



# ETHIOPIAN RAILWAYS CORPORATION (ERC)



## Status of African Railways

Presented by

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Africa Transport Policy Program Annual Meeting, 25 November 2019, **Elephant Hills Hotel, Victoria Falls, Zimbabwe**



# Introduction - Ethiopia

## Ethiopia

### At the Horn of Africa



Scale 1:51,400,000

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## Discussion Topics

**The importance of connecting to the sea port for investment and export logistics**

**Ethiopian is connected to the sea port of Djibouti by a railway line .**

**Connecting Ethiopia to the sea port by the railway line cannot effectively contribute to investment and export logistics unless other modes of transport are integrated with the railway line. I will explain Why?**

**Actions to be taken to improve investment and export logistics**

**Status of African Railways**



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## Development of National Railway Network

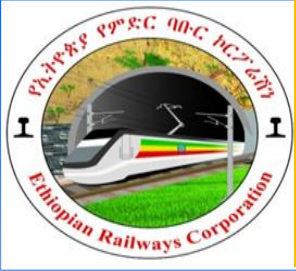
- **increasing transport demand**
- **growing mobility needs of people**



- ❖ **Lack of transport infrastructure (limited connectivity)**
- ❖ **poor quality of transport services in general**

- ✓ **Modern and reliable railway system is needed:**
  - **to sustain the economic growth momentum of the country**
  - **by supporting the demand of freight and passenger mobility**



