Operationalization of Malawi CERT.

Lessons Learnt and Challenges

Christopher Banda(Malawi CERT, Malawi)
Christopher.banda@mwcert.mw

Dr. Vilius Benetis, (NRD Cyber Security, Lithuania)

VB@nrdcs.lt

Malawi Location

Key Information

- Population: 20 Million
- Economy: agriculture
- Tourism: Lake Malawi
- Politics: Multi-party democracy

OVERVIEW

- Legal Framework
- National Cybersecurity Strategy
- Malawi CERT
- Achievements
- Challenges
- Lessons Learnt

LEGAL FRAMEWORK

- Electronic Transaction and Cybersecurity Act, 2016

→ Developed to address the challenges relating to cybersecurity and electronic transactions in Malawi

→ Establishes the Malawi Computer Emergency Response Team (mwCERT) within MACRA

NATIONAL CYBERSECURITY STRATEGY 2019-2024

- The National Cybersecurity Strategy
  - → Describes how Malawi will ensure the secure, trusted, resilient, and safe cyberspace used by Malawi institutions and citizens

NATIONAL CYBERSECURITY STRATEGY: Vision

Vision

"A nation with a secure, trusted, resilient and safe cyberspace that promotes a knowledge-based society and socio-economic development"

NATIONAL CYBERSECURITY STRATEGY: Mission

Mission

"To develop and deliver effective Cybersecurity capacity, services and infrastructure that instills confidence in cyberspace"

NATIONAL CYBERSECURITY STRATEGY: Key Goals

- Identification and protection of the critical information infrastructure in Malawi
- Develop and enhance Cybersecurity-related capacity, infrastructure, legal, regulatory and other related frameworks
- Promote awareness, information sharing and collaboration on cybersecurity
- Enable and continuously improve the safety of vulnerable groups in cyberspace, especially the safety of children
- Enhance and co-ordinate the fight against all forms of cybercrime
- Promote the use of cyberspace to drive social and economic development

MALAWI CERT

- The Malawi Computer Emergency Response Team abbreviated as mwCERT, was established as a unit within the Malawi Communications Regulatory Authority (MACRA) to act as a focal point for the coordination of cybersecurity-related issues at both national and international levels.
- mwCERT was established pursuant to Section 6 of the Electronic Transaction and Cyber Security Act, 2016 of the Laws of Malawi to take charge of Critical information infrastructure protection actions and serve as a base for national coordination to respond to cyber security threats

MALAWI CERT : Vision

Vision

"To be the trusted cybersecurity emergency response team that makes Malawi and the world a safe cyberspace"

MALAWI CERT : Mission

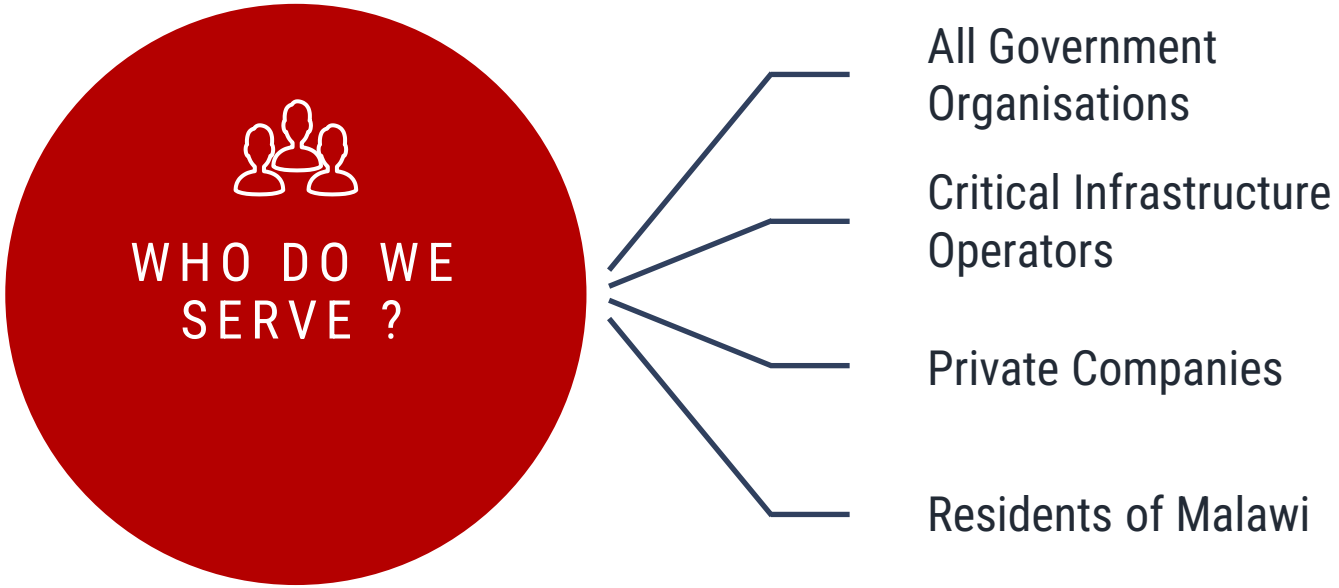
Mission

"To provide a comprehensive set of responses to cybersecurity threats and vulnerabilities through national coordination with all stakeholders to effectively respond and prevent cybersecurity incidents for critical infrastructures and other systems of national interest"

