

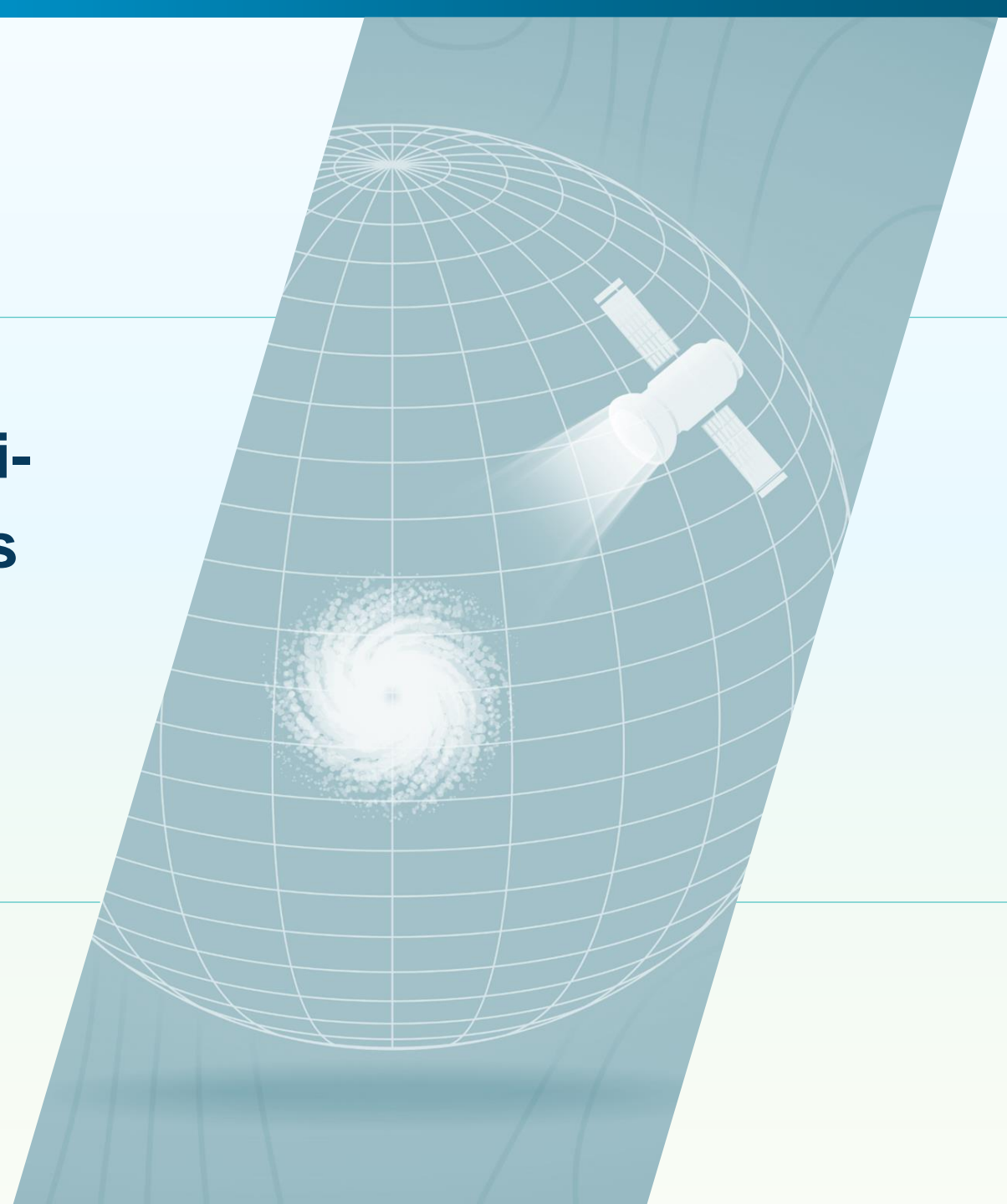


A Strategic Roadmap for Advancing Impact-based Multi- hazard Early Warning Systems and Services in the Caribbean

**2022 Annual Meeting of Directors of Meteorological
Services**

November 23, 2022 (Grand Cayman)

World Bank - Haleh Kootval



Outline

- CREWS Caribbean Project
- Strategic regional Roadmap
 - Vision
 - Purpose
 - Principles
- Ten Strategic Initiatives
- Implementation Approach
- Recommendations



