



INTEGRATED POLICY PRACTITIONERS' NETWORK

(IPPN)

Connecting knowledge and practitioners to lead integrated approaches to the SDGs

**Knowledge Café:
Policy Priority Inference Tool – Experiences from Latin America**

Wednesday, 19 April 2023

Policy Priority Inference Concept, Methodology and Tool

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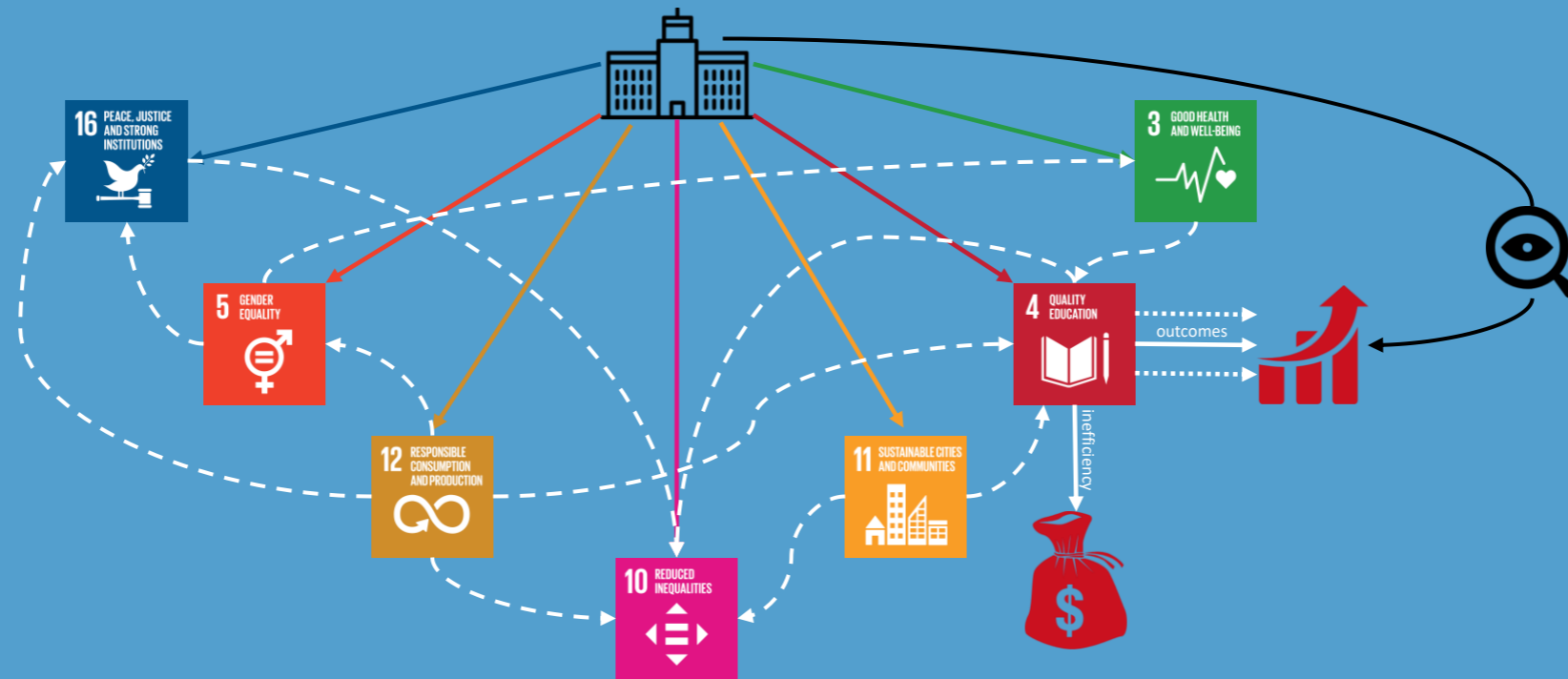
Head of Computational Social Science Research, The Alan Turing Institute

About Policy Priority Inference (PPI)

- A research programme on development economics (ATI+CIDE+UNDP)
 - How do governments establish policy priorities (budget-wise)?
 - How does public spending impact development indicators?
 - How to perform multidimensional impact evaluation?
 - How can governments align to the SDGs?
- It tries to overcome empirical challenges that econometrics and machine learning cannot handle with currently existing data
- Offers a causal account for the expenditure-indicator relationship via a parsimonious model
- Provides a tool for designing budgetary interventions

On the complexity of policy prioritization

- Numerous development dimensions (**indicators**) and interdependencies (**networks**)
- Public governance and misaligned incentives (**inefficiencies**)
- Micro-level interventions and macro-level outcomes (**emergence**)
- Imperfect expenditure-outcomes data (**coarse-grained and mismatched**)

