



# Massification of Disaster Detection and Monitoring

Disruptive technologies and innovations for connectivity, disaster risk reduction and response

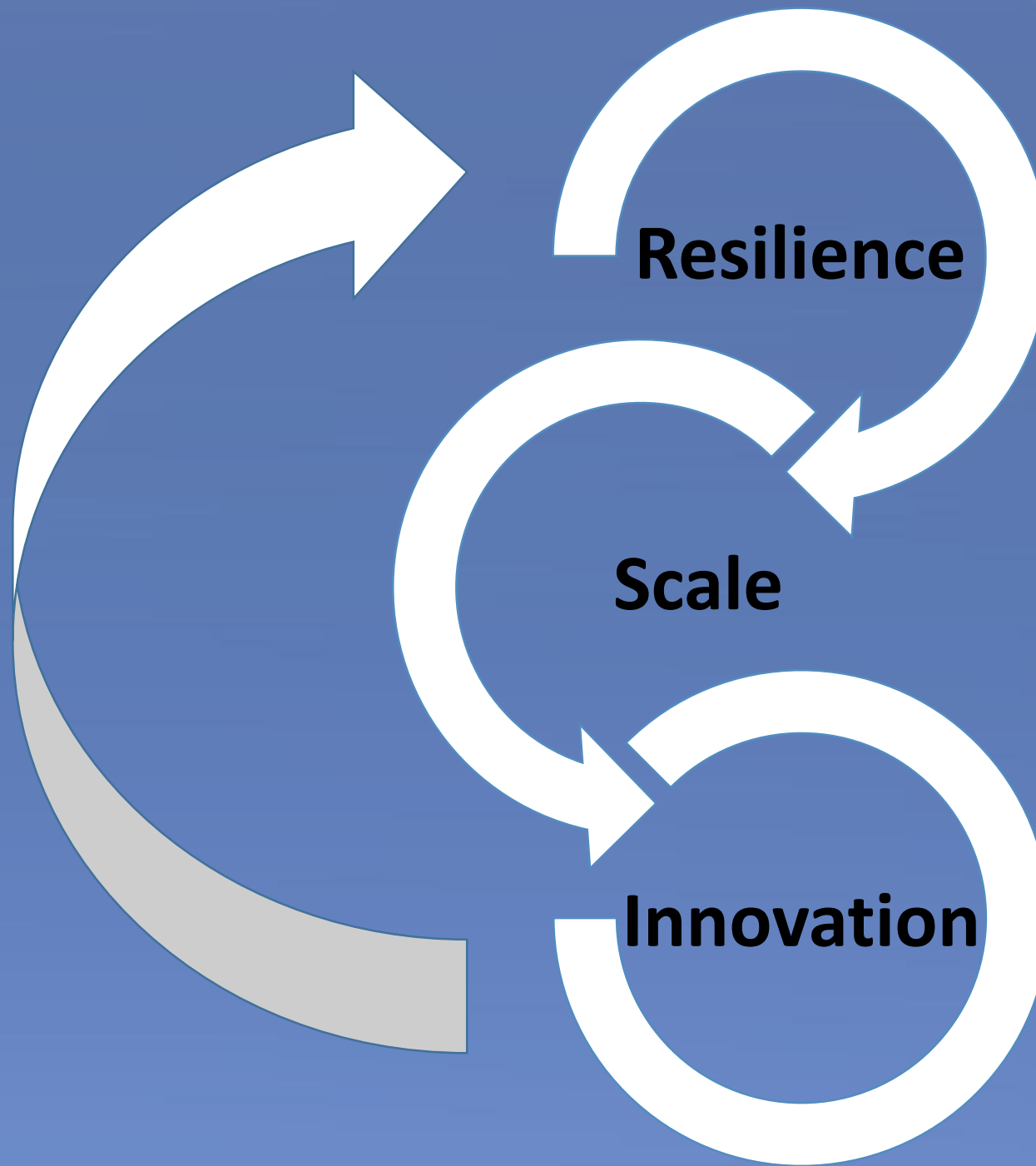
*Global Forum on Emergency  
Telecommunications (GET-2019)  
Mauritius*

