

# »» Cities need more than metros – KfW's approach to urban mobility

10<sup>th</sup> Urban Mobility India Conference & CODATU XVII

6<sup>th</sup> November 2017, Hyderabad

Stephanie Rieger – Head of Division

Urban Development and Mobility, South Asia

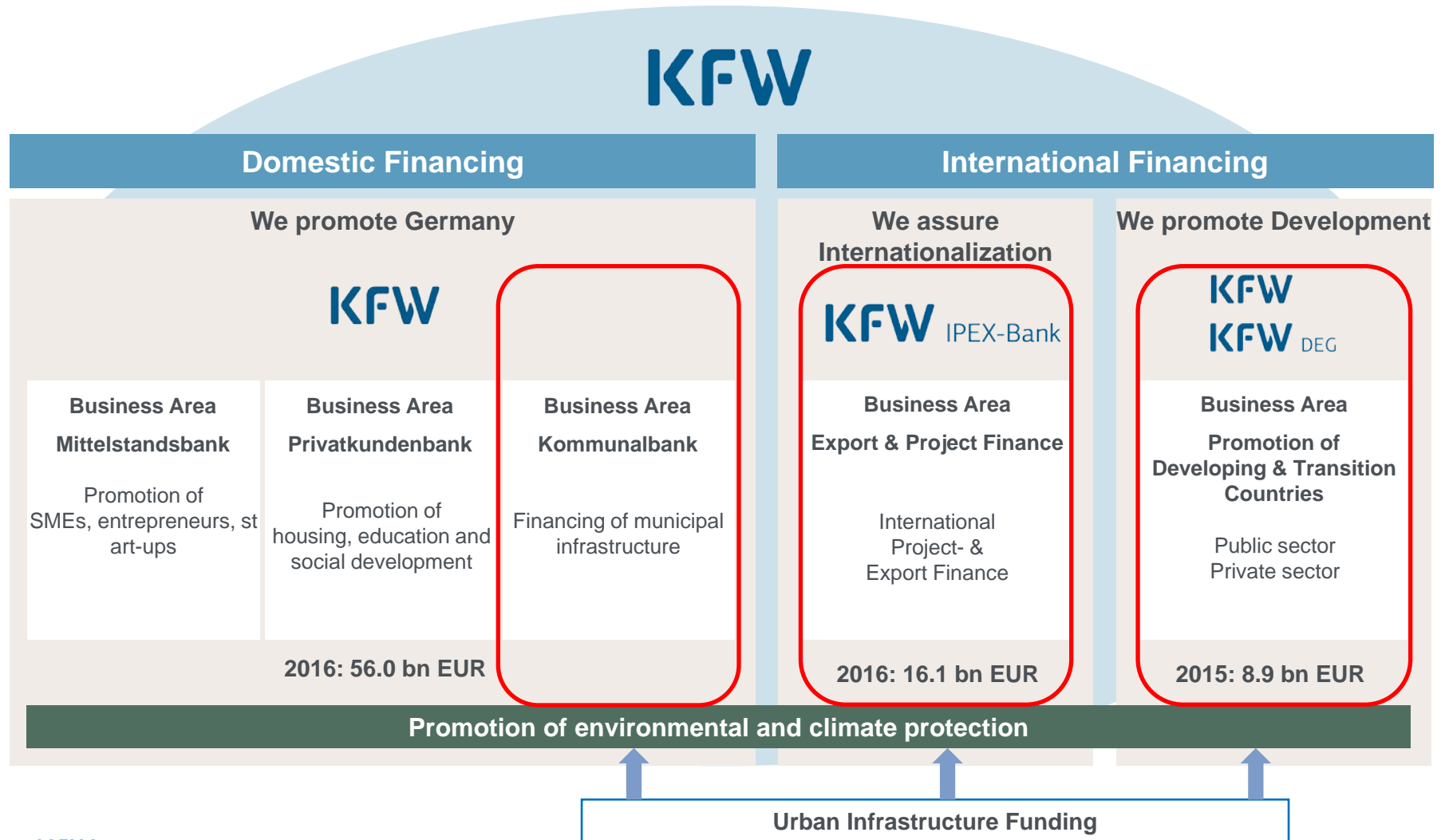
Tel.: +49 69 7431-4151

Mail: [stephanie.rieger@kfw.de](mailto:stephanie.rieger@kfw.de)

