WELCOME

SIDE EVENT COORDINATED BY UIC

SUSTAINABLE MOBILITY FOR A SUSTAINABLE AFRICA: THE ROLE OF RAIL IN AN AFRICAN GREEN DEAL

28 SEPTEMBER 2021

REGIONAL CLIMATE WEEKS

Virtual Thematic Sessions

Africa Region | 26-29 September 2021

Agenda

1. Welcome message
   - Introduction to UIC – *Moderator* Lucie Anderton, Head of Sustainability, UIC
   - Mohamed Rabie Khlie, Chairman UIC Africa, UIC Vice-Chairman
   - François Davenne, UIC Director General
2. Keynote speech – Atef Marzouk, African Union Commission , Director of Department of Infrastructure and Energy Commission
3. Panel presentations and discussion: The importance of rail and public transport for a sustainable Africa
   - Sustainable Urbanisation and Rail transport in Africa, Rahab Mundara, Urban Mobility Unit, UN-Habitat
   - Railway as a driver of territorial sustainability:" The experience of Bolloré Railways", Eric Melet, The CEO of Bolloré Railways
   - The Institute of Transportation and Development Policy, Gashaw Aberra, ITDP
4. Video – The African Railway Green Deal for Sustainable Mobility
5. UIC Africa Regional Office - Hassan Aboulfaraj - presentation of the Africa Sustainability Pledge and Ten initiatives of the African Rail networks for a better involvement in the UIC commitment: carbon neutrality of African railway by 2050
6. Closing remarks, Lucie Anderton, Head of Sustainability, UIC

UIC: 100 years of serving member railways and facilitating international railway cooperation

200 members in 95 countries	**3,000** billion passenger-kilometres	**10,000** billion tonne-kilometres	**1** million kilometres of line
7 million rail personnel	Cooperation with over **100** institutions	**700** UIC leaflets - new International Railway Solutions (IRS)	**85** congresses, conferences, workshops

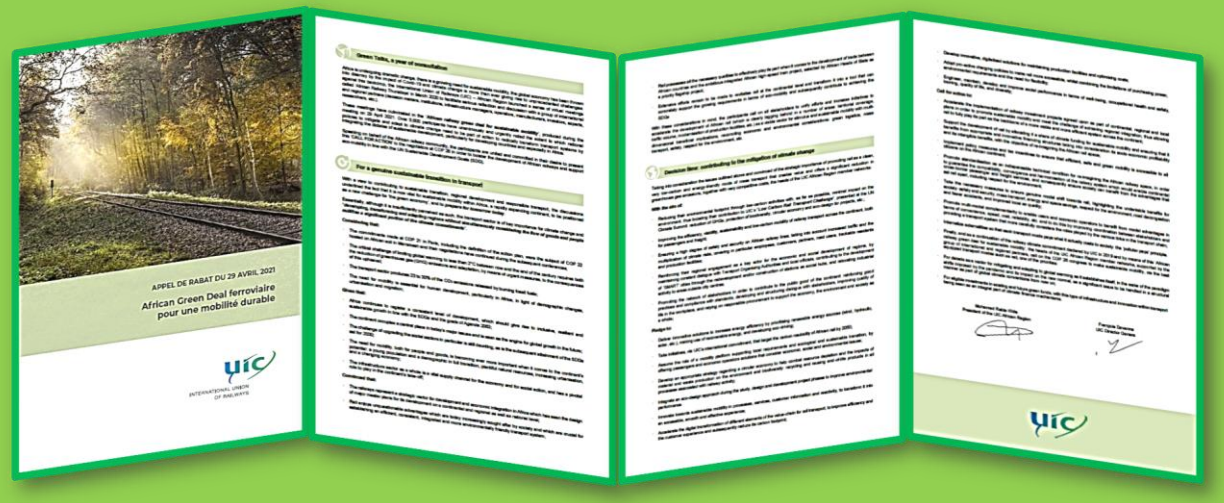
6 UIC focus areas for global cooperation serving the entire railway community

- **Sustainability**
- **Safety & Security**
- **Freight/Intercontinental corridors**
- **Railway Signalling & Control Command**
- **Standardisation**
  UIC leaflets, IRSs
- **Research & Expertise Development**

Mohamed Rabie Khlie
Director General of ONCF, Morocco
Chairman UIC Africa, UIC Vice-Chairman

'AFRICAN RAILWAY GREEN DEAL

FOR SUSTAINABLE MOBILITY'



UN CLIMATE CHANGE CONFERENCE UK 2021

IN PARTNERSHIP WITH

François Davenne
UIC Director General

REGIONAL CLIMATE WEEKS

Virtual Thematic Sessions

Africa Region | 26-29 September 2021

Atef Marzouk, AUC, Director AUC-IEC
Keynote speech

REGIONAL CLIMATE WEEKS

Virtual Thematic Sessions

Africa Region | 26-29 September 2021

The importance of rail and public transport for a sustainable Africa

- Sustainable Urbanisation and Rail transport in Africa
  Speaker: Rahab Mundara, Urban Mobility Unit, UN-Habitat

- Railway as a driver of territorial sustainability: The experience of Bolloré Railways
  Speaker: Eric Melet, The CEO of Bolloré Railways

- The Institute of Transportation and Development Policy
  Speaker: Gashaw Aberra, ITDP

Panel: The importance of rail and public transport for a sustainable Africa

Rahab Mundara
Urban Mobility Unit,
UN-Habitat

Eric Melet
The CEO of Bolloré
Railways

Gashaw Aberra
ITDP
The Institute of
Transportation and
Development Policy

Sustainable Urbanization and Rail transport in Africa

Rahab Mundara
Urban Mobility Unit
UN-Habitat

UN HABITAT
FOR A BETTER URBAN FUTURE

OUTLINE

- Urbanization in African cities (Trends, opportunities and challenges)
- Railway Development Potential and Challenges
- Transition towards sustainable urbanization and mobility
- Reflections

