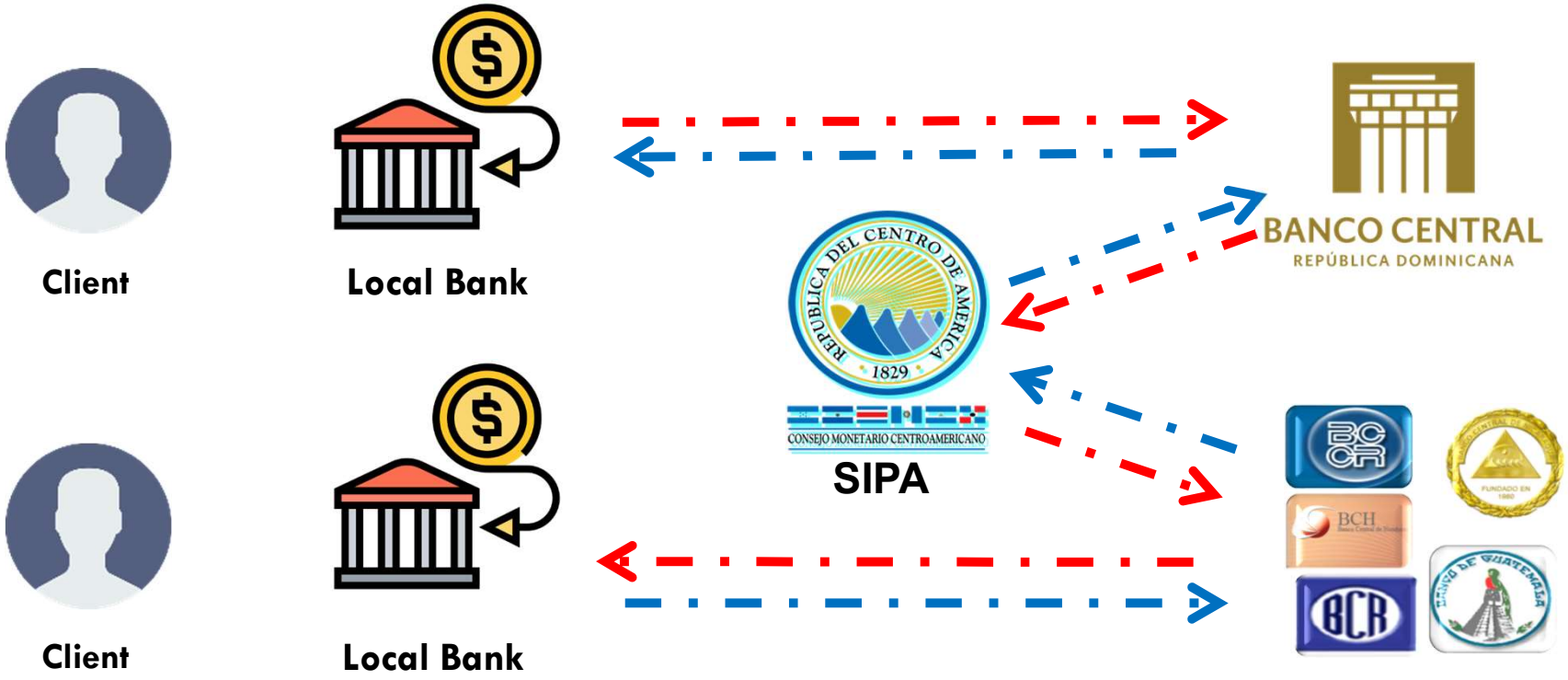
- Created by linking the national payment systems of the central banks of **Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic.**
- Its main purpose is to facilitate payments for the exchange of goods and services between these countries.



SIPA Automated Settlement Process



How can we Protect It?

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3 Information and Cyber Security Regulations for the Financial System of the Dominican Republic

About the Information and Cyber Regulations

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- Approved by the Honorable Monetary Board in November 2018
- It is the main instrument for the development of cybersecurity capabilities in the Dominican financial system.
- Its elaboration process had the important participation of the financial system from its conception to its approval and enforcement.

