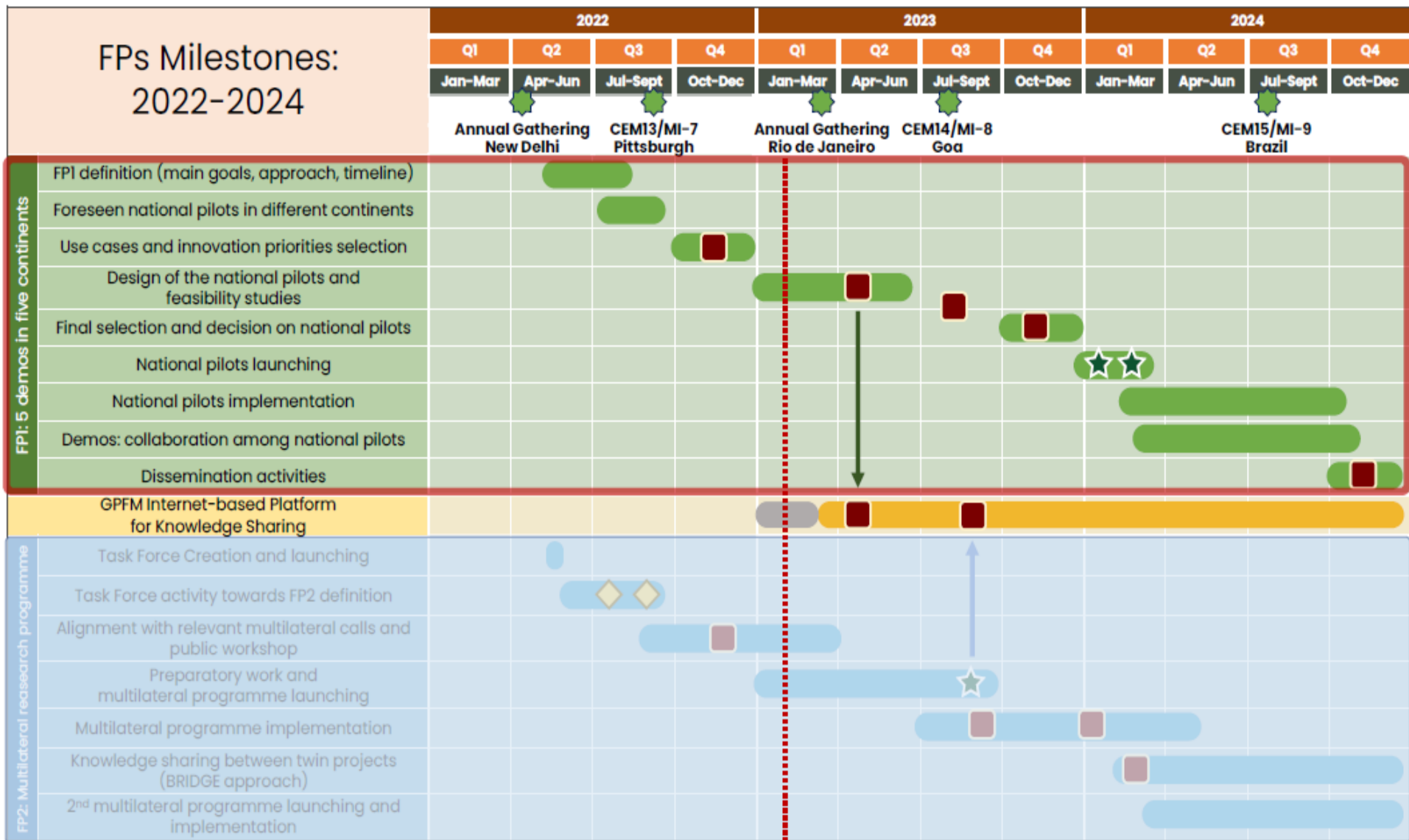


Agenda



- 13:00–13:10 **Welcome and Introduction**
- 13:10–13:25 **Main engagements in 2023**
- a. GPFM Membership and commitment
 - b. GPFM participation to MI Ministerial events
- 13:25–14:00 **GPFM FP1 & FP2 foreseen activities**
- a. National pilots survey
 - b. Continental Task Forces
 - c. MI-dedicated call module
- 14:00–14:15 **GPFM International Workshops**
- 14:15–14:25 **Communication activities**
- 14:25–14:30 **AOB**