IMPLEMENTING THE NEW URBAN AGENDA

11 SUSTAINABLE CITIES AND COMMUNITIES

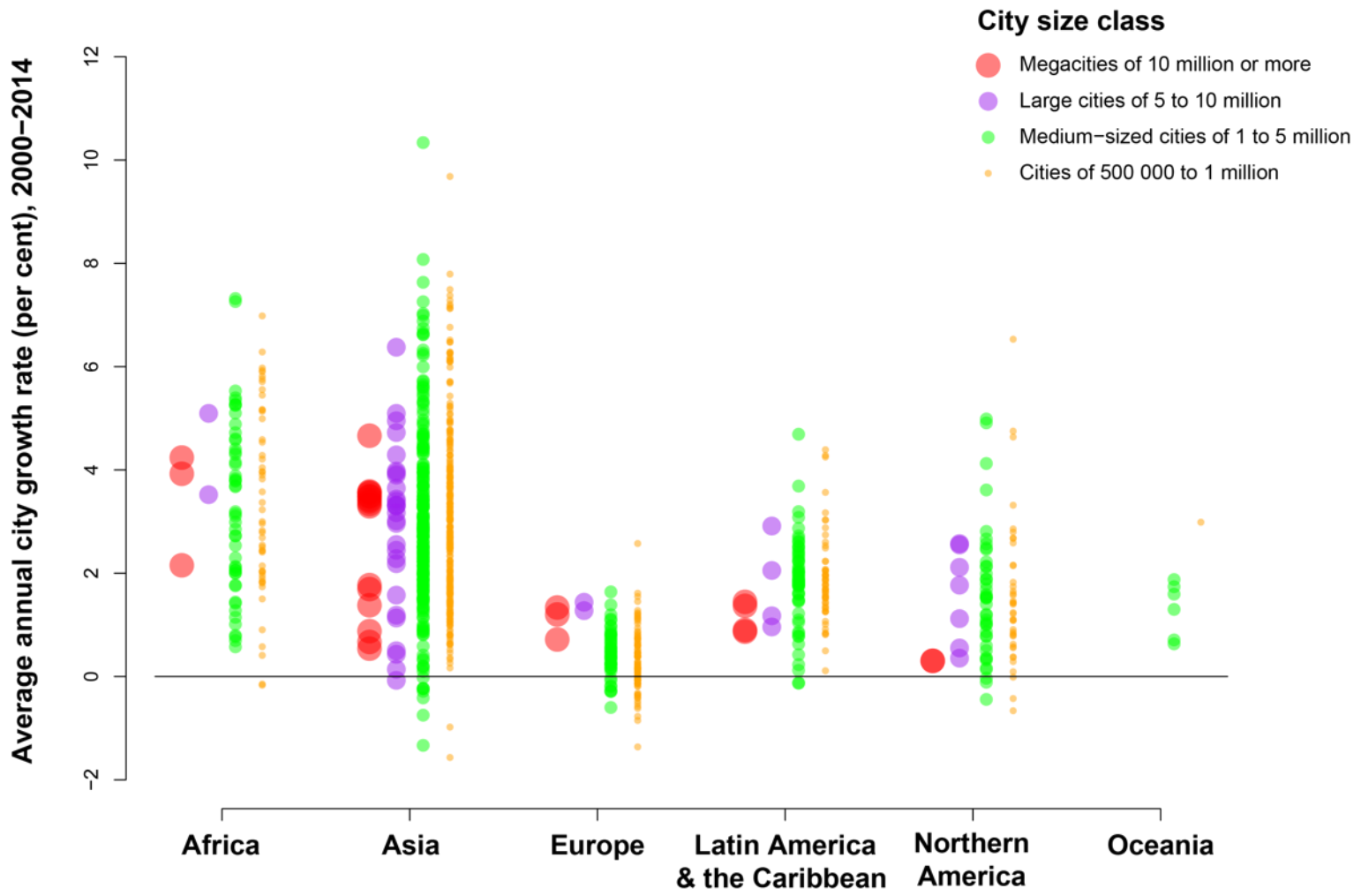
UN HABITAT
FOR A BETTER URBAN FUTURE

Introduction

- The achievement of **all** the Sustainable Development Goals in Africa is critically dependent on better transport, both within cities and also between cities and countries.
- The way cities in Africa plan and manage their growth, ensuring mobility and accessibility for people and the movement of goods will determine their prospects of growth and prosperity.

UN HABITAT
FOR A BETTER URBAN FUTURE

Opportunities for Sustainable Urbanization



*Nearly **90 per cent** of the urban population increase will be in **Africa and Asia**, the fastest urbanizing global regions.*

*Most cities in developing Africa and Asia are still to be built, and the World Economic Forum projects **two-thirds of the investments in urban infrastructure in Africa needed by 2050 have yet to be made.***

UN HABITAT
FOR A BETTER URBAN FUTURE

Reality: Car-Based Transit Corridors in many African Cities

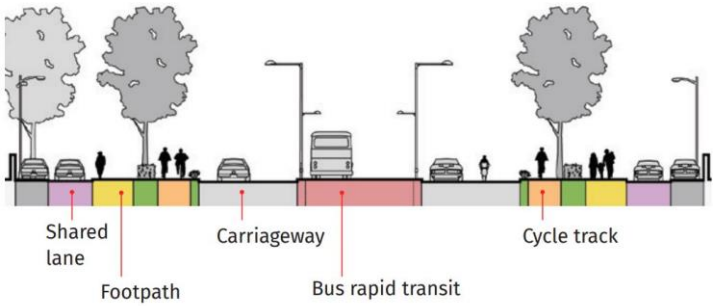
- Low density, urban sprawl
- **Car-based** transit corridors contributing to congestion, emissions, pollution, accidents
- **No Integration** between mobility systems
- Land use systems have not been able to provide access through **proximity**
- Access is mostly dependent on **movement**

UN HABITAT
FOR A BETTER URBAN FUTURE

• Integration of regional connections with urban transport

- ❖ Need for integration between regional connections and various modes of transport within cities – including good Public Transport and Non-motorized transport options
- ❖ Ensuring a central position of train stations in the city and linking them with key points of interest within the city through good public transport connections
- ❖ Ensuring that train stations and surrounding streets don't become areas of traffic congestion
- ❖ Ensuring that surrounding streets have adequate street designs

Source: Obermeyer, 2021. Changbaishan urban planning deisgn.

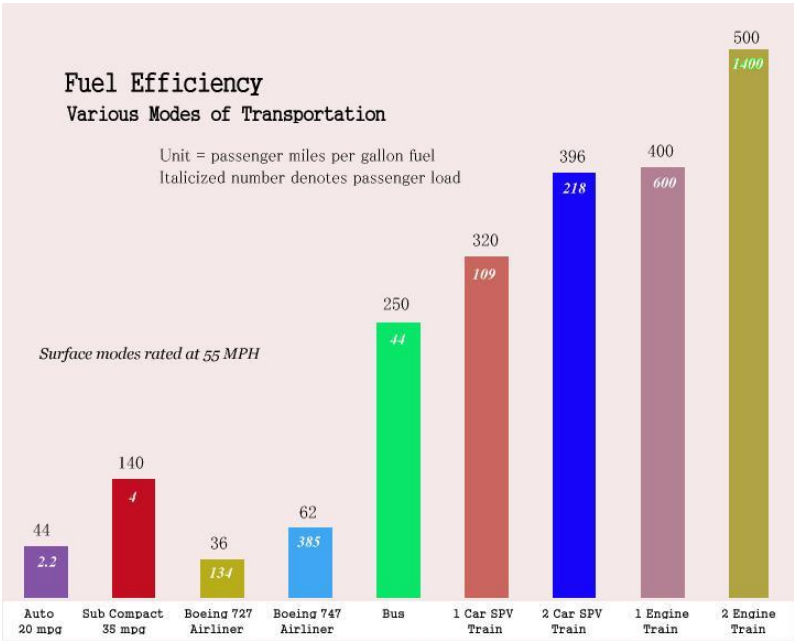


Source: ITDP, 2020

UN HABITAT
FOR A BETTER URBAN FUTURE

Benefits of rail transport

- ❖ Highly beneficial for long-distance regional connectivity
- ❖ High load carrying capacity – reduces road congestion and road wear and tear
- ❖ Highly energy efficient:
  - Very low friction-related energy loss (steel on steel)
  - Travels in it's own wind-shade
  - Builds on momentum
- ❖ Can be fully electrified, either on grid or through batteries/alternative fuel
- ❖ High initial investment, but low long-term costs
- ❖ Reduces costs for freight transit



UN HABITAT
FOR A BETTER URBAN FUTURE

Benefits of rail transport

- Potentials for decarbonizing both passenger and freight transport – least amount of emissions per passenger on long distance
- Can help achieve the Sustainable Development Goals and the 1.5°C stabilization pathway agreed upon in the Paris Agreement
- Ensuring that Public Transport becomes more affordable, convenient, attractive and efficient than personal cars can incentivize a shift towards sustainable mobility

PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

SUSTAINABLE DEVELOPMENT GOALS

UN HABITAT
FOR A BETTER URBAN FUTURE

Challenges of rail transport in Africa

- Rail network has not kept pace with the continent's expansion and the economic development.

WHY?

- Rail has suffered from decades of low direct investment, poor infrastructure management and inefficient train operations.

- Governments and development agencies have attempted some local improvements, yet the revival of African railways has not happened.

- There is real competition from road transport which offers more viable options, connectivity and proximity.

UN HABITAT
FOR A BETTER URBAN FUTURE

• Concerns of rail transport

- ❖ Use of different gauge tracks require the use of expensive variable gauge systems
- ❖ Railroads can represent barriers in the environment and can be disruptive to wildlife - considerations of environmental impacts need to be taken into account and addressed
- ❖ Due to the large initial investment may not be the most viable option within urban areas of developing countries
- ❖ Non-comparable gauges cause delays and added costs in freight transit

UN HABITAT
FOR A BETTER URBAN FUTURE

Lessons on Railway Development

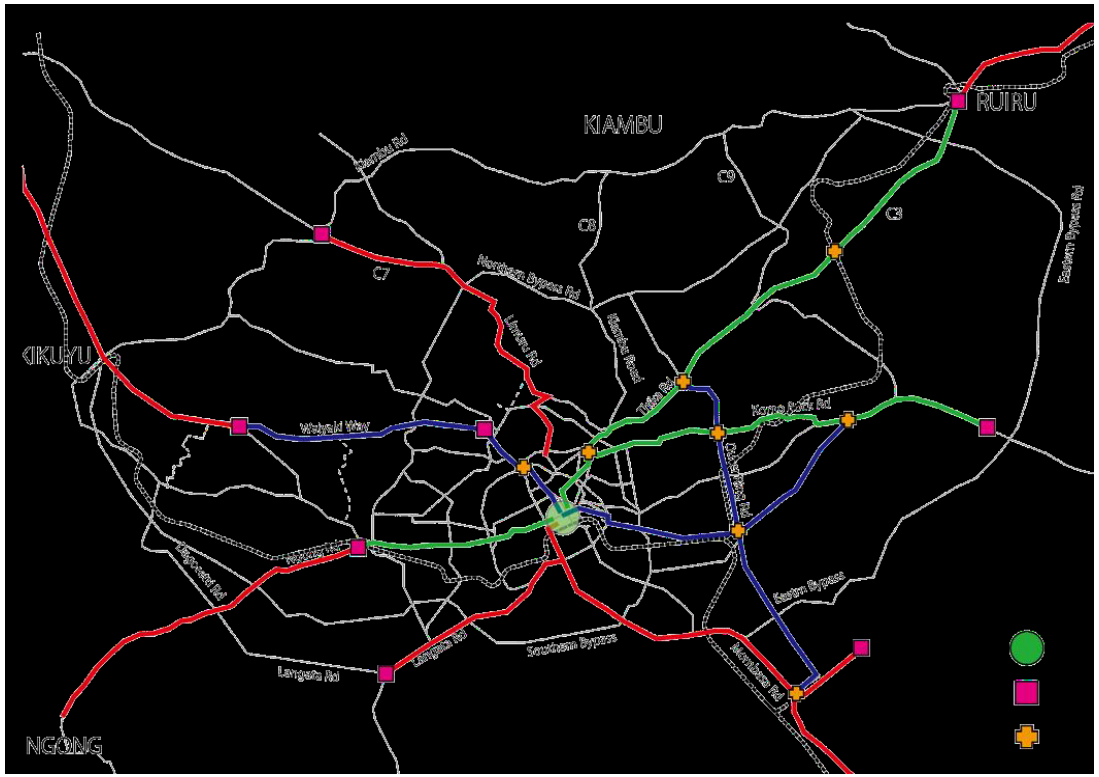
Majority of the developments are in the North and South Africa with very few investments in the SSA:

Gautrain, in South Africa the first rapid rail system in the region provides **a good example of collaboration between different spheres of governments and with the private sector**:

- The 80 Km long urban rapid rail system, links Johannesburg, Pretoria, Ekurhuleni and the OR Tambo International Airport
- Serves more than 100,000 users every day
- System was built using an innovative PPP mechanism, involving a combination of investments from the national and provincial government together with private sector borrowings and equity as well as external financial assistance.

UN HABITAT
FOR A BETTER URBAN FUTURE

Lessons: What the Gautrain models require……



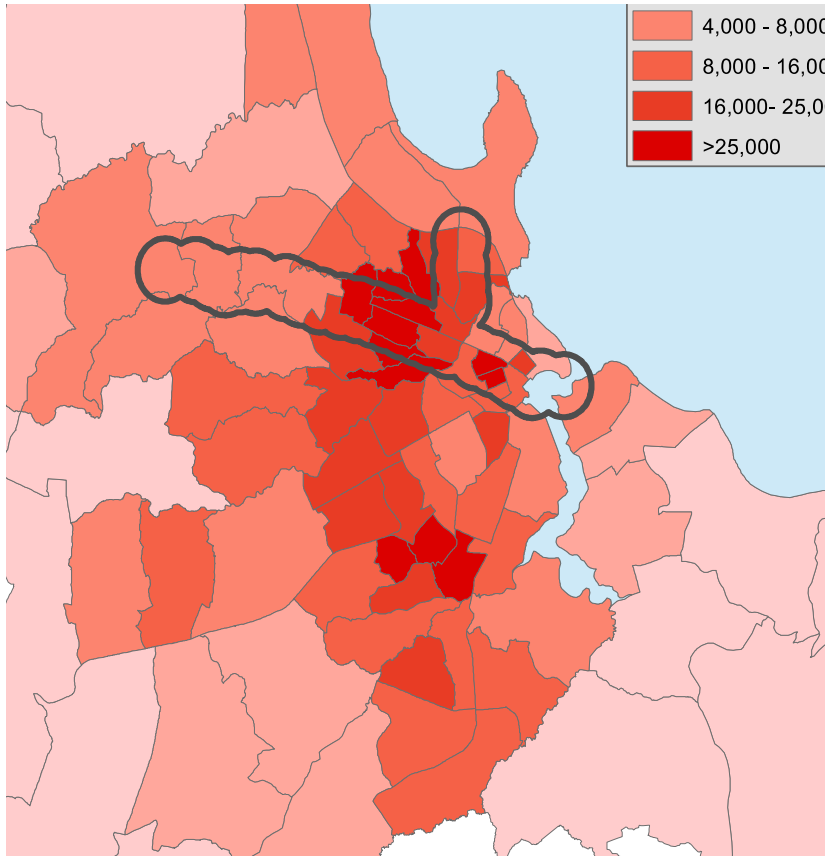
PROPOSED 5 MRTS NETWORK IN NAIROBI

- Access to capital markets
- Lower cost of borrowing
- Lower processing costs
- Lower risks through diversification
- Incentives to improve creditworthiness
- Transfer of knowledge

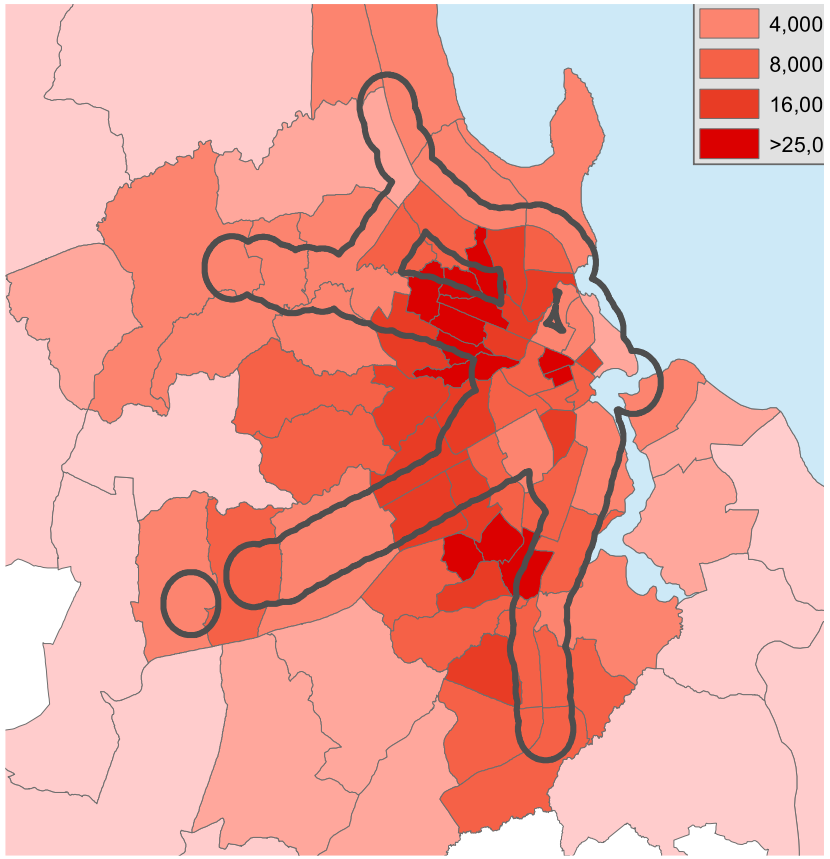
UN HABITAT
FOR A BETTER URBAN FUTURE

COMPACT DEVELOPMENT AND DENSIFICATION

- Rapid Transit Coverage in Dar es Salaam



After BRT phase 1
8% of residents near rapid transit

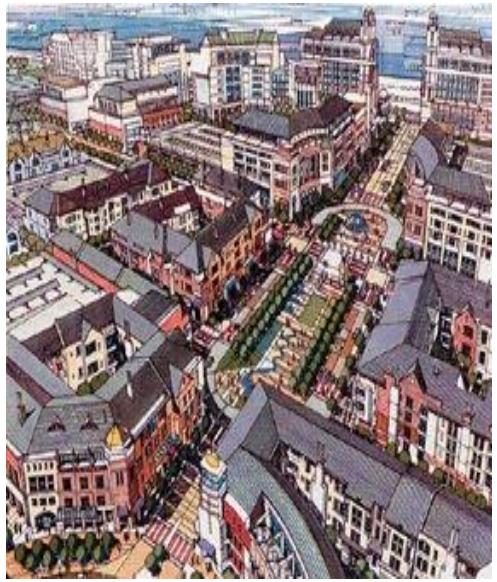


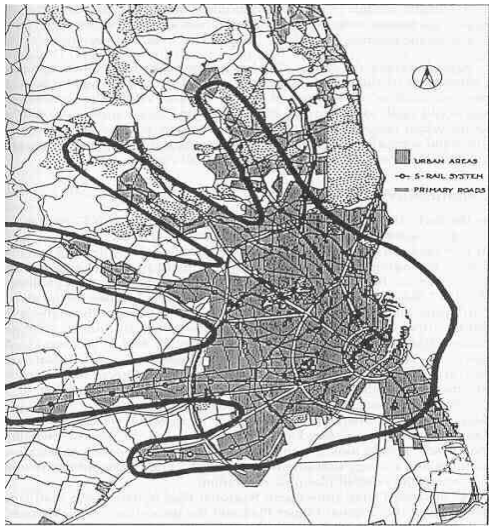
After BRT phases 1-4
33% of residents near rapid transit

