



PLATAFORMA PORTUGUESA TECNOLÓGICA DA CONSTRUÇÃO



Visita a Washington



Agradecimento

Uma Nota de Agradecimento pelo trabalho de excelência e de apoio prestado durante esta iniciativa :

1- à AICEP, quer a nível central, quer da Delegação nos EUA liderada pelo Dr. João Mota Pinto, por todo o apoio dado ao longo da preparação e realização da iniciativa;

2- ao Dr. Miguel Coelho, enquanto representante português no World Bank, por todo o apoio dado e participação nas reuniões de trabalho realizadas;

3 - ao Embaixador de Portugal – e sua equipa – pela sessão de trabalho realizada na Embaixada;



CONTEXTO

A Plataforma Tecnológica Portuguesa da Construção – PTPC – organizou esta ação em Washington com uma Agenda Concreta de um Plano de Ação focado na promoção das prioridades estratégicas e das boas práticas do cluster e encontros na área das multilaterais com o World Bank e o IDB.

A Plataforma Tecnológica Portuguesa da Construção – PTPC – tem uma agenda estratégica – Criar Valor Sustentável com Inovação – que incorpora 5 prioridades – Qualidade, Inovação, Sustentabilidade, Tecnologia e Responsabilidade Social – que foram sintetizadas nas apresentações feitas na Sessão na Embaixada e nas reuniões tidas com as multilaterais.



Principais Objetivos



- Reuniões com o World Bank e o IDB para informação e atualização sobre Oportunidades na área Multilateral
- Apresentação das Prioridades Estratégicas e Boas Práticas
- Apresentação da Iniciativa PRESTIGE e do Portfólio Internacional
- Follow Up com Articulações a desenvolver

SÍNTESE

As ações realizadas em Washington – conforme previsto no programa – tiveram 2 momentos principais : reuniões de trabalho com as multilaterais (World Bank e IDB) e sessão de apresentação e discussão das linhas estratégicas e casos de sucesso do cluster da construção, bem como da Iniciativa Prestige, realizada na Embaixada de Portugal.

As reuniões de trabalho foram muito produtivas – conforme notas específicas à frente – e abriram um conjunto de oportunidades de articulação que o cluster poderá desenvolver para as suas empresas no contexto das oportunidades na área das multilaterais



Plano de Ação Operacional

I1

Reuniões com o WB e IDB

Reuniões com o WB e IDB para fazer uma atualização em termos de oportunidades na área Multilateral

I2

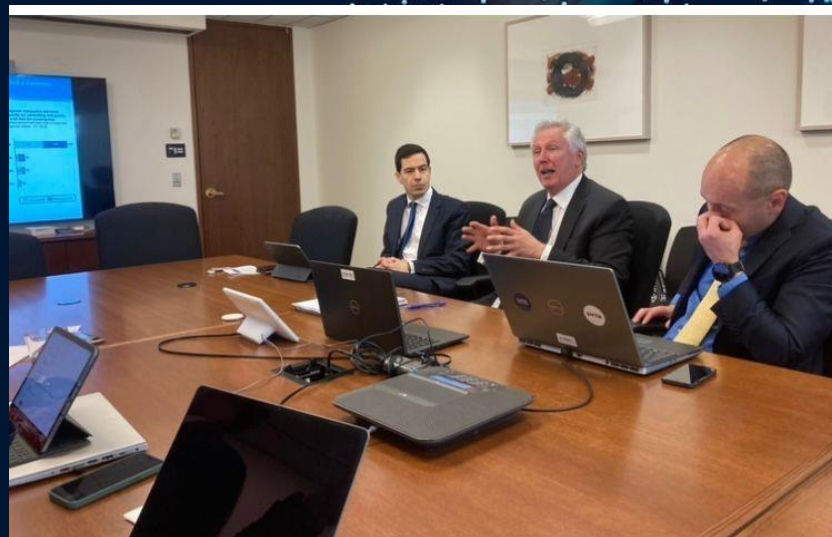
Linhas Estratégicas

Apresentação a representantes de empresas, universidades, etc. das linhas estratégicas do cluster e dos seus desafios para o futuro

I3

Iniciativa PRESTIGE

Visibilidade de alguns trabalhos de referência da fileira portuguesa da construção e do seu portfólio internacional



Síntese

World Bank

Tópicos Reuniões WB

- 1- Breve Apresentação das Linhas Estratégicas do Cluster e da Iniciativa PRESTIGE
- 2- Atualização em termos de informações sobre oportunidades na área das Multilaterais
- 3- Discussão de áreas a dinamizar no contexto da Agenda das Multilaterais
- 4 - Outros assuntos



REUNIÕES WORLD BANK

9h00 – 10h00 : WBG Operations and Corporate Procurement

10h15 – 11h15 : WBG Infrastructure Practice Group

11h30 – 12h30 C Sustainable Infrastructure Advisory

13H40 – 14H20 : WBG Global Infrastructure Facility

14H30 – 15H20 – IFC Global Transport

APRESENTAÇÕES EM ANEXO



Síntese WB

A visita de trabalho ao World Bank, articulada com a AICEP e a representação portuguesa no Banco, foi de grande utilidade prática e das várias reuniões havidas – com contactos diretos estabelecidos para futuro – sobressaem alguns pontos centrais:

1- As empresas portuguesas – e as suas fileiras – têm um grande potencial de oportunidade em reforçarem a utilização do WBG – e da IFC – em termos de oportunidades para o futuro;;

2- O Banco tem um sistema de procurement bem estruturado – explicado e discutido numa das reuniões – e assente numa plataforma de fácil utilização e que permite de forma muito prática obter as informações necessárias, acompanhar oportunidades e interagir sempre que necessário;

3- No contexto da aposta que o cluster pretende fazer na área das multilaterais, este é o tempo certo para criar os links necessários com o sistema do Banco e sinalizar a participação em projetos concretos em mercados selecionados e aproveitando o papel de intermediação operacional e financeira do Banco;



Síntese WB

4- A área da consultadoria tem tido também um particular desenvolvimento no contexto do Banco e para o cluster – e em particular para o BUILT CoLAB – representa um capital de futuras oportunidades, que irão ser acompanhadas no futuro;

5- As apostas que o cluster tem feito na área do twin transition – digital e sustentabilidade – estão em sintonia com a agenda estratégica do Banco. Foram apresentados vários exemplos concretos de oportunidades que vale a pena estudar

6- No mesmo sentido a aposta em mercados sustentáveis, explicada em detalhe e que configura novas oportunidades concretas, uma área muito interessante onde o cluster poderá estar atento daqui para a frente;

7- Ficou também clara a estratégia de desenvolvimento que a IFC – e projetos associados – está a ter e o grande potencial que representa para a PTPC e os seus associados;





Síntese

IDB

Tópicos Reuniões com o IDB

- 1- Breve Apresentação das Linhas Estratégicas do Cluster e da Iniciativa PRESTIGE
- 2- Atualização em termos de informações sobre oportunidades na área das Multilaterais
- 3- Discussão de áreas a dinamizar no contexto da Agenda das Multilaterais
- 4 - Outros assuntos



Reuniões no IDB

9h45 – 10h00 : Office of Outreach and Partnerships

10h00 – 11h00 : Housing and Urban Development

11h00 – 12h00 : Infrastructure and Energy

APRESENTAÇÃO EM ANEXO



Síntese IDB

A visita de trabalho ao IDB, articulada com a AICEP , foi de grande utilidade prática e das várias reuniões havidas – com contactos diretos estabelecidos para futuro – sobressaem alguns pontos centrais:

- 1- As empresas portuguesas – e as suas fileiras – têm um grande potencial de oportunidade em reforçarem a utilização do IDB em termos de oportunidades para o futuro;
- 2- O Banco tem uma intervenção muito centrada na América Central e Latina e atentas as oportunidades existentes e articulações naturais com aqueles países há uma agenda muito desafiante para o futuro;
- 3- Entre as várias áreas a desenvolver, de destacar as estratégias de modernização digital das cidades, num contexto de melhor integração das organizações e cidadãos, em curso e vários países e que representam uma excelente oportunidade para o BUILT CoLAB e as suas empresas;

APRESENTAÇÕES EM ANEXO





Síntese

Embaixada

Síntese SESSÃO

A Sessão realizada na Embaixada – como sempre previsto, dada a dimensão institucional da cidade - foi um momento muito interessante de apresentação da PTPC e do BUILT CoLAB ao Embaixador e um conjunto de convidados de referência, envolvidos em projetos estruturantes ligados a esta fileira. No contexto da apresentação da estratégia portuguesa e da Iniciativa Prestige, ficou claro que esta está muito em linha com as oportunidades que o mercado norte americano representa.

Em articulação com a AICEP, ficou claro que em complemento ao trabalho junto das Multilaterais a desenvolver na sequência das reuniões realizadas, se deverão realizar ações específicas de promoção da capacidade e competências da fileira – e empresas – em cidades com mais contexto comercial – caso de Nova Iorque – e dar assim sequência a uma estratégia de consolidação neste importante mercado.



Notas Finais

Esta ação realizada em Washington – na sequência das realizadas em Londres e bruxelas - no âmbito do Projeto Multi AEC foi um primeiro passo importante para contactar de perto com as multilaterais – identificar novas oportunidades e estabelecer linhas futuras de articulação – e de promover junto de representantes locais deste ecossistema da construção as linhas estratégicas e casos práticos associados ao trabalho realizado pela PTPC e pelo BUILT CoLAB.

Pretende-se que com a realização de uma sessão de follow up desta iniciativa e a manutenção de linha aberta com os muitos contactos feitos nos vários momentos desta iniciativa se possam consolidar os resultados conseguidos e desta forma potenciar o efeito positivo da área das multilaterais na estratégia de inovação e valor da fileira e em particular das suas apostas na twin transition – digital e sustentabilidade.



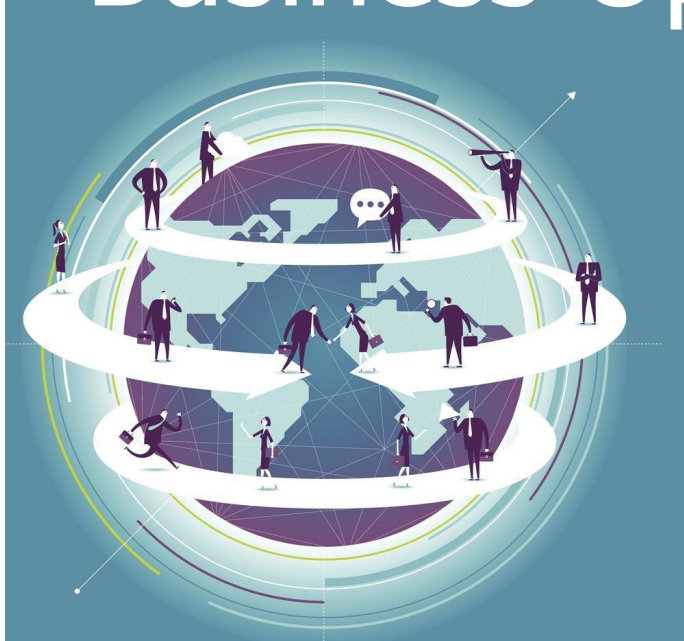


Anexo

Apresentações

Apresentações

World Bank

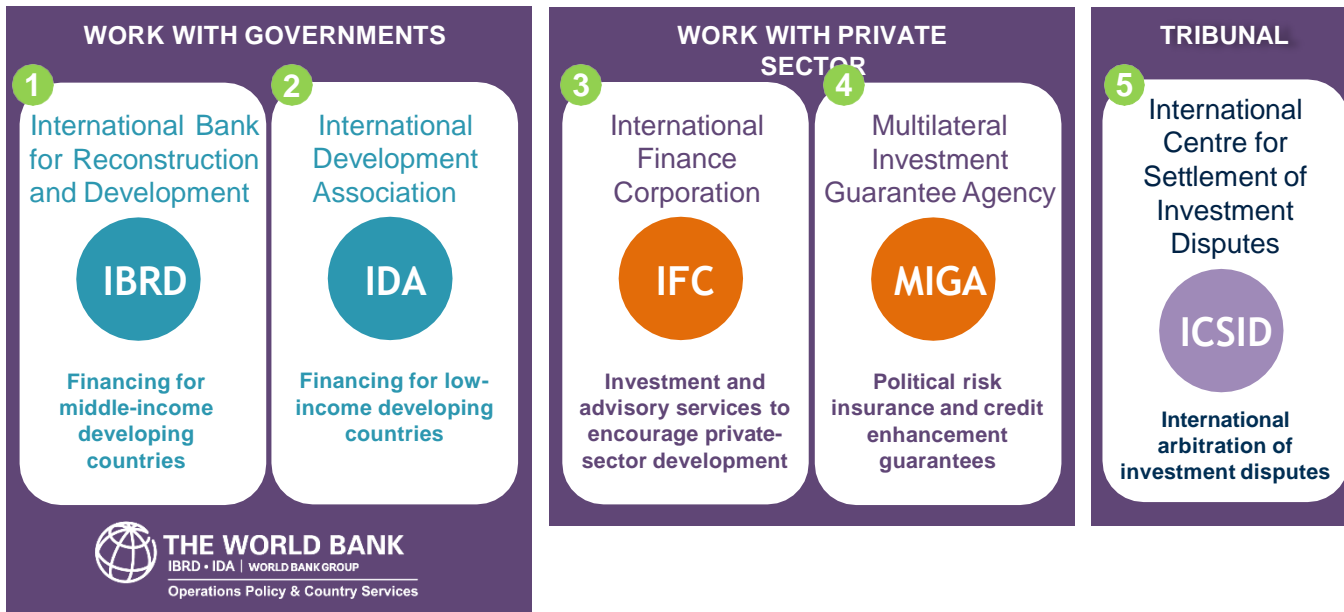


THE WORLD BANK

IBRD • IDA | WORLD BANK GROUP

Operations Policy & Country Services

World Bank Group operating model



Investment Project Financing - IPF

World Bank Goals

- 1 End extreme poverty
- 2 Promote shared prosperity

IPF WHAT DOES IT DO?

Provides IBRD loans, IDA credits and grants and guarantee financing to governments

IPF WHAT DOES IT FUND?

Activities that create the physical & social infrastructure necessary to reduce poverty and create sustainable development



\$239 billion

total value of active IPF projects at end of FY22

1,793

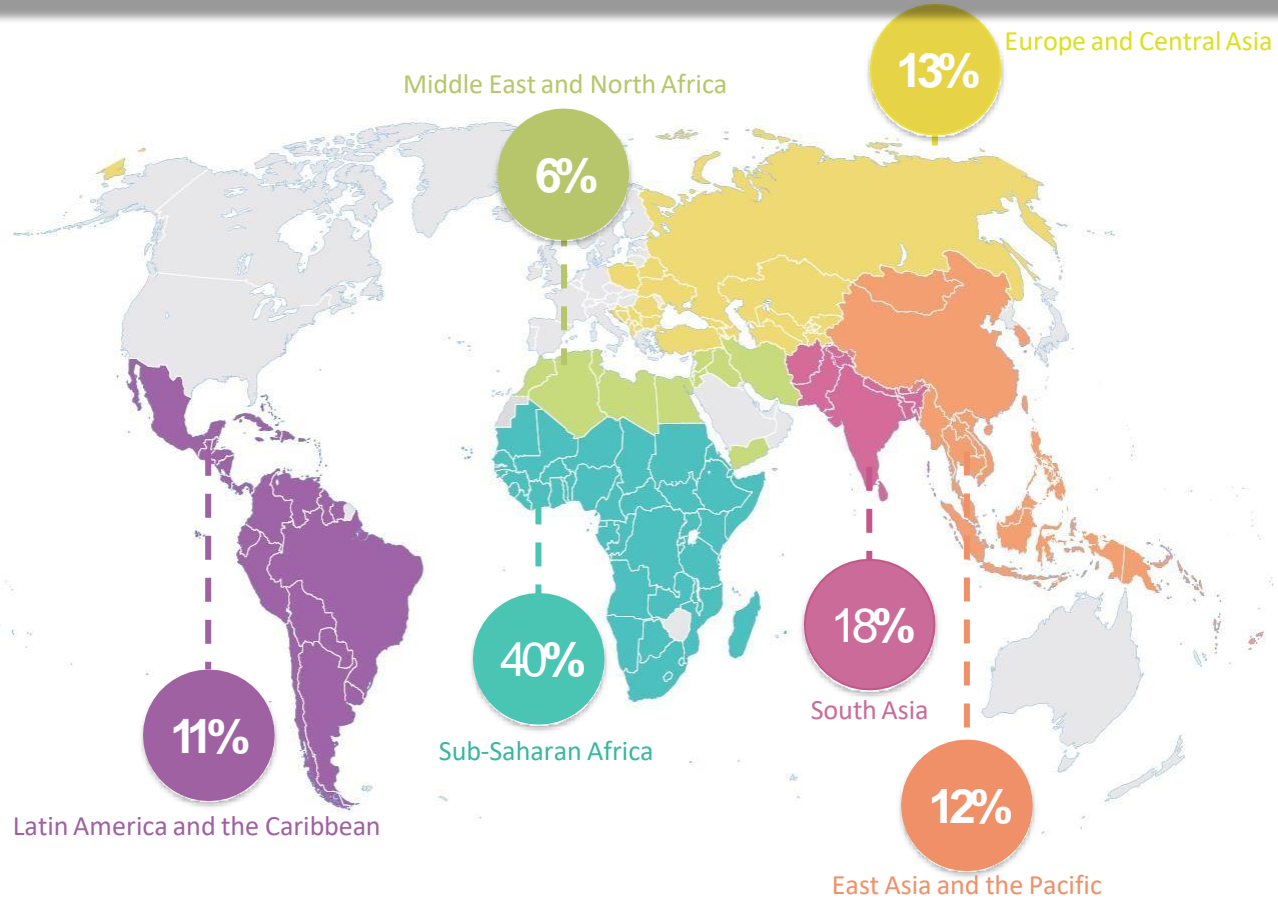
projects worldwide (FY22 Q4)

146

countries

The World Bank provides Investment Project Financing (IPF) in the form of loans, credits or grants
IPF is used to fund “eligible expenditures” for the procurement of Goods, Works, Consulting and Non-consulting Services

2022 Global commitments by region



Roles in IPF procurement

The Bank ensures that funds are used only for the purpose for which they were granted

- provide borrowers with implementation support and oversight
- oversight includes conducting reviews of the borrower's procurement activities.
- Prior Review: before the procurement activity takes place
- Post Review: after the procurement activity has been completed

The borrower conducts the procurement in accordance with the loan agreement and the WB Procurement Regulations. Key responsibilities include:

- preparing a procurement strategy
- planning the procurement
- seeking offers from the market
- evaluating offers and determining the Most Advantageous Bid/Proposal
- awarding, signing and managing contracts

Challenges & opportunities



Unprecedented global challenges

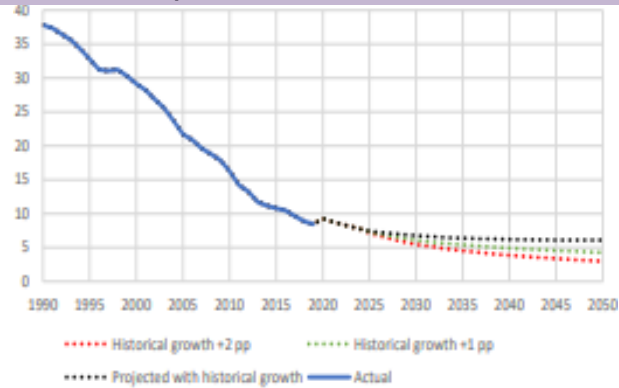


- Convergence of global crises:
 - climate change
 - pandemic recovery and future risk
 - fragility, conflict & violence & Ukraine war
 - increased incidence of natural disasters
 - growing debt burden & rising inflation
- Development outcomes interlinked with global challenges
- Since 2020 there have been reverses in economic growth, poverty reduction and human development
- Urgency of action is required to address the magnitude of global challenges

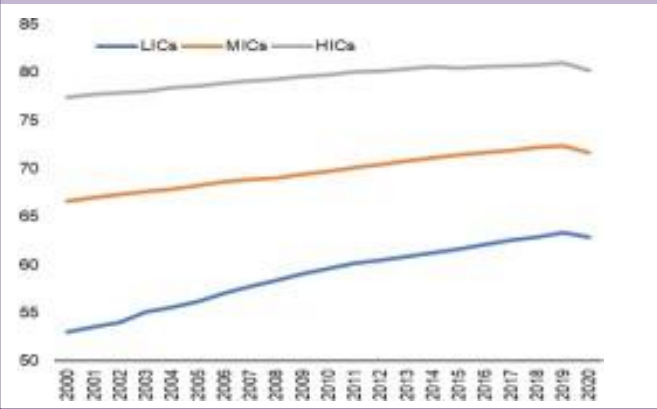
Its essential that global challenges are met with country-specific solutions

The World Bank is uniquely placed to catalyze global action, deepen country impact and reach the poor and vulnerable

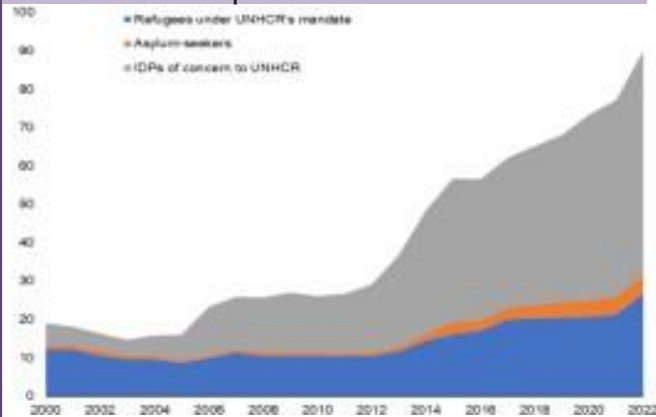
Poverty eradication is not on track



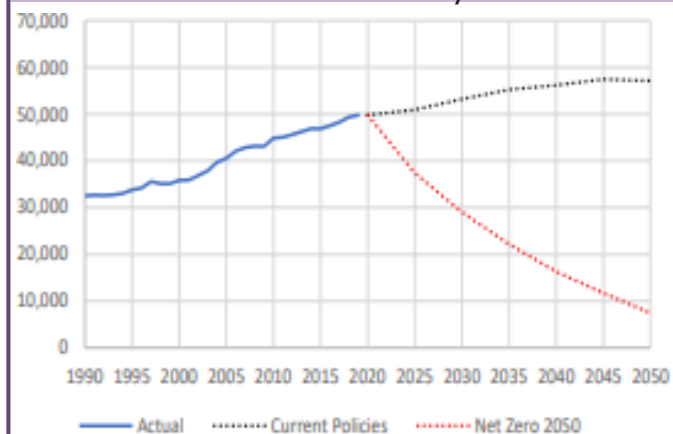
Life expectancy dropped during COVID-19



Fragility, conflict and violence continue to force displacement of millions



CO2 emission continue to grow and are not on track for net zero by 2050



Reshaping development

and the evolution of the World Bank Group

A major push is needed in three directions:

- scaling up impact for good development outcomes for countries
- tackling cross-border global challenges
- preventing, preparing, and responding to crises

The WBG is evolving and scaling-up to help meet the world's development challenges – Evolution of the World Bank Group Roadmap

1

Shape Mission

“To end extreme poverty and boost shared prosperity by fostering sustainable, resilient, and inclusive development.”