The role of Malawi CERT

- Facilitate the development of a national cybersecurity posture
- Assisting Critical Information Infrastructure (CII) owners to mitigate their information risk
- Establish a trusted communication channel between all the stakeholders
- Provide early warning to CII and Public
- Coordination of incidents response at the National level
- Help CIIs develop their own incident management capabilities.
- Testing and measuring maturity over time and guiding strategy based on measurement
- Promote a National Culture of Cybersecurity (Awareness/Capacity Building**)**

MALAWI CERT : Constituents



MALAWI CERT : Services

mwCERT provides cyber-related assistance to its constituents to help them resolve incidents

mwCERT gathers information on cyber threats from various sources and takes necessary measures

mwCERT identifies vulnerabilities and advises its constituents on mitigating the risks

mwCERT's knowledge transfer service involves raising awareness, providing training, and conducting exercises to enhance cybersecurity capacity

mwCERT continuously analyzes feeds to identify potential threats that may affect the systems of its constituents

mwCERT provides digital forensic services to help resolve incidents

MALAWI CERT : Implementation Process

- mwCERT Unit was set within MACRA and one person was assigned to coordinate the implementation process

MALAWI CERT : Implementation Process

- An assessment was conducted to gather insights on the best approach for implementing a national Computer Emergency Response Team (CERT) in Malawi

MALAWI CERT : Implementation Process

- A workshop was conducted to design mwCERT, along with its associated implementation processes

MALAWI CERT : Implementation Process

- Technical implementation contract for mwCERT was agreed and signed by ITU and MACRA

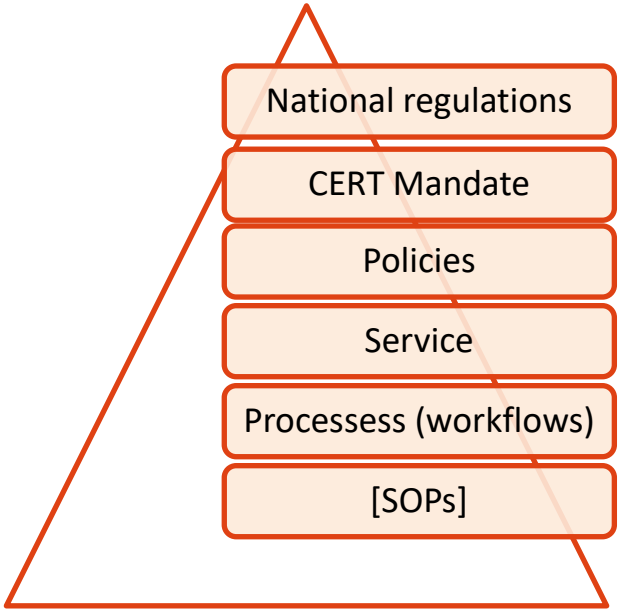
MALAWI CERT : Implementation Process

- Due to the Covid pandemic, the technical implementation of mwCERT was delayed

MALAWI CERT : Implementation Process

- The technical implementation of mwCERT was finalized

Structural Composition of the CERT organization.



KEY ACHIEVEMENTS

The initiatives accomplished :

- ✓ Coordinated the Development of the first Cybersecurity Maturity Model Assessment in 2016
- ✓ Coordinated the Development of the National Cybersecurity Strategy in 2017 - 2019
- ✓ Conducted the first National Cybersecurity Risk Assessment in 2020
- ✓ Coordinated the Development of the second Cybersecurity Maturity Model Assessment in 2021
- ✓ Conducted the second National Cybersecurity Risk Assessment in 2021

KEY ACHIEVEMENTS Cont….

- ✓ Coordinated Development of the National Public Key Infrastructure Framework
- ✓ Coordinating the Development of the Child Online Protection Strategy (underway)
- ✓ Conducted capacity building for Law enforcement, Judiciary, and Legal practitioners
- ✓ Conducted capacity building on cybersecurity for various security agencies
- ✓ Recommended government to join Budapest and Malabo convections

KEY ACHIEVEMENTS

- ✓ mwCERT was awarded the FIRST fellowship since 2021
- ✓ mwCERT is a member and Vice-chair of the SADC CSIRT
- ✓ Improved local and international cooperation, coordination, and networking among stakeholders
- ✓ Coordinating Sectoral CERT establishment (Academia, Banking, Defense, Government and Malawi Police)
- ✓ Organized the ITU 2023 Cyberdrill for Africa 8-12 may 2023

CHALLEGES FACED IN CYBERSECURITY

- Gaps in our legislation
- Delays in policy development
- Limited resources
- Lack of public education and awareness on cybersecurity across Malawi
- Limited available capacity to mitigate emerging forms of cybercrime in Malawi

LESSONS LEARNT

- The need for legislation/Strategy (To get a mandate)
- Stakeholder engagement and cooperation (Local and International)
- Start small
- Use open-source solutions
- Build capacity
- Keep on Lobbying

Thank you!

DISCUSIONS

Contact

Christopher Banda, Christopher.banda@mwcert.mw

Vilius Benetis, VB@nrdcs.lt