

Possible vision for « Design – Build – Operate » business model

Patrick Bénichou, President



RA-VI Regional Forum of the Open Consultative Platform
Geneva, Nov.03, 2022

WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

SUMMARY

1. MFI positioning and vision for PPE-DBO
2. The UN EWS initiative and the W4ALL approach
3. Support from NMHSs



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1. MFI positioning and vision for PPE-DBO

The way to safe, effective and sustainable implementation of the MET value chain?



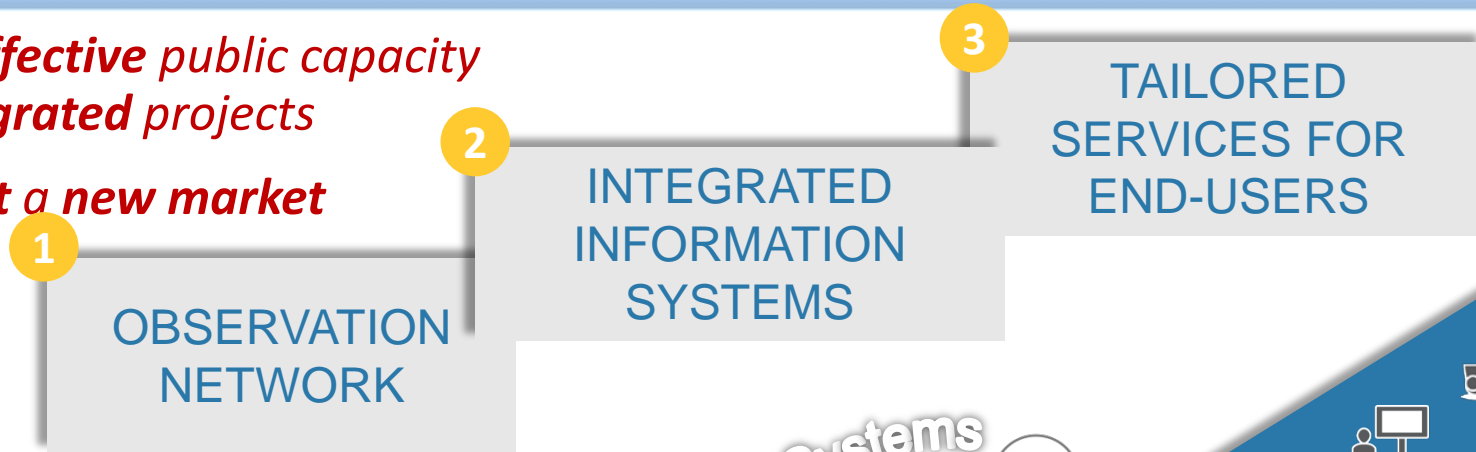
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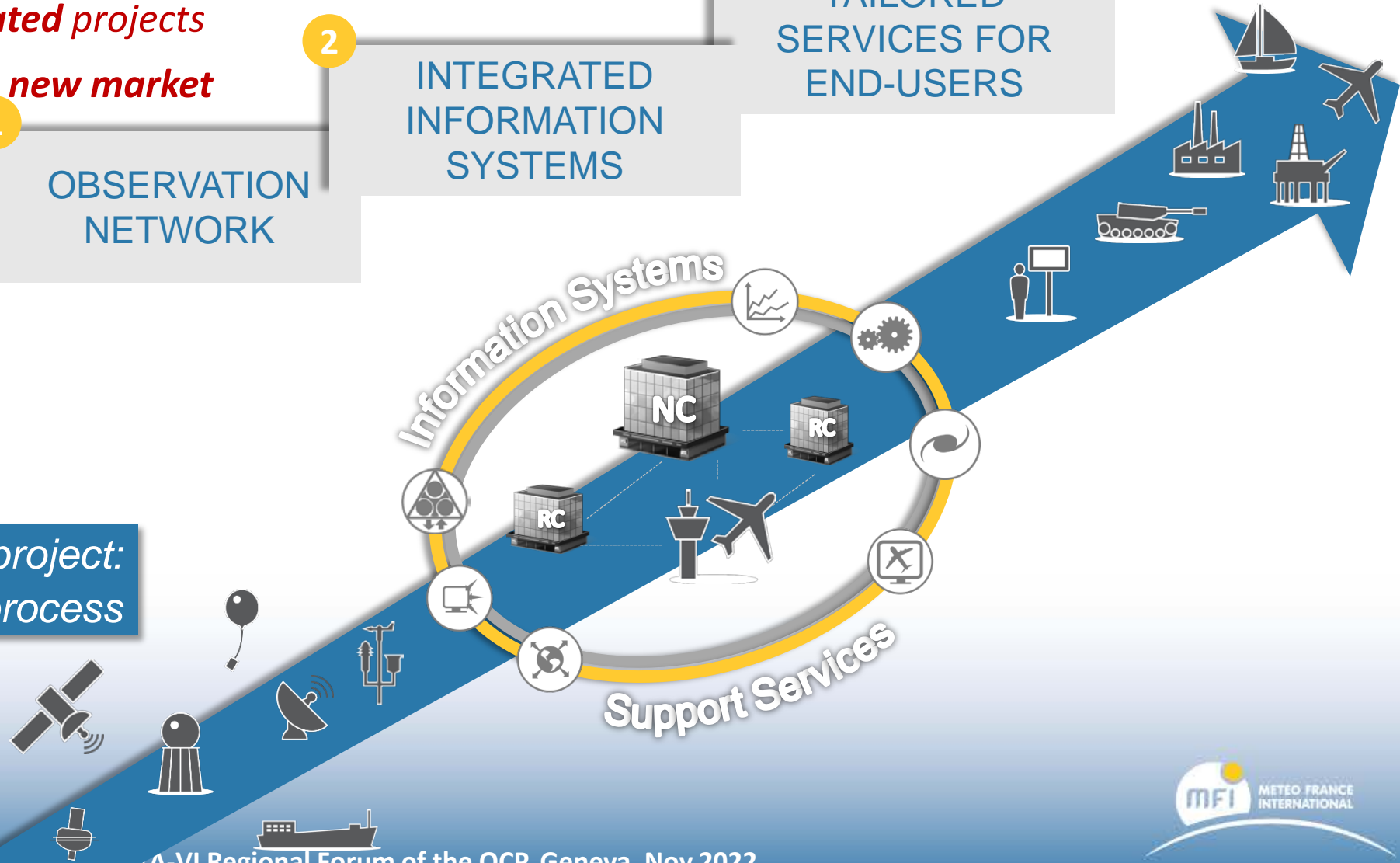
MFI strategic positioning : 20 years on the side of NMHSs