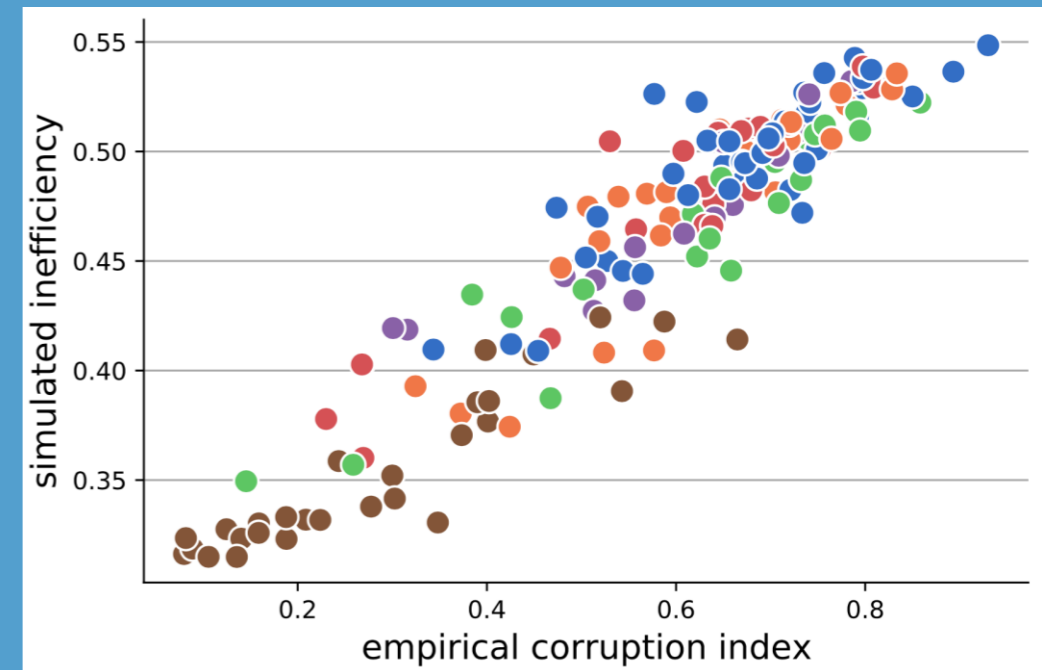


The PPI model

Model structure



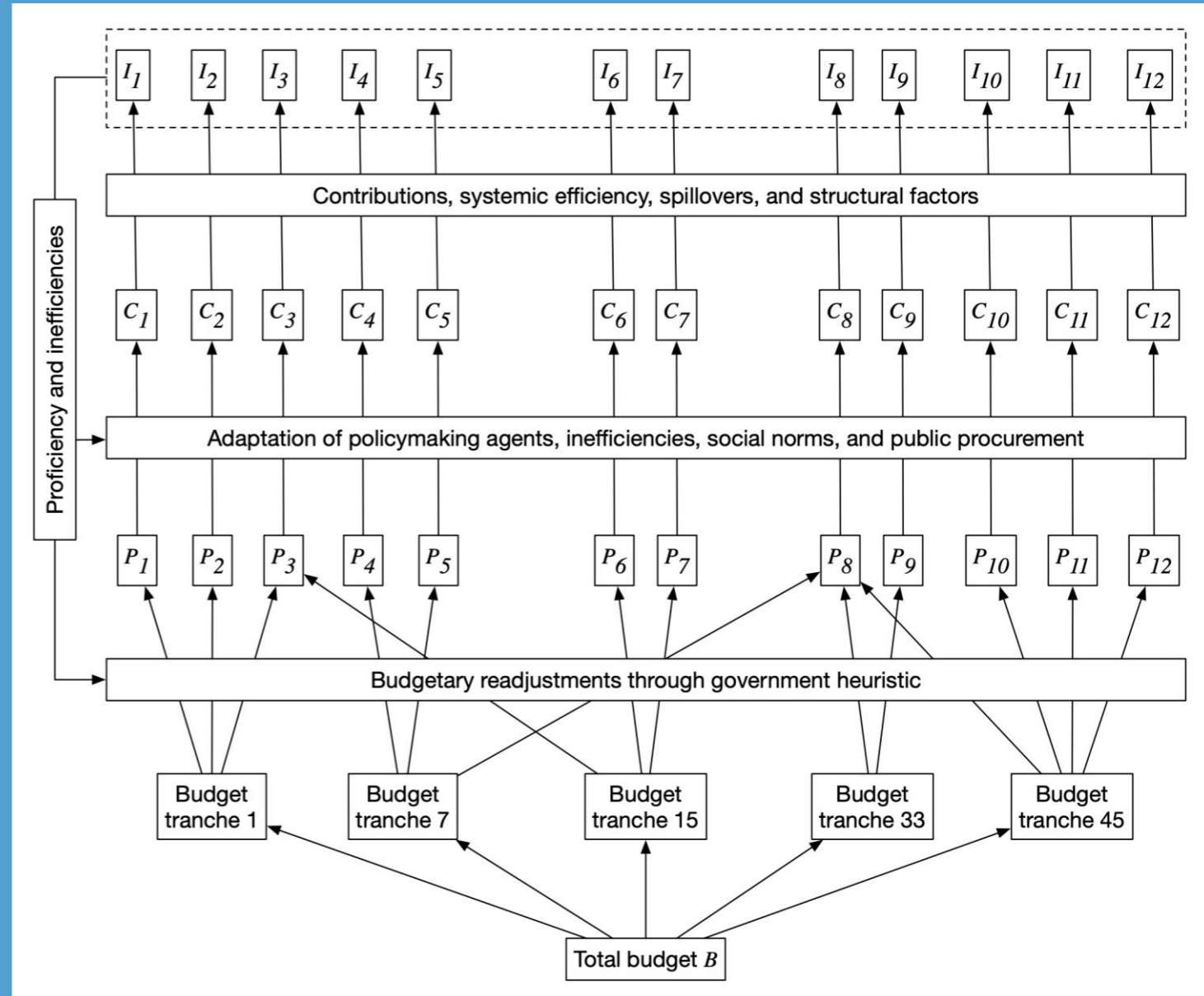
Validation



- When data is not good enough, theory is needed to feel the gaps
- Flexible to reach a compromise between theoretical richness and parsimony
- Easy to communicate to policy makers (not a black box)

Model + data

- Provide historical indicators, expenditure, and interdependence networks as inputs
- Calibrate model to replicate two features of the indicators: trend & success rate
- Once calibrated, perform counterfactual analyses (retrospective & prospective)



What questions can we examine?

- How feasible are a given set of development goals (**convergence time**)?
- What is the impact of public spending (**and other financial resources**)?
- How adequate is a budget (**policy coherence**)?
- How to optimize expenditure (**complementarities between programmes**)?
- Which indicators respond to financial interventions (**sensitivity analysis**)?
- How does public governance improve or dampen financial interventions?
- Which development dimensions are bottlenecks (**negative externalities**)?
- Which development dimensions are accelerators (**spillovers**)?
- Many more...