2

Evolve Operating Model

Use the Bank's country-based model to support development in ways that address global challenges

3

Adapt Financial Model

Leverage the Bank's ability to mobilize and effectively deploy large-scale financing

The role of procurement in this landscape

“ Procurement in IPF operations supports Borrowers to achieve value for money with integrity in delivering sustainable development. ”

World Bank Procurement Regulations - Vision

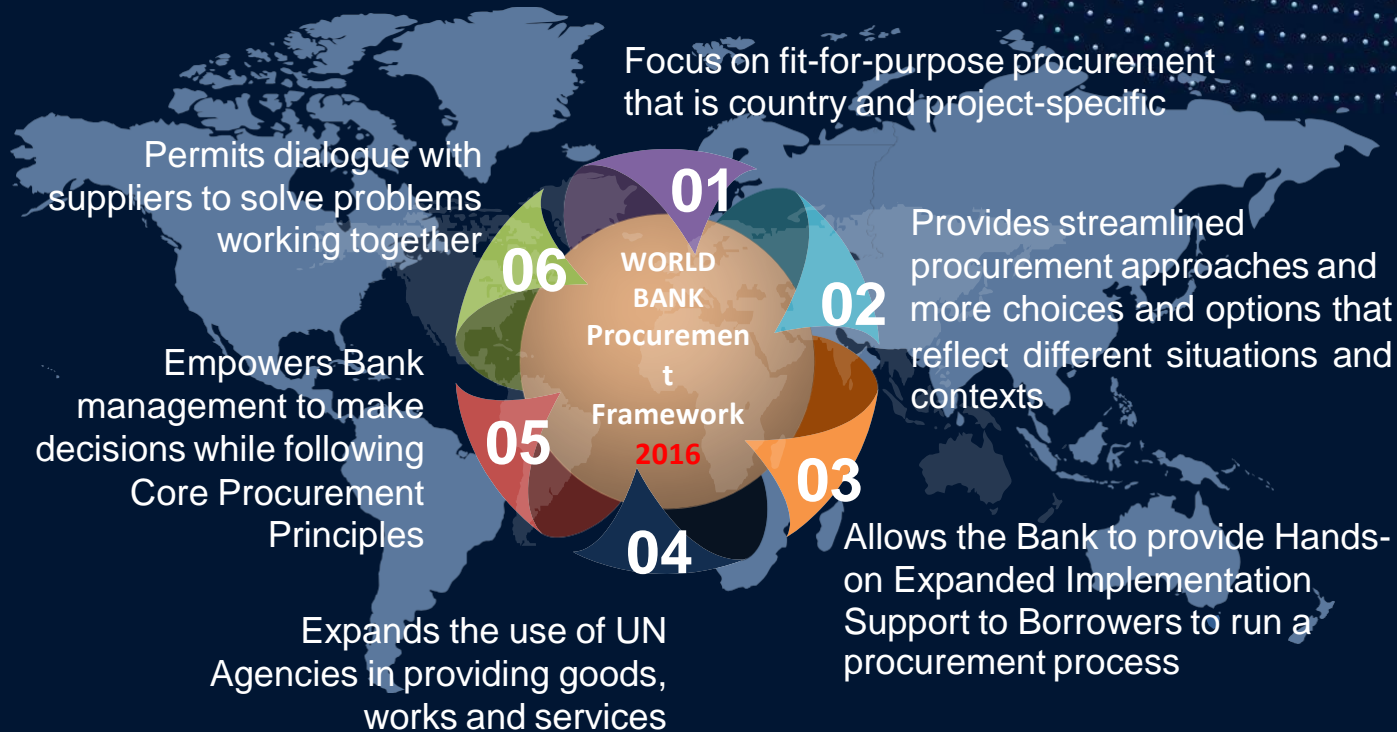
“ On the spending side, policymakers must increase the efficiency of public spending, remove wasteful and regressive subsidies, and improve public procurement. ”

WBG President Malpass – speech Niger March 2023

Modern governments are harnessing procurement as a strategic tool to address the impacts of the global crises

World Bank Procurement Framework

Launched 2016



Procurement Framework 5-year Retrospective

RESULTS

Review of the Procurement Framework after the first five years



Building on success

Procurement Framework future focus

Laser focus on impact

- Profound global challenges demand scaling-up the application and effectiveness of the Procurement Framework
- The Procurement Framework is a critical development tool with a track record of responding to emerging issues
- Strategic procurement addresses country and project specific risks
- Impact can be deepened through wider application of Value for Money decision making, including Rated Criteria and life-cycle costing

The Power of Procurement

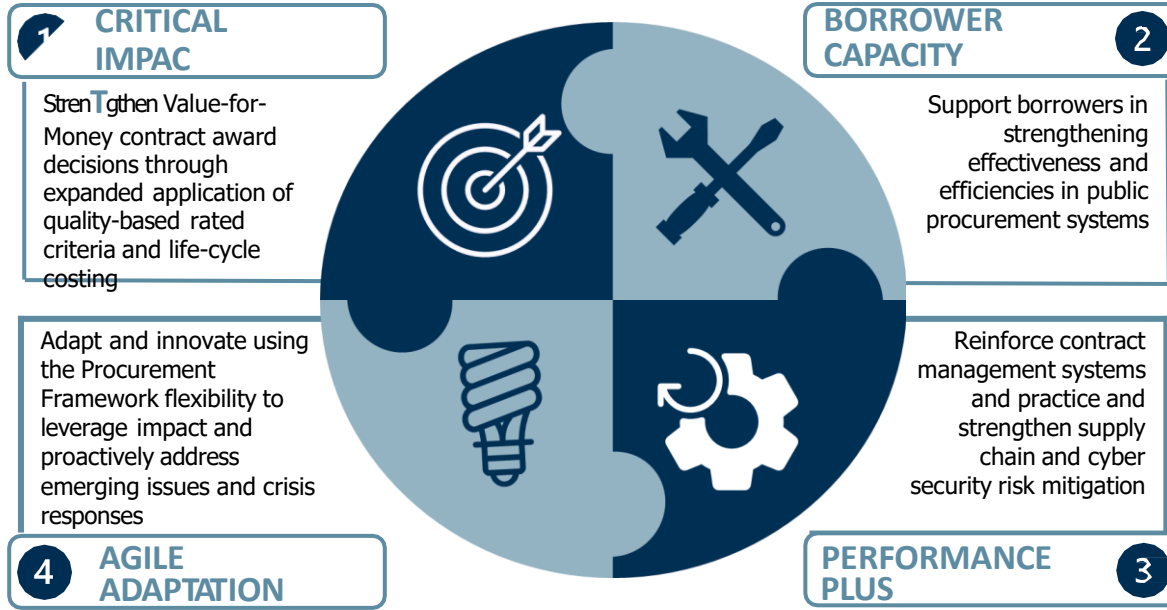
Procurement is capable of:

1. managing a diverse set of risks
 - environmental • social • supply chain • cybersecurity
2. leveraging opportunities
 - economic growth • job creation • gender • inclusive communities • resilient infrastructures • improving public investment management
3. exercising foresight to anticipate future needs/challenges with fit-for-purpose policy development

Fast Forward Focus

Advancing the Procurement Framework

Four Key Focus Areas



Strengthening practice

- **Rated Criteria**

- Importance of Rated Criteria in assessing non-price factors and identifying best solutions to address project-specific needs and risks, such as:
 - environmental and social • sustainability • climate change mitigation • resilience
 - pandemic risk • innovation • green supply chains • resilient infrastructure • GHG emissions reductions

- **Contract management**

- Boost contract management support and integrity through enhanced IT systems - Improve tracking of KPIs
- Deep dives on high-risk contracts
- Hands-on support for contract management

- **Supply chain management**

- Build supply chain resilience to better manage risks
- New technical guidance on Supply Chain Management
- Liaise with industry bodies to leverage innovations in tracking and verifying supply chains

- **Cyber security risks**

- Improve management of cyber security risks

Environmental & Social

- Bank has developed specific policies to manage Environmental and Social (ES) risks, with additional requirements for large civil works
- These have been mainstreamed into all relevant Standard Procurement Documents (SPDs)
- Bank's ES policies are a cornerstone of the World Bank's approach to ensure strong protections for people and for the environment
- Bank's policies require ES risks to be assessed and addressed through specific ES instruments (e.g., Environmental and Social Management Plans)

Environmental & Social risks include:

- displacement and resettlement
- labor force influx
- community health and safety
- occupational accidents
- environmental protection
- sexual exploitation and abuse (SEA) and sexual harassment (SH)



HOW TO COMPETE AS A CONSULTANT



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP
Operations Policy & Country Services

Why bid on Bank-funded contracts?



Finding opportunities - World Bank Project Cycle



Help on how to identify opportunities

Video: 'How to Bid'

<http://www.worldbank.org/en/news/video/2016/03/30/world-bank-procurement-video>

Guidance

[Finding Business Opportunities and Winning Contracts Financed by the World Bank](#)

Alerts

Subscribe to email alerts for procurement notices and project document and more

<https://alerts.worldbank.org/>



Steps in identifying contract opportunities

Background research

Determine areas of focus – country / region / sector
Be informed about what is in the pipeline

Where we work

Search by country or region or country group

<https://www.worldbank.org/en/where-we-work>

Country Partnership Framework

Review individual country-driven development strategies that seek to maximize the impact of WBG's support – identify current and planned projects

<https://www.worldbank.org/en/projects-operations/country-strategies>

World Bank Procurement App

Get access to real time procurement data

Android: https://play.google.com/store/apps/details?id=org.worldbank.operationsprocurement&hl=en_US&gl=US

iPhone iPad <https://apps.apple.com/us/app/world-bank-project-procurement/id911312962>

WBG FinanceOne

One destination for easy access to publicly available financial information of the World Bank Group

Webpage: <https://financesapp.worldbank.org/>

Guidance: <https://thedocs.worldbank.org/en/doc/604cffbceec8bc4bf4b5860c87182b9e1-0290032023/original/16499-WB-Finances-One-WEB-FINAL.pdf>

Steps in identifying contract opportunities

Procurement Notices

International Development Procurement Notices (UNDB)

Information on business opportunities generated through the World Bank, regional development banks, and other development agencies. Borrowers publish all WB-financed procurement notices here

United Nations - Development Business <https://devbusiness.un.org/>

World Bank Procurement Notices

Search by country, region, notice type, procurement category and procurement method
<https://projects.worldbank.org/en/projects-operations/procurement?srce=both>

Deep dive information

Monthly Operational Summary

Projects: Reports on the status of individual projects in the procurement pipeline from the time the operation is identified to the signing of the loan agreement

webpage: <https://projects.worldbank.org/en/projects-operations/projects-list?os=0>

information on how to use: <https://www.worldbank.org/en/projects-operations/products-and-services/brief/monthly-operational-summary>

Information on World Bank procurement

Procurement for Development

<https://www.worldbank.org/en/topic/procurement-for-development>

Procurement for Projects and Programs

<https://www.worldbank.org/en/projects-operations/products-and-services/procurement-projects-programs>

World Bank Development Projects

<https://www.worldbank.org/en/what-we-do>

World Bank's Procurement Regulations for IPF Borrowers

<https://thedocs.worldbank.org/en/doc/178331533065871195-0290022020/original/ProcurementRegulations.pdf>

Standard Procurement Documents (SPD) templates

<https://projects.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework#SPD>

Guidance on SPDs

<http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework>

Guidance on how to complain

<http://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework>

Preparing a proposal

- Get involved with early market engagement and pre-proposal briefing – if any
- Fully address all requirements
- Emphasize your methodology for delivery – innovate if you can
- Propose a strong project manager and experienced experts
- Cite relevant technical and regional experience similar to the project – the more significant and similar the better
- Don't deviate from standard bidding document forms and conditions
- Carefully review qualification and evaluation criteria and use these to help write the content and detail of your proposal
- Failure to meet pre-qualification conditions leads to rejection

Preparing a proposal

- Check your understanding - if in doubt about anything contained in the bidding documents seek clarification from the Borrower's implementing agency undertaking the procurement
- Use trade missions and Executive Director's team for other concerns and questions
- Understand local laws and taxes – be aware of local customs
- Submit a professional proposal that is:
 - comprehensive (covers all information requested)
 - includes all supporting documents
 - signed by an authorized individual
 - submitted before the deadline
 - if joint venture, ensure all JV provisions are met
 - properly mark all envelopes enclosing the proposals
- Be fully prepared before going into a negotiation – cover all bases e.g. operational, legal, financial
- Don't change Key Personnel without consent

Common issues with proposals

- No Bid Security
- Insufficient amount of Bid Security
- Lack of supporting documents
- Incomplete proposals
- Incomplete bills of quantities
- Proposals not signed
- JV partner as proposer in another proposal
- Conflict of interest



Pro
Al

CONFININDUSTRIA
Associazione Nazionale
Organismi di Consulenza Tecnica



Procurement opportunities in World Bank IPF projects: activities already approved in procurement plans

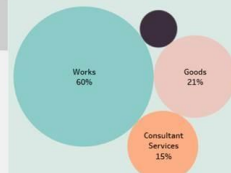
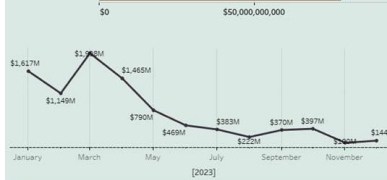
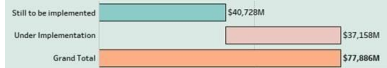
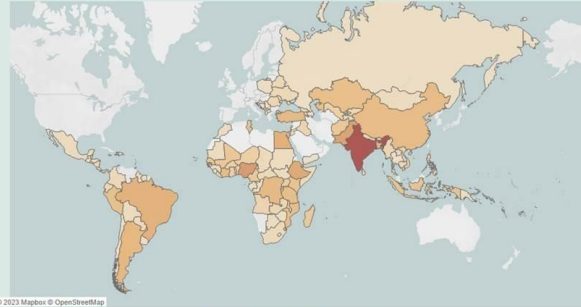


\$77.9B

117.1K activities

148 countries

Region	Value in USD	Volume	# Countries
AFRICA	\$32,974M	59,370	49
SOUTH ASIA	\$15,654M	22,233	9
LATIN AMERICA AND CARIBBEAN	\$9,212M	15,686	31
EUROPE AND CENTRAL ASIA	\$7,645M	5,708	24
EAST ASIA AND PACIFIC	\$7,154M	11,256	23
MIDDLE EAST AND NORTH AFRICA	\$5,240M	2,257	10
OTHER	\$3M	96	2
Grand Total	\$77,884M	117,096	148



Value Range	Count	Percentage	Activity name	Country	Status	Value (M)
Up to 52k	1	(0.3%)	2.1 Greenfield Link and 2.2 Marask-Wahat Section Upgrade	Egypt, Arab Republic of	Under Implementation	\$974M
52k-100k	1	(13.1%)	Adquisición de dosis de vacunas COVID-19 producidos por el laboratorio Pfizer	Peru	Under Implementation	\$620M
100k-210k	2	(12.7%)	Lot 1: G.R.P, Lot 2: Marker Tape, Lot 3: U.P.V.C Pipes and Fittings, Lot 4: E.F. Pipes PE 80 & PE 100...	Egypt, Arab Republic of	Under Review	\$611M
210k - 500k	3	(9.4%)	Etude de faisabilité économique et financière pour le développement d'entreprises agricoles dans la zone d'AL... Pals	Mali	Pending Implementation	\$609M



DATA PROJECTS & PROCUREMENTS



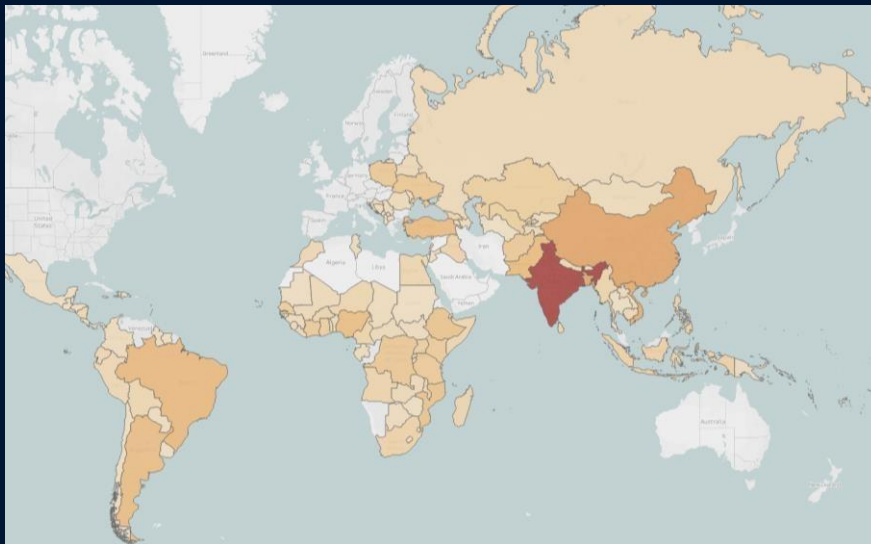
THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP
Operations Policy & Country Services

The data presented today has been collated from FY 2018 to FY 2022

Awarded value by Borrowers

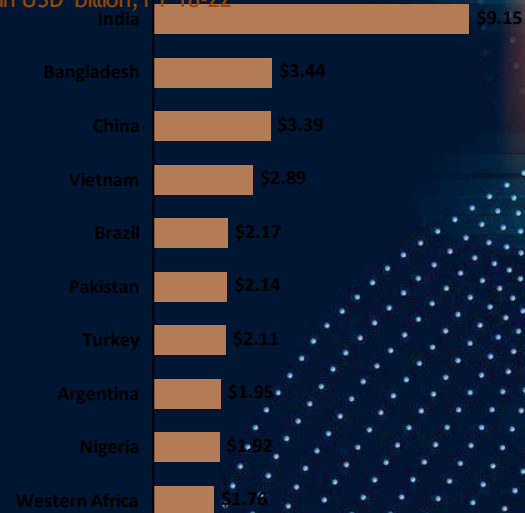
\$ 73.64 billion

FY 18-22



Top 10 borrowers by awarded value

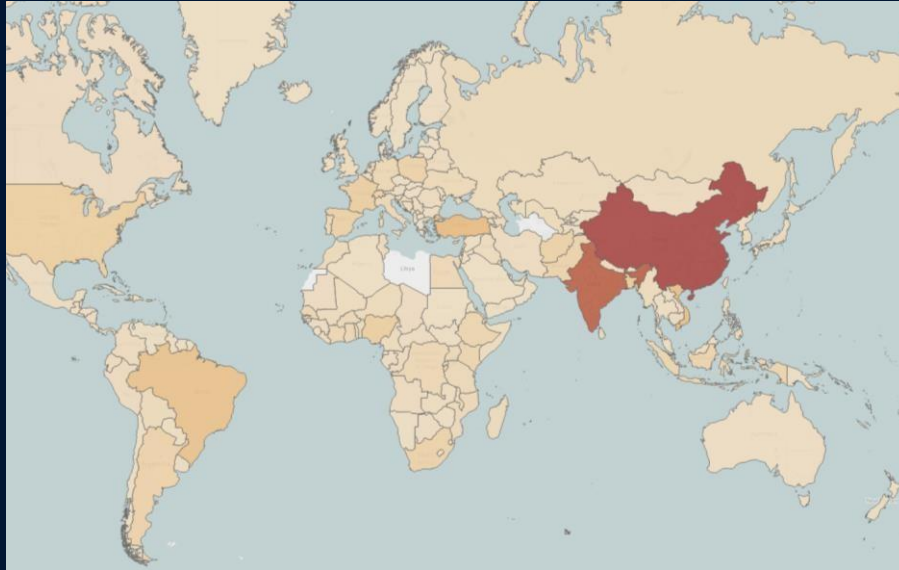
in USD billion, FY 18-22



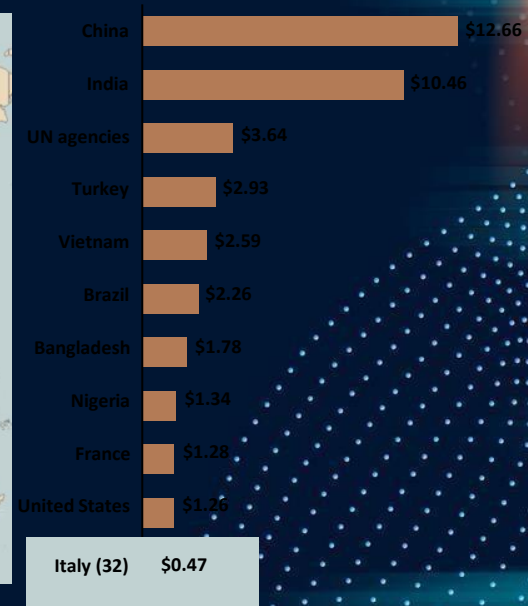
Awarded value by supplier country

\$ 73.64 billion

FY 18-22

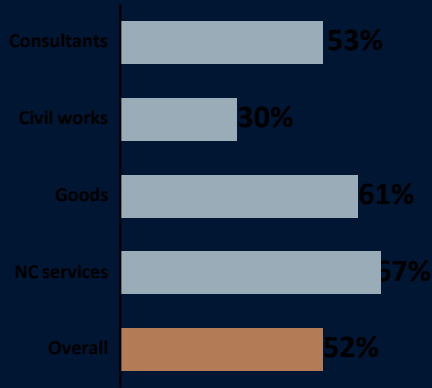


Top 10 supplier countries by value
in USD billion, FY 18-22

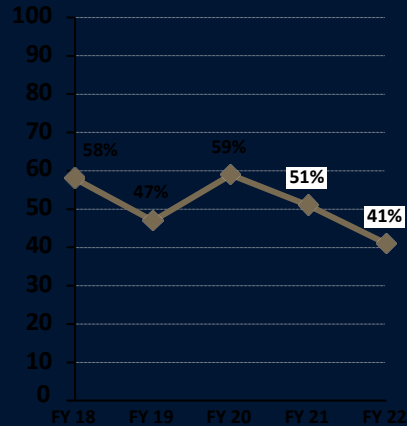


During FY18-22, Portuguese companies were awarded a contract almost every other time they bid.