CREWS Caribbean

The project

Strengthening Hydrometeorological and Early Warning Services in the Caribbean

Financial Resources:	US\$ 6.5 million CREWS financing
Duration:	November 2018 - December 2022
Implementing	
Partners:	World Bank/WMO/UNDRR
Stakeholders:	CDEMA/CIMH/CMO NMHS/NDMO/Gender Bureaus REWS EWISACT

Project structure



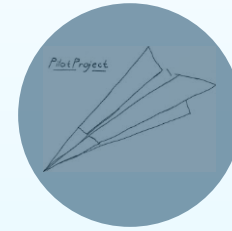
Component 1

Development of a strategic regional Roadmap to Strengthen and Streamline Early Warning Services



Component 2

Institutional Strengthening and Streamlining of Early Warning and Hydromet Services

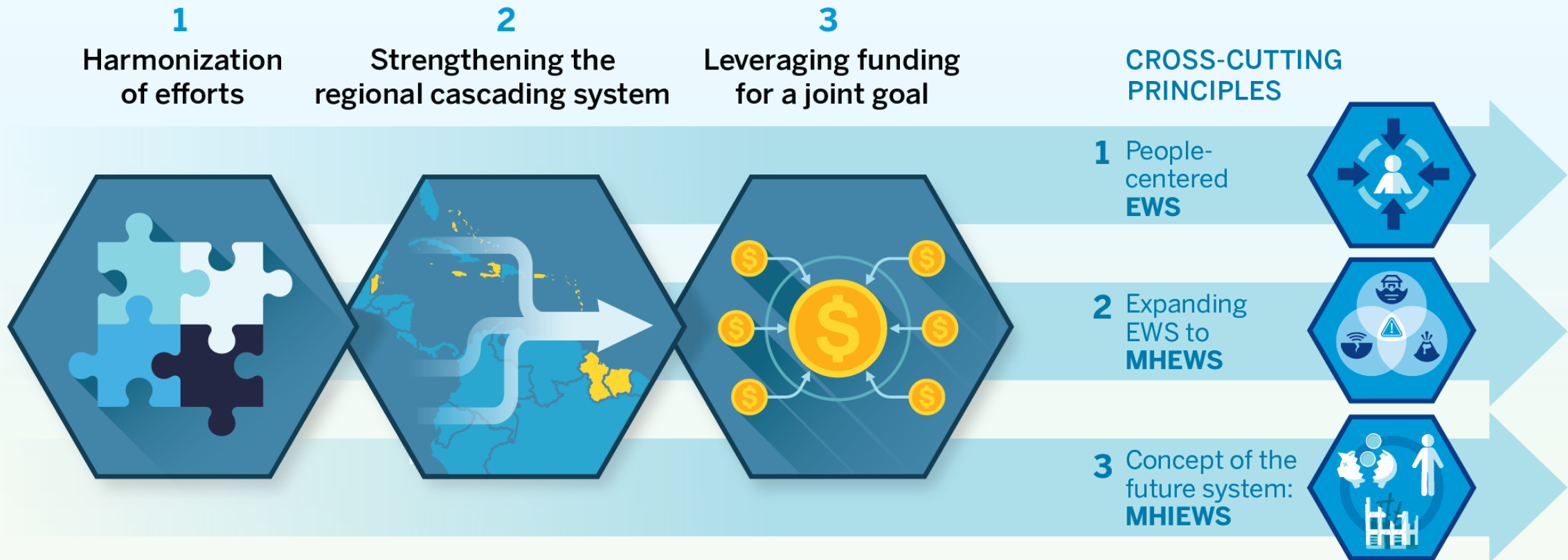


Component 3

Support for Piloting High Priority Activities

Strategic Roadmap

Purpose and cross-cutting principles

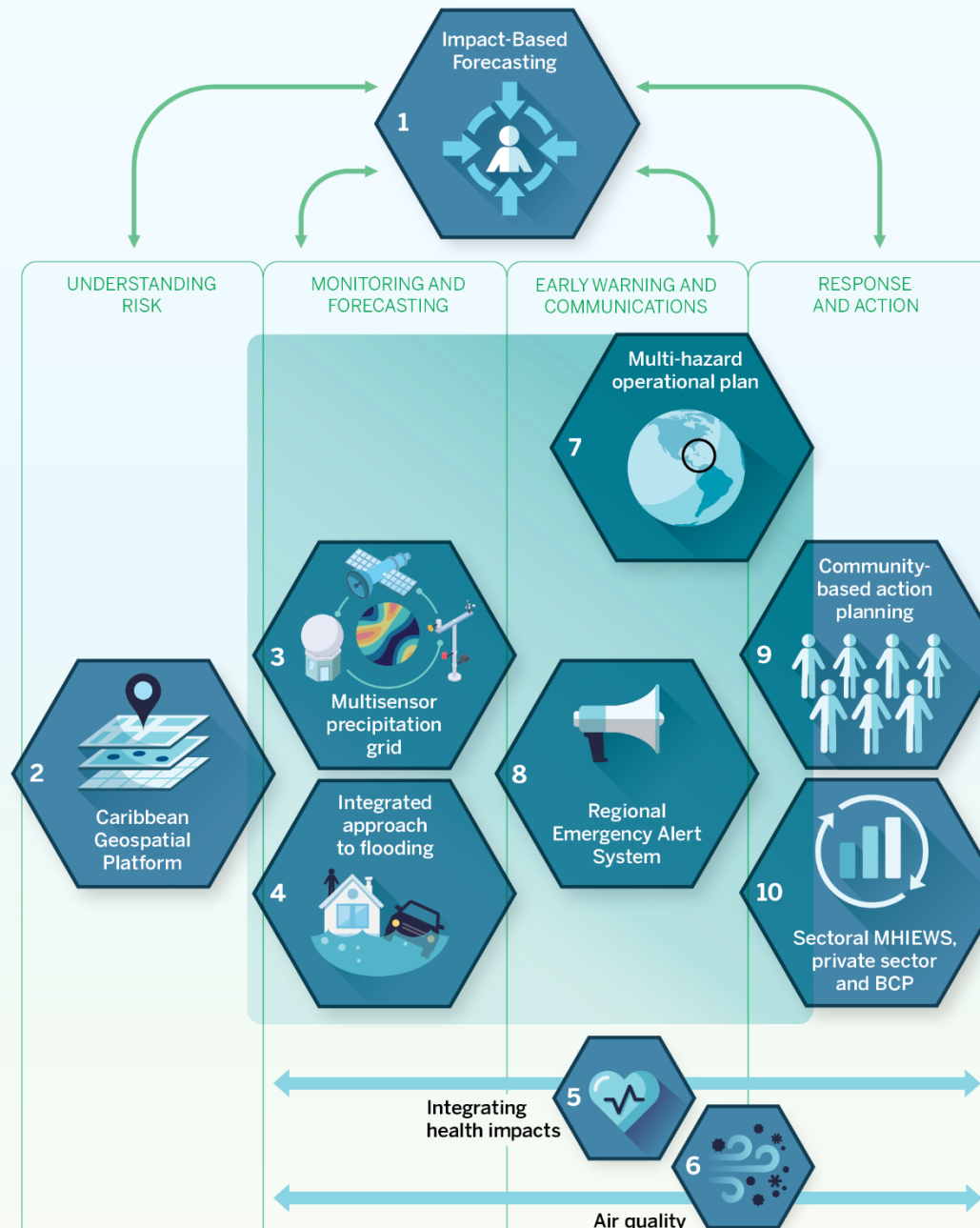


Vision

A regional model for inclusive and reliable Impact-Based Multi-hazard Early Warning Systems and Services that are effective in protecting lives, livelihoods and increasing resilience in the Caribbean