*Build **sustainable & effective** public capacity through complex **integrated** projects*

*i.e. **create and harvest** a new market*



*A typical MFI project:
An all-in-one value-adding process*



MFI subsidiary of Météo-France
>80 staff members in 2022

India & Indonesia pioneer « DB » projects



India (15M€, 2008-2011)

- 2006
 - From audit & roadmap to G2G agreement



- 2008-2011 Varsamana
 - Project implementation



Indonésie (30M€, 2012-2016)

- 20.000 men-days
- 500m³ equipment
- 180 trainings



Challenges (*source World Bank, GFDRR, 2016*) and ways forward

Challenges



Next steps



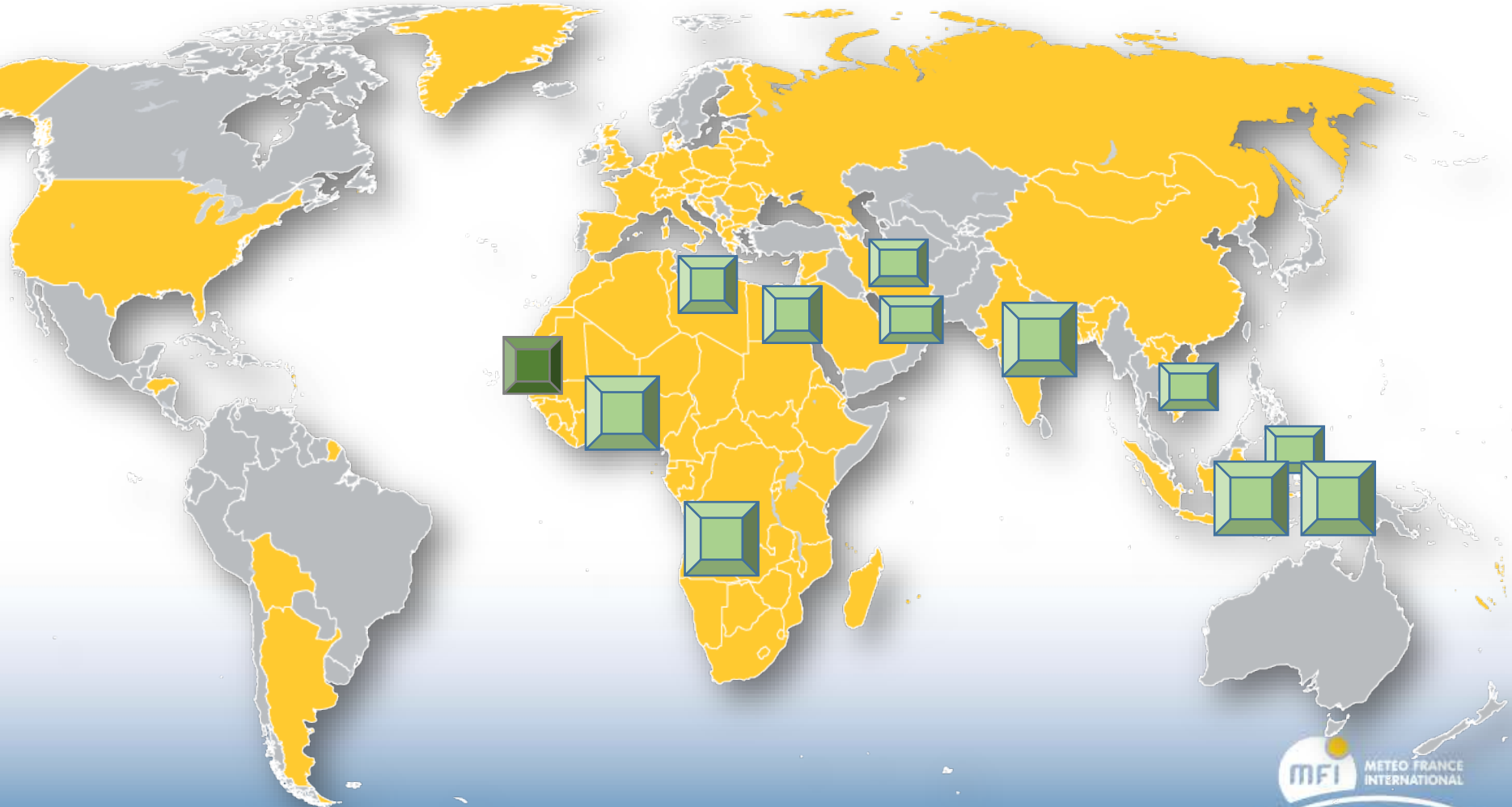
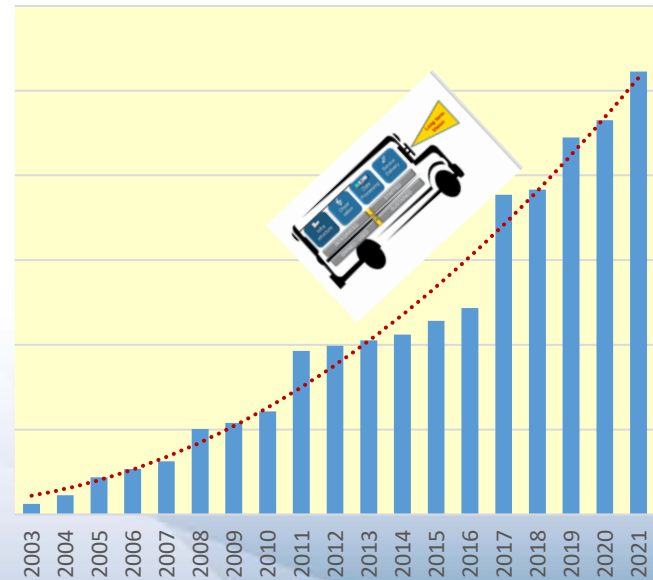
- Clear statement...
- ...paving the road to comprehensive approach & long-term partnership...
- ...but **not really implemented by development partners** (donors) so far

