Global Infrastructure Hub

Resilient Cities Network

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The GI Hub is the dedicated infrastructure entity of the G20

Supporting the G20’s agenda to help deliver sustainable, resilient and inclusive infrastructure

A global mandate for priorities aligned with G20 priorities

Partnership and collaboration to develop tools and data insights
The Global Infrastructure Hub (GI Hub)

G20 Finance ministers & Central Bank Governors

Infrastructure Global Data & Insights
Market trends and deriving insights to help stakeholders make more informed decisions

Support the G20 Infrastructure Agenda
Accelerate discussions towards better and sustainable infrastructure by facilitating connections within the infrastructure community

Practical tools focused on finance
Advocating for change based on insights, improving knowledge uptake and promoting best practice

Infrastructure finance practitioners
G20 and Resilience
G20 and Resilience
A priority for the 2021 Presidency

1. Resilience & Infrastructure stimulus packages. GI Hub's InfraTracker to help governments make more informed decisions when including infrastructure in stimulus packages.

2. Resilience & Financial markets. The G20 re-started the Sustainable Finance Working Group to develop a long-term G20 agenda to further align the financial system to the Paris Agreement and SDGs.


4. Innovation in Resilience: GIHub InfraChallenge 2021 invited global innovators to submit their technology-based solutions for better and more resilient infrastructure.
Resilience and Covid recovery packages
**G20 priorities for Covid recovery**

**Sustainable & Resilient recovery**

- More political pressure for infrastructure investments to support community resilience
- The majority of G20 countries have now developed carbon neutrality targets

**Local job recovery**

- Local economic recovery and job creation is still a key priority

**Fiscal challenges**

- Infrastructure funding gap by 2040 is widening as budgets being diverted to COVID emergency response.
- Renewed focus on private capital to address the resulting fiscal challenges

### Infrastructure investment emerged as a mechanism for a transformative recovery

We conducted a **meta-analysis** of estimates of the fiscal **multiplier** and of the effect of public investment on economic output, using 3,000 estimates drawn from economic studies over 25 years.

<table>
<thead>
<tr>
<th></th>
<th>Cumulative Multiplier (within 2 to 5 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Spending</td>
<td>1.0</td>
</tr>
<tr>
<td>(all forms of spending)</td>
<td></td>
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<tr>
<td>Public Investment</td>
<td>1.5</td>
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The fiscal multiplier of public investment has generally been **higher in the contractionary phase** of the business cycle and, furthermore, when **interest rates are close to zero**.
InfraTracker Project Purpose

To provide aggregated trends and insights to help governments make more informed decisions when including infrastructure in stimulus packages.

Project Elements

- InfraTracker (stimulus tracker)
- Innovative stimulus financing approaches
- Transformative infrastructure approaches
What are the G20 trends for infrastructure as a stimulus?

**Social**
- Housing/building & structures: $329,000M
- Education: $70,700M
- Healthcare & wellness services: $50,000M

**Transport**
- Urban transit systems: $247,000M

**Communications**

**Energy**

**Infrastructure (unspecified sectors)**

**Other**

**Water**

**Waste**

US$2.2 trillion (2.8% of GDP) announced in total infrastructure stimulus

Social is the sector with the largest proportion at

Greenfield is the infrastructure type attracting the largest proportion at

Sustainable Infrastructure is the top transformative focus area, associated with

Still in draft and being updated by countries
Which are the key sectors focused on resilience?

Transformative infrastructure categories by sector (% of total stimulus)

- Sustainable Infrastructure
- Digital/InfraTech
- New Tech/R&D
- Inclusive Infrastructure
- Resilient Infrastructure

- Energy
- Infrastructure (unspecified sectors)
- Other
- Social
- Transport
- Waste
- Water
- Communications

8% Resilient Infrastructure
Examples of packages targeting resilient infrastructure outcomes

A robust pipeline of more than 270 projects was identified in June 2020 and fast-tracked for immediate implementation. This includes private sector collaboration.

Total amount allocated to resilient infrastructure = US$ 170bn (around 8% of total stimulus)

Sector breakdown below.

- Water – general
  - US$150bn over 10 years
- Water – treatment
  - US$100bn over 4 years
- Water – dams and irrigation
  - US$60bn over 1 year
- Water – ecology
  - US$40bn over 5 years
- Water – ecology
  - US$40bn over 5 years
- Energy – alternative fuels
  - US$27bn over 3 years
- Energy – alternative fuels
  - US$27bn over 3 years

The upgrade of clean water project upgrades through direct national investment through grants.

Building of new dams and new irrigation networks by channeling finance through local government.

Investment into ecological protection and preservation of marine ecosystems, coastal environment and nature-based solutions for water and wastewater infrastructure. Transfers and loans offered through a government agency.

Sustainable alternative fuels using compressed biogas to enable better affordability of transport while still upholding sustainability. Grants provided to states through a government agency. This includes private sector collaboration.
Leveraging the financial system for resilient infrastructure
Climate resilience to feature increasingly in infrastructure markets

The working group will make it possible to develop a long-term G20 agenda that can help to drive the policy change needed to further align the financial system to the Paris Agreement and SDGs.

The Italian Presidency continued to emphasize the importance of multilateral efforts to address climate risk, and how a strong working group can achieve its collective ambitions to align financial flows to international climate and sustainability objectives and help G20 economies transition to a more sustainable and resilient path.

The TCFD was established by the FSB in 2015 to develop a set of voluntary, consistent disclosure recommendations for use by companies in providing information to investors, lenders and insurance underwriters about their climate-related financial risks. Energy companies and materials and buildings companies are leading on disclosure, with an average level of TCFD-aligned disclosures of 40% for energy companies and 30% for materials and buildings companies in 2019.