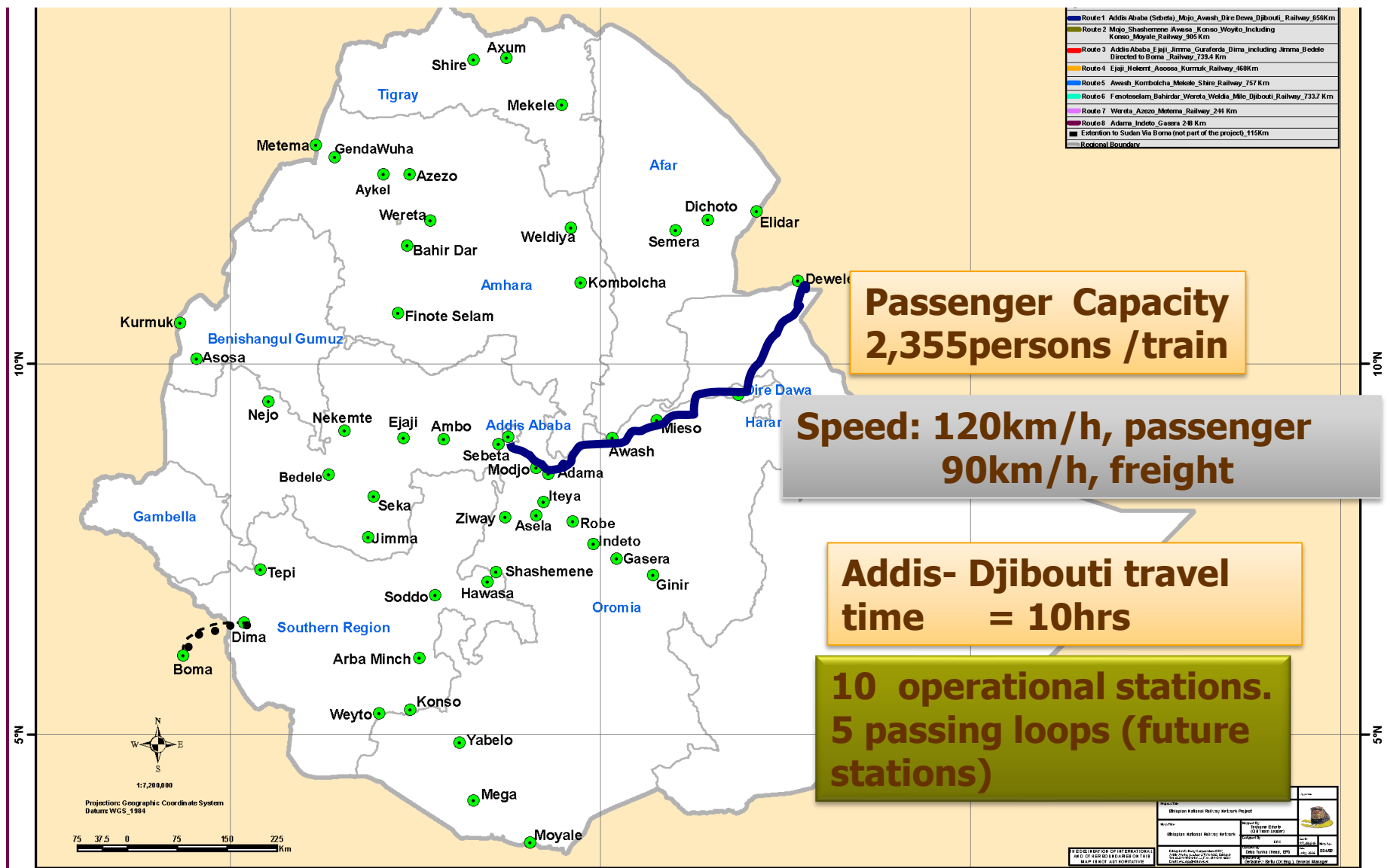


# ETHIOPIAN RAILWAYS CORPORATION (ERC)

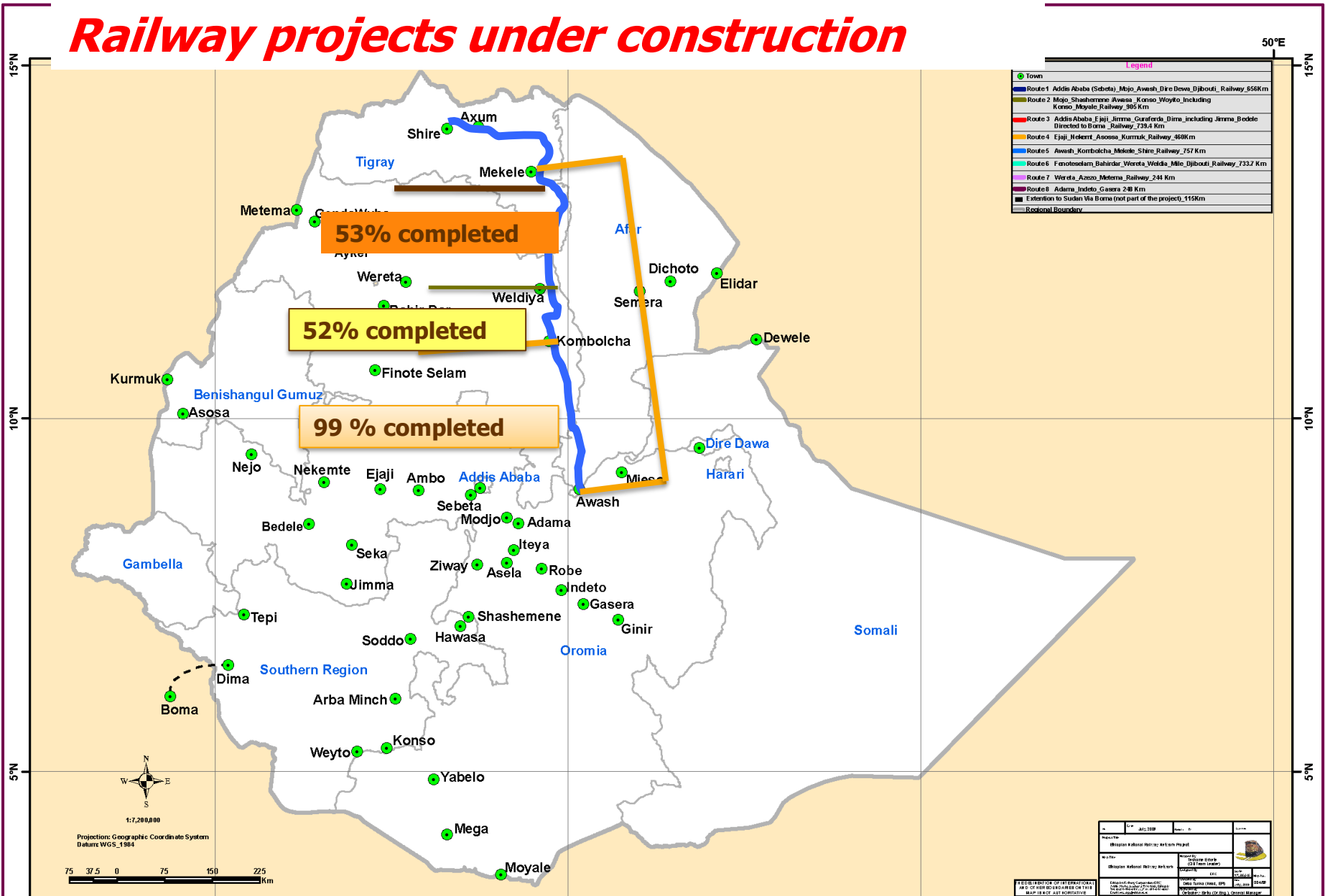
## The Importance of Connecting to the Sea Port for Investment and Export Logistics:

- ❑ **The Governments' socio-economic reforms, sustainable macro-economic policies, and successful sectoral and regional strategies and programs have unleashed the potentials for accelerated development;**
- ❑ **This accelerating development will be adversely affected unless development in the transportation sector is attained with sufficient capacity to support the investment and export logistics;**
- ❑ **In order to be competitive in the international export market, end to end transport service from the production site to the sea port shall be provided in sufficient capacity, less time and low cost.**