MFI references in large scale integrated projects (DBO)

Financing (>200M€)

- Govt own funds
- French Treasury
- Export Credit
- AFD

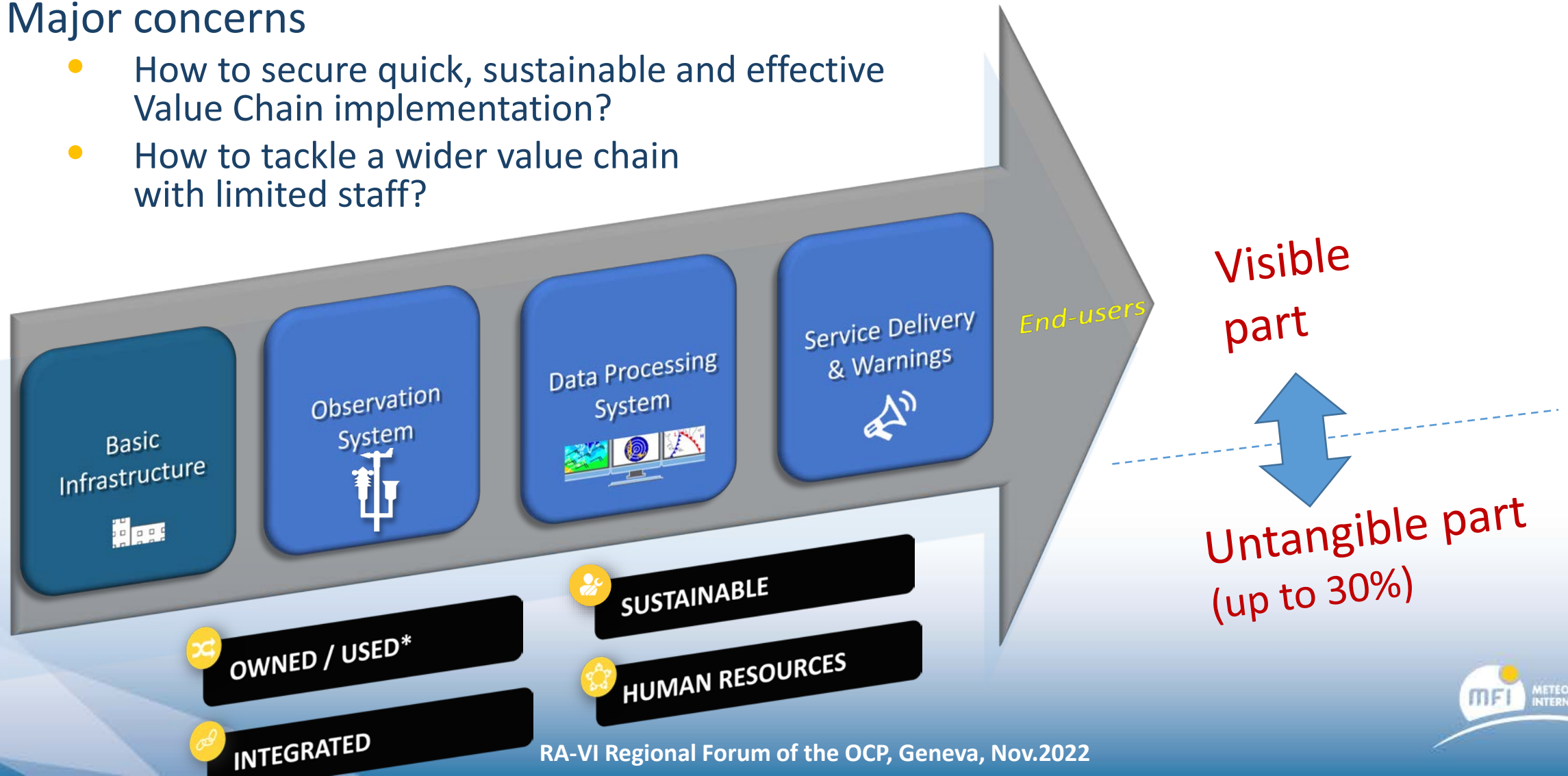
Cumulated sales



Value chain with Key Success Factors

Major concerns

- How to secure quick, sustainable and effective Value Chain implementation?
- How to tackle a wider value chain with limited staff?