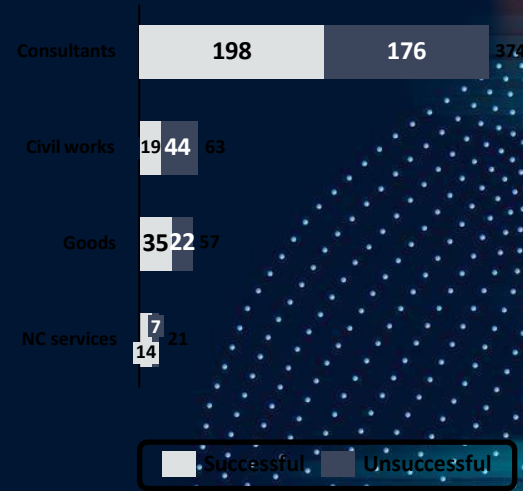
Portuguese companies were successful in consulting services winning almost half of the time they participated
 Success rate of Portuguese companies FY 18-22



Portuguese companies had a steady success rate over the past five FY around 50% when they bid
 Success rate of Portuguese companies FY 18-22



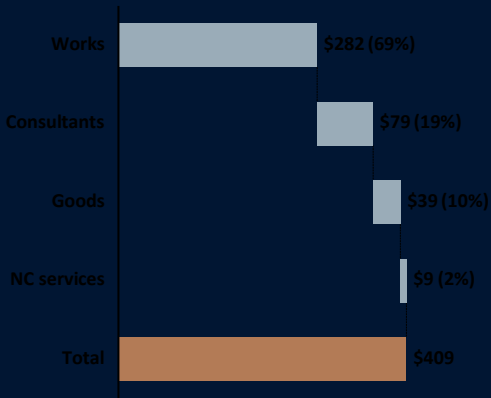
Portuguese companies bid more frequently for consulting and goods, and a lot less for construction
 # of procurement activities with at least one Portuguese bidder - FY 18-22



Portuguese companies were awarded \$472 million during FY 18-22, ranking 36th overall in awarded value, and 17th overall for civil works.

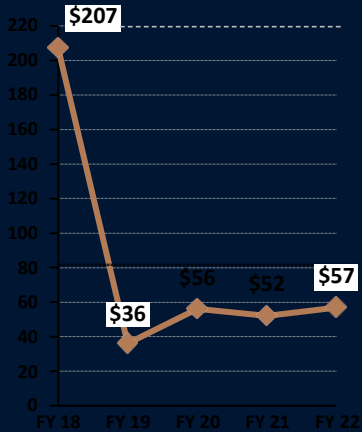
Despite seldom bidding for construction, Portuguese companies were awarded \$282 million

Awarded value to Portuguese companies
In USD million, FY18-22



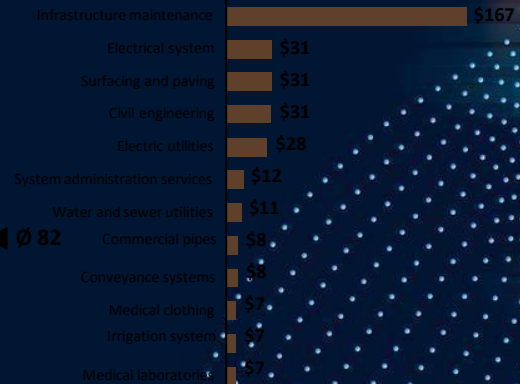
Awarded value to Portuguese companies fluctuated over the past five FY

Awarded value to Portuguese companies
In USD million



Specialized engineering, utilities and medical equipment and supplies are the main markets for Portugal

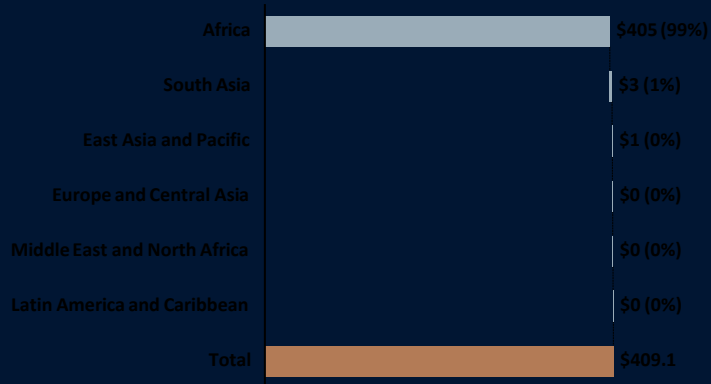
Top markets for Portuguese companies
by awarded value (in USD million)



Borrowers in Africa were the main customers of Portuguese companies during FY 18-22.

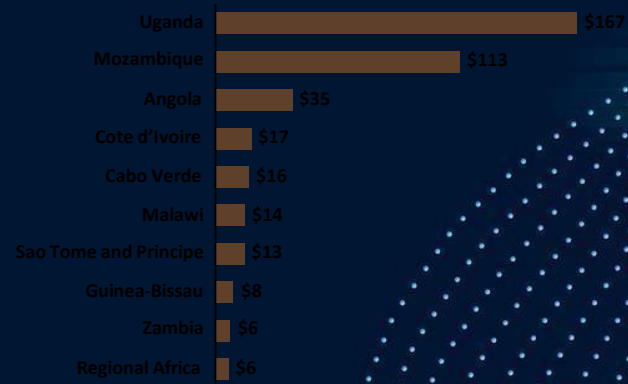
Portuguese companies got 99% of the awarded value in Africa

Awarded value to Portuguese companies
In USD million, FY18-22



Top 10 Borrowers that awarded contracts to Portuguese companies

by awarded value (in USD million)





THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP
Operations Policy & Country Services

CONCLUSIONS

Conclusions

Consulting firms are key partners in maximizing impact in every type of procurement and at every stage of a project

Urgency of action

Urgency of action is required to address the magnitude of global challenges. Procurement can work to ensure that global challenges are met with country-specific solutions

Focus on quality

Improve quality in delivery and outcomes by strengthening Value-for-Money contract award decisions based rated criteria and life-cycle costing

Drive innovation

Encourage innovation and adaptation by allowing the market to propose innovative solutions and to have these methodically assessed by rated criteria

Procurement Framework Forward focus

Continue to strengthen the impact of good public procurement through coordinated initiatives that focus on critical impact, borrower capacity, maximizing performance and leverage the flexibility in the Procurement Framework to meet emerging and future challenges

World Bank Procurement Contacts

Enzo De Laurentiis Chief Procurement Officer

elaurentiis@worldbank.org

Tel: 202 473-0538

Global Practice Managers

Washington DC

Anna L Wielogorska South Asia

awielogorska@worldbank.org

Tel: 66-2-6868350

Jean-Jacques Verdeaux Latin America and Caribbean

jverdeaux@worldbank.org

Tel: 1-202-4397096

Dione Des Beroa

East Asia and Pacific (Indonesia,
Philippines and the Pacific)

dberroa@worldbank.org

Tel: 66-2-6868329

Elmas Arisoy

East and Southern Africa

earisoy@worldbank.org

Tel: 202 473-2699

Kofi Awanyo

West Africa (Francophone and
Lusophone Africa)

kawanyo@worldbank.org

Tel: 66-2-6868329

Hiba Tahboub

East Asia and Pacific (South East,
Asia and China)

htahboub@worldbank.org

Tel: 202 473 0609

Etel Patricia Bereslawski Aberboj Middle East and North Africa

ebereslawski@worldbank.org

Tel: 202 24614457

Simon B. Chenjerani Chirwa Europe and Central Asia

schirwa@worldbank.org

Tel: 202 390-7885

Infrastructure

Practic e Group Overvie

May 11, 2023

W

Infrastructure Practice Group –

Critically contribute to Climate Action

Identify and address infrastructure gaps to develop green, resilient & inclusive

gaps in developing and emerging economies, and work towards building global consensus and/or solutions to address global issues.

Help resolve the supply chain and food security crisis (logistics, corridors, etc.)

Accelerate Digital Transformation

Improving connectivity for growth, inclusion and sustainability

59

Enable and mobilize private capital sustainably

Practice Areas

ENERGY & EXTRACTIVES



Expanding energy access (SDG7) and meeting climate goals simultaneously, including by scaling up energy efficiency and renewable energy to boost energy security, while reducing the world's dependence on fossil fuels and mitigating climate change.

TRANSPORT



Transforming transportation systems in order to make them cleaner, safer, more inclusive, and more resilient.

DIGITAL DEVELOPMENT



Enable digital transformation that promotes inclusive access to fast, reliable, safe, and affordable internet as well as data infrastructure and platforms.

INFRASTRUCTURE FINANCE, PPPs, GUARANTEES

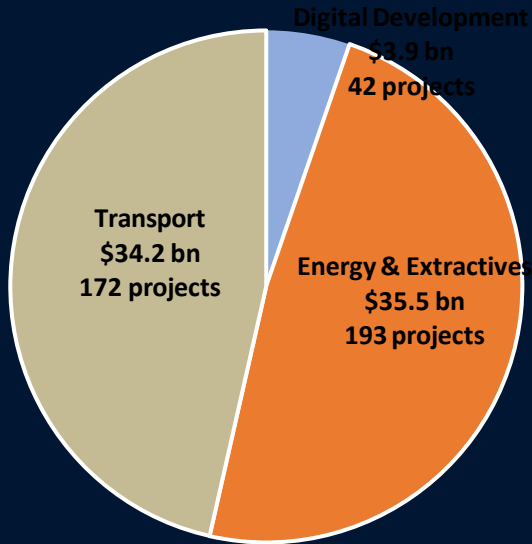


Support reforms and develop project pipelines to facilitate and mobilize private capital; and financial structuring for optimal use of concessional and public funds and World Bank Group instruments for private capital mobilization.

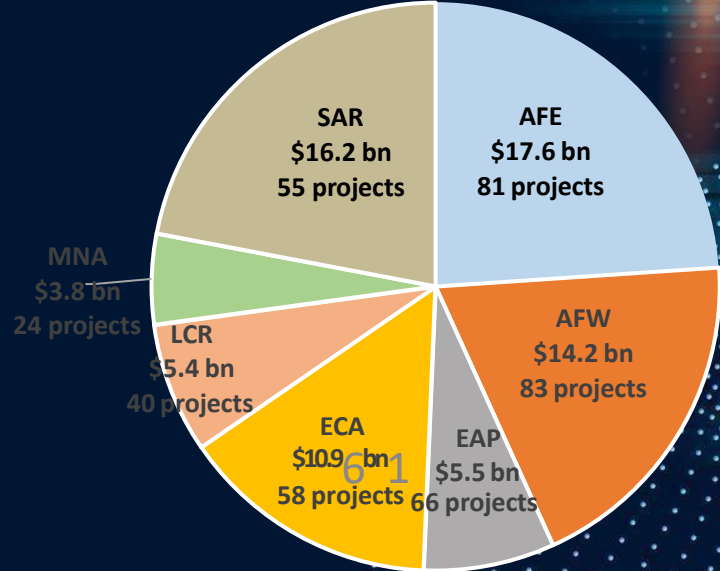
Current Portfolio

➤ Current portfolio comprises 407 projects with commitments of \$73.6 billion

Portfolio by Practice



Portfolio by Region

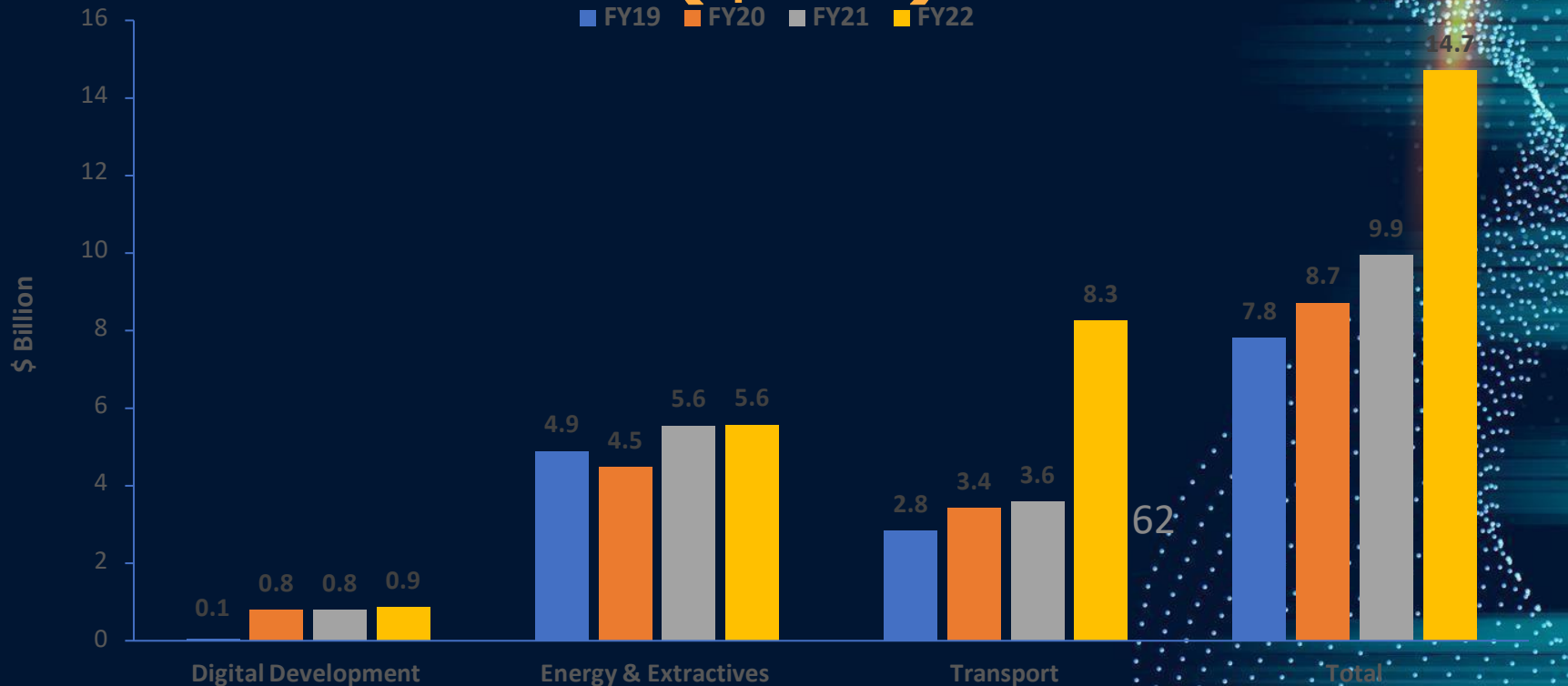


AFE: Eastern & Southern Africa
AFW: Western & Central Africa
EAP: East Asia & Pacific
ECA: Europe & Central Asia

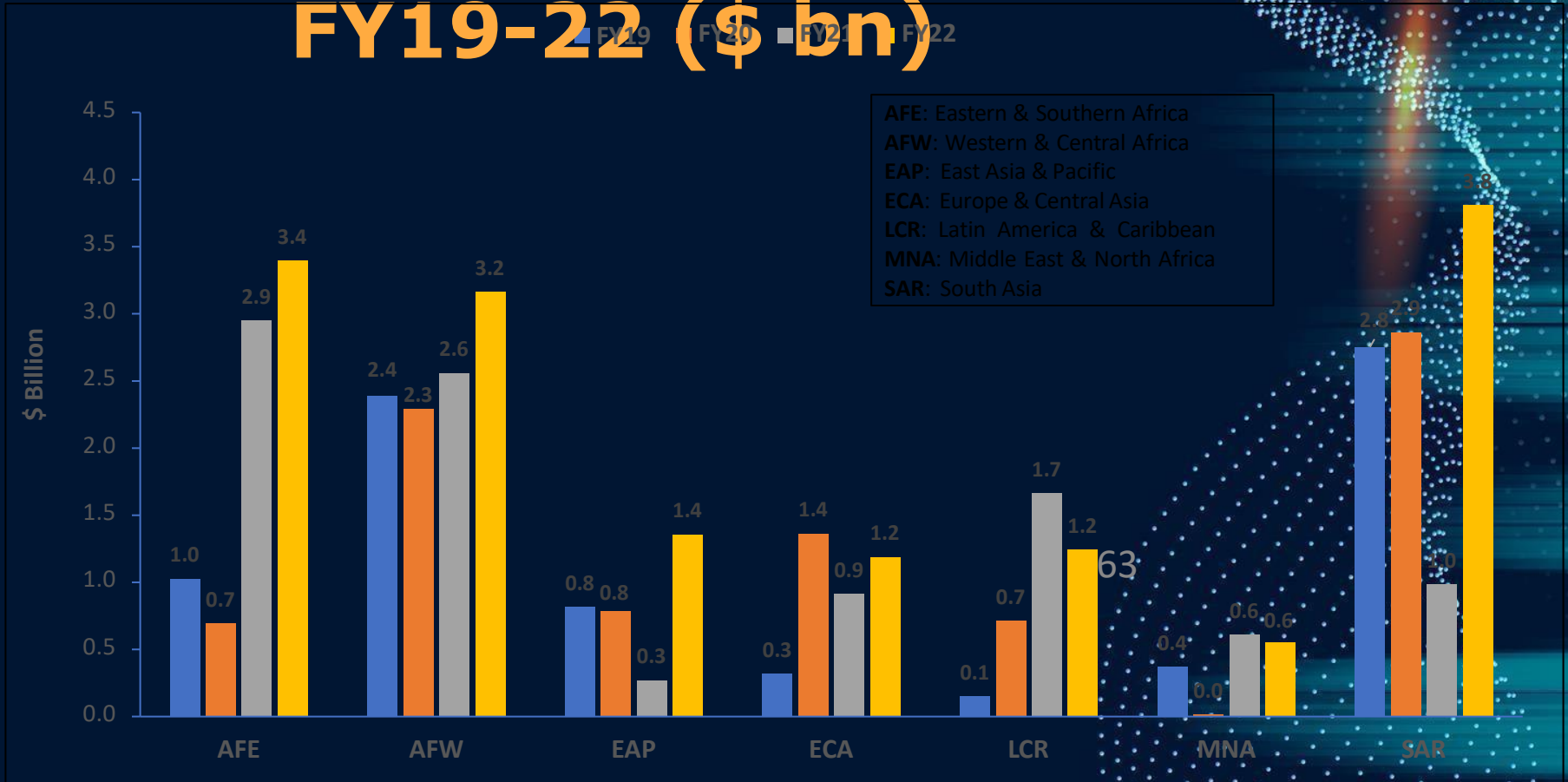
LCR: Latin America & Caribbean
MNA: Middle East & North Africa
SAR: South Asia

Lending by Practice: FY19-22 (\$ bn)

FY19 FY20 FY21 FY22



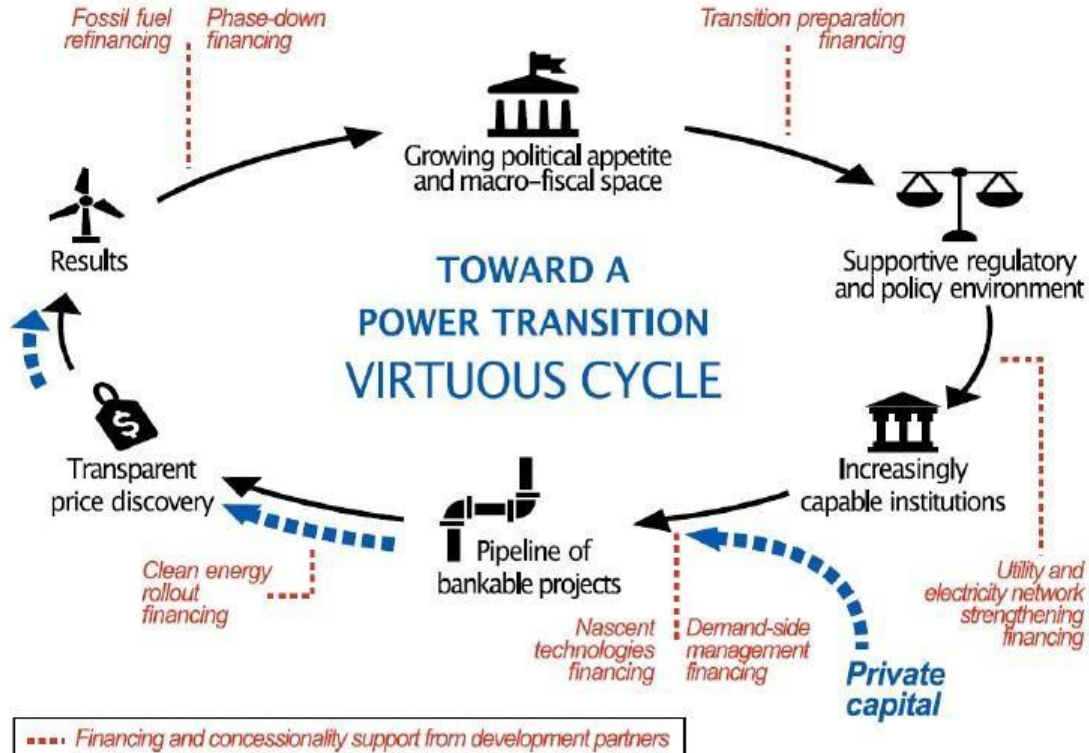
Lending by Region: FY19-22 (\$ bn)



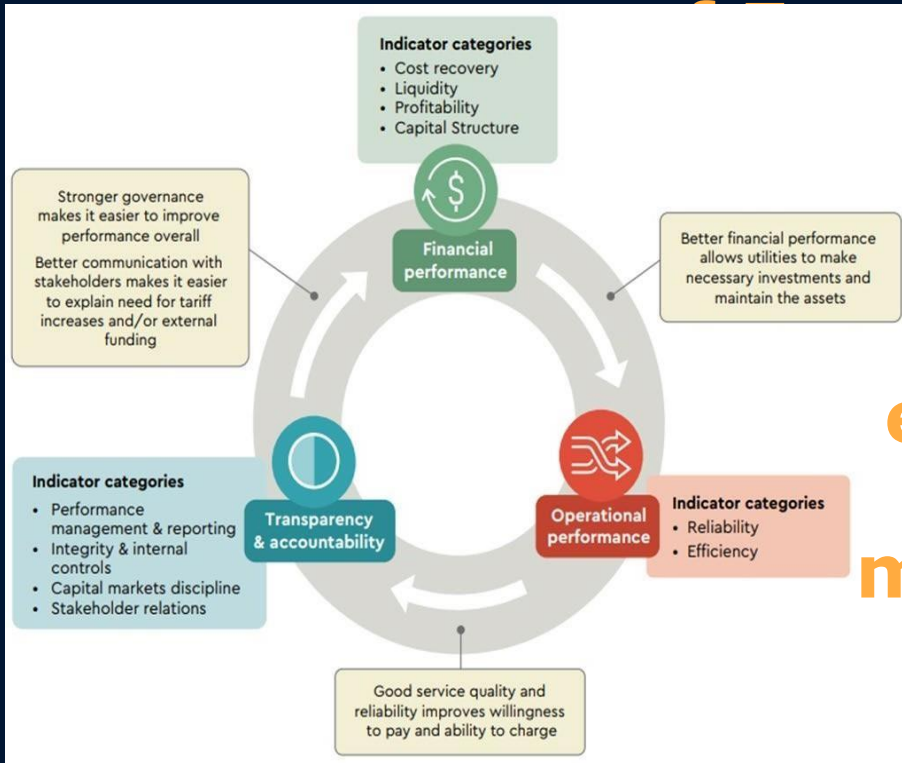
World Bank Framework Approach in Energy and Extractives:

Support on addressing barriers

Figure ES1. A virtuous cycle to propel the power sector transition with financing approaches that can help to overcome barriers at each stage



Improving Performance



Digitalization is critical for strengthening governance and improving operational and financial performance of transmission and distribution companies

Examples:

- Incident management system
- Billing and collection management system
- Advanced metering infrastructure
- Corporate resource management system

SCADA

men t

World Bank Digital Transformation Framework

Digital Transformation for Sustainable, Resilient, and Inclusive Development



DIGITAL USE CASES ACROSS SECTORS

Financial Services, Health, Social Protection, Agriculture, Urbanization, Trade, GovTech, EduTech, InfraTech, ClimateTech, BlueTech



DIGITAL ACCELERATORS

Digital Safeguards
Data protection and cybersecurity

Digital Public Infrastructure
Digital ID/
payments/data exchange

Digital Capabilities
Digital literacy and skills



DIGITAL FOUNDATIONS

ICT Industry and Digital Jobs

Digital Data Infrastructure: Data Storage, Computing, and Exchange Systems

Broadband Connectivity, Access, and Use: Affordable and High-Quality

Cross-Cutting Themes: Climate Change, Private Capital Mobilization, Gender and Inclusion, and Jobs and Economic Transformation

Digital Development Practice: Core Business Lines



Broadband Connectivity, Access, and Use

Promoting universal access to inclusive, affordable, safe, and resilient connectivity and usage through effective telecommunications policy and regulation, stimulating broadband infrastructure investment, and boosting digital literacy and access to internet-connected devices.