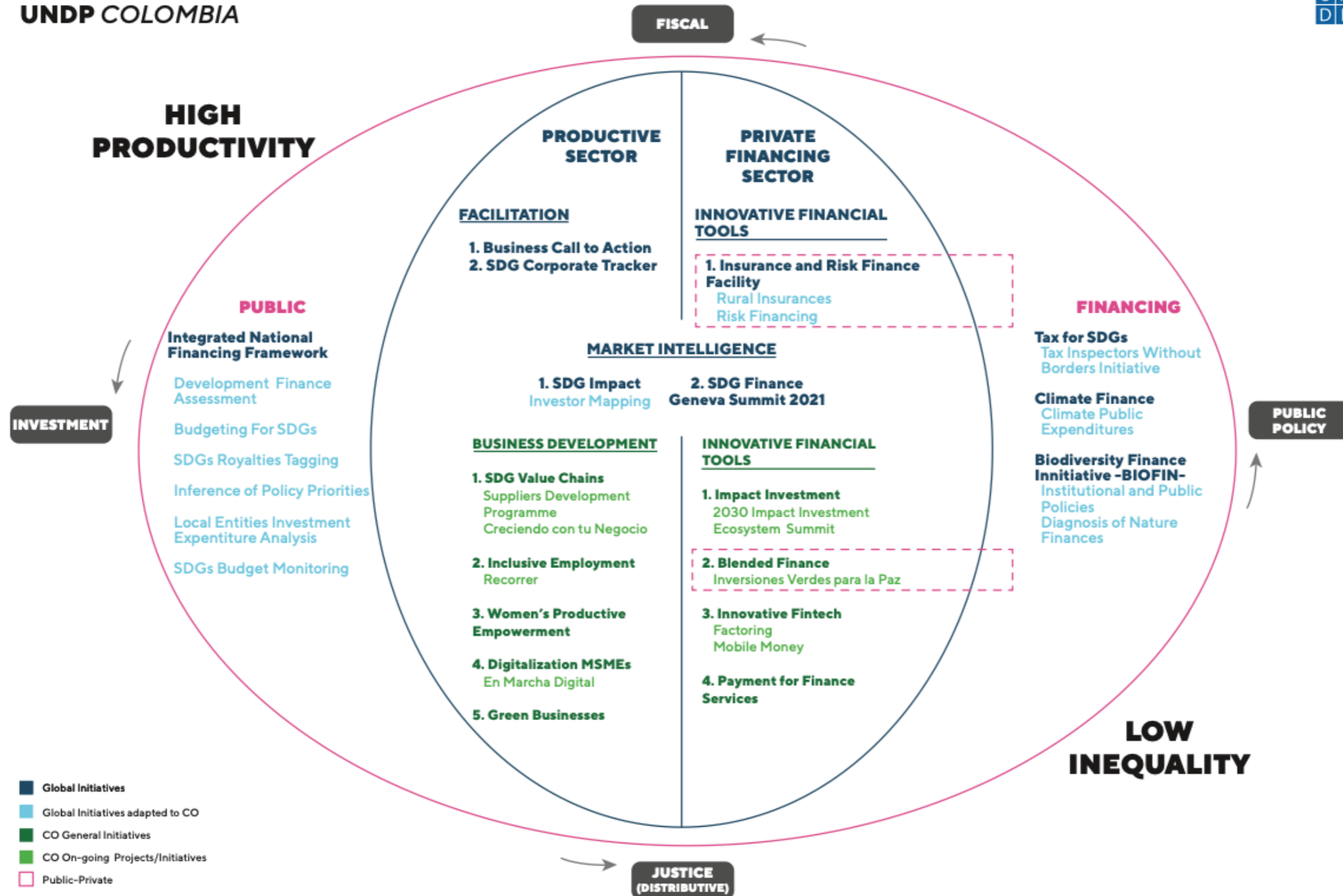
Learn more about PPI

- Forthcoming book: *Complexity Economics and Sustainable Development: A Computational Framework for Policy Priority Inference* (Cambridge University Press)
- Official website: <http://policypriority.org>
- Python open-source code and tutorials: <http://github.com/oguerrero/ppi>
- Online application: <http://policypriority.org/app>
- Data challenge in 2024: Policy Priorities & AI for SDGs

Country experience: Colombia

Jaime A. Urrego

Development Economist, UNDP Colombia



Integrated National Finance Framework

Process: Engagement/Coordination

- Consider 17 SDGs (!!!)
- Engagement with government (2.5yrs)
↳ *Planning and Finance Ministries*
