

# Delivery of hydromet services: are there promising pathways to build sustainable business models in developing countries?

*A contribution to GWEF-1 Sub-task 4.1*

“Development partners to investigate and promote implementation of business models that focus on data provision and service delivery in a long-term sustainable way”

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# Why business models are important

- A **business model** describes the rationale of how an organization creates, delivers, and captures value, in economic, social, cultural or other contexts
- Our main focus – improvement of hydromet service delivery in developing countries
- Main issue: poor services lead to ‘excessive’ losses of lives and property
- Knowledge on potential sustainable business (and operating) models
  - Should define directions of investment support
  - Improve sustainability of development partners interventions and their development impact

# Hydromet services in developing countries and GWE

- Domination of weak public sector (NMHSs) providing inadequate services
  - Low national visibility and support for NMHSs, underfunding, low capacity, outdated development priorities, weak or non-existent R&D, etc.
  - Government policies (pressure to introduce 'fee-based' services often in absence of high quality basic services, restriction of competition and data sharing)
  - Emerging competition with private sector perceived to be a threat by many NMHSs
- Lack of data from developing countries is a limiting factor for GWE progress
- GWE benefits are critical for many dev countries but not fully utilized
- Programs supported by development partners are largely unsustainable

# What should be done

- Support for introduction of «responsible» private sector is critically important but politically difficult
- Improve government awareness of a value of national weather enterprise
  - Existing extremes: Do not need NMHS (gadgets show all) vs. protect NMHS monopoly
- Demonstrate benefits of PPE to NMHSs, create incentives for cooperation
- No size fits all - multiple models and approaches
- Support for identification of viable models
  - Benefits are often not evident and require targeted support and significant time
  - Various parts of hydromet value chain can provide viable opportunities for PPE

# What should be considered by NMHSs

- **Strategic vision:** identify national value chain and make a decision on its implementation, (develop a Road Map and CONOPS)
- **Service capability:** improve timeliness, relevance, frequency of products to satisfy user needs and expectations
- **Legal framework:** adjust their legal/regulatory framework to fit user orientation and facilitate PPE
- **Sustainability:** identify a proper balance between sustaining operations and developing service capacity
- **Evaluate partnerships with private sector** along the value chain to speed up the process and increase quality / sustainability

# Public Private engagement: development partners view

- **Current practices**

- Observation: mainly based on equipment → change paradigm, pilot projects?
- Information systems: also based on equipment while integration underestimated → to be addressed as a whole system

- Mechanism matching **PPE integrated approach**

- Procurement mechanisms: Not yet developed by most development partners
- Exist in other areas (e.g. water and power utilities)