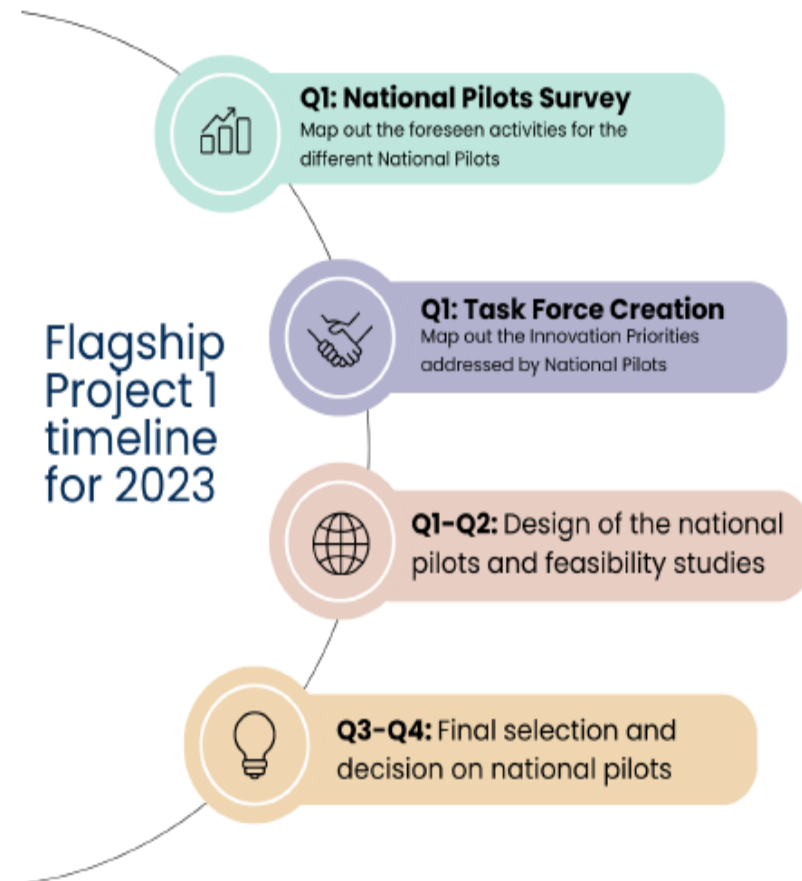
FPs Milestones: 2022-2024



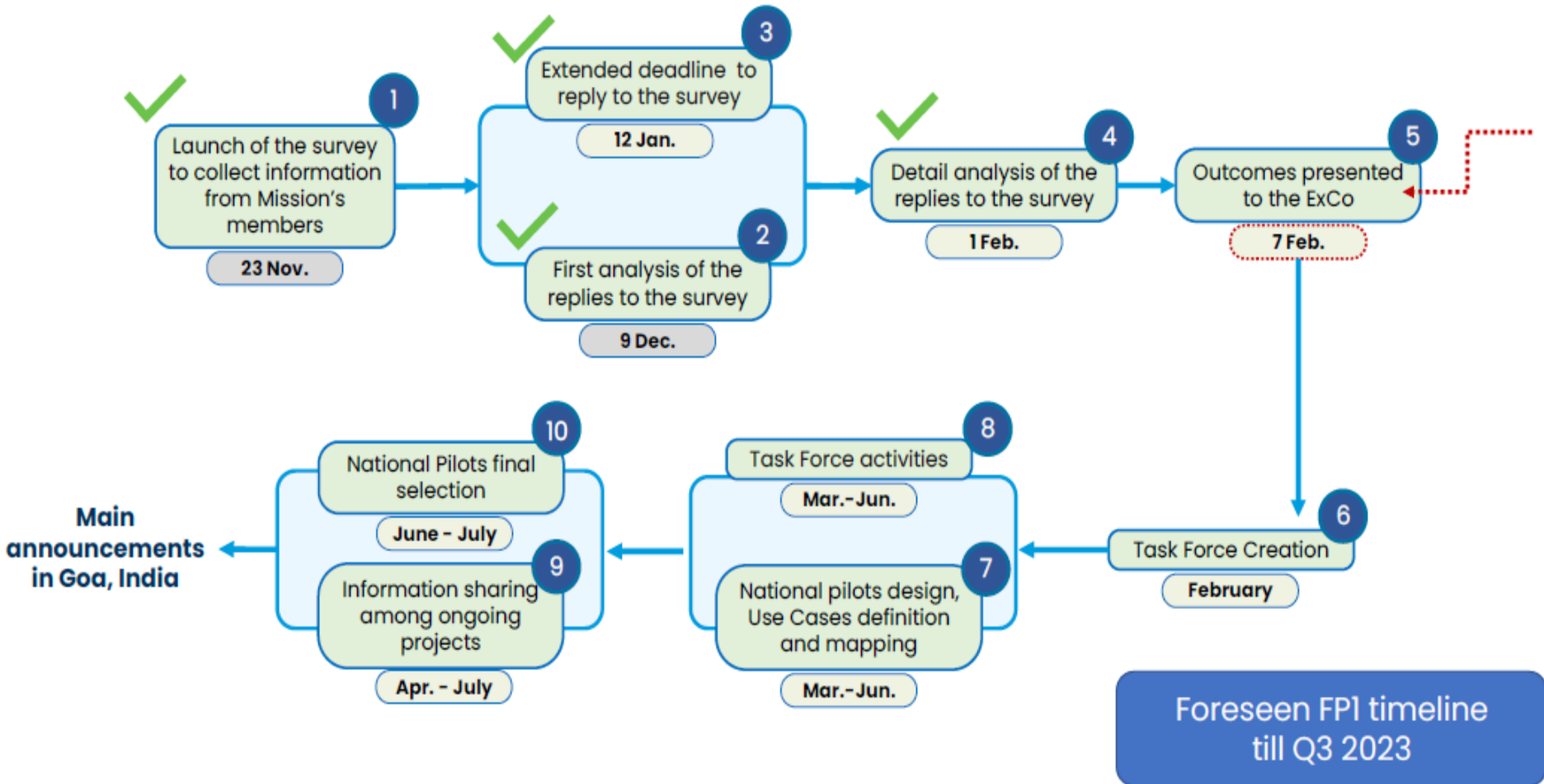
Legend: CEM/MI event Consensus meeting Periodic events Launching activities

