

SUSTAINABLE AND GREEN MOBILITY

INNOVATIVE FINANCING MODELS FOR PROMOTING GREEN MOBILITY

29/10/2021

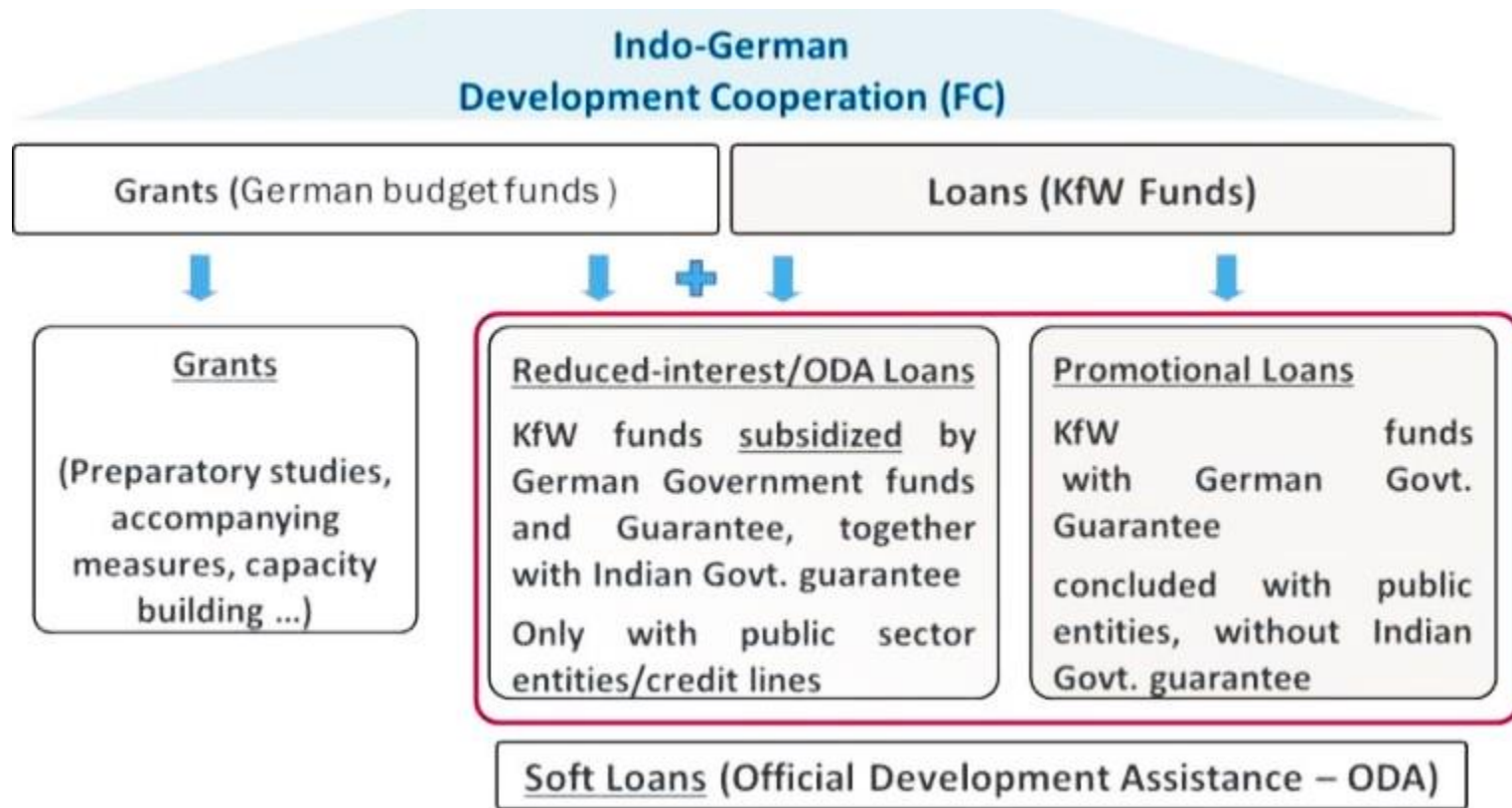
Ms. Anja Fourie

KFW DEVELOPMENT BANK

- Financial Cooperation arm of Indo-German Cooperation
- AAA rated promotional bank of the Federal Republic of Germany;
- Established in 1948
- Headquarters: Frankfurt
- India Office: New Delhi



TRADITIONAL FINANCING INSTRUMENTS



INDO-GERMAN DEVELOPMENT FINANCE COOPERATION

A history of
more than

60

years

Projects under
implementation

EUR

~7 bn.