Digital Data Infrastructure

Maximizing the social and economic value of data by encouraging investment in data infrastructure and services, strengthening data governance, and development of integrated data management infrastructure, platforms, and analytical capabilities.



Digital for Climate

Reducing the environmental footprint and strengthening the climate resilience of digital infrastructure and systems, and deployment of digital technologies, business models and data to mitigate greenhouse gas emissions and support climate resilience and across key sectors



ICT Industry and Digital Jobs

Boosting economic growth and creating jobs by encouraging investment in ICT and ICT enabled services industries and facilitating industry-academia partnerships to develop digital skills and job placement programs tailored to market demand.



Digital Safeguards

Building and strengthening trust in usage of digital platforms and services among people, governments, and businesses by strengthening data privacy protections, raising cyber awareness, and building capacity to protect critical infrastructure and systems from cyber threats.



Accelerating Digital Use Across Sectors

Building upon our primary business lines, we support our partner GPs to accelerate the deployment of digital technologies and utilization of data to drive innovation, increase operational efficiency, and develop more accessible, user-friendly, and productive digital products, services, and other use cases.

GLOBAL TRANSPORT TEAM

OPPORTUNITIES FOR PTPC AND AEC
COLLABORATING WITH IFC



Colaborado por:



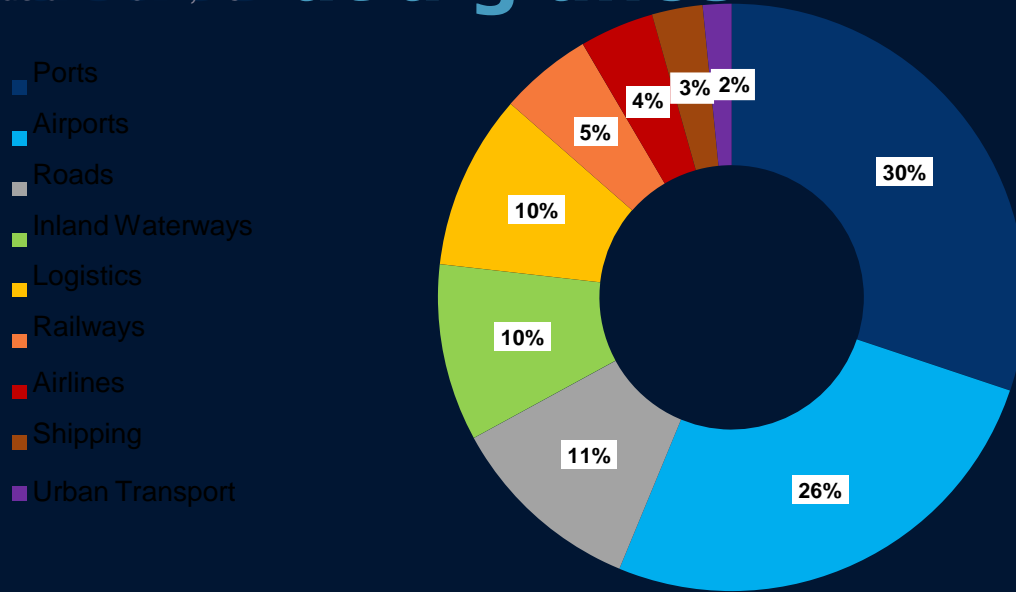
UNIÃO EUROPEIA
Fundo Europeu
de Desenvolvimento Regional



May 11th, 2023

IFC's Transport portfolio at a glance

IFC Committed Portfolio by Subsector
as of June 30, 2022



IFC transport's committed portfolio volumes average around \$2.5 billion per year.

US\$10.1 billion for IFC's own account and mobilized over the past decade.*

Note: The committed portfolio for IFC's own account for end of FY22 includes outstanding and undisbursed volumes for all product categories. Last decade (FY12-22) numbers include IFC own account, core mobilization, and MIGA volumes.

What We Do: Generation, Advisory and Investment

Pre-investment

Advisory and Early-Stage Project Development

Create proprietary projects and investment opportunities by developing a sustainable

to help develop policies, regulations, and frameworks for private sector investment; and to develop scalable project pipelines

INVESTMENT

Financial products tailored to client needs

- Loans
- Equity
- Trade and Commodity Finance
- Derivatives and Structured Finance
- Blended Finance

US\$23.2 billion committed in FY22

US\$63.8 billion committed portfolio

MOBILIZATION

Mobilizing and managing capital for investment

- Syndications
- IFC Asset Management Company

US\$10.1 billion under management at IFC AMC

US\$10.6 billion mobilized from other investors

Post-investment

ADVISORY

Innovative solutions combining IFC's expertise and tools

- Help Create New Markets
- Unlock Investment Opportunities
- Strengthen Clients' Performance and Impact
- Improve Environmental, Social, and Corporate Governance Standards

Over 800 projects of \$1.2 billion

2 Opportunities for

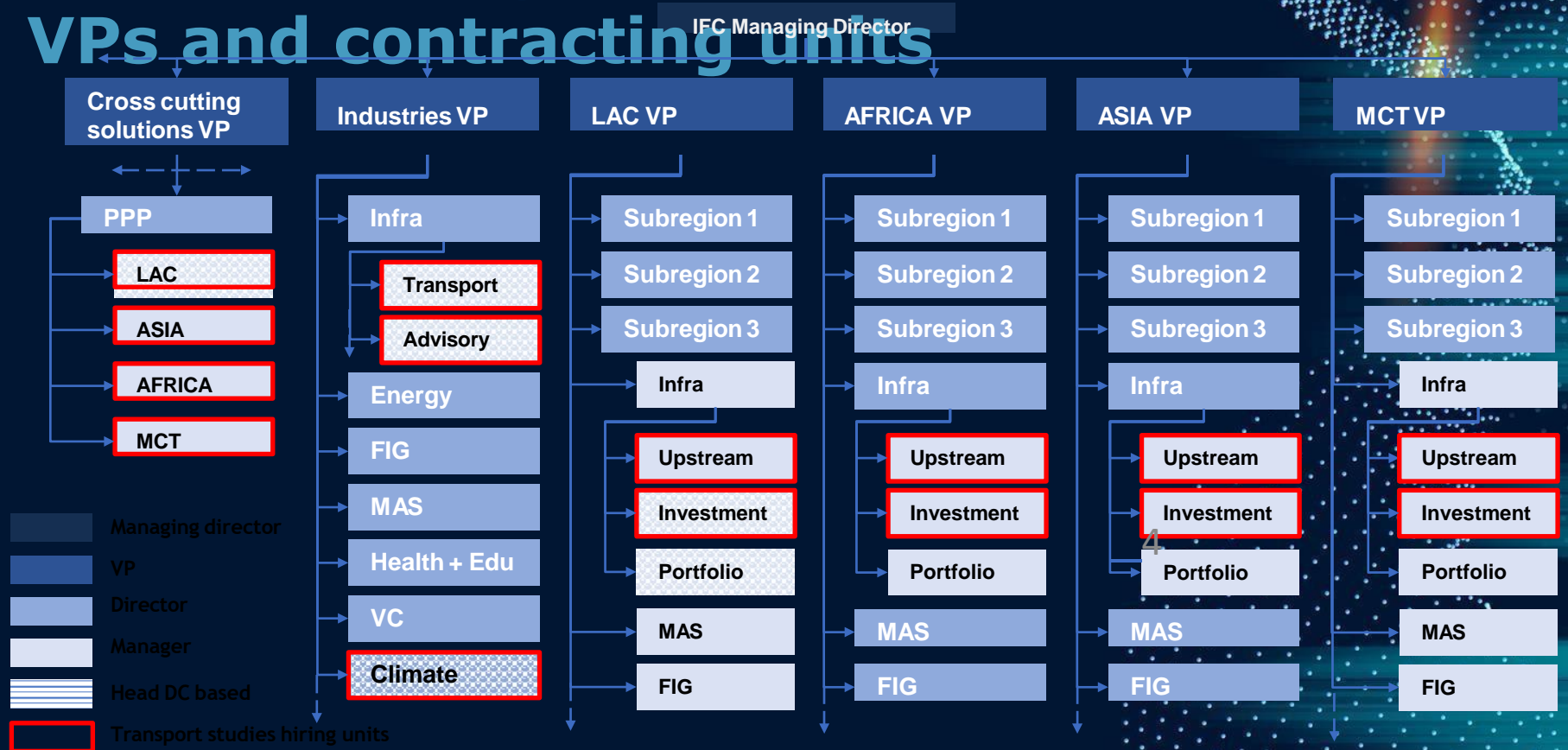


Generation and Advisory:

Beneficiary	Type	Description	Contracting unit	Unit Location	Time
IFC	Climate – Strategy *	Climate change strategy	- Global Transport - Climate	Washington	3 - 6 months
	Climate - Technical *	Developing tools or methodologies to assess climate change impacts	Climate	Washington	6-12 months
	Upstream - Strategy *	Explore markets or sectors	- Global Transport - Regions	Washington Regions	3 - 6 months
	Transactional - DD	Market or Technical validation of an investment	Client	Washington Regions	1 - 3 months
	Transactional - Monitoring	Works monitoring, usually quarterly reports	Client	Washington Regions	6 - 36 months
	Transactional - Portfolio	Identify potential issues in a project	Client ³	Washington Regions	1 - 3 months
Clients	Upstream – Prefeasibility *	Analyze the feasibility of a Project. Could be unsolicited proposals, brownfield Project, etc	Upstream	Regions Project Site	3 – 6 months
	Transactional -	Help implement projects with	Upstream	Washington	3 – 6 months



How IFC is organized: Relevant VPs and contracting units



Advisory Examples: Strategic Support- Port Decarbonization

Project Overview

- IFC is supporting one of South Asia's largest integrated logistics, services and transportation providers (specializing in marine services, ports and logistics and technology) to develop a corporate sustainability strategy, focusing on **decarbonization** and **resilience solutions**.
- IFC will identify **solutions** to ensure **zero carbon emissions terminals**, including electrification of cargo handling equipment and road transport fleets, and support community resilience.



IFC Scope of Intervention

- Key activities to be undertaken:
 - Baselineing - Quantify GHG footprint (scopes 1,2,3) and diagnosis of climate risks.
 - Benchmarking - Analyze climate change leadership strategy against peer groups. 5
 - Strategy and Solutions - Assess and prioritize viability of decarbonization and resilience interventions.
 - Target Setting and Validation – Set medium and long-term targets aligned with the Science-Based Targets Initiative.
 - Collaborative Initiatives – Recommend collaborative initiatives for the client to join

Generation and Investment: Early-stage Development of Projects with Sponsors

Advisory

Early Development of Projects

	Description	Maturity	Investment Size	Engagement timeline	Approach Framework
Collaboration Agreements	IFC to cost-share specific limited scope studies/activities to assess potential project(s) in return for certain future co- investment rights	Pre-feasibility support for advanced activities	< US\$1m of cost sharing required	Up to 12 months	<ul style="list-style-type: none"> • Collaboration Agreement • Shares early-stage project development expenses • Secures MLA rights through ROFO/ROFR
Co-Development Agreements	IFC acts and invests as a co-sponsor of a well-defined project	Full feasibility studies to bring project to financial close	US\$1-8m in IFC contributions	Potentially spanning multiple years	<ul style="list-style-type: none"> • Joint Development Agreement • Secures similar rights and interests • Typically secures MLA rights
Unsolicited Proposals	IFC acts and invests as a co-sponsor for the required studies for a project .	Initial technical and pre-feasibility studies completed	Up to 50% or US\$1m to partially cover for the study costs	Up to 24 months for study completion and project presentation	<ul style="list-style-type: none"> • Project Development Engagement Agreement • Shares costs with the sponsor • Secures compensation for success or MLA rights

Case Studies:

Presented by private entity to the government for direct award/licensing

Collaboration - YCH



PROJECT OVERVIEW

- IFC Pre-investment partners with the T&Y consortium, led by YCH Singapore, to develop an international logistics center in the Vinh Phuc province in Northern Vietnam.
- The facility will serve multiple trade lanes, including international air and sea cargo as well as cross-border trade between Vietnam and China, and will offer various value-added services to Northern Vietnam's booming industrial zones.

PROJECT IMPACT

- The Project aims to establish an efficient and modern multi-modal SuperPort, operating up to international standards, helping reduce costs for enterprises and improving the quality and competitiveness of goods and services.
- It is the first project of the Smart Logistics Network across the ASEAN, aiming to facilitate international trade and sustainable growth in the Asia Pacific region.

IFC VALUE ADDED

- IFC Pre-investment brings technical and structuring expertise to develop a project into a bankable investment opportunity
- IFC provides extensive project preparation support including on technical, commercial, legal, environmental and social aspects of the project to support its feasibility.



Case Studies:

Support to an Unsolicited



PROJECT OVERVIEW

- Mexico has a clear and transparent framework to regulate unsolicited proposals.
- In this context, IFC supported a renowned international sponsor with local presence with the development of a Private Initiative for a ring road in Mexico.
- Sponsor had overall responsibility and ownership for the proposal, with IFC providing support in agreed areas.

PROJECT IMPACT

- Strategic project for the economic and social development of the area.
- Private Initiative complemented the capacity of the government to prepare investment projects.
- Innovative pavement solution proposed

IFC VALUE ADDED

- IFC covered part of the costs associated with the feasibility study and supported the Sponsor in several areas:
 - Demand assessment
 - Financial model
 - Environmental and social impact assessment



The Transport GP's Strategy

4 + 2 Strategy forms the basis of our work and enables us to offer globally informed practical knowledge and expertise.



Decarbonizing Transport: Engagement Areas - ASIR

Inclusive and Safe Mobility and Accessibility

Avoid – Managing Demand

- Sustainable Demand Management
- TOD, Urban Planning
- Telecommuting, E-services

Improve – Efficiency

- Cleaner Technologies, Electric Mobility, Alt. Fuels
- Motorization and Fleet Renewal
- Intelligent Traffic Systems

Enhance **Resilience** of Systems

- Urban Accessibility
- Rural Accessibility, Lagging and Isolated Areas
- Basic lifeline mobility and connectivity

Shift – Modal Competition and Substitution

- Public Transport
- Non-Motorized Transport
- New (shared) mobilities
- Road Safety
- Gender and Transport

Integrated and Competitive Logistics and Connectivity

Avoid – Managing Demand

- Urban Logistics and E-commerce
- Economic Corridors
- Re-engineered supply chains

Shift – Modal Competition and Substitution

- Competitive low-emission modes (rail, waterways)
- Multimodality
- Safety to non-road modes

Improve – Efficiency

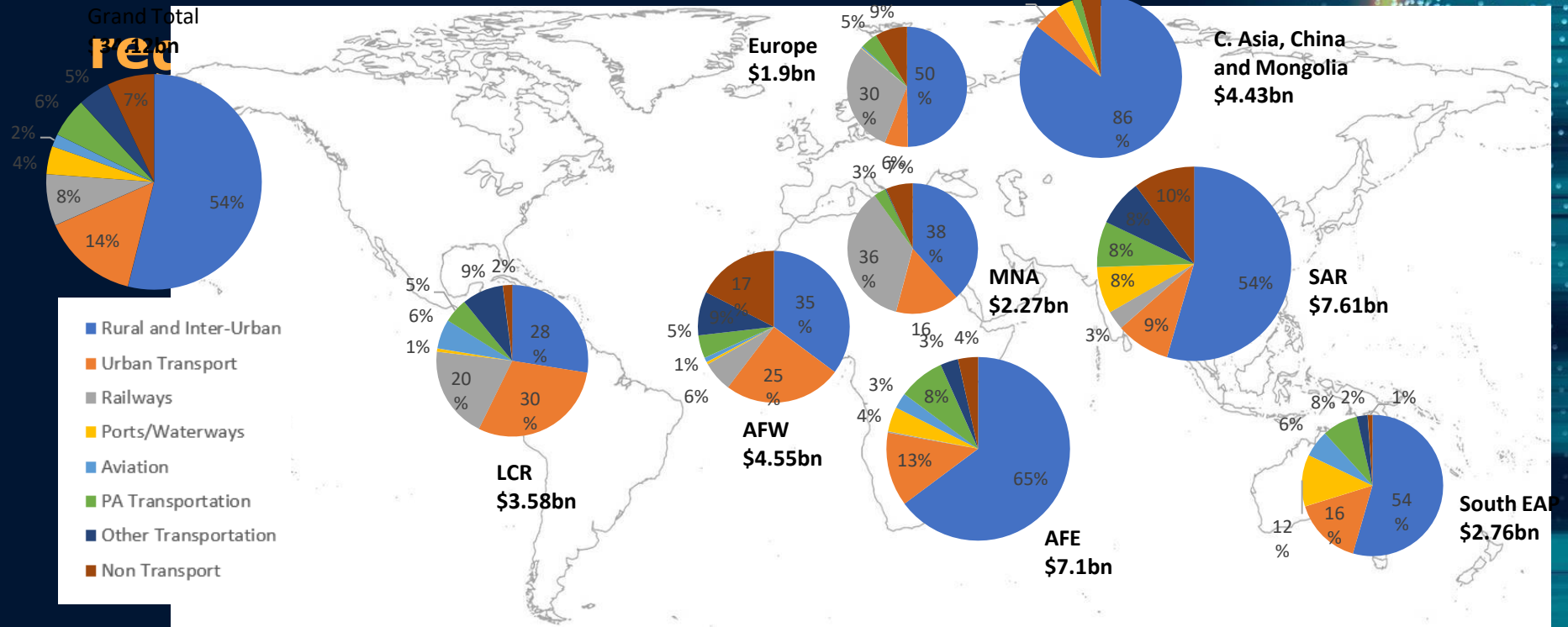
- Green Logistics and Ports
- Efficient and sustainable logistics & supply chains
- Fuel standards & trucking sector reform, digitalization

Enhance **Resilience** of Systems

- Resilience and Adaptation
- Regional Connectivity
- Fragility & reconstruction
- Landlocked and Small Island States

\$34.12bn in active commitments among 172 projects

Sub-sectoral diversification varies among



The Global Facility to Decarbonize Transport (GFDT)

A multi-donor trust fund, established in 2021, that aims to **accelerate innovation and investment** toward climate-smart mobility solutions.

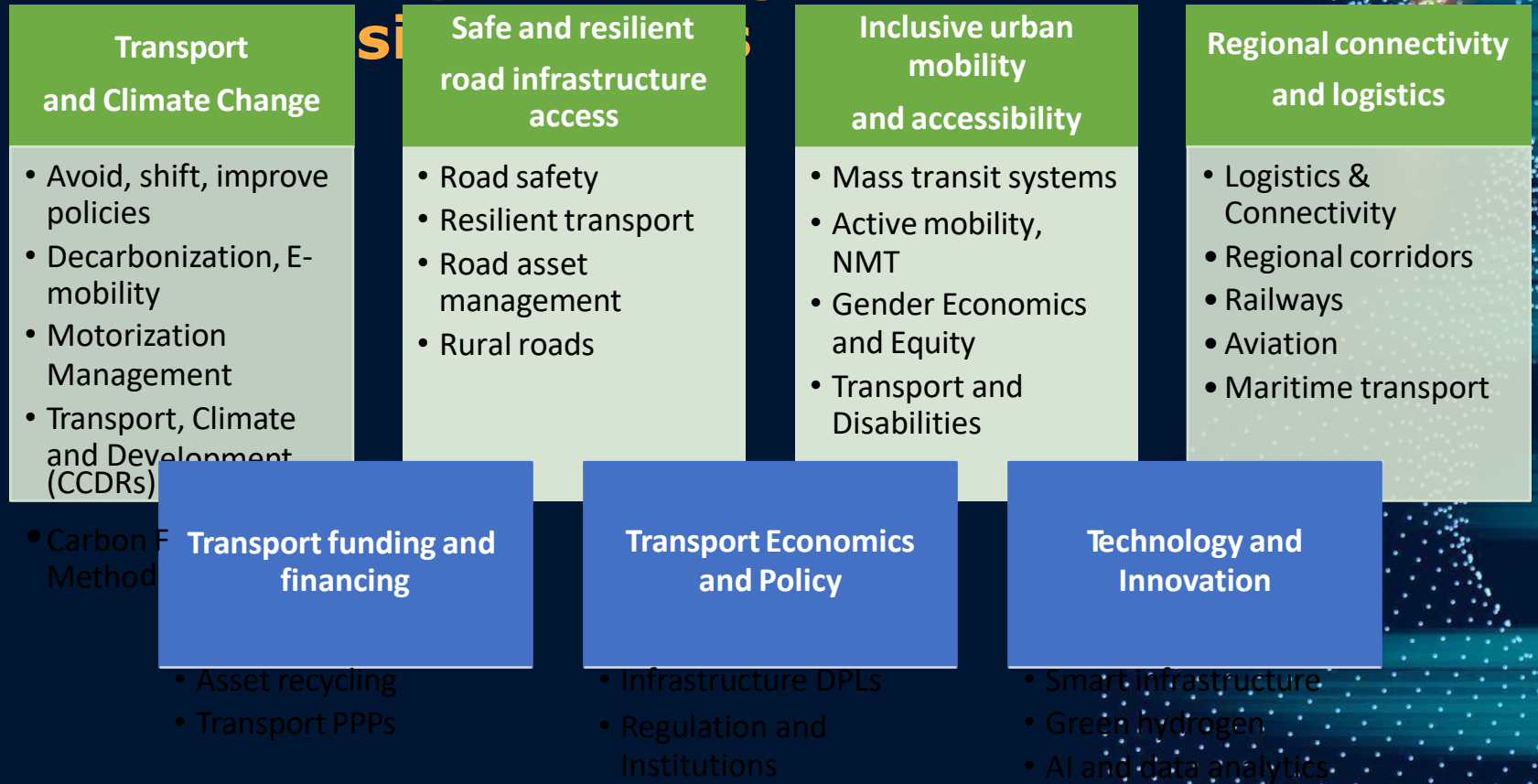
GFDT's grant-making, knowledge, and project preparation support enables developing countries to build **low-emissions transport systems** that are **safe, modern, inclusive and resilient**.