Visible part

Intangible part
(up to 30%)

Potential PPE business models (GWEC, 2018 & WMO RA-I, 2019)

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

A contribution to GWEC-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"

P.Bénichou / D.Ivanov / V.Tsirkunov
 October 11, 2018

AMCOMET Technical Segment Session 5:
 Scaled up Public - Private partnerships
 Cairo, Feb. 19, 2019

Effective PPE & financing for improved NMHS sustainability and service orientation
 Patrick Bénichou, President

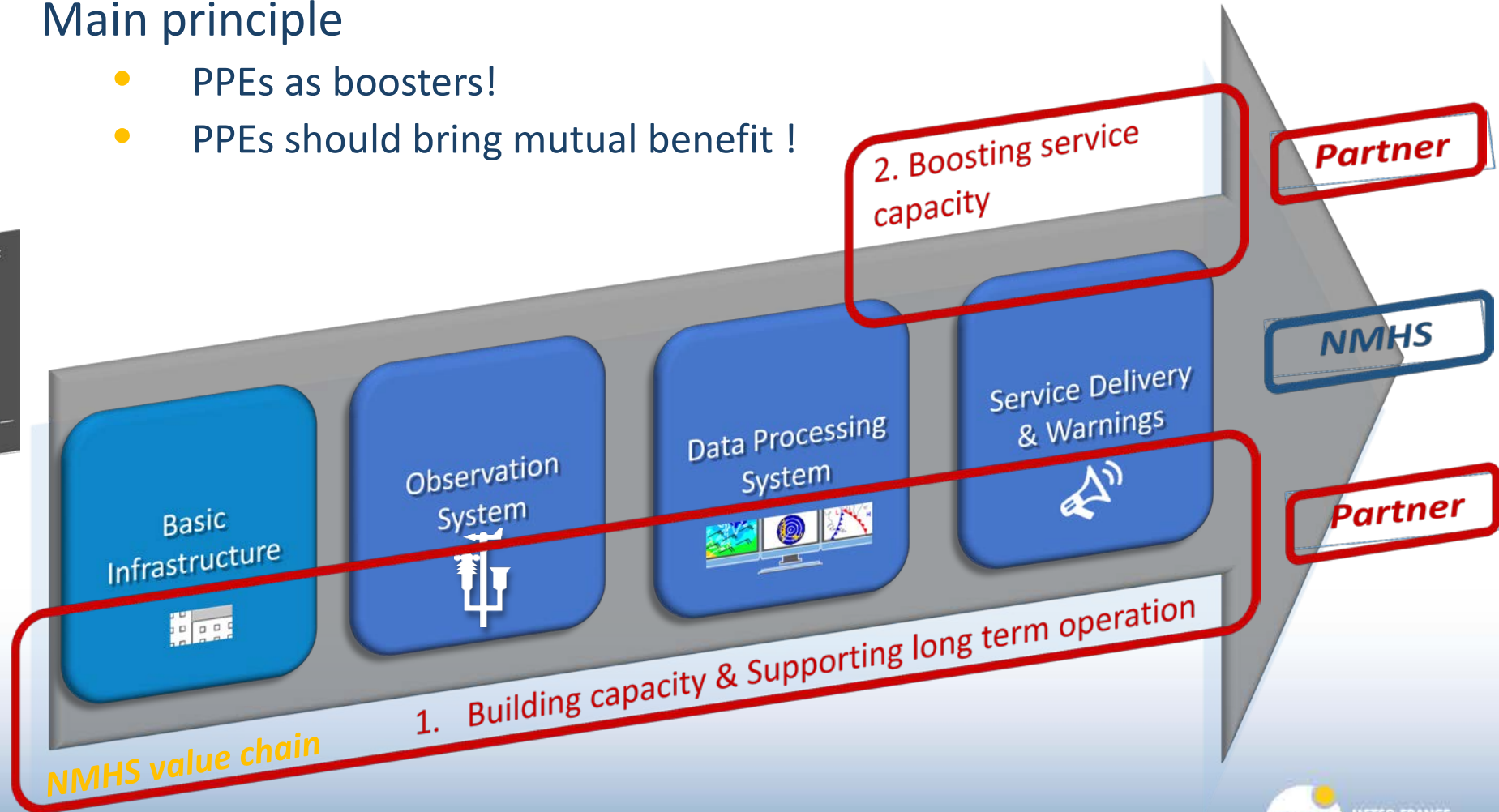
Business models

The Value Chain

Modalities for PPE:
 End-to-End
 DBO Design-Build-Operate

Main principle

- PPEs as boosters!
- PPEs should bring mutual benefit !



PPE-DBO (Design Build Operate) special meaning

“**DB**” means that **the one in charge of the design is the one implementing the solution**

- DBO agreement is executed based on high-level design only
- Design may also (slightly) change during the Build phase, based on mutual agreement.
- The “Builder” (integrator) is **one only** (i.e. he will take care of all suppliers and subcontractors).
- Capacity building actions are scheduled in a consistent manner during project lifetime
- → *DB is simple and effective.*

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“**O**” means that **NMHS is not left alone** with modern technology and new concepts **after the project** is completed.

- The partner will help for a given period of time to maintain the observation network, administrate the IT systems, and even, on request, help prepare new products for sectoral users, while...
- ...the NMHS will first concentrate on its core mission, thus “*respecting the sovereign right of Members in deciding how weather, climate and water services are organized and provided*”
- → “**O**” phase may last for years

Towards cost-effectiveness & sustainability (**DB**)

Technical actions

- Design & Build by the same Partner / contractor
- Flexible design all along the implementation period
- Traceable and effective System integration

Core business processes

- Enabled by overall architecture
- Revised **operational timeline**
- New business processes
- **Standard Operating Procedures**

Organization

- Towards a new (**user-oriented**) organization
- Provide related change management

Build / enhance **trust relation**

- Reflect willingness & partnership in a **MoU** or **SPA** (Strat. Partnership Agreement)
- At Ministry level, at DG level, at staff level

