

C&I training module for start-ups

Session 2: New Technologies and IOT

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Session on ICT Conformance and Interoperability: *Challenges for Developing Countries*

Jeevan

Relevant Experience

Economic Development

Advisory Board

- 15years working within the Caribbean in the areas of entrepreneurship and startups
- Consultant to Caribbean economic bodies and science organisations on matters related to economic development
- 15years working in the areas of electronics product development and additive manufacturing















CITP Structure

OM1: Establishing conformity and interoperability regimes

OM2: C&I testing domains

OM3: Development, implementation and management of Mutual Recognition Agreements

OM4: Establishing Conformity Assessment Test Labs in different Regions **EM 1.1:** Understanding of common minimum requirements for type approval (from FCC and EC)

EM 1.2: Use of proxies (FCC and EC)

EM2.1: Electromagnetic Compatibility (EMC) testing

EM2.2: Mobile Terminals type approval testing;

EM2.3: Aspects of NGN and Future Networks conformance and interoperability testing;

EM2.4: Fixed broadband access networks

EM2.5: Optical Networks

EM2.6: Pre-compliance testing for start-ups

OM4.1: Feasibility Study for a Conformance Testing Centre

Quick overview



U.N. Sustainable Development Goals



World Economic Forum





IOT & Sustainable Development

- Expectation that technology will solve local & global challenges.
- IOT is ranked 3rd for global economic impact by 2025¹
- Relevance to emerging economies:
 - Participation vs consumption (\$11.1 trillion 14% of today's global GDP)
 - Unaddressed markets and needs
 - Specific solutions focus on social impact





75% of IoT projects focus on 5 SDGs

Individuals <10K : >10M Usage single sector : multiple sectors Geography community : worldwide

World Economic Forum

IoT Projects

SDG





IOT Challenges

- Scaling is impacted by interoperability challenges:
 - Understanding at the regulator level
 - Perception of regulations as a barrier to entry
- Developer level awareness & perception of C&I
 - Monetary cost
 - Safety & human cost
- Funding and resources for IOT projects/products is limited
 - Certification costs
- IOT markets are still in their infancy



Electronic Steelpan (P.H.I.)



Example

Pannist Natasha Joseph





Natasha Joseph performing with the PHI

Testing at the certification lab

- Product development was completed with intention to launch sales
- Undertook FCC certification and failed
- Resultant delay to market + required rework of electronics resulted in app. USD100k in losses

FM2.6

EM2.6 Pre-compliance Testing For Startups

- For startups awareness about C&I:
 - Relevant to their specific IOT product design
 - At their current point on their journey to market
- For regulators awareness of the impact of C&I:
 - Appreciation of the costs (monetary, time, technical) to a startup
 - Regulations as a benefit vs a barrier







EM2.6 Content



EM2.6 Pre-compliance Testing For Startups

Understanding the Global Landscape of C&I regulations. Understanding the IOT product space

Case Study involving real product scenario:

- Identify IOT technology space
- Identify C&I certification needs

Understanding the IOT product development cycle. Understanding C&I certification risk at each stage.

Case Study involving real product scenario:

• High risk IOT product requiring risk mitigation strategies

Developing budging for a new IOT product/ service initiative

Case Study involving real product scenario:

• Planning for a new IOT product development initiative



- Giving Startups a better chance of success:
 - Smart product mix
 - Incorporating C&I from the drawing board
 - Knowing the people + resources that you need
 & when you need them
- Helping Regulators uplift emerging products & businesses:
 - Advocacy for cross cutting MRAs
 - Informed engagement with entrepreneurs

mpact





Hope

Young pannist playing the electronic steelpan



Need for affordable robust hearing aids

- Young people and startups are working to build solutions to address pressing needs
- Their solutions can be exportable innovative game changers
- A progressive regulatory framework can protect and uplift all stakeholders



Assistive device for the visually impaired



Sustainable robotics for classrooms

THANK YOU



transforming ideas