BRT can act as a backbone around which to transform and redevelop the city to further increase sustainability and functional effectiveness

UN HABITAT
FOR A BETTER URBAN FUTURE

Integrating urban mobility and planning

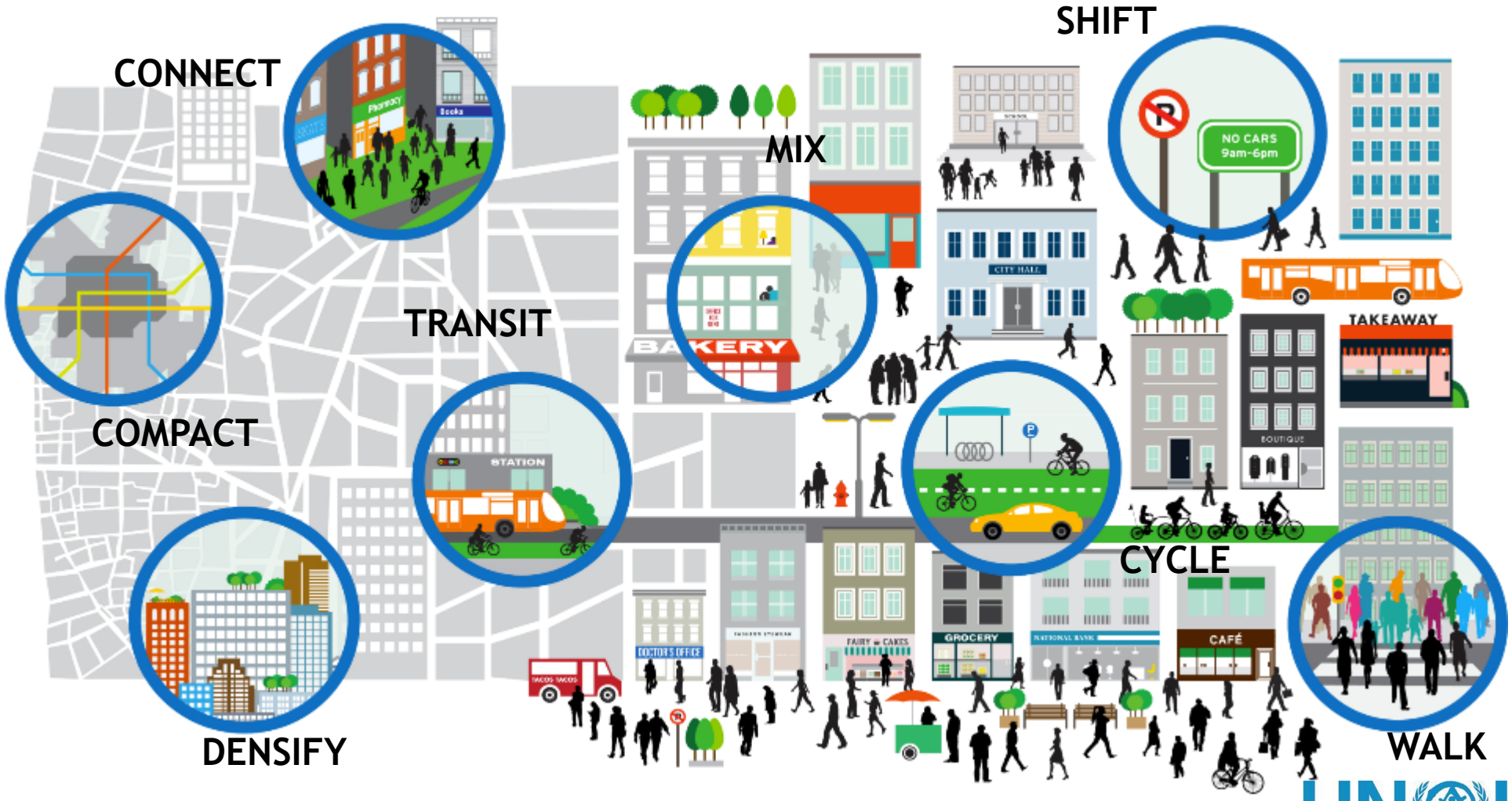




- Well-designed density and mixed uses, ensure adequate proximity of the Factors of Production(FP), thus reducing the need for transport and optimizing the use of land and resources;
- Affordable public transport improves access to jobs, city services and social activities needed for supporting income generation;
- Integrating sustainable transport into feasible urban policies can potentially multiply the benefits of urban interventions
- Well-designed network of public spaces, including streets for proper connectivity create safe, healthy environments of equity, social participation, and inclusion;
- Better connectivity and urban mobility enhance competitiveness of urban areas;
- Promoting people-friendly infrastructure and technology exchange ensures sustainability of public investments

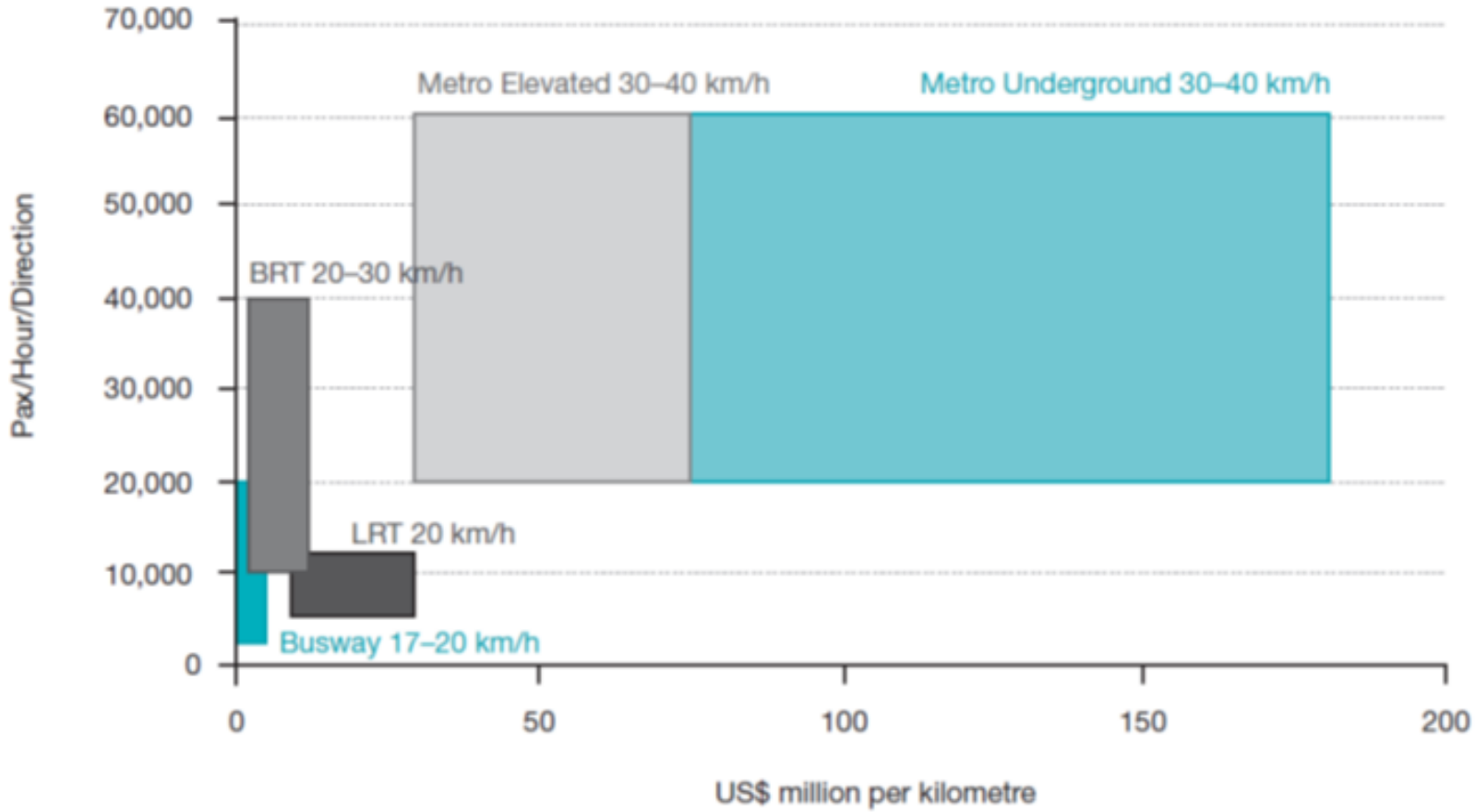
UN HABITAT
FOR A BETTER URBAN FUTURE

The 8 Transit Oriented Development principles



UN HABITAT
FOR A BETTER URBAN FUTURE

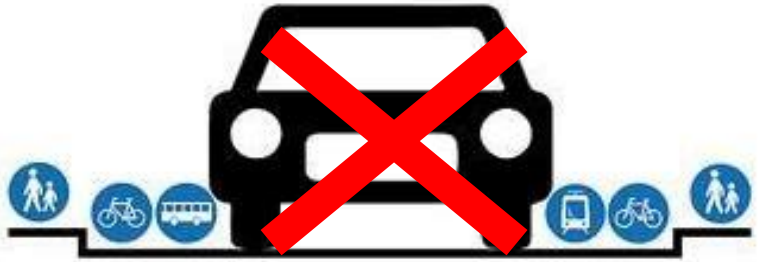
• Making the Right Choice : Balancing Passenger Demand, Investment and Speed