GFDT's vision is a world where developing countries **do not have to choose** between development and climate action.

GFDT's ultimate goal is to achieve **carbon neutrality in the carbon sector by 2050**



Transport GP Knowledge Groups: Driving Our Core



IFC > INFRASTRUCTURE

Sustainable Infrastructure Advisory

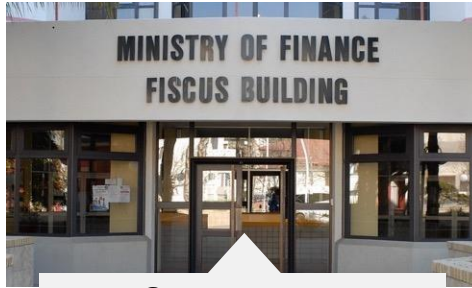
Creating shared value for companies and communities

May 11, 2023



CHALLENGE: MEETING STAKEHOLDER DEMANDS

- Businesses need help to build ESG credibility and avoid greenwashing
- Communities need support to thrive in the new green digital resilient economy



Governments demand projects to spur development through infrastructure, services, jobs with high ESG standards & net zero commitments.



Investors demand ESG management to keep projects on time and on budget and improve performance.



CSOs demand transparency on risks, impacts, benefits to communities/climate.



Local communities demand voice, engagement, and tangible benefits, such as jobs and improved services.

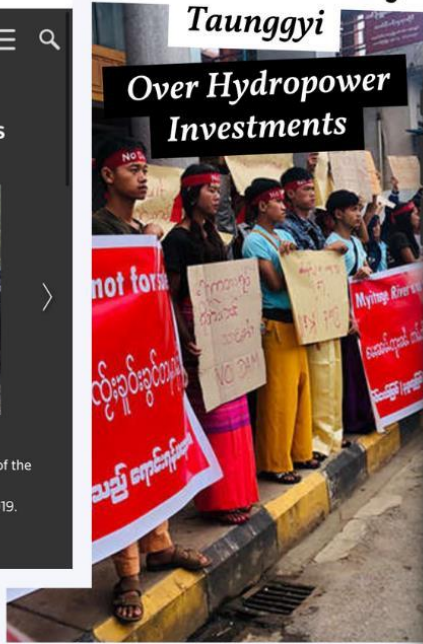
Failure to meet these expectations can lead to project delays, cost overruns, and even shutdowns.

RISK: PROJECT OPPOSITION CAN BE MOBILIZED IN A FLASH

Headline News

Locals Protest Meeting in Taunggyi

Over Hydropower Investments



REUTERS

PICTURES

Police in Georgia clash with protesters against hydro plant



1 / 4

Participants attack police officers during a rally held by residents of the Pankisi gorge, who protest against the planned construction of a hydropower plant, near the village of Birkiani, Georgia April 21, 2019.

REUTERS/Ekaterina Anchevskaya

Apr 21, 2019 6:26 PM EDT



EMISSIONS
Bangladesh protest to scrap power plant in Sunbardan

Backlash continues over #hydroelectric power projects in #Guatemala

Plans for major lithium mine stirs protests in Serbia

Cape Town Residents picketed outside Eksom Building in CapeTown on Thursday

NOT IN MY BACKYARD!!

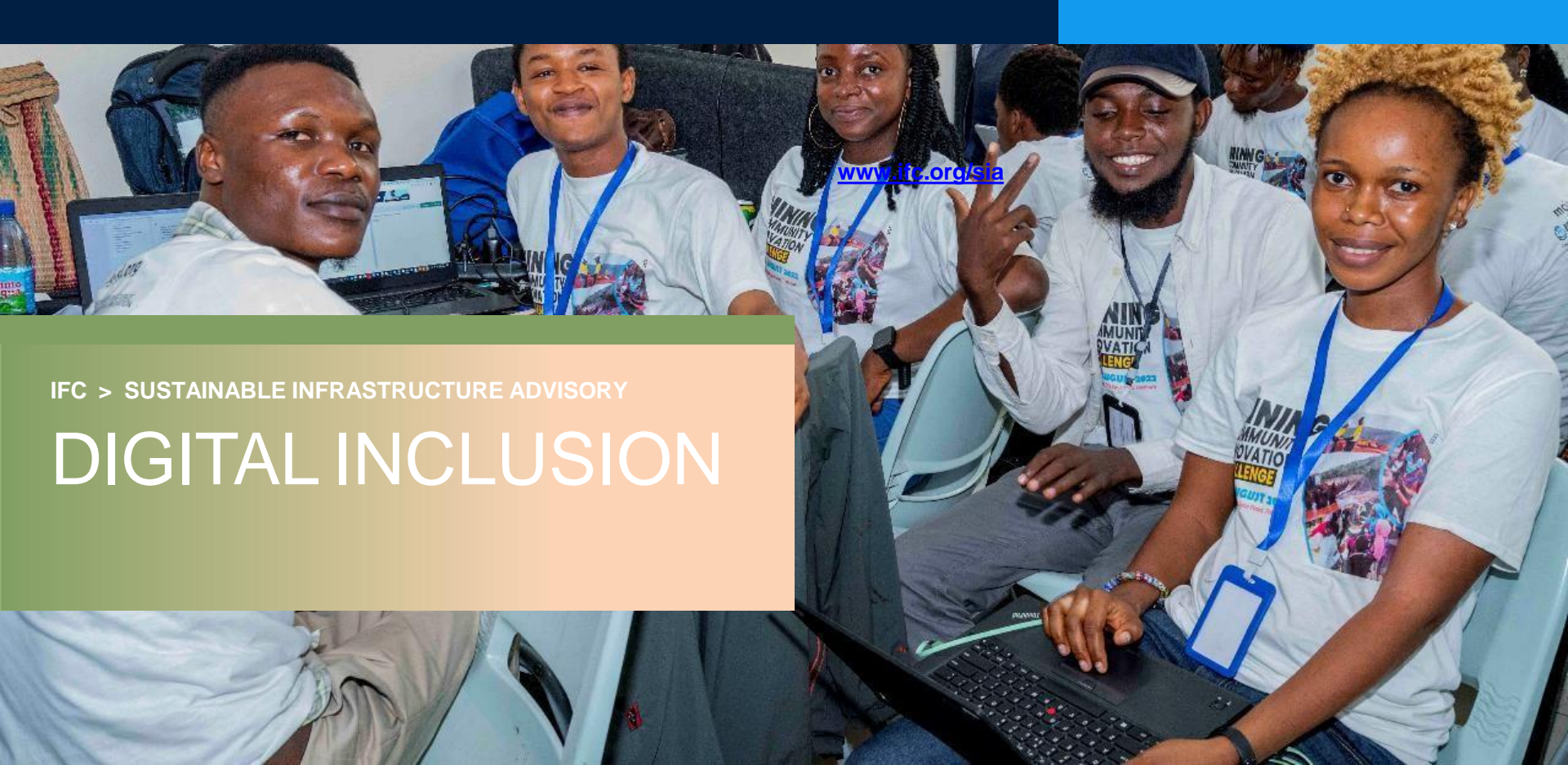
Farmers oppose wind turbines

SUSTAINABLE INFRASTRUCTURE ADVISORY SERVICES

We support companies at corporate and project levels to strengthen their credibility, address climate and social challenges, and increase benefits to local communities. This ensures that communities are vested in project success and that companies experience a smoother operating environment.

EVOLVING TO ANTICIPATE CLIENT NEEDS AND MARKET TRENDS

- **Local Benefit Sharing:** Build social license to operate related to: Local Economic Development, Local Content, Community Investment Strategy, and Government Capacity Building.
- **Sustainability-Linked Financing Coordinator:** Support clients to develop climate and social strategies, set KPI & targets and meet sustainability goals.
- **Gender:** Strengthen capacity of clients and communities to develop gender-smart solutions and increase gender equality.
- **Climate Advisory:** Support decarbonization pathways, risk and resilience roadmaps, just transition process and plans.
- **Digital Inclusion:** Build capacity of companies and government agencies to use digital tech and data for inclusive development
- **Voice & Accountability:** Enable multi-stakeholder dialogue and info-sharing to improve transparent decision-making



www.ifc.org/sia

IFC > SUSTAINABLE INFRASTRUCTURE ADVISORY

DIGITAL INCLUSION



OPPORTUNITY TO DEVELOP NEW SERVICES

III. Digital Solutions for Sustainability

Plan to explore biz opportunities in areas incl. data for climate resilience, use of disruptive technologies such as sensors, IoT, ML/AI for optimizing use of resources (energy, water) or monitoring ESG compliance

6 TESTED SERVICES WITH STRONG CLIENT DEMAND

II. Digital Transformation

1. Data-driven community engagement: corporate and agency strategies, change management to strengthen SLO
2. ESG information and data sharing: leveraging open data to close information gaps in communities
3. Smart city: strategy, roadmap, training, investment pipeline

I. Digital Skills

1. Data analytics: getting actionable insights from data
2. Digital entrepreneurship: creating data-driven startups
3. Digital literacy programs: good corporate practices for communities

DIGITAL TRANSFORMATION SERVICES - EXAMPLES

Smart City/Citizen Engagement



Izmir Open Data

Requested by Mayor Soyer

IFC Delivered:

1. Data management assessment – 9 stakeholder focus groups & 13 interviews
2. Capacity building – 6 sessions
3. Open Data Strategy & Roadmap

Results:

- Open data portal launched with over 180 datasets

Smart City/Infra Planning



Almaty Biking Infra

Requested by Dept of Digitalization

IFC Delivered:

1. Technical assistance to Almaty muni to plan new biking lanes using open data
2. Capacity building to muni – 10 sessions
3. Examples of international good practice

Results:

- Portal with open mobility data launched
- Bicycle Comfort Index incorporated in Almaty's Cycling Strategy

ESG Data Sharing w/Community



Water and Mining Data

Requested by Oyu Tolgoi and MMHI

IFC Delivered:

1. Water & mining data hackathon & festival
2. Data assessment & prioritization workshop
3. Community baseline survey

Results:

- 10+ data-driven community engagements
- 40 datasets prioritized; 13 govt datasets disclosed
- Data assessment and survey report

DIGITAL SKILLS SERVICES - EXAMPLES

Data Analytics



Infomediaries training in Mongolia

Requested by OT and MMHI

IFC Delivered:

1. Mining Data Curriculum for Infomediaries
2. Digital skills for youth, CSOs, media
3. Data analysis and visualization skills for OT, MMHI

Results:

- 200+ infomediaries trained; 29 trainers certified

Digital Entrepreneurship



Sierra Leone Mining Community Innovation Challenge

Requested by DSTI

IFC Delivered:

1. Hackathon & open data competition—300 applicants, 90+ participants (44% F)
2. 8-week digital & business skills training

Results:

- 2 winning solutions: (i) Smart Cure—device that measures water quality, (ii) Digital Agro—youth employment opportunities using greenhouse farming technology

Digital Literacy Programs



Peru Community Leaders

Requested by Government of Moquegua

IFC Delivered:


1. Capacity building—public budgeting & investment monitoring—10 sessions
2. Virtual training on social media and data
3. D2D Peru Working Group—7 sessions

Results:

- 16 Surveillance Committees trained
- 300+ leaders trained on social media use
- Launched virtual public platform: InfoVoces

SELECTED SUSTAINABLE INFRASTRUCTURE ADVISORY PROJECTS

**Türkiye
Open Data**



City of Izmir

Open Data Strategy and roadmap developed, which were adopted by Izmir.

2020-2022

**Nepal
Hydropower**



Nepal Water and Energy Development Company

Local shares allocation plan for Upper Trishuli hydropower project in Nepal developed.

2019-ongoing

**Africa Region
Power**




Lekela

Gender Assessment (workforce & supply chain) completed & community gender assessment conducted for Taiba Wind farm in Senegal.

2019-ongoing

**Côte d'Ivoire
Power**




Azito Energy

Capacity of local stakeholders strengthened to ensure compensation payments are well spent; workplace gender strategy.

2019-ongoing

**Indonesia
Transport**




ASSA Logistics

Virtual gender assessment conducted.

2020-ongoing

**Colombia
Cities**



City of Bogota

Study on social and economic effects of COVID-19 on women conducted. Recommendations provided to improve communications.

2020-2021

**Guinea
Mining**



Compagnie des Bauxites de Guinée

Community rail strategy developed and integrated into CBG's operational safety.

2017-ongoing

**Peru
Mining**



Apurimac

Municipalities and communities effectively planned the use of mining royalties; projects worth \$44M in water, education, and roads.

2015-2017

SUSTAINABILITY THOUGHT LEADERSHIP: INNOVATIVE ESG PRACTICES, CONVENING, BRANDING

Cutting-edge research & applications shared in accessible digital formats



FROM DISCLOSURE TO DEVELOPMENT (D2D)
Open Data to Help Address Challenges in Sierra Leone's Mining Communities

CommDev's latest research project, *From Disclosure to Development (D2D)*, aims to help address the challenges in Sierra Leone's mining communities. The project focuses on the impact of mining on the environment and the community, and how to improve the lives of the people living in these communities. The project is a collaboration between CommDev and the Sierra Leone government, and is supported by the World Bank.

Key findings:

- There is a need for more data on the impact of mining on the environment and the community.
- There is a need for more transparency in the mining sector.
- There is a need for more community engagement in the mining sector.

Next steps:

- CommDev will continue to work with the Sierra Leone government to improve data collection and transparency.
- CommDev will continue to work with the Sierra Leone government to improve community engagement.

THE BUSINESS CASE FOR GENDER-RESPONSIVE CLIMATE-SMART MINING

This report explores the business case for gender-responsive climate-smart mining. It highlights the importance of gender equality in the mining sector and how it can contribute to a more sustainable and resilient future. The report is a collaboration between CommDev and the Sierra Leone government, and is supported by the World Bank.

A Sustainable Future For Infrastructure Finance

This report explores the business case for sustainable infrastructure finance. It highlights the importance of sustainability in infrastructure projects and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

En Bogotá, un estudio revela las repercusiones del COVID-19 en las mujeres cuidadoras

This report explores the impact of COVID-19 on women caregivers in Bogotá. It highlights the challenges women caregivers face and how they are coping with the pandemic. The report is a collaboration between CommDev and the World Bank.

WORLD BANK GROUP

Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition

This report explores the mineral intensity of the clean energy transition. It highlights the importance of minerals in the transition to a sustainable future and how they can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

Pedal to the Metal: Decarbonization Pathways for Copper and Nickel

This report explores the decarbonization pathways for copper and nickel. It highlights the importance of these metals in the transition to a sustainable future and how they can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

MONGOLIA ECONOMIC FORUM

GREEN FINANCIAL RECONFOR FOR MONGOLIA'S NEW RECOVERY

This report explores the green financial reconfor for Mongolia's new recovery. It highlights the importance of green finance in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

FROYDA CAMERON-JANSSON

and our commitments to carbon neutrality

This report explores the commitments to carbon neutrality. It highlights the importance of carbon neutrality in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

CLIMATE SMART MINING FACILITY

Mineral Intensity of the Clean Energy Transition

This report explores the mineral intensity of the clean energy transition. It highlights the importance of minerals in the transition to a sustainable future and how they can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

SUSTAINABLE FINANCE FOR CLIMATE AND SOCIAL IMPACT

#IFCSEXCHANGE

This report explores the sustainable finance for climate and social impact. It highlights the importance of sustainable finance in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

Morgan Landy - 1st Global Director, Infrastructure at IFC - International Finance Corporation

So many aha! moments in Panama for IFC & Canal de Panama's Roundtable on Sustainable Finance

This report explores the aha! moments in Panama for IFC and Canal de Panama's Roundtable on Sustainable Finance. It highlights the importance of sustainable finance in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

Edutainment, partnership and IFC additionality at the virtual IFC Exchange and VIP Sustainable Finance Roundtables, May-Oct 2022

This report explores the edutainment, partnership and IFC additionality at the virtual IFC Exchange and VIP Sustainable Finance Roundtables. It highlights the importance of edutainment, partnership and IFC additionality in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

2022 IFC SUSTAINABILITY EXCHANGE

This report explores the 2022 IFC Sustainability Exchange. It highlights the importance of the IFC Sustainability Exchange in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

2022 IFC SUSTAINABILITY EXCHANGE

This report explores the 2022 IFC Sustainability Exchange. It highlights the importance of the IFC Sustainability Exchange in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

2022 IFC SUSTAINABILITY EXCHANGE

This report explores the 2022 IFC Sustainability Exchange. It highlights the importance of the IFC Sustainability Exchange in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

2022 IFC SUSTAINABILITY EXCHANGE

This report explores the 2022 IFC Sustainability Exchange. It highlights the importance of the IFC Sustainability Exchange in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

2022 IFC SUSTAINABILITY EXCHANGE

This report explores the 2022 IFC Sustainability Exchange. It highlights the importance of the IFC Sustainability Exchange in the transition to a sustainable future and how it can contribute to a more resilient and sustainable future. The report is a collaboration between CommDev and the World Bank.

Apresentações

BID



IDB Cities Lab

Housing and Urban Development Division
Inter-American Development Bank

May 2023



Housing and Urban Development Division ->Cities Lab

We promote innovation and experimentation in LAC cities

Priorities

Climate Resilience

Green Housing

Informality

Smart Cities

What do we do?

Identification and dissemination of innovative trends to inspire and build capacities

Experimentation through pilot projects to test innovative solutions to common problems

Development and implementation of digital solutions for Urban Planning and Management



Identification



Connection



Experimentation



Data and Technology



We are always searching for urban innovation to showcase

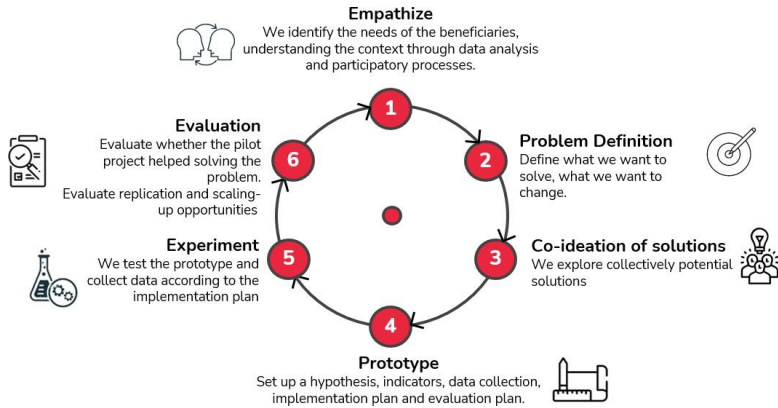
1. Through an **Open Innovation methodology** we identified innovative private sector solutions and connected them with IDB specialists and our counterparts. We did this for different topics of interest: [PropTech](#) ([publication available](#)), *Informal Housing*, [Climate Resilience](#).
2. One way that we find quite useful is developing **Discovery Papers** - currently working on *Housing Retrofitting*, *Green Housing*, and *Heat Island Effect Mitigation through NbS*
3. We have a **podcast** called *Inteligencia Urbana* – 1st season: Urban Labs ; 2nd season: informal settlements; 3rd season: climate resilience (ongoing)
4. Develop networks: Launching the Regional Platform of Urban Labs
5. Other activities: blogs, Exchange programs (with Austria and Urbelac), webinar series





We support cities in their pilot design, implementation and evaluation

- We believe that working with **pilots** enables cities to test solutions, develop capabilities, and deliver better services.
- Our pilots are **citizen-centered** and **problem-oriented**. We generally follow the *Design Thinking* work process.
- Currently working in **6 pilots**:
 1. reutilization of *solid waste for construction* in slums,
 2. *behavioral science and auto-construction*,
 3. greenery in public spaces to *mitigate heat island effect*,
 4. Georeferenced *tree census*
 5. Historic Downtown revialization and *residentialization*
 6. Off-the-grid water provision
- Others in pipeline: 15mC, informal housing structural reinforcement





We promote and develop digital tools for urban planning and management

- We developed **MAIIA**, **UrbanPy**, and the **Housing Déficit Estimation tools**.
- These tools are open source and are available [here](#).
- We provide support to different city governments to implement these tools in their cities.



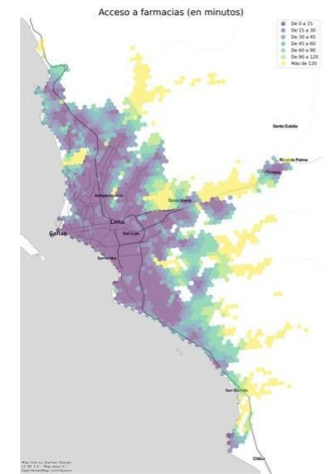
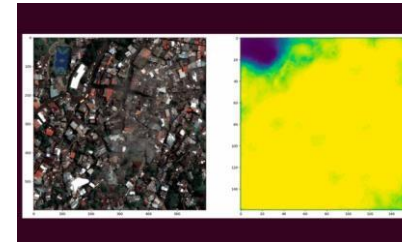
URBANPY

Un paquete de soluciones que resuelve de manera automática la medición de accesibilidad.



MAIIA

Un algoritmo que permite mapear de forma automatizada la ubicación de asentamientos urbanos informales mediante el análisis de imágenes satelitales.





