Good Practices on Public – Private Engagement

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The Role of the Private Sector in Monitoring, Observing and Predicting Hazards

Carlos M Villamil S
Director, Latin America & Caribbean

OTT Hydromet

OTT HydroMet

MEASURING THE WORLD'S WATER CYCLE AND SURFACE WEATHER

THROUGH A RANGE OF BRANDS TO OFFER COMPLETE HYDROLOGIC AND METEOROLOGIC SOLUTIONS THAT SERVE TO MONITOR AND PROTECT THE ENVIRONMENT AND LIVES

OTT HydroMet

Solutions for Hydrology, Meteorology, and Solar Energy

AQUARIUS	KIPP & ZONEN	Lufft	SUTRON	OTT	ADCON	HYDROLAB	METEOSTAR
Analytics software for real-time, accurate surface and groundwater data	Solar radiation and atmospheric properties for meteorology and solar energy	Ambient weather monitoring for meteorology and weather critical operations	Hydro-meteorology monitoring, data collection and management for water, weather, and renewable energy	Hydrology monitoring and data management for surface and groundwater	Plant disease monitoring and agricultural meteorology for smart farming and irrigation management	Environmental water quality monitoring for surface and groundwater	Software for real-time weather forecasting in aviation weather and flight planning

Our Purpose: Innovate modern solutions that enable ***confident decision-making despite increasingly volatile and intense weather***

AROUND THE WORLD

OTT HYDROMET IS PRESENT IN 23 COUNTRIES, PLUS DISTRIBUTION PARTNERS IN MORE THAN 90 COUNTRIES, ALL AROUND THE WORLD.

WHAT ARE OUR GLOBAL SOCIETAL CHALLENGES?

Extreme Weather

- Drought
- Flood
- Tsunami
- Heatwave
- Wildfires

Water Scarcity

- Water Resources
- Irrigation
- Saltwater Intrusion
- Water Quality
- Surface Water Quantity

Macro Challenges

- Climate Change
- Food Security
- Renewable Energy
- Environmental Protection
- Population Increase







PEOPLE CENTERED EARLY WARNING SYSTEM

Disaster risk knowledge

Systematically collect data and undertake risk assessments

- Are the hazards and the vulnerabilities well known by the communities?
- What are the patterns and trends in these factors?
- Are risk maps and data widely available?

Detection, observations, monitoring, analysis and forecasting of hazards

Develop hazard monitoring and early warning services

- Are the right parameters being monitored?
- Is there a sound scientific basis for making forecasts?
- Can accurate and timely warnings be generated?

Preparedness and response capabilities

Build national and community response capabilities

- Are response plans up to date and tested?
- Are local capacities and knowledge made use of?
- Are people preapred and ready to react to warnings?