Source : GRHS 2013 Planning and Design for Sustainable Urban Mobility (UN-Habitat/Hindalgo)

UN HABITAT
FOR A BETTER URBAN FUTURE

Towards Sustainable Mobility - BRT Africa Situation



How most traffic engineers see your city

How cities should be designed

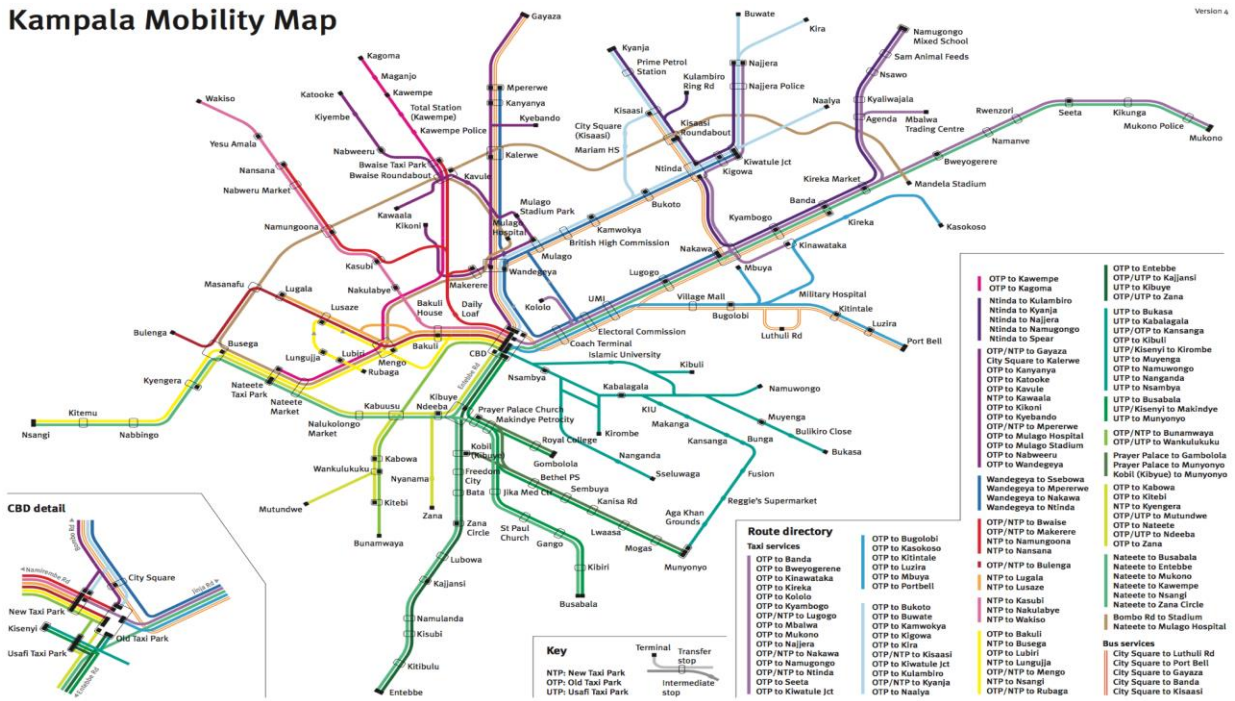
- Operational BRT
- Planning

UN HABITAT
FOR A BETTER URBAN FUTURE

Transitioning to Sustainable Urbanization - BRT systems

UN HABITAT
FOR A BETTER URBAN FUTURE

Uganda - Kampala Mobility Map



Need to develop new business models for the operation of public transport through consultative processes with the existing industry stakeholders as well as the development of new planning, policy and regulatory frameworks.

Further Work: Incorporate other modes of transport including integration to the railway networks.

UN HABITAT
FOR A BETTER URBAN FUTURE

Open-ended Questions

- Is there an “African approach” to financing mobility improvements?
- Are the improvements defined in the statutory physical plans/spatial plans?
- What are the economic incentives?
- What do we need to change in the Legislation for land use and mobility
- What room is there to raise local revenues through land taxation and charging policies e.g. Parking charges, rates and other reforms
- Is it feasible for African Governments to re-prioritize budget allocation to support sustainable urbanization?

UN HABITAT
FOR A BETTER URBAN FUTURE

Some Reflections

- Sustainable Urbanization and intercity/interregional connectivity are both essential for Economic Development in Africa
- Rail is key for intercity and regional connectivity but requires sustainable financing
- In the context of African cities, local economy development, social inclusion, environmental responsibility are at the centre of a good transit system
- Link urban growth with land use policies and transport investments to improve access to jobs, schools, recreation and affordable housing around stations
- Capacity building key for multi-modal planning with integration of the different modes. Interventions need to address more than one issue (transit-oriented development)
- Dedicate fuel taxes, parking fees, and other transport revenues toward sustainable transport
- Governments to increase investments to upgrade and modernize public transport, which is dependent largely on informally operated minibuses such as the *matatus* in Kenya to *Tro-Tros* in Ghana and *Dala-Dalas* in Tanzania.
- Strong political mandate and strategic vision

UN HABITAT
FOR A BETTER URBAN FUTURE

Thank You For Your Attention

UN HABITAT
FOR A BETTER URBAN FUTURE

Railway as a driver of territorial sustainability: The experience of Bolloré Railways

Eric Melet, The CEO of Bolloré Railways

BOLLORÉ RAILWAYS

LONG DISTANCE RAILWAY, DRIVER OF TERRITORIAL SUSTAINABILITY

THE EXPERIENCE OF BOLLORÉ RAILWAYS

28/09/2021

01 THE BOLLORÉ RAILWAYS EXPERIENCE

20 YEARS DRIVING LONG DISTANCE CONNECTIVITY

KEY FIGURES

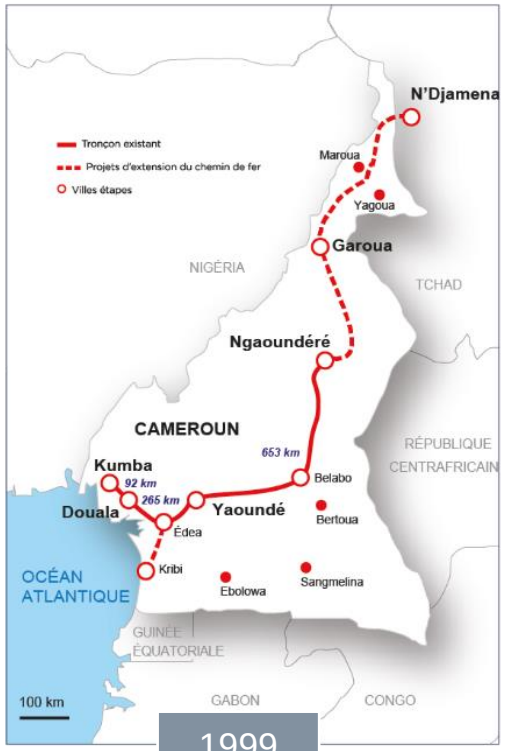
2,700 km
of tracks

2.6 million
tonnes of freight transported per year

1 million
passengers transported per year

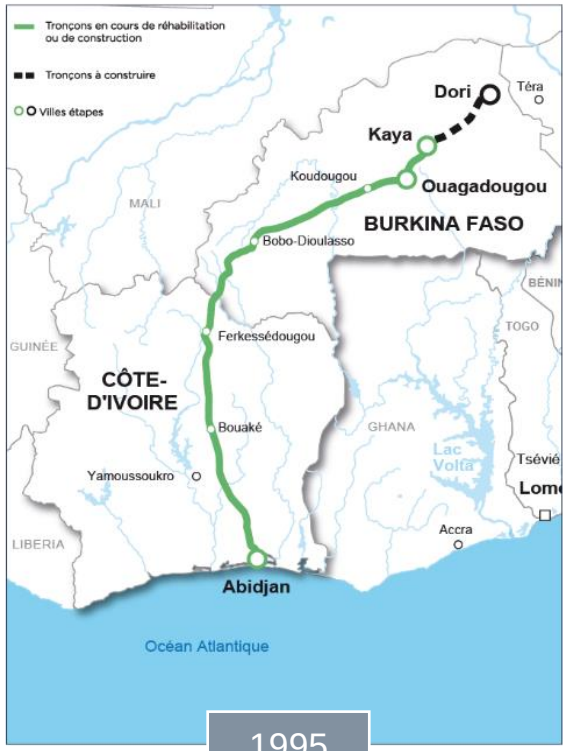
3,400
employees

CAMRAIL



1999

SITARAIL
TRANSPORT FERROVIAIRE DE PERSONNES ET DE MARCHANDISES



1995

BENIRAIL

2015

BOLLORÉ RAILWAYS

02 THE BOLLORÉ RAILWAYS EXPERIENCE

Multi-user rail operator - moderate traffic intensity with strong CSR impacts

DRIVE GROWTH & COMPETITIVITY IN LANDLOCKED AREAS

- Manufactured & essential products
- Export commodities
- Support high volume industrial needs
- Intra-regional & interurban mobility
- Strong road competition