Current annual
commitments

EUR

~1.0 bn.

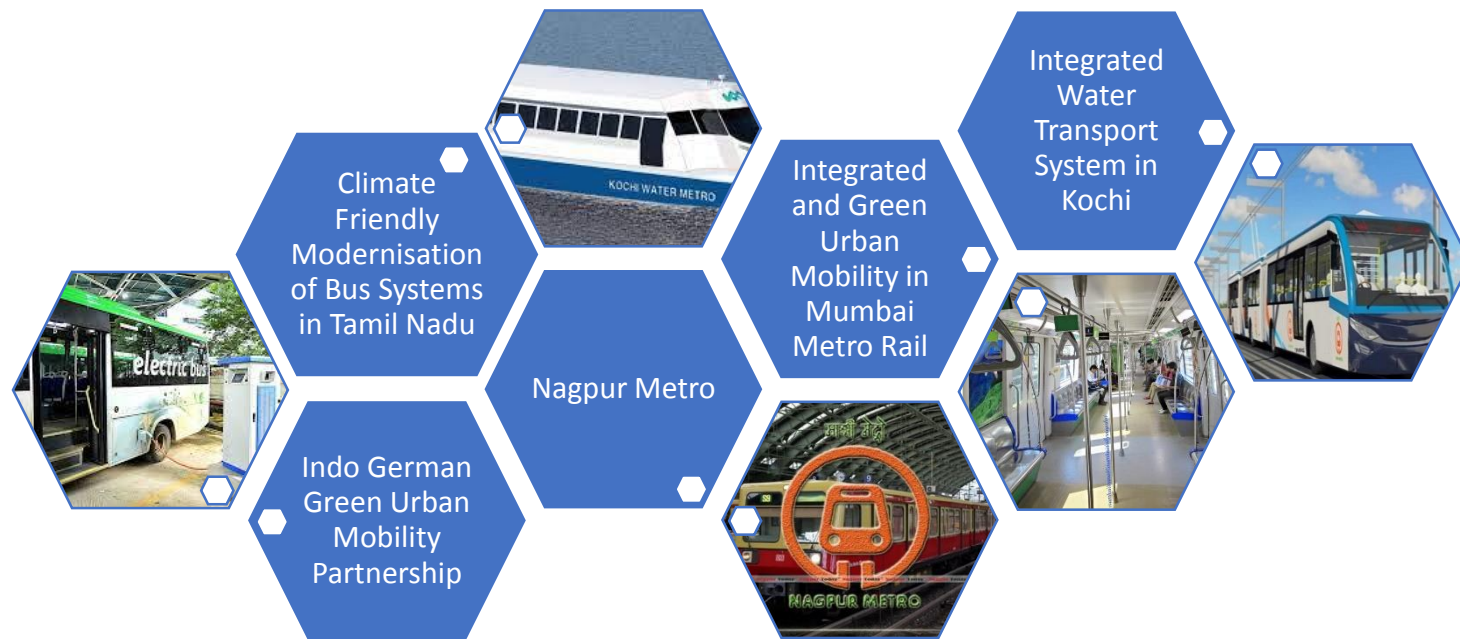


Key Areas of Cooperation:

- **Urban Mobility and Sustainable Urban Development**
- Energy (access to energy, renewable energy, energy efficiency)
- Natural Resource Management (Forestry, Ecological Agriculture)