Flagship Project 1: 5 demos in five continents timeline for 2023

- **National Pilots Survey** with information on National Projects launched after Q1 2021 or foreseen to be launched before Q4 2024
- Creation of the **Continental Task Forces:**
 - to map out the specific Innovation Priorities covered by each National Pilot
 - to monitor progress and foster the sharing of approach and main results
- Design of the National Pilots and **feasibility studies**
- Final selection and decision on National Pilots



Proposed timeline for FPI activities



Received contributions from GPFM members

Information as collected by the dedicated national pilots survey

Thank you for your valuable contribution!

63 Pilot projects, **44** of which are ongoing and (fully) aligned with the GPFM goals and activities

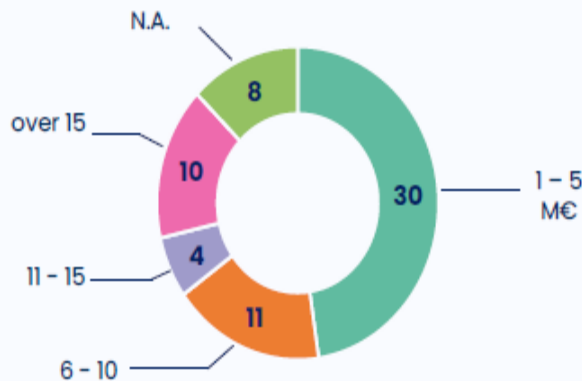
vs

20+ estimated in the Action Plan 2022-2024

<i>GPFM coalition member</i>	<i>Contribution to the FPI</i>	<i>Numbers of projects</i>
China		1
Italy		8
UK		1
Australia		1
India		2
Saudi Arabia		-
Spain		23
IRENA		-
World Bank		-
Alperia		1
Areti		2
Enel		5
Goldwind		1*
Icebreaker One		1*
Longi		1*
National Grid		8
Austria		
Brazil		1
Canada		3
EU		-
Germany		
Japan		1
The Netherlands		-
Republic of Korea		
IEA		-
BSI Group		
ENA		
GSE		1*
Terna		5

National Pilots survey in figures

Project budget (in M€)