Mutual confidence



Overcome bureaucracy

One-stop stop for all Value chain

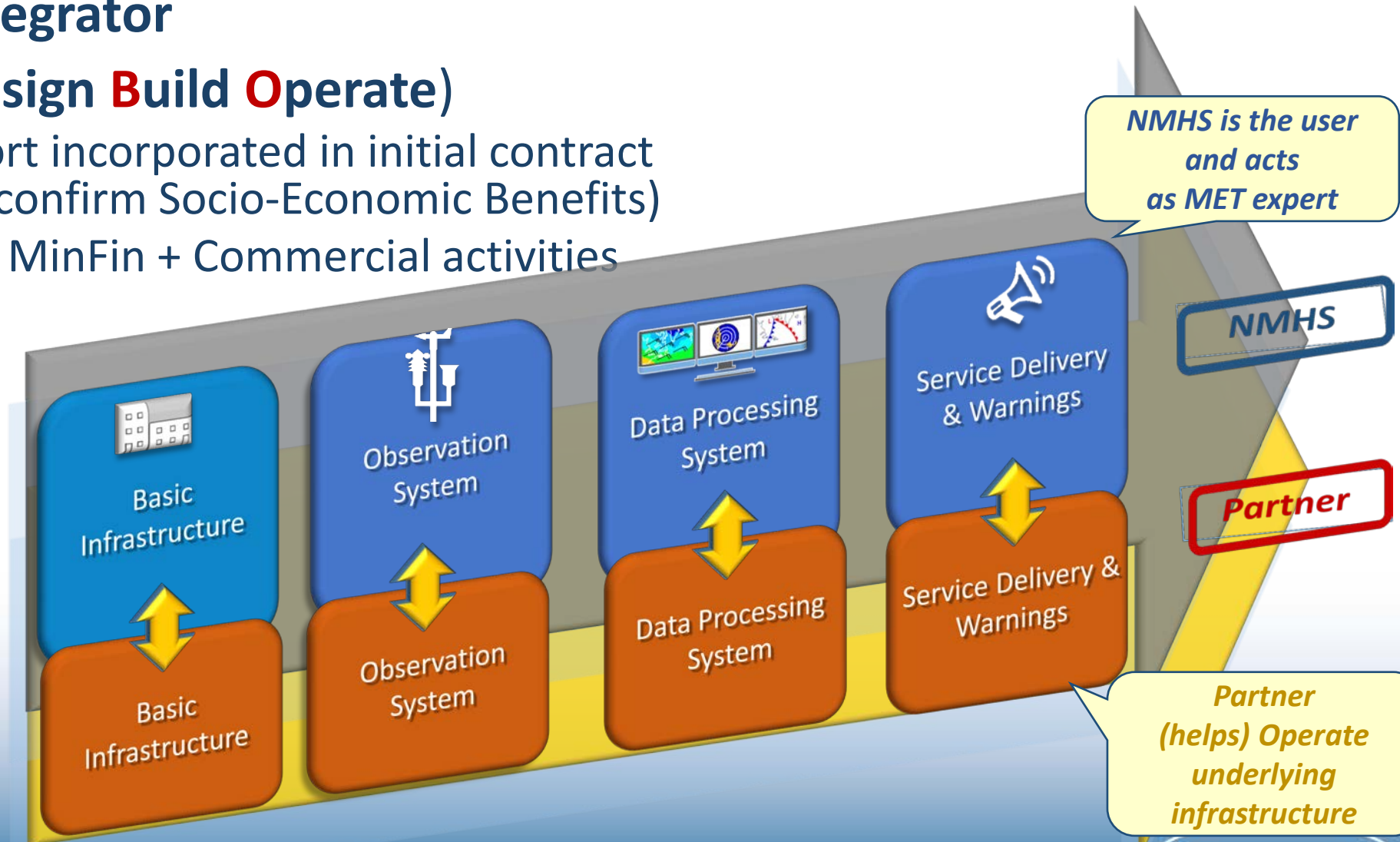
- Contractor = Integrator / Supplier / Consultant-Partner
- High-level **Steering Committee** to overcome obstacles over project lifetime

PPE-DBO for securing long term operation (O)

Private partner : **integrator**

Business model (**D**esign **B**uild **O**perate)

- **2-5 years** support incorporated in initial contract (leaves time to confirm Socio-Economic Benefits)
- Next budget ⇔ MinFin + Commercial activities



PPE-DBO strong points in brief

DBO main values and success factors

- **Design and Build** : Full commitment of the designer to deliver and implement
- **Comprehensive**: Integrated, across the full value chain
- **Owned by NMHS**: through **twinning**, consultancy, change management, SOPs... and trust!
- **Quick**: Typically, 3 years for Design and Implementation of a 20-60 M€ project
- **Effective & Measurable**: Through relevant KPI on internal benefit, socio-economic benefit, and WMO compliance
- **Risk minimization**: DBO is nothing but transferring the risk to the Private sector (integrator)
- **Sustainable**: Assistance to operations of the underlying infrastructure over the value chain + Assistance to seek yearly budget for O&M after DBO project is over

Recent examples (120M€): Angola, Indonesia, Cote d'Ivoire

- **Angola (2019-2022, 60M€)**
 - DBO Modernization project across the Value chain
 - €€ by Export Credit **Société Générale**



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- **Indonesia (2020-2023, 32M€)**

- 2nd DBO project now focusing on **Impact Based Warning & services**
- €€ by **French Treasury** soft loan

Indonesia STR2 (24+8M€, 2020-2025)

- « Repeat order » after STR1 (30M€, 2012-2016)
- Scaling up and upgrade of successful concepts
 - Digital Forecast & collaborative work
 - PWS
 - Services to Aviation
- Implement innovative concepts
 - E.g. **Impact Based Forecast**
- Extend concept / architecture to Marine met. & Oceanography
- Train MSc students in France

IBFWS application over Indonesia

IBFWS application – potential impact

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IBFWS application over Indonesia

HAZARD (24h rain acc. Normalized AROME – 2.5 km)

VULNERABILITY (specific for heavy rains InaRISK 100m aggregated 2.5 km)

CAPACITY (for all risk admin. level 3)

Risk theory equation

Potential impact

IBFWS application – potential impact

Potential impact (risk theory equation)

- **Cote d'Ivoire (2022-2025, 27M€)**

- DBO Modernization project across the Value chain (+ revenue sharing)
- €€ by **AFD (first DBO project ever)**

Abidjan, 21 octobre 2022
Patrick Bénichou
Président de MFI

PRESENTATION DU PROJET VIGICLIMM
Modernisation de la Direction de la Météorologie Nationale de la SODEXAM

Aperçu du projet VIGICLIMM...