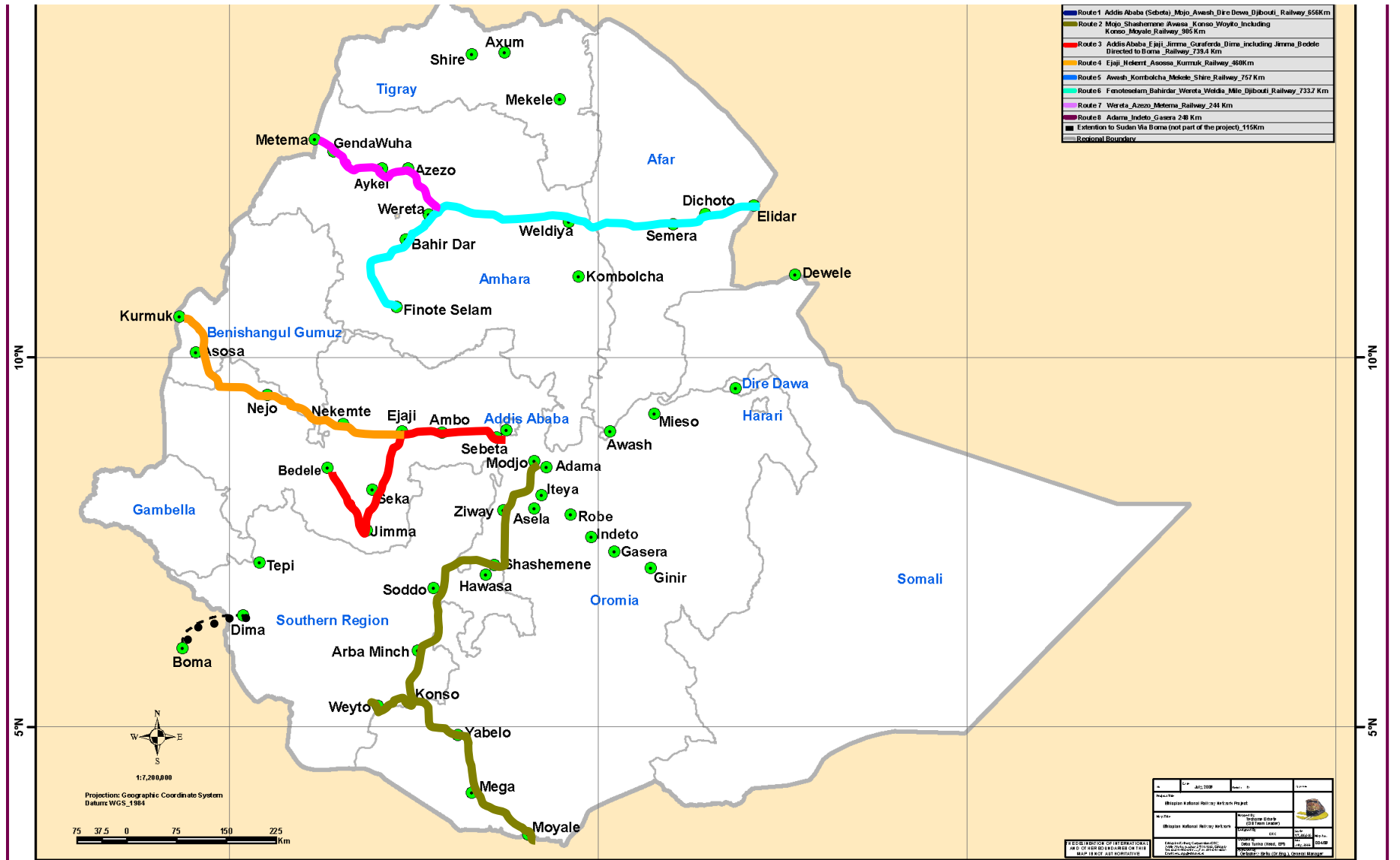
# Ethiopian is connected to the sea port of Djibouti by a railway line .