In conclusion

- We are always looking for innovative solutions to showcase
- We are currently exploring innovative solutions for: housing retrofitting, informal settlements, urban resilience, and heat island effect mitigation.
- We will continue working with pilots, supporting IDB Operations and developing digital tools for urban planning and management.
- More information - visit our [web page](#)





Thank you! Questions?

Enrique Pelaez
epelaez@iadb.org

Apresentações

Embaixada

A COMPETENCE AGENDA FOR A TWIN TRANSITION

Luís Gomes - Administrator

PTPC - Portuguese Construction Technological Platform

João Moutinho – Director

BUILT CoLAB – Collaborative Laboratory for the Built Environment

London – Portuguese Embassy – 7th February 2023



Start with the big picture



Strategic positioning for the country's competitiveness



Stimulus to the development of collective efficiency actions



Promote innovation, R&D and the internationalization of the Portuguese economy



The Portuguese Construction Technology Platform (PTPC) has as a mission the innovation development in construction, in order to contribute to the increase of competitiveness and sustainability of the AEC sector within the general framework of the economy, bringing together and promoting cooperation between companies, RTOs, associations, federations, confederations, public or private entities of the construction and public works sector or associated to it.

The AEC Cluster difference



By understanding the global dynamics that affect the Portuguese construction industry, AEC Cluster helps connecting the pieces.

Global reach

AEC Cluster helps screening all possibilities by identifying opportunities available to companies worldwide.

Technology at the core

Leverage technology for operational efficiency and to gain a clear vision of relevant opportunities.

Lifecycle view

Each project must be considered in the context of the investment and innovation lifecycle to realize the full financial and commercial benefit.

Leveraging the ecosystem

Innovation does not happen in a vacuum. Connecting with relevant stakeholders will propel innovation capability. AEC Cluster helps build winning relationships.

Industry experience

AEC Cluster knows and understands the industry, its business and technology language.

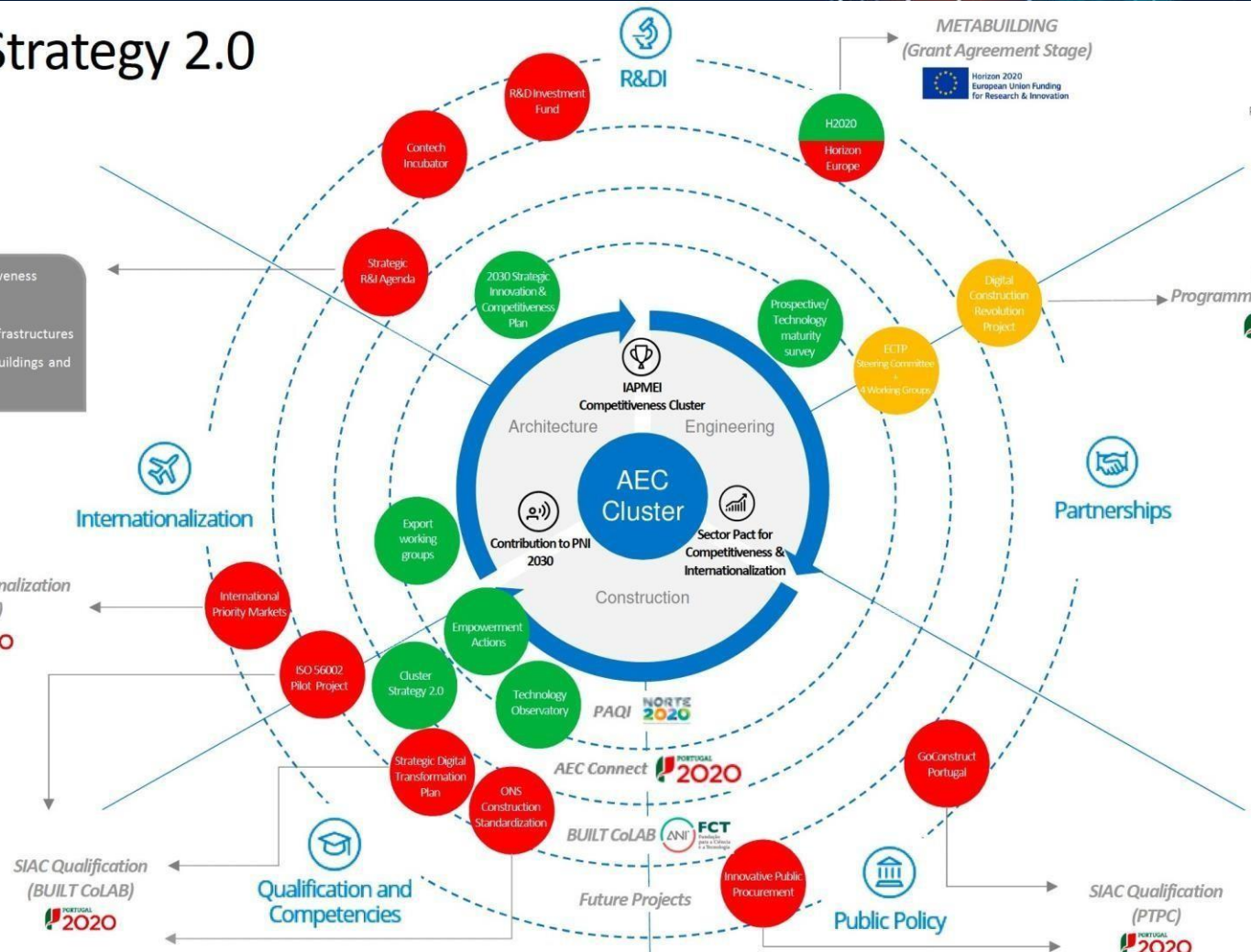
Total perspective

AEC Cluster's broad sector knowledge is available to help companies further enhance and accelerate their business opportunities.

Cluster Strategy 2.0

- Productivity and competitiveness
- Digital design tools
- Intelligent buildings and infrastructures
- Resilient and sustainable buildings and infrastructures

- Digitalization
- Platform & Apps
- Asset management
- R&D pilots



METABUILDING
(Grant Agreement Stage)
Horizon 2020
European Union Funding
For Research & Innovation

Mobilizing Programme (PTPC/BUILT CoLAB)
PORTUGAL 2020



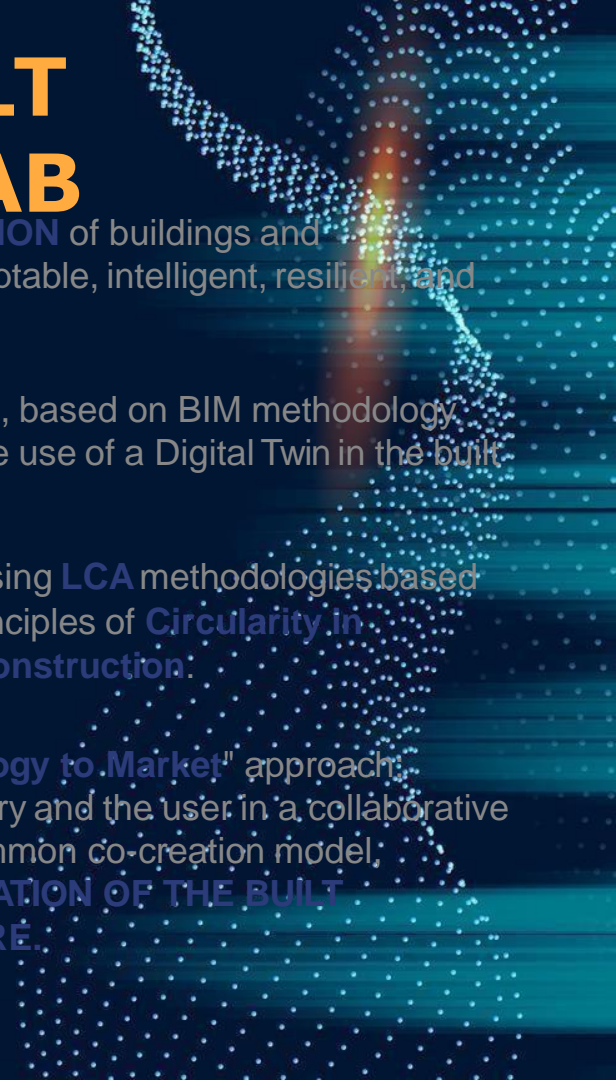
BUILT CoLAB

We promote the **TWIN TRANSITION** of buildings and infrastructures, making them adaptable, intelligent, resilient, and sustainable.

We promote the **DIGITALIZATION**, based on BIM methodology and technologies that promote the use of a Digital Twin in the built environment.

We promote **SUSTAINABILITY** using **LCA** methodologies based on **BIM** methodology and the principles of **Circularity in Construction to Decarbonize Construction**.

BUILT CoLAB follows a "**Technology to Market**" approach, joining knowledge centres, industry and the user in a collaborative environment, to encourage a common co-creation model, contributing to the **TRANSFORMATION OF THE BUILT ENVIRONMENT OF THE FUTURE**.



Thematic Strategy | Holistic approach

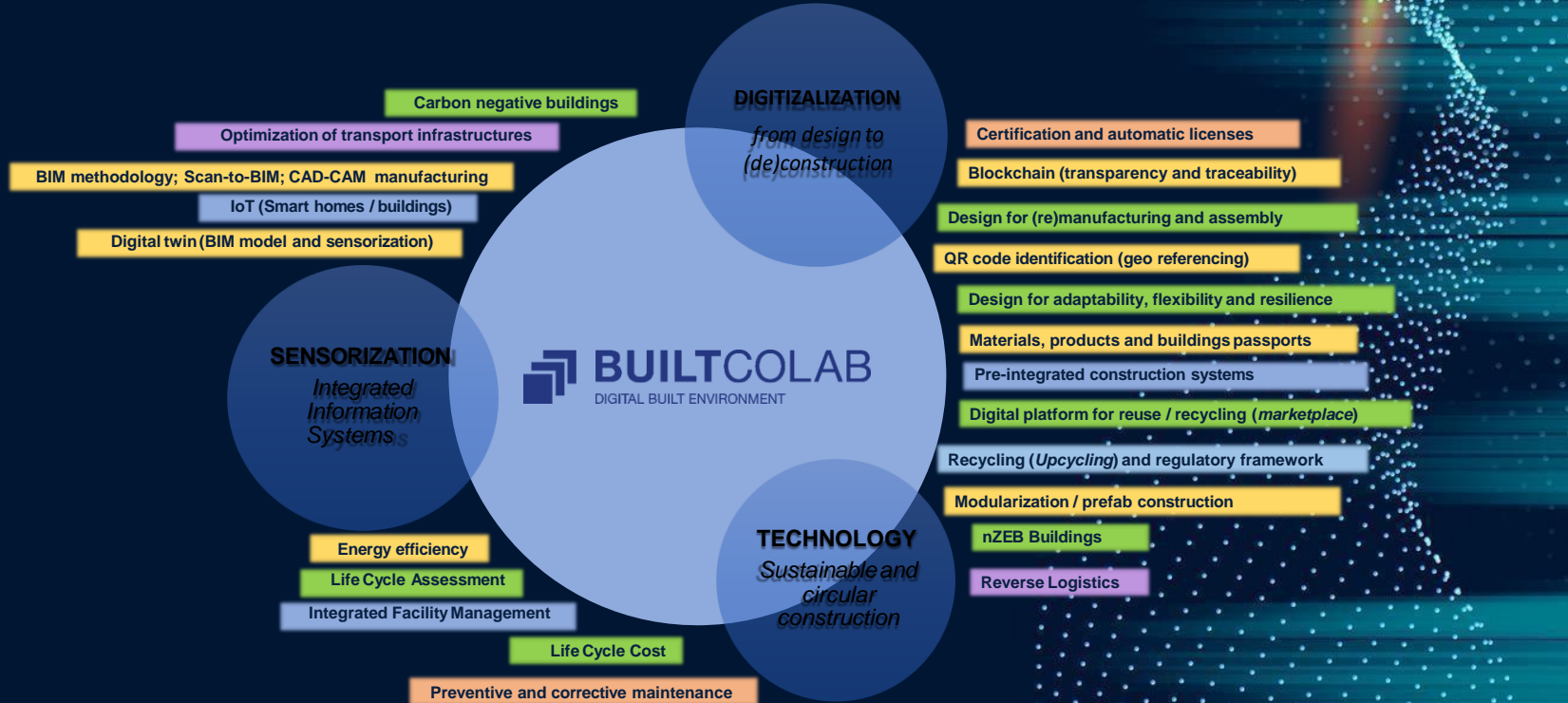
Smart Transport Infrastructures

IoT & Smart Technologies

BIM Intelligence & Digital Twin

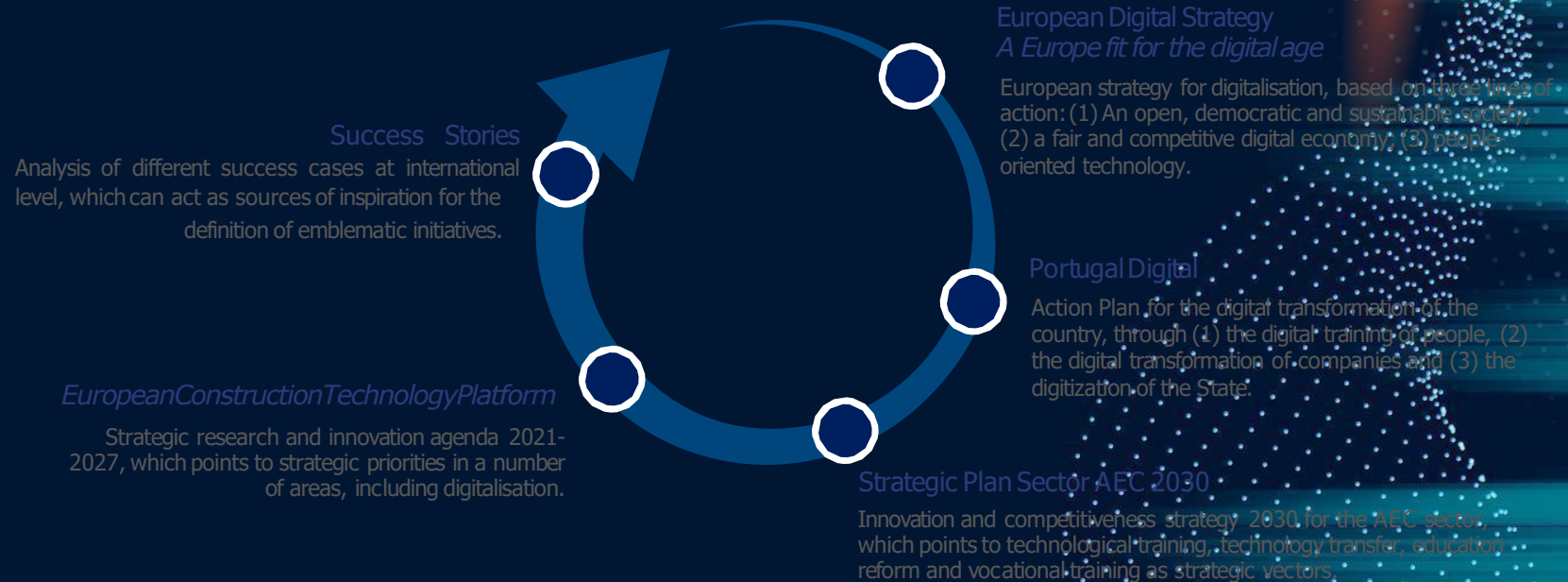
Green Transition

Standards & Digital Transition



Guiding principles

The genesis of the AEC Digital Transition Action Plan is based on the analysis of different strategic documents and sources of information:



Proposal for Strategic Pillars



Pillar 1 - Human Capital

- Education and qualification of people
- Digital training and inclusion



PILLAR 2 - BUSINESS FABRIC

- Digital transformation of companies in the sector, focusing on SMEs
- Transfer of technical-scientific knowledge



PILLAR 3 - PROCESSES AND MANAGEMENT

- Modeling and standardization of information
- Certification models

Advanced Technologies and Materials

Cybersecurity and Privacy

Decarbonization and sustainability

Catalysts

Catalysts for the digital transition of the AEC sector, across strategic pillars and different flagship initiatives:



Action Plan to accelerate the digitization of the country, focusing on the digital training of people, the digital transformation of companies and the digitization of the State.

**Recuperar Portugal
2021-2026**

Recovery and Resilience Plan for Portugal, which defines 9 roadmaps for the recovery of sustainable and inclusive growth, including Productive Potential and Employment, Energy Efficiency, Companies 4.0 and Digital Public Administration.



Strategic program that defines the properties for the country for the next decade, based on 3 axes, including Innovation and Knowledge and Qualification, Training and Employment.



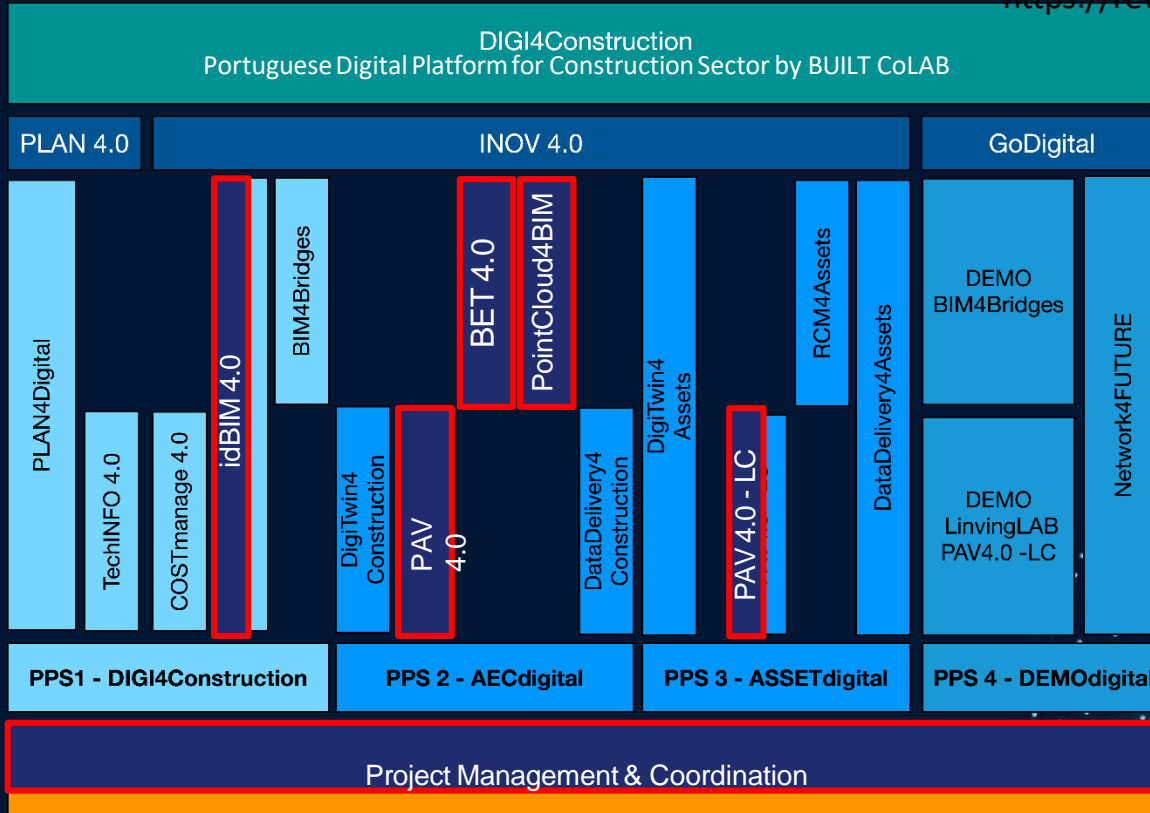
Sector Pact for Competitiveness and Internationalization, concluded between the Ministry of Economy and the AEC Cluster, which embodies a set of initiatives in areas such as digitization, human resources training and R&D.

Smart Transport Infrastructures	IoT and Smart Technologies	BIM Intelligence	Green Transition	Standards and Digital Transition
<p><u>AUTOMATION</u></p> <p>Automation</p> <p>PAV 4.0</p> <p>BET 4.0</p>	<p><u>IoTask</u></p> <p>Retrofitting</p> <p>Smart Office</p> <p>Fuel Estimator</p>	<p><u>Positiv</u></p> <p>ModuLIB • ModuLAB • ModuGEN • OPTIMIZE</p> <p><u>Simplify</u></p> <p>BIM Checker • BIM Classification</p> <p><u>SMILE</u></p> <p>Smart Digital Twin</p>		
<p><u>DigiTT</u></p> <p>Drilling</p> <p>Audit</p>	<p>SmartCommNode</p>	<p><u>BIMCloud4All</u></p> <p>Digi4Construction • idBIM - National Object Library</p> <p><u>Building Passport</u></p> <p>Blockchain4BIM • Construction Data Templates • BIMBench</p> <p><u>HIVE</u></p> <p>BIM Exporter • VR Cockpit • Construction Simulation</p>	<p>Circular Dynamics</p> <p>Circularity</p> <p>GreenSpecs</p>	



REV@Construction – Digital Construction Revolution

<https://revconstruction.pt/>

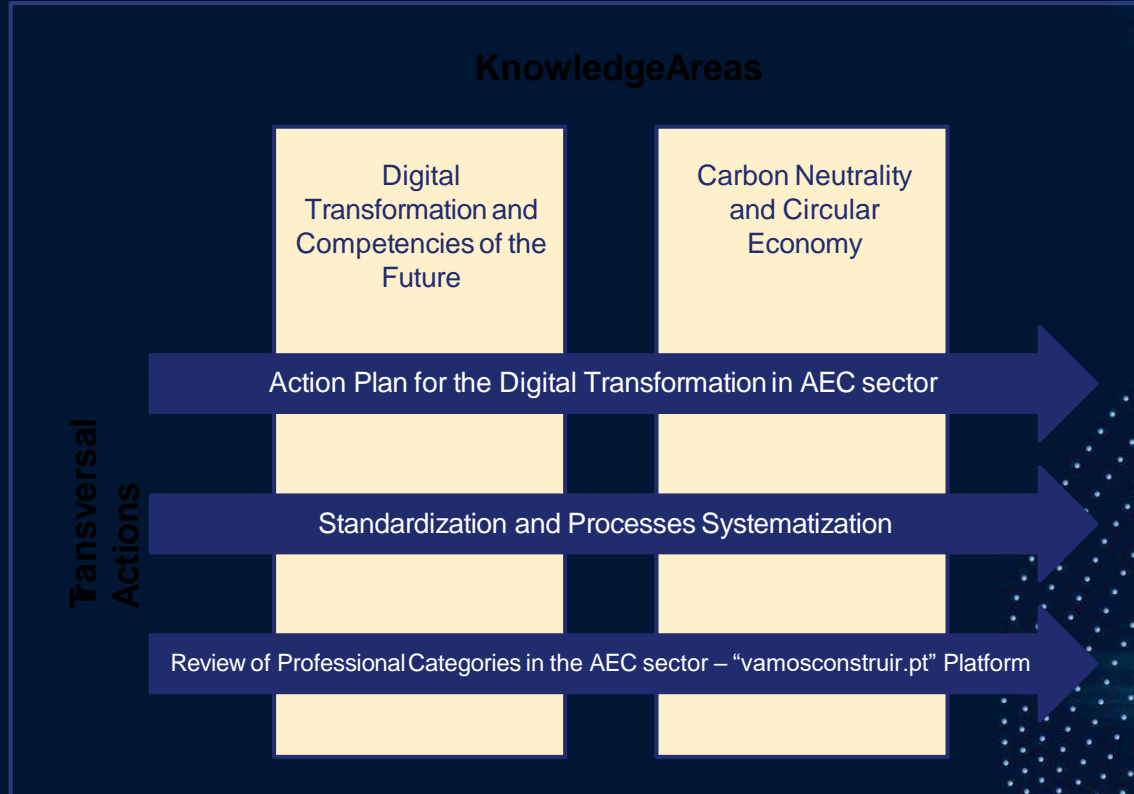


20 partners
9M€



Future of Construction

<https://futureofconstruction.pt/>



FOC is a project under the SIAC - Collective Actions Support System initiative.