How it was built

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A Drafting Commission was established:

6

Representatives
Financial
System

8

Representatives
Monetary
Authority

Regulation Framework

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Goal

- To promote the embrace & implementation of practices for information security and cybersecurity risk management

Reach

- To establish principles & guidelines for regulated institutions for the procurement of information integrity, availability and confidentiality
- To obtain an optimal performance of all information Systems and technological infrastructure

Applies to

- Financial Intermediation Institutions (FIs)
- Payment Processors and other participants of the Payments and Securities Settlement System of DR (SIPARD)
- Related Services and Support Institutions interconnected with FIs or the SIPARD

Regulation Core Structure

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62 Articles

4 Titles

- General Provisions
- Information Security & Cybersecurity Program
- Sectoral Coordination to Respond Security Incidents
- Final Dispositions

Title I - General Provisions

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- It contains the general provisions that define and guide the following sections of the Regulation
- In this section a broad conceptual framework has been developed that will help to homogenize the criteria and definitions commonly used in the field of information security, as well as those necessary for the application of the provisions contained in the Regulation itself

Title II - Information Security & Cybersecurity Program

- It refers to the obligation to create a cyber and information security program, to be developed and deployed by each regulated institution
- This program should understand the different aspects relevant to the management of technological risk such as the implementation of applicable international standards to manage this type of risk, as well as the self-evaluations, reporting of compliance, monitoring and evaluation of the program

Title II - Information Security & Cybersecurity program

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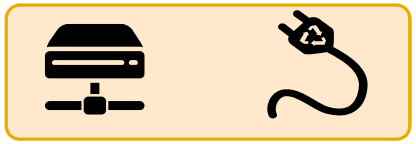
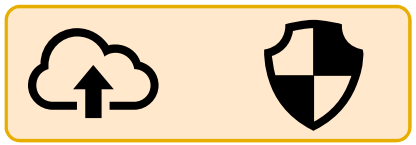


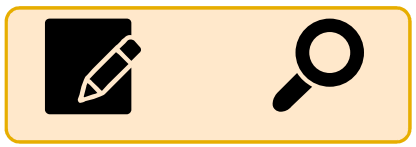
Technological Risk Management

- Self-Assessment of technological risks taking into consideration the risk appetite
- Assessment of technological risks to interconnected entities



Development of control framework

- Development of internal cybersecurity and information policy
- Controls for the active management of information, networks, information systems and technological infrastructures.



Program evaluation and monitoring

- Internal auditing
- Cybersecurity & information security monitoring

International Standards

- Applicable to the regulated ones that access to products and services of international suppliers
- Applicable to outsourced suppliers of bank card production services and identification tokens.

Compliance reports

- Financial intermediation entities (Banking Supervision Authority – Superintendence of Banks)
- SIPARD managers and participants, support entities and related services (Central Bank)

From the Controls Perspective

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1 Governance and Cyber Culture

1. InfoSec Committee
2. CISO Roles and Responsabilities

2 Risk Management Model

3 Program and Policies

1. Information Privacy
2. Application Management
3. Network and Servers
4. Procurement Policies
5. Incident Handling
6. Software Development

4 Management System

1. Identity
2. Technical Controls
3. Incidents
4. Devices
5. Third Parties and Contractors
6. Applications and Services
7. IT Ops Continuity

5 Evaluation and Compliance

1. International Standards
2. Self-Assesment
3. Audit
4. Sanctions Regime

Collaborative Aspects of the Information and Cyber Security Regulations

Title III: Sectorial Coordination

Sectorial Council for Cyber Security Incidents Response

- Coordinates financial sector efforts to manage information related to cyber security incidents
- Defines priorities and guidelines for the operation of the CSIRT

Sectorial Council for Cyber Security Incidents Response

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Permanent members with Voting Power (7 Members-delegates)

Monetary and financial administration

- Governor of the Central bank, who chairs the Council
- Banks Superintendent
- The Inspector General of the Central Bank
- Deputy Manager of Systems and Technological innovation of the Central bank

Private Financial Sector unions

- The Chair of the Association of Commercial Banks of the Dominican Republic (ABA)
- The Chair of the Security Committee of the Dominican Savings and Loan associations League (LIDAAPI)
- The Chair of the Technology Committee of the Association of Savings and Credit banks and credit corporations