# Railway projects under construction



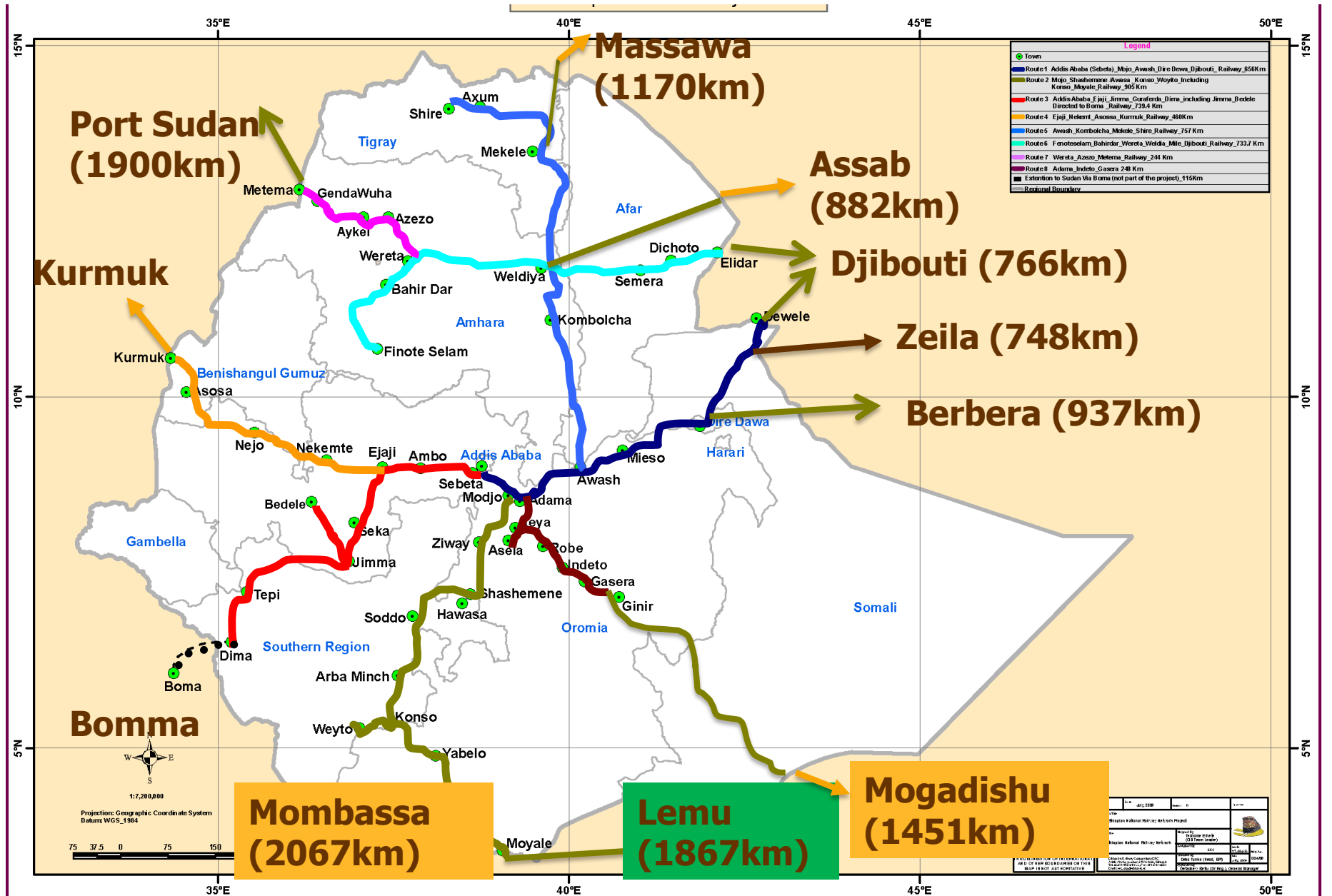
# Railway projects bankable feasibility study and inception design has been undertaken



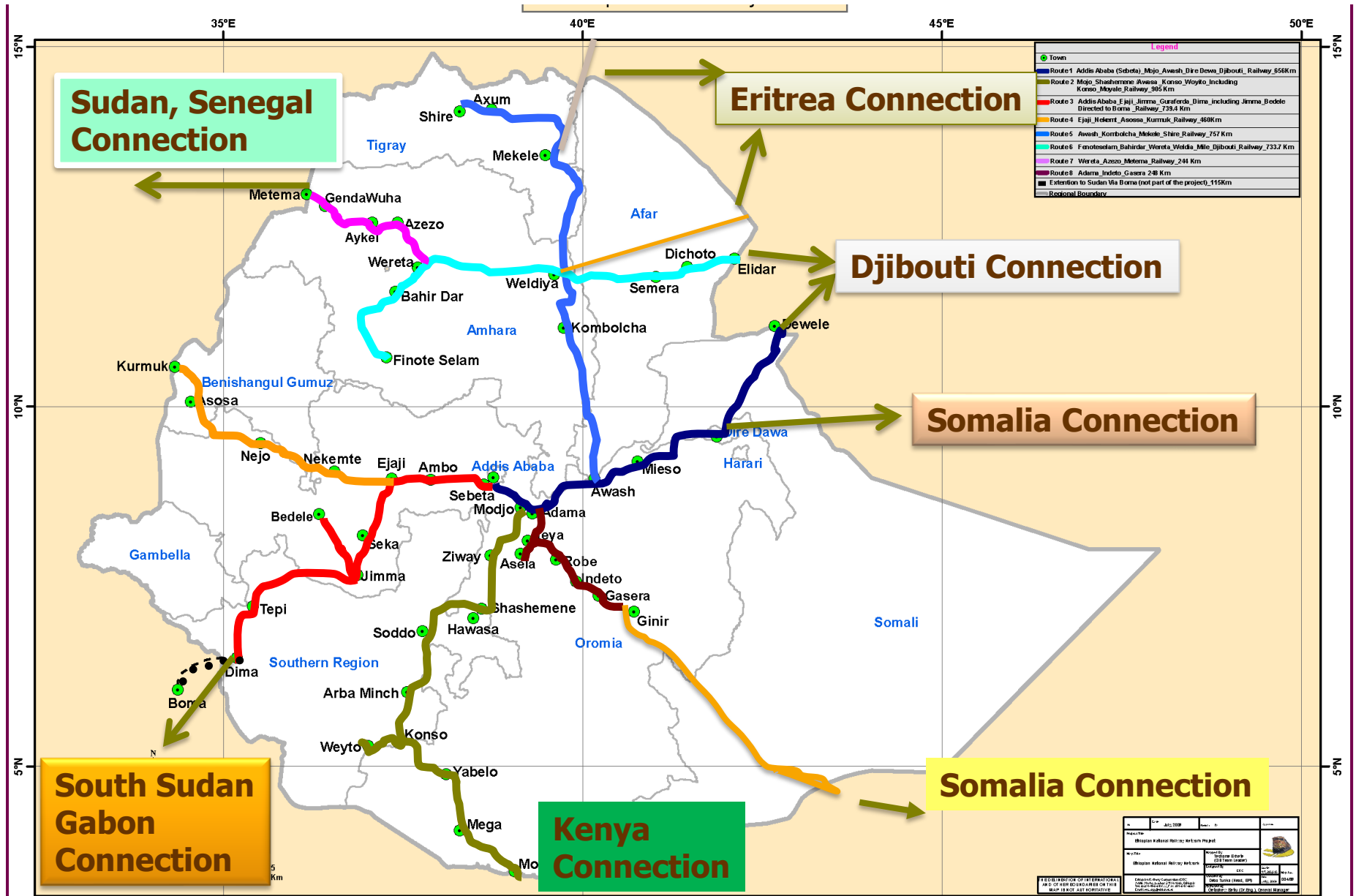
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# We have further dry and sea port export corridor options