VIGICLIMM: vers la DMN / SODEXAM 2.0

La SODEXAM, Pôle d'excellence en Afrique de l'Ouest

Toulouse, 23 Sept. 2022 – Signature d'un accord SODEXAM / MFI
Rayonnement de la SODEXAM sur les pays alentours pour la mise en œuvre de projets à l'international comme le WALL (Alertes pour tous)

Acknowledgements (2018, 2020)



PUBLIC-PRIVATE ENGAGEMENT

Compendium of Good National Practices for Public-Private Engagement

Meteo France International (MFI): Modernizing NMHSs through public-private partnerships

Patrick Bénichou
Meteo France International

How to best implement the Meteorological Value Chain at the national level, how to best use the public monies, in the most effective and sustainable ways are challenges of this decade for a lot of National Meteorological and Hydrological Services (NMHSs), and no NMHS can embrace the whole value chain with the same level of energy. Public-Private Engagement would address those challenges; within which the DBO (Design Build Operate) approach could bring a lot of incentives to NMHS in the field of system integration, change management, sustainability. It is also fully compliant with the spirit of the Geneva Declaration - 2019 endorsed during the 18th World Meteorological Congress.

PPE-DBO approach also brings proven Key Success Factors that Meteo France International (MFI) already experienced and introduced in the past 10-15 years in various contexts like in Indonesia, Cambodia, Angola, India:

- Strong strategic partnership with NMHS
- Shared managerial vision
- Design & Build approach
- Flexible Design all along implementation
- Co-steering the project with flexibility
- Integrated approach to implementing value chain
- Setting up the new NMHS workflow
- Support to Change management
- Operational procedures
- Capacity Building & twinning with leading NMHS
- Transfer of knowledge to NMHS and local private sector for long term sustainability



April 24, 2018

Mr. Patrick Bénichou
President
Meteo France International

Dear Mr. Bénichou,

On behalf of the Global Facility for Disaster Reduction and Recovery (GFDRR), I would like to thank you and your team for organizing and joining the knowledge sharing visit on the modernization of the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG) for the GFDRR Hydromet and the World Bank teams on April 16-17 in Jakarta, Indonesia. The experience of the modernization of BMKG carried out by the Meteo France International (MFI) is extremely valuable, and would be applicable for many countries that are going through or planning the process of modernization of their national meteorological and hydrological services.

The team highlighted several important aspects that had been taken into account by the MFI to ensure the sustainability of the modernization results for the BMKG. Specifically, the team noted the efforts invested in building local capacity and empowering of the staff of the BMKG in order to sustain systems and services. The "turnkey" approach used by the MFI for the modernization of the BMKG presents a lot of interest and potential for large-scale NMHSs modernization projects supported by the World Bank/GFDRR Hydromet program and should be studied further. The team also took note of the thorough process of change management that accompanied the project throughout implementation. Other key points discussed during the study tour as well as potential areas for future collaboration are summarized in the follow up note which was also shared with the management of the BMKG.

Once again, we appreciate the opportunity to learn from the experience of agencies such as MFI and BMKG, and look forward to continuing collaboration.

Sincerely,

Francis Ghesquiere
Manager

Global Facility for Disaster Reduction and Recovery

How to scale-up PPE-DBO approach (*vs mainstream*)?

- Context
 - PPE-DBO proved **successful in all cases**, even renewed (e.g. Indonesia, others to come)
 - PPE-DBO **principles are now « supported »** by WMO & major development partners
 - PPE-DBO **meet strong expectations** from the field
- Scaling up the approach would require **in-depth changes**
 - In the **project design methodology** (joint design)
 - In the **implementation methodology** (DB)
 - In the **procurement plan** (integrated approach, + inclusion of an « O » period)
 - In the **respectives roles** of development partners, WMO, private sector (integrator + local partners), for **alignment** with the spirit of the Geneva Declaration
- As of 2022, most ***multilateral agencies do not comply (yet) with the spirit of DBO...***
 - ...but **when there is a will, there is a way !**

2. The UN EWS initiative & the **W4ALL** approach

A logical application of the DBO model?



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The UN EWS initiative (Mar. 2022)



"Today I announce the United Nations will spearhead new action to ensure every person on Earth is protected by early warning systems within five years.

I have asked the World Meteorological Organization to lead this effort and to present an action plan to achieve this goal at the next UN climate conference, later this year in Egypt."

António Guterres, Secretary-General of the United Nations, 23rd March 2022



WMO has been asked to spearhead a global UN initiative to meet the goal of every person on Earth being covered by early warning systems in five years, building on existing partnerships and contributing to the global climate adaptation agenda. Three key focus areas are proposed to achieve this goal:

- ⇒ Earth system observations and monitoring
- ⇒ Predictive and warning capabilities
- ⇒ Coordinated communication for anticipatory action

Every person on Earth to be protected by early warning systems in five years
How can we achieve this?

Main challenge

- How to draft a **Plan of Action**, consistent with a concrete **5-year objective** for worldwide implementation

MFI W4ALL proposal to WMO for UN EWS objective

The proposed vision (MFI, Jul.2022)

- Worldwide **PPE-DBO approach** based on **qualified consortia**
- Consortia qualifies vs a list of **high level specs** and **principles**
- Each consortium delivers, implements (and operates) a full **compliant solution across the EW/EA** (Early Warning / Early Action) **value cycle**
- Each consortium works on a « **geographic area of responsibility** »
- Each consortium is funded by a **fitted financing mechanism** compliant with the PPE-DBO approach.