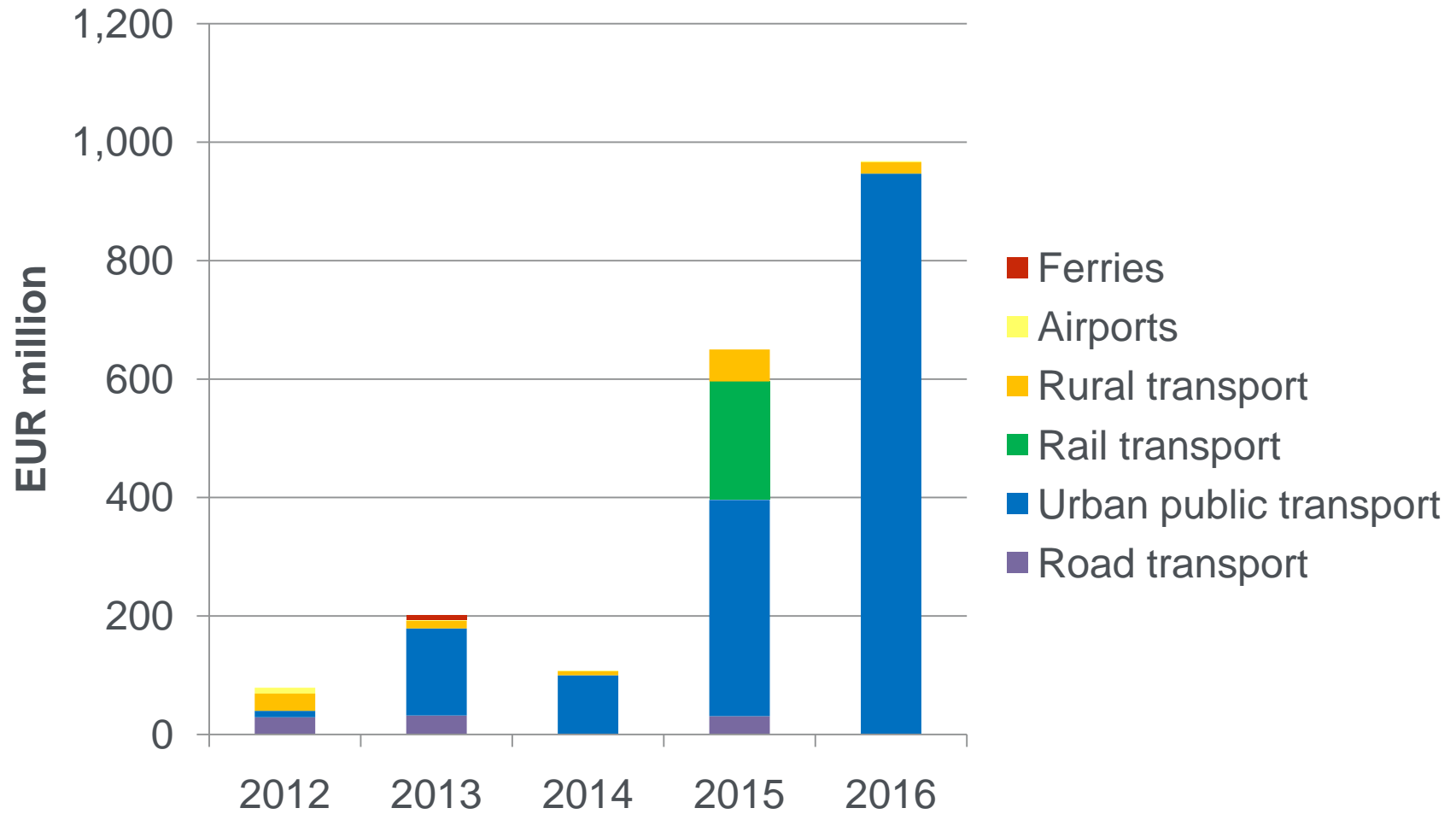
Bank aus Verantwortung

The KfW logo consists of the letters 'KFW' in a bold, blue, sans-serif font. The 'K' and 'F' are connected at the top, and the 'W' is positioned to the right of the 'F'. The background of the slide features a light blue and white geometric pattern of lines and shapes, resembling a modern architectural or urban design.

# »» KfW Group at a glance: a bank with various tasks



## »» KfW Development Bank: investments in transport



# »» Main features of well-designed urban transport systems

## Comprehensive planning

- › Holistic approach to urban transport planning
- › Equitable transport user balance