# Ethiopian Railway Network and African Connection



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# East African Railway Master Plan



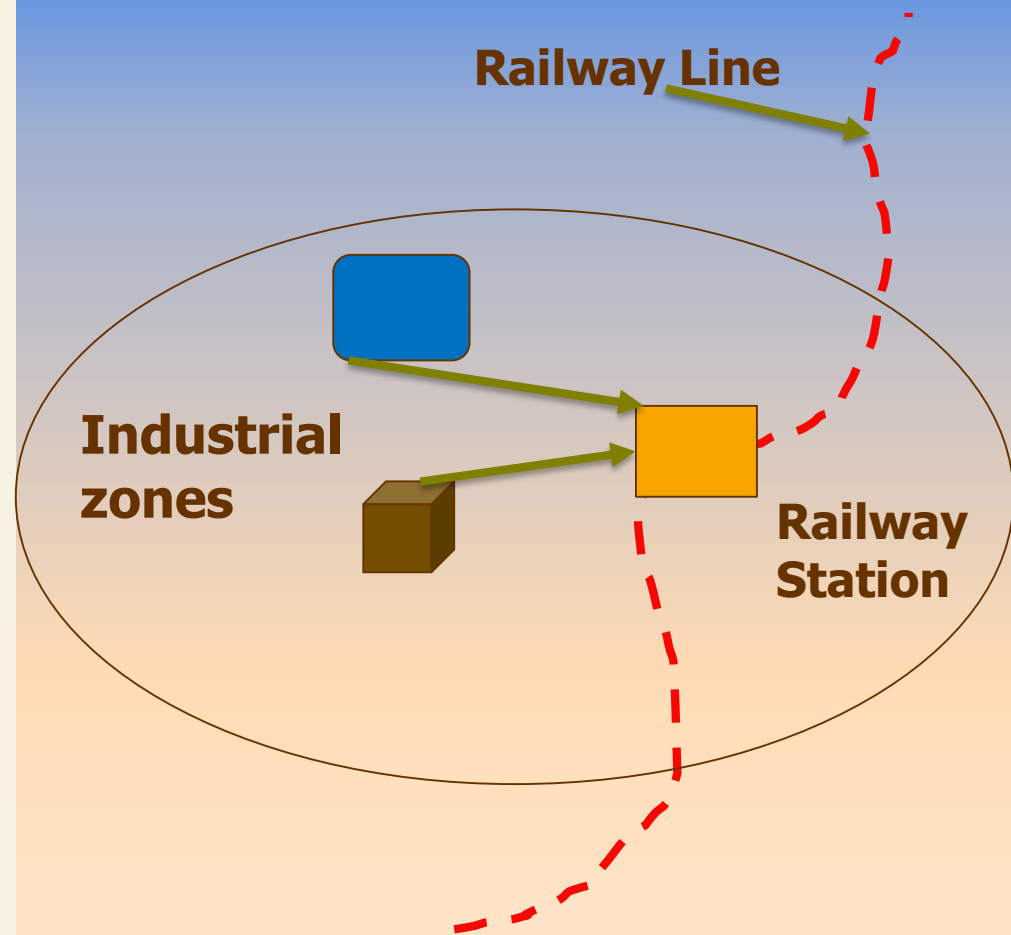


# **ETHIOPIAN RAILWAYS CORPORATION (ERC)**

**CONNECTING ETHIOPIA TO THE SEA  
PORT BY THE RAILWAY LINE  
CANNOT EFFECTIVELY CONTRIBUTE  
TO INVESTMENT AND EXPORT  
LOGISTICS UNLESS OTHER MODES  
OF TRANSPORT ARE INTEGRATED  
WITH THE RAILWAY LINE AS A HUB.**

