THE UNITED REPUBLIC OF TANZANIA
TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

Implementation of ITU DFS security lab

- TCRA’s experience.

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About TZ-CERT

TZ-CERT
TANZANIA COMPUTER EMERGENCY RESPONSE TEAM

About

The national focal point of contact for coordinating responses to cybersecurity incidents

Operations

Started in 2010; within the structure of TCRA

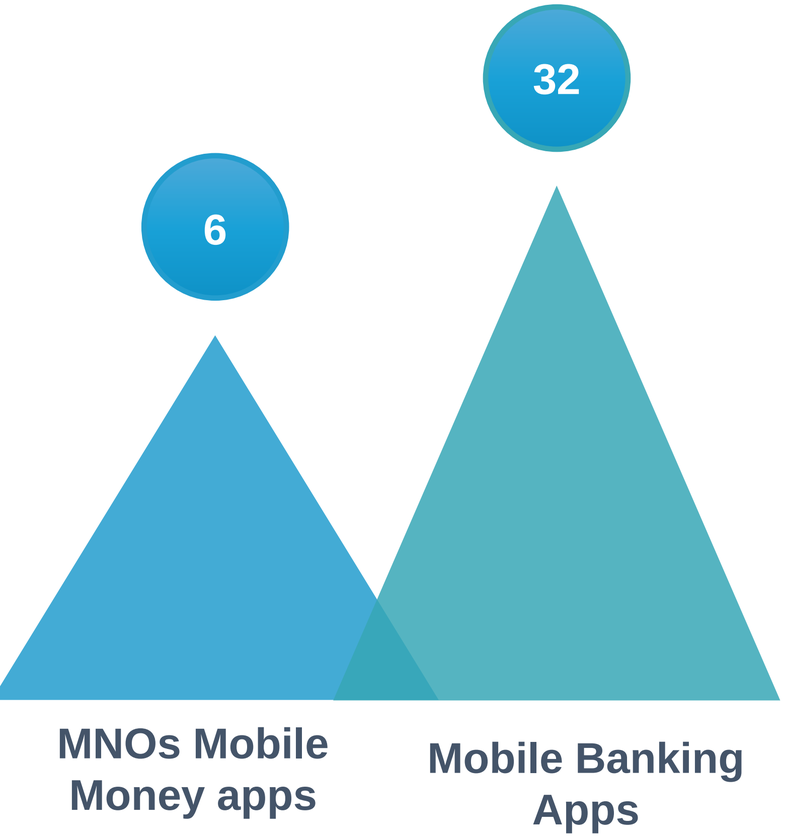
Sectorial CERTs

Government CERT, Academia CERT, FinCERT (in progress)