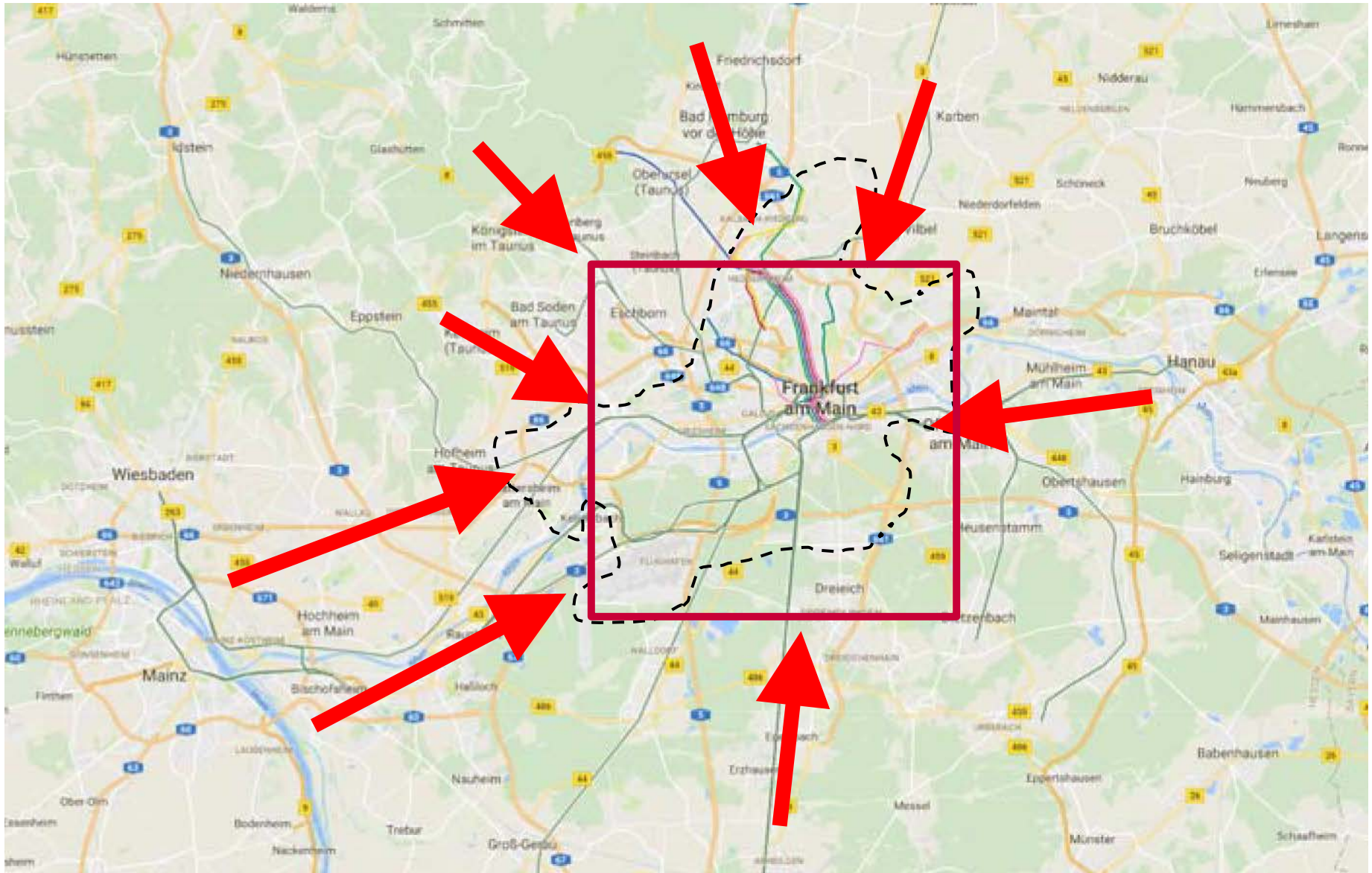
## Layered network

- › High capacity mass transit systems are not needed everywhere
- › Variety of public transit systems in one city