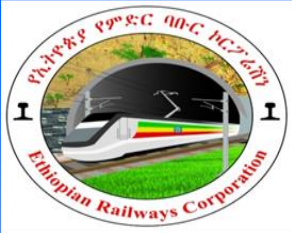
**THE FIRST AND APPROPRIATE  
OPTION IS:**

**TO LOCATE INDUSTRIAL ZONES  
CLOSER TO THE RAILWAY STATION.**





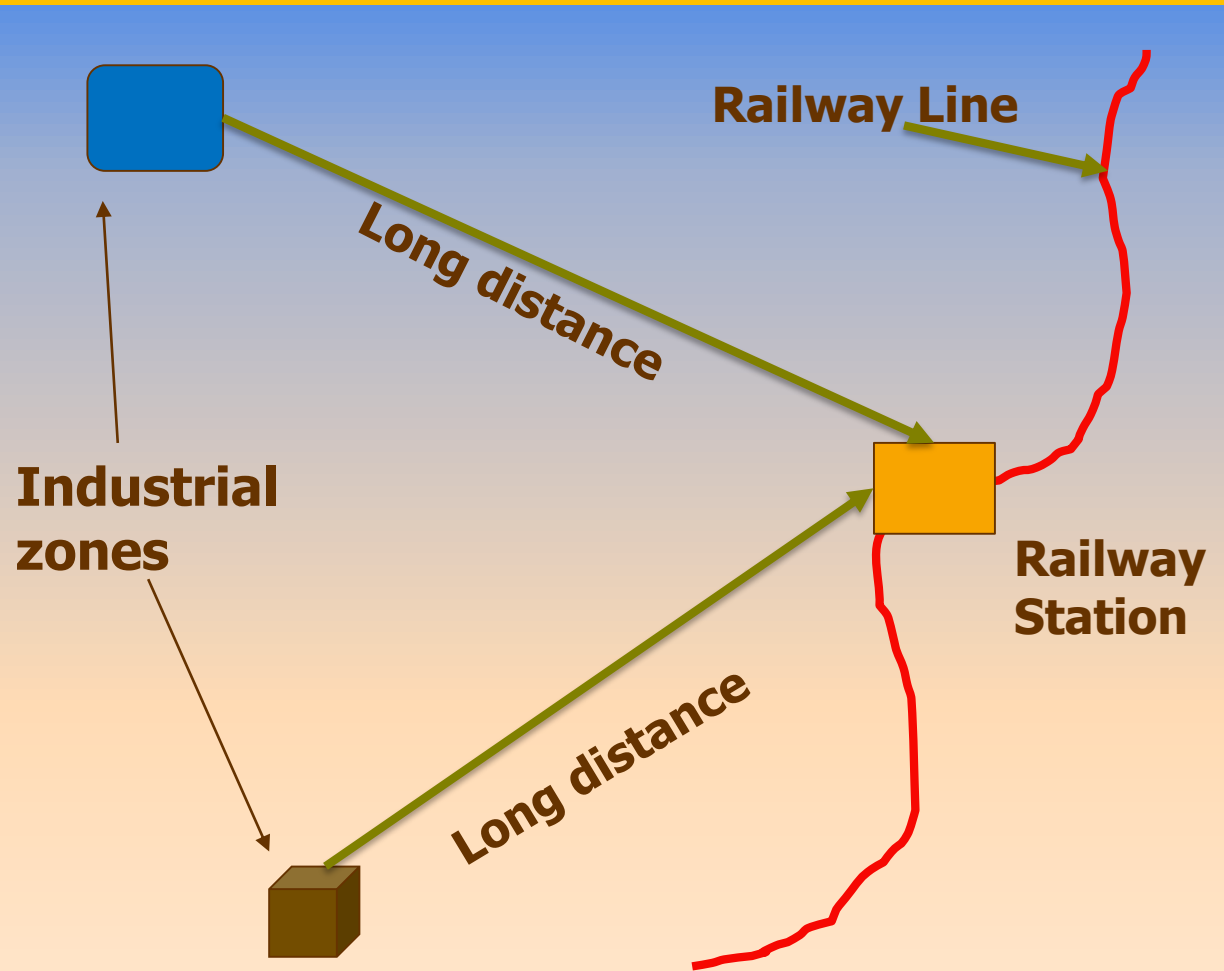




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**IF INDUSTRIAL ZONES  
ARE LOCATED FAR AWAY  
FROM THE RAILWAY LINE,  
THE ALTERNATIVE  
OPTION IS TO CONNECT  
THE INDUSTRIAL ZONE  
BY LINK ROAD/RAILS.**