Brings together 48 organizations across the investment value chain. The CCRI focuses on physical climate risk to produce, validate, and pilot analytical and investment solutions for the efficient pricing of physical climate risks in investment decision-making, ultimately informing key incentive structures in the financial industry to drive systemic change in financial transactions.

Initiative led by HSBC, IFC, OECD, and the Climate Policy Initiative on the Finance to Accelerate the Sustainable Transition-Infrastructure (or FAST-Infra Initiative). This is an industry-led, public-private initiative with two main components: to develop a sustainable infrastructure labeling system including resilience aspects and to target financial interventions to expand private infrastructure finance in developing countries, particularly from institutional investors.
Global private infrastructure investment in primary markets is however declining and reached its lowest level in over a decade: USD 80 billion in 2020

https://www.gihub.org/Infrastructure-Monitor/

Global infrastructure investment need: $3.7 trillion per year

Global public debt: 100% of GDP in 2020

-6% (CAGR)

Source: Global Infrastructure Hub analysis based on I.J. Global
Social infrastructure has seen the sharpest fall in private investment over the past decade, in particular healthcare and social housing.

Private infrastructure investment in the social sector (2010–2020)


- Healthcare: -40% (CAGR)
- Social housing: -100% (CAGR)

Post-Covid-19 lockdowns:
- Telecom
- Transport
Largest infrastructure investors in primary markets are increasingly including ESG into their decisions and governance.
Resilience in infrastructure projects
Focus of OECD & World Bank draft report

✓ Covid-19 calls for a new resilient infrastructure landscape
✓ Regulatory and institutional framework for resilience
✓ Innovation in maintenance and asset management strategies of existing infrastructure
✓ Building capabilities for resilience and maintenance in strategy and planning
✓ Ensure funding and-mobilising investment for O&M and resilient infrastructure

Resilient infrastructure as an economic opportunity
Recent research from the World Bank shows that investing in resilient infrastructure has a net benefit of USD 4.2 trillion with USD 4 in benefit for each USD 1 invested, whereas “business-as-usual” infrastructure not optimised for resilience only returns USD 1.5 for every USD 1 spent (WB 2020).

Public procurement and lifecycle perspective in infrastructure is critical

Costs generally estimated to assess affordability of new infrastructure projects OECD 2020
Key barrier to increasing the flow of investment into infrastructure projects:

Develop projects with attractive risk weighted return profiles

- Ensuring projects deliver the revenues needed to fund them
- Two key principles: value creation (strong revenue potential) and value capture (key risks are mitigated; financed to secure profitability).

Ensure the availability of programmatic pipelines

- Develop a clear vision for infrastructure development agenda and goals.
- Clarity in this enables a robust and properly prioritised pipeline of projects.

Navigate regulatory, political and economic uncertainty

- Infrastructure development is often complex
- Alignment needed across multiple, diverse and sometimes competing stakeholder groups
- Opportunity to create the proper regulatory and economically robust environment
Leveraging innovative Funding and Financing approaches

https://www.gihub.org/Innovative-Funding-and-Financing/

The GIHub developed the IFF Tool to help governments understand their options, identify frictions in their markets, and access solutions to improve the quality and quantity of projects attractive to private sector investors.

The Tool comprises 2 elements:

1. The Framework: built around the 3 levers of Funding, Risk Management and Financing

2. The Case study Library: comprising 50 examples of which 38 are deep-dive case studies that showcase innovations made across the 3 levers

Findings:

• Private sector is able and willing to invest in infrastructure
• Innovation can be found across all markets, not just developed ones
The Infrastructure Funding and Financing Framework

Private Participation Program Objectives

- Brownfield Asset Monetisation
- Greenfield Asset Development
- Asset Performance Enhancement

Project Types

- Public Projects
- Privatisation
- PPP
- Leases
- Management Contracts
- Private-to-Private Deals

Revenue Levers

- Tax-Based
- User-Based
- Ancillary Revenue
- Value Capture
- Data

Risk Management Levers

- Profit-Sharing Agreement
- Political/Performance Guarantees
- Volume Guarantees
- Financial Guarantees
- Hedging
- Insurance

Primary Financing Levers

- Direct
  - Commercial Bank Loans
  - MDB/ECA/NDB Debt
  - Government Debt
  - Direct Equity Operating
  - Direct Equity Institutional
  - Government Equity

- Listed
  - Securitised Debt
  - Project Bonds
  - Government & G.O. Bonds
  - Listed Security Investments
  - Listed Trust Investments
  - Listed Infrastructure Funds

Secondary Financing Levers

- Indirect
  - MDB/NDB Debt Fund
  - Private Debt Fund
  - Private Equity Investments
  - Asset Platform Investments

How does it work?

The Infrastructure Funding and Financing Framework

Program Toolbox

1. For simplicity, Funds of Funds were not considered an explicit category
2. Category defines equity and debt instruments provided by entities underwritten by the public fiscus
3. Concessionaires
4. De-risking impacts from financial solutions offered by MDBs (e.g., the "halo effect" from MDB project loans) result in interactions between the "Risk Management Levers" and "Primary Financing Levers"
The Framework for Inclusive Infrastructure details the six critical Actions Areas that need to be considered to ensure the successful implementation of inclusivity in infrastructure projects. These Action Areas are then broken down into practices which provide a full list of recommendations for practitioners to use in the implementation of more inclusive infrastructure.
Technology innovation and resilience
InfraChallenge 2021
The purpose is to find technologies that will be transformative to the infrastructure sector and enable resilient infrastructure.

Visit www.gihub.org/infrachallenge for more information on the participating teams.
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