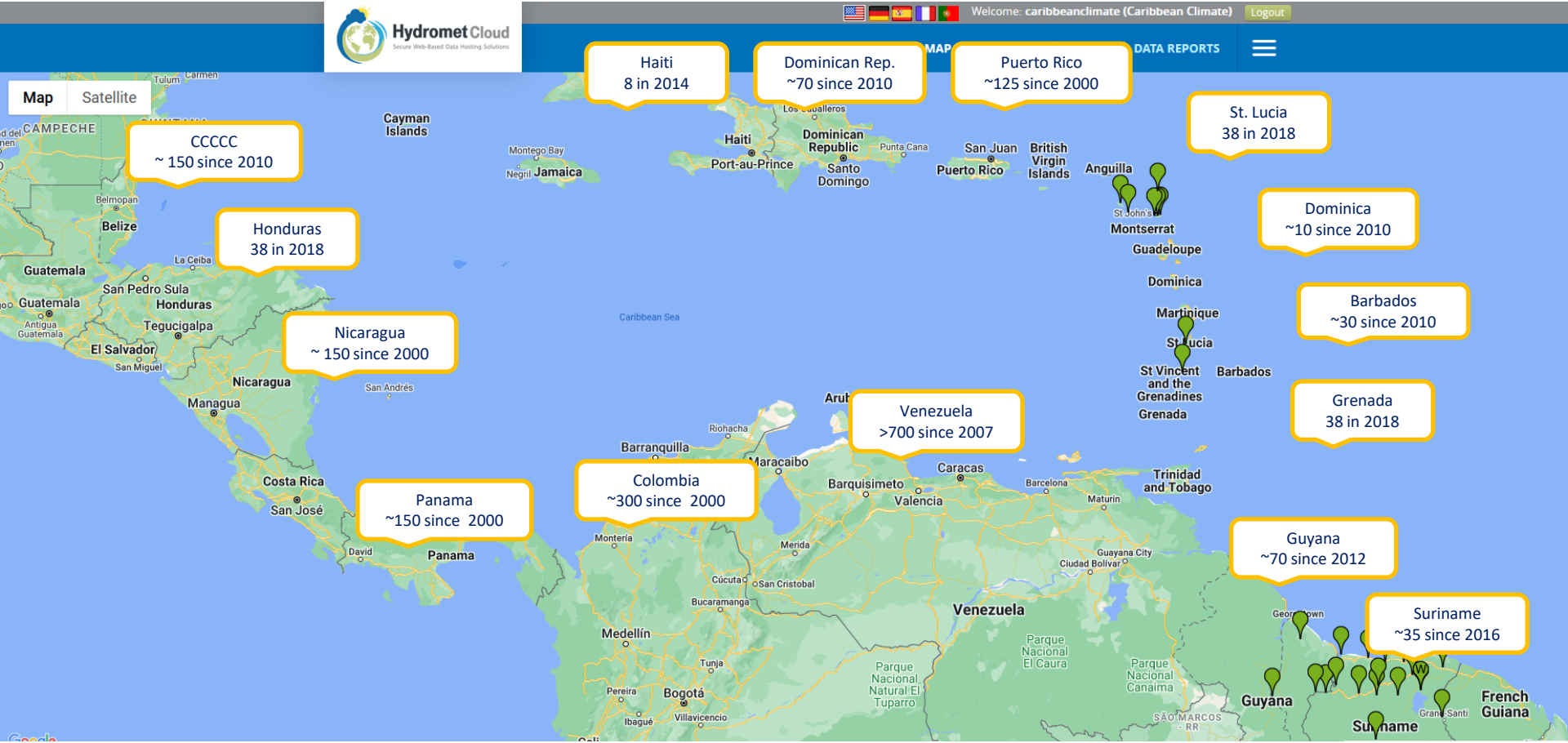
Warning dissemination and communication

Communicate risk information and early warnings

- Do warnings reach all of those at risk?
- Are the risks and warnings understood?
- Is the warning information clear and usable?

OTT HydroMet

OTT Hydromet Footprint in the Caribbean



Flood Warning System

Riviere Grise & Riviere Blanche - Haiti

Funded by USAID
After the 7.0 magnitude earthquake

Project Components
- ❑ 4 Automatic Water Level Stations
- ❑ 4 Siren Stations
- ❑ 2 Control Centers with Customized GUI

Engineering Services & Support
- System Design and Configuration
- Customized Software GUI for Siren Controls
- Site Survey and Site Preparation
- On-Site Installation w/ Local Partner
- OEM Training for Hardware and Software
- After Sales Support and Warranty

Radar Sensor

Siren Station

In-Country Software Training

Puerto Rico Tsunami Warning System

Funded by University of Puerto Rico and FEMA
After Indian Ocean Earthquake and Tsunami

Project Components
NOAA/NOS Tide Stations
XConnect Data Center

Tsunami Messages
Tsunami Watch
Tsunami Waring
All Clear / Cancellation of Tsunami Watch or Warning

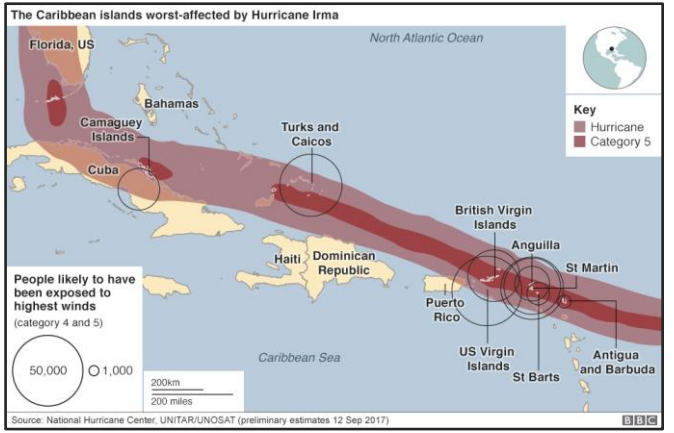
Donation of Two Automatic Weather Stations

In Collaboration with CIMH
End User: British Virgin Islands Airport Authority
After the 2017 Category 5 Hurricane Irma