The screenshot shows the DigiPME DigitalLEVEL assessment interface. On the left is a sidebar with navigation options: Transição Digital, Ferramentas Digitais, Normalização, DigiLEVEL (highlighted), and E-learning. Below the sidebar are language settings (PT), a search bar, and a user profile for Ana Rocha. The main content area is titled 'DigitalLEVEL' and 'Disponíveis: 22 perguntas'. It features a progress indicator for 'Estratégia' with a circular gauge. Two assessment questions are displayed:

1. Na sua empresa, existe uma estratégia para a transição digital da empresa?

This question has five levels (Nível 0 to Nível 4). Nível 0 is selected, with a description: 'Não existe plano para a digitalização da empresa.' Níveis 1, 2, 3, and 4 are unselected. Nível 4 has a description: 'Plano contínuo para a digitalização com implementação e realização de iniciativas contínuas em todas as áreas de atuação da empresa.'

2. Existe investimento em tecnologias e/ou iniciativas para a digitalização da empresa?

This question also has five levels (Nível 0 to Nível 4). Nível 4 is selected, while Níveis 0, 1, 2, and 3 are unselected. The progress indicator at the bottom shows '01 / 22'.



DIGPME Supporting the Twin Transition for SMEs

The objective is to support the innovation and digital transformation of SMEs and provide informed information, standards, tools and tools to support the digitisation processes of the AEC sector. The digime portal has as main objective, to guide SMEs to the national and European regulatory ecosystem, framing them in the processes of change and promoting their competitiveness at international level. It also serves as a repository of relevant documentation in the context of digitisation and as a guiding tool for SMEs in general. This portal also serves as a forward-looking observatory to support the development of periodic reports on the AEC sector, and SMEs in particular, analyzing its progressive modernisation.

Just Published/ *Circular Economy in the CI*

Circular Agreement with the Construction Industry (CI)

Involvement of the main Portuguese stakeholder associations:

APA, IMPIC, AICCOPN, CIP/CPCI, AECOPS e PTPC

Action Plan for Circularity in Construction in Portugal (PACCO):

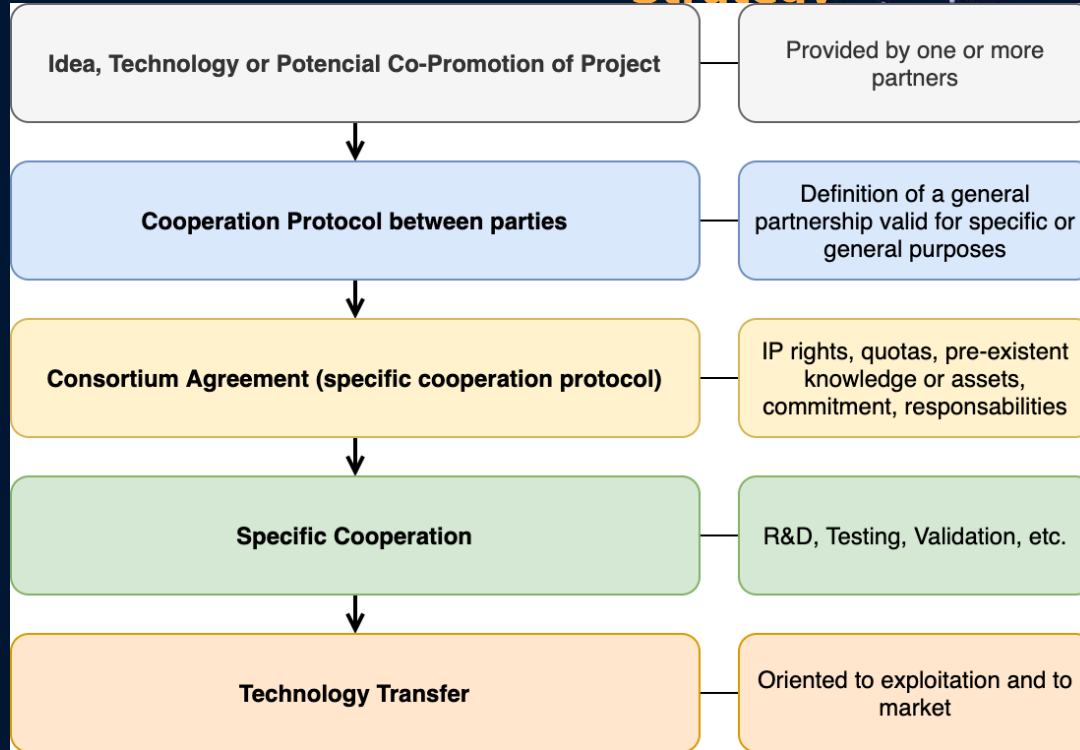
- Characterization of the state-of-the-art of circularity in the Portuguese CI;
- Documentation supporting the Portuguese waste framework;
- 4 workshops and 7 actions, in-person and online, and a final session on the 26th of January 2023;
- Development of the Action Plan and Executive Summary



Prospective projects in Sustainability

	Designation	Projectdescription	Connections
P01	PACCO implementation	Support for the implementation and realization of the Action Plan for Circularity in Construction (PACCO), including an Entity for Circular Construction and/or Entity for the twin transition	P02 e P03
P02	Communication and marketing implementation	Execution of the Action Plan's communication and marketing plan: executive summary, sectorial agenda, and dissemination actions	P01
P03	Ex-ante evaluation of measures	Ex-ante assessment of the economic, environmental and social impact of implementing measures and monitoring the implementation of PACCO	P01 e P05
P04	Baseline scenario for the construction industry	Technical study to characterize the construction sector and built environment to establish a baseline: resource consumption, waste generation and emissions	P01 e P03
P05	National standards and technical specifications	Study, design and elaboration of national standards and technical specifications on digital passports of materials, design for circularity, design for deconstruction	P06, P07, P12 e P13
P06	Residues management platform	Waste and secondary material management platform with geo-location (marketplace)	P05, P08, P12 e P13
P07	Case studies	Pilot cases demonstrating the environmental and economic benefits of transitioning to a CE	P05 e P12
P08	Urban & landfill mining	Study on the potential for reuse of materials in the existing building stock (potential for urban and landfill mining)	P03, P04 e P06
P09	Prospective study	Study (foresight 10-20 years) on circularity, super-circularity (increasing the value of materials throughout their life cycle), plug&play and "as a service" systems for installations, etc...	P04, P07 e P08
P10	Transition supporting manuals	Study, preparation and dissemination of manuals to support the transition to circularity	P02, P05 e P09
P11	National database and eco-design digital tools	Eco-design digital tools, including digital tools to support the application of the Level(s) framework adapted to the national reality	P13 e P14
P12	Digital tools supporting pre-demolition audits	Methodology and development of a digital support tool for pre-demolition audits considering the technical specifications	P06, P07 e P08
P13	Certification schemes	Creation of certification schemes based on standards and technical specifications	P05, P07, P11 e P12

Knowledge Transfer Strategy



How can one benefit from the Portuguese AEC ecosystem?



Architecture
Engineering
Construction



- A NEW EMERGING MARKET WITH MUCH TO BE DONE IN THE TWIN TRANSITION

- AN INVESTMENT OPPORTUNITY WITH A VIBRANT R&D ECOSYSTEM

- TOP-NOTCH HUMAN RESOURCES (ENGINEERING AND ARCHITECTURE)

- AN OPEN DOOR TO PORTUGUESE-SPEAKING MARKETS

- INTERNATIONAL EXPERTISE

- MULTI-LATERAL PREVIOUS EXPERIENCE

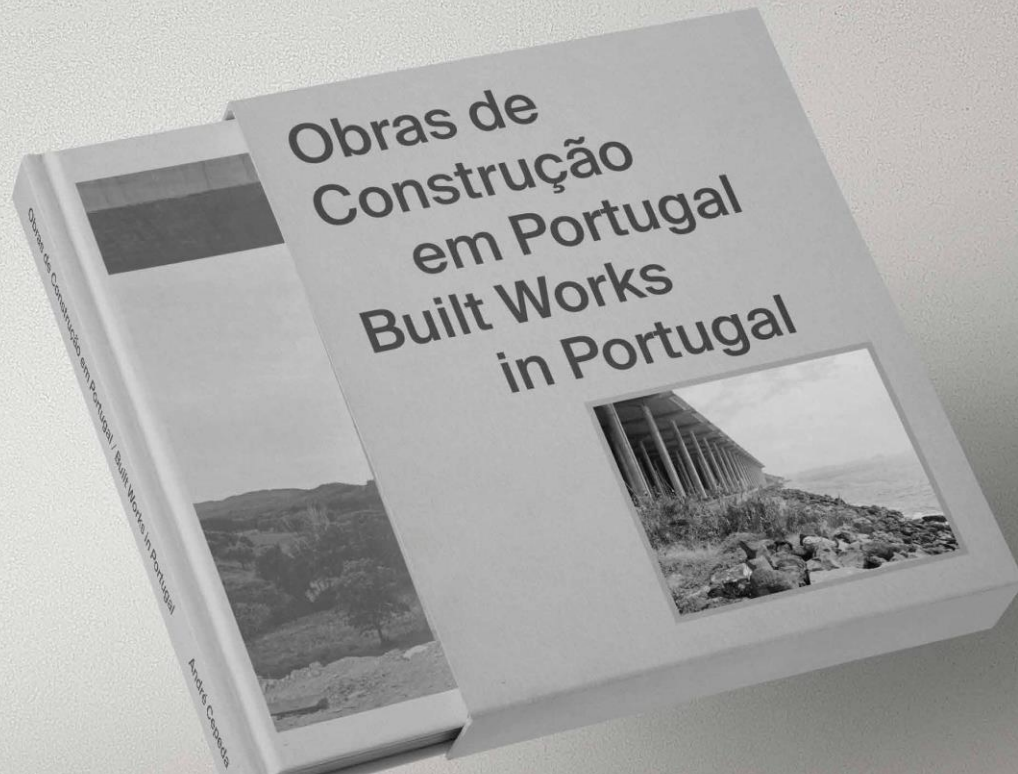
- SUSTAINABLE MATERIALS INDUSTRY

Obras de Construção em Portugal / Built Works in Portugal

André Cepeda

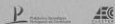
Obras de Construção em Portugal Built Works in Portugal





Pavilhão de Portugal na EXPO98; Office Park Expo – Campus de Justiça de Lisboa; Autoestrada A10 e Nó de Interligação à Autoestrada do Norte (A1); Hospital CUF Tejo; Empreendimento One Living; Ponte de Alcácer do Sal – Variante de Alcácer do Sal – 2ª Fase; Atravessamento Ferroviário do Sado e Viadutos de Acesso; Barragem de Salamonde, reforço de Potência do Aproveitamento de Salamonde – Salamonde II; Túnel do Marão – IP4 (A4); A41-Douro Litoral, Ponte sobre Rio Douro, Túneis de Acesso e Ponte sobre Rio Sousa; Bairro Alto Hotel; Vidago Palace Hotel; Hilton Porto; Ponte Vasco da Gama; Oceanário de Lisboa; Fundação Champalimaud; Aeroporto do Funchal; Ponte das Lezírias; Linha Alameda – Expo do Metropolitano de Lisboa; Edifício/Casa Apalaçada na Av. da Liberdade; Expansão do Estaleiro da Mitrena – Construção do Hydrolift; Barragem de Alqueva – Aproveitamento Hidroelétrico de Alqueva; Aproveitamento Hidroelétrico de Foz Tua (Barragem e Central subterrânea em poço); Aproveitamento Hidroelétrico de Venda Nova III / Frades II (Central subterrânea em caverna e um Circuito Hidráulico em túnel); Estádio do Dragão; 516 Arouca – Ponte Suspensa; Nova Ligação Ferroviária entre Évora Norte e Elvas/Caia; Requalificação do Castelo de Leiria; Acessos/Ascensores Mecânicos ao Castelo de Leiria; Ponte 25 de Abril (Alargamento e instalação do tabuleiro ferroviário)

Parceiros / Promotores

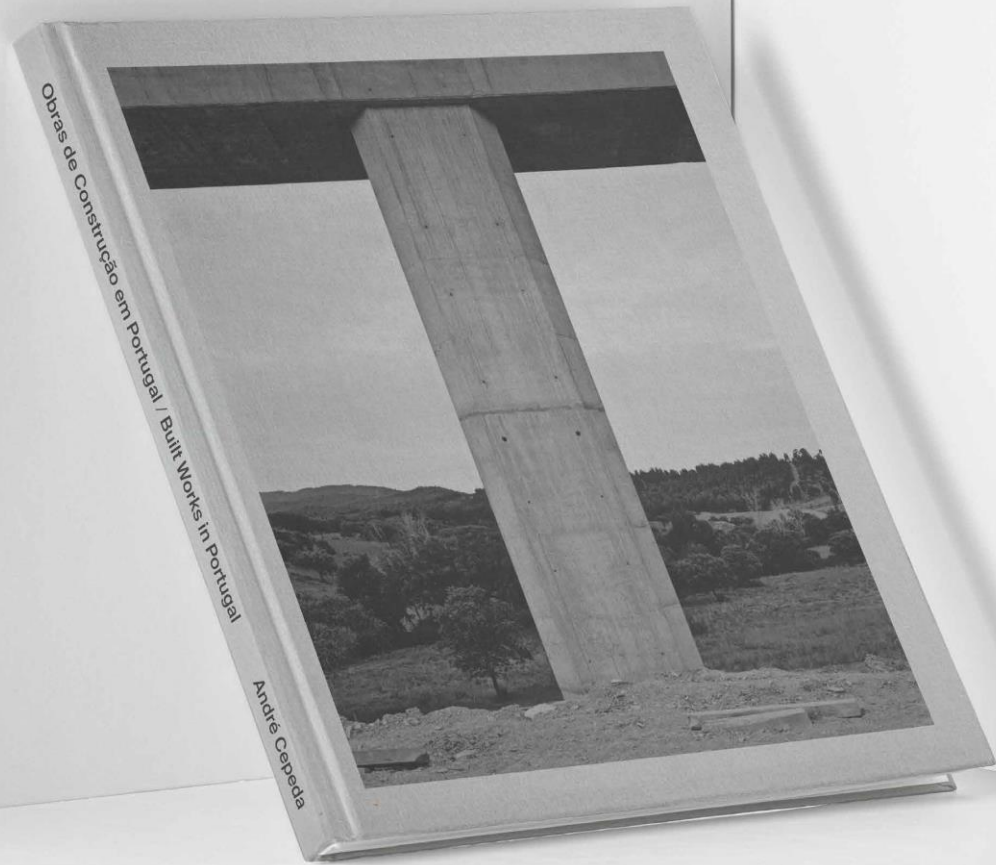


Co-financiada por / Co-financed by



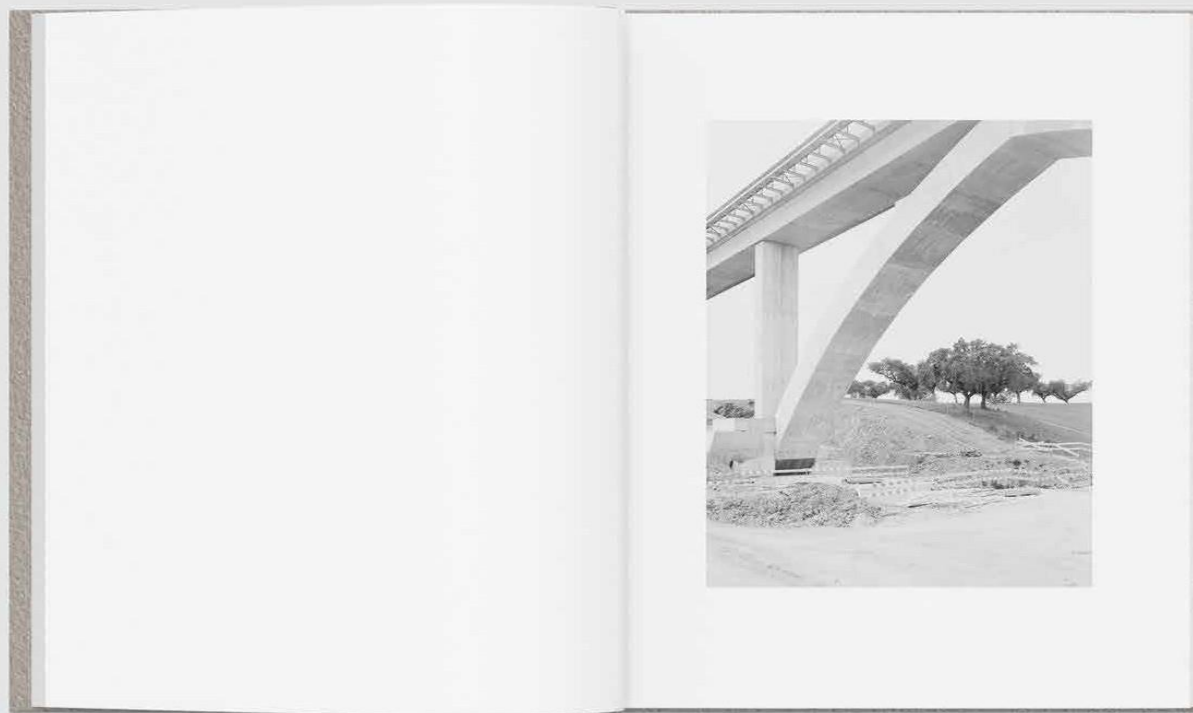
Com o patrocínio de / With sponsorship of





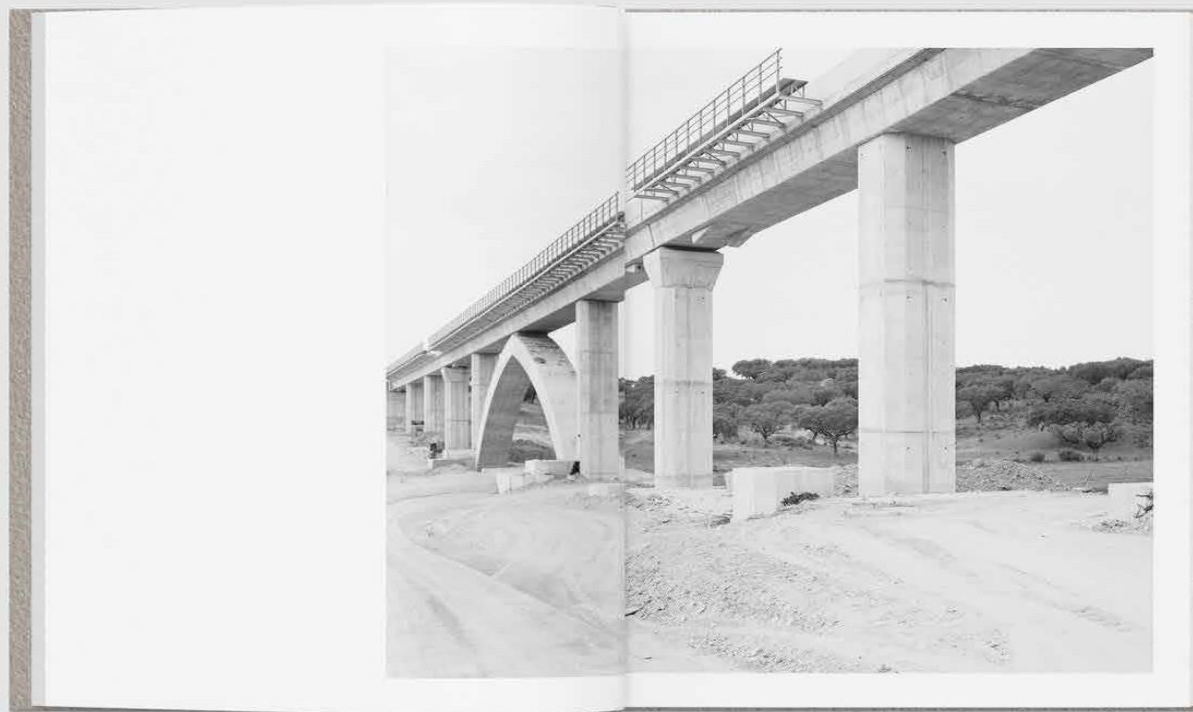
Obras de Construção em Portugal / Built Works in Portugal