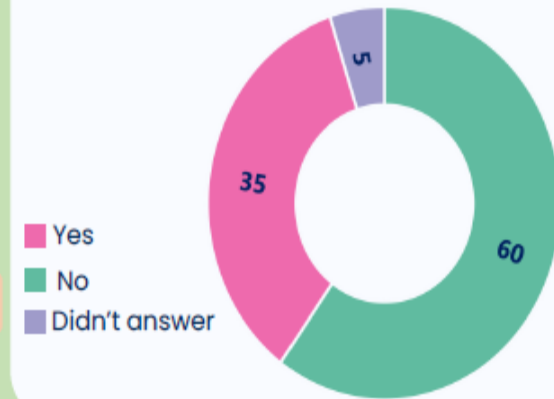


63 projects submitted

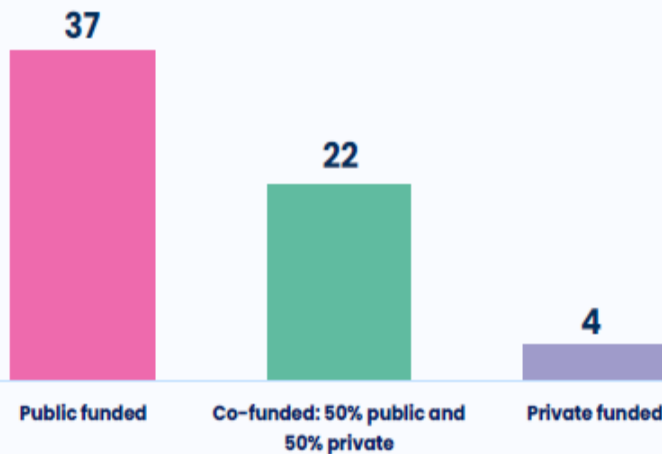
44 ongoing

19 new

International Cooperation (%)



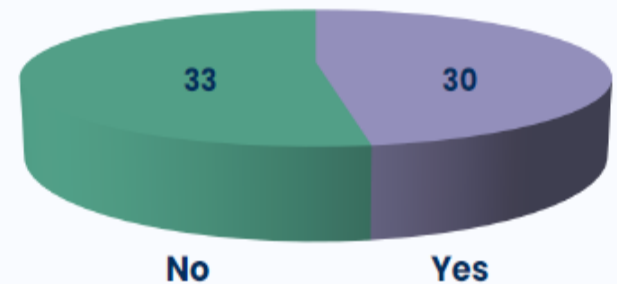
Funding Scheme



48 IPs out of 50 covered

**50+ Use Cases
20 UCs >10x**

Info publicly available on Internet



Survey initial outcomes: overview

Number of IPs selected by the projects

0 5 10 15 20

Pillar 1

- 1.1.1 High efficiency PV cells and modules
- 1.1.3 Reliability evaluation of PV modules and systems
- 1.1.5 Software and database for PV systems
- 1.1.6 Recycling and eco-design of PV cells and modules
- 1.1.7 Agri-PV technologies
- 1.2.2 Floating offshore wind turbines
- 1.3.2 Large-scale IRE generation for improving system reliability and stability
- 1.3.3 Distributed IRE generation at grid edge
- 1.6.1 Analysis of batteries life cycle and monitor, test and recycle of batteries
- 1.5.2 Recycling and reuse batteries design
- 1.5.3 Innovation in energy storage technologies
- 1.5.4 Driving cost-reduction across the battery supply chain
- 1.5.6 Safety assessment of electrochemical storage
- 1.6.1 Grid-forming devices applied to solar PV and wind
- 1.6.2 Grid-supporting technologies from inverter-based resources