Project Components
Supply of Two Synoptic Automatic Weather Stations

Engineering Services & Support
System Design and Configuration
After Sales Support and Warranty

CIMH Support
Site Survey and Site Preparation
On-Site Installation with Local Partner



Capacity Building Activities

Advanced Users Symposium
- ❑ Yearly Event open to Customers Worldwide

Regional Training
- ❑ Component of Regional Projects
- ❑ Attended by Technical Staff of Regional NHMS

Soon to be shared, regional survey to identify critical needs on training and capacity building for RA III & RA IV

Public-Private Engagement

Advocacy in Global, Regional & National Fora

To find ways for the private sector to meaningfully contribute to improving availability, access & dissemination of accurate and timely weather, water and climate data

ACTIVITIES

Speaking Engagements at Meetings & Conferences

- ❑ Advocate for private sector engagement for project development
- ❑ Support creating space for public-private transparent discussions to better understand both perspectives and expectations

HMEI Governing Council

- ❑ Councilor for WMO Commissions Collaboration – strengthen collaboration & promote trust between hydromet companies and the wider WMO community in support of Member States

Global Hydrometry Support Facility (WMO HydroHub)

- ❑ Advisory Council Member – Private Sector Representative – provide advise on strengthening national water monitoring capabilities & promote HydroHub Initiative

Promote PPEs at (sub) regional & national levels

To work towards building trust through better understanding of the specific needs of the hydro-met institutions and identify strengths and experience that OTT can bring to the table

ACTIVITIES

Climate Funding Institutions & Aid Agencies

- ❑ Understand donor expectations, Co-develop & align on what good PPEs look like
- ❑ Pilot innovative ways to collaborate to have evidence for new policies

UN Agencies & Development Banks

- ❑ Explore innovative ways to collaborate to ensure sustainability of observation networks and increased capacity & expertise in developing countries

Regional & National Institutions

- ❑ Actively engage with Regional Climate Centers, National Hydromet Services and other end-users to better understand needs and find fit for purpose solutions

Public - Private Engagement

Urban Flood Warning Station

Turn-key solution for a real-time flood warning network

TECHNICAL SPECIFICATIONS	
Parameters	water level water temperature
Parameters (optional)	visual imagery precipitation air temperature barometric pressure relative humidity
Power Management	Solar panel and rechargeable battery provide full system autonomy
Communication	Two-way 4G LTE cellular communication with alarming capabilities
Additional Interfaces	SDI-12, RS-485, RS-232, Analog
Temperature Range	-40° F to +158° F
NEMA Enclosure Size	7.3 in x 9.5 in x 5.2 in
NEMA Enclosure IP Rating	IP66

Availability and technical specifications subject to change.

Stand up a network that fits your needs

Quickly notify stakeholders of an event

Customized Solutions.

1. For Urban Flood WSs, we engaged with local authorities within US to design an easy to deploy solution, also complying with minimum tech reqs
2. Initiating trials in 2023 in US

Station Components

Datalogger

Water Level Sensor

Power Source

Optional Upgrades

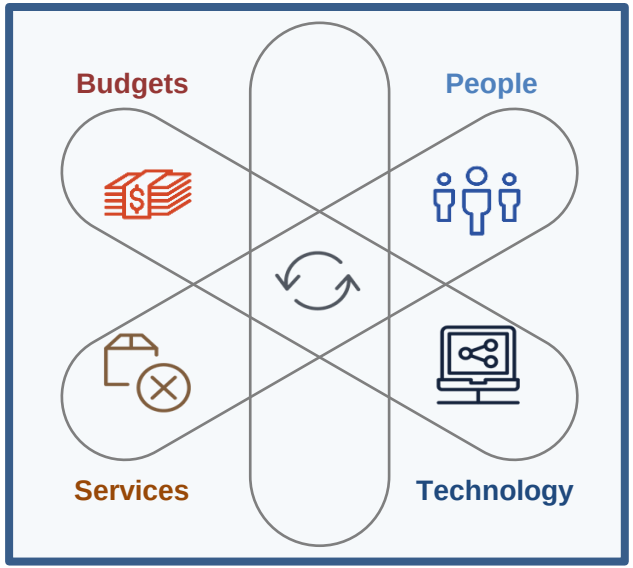
Station Camera

Radar Level Sensor

Tipping Bucket

Weather Station

Challenges



BUDGETS

- ❑ Limited government budgets
- ❑ Dependence on sporadic donor funding

PEOPLE

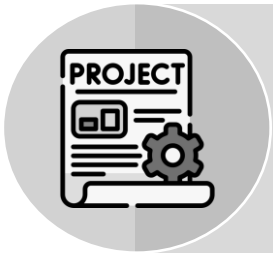
- ❑ Limited technical skills & resources
- ❑ Lack of professional, empowered staff