- Technical committees: WB, EU, Government.
- UN Coordination: UNW/Unicef
- High-level consultants
- Flexibility

Challenges

- Change of government
- Relevancy
 - Timing
 - Adaptability
 - Scope
 - Sustainability



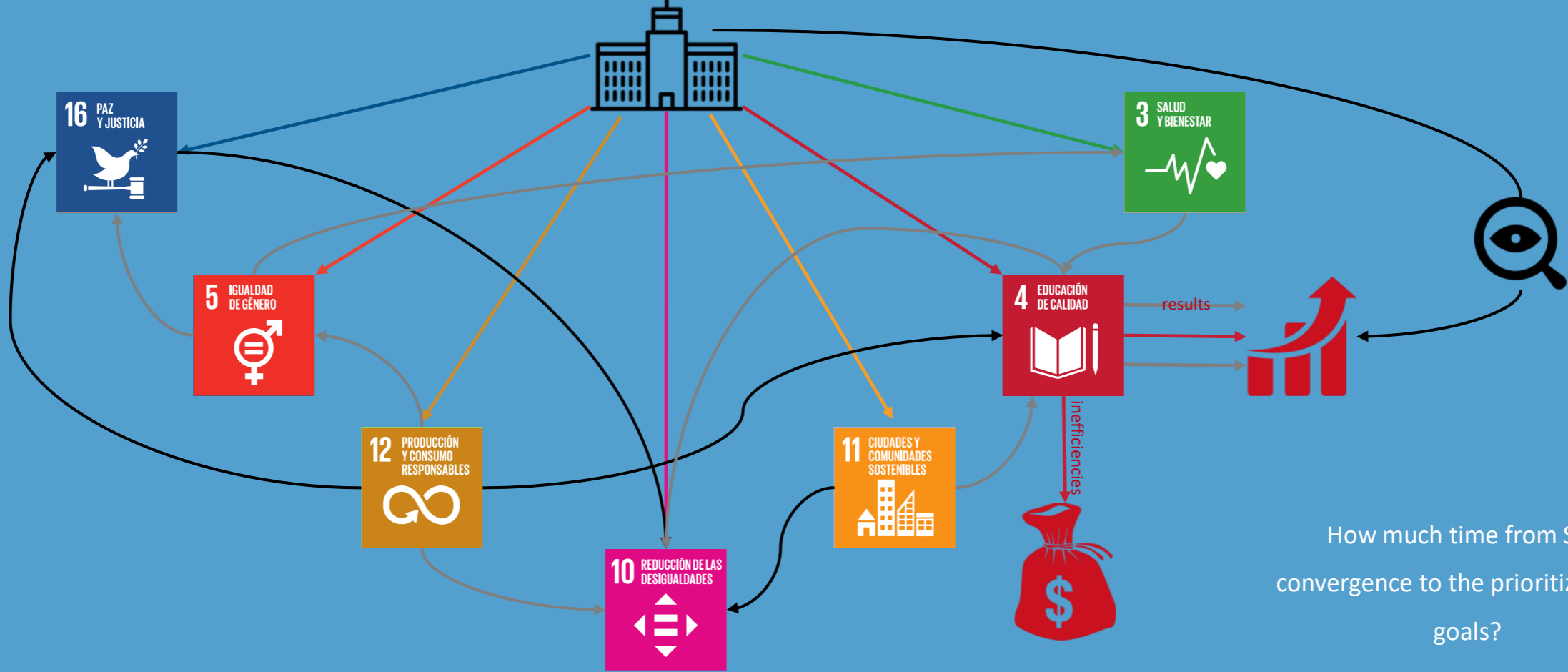
Results

- **Financing Roadmap (15 tools)**
- **Budget tagging (National budget, royalties, international cooperation)**
(86% of the budget is aligned to SDGs)
- **Priority Policy Inference (local/National)**
(47% of the goals can be achieved regardless of the budget)
- **Development Finance Assessment**
(International/National Public/private financial flows)
(USD \$657 Billion identified in financial Inflows in Colombia 2020)