■ Ongoing projects
■ Foreseen new projects

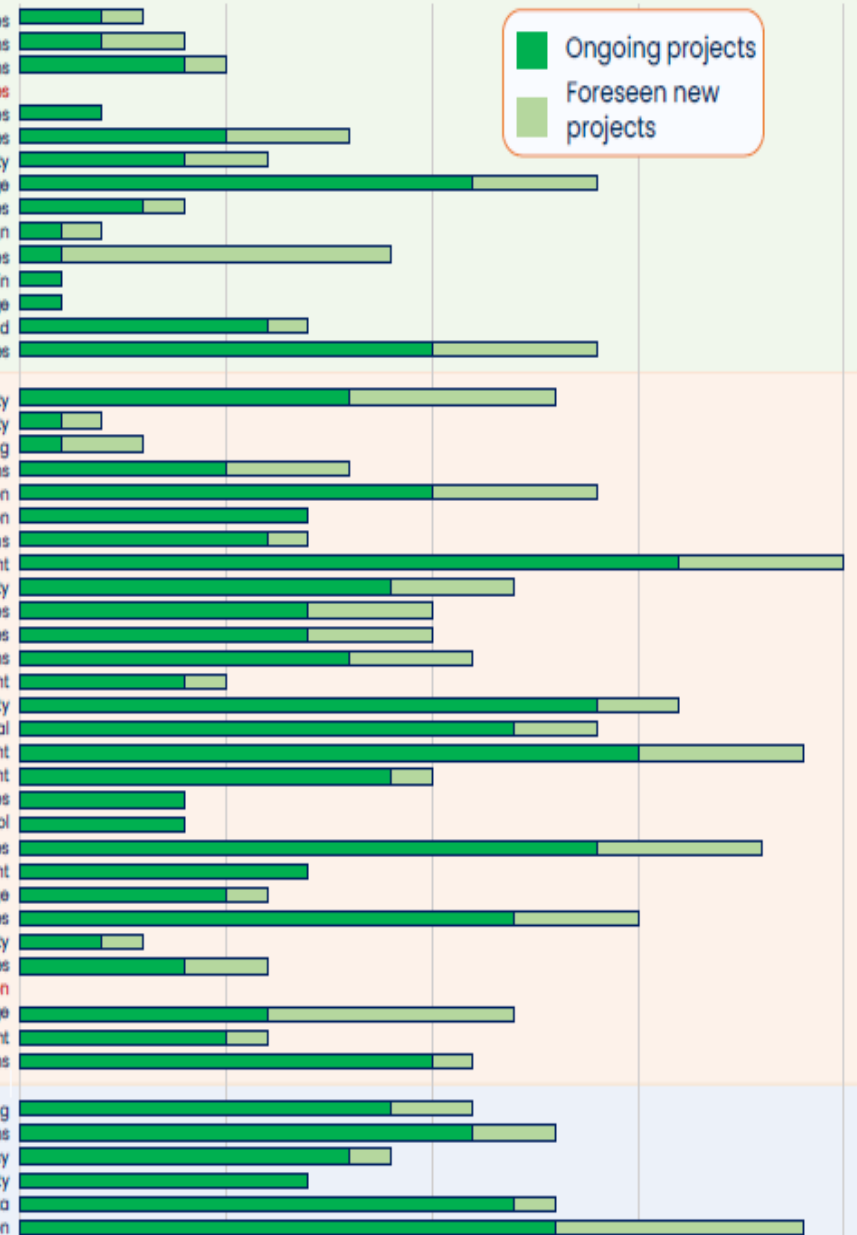
Survey initial outcomes on the 50 Innovation Priorities addressed by FPI National Pilots