6 – 8 March 2019

Telecommunications Authority of  
Trinidad and Tobago

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Agenda



Enablers



# Technological Resilience

Multi-hazard Early  
Warning & Response

- Multi-sensor
- Multi-channel

Geo-coverage

- Densification
- Massification

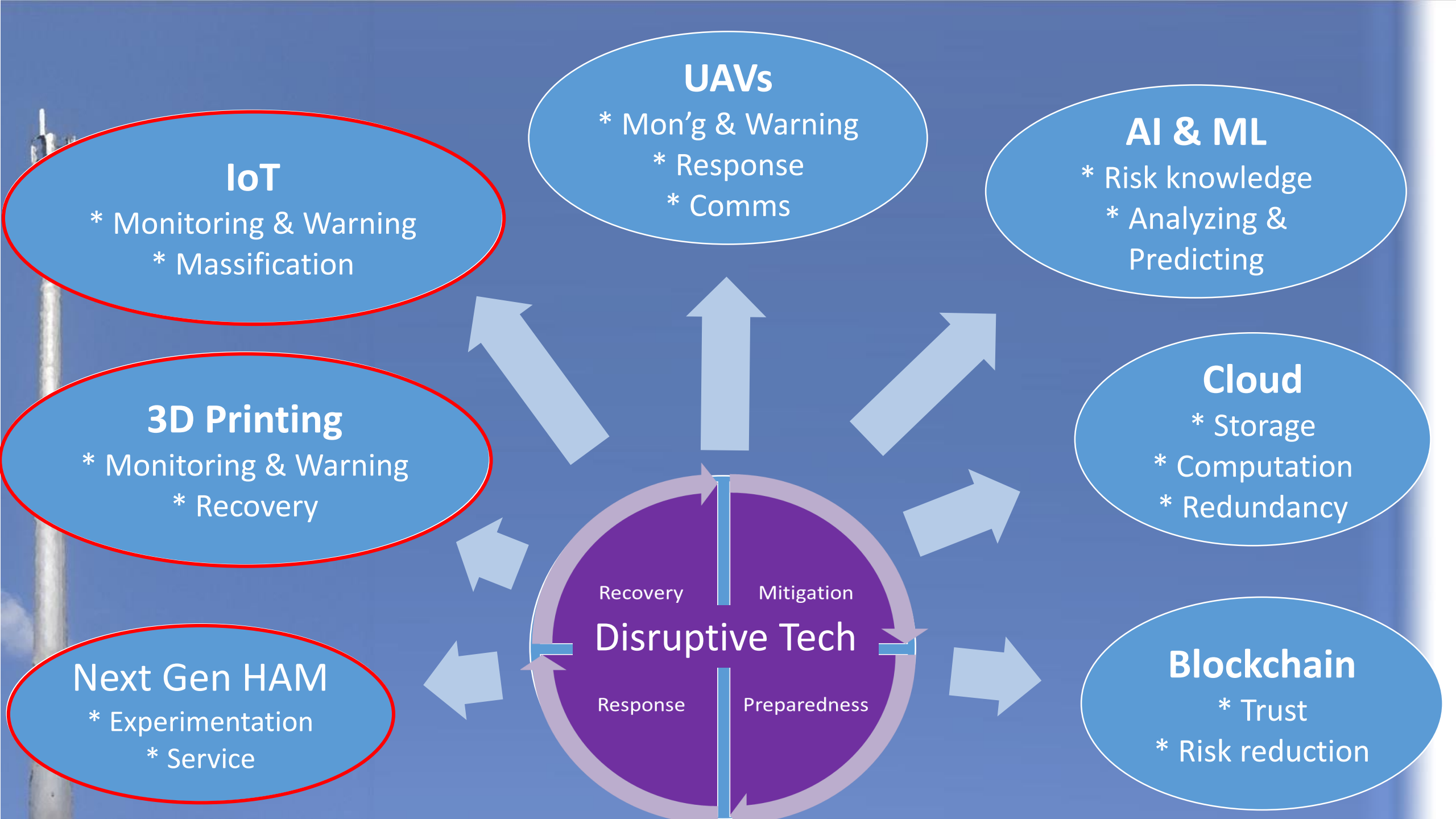
Availability

- Redundancy
- Diversity