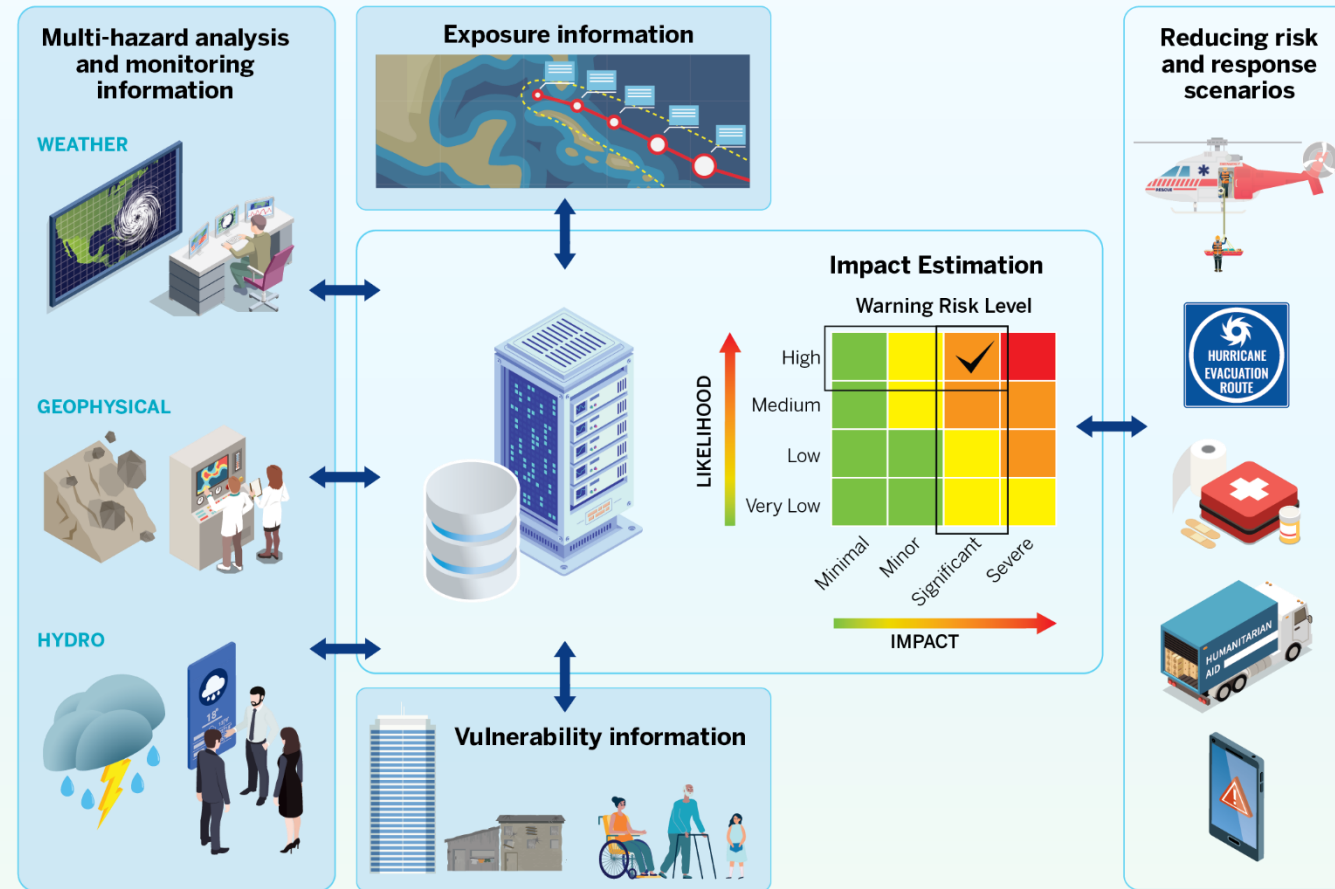


Roadmap contains 10 strategic initiatives (SI) across EWS pillars



S I 1

Supporting the transition to IBF and warning services



UNDERSTANDING RISK The risk from a natural hazard is determined by the combined understanding of three components:

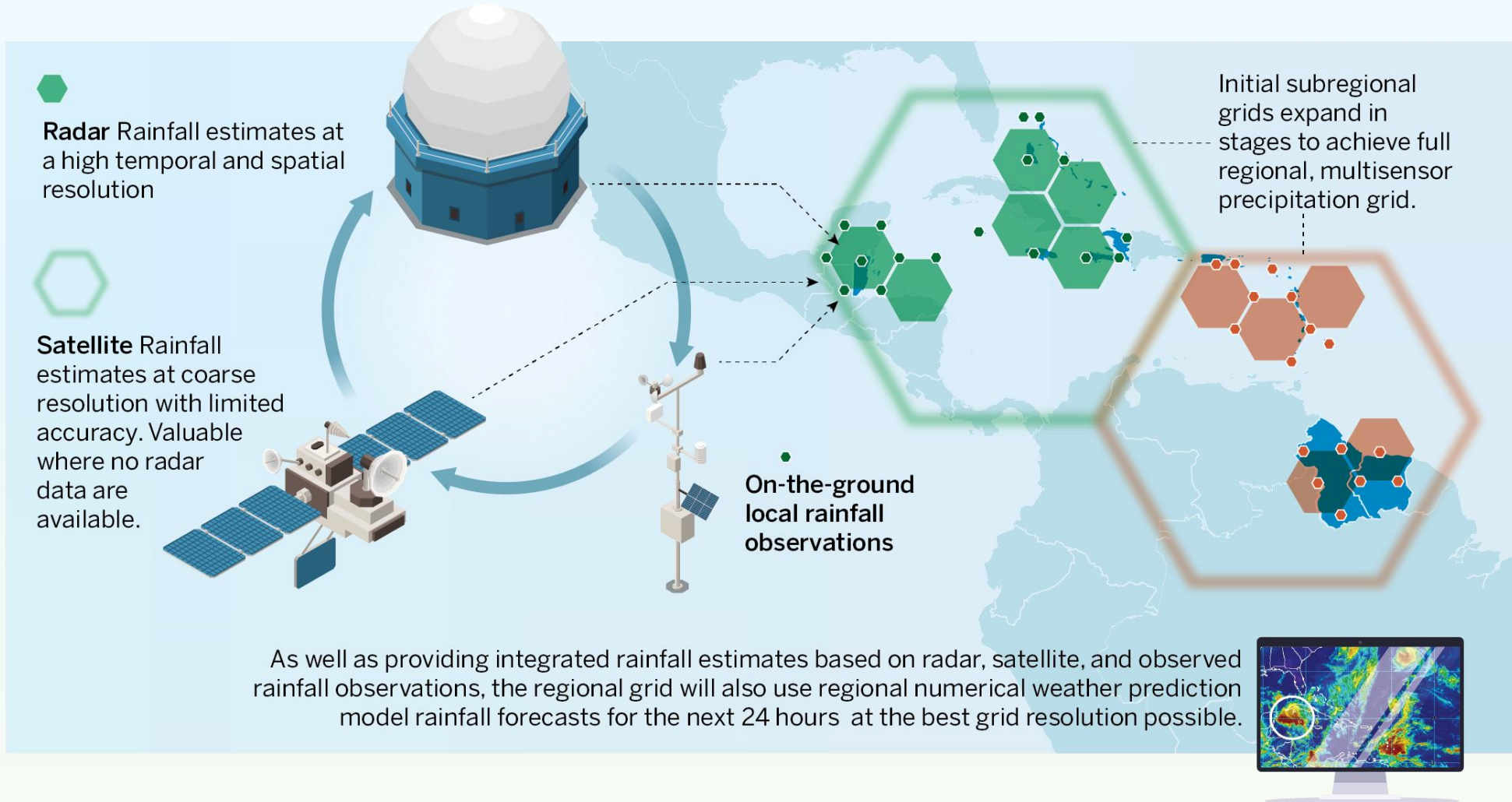
- **Hazard:** how big and how often?
- **Exposure:** what elements are at risk (people, buildings, infrastructure, agriculture etc.)?
- **Vulnerability:** how does each exposed element respond to the level of hazard?

SI 2 Towards a Caribbean geospatial platform

To better understand:
where the population is,
what risks are they
exposed to,
and, especially, what
makes different people
vulnerable.



SI 3 Regional multisensor precipitation grid



SI 4 Integrated Approach to Flooding

Reducing potential impact of all types of flood events for all people at risk by:

using an integrated approach of building an impact-based MHEWS operational hydromet environment



SI 5 Integrating health impacts into Impact-based MHEWS

Expanding weather and climate-related impact-based MHEWS to include public health risks – inclusive of those resulting from climate change impacts

Applying Impact-based Forecasting for regional health hazards to benefit the whole of society



SI 6 Air Quality Health Impacts

Progressively developing and operationalizing national and community air quality observation and early warning systems & effectively communicating warnings to all at-risk communities and persons.



SI 7 Towards a Caribbean multi-hazard Operational Plan

Establishing a regional multi-hazard operational plan:

that integrates existing mechanisms for each hazard &

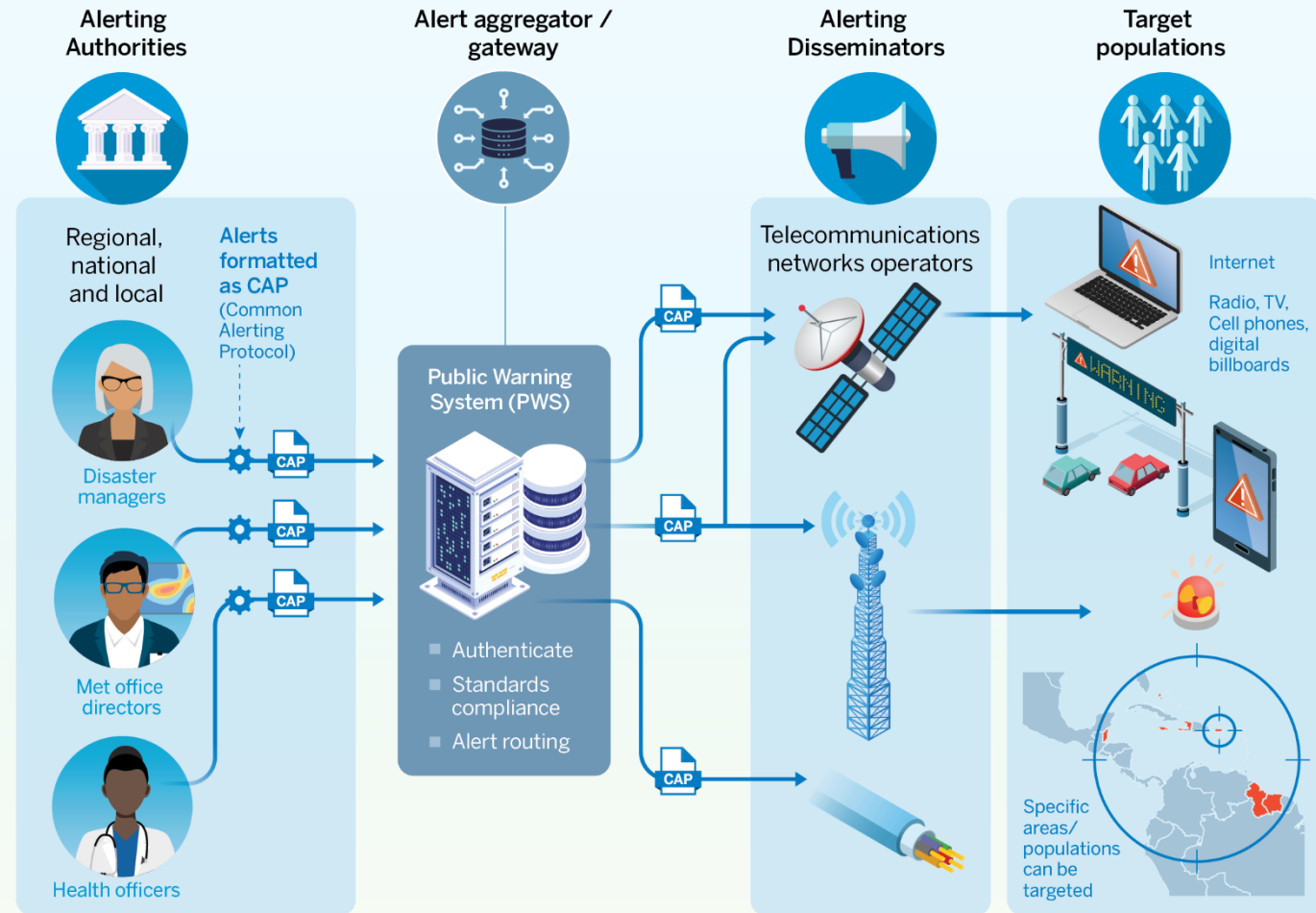
is flexible, practical, and regularly reviewed and updated



SI 8 Regional Emergency Alert System

Effective people-centered, impact-based regional emergency alert communication and dissemination system that:

prompts appropriate action by all target groups



SI 9 Community-based action planning

Strengthening community resilience and responding to the needs of all people by:
establishing national processes for systematically applying IBF to advance community-based early warning early action planning and implementation