- Mechanism matching **joint service delivery**

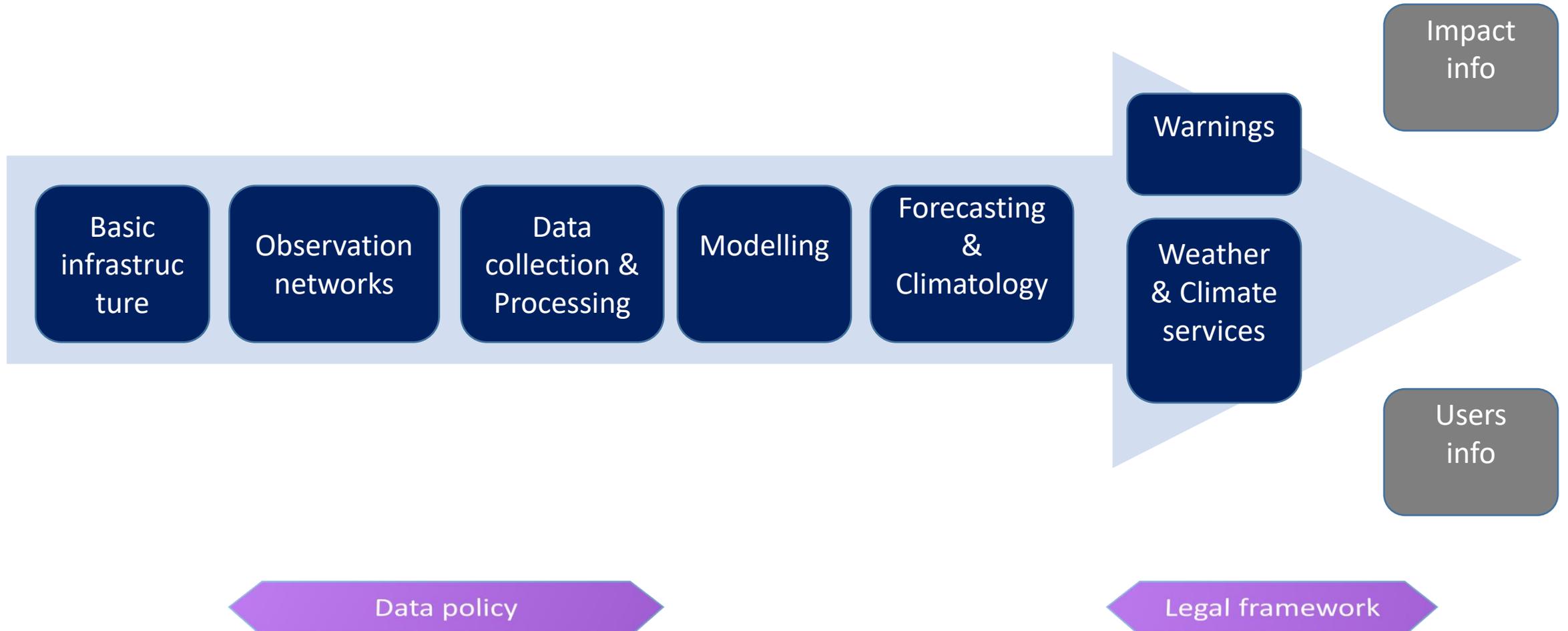
- Requires a fitted legal framework (at least autonomous body)
- Requires a special PPE agreement for investment and revenue sharing

# Conditions for successful PPPs/PPEs in Weather and Climate

*(incl. WMO-EC Policy framework for PPE)*

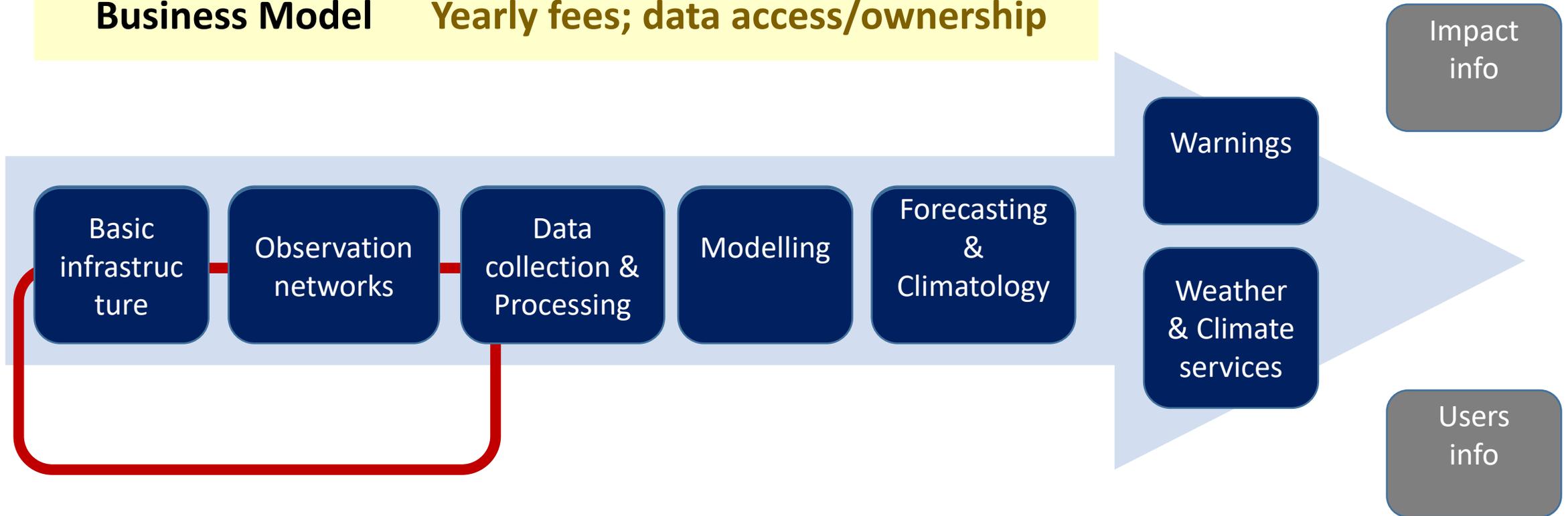
- **Shared value & convergence of interests**
- **Sustainability**
- **« No one left behind »**
- **Enabling Legal & regulatory framework**
- **Maintain integrity of the agencies**
- **Respect sovereignty**
- **Availability of qualified private firms**
- **Availability of good PPE cases supported by development partners**
- **Gov-t interest to experiment and provide initial investment support**