Sectorial Council for Cyber Security Incidents Response

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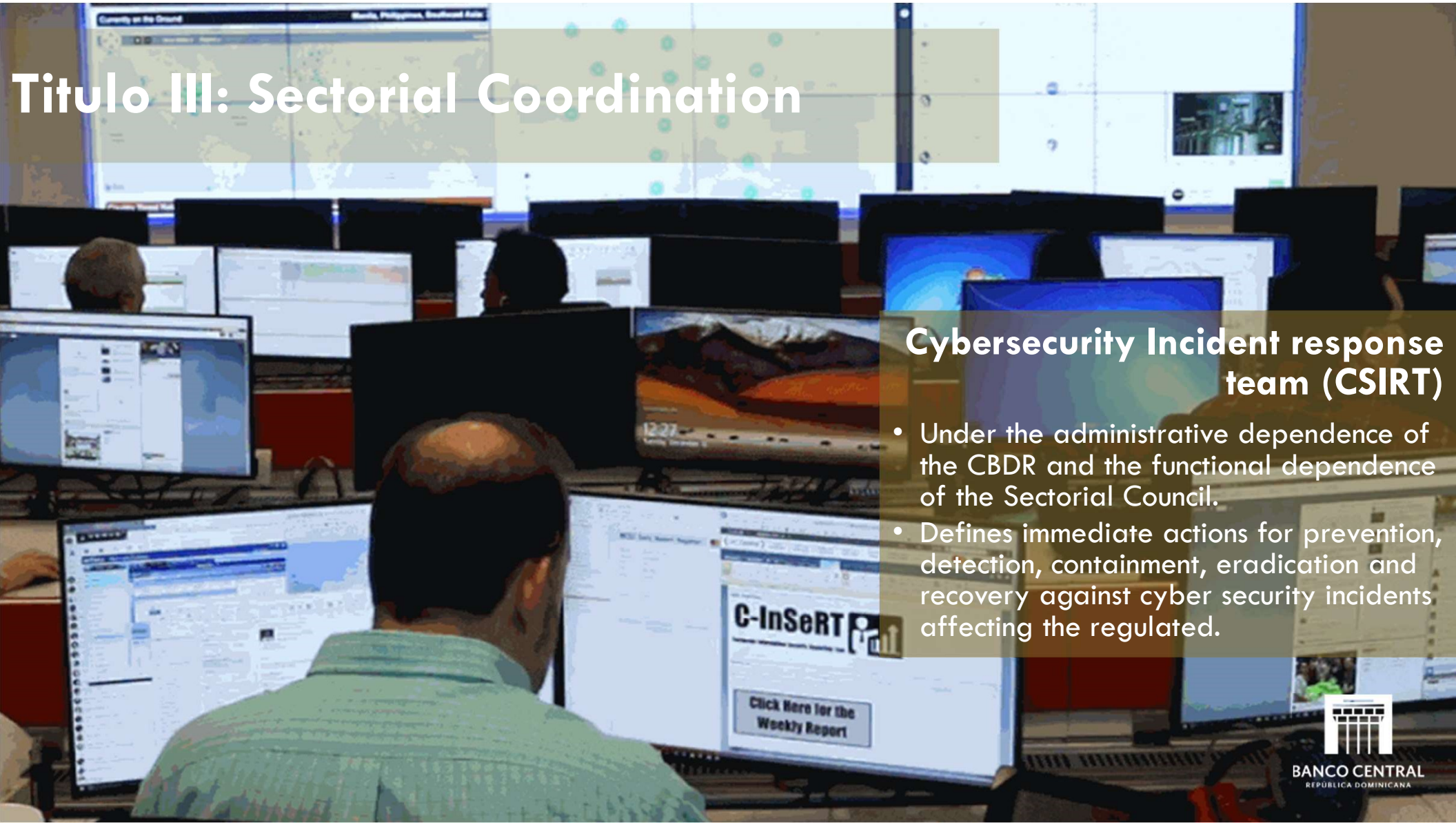
Permanent Members Without Voting Power (8 Guests-delegates)

Monetary and Financial Administration

- Director of the Cybersecurity Incidents Response Team (CSIRT)
- Director of Information & Cyber Security of the Central bank
- Director of the Systems and Technology Department of the Central Bank
- Director of the Security Department of the Central Bank
- Head of the Risk Management Office of the Central Bank
- Director of the Operations and Technology Department of the Banks Superintendency
- A representative of the Securities Market Superintendency
- A representative of the Pensions Superintendency

4 The CSIRT as a Collaborative Model

Titulo III: Sectorial Coordination



Cybersecurity Incident response team (CSIRT)

- Under the administrative dependence of the CBDR and the functional dependence of the Sectorial Council.
- Defines immediate actions for prevention, detection, containment, eradication and recovery against cyber security incidents affecting the regulated.