SI 10 Sectoral MHIIEWS, private sector, and BCP

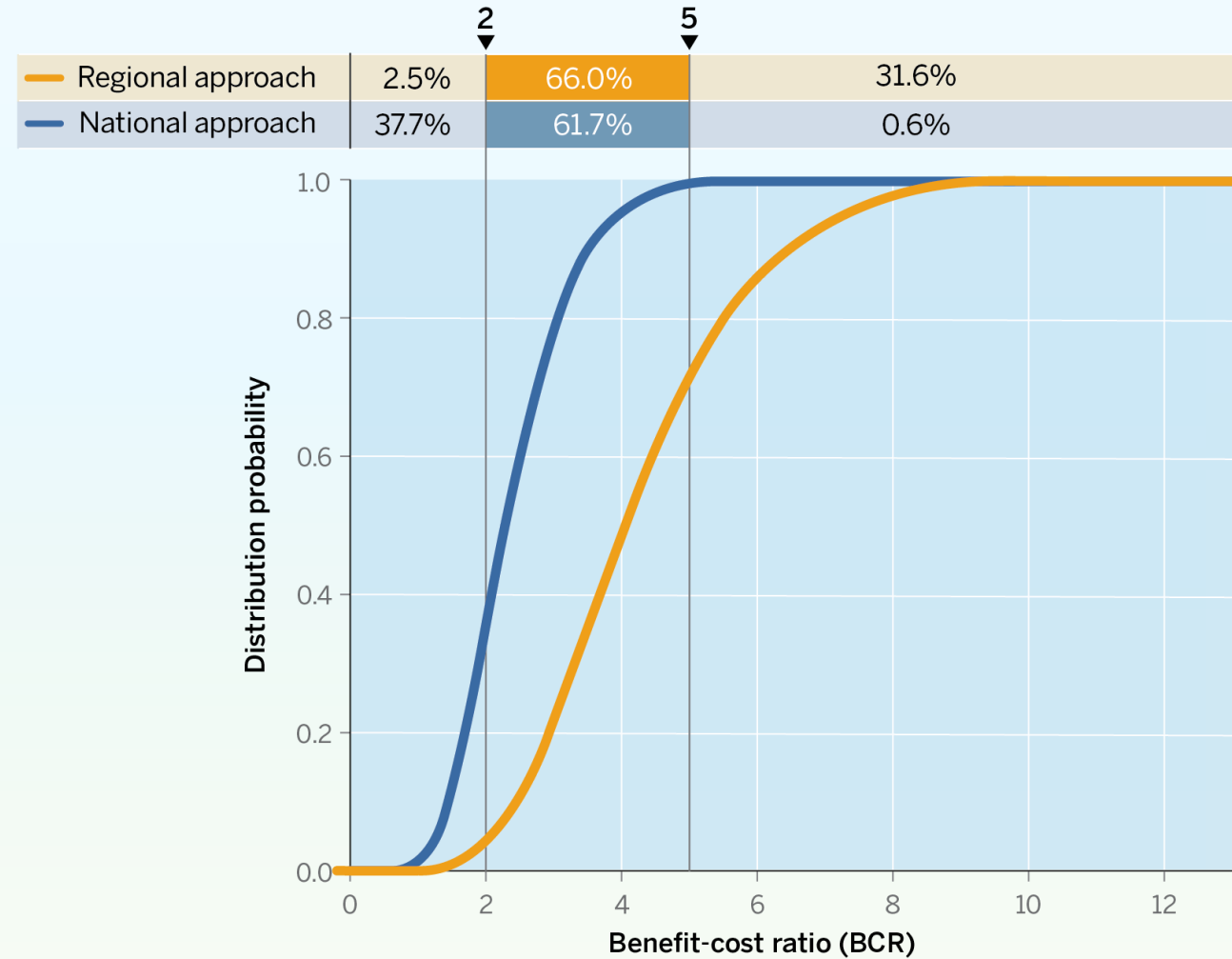
Actively engaging stakeholders from across the private sector

Mitigating loss of critical physical assets & disruptions in vulnerable supply chains and business services