Next Steps

- Climate Finance
(Social, Peace, Green Bonds, SDGs Bonds, debt swaps x nature)
- Carbon bonds market (Private sector)
- Tax4SDGs
(Expenditures, evasion, international taxation)
- Priority Policy Inference
(local and regional level)

Systemic view of the policy priorities



How much time from SDG convergence to the prioritization of goals?

Allocation of resources matters

Colombia: Characteristics of the methodology

Context

- PPI is a tool developed for the Integrated National Financing Framework and it is part of the Colombian financing strategy roadmap.

Data

- Gathering of 20-year times series of more than 90 indicators associated with SDGs
- Gathering of the detailed national budget of the last years
- National Development Plans with National Government Priorities

Collaboration

- Working closely with Finance and Planning Ministries in the collection and analysis of data (particularly with the Public Policy Monitoring and Evaluation office at DNP who is in charge of the SDGs agenda in Colombia)

Uses

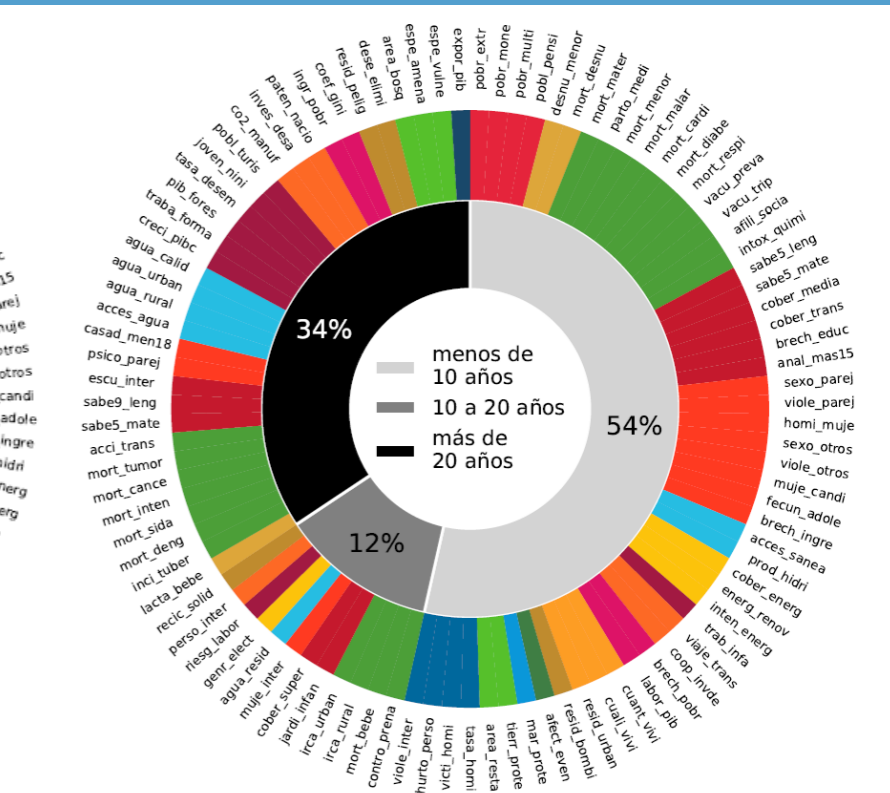
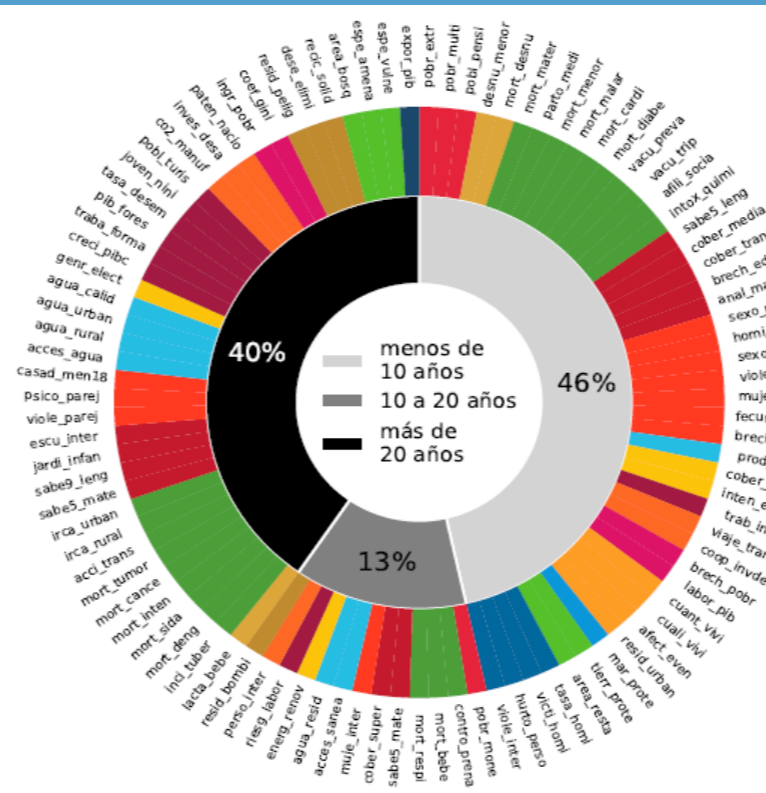
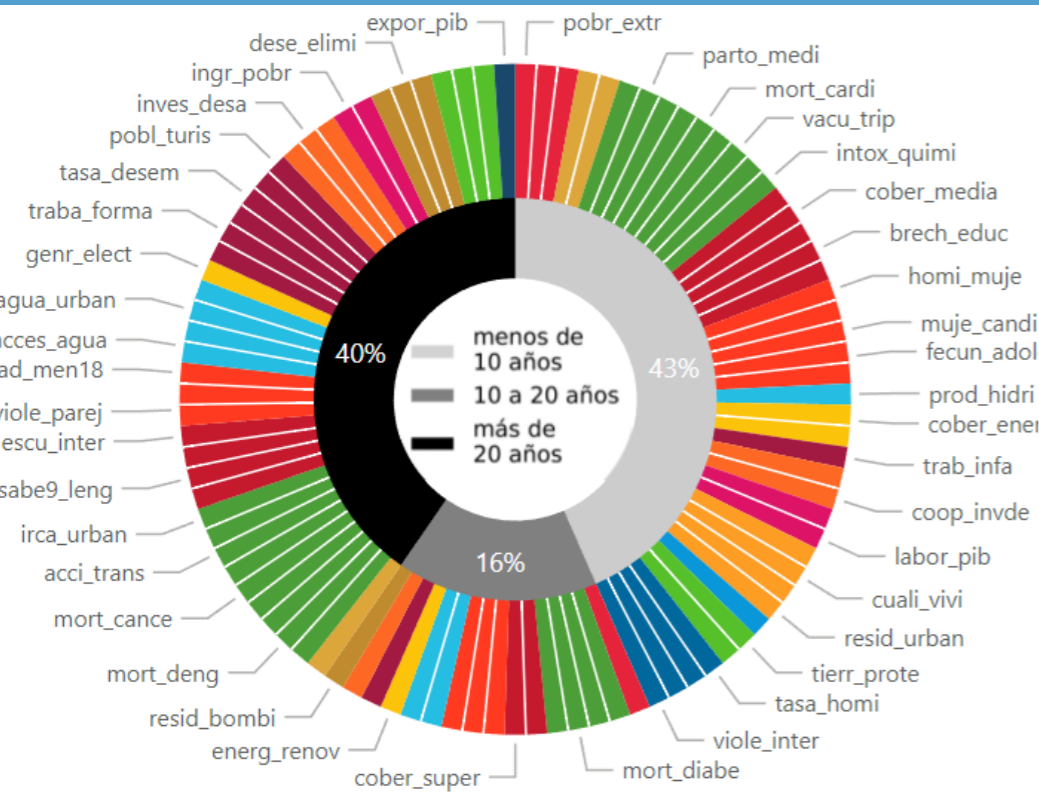
- We are working closely with the government promoting the use of the tool in the design of the new National Development Plan 2023-2026.
- We created an analysis of the estimated convergence of the National Development Plan 2023-2026 to highlight the importance of the tool in the identification of opportunities for better public policies.