Accessibility

- Multi-channel
- Multi-compliance

Multi-Processing,  
Analysis & Storage







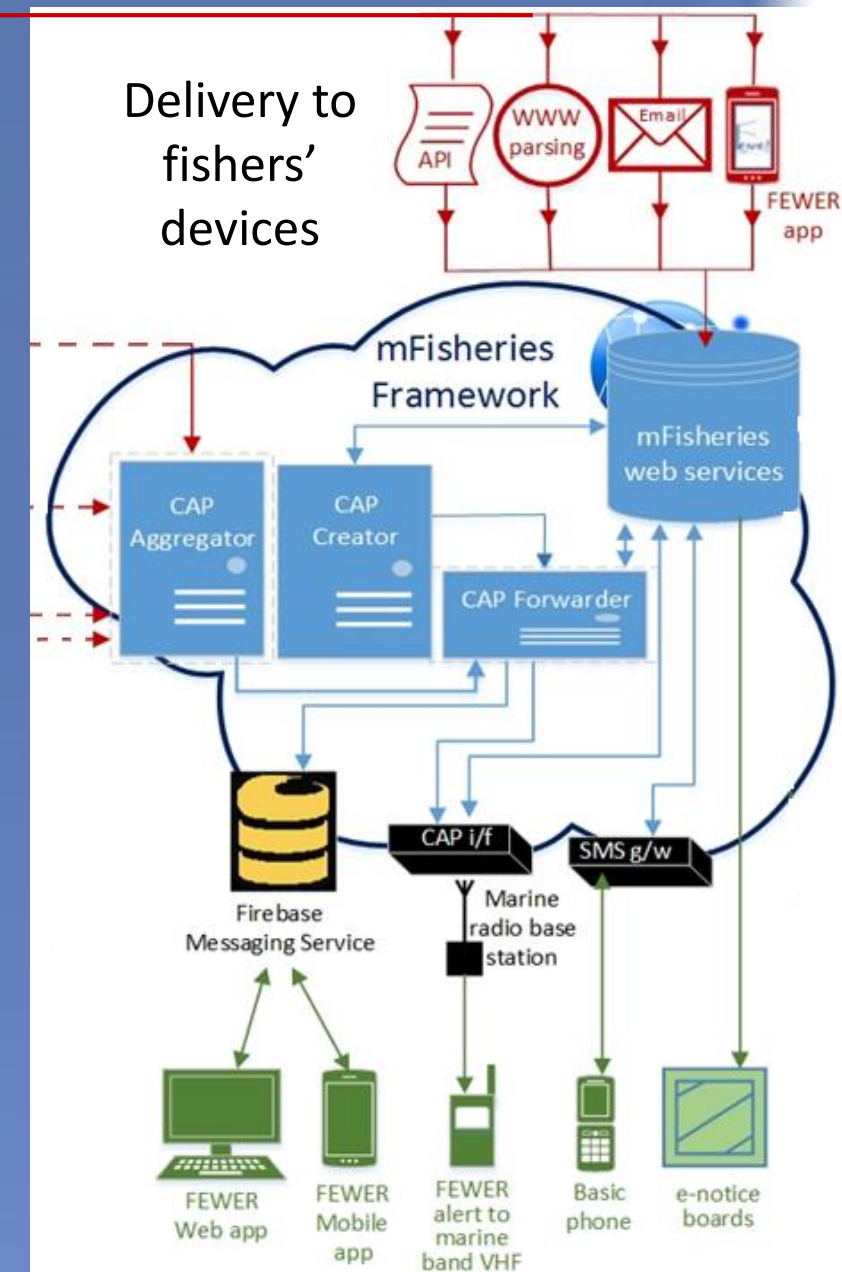
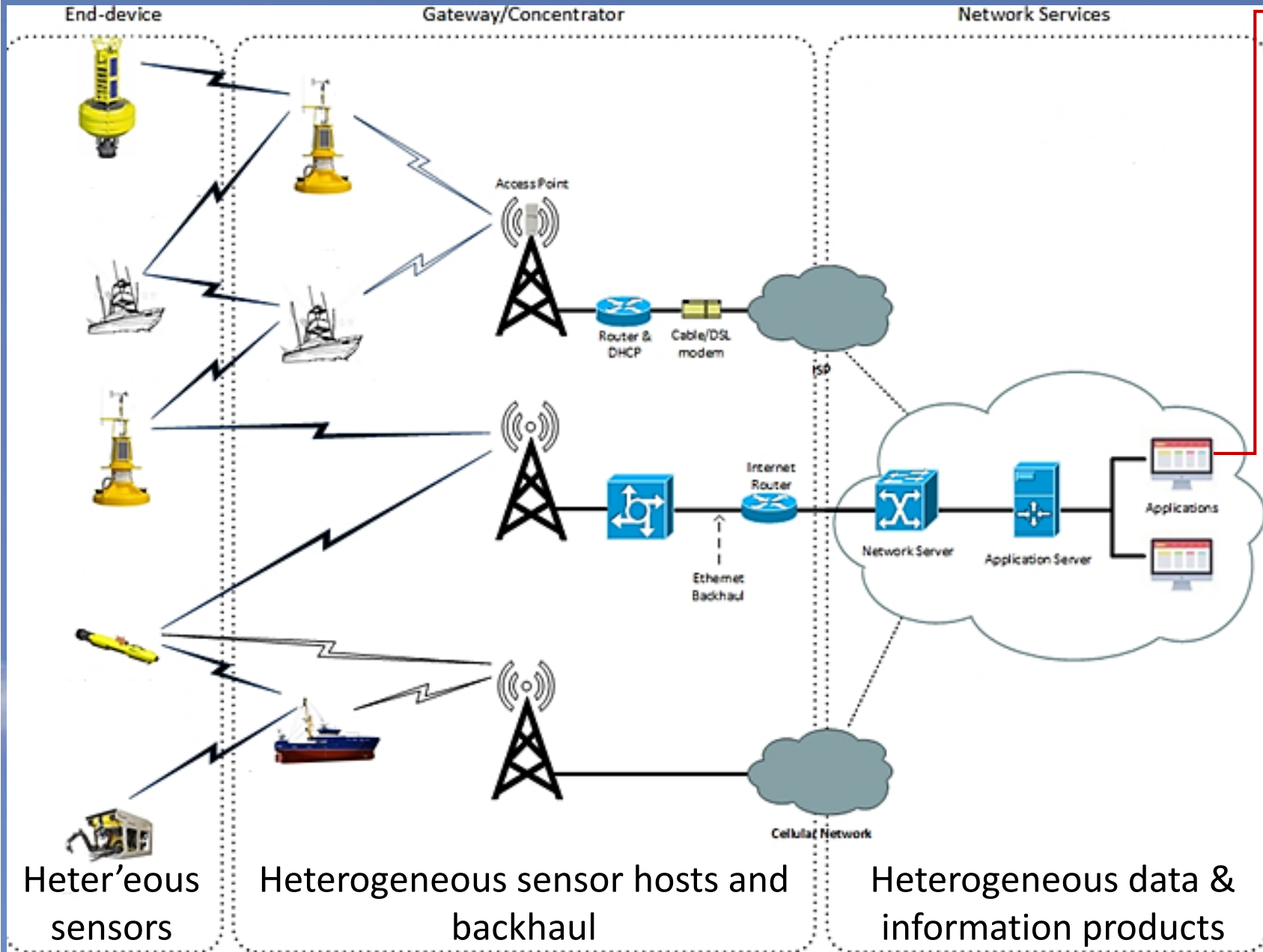
IMAGINE