# Weather & Climate value chain



# Weather & Climate PPPs: OaaS

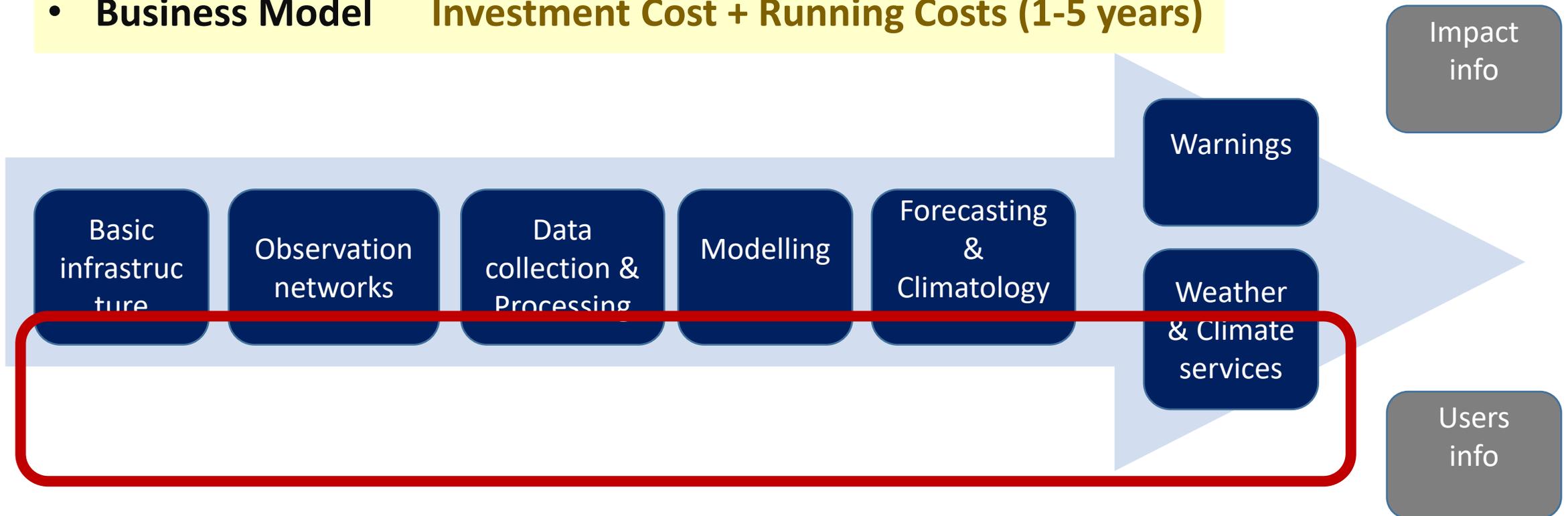
- **What:** (part of) **Observation as a Service**
- **Type:** **Public-Private** (key issue: who will pay)
- **Business Model:** **Yearly fees; data access/ownership**