More budget or reallocation?

Original budget trend (5% growth)

20% general increase in budget

Optimization without budget increase



- A better allocation towards budget sensitive indicators increases the percentage of indicators that would reach their goals in 2030.

What is sensitive to changes in the budget?



What we should do?

Indicador (ODS)	Alcanza meta en 2030	Tiene cuellos de botella	Nivel histórico del indicador es alto	Estrategia
Menores 1 año con tercera dosis pentavalente (3)	✓			presupuestales No hacer ajustes
Tasa de cobertura bruta en educación media (4)	✓			
Productividad hídrica (6)	✓			
Cobertura de energía eléctrica (7)	✓			
Mujeres forzadas a tener relaciones con otros (5)	✗	✓	✓	Rediseñar programas
Crecimiento del ingreso de 40% más pobres (10)	✗	✓	✓	
Aguas residuales urbanas domest. tratadas (6)	✗	✓	✗	
Población en Admin. de Riesgos Laborales (8)	✗	✓	✗	Ajustar presupuesto
Solicitudes de patentes por vía nacional (9)	✗	✓	✗	
Residuos peligrosos aprovechados y tratados (12)	✗	✓	✗	
Tasa de mortalidad prematura por cáncer (3)	✗	✗		
Índice de Riesgo Calidad del Agua, rural (3)	✗	✗		Ajustar presupuesto
Acceso a agua potable (suelo urbano) (6)	✗	✗		
Porcentaje de superficie cubierta por bosque (15)	✗	✗		
Porcentaje menores de 6 meses con lactancia (2)	✗	✗		
Letalidad por dengue (3)	✗	✗		
Porcentaje de matrícula oficial con internet (4)	✗	✗		
Tasa de formalidad laboral (8)	✗	✗		