Pillar 2

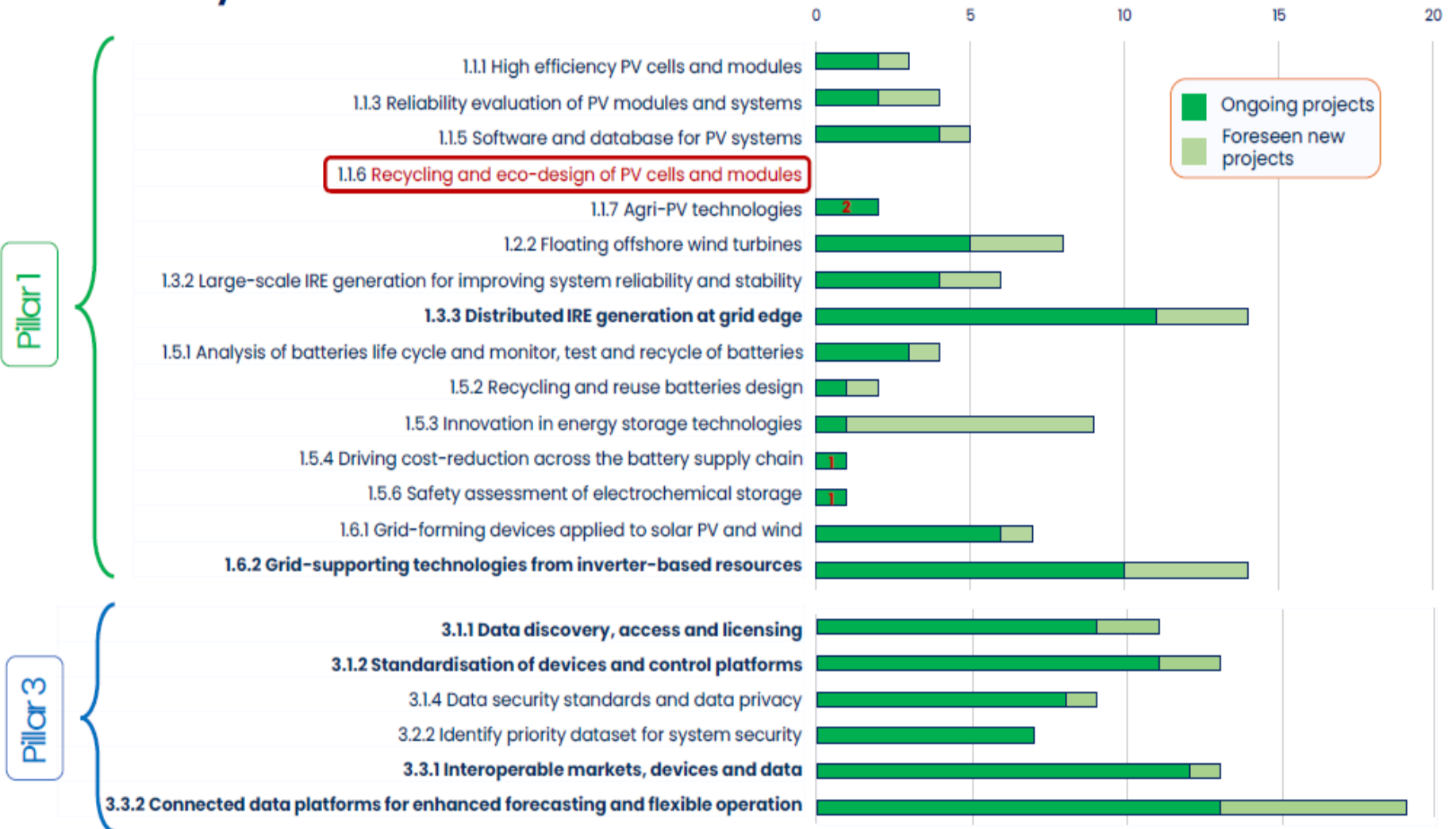
- 2.1.1 VRE flexibility provision and contribution to generation capacity
- 2.1.2 Further exploitation of hydropower and pumped hydro flexibility
- 2.2.1 Innovative components and dynamic line rating
- 2.2.4 Enhanced control rooms and automated decision systems
- 2.3.1 System stability assessment considering high VRE penetration
- 2.3.2 Enhanced TSO-DSO coordination platform for flexibility markets optimisation
- 2.3.3 Innovative frequency and nonfrequency ancillary services specifications
- 2.3.4 Tools and solutions for DSO flexibility management
- 2.3.5 DSOs and TSOs enhanced grid and DER observability
- 2.4.1 Need and requirements assessment for storage systems new services
- 2.4.3 Utility scale storage systems for innovative flexibility services
- 2.4.4 Assessment of energy management for multi-service energy storage systems
- 2.4.6 Identification of main barriers hindering storage systems mass deployment
- 2.5.1 Methods to estimate the available actual demand-side flexibility
- 2.5.2 Unlocking commercial and residential buildings flexibility potential
- 2.5.4 Demand response, EV services and grid impact assessment
- 2.5.5 Tools for optimal smart charging and V2G management
- 2.5.6 Impact assessment of flexibility services on EV batteries
- 2.6.1 Integrated transmission and distribution planning tool
- 2.6.3 New planning strategies and methods for flexibility solutions and system services
- 2.6.5 EV charging infrastructure planning and deployment
- 2.7.1 Flexibility markets for innovative ancillary services by VRE and storage
- 2.7.4 Business models and regulatory framework for flexible resources
- 2.7.5 Market access rules, grid tariffs and price schemes to exploit EV flexibility
- 2.7.7 Regulatory solutions to foster flexibility provision from end-users
- 2.7.8 Output-based regulation to incentivize grid flexibility exploitation
- 2.7.11 Social acceptance of innovative technologies and required behavioral change
- 2.8.1 Sector Coupling flexibility assessment
- 2.8.2 Optimal planning and operation of integrated energy systems