- **Who (Pr):** **Observation Equipment supplier, others?**
- **Shared value:** **NMHS (staff, access to sites, etc)**      **Operator: tbc**
- **Risk:** **NMHS: lose ownership of data**      **Operator: tbc**

# Weather & Climate PPPs: **DBO**

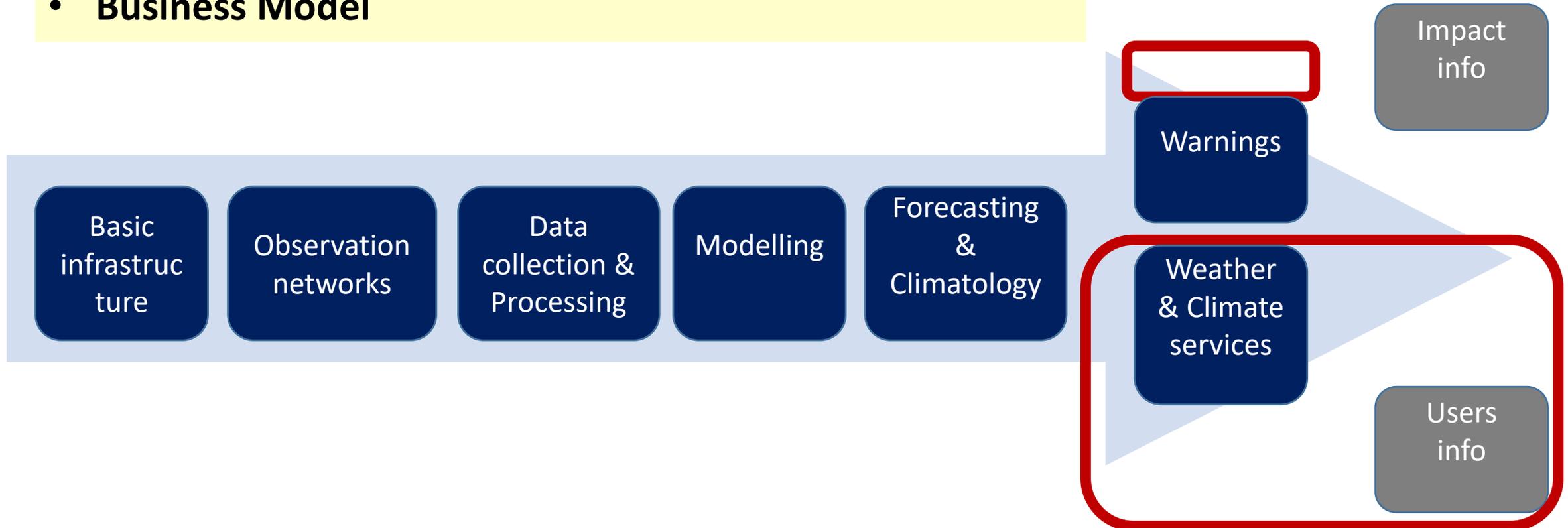
- **What:** **Design Build Operate (whole infrastructure)**
- **Type:** **Public-Private**
- **Business Model** **Investment Cost + Running Costs (1-5 years)**



- **Who (Pr):** **Integrator?**
- **Shared interest:** **NMHS: Reliability, sustainability**      **Operator: tbc**
- **Risk:** **NMHS: tbc**

# Weather & Climate PPPs: 4b. Pure service delivery

- **What:** Joint commercial tailored services
- **Type:** Public-Private
- **Business Model**



- **Who (Pu / Pr):** Service provider // Last mile delivery (warnings)
- **Shared interest:**
- **Risk:**

# Few next steps

- **WB/GFDRR Consultancy support**
  - e-Concept assignment
  - **Assessment of the potential for PPE in Nepal for increasing hydromet service delivery and sustainability of DHM operations**
    - Survey of weather and climate sensitive economic sectors and related WTP
    - Survey of directions of increasing sustainability of DHM daily operations
  - Assignment on piloting OaaS or IaaS in selected developing country
- March 2019      **GWE Conference (InterMET Asia)**
- Do we know which development path will lead to sustainability?

**Thank you!**

Patrick, Vladimir, Dimitar