## Integration

- › Seamless transfers
- › Suitable institutional arrangements

## »» Cities need more than metros: example of Frankfurt





»» Cities need more than metros

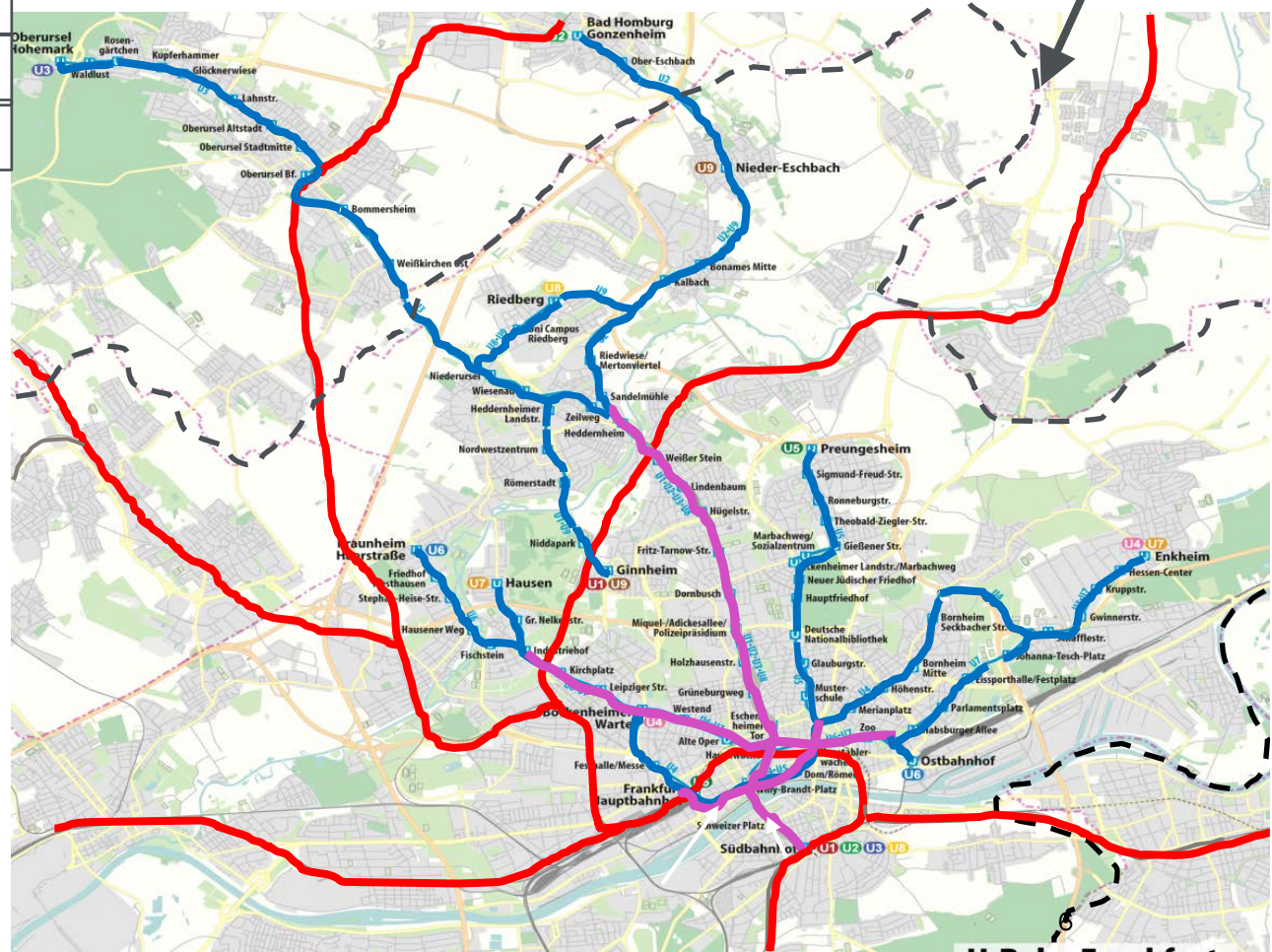


**Metro (= S-Bahn) : 9 Lines**

**Heavy LRT (= U-Bahn): 9 Lines**

- Multiple line U-Bahn
- Single Line U-Bahn

Frankfurt city boundary





# »» Cities need more than metros



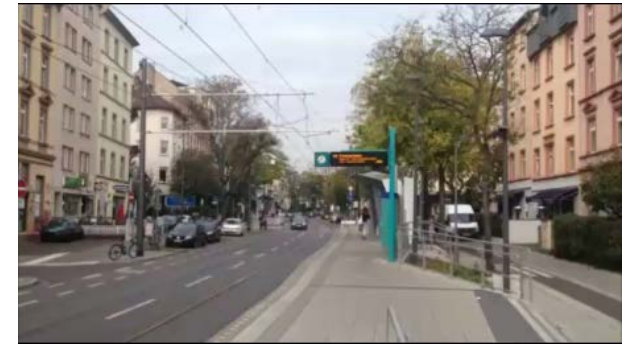
Tramways *Advanced Tram*  
Buses



## »» Some key features of LRT systems (1)

Heavy LRT looks like a „light Metro“, but several features provide **greater flexibility, versatility and cost effectiveness**

- › Articulated vehicles allow turning radius as low as 25m (Metro minimum radii 120m)
- › Ability to easily operate in exclusive, partially segregated and mixed ROW modes (metro must use exclusive ROW mode only)
- › Can effectively function at-grade through major road intersections (even at 32,000 PPHPD)







Bank aus Verantwortung

**KFW**



Bank aus Verantwortung

**KFW**



Bank aus Verantwortung

**KFW**



## »» Some key features of LRT systems (2)

- › **Flexible trainset size:** 1 to 4 carriages to meet demand from 5,000 to 32,000 PPHPD (metro min. 3 carriages)

peak hours (3 or 4 cars)