Pillar 3

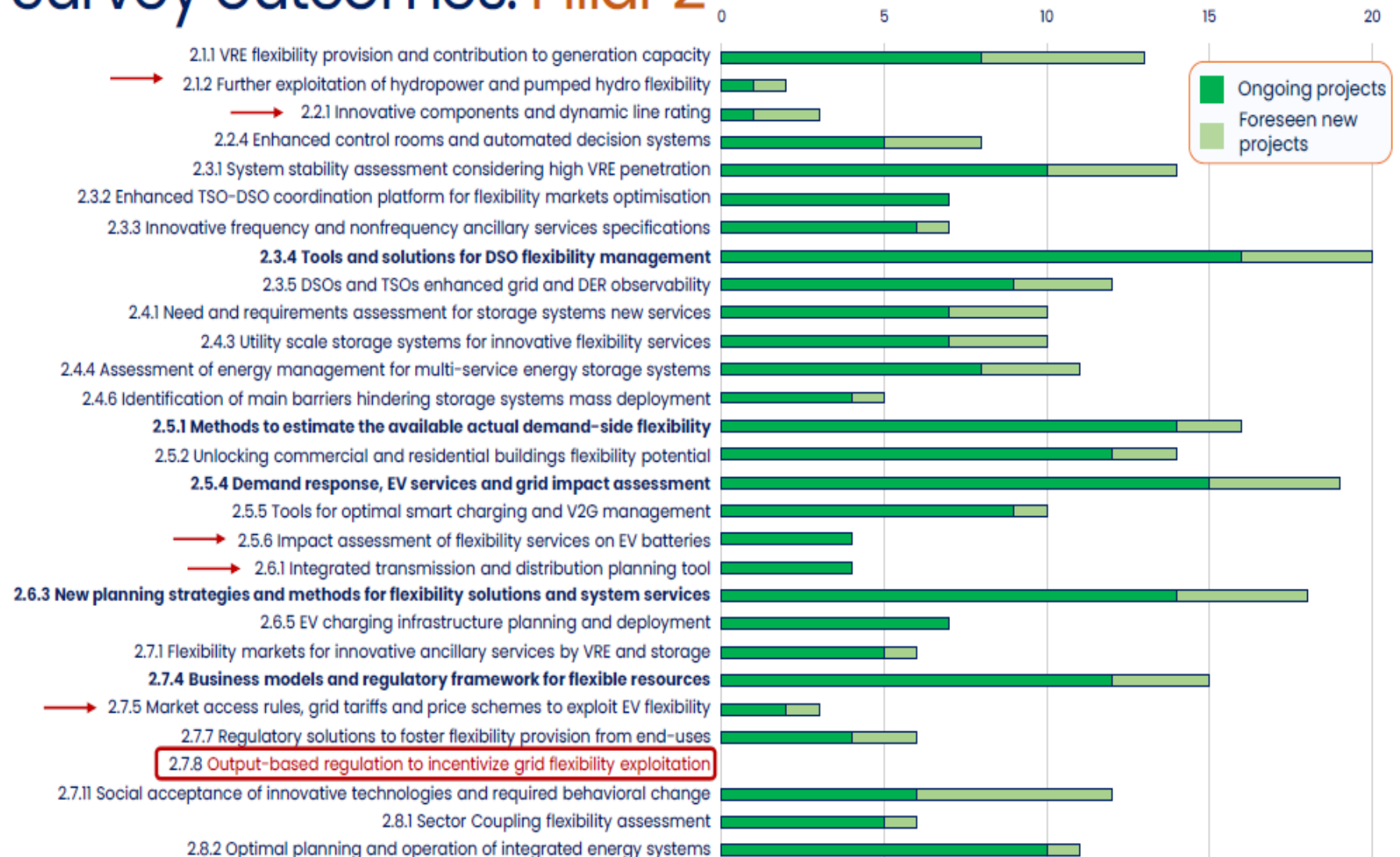
- 3.1.1 Data discovery, access and licensing
- 3.1.2 Standardisation of devices and control platforms
- 3.1.4 Data security standards and data privacy
- 3.2.2 Identify priority dataset for system security
- 3.3.1 Interoperable markets, devices and data
- 3.3.2 Connected data platforms for enhanced forecasting and flexible operation



Survey outcomes: Pillar 1 & Pillar 3



Survey outcomes: Pillar 2



FPI Continental Task Forces

- **3-5 Continental Task Forces** to map out the specific Innovation Priorities addressed by each individual National Pilot
- Each Task Force will:
 - **monitor progress** and foster the **sharing of results**
 - engage the **national pilot coordinators** and the main **public and private partners** involved
 - nominate a **lead member** and an alternate member that will be responsible to provide **periodic updates**