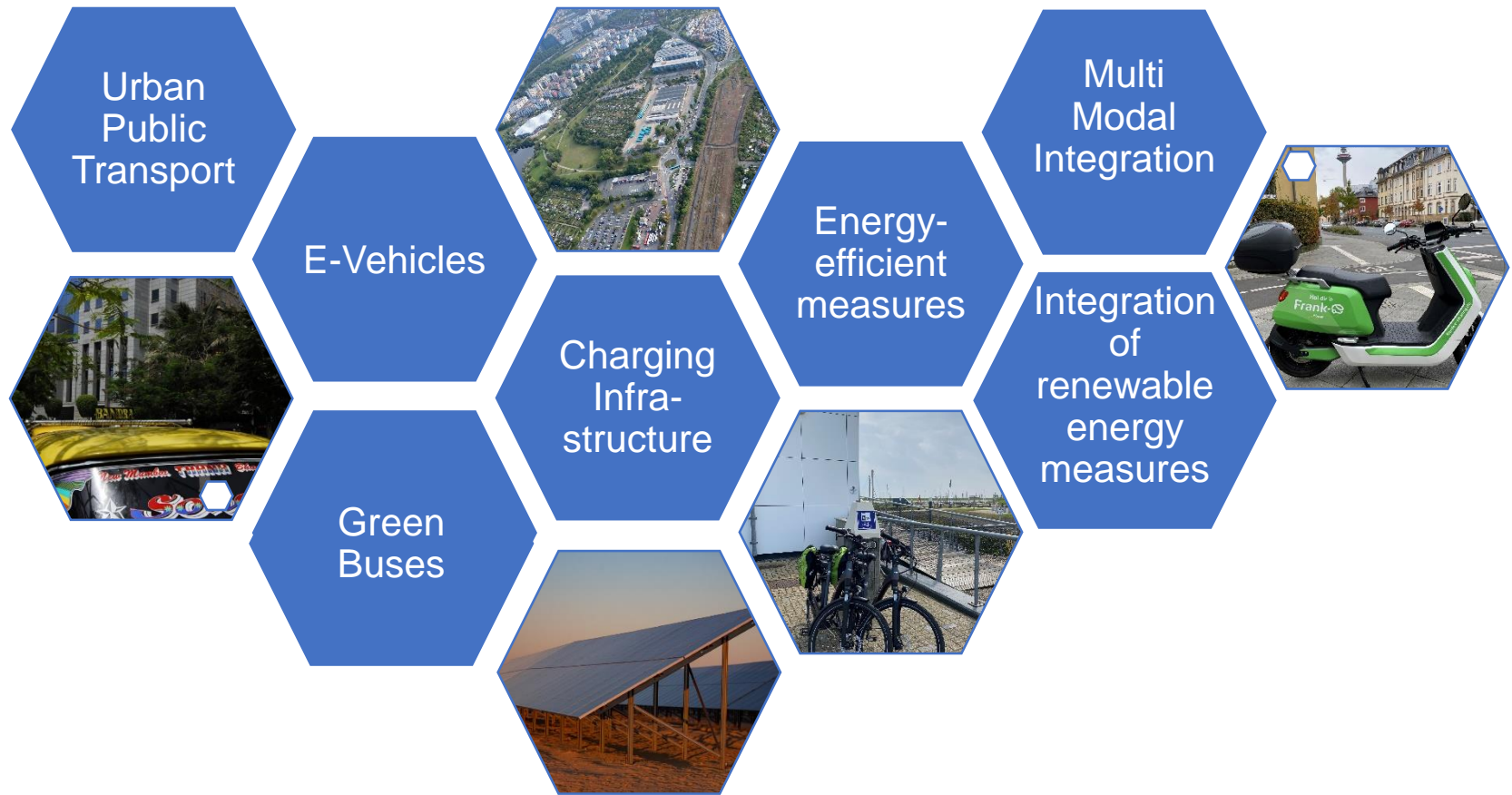
OUR GREEN URBAN MOBILITY PORTFOLIO IN INDIA