# A Smart World

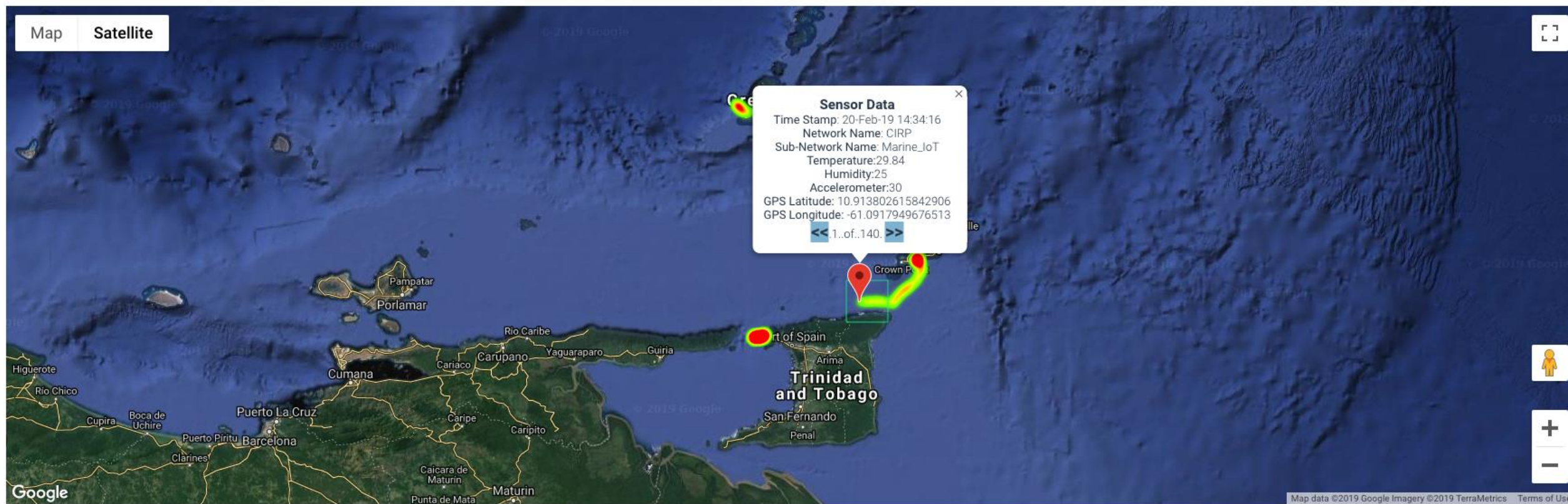
Fixed & mobile sensors deployed through infrastructure & crowd:

- Massively
- Opportunistically

# Example: Smart Seas Caribbean





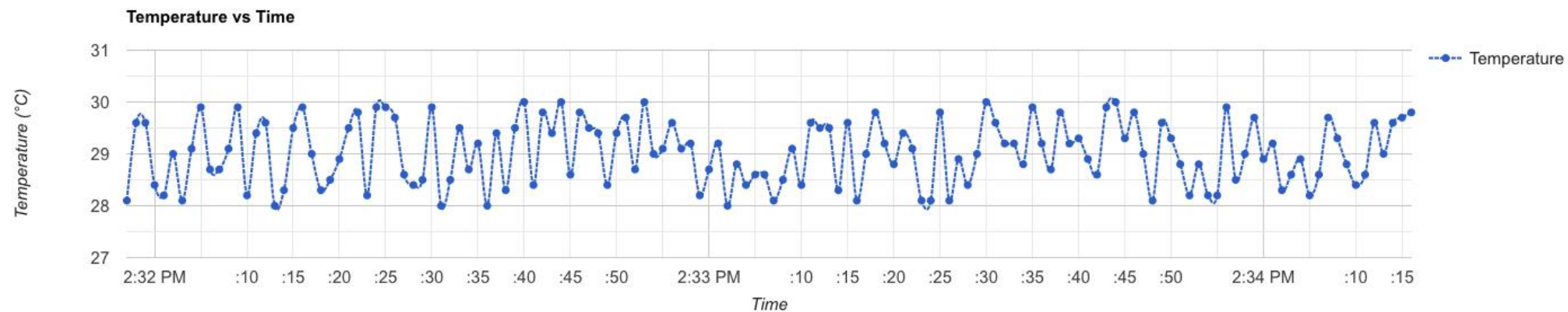


Sensor Value to Plot

Temperature

Humidity

Accelerometer



# Massification: Infrastructure and Crowd

DEVICE MASSIFICATION requires:

Affordability

Massification

Means

Incentive

Acceptability

Conformance &  
Interoperability

Standards

Regulations

MASSIVE DEPLOYMENT requires:

Agency

Accessibility

Skills

Opportunity

Ownership

Know-  
ledge

Empower-  
ment



# Disrupting Technology: Maker Movements

Democratization of the means of production

Makers derive identity and meaning from the act of creation, distinguished from past inventors by incredible power of modern technologies and a globalized economy

(i) to connect and learn and (ii) as a means of production and distribution.