Presented at ExCo12

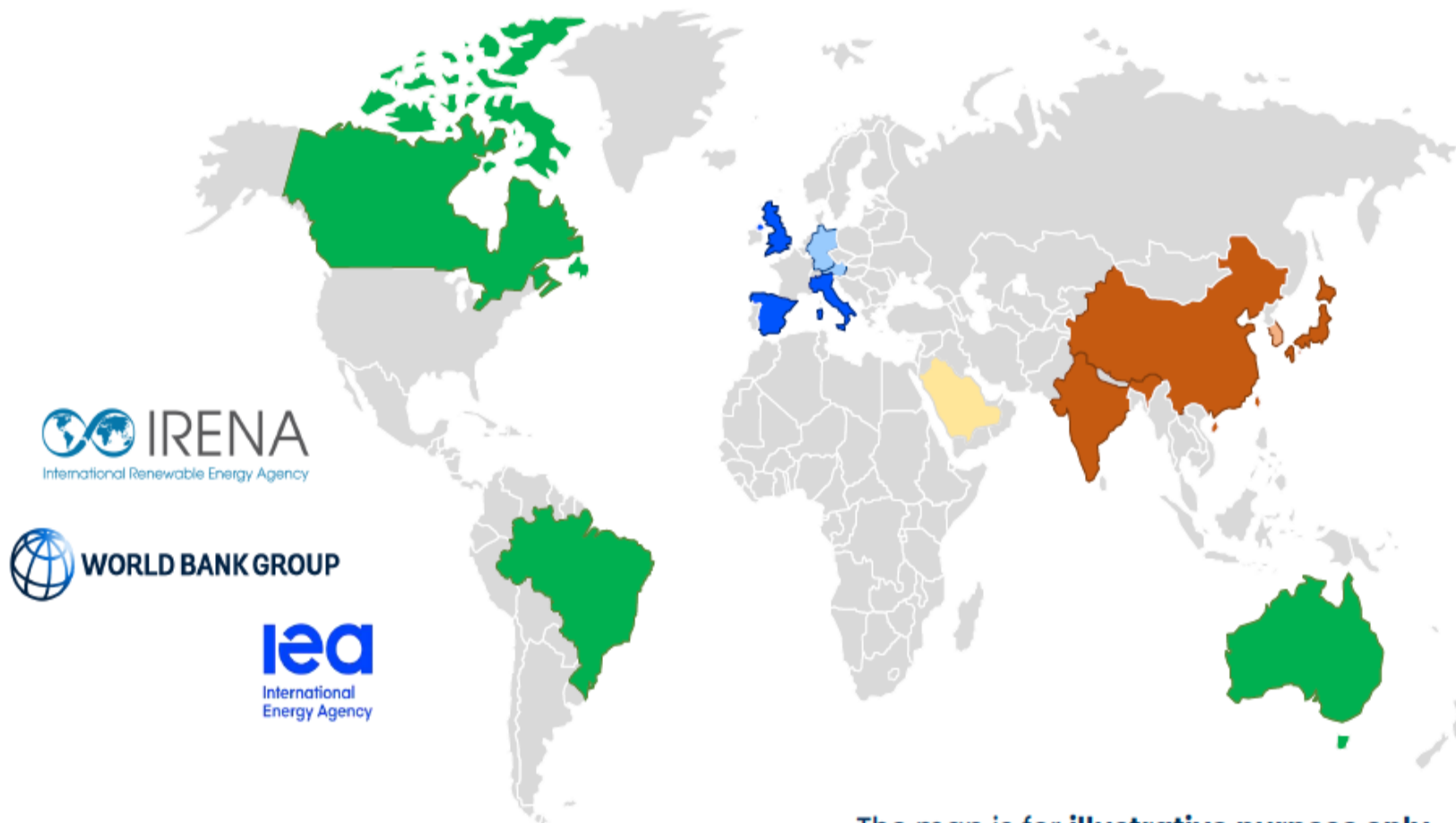
Expectation of the Continental Task Forces and Task Force Leads



Proposed approach & setting:

- Task Forces Plenary Meeting **every quarter** (once every 3 months)
- Task Force Lead and co-Lead (to be selected on a volunteering basis):
 - to **set up** and **lead** meetings
 - to **gather updates** from Task Force members **on the progress of national pilots**
 - to enable the **sharing of the learning** between national pilots
- Task Force Leads present updates on their Task Force to the GPFM ExCo at **least every quarter**, following the Task Force meetings
- AOB

Example of 5 demos in five continents



The map is for illustrative purpose only

Proposed approach to the set up of 3 Continental Task Forces



- Nomination of a Task Force Lead and Alternate/co-Lead for each continent – **all members are welcome to volunteer to be a Task Force Lead/co-Lead**
- Provision of results of the national pilot survey to the Task Force Leads and the contact details of all members relevant to each Task Force
- Set up of **regular meetings** by the Task Force Lead
- Agreement of a **format of slides** for Task Force Leads to present on the progress of the demos at ExCo's
- **Information Periodical update** to be uploaded on the dedicated space on the **Internet-based Platform** (GPFM members-only area)

FPI Task Forces: Open discussion

- Timeline, organization issues, milestones, etc.
- Continental Task Force volunteering Leads/co-Leads:
 -
- Contributing members: ...
 -
- Additional inputs



Agenda



- 13:00–13:10 **Welcome and Introduction**
- 13:10–13:25 **Main engagements in 2023**
 - a. GPFM Membership and commitment
 - b. GPFM participation to MI Ministerial events
- 13:25–14:00 **GPFM FP1 & FP2 foreseen activities**
 - a. National pilots survey
 - b. Continental Task Forces
 - c. MI-dedicated call module
- 14:00–14:15 **GPFM International Workshops**
- 14:15–14:25 **Communication activities**
- 14:25–14:30 **AOB**