Country experience: Mexico

Maite García de Alba

Public Policy Specialist, UNDP Mexico

Motivation

- Use of innovative tools that address the complexity of the multidimensional relations between development challenges and its associated policies.
- Enable cross-fertilization between academic institutions, government, international organizations and think tanks to allow for the development of a tool that can support real-world decision-making.
- Overcome short-term planning tied to electoral cycles.
- Development of evidence-based criteria to prioritize.

Implementing the PPI Model - Design

The PPISD project, implemented over the course of 2019, consisted of three subsequent phases:

1. Conformation of a project Taskforce and Review Committee;
2. Adaptation of the model to the SDGs; and
3. Pilot implementation of the model with real-world data.

Implementing the PPI Model - Governance

Taskforce

- UNDP México
- National Laboratory for Public Policy
- Ministry of Finance
- 6 subnational governments

Model adaptation
Target definition
Drafts and final reports



Review of draft reports
Identification of relevant data
and possible applications of the
model

Review Committee

- President's Office
- National Institute of Statistics and Geography.
- National Council for the Evaluation of Social Development Policy
- Economic Commission for Latin America and the Caribbean in Mexico

Implementing the PPI Model – Adaptation

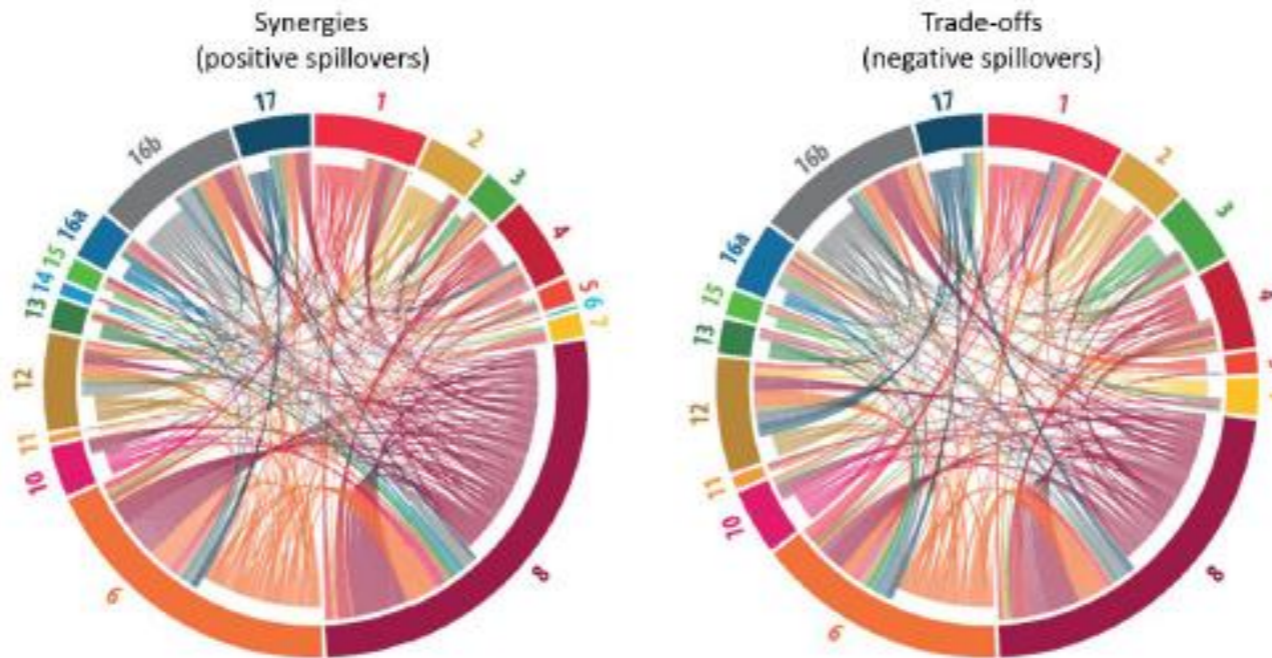
- 141 indicators for the period 2006-2016
 - Linkage to one of the 17 SDGs.
 - Standardization to values ranging from 0 to 1.
- Definition of targets according to governments' priorities.
- Splitting of SDG 16 in two main components, given the Mexican context:
 - Peace and justice
 - Strong institutions
- Workshop with members from the Taskforce and Review Committee:
 - Analyze suitability of the model and adaptation according to national and local capacities, development plans, resource allocation rules (earmarked budgets) and data availability.