The nature of consortia: a team of **public & private** players

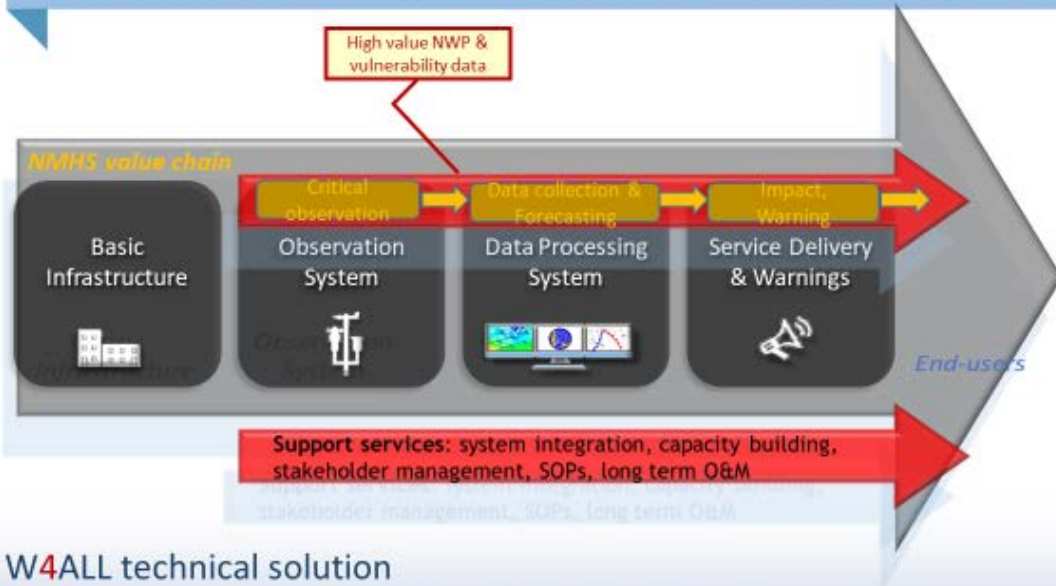
- **Private** (integrator + relevant companies): develops, delivers, maintains the Industrial proven integrated solution (observation, forecasting, warning, impact) across the EW/EA value chain
- **Public**: GPC (high quality NWP data), « host » NMHS (in the area of responsibility) **incl RSMCs**
- Both public and private partners are **getting paid** for service

Beneficiaries

- Countries identified from WMO gap analysis

W4ALL Concept : EW/EA value chain & area of responsibility

W4ALL main project components vs EW/EA value chain

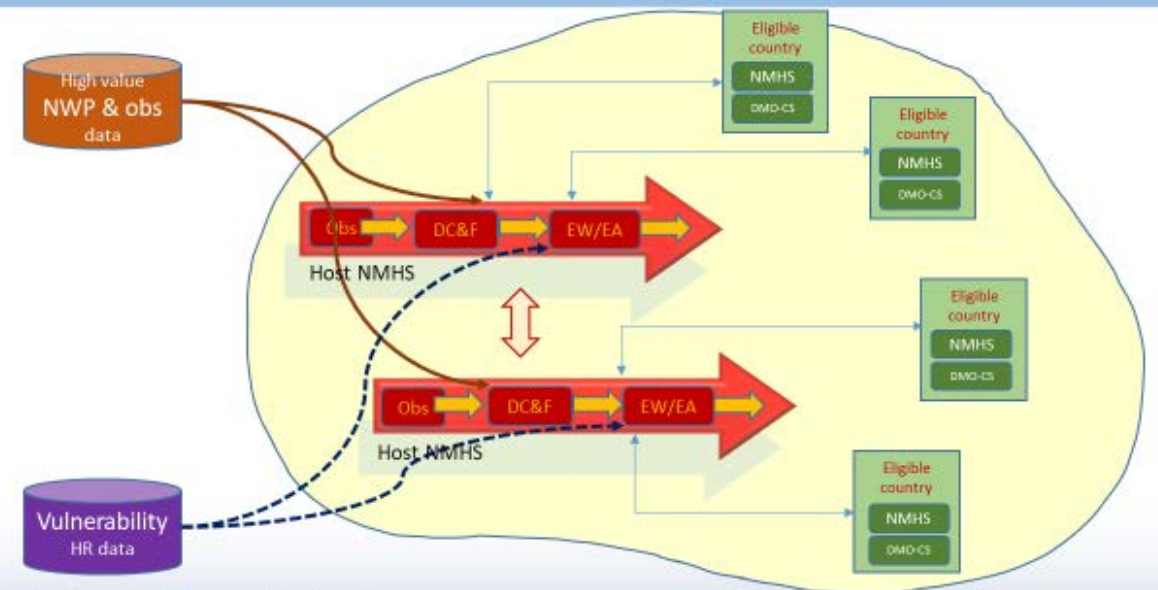


W4ALL technical solution

- contributes to overall HNMS value chain implementation
- comes along with support services as Key Success Factors

RA-VI Regional Forum of the OCP, Geneva, Nov.2022

W4ALL typical deployment over an « area of responsibility »



1 area of responsibility (yellow) includes

- A number of « **host NMHS** » (incl. RSMCs when relevant) hosting the W4ALL solution
- All **eligible countries** (incl. NMHSs and stakeholders) connected to one host NMHS through the internet

How consortia work in the W4ALL approach



Each consortium will

- comply with a list of high level requirements / criteria
- Implement UN EWS on a given area of responsibility

Beneficiaries
(all eligible countries in resp. area)
NMHSs + stakeholders

Support requested for W4ALL !

The UN EWS initiative is a unique opportunity to change things!