Green Urban Mobility Partnership ~€ 1.0 bn



OUR SPECTRUM OF GREEN URBAN MOBILITY



PROJECT EXAMPLE

CLIMATE FRIENDLY BUS MODERNISATION IN MAJOR CITIES OF TAMIL NADU

Challenges

- 34% urbanization rate in Tamil Nadu
- Rising individual motorization due to dilapidated public transport system
- Transport sector fastest growing GHG emitter in India

Approach

- Modernized bus fleet combined with extensive digitalization

Impacts

- Increased public transport attractiveness
- CO2 savings of around 2 900 tons per day
- Efficient, safe and sustainable viable bus operations



Information

- Up to 2, 213 outdated and uneconomical diesel buses replaced by modern, energy-efficient models
- 500 E-buses deployed in Chennai, Coimbatore and Madurai
- Digitization of bus operations and route planning
- Increased user-friendliness and ease of access

Volume

- EUR 200 mn loan
- EUR 3 mn grant

PROJECT EXAMPLE

INTEGRATED WATER TRANSPORT SYSTEM IN KOCHI

Challenges

- Rapidly growing population and economic development
- Expansion of transport infrastructure
- Possibility of marginalized population groups on the islands to get access to employment opportunities and to public services

Approach

- Integrated water transport system, which connects the islands by ferries

Impacts

- Integration of all inhabitants on the islands and thereby provision of access to employment opportunities and public services
- Reduction of resource consumption
- Safe, quick and comfortable means of transport



Information

- 15 routes with 38 terminals and approx. 76 energy-efficient, **electric-hybrid boats**
- 80 000 trips per day with time savings of 30% in comparison to road transport
- Up to 40% less diesel will be consumed

Volume

- EUR 85 mn loan
- EUR 1.8 mn grant

THE NEED FOR INNOVATIVE FINANCING INSTRUMENTS

EXAMPLE: BARRIERS TO E-MOBILITY

- High Investment Cost
- Total Cost of Ownership analysis necessary, but based on many assumptions

You are not just procuring a bus, but a whole system.

- New, more complex business models appear
- High technology risks, uncertain market value
- Limited debt capacity of EV users, but at the same time higher capital needs, resulting in higher capital costs



NEW BUSINESS MODELS ADD COMPLEXITY: HERE THE EXAMPLE OF E-BUSES

	1	2A	2B	3A	3B
	In Sourcing	Partial Outsourcing	Partial Outsourcing	Complete Outsourcing except Depot Development	Complete Outsourcing FAME II / GCC
Bus Ownership	STU	STU	STU	OEM	OEM
Depot Development	STU	STU	STU	STU	OEM
Electric and Charging Infrastructure Development	STU	ESP	ESP	OEM	OEM
Bus Operations	STU	STU	OEM	OEM	OEM
Bus Maintenance	STU	OEM	OEM	OEM	OEM
Depot Maintenance	STU	STU	STU	OEM	OEM
Electric and Charging Infrastructure Maintenance	STU	ESP	ESP	OEM	OEM

OEM:
Manufacturer,
Operator, Joint
Venture

STU:
State Transport
Undertaking

ESP:
Energy Service
Provider

CLASSICAL FINANCING MODELS FOR GREEN MOBILITY

- Classical ODA loan
- Result based lending
- Credit lines via the banking sector to onlend

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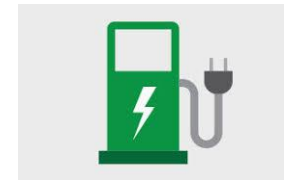


- Commercial Asset-based Finance
- Export-Credit covered Finance
- Financial Leasing

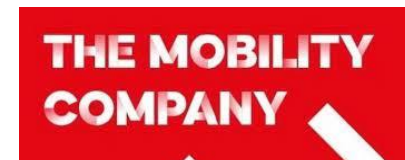


INNOVATIVE FINANCING MODELS FOR GREEN MOBILITY

- Green Loans
- Green Bonds
- Guarantee Instruments
- Operating Leasing (e.g. Batteries)
- Long-Term CAPEX Finance for GCC
- Etc.



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CONTACT DETAILS

Anja Fourie

Principal Portfolio Manager

Climate Finance and Mobility South Asia

KfW Development Bank

Email: anja.fourie@kfw.de



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