Membership

Member of FIRST since 2015, Other memberships:- AfricaCERT, CAMP, SADC-CERT

DFS apps in Tanzania



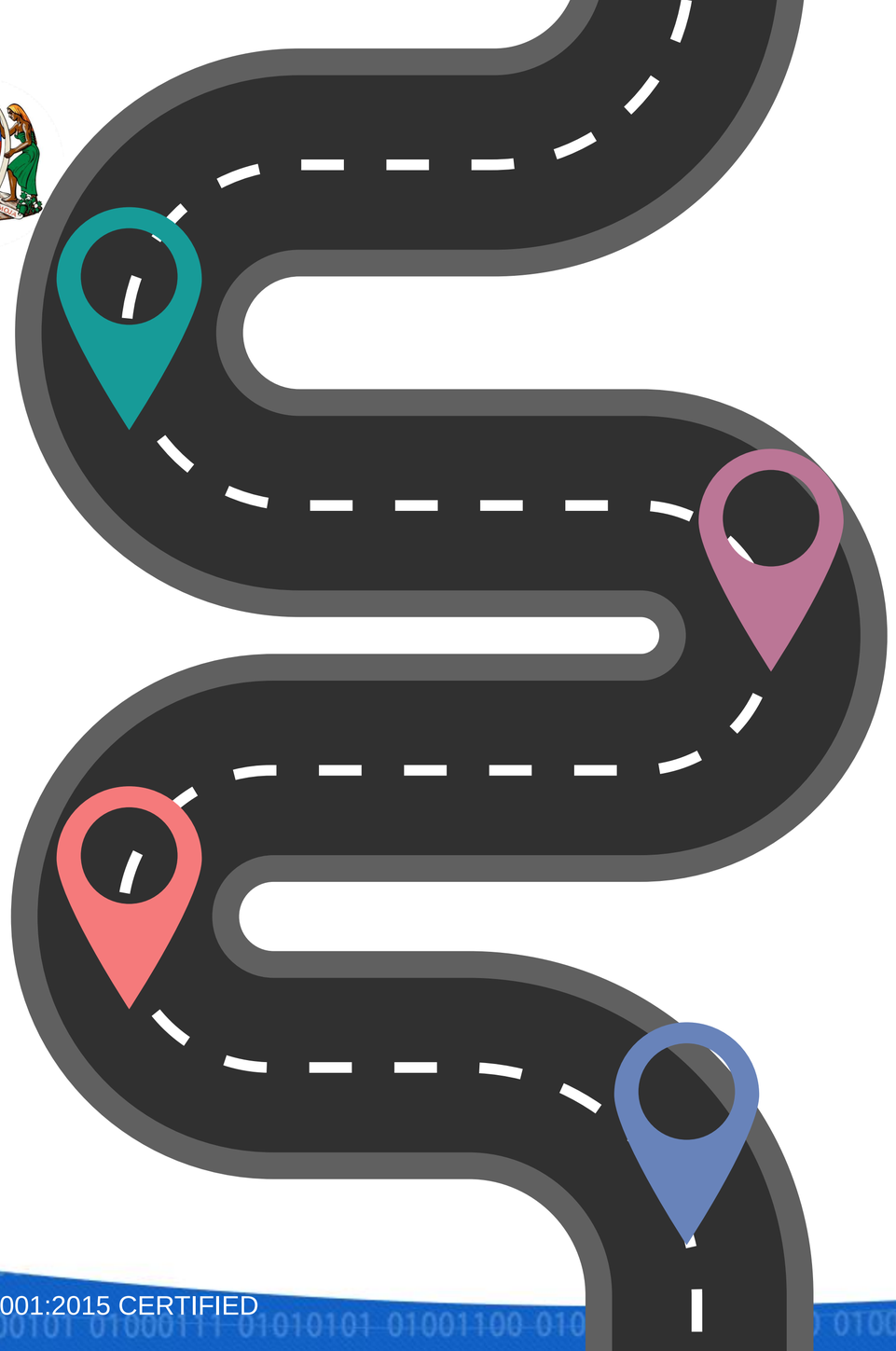
Mobile Money Transactions Increase

2020: 3.4 Billions

2023 4.2 Billions

- ✓ **Mobile money subscription**: 51.4 million (TCRA Sept 2023 quarter report).
- ✓ **Mobile money market share**: over 60% dominated by 3 operators
- ✓ Number of Mobile money transactions (Q1, Sept 2023): **422,390,546.**
- ✓ Number or mobile banking transaction (Q4, June 2023, BOT report): **7,117,040.**

DFS Security Lab Roadmap



1

Planning & Final Requirement

June 2022

2

Lab setup & Virtual walkthrough

June – October 2022

3

Operationalization

Independent testing & Report writing : Aug – Dec 2022

4

Post implementation

Follow-up meetings: Nov 2022- To date

How we benefited

- ✓ **Improved the protection against Cyber Threats**
  - *Assisted us in identifying vulnerabilities and developing proactive measures*
- ✓ **Promotion of Digital Financial Inclusion**
  - *With a secure Digital Financial Ecosystem can encourage more people to adopt digital banking services*
- ✓ **Fostering Innovation**
  - *This lab can foster innovation in the fintech sector by collaborating with startups to build secure digital financial solutions*

How we benefited

- ✓ **Skills Development**
  - *The lab has provides us a space to work on cutting-edge technologies and gain practical experience.*

- ✓ **Global Competitiveness**
  - ✓ *The lab contributes to a country's global competitiveness by showcasing its commitment to digital security and innovation*

Apps tested

Number of Apps tested

- ✓ Seven (7) apps (Android & iOS)
- ✓ Five (5) USSD STK apps

Key issues fixed

- ✓ Insecure Data Storage
- ✓ Insecure Communication (MiTM)
- ✓ Code Tampering
- ✓ Reverse engineering
- ✓ Insufficient Cryptography
- ✓ Binary Over the Air (OTA) attacks
- ✓ Remote USSD execution using ADB
- ✓ Device (IMEI) validation

Way Forward

Adopting key ITU recommendations

SS7 vulnerability

SIM related risks & SIM swap

MoU with Central bank

Mobile app security best practice.

Knowledge transfer to other stakeholders

Knowledge transfer to key stakeholders by facilitating trainings

Establishment of Financial Sectorial CERT

This CERT will support in the role to protect DFS security

DFS Lab operation

TZ-CERT continues to use the lab to test apps in quarterly basis.

Thank You !

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