SUSTAINABLE RAILWAY ECOSYSTEM IN COUNTRY

- 400 subcontractors : infrastructure & maintenance
- Promotion of local purchase
- Inter network synergies
- Continuous improvement of safety

BOLLORÉ RAILWAYS

GREENEST LONG DISTANCE TRANSPORTATION MODE

- Lower CO2 emissions
- Urban decongestion
- Reduction of industrial waste & pollutants

UNIQUE SOCIAL FOOTPRINT

- 40 000 jobs generated by rail activities & 150 000 hours of training
- 50 000 medical visits yearly for family & Staff
- Develop rail communities ownership
- Long distance mobility of people

03 THE BOLLORÉ RAILWAYS EXPERIENCE

Challenges for railway sector in Africa

- **Railways is clearly the best transportation mode for a sustainable Africa**
- **However high challenges need to be addressed**

National & regional state policies shall better incorporate the industry needs in subsaharian African context

Combining pragmatic approach of the existing networks with ambitious plans of new networks

Fostering both Public & Private Financing by considering rail as strategic infrastructure and not a business object only


BOLLORÉ
TRANSPORT & LOGISTICS

The Institute of Transportation and Development Policy

Gashaw Aberra, ITDP

ITDP

Better public transport design for a sustainable Africa

September 2021

ITDP

Institute for Transportation & Development Policy

Promoting equitable and sustainable transport worldwide.

Addis Ababa LRT

ITDP

Casablanca Tram way

ITDP

Dar es Salaam BRT

Comparison between the three modes

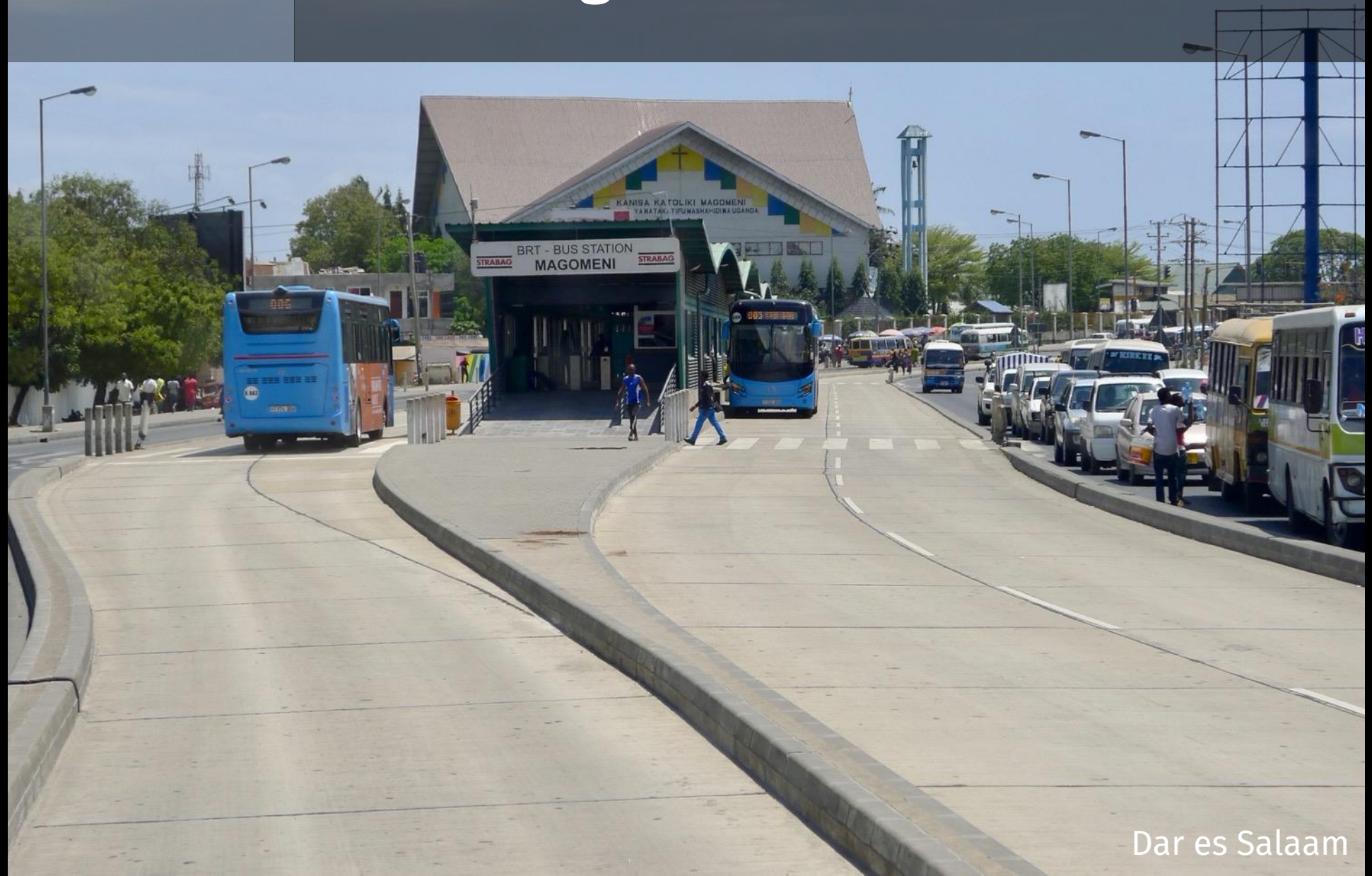
	Addis Ababa, LRT	Casablanca, Tramway	Dar es Salaam BRT
Length	34 km, NS and EW corridors	47 km, T1 and T2 lines	21.1 km, phase 1
Stations	41 stations	71 stations	5 terminals, and 27 bus with median stations.
Passenger per day	120,000	250,000	172,000
Passesnger per hour per day	3434 pphpd, ERC	5,300 pphpd, Casa Transport SA, le 23 janvier 2019 :	9600, during covid
Project cost	US$ 475m	US$ 745m	US$ 247