André Cepeda



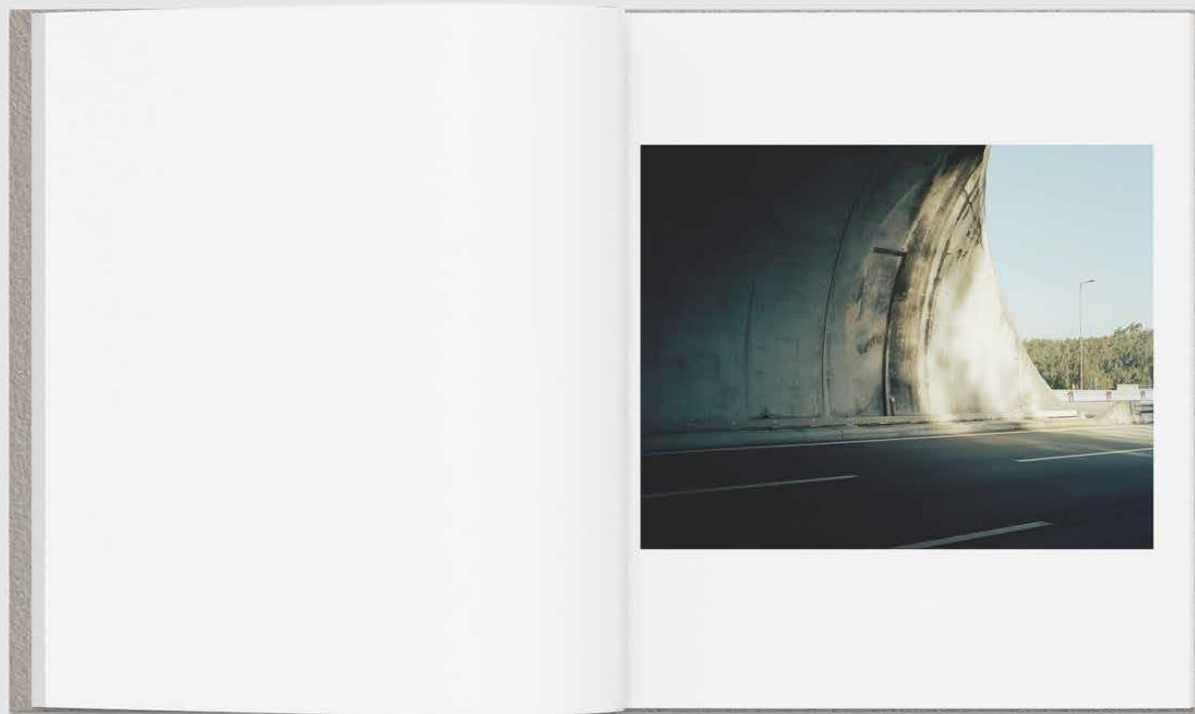




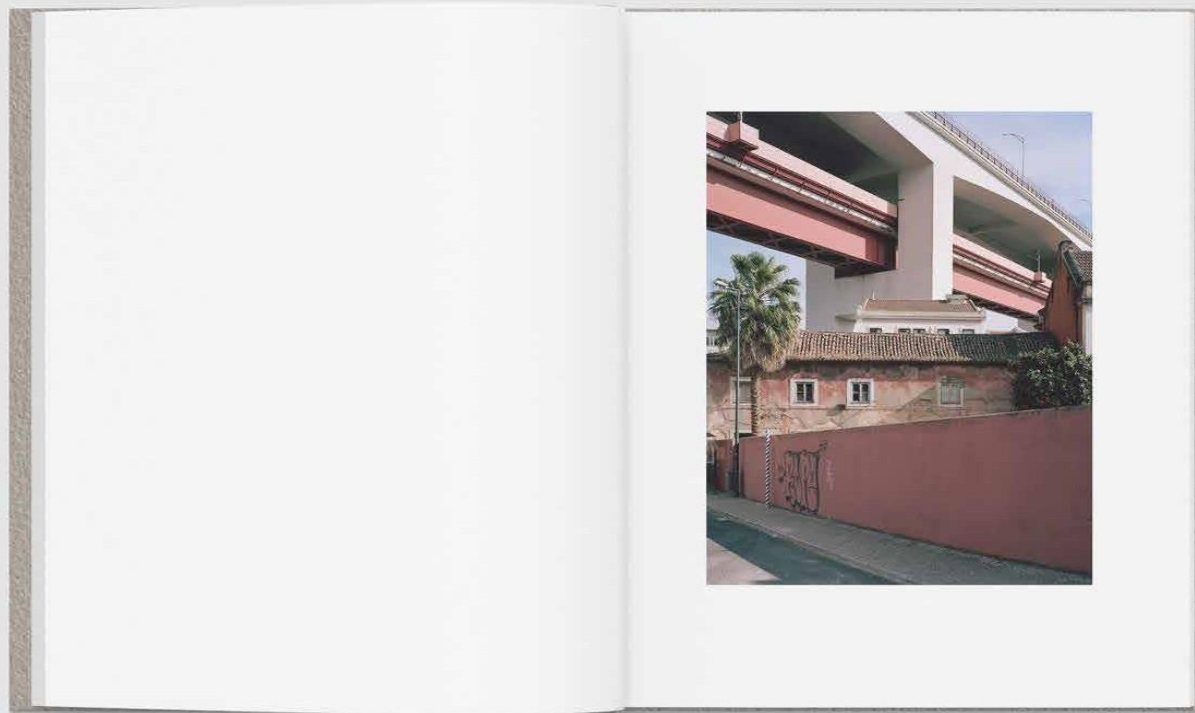












Obras de
Construção
em Portugal
Built Works
in Portugal

Ana Sofia Guimarães
André Tavares
Bárbara Rangel
Mário Rinke
Sérgio Mah

Lista de Obras

List of Constructions

04

05



Obras / Condições:
Pavilhão de Portugal na EXPO98

Localização / Location:
Parque das Nações, Lisboa

Intervenção / Intervention:
Construção

Ano / Year:
1998



Obras / Condições:
Office Park Expo - Campus de Justiça
de Lisboa

Localização / Location:
Parque das Nações, Lisboa

Intervenção / Intervention:
Construção

Ano / Year:
2009



Obras / Condições:
Autopista A10 e N5 de Interligação
à Autoestrada do Norte (A1)

Localização / Location:
Carregado

Intervenção / Intervention:
Construção

Ano / Year:
2006



Obras / Construction:
Hospital CUF Tejo
Localização / Location:
Lisboa

Informação / Information:
Construção

Ano / Year:
2020



Obras / Construction:
Emorrendimento One Living
Localização / Location:
Cascais

Informação / Information:
Construção

Ano / Year:
2021



Obras / Construction:
Variante de Alcácer do Sal - 2ª Fase
Atravessamento Ferroviário do Sado e
Viadutos de Acesso

Localização / Location:
Rio Sado, Linha Ferroviária do Sul, Km's
8+350 e 11+295, Alcácer do Sal

Informação / Information:
Construção

Ano / Year:
2013

06



Obras / Construction:
Pavilhão de Portugal na EXPO98
Localização / Location:
Parque das Nações, Lisboa

Informação / Information:
Construção

Ano / Year:
1998

07



Obras / Construction:
Ofício Park Expo - Campus de Justiça
de Lisboa
Localização / Location:
Parque das Nações, Lisboa

Informação / Information:
Construção

Ano / Year:
2009

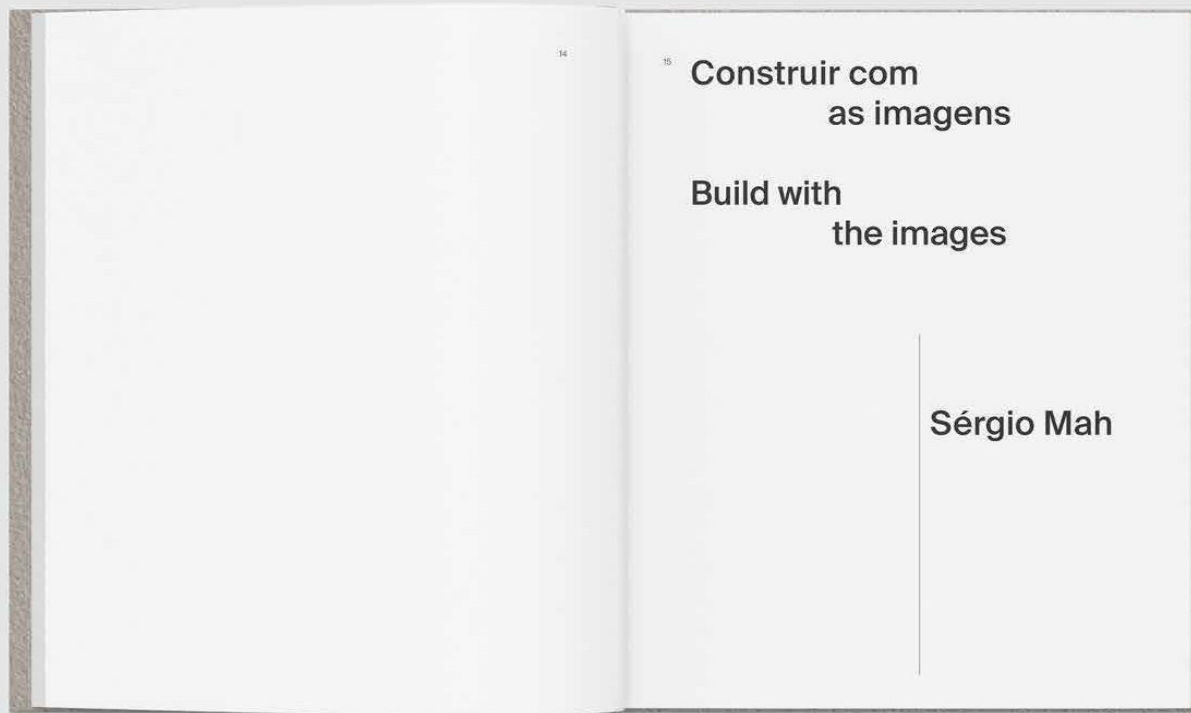


Obras / Construction:
Autopista A10 e N5 de Interligação
à Autopista do Norte (A1)

Localização / Location:
Carregado

Informação / Information:
Construção

Ano / Year:
2006



14

15

**Construir com
as imagens**

**Build with
the images**

Sérgio Mah

[PT] São muitas as histórias de relações entre fotografia, engenharia e arquitetura. Com êxito, o aparecimento da primeira máquina fotográfica no século XIX, e sua subsequente consolidação na época moderna, foi concomitante com progressos revolucionários no campo da engenharia contemporânea, com o surgimento de novas tendências na arquitetura. A fotografia foi um meio privilegiado na documentação desses tempos de agitação mundial, associados e potencializados pelas descobertas e resultados inerentemente visuais que distinguem também os novos tipos. Músculos, cabelos, roupas formais de adorno da figura da engenharia e da arquitetura. Paralelamente, a fotografia no contexto das artes visuais e do seu papel central na passagem cultural das sociedades modernas e modernas, projectando o modo de um tempo novo, diferenciado de novos horizontes perceptivos e realidades.

Recordemos que as vitais giram ou paralam de edifícios em contexto urbano ou rural, designam um novo primeiro plano da história da fotografia, como se controla pelas imagens realizadas por alguns dos seus pioneiros, como Joseph Nicéphore Niépce, Louis-Jacques-Mandé Daguerre, William Henry Fox-Talbot e Hippolyte Bayard. Pistas suas incógnitas, ressonâncias culturais, simbólicas e sociais, à arquitectura afiladas-se ao mesmo tempo, carónicas e suficientemente expressivas para os fotógrafos. Porém, essas incipências também se levam a outros pontos. A importância do estudo arquitectónico via fotográfica levou longos tempos de exploração que nos permitiu da fotografia poderam chegar a qual algumas decisões do método. O edifício inserido em um assunto, claramente presente na produção documental e motivação da operação fotográfica. Paralelamente, a fotografia foi um meio muito útil para a promoção e análise da arquitetura, permitiu assegurar representações realistas e credíveis, permitiu uma análise histórica e estética da arquitectura, mas também uma aproximação mais científica ao estudo da arquitectura, em consonância com o aprofundamento de pesquisa nos aspectos dos arquitectos.

Logo após a sua invenção, a fotografia foi rapidamente actualizada pelos argumentos de variando positiva que suportava o desenvolvimento das técnicas fotográficas e humanas. Nessa época, os discursos da volta da fotografia eram consistentes na seguinte conclusão: o que a fotografia é a conservação e a transferência permanente impressa pela afirmação do "naturalismo nas artes representativas", nesse sentido, a fotografia como a relação mais próxima da realidade.

E com base nas suas características ontológicas e epistemológicas que a fotografia se vê incorporada no mundo moderno como um meio preferencial na documentação, estudo e divulgação da arquitectura, adoptando também as áreas do planeamento urbano e da conservação do património. A esse nível, é de destacar o seminário projecto da Missão Helográfica, iniciado em 1853, que consistiu num encontro de planeamento urbano efectuado por vários regimes de França como um primeiro para uma política de restauração. Trata-se de uma das primeiras fotografias francesas de França, como um primeiro para uma política de restauração. Também se deu uma das primeiras fotografias francesas de França, como um primeiro para uma política de restauração. Também se deu uma das primeiras fotografias francesas de França, como um primeiro para uma política de restauração.

E neste contexto que se conhece a ideia de documento fotográfico de arquitectura, cujo modo de ser em todo o mundo mudou sentido à medida que evoluiu para as artes visuais e para o sentido em que se apropriou nas suas várias manifestações, sobre uma determinada realidade arquitectónica, por outro lado, a imagem feita-se a partir de um documento de uma dada situação histórica, podendo ser inserida e articulada num contexto urbano e cultural, para ser analisada e interpretada de acordo com os critérios da análise crítica. As imagens fotográficas realizadas para a Missão Helográfica que foram antes mas também usadas com finalidade de documentação e restituição de edifícios e monumentos.

Essas mesmas expectativas e funções justificam a importância conferida à fotografia no âmbito da inventarição de grandes informações urbanas ocorridas no século XIX, sendo o caso mais evidente o parisiense. A quem levou lugar em Paris, entre as décadas de 50-70. Sob a tutela de Georges Eugène Haussmann, director do antigo departamento de Sena, é desenvolvida uma tarefa renovada, afim de se obter a forma de responder às necessidades e condições específicas de uma cidade onde se vivencia a manifestação espacial e o desenvolvimento permanente do comércio e da indústria. Nesta altura, foram obtidas as extraordinárias fotografias de Charles Marville que, após concluída a comissão municipal Trajetos Históricos, em 1865, realizou centenas de imagens do antes e depois de uma intervenção urbana que visava tanto a cidade e a paisagem e a seguir das metodologias europeias. As fotografias de Charles Marville, marcaram a transição entre a cidade antiga e nova. A distinção em que se dá a prioridade às necessidades da cidade e a seguir da paisagem urbana, através da transformação urbana que se via também do ponto de vista político e urbanístico. Segundo Implet. De facto, o monumento traçado de Charles Marville é paradigmático de uma visão de arquitectura institucional que se preocupava por diversos aspectos, o que é revelador da crescente importância conferida por métodos de documentação e do papel da fotografia na actualização de estratégias urbanas e culturais.

A fotografia foi indiscutivelmente um instrumento primordial na análise e construção de uma modernidade urbana, que assume a cidade também como uma realidade perceptiva de percepções imaginárias. Como admitiram vários historiadores, o alargamento do conhecimento das ruas e dos espaços, a proliferação de ruas comerciais com montões, o que aumentou de modo notável, o interesse social, a importância das evidências que apontam para uma forma de controle e cidade como uma realidade física que inicia a percepção de uma nova cultura e tecnologia, consequentemente precedido e apelativo para a experiência da vida.

Como conceito histórico e cultural, a modernidade está fortemente ligada ao sentido de actualidade. Ao conceito único de Paris e a seguir, do resto a acontecer, incluindo no mundo a oposição de uma realidade perceptiva que encara o espaço e a cidade que se apresenta a realidade. Neste contexto, a fotografia foi um instrumento crucial no acompanhamento do modo de organização da cidade e a seguir das relações e formas de caminhar de forma tradicional, documentadas em Portugal por Emilio Delfino (1883), historicamente conhecidas, assim como de edifícios característicos e interiores

17 referências, nomeadamente para as decoradas exposições universais. Foram também os seus acurados e a enorme complexidade entre fotografia, arquitectura e engenharia, suportada pelo sistema técnico de representação gráfica, as artes de imagem, arte e tecnologia, que são determinantes no desenvolvimento da arte moderna, em especial no contexto das vanguardas artísticas do início do século XX.

É conveniente recordar que na cultura ocidental, as sensações documentadas pelo progresso técnico do momento tiveram expressão simbólica no mundo da arte - reconhecidas que em meados do século, o pensamento crítico de John Ruskin continuava a exortar os artistas a desenvolverem das "formas decoradas" produzidas pela indústria. Nessa mesma linha, em 1883, Ingres, o célebre pintor francês e figura preeminente na passagem do neoclassicismo para o romantismo declarou: "Quem-se agora mistura a indústria e a arte. A nacional não não a quem tem. Quem não se mantém no seu lugar e não vem estabelecer-se nos degraus da nobreza está da Ásia, consagrado apenas às artes da Grécia e de Roma".

Não obstante, e também o sobretudo devido à fotografia que uma nova sensibilidade estética cresce no contexto da modernidade, aliada ao culto da tecnologia e da indústria, visando um novo conceptualismo visual. Quando vemos as imagens de uma nova geração de fotógrafos especializados nas técnicas da arquitectura e da engenharia, como Philip Henry Delmonico, Eduard Bacia, Auguste Colard, Delmonico e Duardeste apontam-nos que não procuravam apenas compreender as dimensões documentais e realidades de imagem, interessa-se-lhes também explorar as variáveis da governança e perspectiva. Por outras palavras, não se criam a expressão a partir das suas formas, mas também, se impõem, impõem descrever como o assunto é reconstruído através da perspectiva de um ponto de vista em que se conjugam com a concepção da luz e de efeitos de sombra.

Neste período, é interessante observar as fotografias realizadas por Philip Henry Delmonico do Crystal Palace, um vasto salão das exposições em Lenno Dunro e voto construído pela primeira vez no Hyde Park para abrigar a Grande Exposição de 1851, a primeira das exposições mundiais. Rapidamente se tornou conhecida que as evoluções na engenharia e na arquitectura estimularam as fotografias a desenvolver as representações de carácter "administrativo", do mesmo modo do estudo fotográfico, tornando-se a nova realidade desolada e fotografada assim-se como um reflexo, uma experimentação que se confronta com os objectos reais que são surgido no passado moderno, cultura e tecnologia, consequentemente precedido e apelativo para a experiência da vida.

Algumas décadas mais tarde, também para uma Exposição Universal, em 1889 ocorreu a realização de uma série de estudos na história da engenharia, a construção da Torre Eiffel, em

Paris. Uma obra que confirma a revolução tecnológica em curso, que não se detém a um funcionalismo concreto, e que encontra a sua razão principal na cura estética e na exaltação das capacidades do espírito humano para o alcance da construção da Torre Eiffel foi profundamente fotografada por Auguste Colard tendo uma parte deslizada imaginada sob mãos reais, tendo uma extraordinária publicação. As fotografias foram feitas de ano de dois anos, ano de dia e sua divulgação. As imagens mostram a construção da fotografia de formas e dimensões da estrutura da torre e a procura da perspectiva mais sugestiva nesses abstracções formais. Gradualmente, o fotógrafo foi abandonando as práticas tradicionais, optando por trabalhar com a paisagem geométrica e volumétrica da torre. Emerge assim uma visão singular estimulada pela imaginação das invenções, curvas, grelhas, picos, escostas, pilares, travess, arcos, que antecedeem as fotografias que Luzard Monclay-Nagy, Albert Berg-Blatzsch e Germane Blud vieram a realizar nos decada de 20 do século seguinte. É uma nova retórica que desponta, que aponta para uma beleza abstracta, geométrica e algebrada.

Enquanto discursivo construtivista à indústria moderna, a fotografia é planeada por uma nova realidade evolutiva perceptiva e criativa, como medium que propicia novos padrões ópticos, reconstruindo a nossa compreensão das coisas e do seu espaço e, consequentemente, estabelecendo horizontes mais vastos no do respeito à experiência histórica do espaço urbano. Em suma, esse mundo novo que nasce com os avanços industriais e tecnológicos, é com os consequentes progressos no domínio da engenharia e da arquitectura, acabam inevitavelmente por induzir a fotografia na prossecução de uma actuação económica, social e tecnológica, através da atenção às estruturas, estéticas e particularidades formais, como curvas, desníveis, inclinações, linhas verticais, diagonais e horizontais, curvas, etc., às variações perspectivais, por entre equilíbrios, vertical e horizontal, frontais, oblíquas, diagonais ou contradições, aproximação ou distanciamento, reflexões ou transparências, dinâmicas entre interior e exterior, entre o que é longo e o que é curto e a escala das coisas, entre efeitos de monumentalidade e de minimalização.

Ao longo do século XX este tipo de articulações entre fotografia, engenharia e arquitectura desdobrou-se por múltiplos sentidos e dimensões. Da qualidade técnica da instalação e da engenharia construtiva para a afirmação de uma cultura fotográfica como parte fundamental de uma nova realidade cultural tecnológica, com a concepção geral de que o mundo dos assuntos técnicos pertence de algum modo às imagens técnicas, nomeadamente a fotografia. Como chegou a afirmar Albert Berg-Blatzsch, em 1927, «a fotografia pode fazer justiça a estrutura linear rígida da tecnologia moderna», as grandiosas grelhas metálicas das pilares e pontes, os programas das máquinas que operam a força de mão cavadas. Com efeito, a fotografia assume uma longa emancipação e a longa casa urbana, no sentido em que as inovações tecnológicas corroboram a promessa de uma modernização global. Por outro lado, é também através da fotografia, enquanto um meio mediador entre vários níveis de saber e de expressão, que técnicas da engenharia

Ficha Técnica Colophon

Publicado por / Published by
Plataforma Tecnológica Portuguesa de Construção

Fotografia / Photography
André Copesco

Textos / Texts
Ana Sofia Guimarães
André Tavares
Barbara Ringel
Mara Rênes
Sérgio Mah

Projeto editorial / Editorial project
André Copesco
Sérgio Coura

Design gráfico / Graphic design
Sérgio Coura

Revisão e Tradução / Proofreading & Translation
???

Digitalização e Tratamento de Imagens / Scanning and Image Treatment
Blues Photography Studio

Impressão e Acabamentos / Printing and Binding
Gráfica Malicioso, S.A.

Impressão / Printed on
500

ISBN
978-972-71-1111-1

Depósito Legal
34800/2017

Agradecimentos / Acknowledgments

A PTCP agradece a todas as Entidades que autorizaram a utilização das imagens e possuíam a acessibilidade aos locais e estações das Obras representadas.

Um agradecimento especial às seguintes entidades que concederam o acesso e apoiaram a execução desta iniciativa em Obras de acessibilidade mais difíceis ou condicionadas: Bria - Auto-Estradas de Portugal; Fundação Chaim Paliamauf; Futebol Clube do Porto; IP - Investimentos de Portugal, S.A.; Larnave - Estaleiros; Naveis, S.A.; Metropolitanos de Lisboa, E.P.E.

Proteções / Protections



Co-financiado por / Co-financed by



Com o patrocínio de / With sponsorship of



© 2022. Todos os direitos reservados. Nenhuma parte desta publicação pode ser reproduzida em qualquer forma ou por qualquer meio eletrônico sem a prévia autorização escrita dos titulares dos direitos reservados. All rights reserved. No part of the publication may be reproduced in any form or by any electronic means without prior written permission from the copyright holders.

Todos os direitos reservados. Nenhuma parte desta publicação pode ser reproduzida em qualquer forma ou por qualquer meio eletrônico sem a prévia autorização escrita dos titulares dos direitos reservados. All rights reserved. No part of the publication may be reproduced in any form or by any electronic means without prior written permission from the copyright holders.