Basic ideas for the High-level Plan of Actions (COP27 & further steps)

- **PPE(DBO) approach:** only way to meet the 5-year objective
- **High level requirements** (across EW/EA value cycle) and **Key principles** only
- **Call for candidate consortia** (involving public and private players) over given areas of responsibility
- Identify **adequate financing mechanism** (for each area of responsibility) based on existing mechanisms and consistent with the PPE approach and with single projects across the full value cycle



W4ALL to be showcased on the French Pavilion with French MoFA in a joint CREWS-MFI side event **on 08/11** during **COP27**

3. Support from NMHSs

A growing number of NMHSs supports DBO & W4ALL

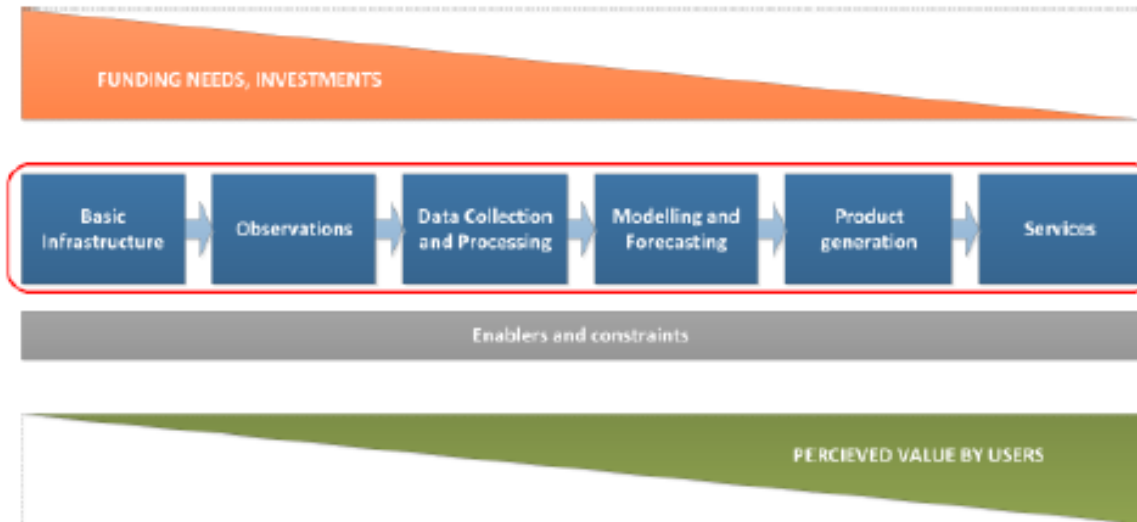


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High-level workshop on PPE-DBO initiatives in meteorology
Sept.21-22 2022, Toulouse, France

Joint declaration on PPE-DBO business model

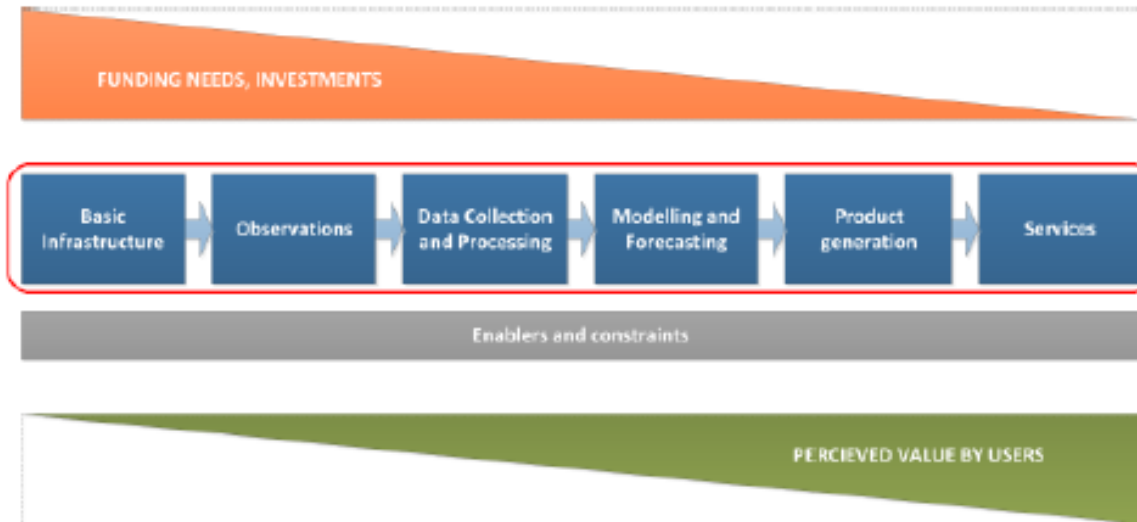


The Workshop finally came along with the following recommendations

1. Request for systematic promotion of the PPE-DBO approach in the most practical way for integrated NMHS modernization projects, incl. showcasing successful experiences
2. Scale up the PPE-DBO approach by in-depth changes (i) in the project design methodology; (ii) in the implementation methodology; (iii) in the procurement plan (to systematically include joint design and long-term assistance to operation); (iv) in the capacity development at country level; (v) in the respective roles of development partners, WMO, private sector, so as to better align with the spirit of the Geneva Declaration
3. Seize the opportunity of the EWS initiative to initiate such in-depth changes and implement PPE-DBO concept in the field wherever it is relevant.

High-level workshop on PPE-DBO initiatives in meteorology
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1. Seize the opportunity of the EWS initiative to implement working concepts in the field (PPE-DBO is one) wherever it is relevant.
2. Support Resolution 4(2)/1 (EC-75) and bring explicit support to the W4ALL principles and proposal at Regional Association level and during upcoming SERCOM, INFCOM meetings on UN EWS
3. Reflect abovementioned main principles as much as possible in the upcoming high-level Plan of Action to be delivered by WMO during COP27

UN EWS initiative Warning **for All** approach



BE ANOTHER BRICK
IN

THE
W4ALL

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Ready for **DBO project(s) in RA-VI?**
Thank you !



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