SERVICES

- ❑ Limited ability to deliver services to decision makers & end-users
- ❑ Lack of credibility

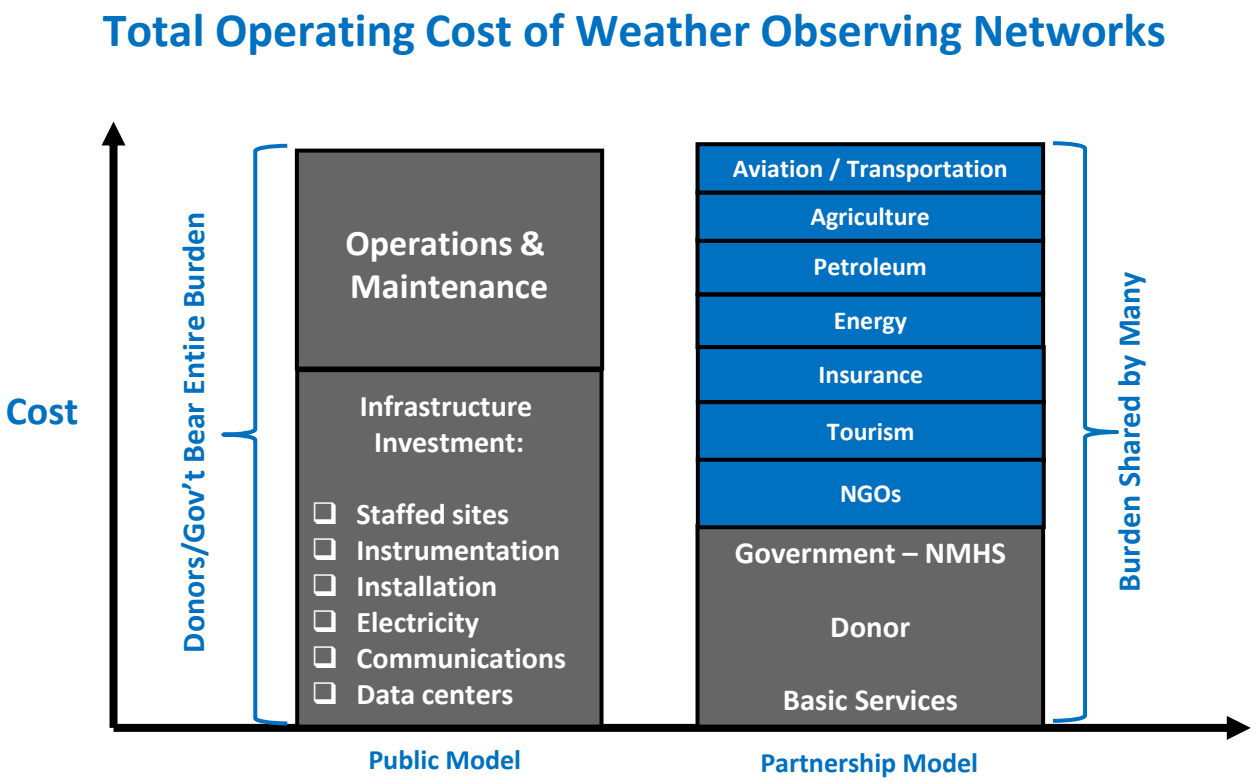
TECHNOLOGY

- ❑ Technology mismatch with capacity
- ❑ Basic operational constraints



- ❑ Timelines too short
- ❑ CAPEX funding does not support operations
- ❑ Absorption capacity not always considered
- ❑ Procurement timelines & specifications lead to poorly specified systems that do not meet needs
- ❑ No Sustainment Strategy

PPP enables sustainable delivery of hydromet services



Call to action

- ❑ Keep opening the communication lines
- ❑ Jointly explore how we can collaborate
- ❑ Engagements either bilaterally or with the support of WMO, UNDP, UNDRR, World Bank or any other relevant institution

Contact Details

Jay Wilson
Director, Business Development & Sustainability
Email: josephine.wilson@otthydromet.com
Phone: +41 79 617 9919

Carlos Villamil
Director of Sales, Latin America & Caribbean
Email: carlos.villamil@otthydromet.com
Phone: +57 (318) 209-5882