**THIS OPTION IS  
INEFFECTIVE AND VERY  
EXPENSIVE.**





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Highway

Railway Line



Link Road/Rail

Railway Station



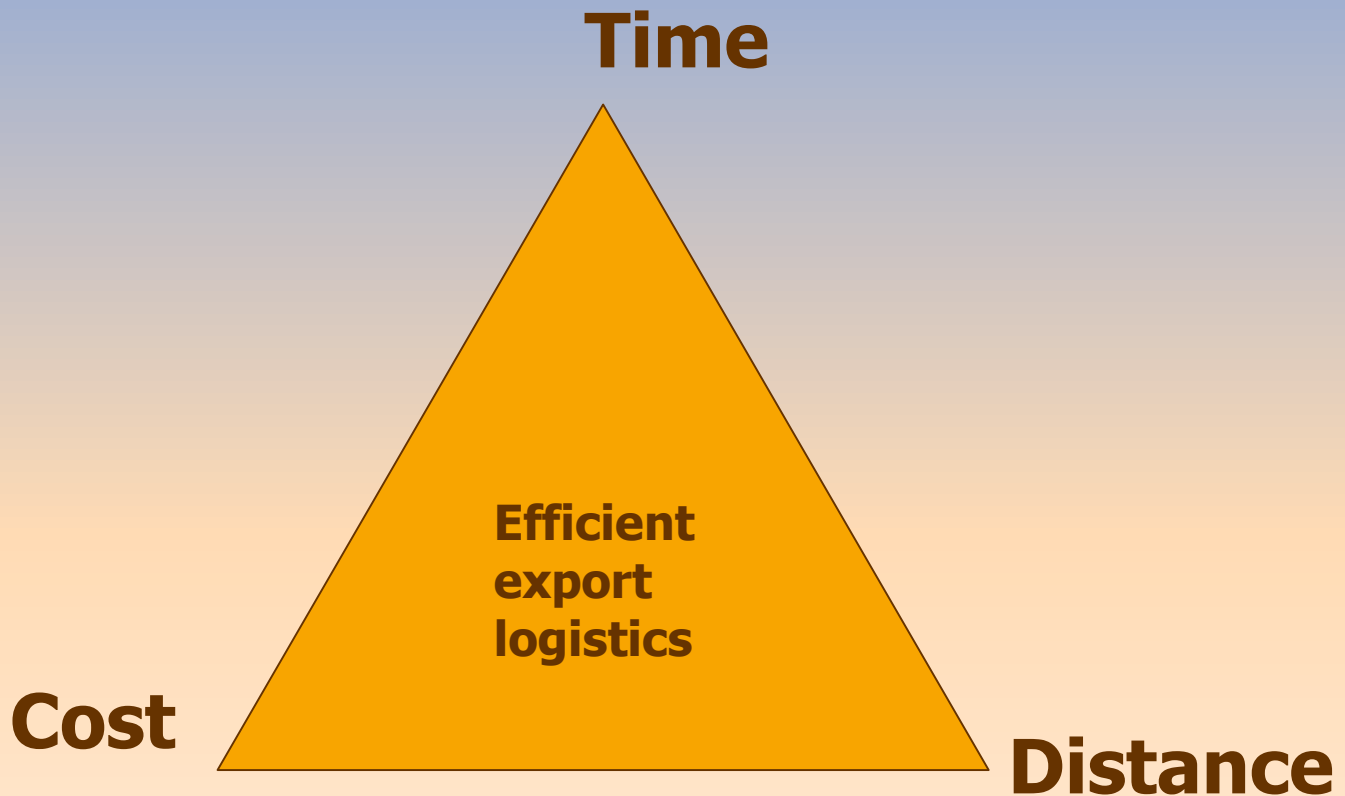
**THIRD OPTION:  
MAIN HIGHWAY  
CONNECTED TO THE  
RAILWAY LINE**

**LONG DISTANCE,  
TOPOGRAPHY MIGHT NOT  
BE FAVORABLE, TAKES  
VERY LONG TIME AND  
BECOMES EXPENSIVE**



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**Efficient export logistics Depends on the following three parameters**







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## Challenges:

❖ **Lack of integrated export logistics modes of transport approach:**

- **Railway Stations**
- **Roads;**
- **Airports;**
- **Ports;**
- **Mining areas;**
- **Industrial zones:**
- **Customs**
- **Immigration services**