*- Derived from Hagel et al, Deloitte Centre for the Edge*

## IoT

e.g. Hidrosónico,  
DAI maker lab

## 3D Printing

e.g. 3D PAWS,  
IEPAS

## Next Gen HAM

e.g. AMSat-DL,  
AMSAT

# Disruptive (Next Generation) Enablers

The Democracy of Citizen Agency

## Products

as Platform

Open

@ Quality

## Markets

Experience  
environments

Democratized

Commoditized

## Regulation

Competent

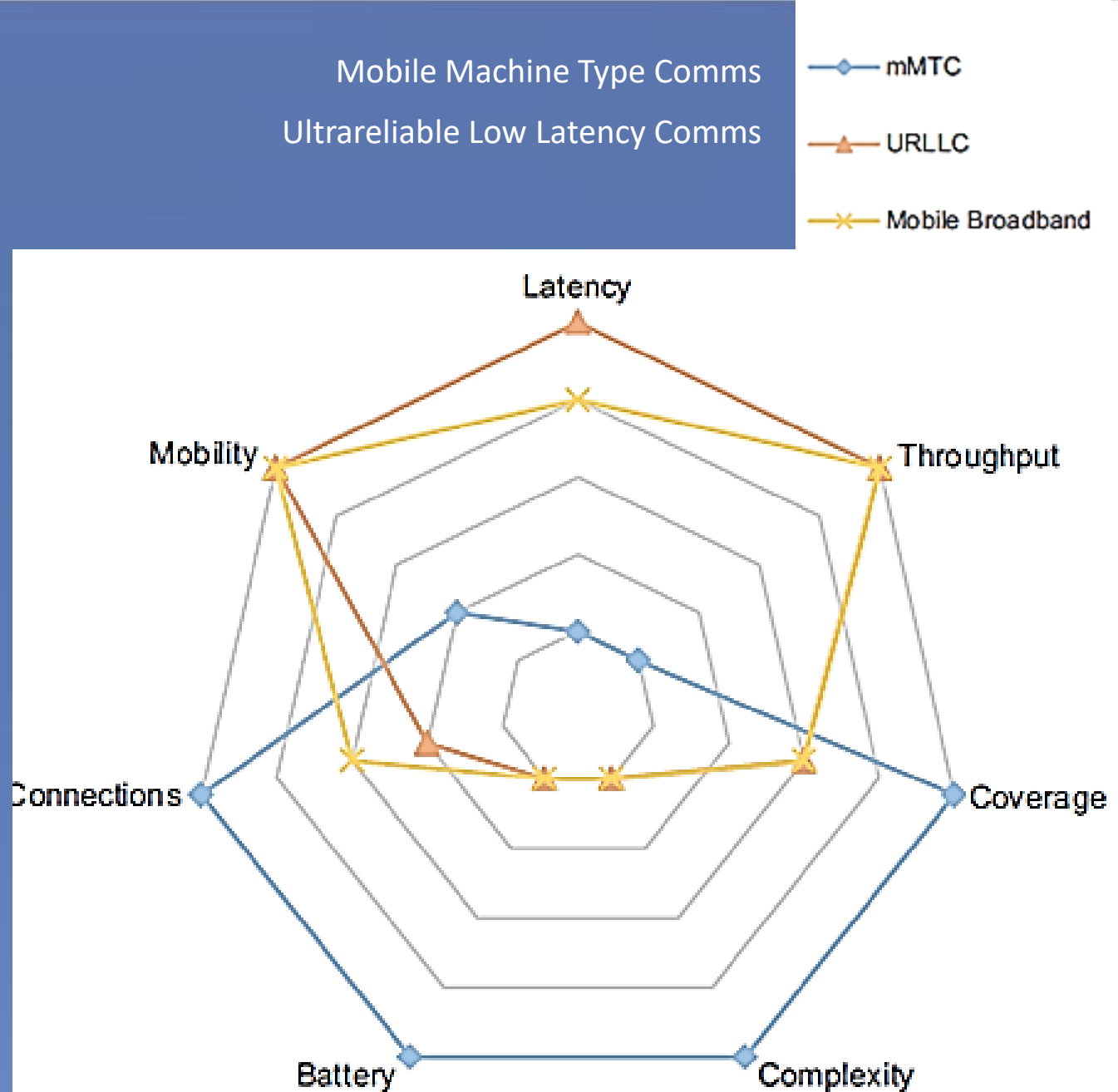
Responsive

Dynamic

Leveraging IoT & AI

# Concrete Steps

- Infrastructure & crowd development & deployment
- Resource hubs
- C&I by design:
  - Essential C&I standards
  - Test specifications
  - Precompliance testing
  - Mutual Recognition Agreements (MRAs)
- Peer support communities
- Open data & APIs
- Public awareness







# THANK YOU