Implementing the PPI Model – Piloting & Results

Unique spillover networks at national and subnational levels

Conditional dependency relationships of indicators are highly complex and can be counterintuitive and are therefore not easy to anticipate through traditional expert analysis.

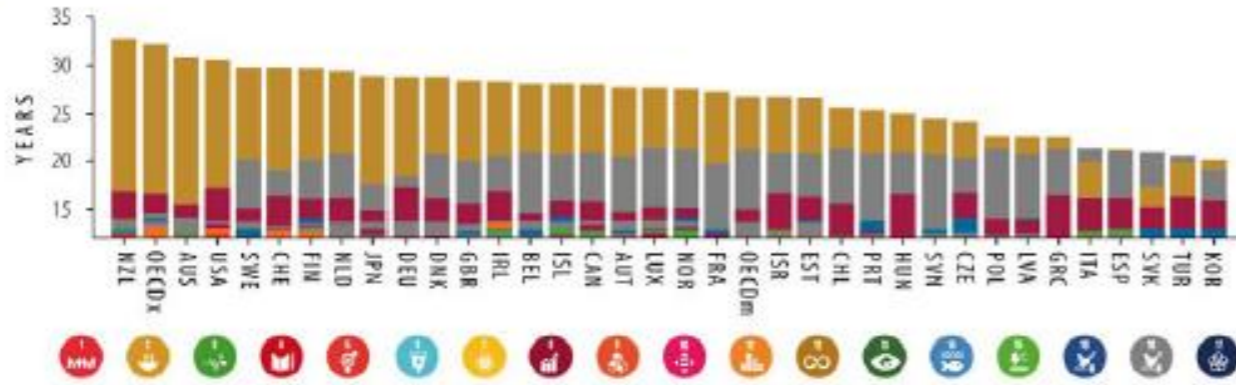
Figure 11.4. Interdependency network between development indicators of Mexico



Source: UNDP Mexico (2020[5])

Implementing the PPI Model – Piloting & Results

Figure 11.5. Feasibility of the OECD development models (Ten 'slowest' indicators).

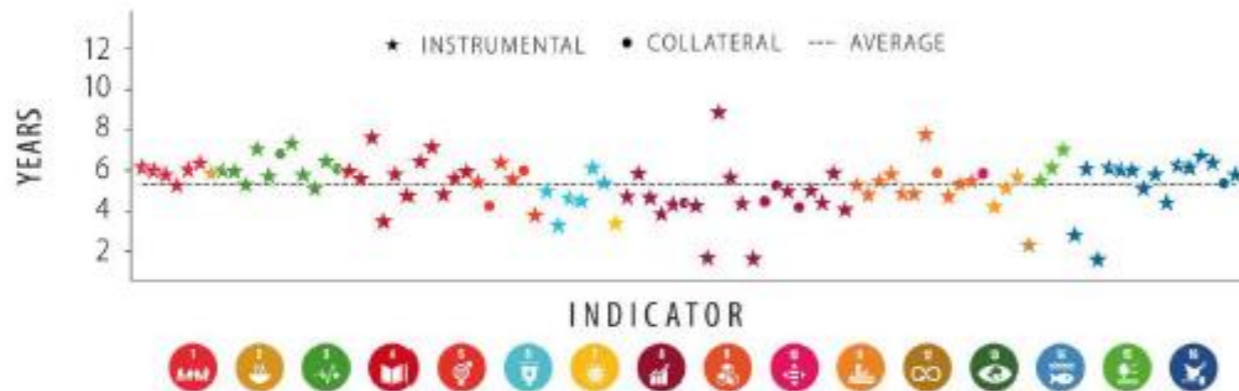


Source: UNDP Mexico (2020_[5])

Feasibility of OECD development modes

It would take Mexico between 20 (in the case of the Republic of Korea) and 32 years (in the case of New Zealand) to reach the development models of different OECD countries.

Figure 11.6. Estimated convergence time of the State of Jalisco's development indicators, per SDG



Source: UNDP Mexico (2020_[7])

Target feasibility

Make informed decisions on the level of ambition of their development targets and ensure that they can be reached within a certain timeframe.

Further applications

- Following the 2019 experience with the PPI model, it has been applied with the State of Mexico, to suggest the reallocation of public resources, based on their strategic priorities, established in their updated development plan.
- We are expecting to apply PPI tool with another subnational government, interested specifically in advancing indicators linked to SDG 16, from an integrated approach, given the high rates of crime and violence it is facing.
- We are also expecting to analyze different scenarios of post-pandemic recovery through the application of the PPI tool.

 Learn more about the IPPN:
sdgintegration.undp.org/IPPN

 Join the IPPN group on SparkBlue:
sparkblue.org/IPPNgroup

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 Any questions? Drop us a line at:
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