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In Practice

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FIs

- 78 Entities interconnected (more will be added in the future)
- Daily report sent twice a day
- Constant collaboration with CSIRT on its duties

CSIRT

- Informational and emergency bulletins
- Emergency response services
- Threat Intelligence services

Conceptual Diagram for CSIRT

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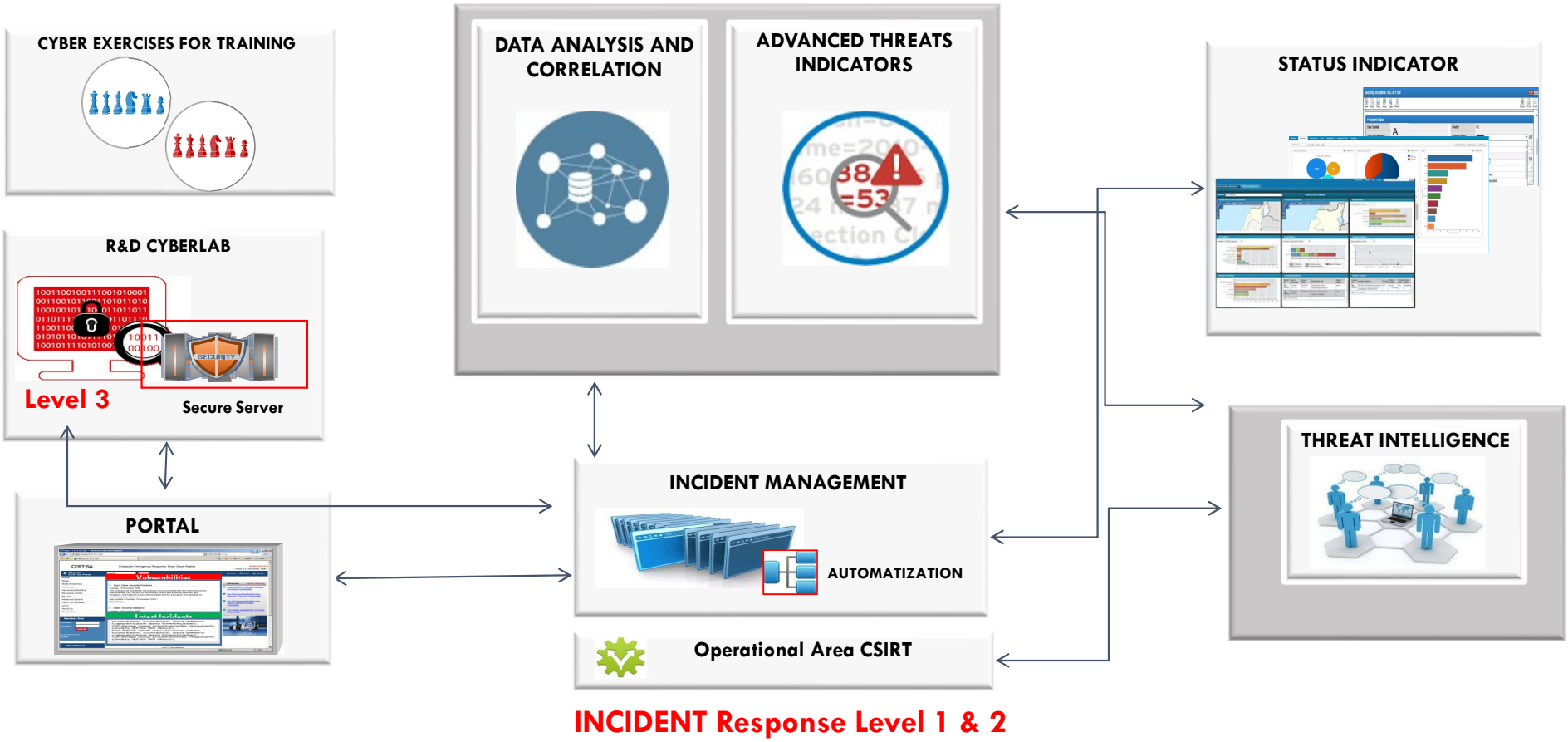
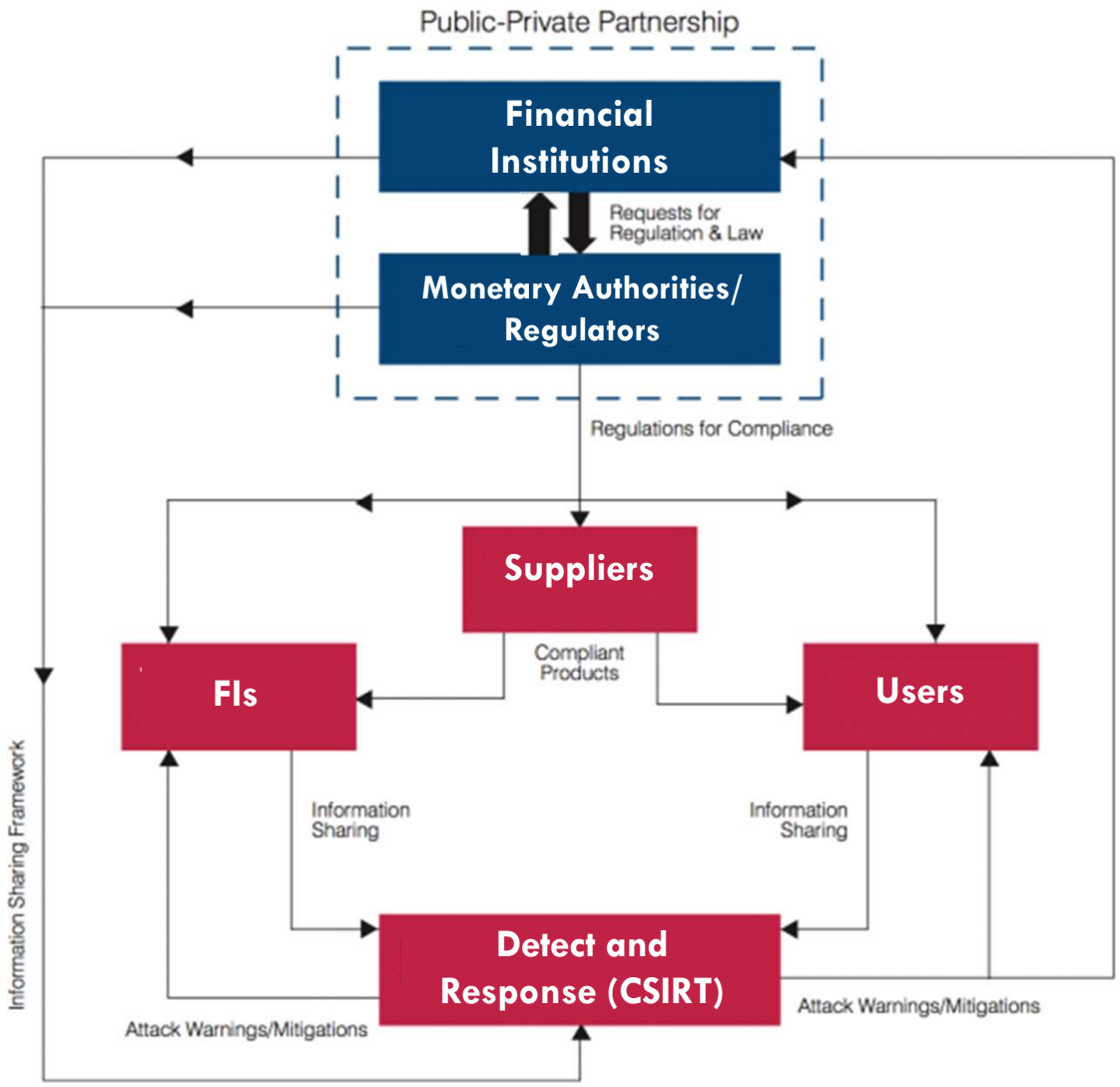


Wrapping Up…



SOURCE: A LOOK INTO PUBLIC PRIVATE PARTNERSHIPS FOR CYBERSECURITY – UNIVERSITY OF PENNSYLVANIA (2017)

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Questions

Thank you very much