Benefit cost analysis

Cumulative probability distribution of BCR

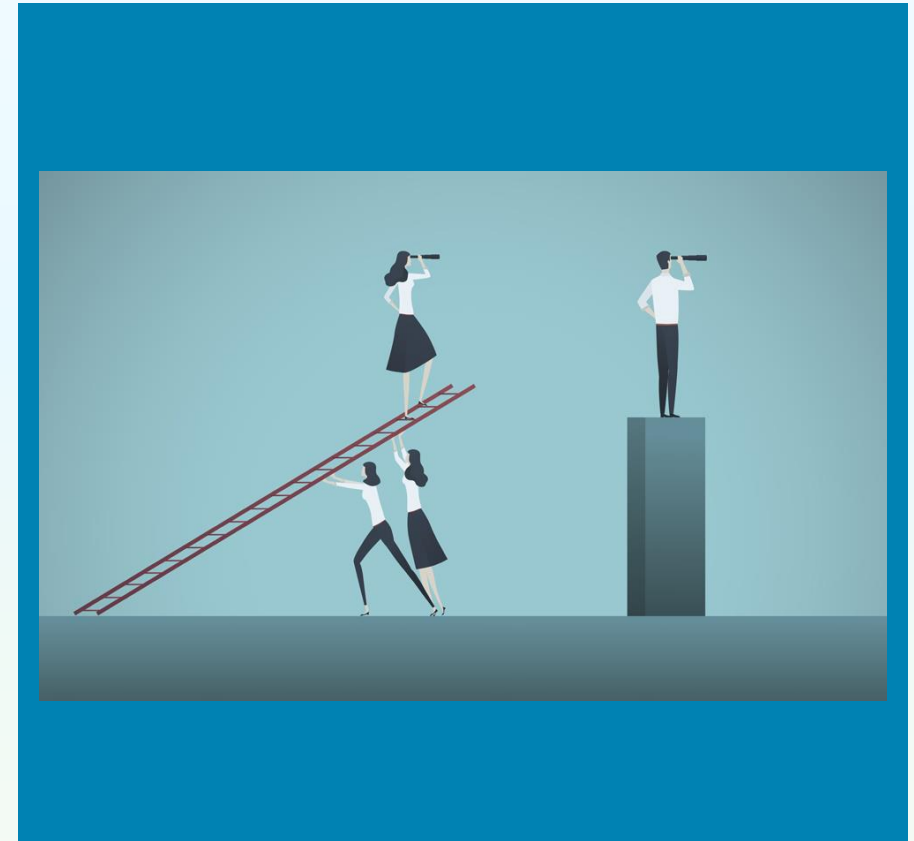


Implementation approach



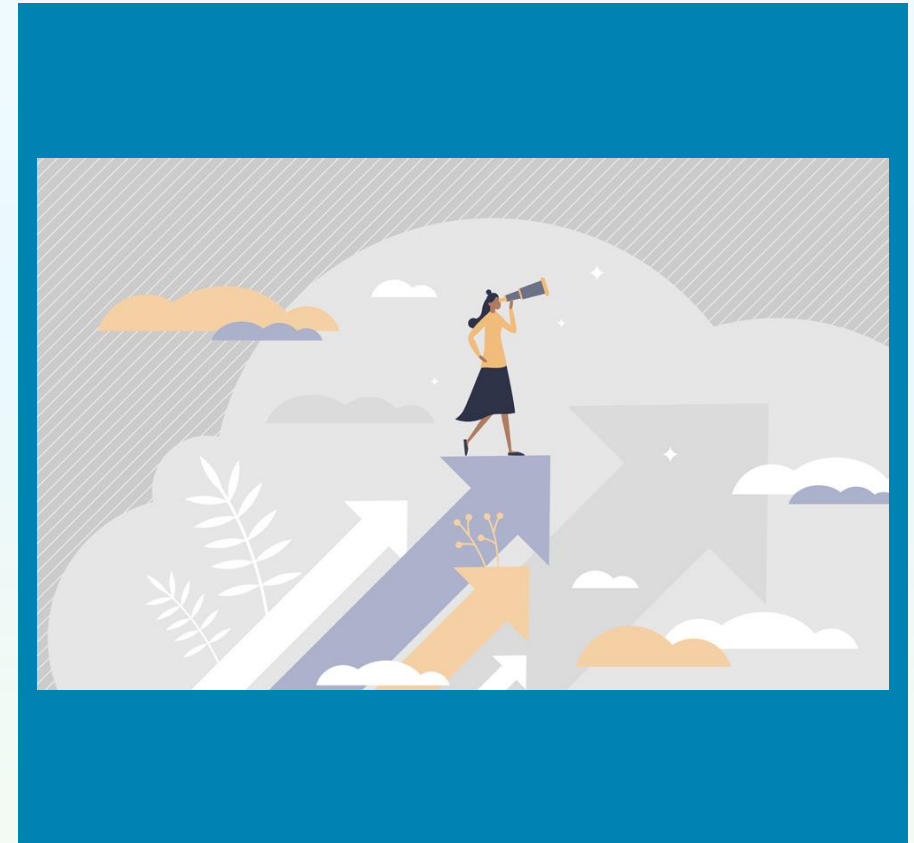
Recommendations 1/2

- Early and actionable information is critical for alleviating fiscal shocks from multiple hazards
- Regional roadmap investments can deliver twice the benefits per dollar spent than parallel national investments
- Regional ownership of the roadmap requires collaboration and resourcing at all levels
- Private sector integration is a key
- Phased approach offers a framework for achieving results in a more sustained and effective way
- Prioritize building and retaining capacity at all levels



Recommendations 2/2

- Advancing policy and regulatory environment in concert with technical advances
- Further harmonizing activities for strengthening the regional MHEWS
- Further synchronizing regional & international cooperation for high-quality and actionable information.
- Data policy development– crucial for service delivery
- People-centered – focus on impact
- Integrating climate-related health impacts into MHEWS
- Inclusive approach for all gender and vulnerable groups





Thank you!