Station design

Station sizing

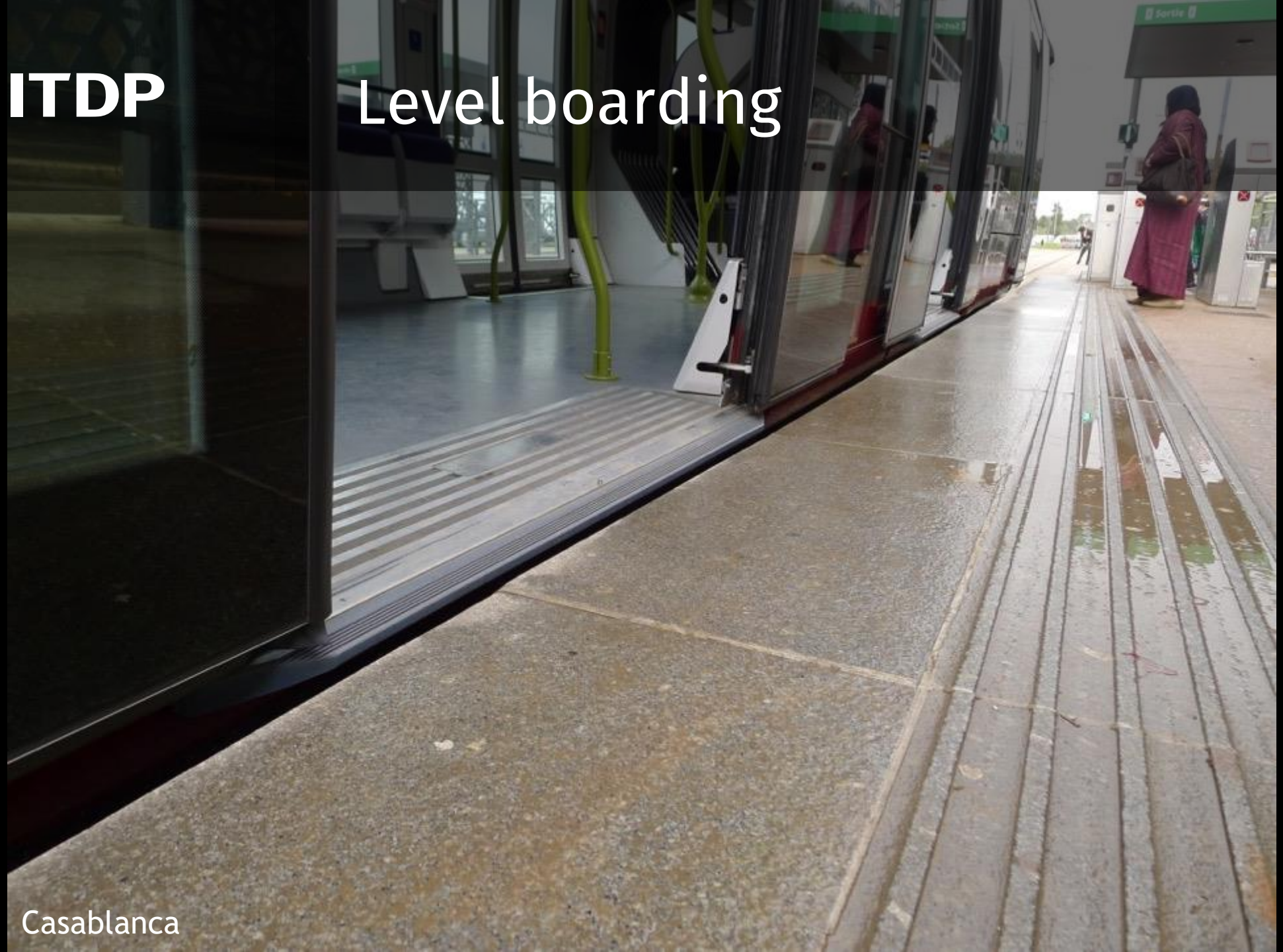
Addis Ababa

Passing lanes a stations



Dar es Salaam

Level boarding



Casablanca

A typical DART station, designed for comfort & efficiency

Dare Selam

Station access

Access to the station, Addis Ababa LRT

Addis Ababa

Dar es Salaam: At-grade station access

Dar es Salaam

Tabletop Crossings

Casablanca

Permeability

Addis Ababa

ITDP

The LRT line in Addis Ababa

Casablanca

Fare collection

Why off-board?

- Convenience for passengers
- Fewer delays
- Reduced revenue leakage
- Automated ridership data for service optimisation

Off board fare collection Addis Ababa LRT

Casablanca off board fare collection.

Source: The view from Fez

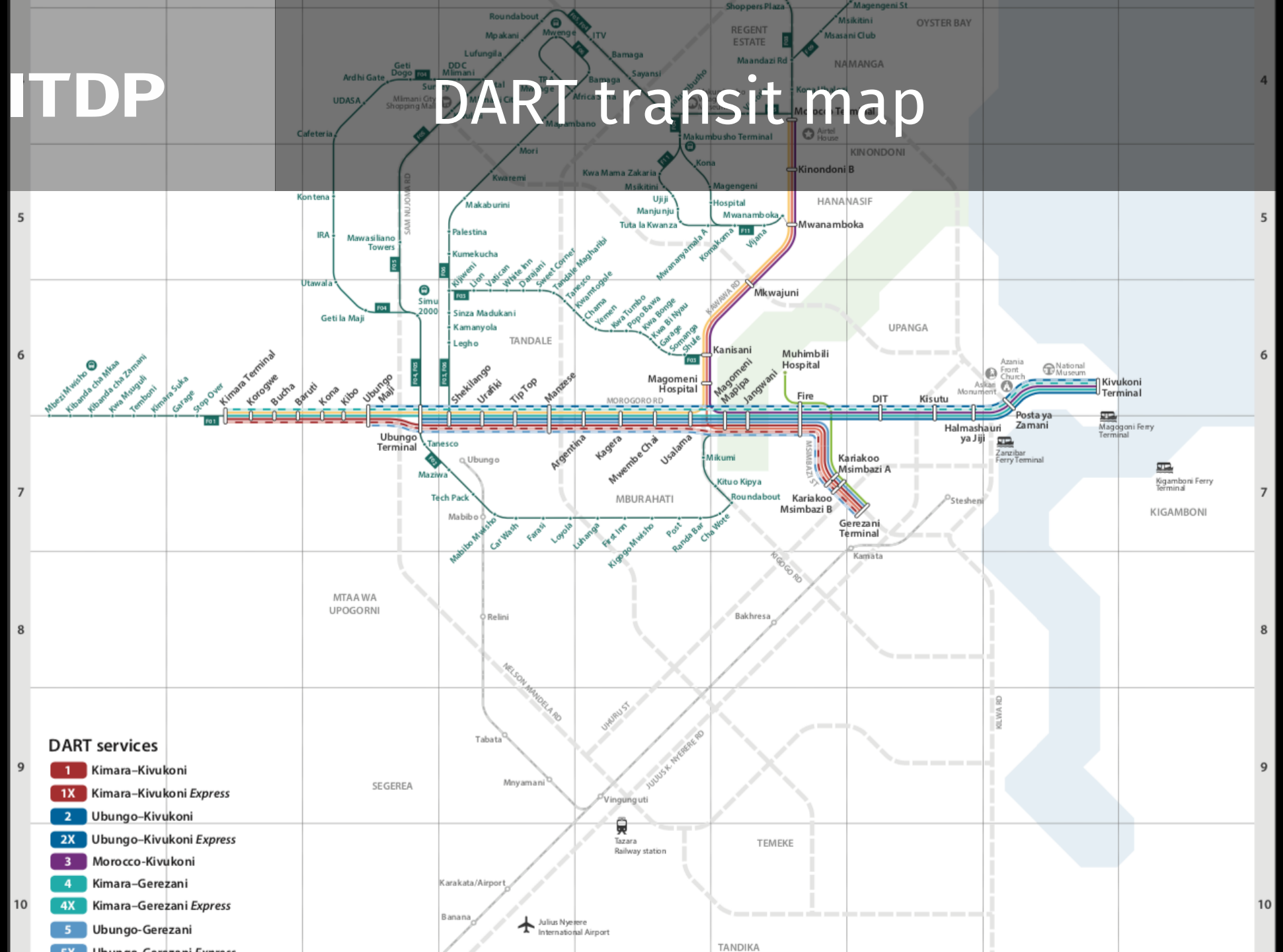
Customer information

Costomer information at Addis Ababa LRT station

Addis Ababa

ITDP

DART transit map



Real-time information

Casablanca

ITDP

Integration with walking and cycling facilities.

Wide walkways & cycle tracks


ITDP
Footpath along the PT corridor

Integration with bikeshare

Guangzhou

Conclusion

- Matching the **capacity and cost** of the PT projects
- Better station designs, level boarding and shelter
- At grade / tabletop pedestrian crossings,
- Modern off board fare collection system,
- Real time customer information system,
- Proper intersection designs
- Last mile connectivity: Integration with the walking and cycling facilities.