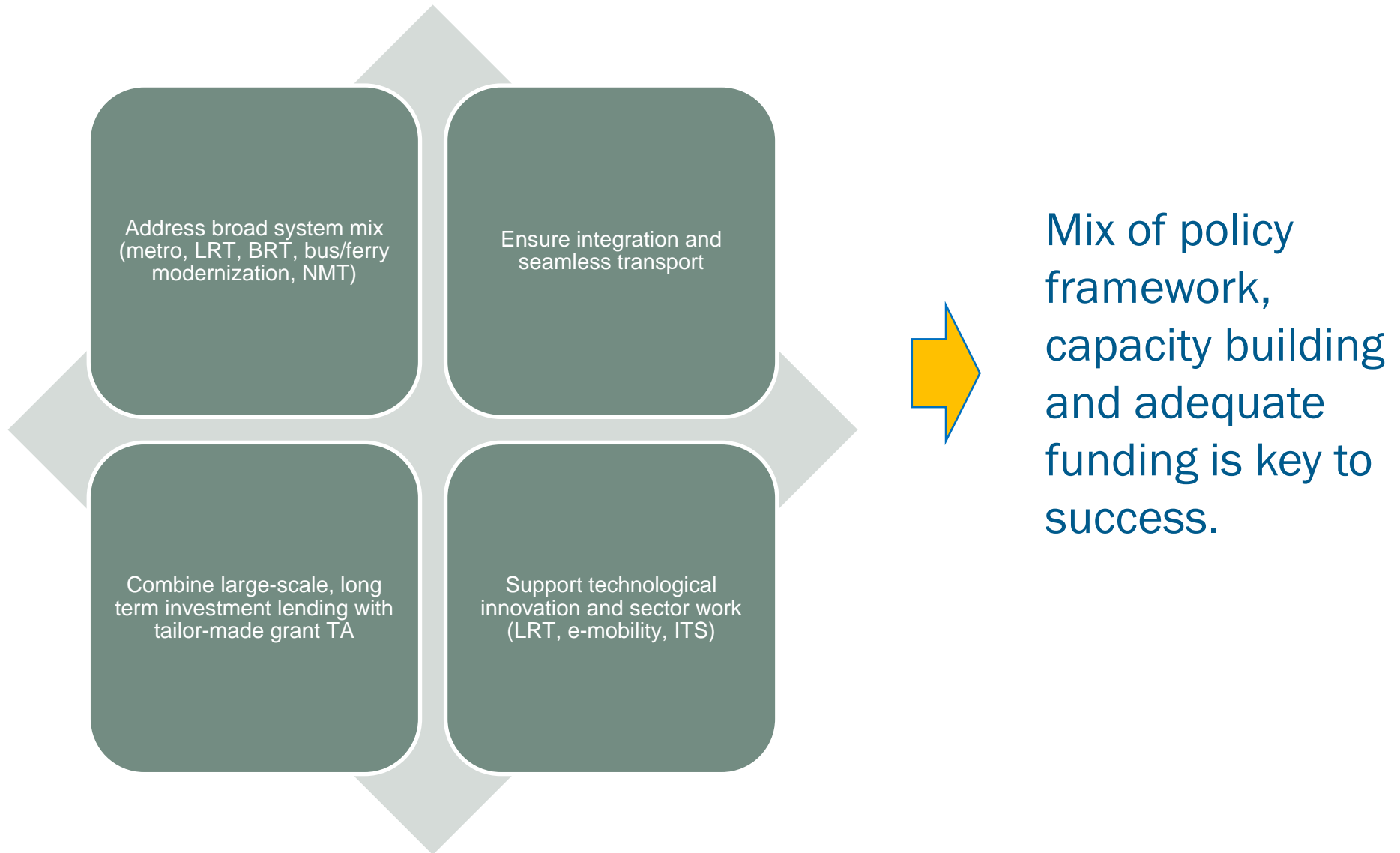
off-peak hours/ weekends



- › **Considerable savings are possible:**

- investment costs: reduced by 15-20% if same alignment as metro, but actual network cost savings are typically 40-70% (because more at-grade alignment is possible)
- annual O&M costs: savings of 20-25% due to high flexibility in trainset size

## »» KfW's approach in our partner countries



»» Thank you

Stephanie Rieger – Head of Division  
Urban Development and Mobility, South Asia  
Tel.: +49-69-74314151  
Mail: [stephanie.rieger@kfw.de](mailto:stephanie.rieger@kfw.de)

Bank aus Verantwortung

**KFW**



# »» Heavy LRT – the missing or hidden MTS option?