ITDP | Institute for Transportation & Development Policy

Thank you

itdpafrica

UN HABITAT
FOR A BETTER URBAN FUTURE

Video African Green Deal

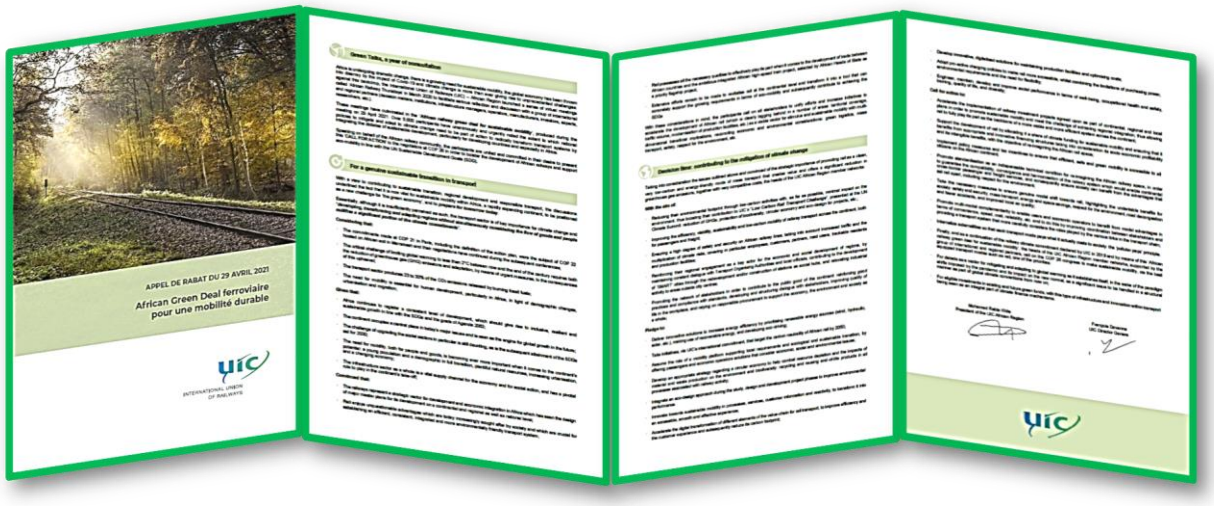
UIC Africa

The Africa Sustainability Pledge
Carbon neutrality of African railway by 2050
&
10 initiatives of the African Rail networks

AFRICAN RAILWAY GREEN DEAL

In what context and why?

- Climate change: new challenges
- Profound transformation of the continent
- Global economy heckled by Covid-19
- The challenge of sustainable mobility



- Contribute to the ecological transition
- Meeting the challenge of the 'green economy'
- Develop responsible transport
- Accelerate the SDGs and aspirations 2063

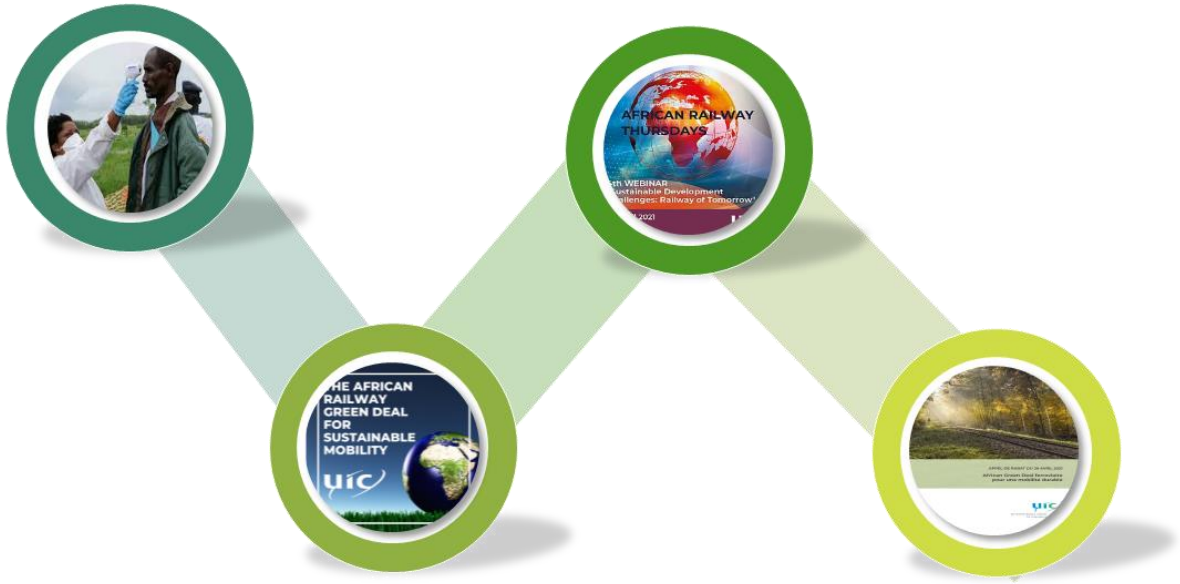
AFRICAN RAILWAY GREEN DEAL

A year of consultation

Deep reflections within the framework of the cycle of virtual meetings

A representative college of international and regional partners

5,600 participants engaged to support eco-mobility in line with the SDGs



Unify efforts and multiply initiatives to help accelerate the development of the African rail mode, the benefits of which are multidimensional, reconciling between the economic and the ecological

AFRICAN RAILWAY GREEN DEAL

Ecological transition in transport

1 GLOBAL MOTIVATIONS

- Commitments of COP21 and PA of COP22
- Limitation of global warming to -2 ° C
- Transport weight: 23 to 30% of CO2 emissions
- Basic needs for human development

2 SPECIFIC CONSIDERATIONS

- Development in line with Agenda 2063
- Challenge to achieve the 2030 SDGs
- Increased need for mobility in view of the potential
- Infrastructures, an essential lever for take-off

3 FOR A RAIL REVITALIZATION

- Vector of economic integration
- Undeniable assets for the Community
- Lever for the development of inter-country exchanges
- Tool for sustainable eco-mobility

AFRICAN RAILWAY GREEN DEAL

Choices to mitigate climate change

Reduce the ecological footprint with low-carbon activities

Ensure a high level of safety and security on African railway lines

Strengthen territorial inclusion, synergy and intermodality

Further improve the efficiency, viability and sustainability of rail transport

Promote the ecosystem of stakeholders and contribute to the general interest

AFRICAN RAILWAY GREEN DEAL

African rail network initiatives

For better involvement in UIC engagement:

carbon neutrality of African railways by 2050

1- Strengthen territorial integration
2- Ensure a high level of safety and security
3- Accelerate digital transformation
4- Innovating low-carbon solutions
5- Valorize recoverable energy

6- Develop eco-driving
7- Promote the circular economy
8- Develop eco-design
9- Develop and orchestrate social performance
10- Promote inter-network cooperation

AFRICAN RAILWAY GREEN DEAL

Time for choices for stakeholders

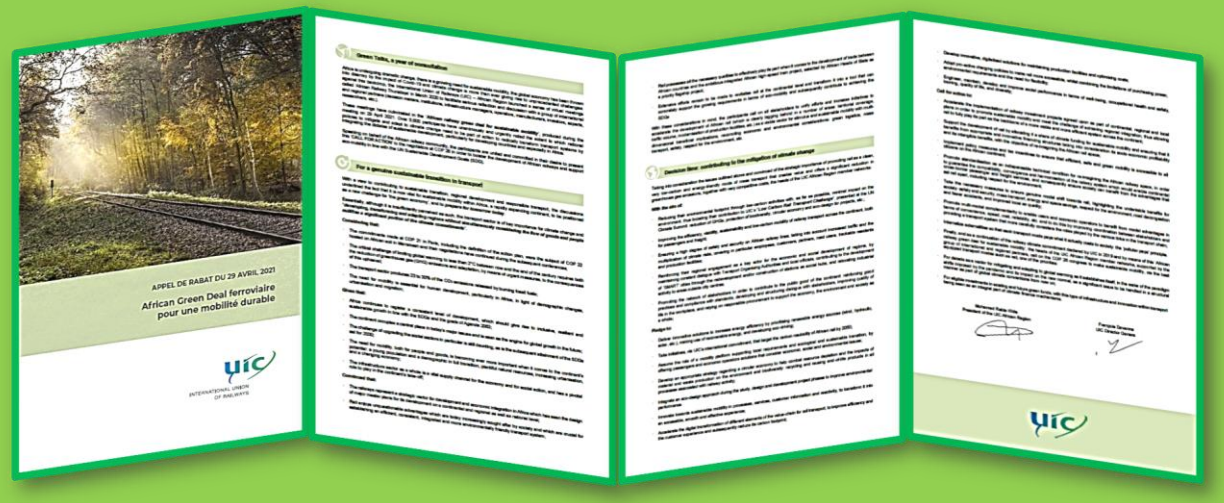
Decisions have to be taken to allow the rail mode to help mitigate climate change

- Rethinking the African rail space
- Accelerate the realization of investment projects
- Allocate part of climate funding to sustainable mobility
- Adopt regulatory and tax incentives

- Promote standardization
- Structure the modal shift
- Promote multi-modality
- Internalize externalities (polluter pays)

'AFRICAN RAILWAY GREEN DEAL

FOR SUSTAINABLE MOBILITY'



UN CLIMATE CHANGE CONFERENCE UK 2021

IN PARTNERSHIP WITH

Closing Remarks

Lucie Anderton
UIC Head of Sustainability

INTERNATIONAL UNION
OF RAILWAYS

Stay in touch with UIC:

www.uic.org

#UICrail

REGIONAL CLIMATE WEEKS

Virtual Thematic Sessions
Africa Region | 26-29 September 2021

Thank you for your attention.

REGIONAL CLIMATE WEEKS

Virtual Thematic Sessions

Africa Region | 26-29 September 2021