**All the above shall be located along the railway line**



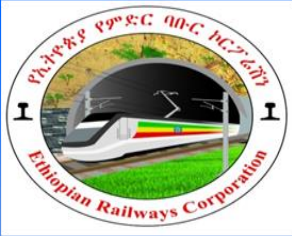


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## Opportunities:

- ❖ African government opens up the railway industry for private investors
- ❖ Railway acts as a catalyst for investment and export logistics;
- ❖ It Introduces Transit Oriented Development (TOD) around the train stations;
- ❖ Generates employment
- ❖ Attracts investment





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## **Actions to be taken to improve investment and export logistics**

- **Integrated Planning Approach among different modes of transport is Required;**
- **Use of intelligent transport system is essential**
- **Railway shall be taken as a hub at the initial stages of investment and export logistics planning;**
- **All the required export logistics facilities including customs & excise shall be established along the railway line;**
- **Railway requires huge investment and the support of private investors to finance and manage railway projects is critical;**
- **Investment transport related technology development shall be encouraged;**
- **Investment in human skill development is also important**



# **ETHIOPIAN RAILWAYS CORPORATION (ERC)**

## **Status of African Railways**

### **A. The current situation**

**Most African railways have suffered a strong decline during the last decades**

**With a few exceptions (mainly in the RSA and Northern Africa), African railways clearly lag behind those of most other regions in the world.**

**Rail transport has faced the same constraints and challenges as elsewhere. But, poor economic, technological and institutional conditions have further aggravated the situation in Africa. The result is outdated infrastructure, sometimes approaching a point of no return. The operations are clearly below international standards.**

**Concessions introduced in the 90s, under the impulse of the World Bank and other international donors, have halted the declining trend that threatened to dismantle many rail lines. But, the entire initiative has produced mixed results: in some cases it was a blatant failure and in quite a few others, if any, it was an outright success.**

**There is no single "fit for all" business model for railways. A large number of railway business models can be found worldwide with various levels of integration/separation of infrastructure and operations, and with more or less private participation. Significantly, the bigger and apparently more efficient railways in Africa (e.g. RSA or Morocco) are public sector undertakings, which is not the mainstream pattern in the Americas or in Europe.**





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## **B. The fundamentals of rail economics and operations**

**Some of the fundamentals of railways that need to be borne in mind, are:**

- **transport is typically competitive over mid to long distances but it usually loses its attractiveness in shorter journeys.**
- **Rail requires high volumes to be feasible, and it is a business of high volumes with low margins.**
- **Road and railway transport are both competitive and complementary. They compete over long distance but road transport is required for the "last mile."**
- **Railway infrastructure is rigid, expensive and requires an operating and maintaining.**
- **The performance of the operator is highly dependent on the conditions of the infrastructure and rolling stock**
- **Rail freight and rail passenger transportation are very different businesses**
- **Most rail projects around the world require high levels of subsidy for the construction and/or operations to be sustainable. This subsidy should reflect the economic, social and environmental benefits of railways compared with other transport modes.**
- **Including appropriate stakeholders in the concessionaire's shareholding improves project performance in the case of PPPs**



## **C. The need for a new approach**

The analysis of selected African railways confirms the need for a new approach. An in depth assessment of the railways in eight African countries has been undertaken. These eight countries are: Botswana, Cameroon, Kenya, Madagascar, Morocco, Senegal, Tanzania and Zambia. They represent a wide range of backgrounds and experiences. Most have had experience with concessions, with different results. But some (like Botswana and Morocco) have maintained a public sector approach.

### **The most relevant conclusions from these:**

- **In most countries, the introduction of concessions has proved rather unsettling to the point that two of them been terminated after a very short time. Where African Development Bank Group - concessions are still operational, the terms have had to be modified, resulting in major changes to their financial base.**
- **Most concessions underestimated the amount of investment required and the sums committed have had a limited impact on improving railway performance. Financial packages associated with these concessions have proved to be insufficient.**
- **Railways contract holders, most of them freight driven, have been overburdened with obligations that do not sit comfortably with their core business. They had to take over a substantial share of state railways legacy and passengers' service obligations, and this has been a major issue for their operations.**
- **Most concessions require operators to engage to a greater or lesser degree in infrastructure renewal or maintenance.**
- **The coexistence of passenger services, with mostly freight-driven operators, has been uncomfortable to the point that in some cases, it has been the cause of litigation.**
- **The competitive environment between railway and road transport modes has not been adequately addressed in most cases.**
- **Most countries have reached the conclusion that railway management and financing have to be reviewed.**



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## **D. The challenge**

**There seems to be two conflicting views:**

- **One opinion is based on the perception that rail transport as a losing game. The number of operations funded by International Financial Institution's (IFIs) in Africa, in recent years, shows relatively little investment in railways as compared to other infrastructure such as roads or energy.**
- **Conversely, the other opinion sees railways as an indispensable tool to foster development and take full advantage of the continent's natural wealth. Many African countries, as well as regional groupings, are currently designing new railway schemes. And several foreign players have become very active in promoting, lobbying government and even investing in railways. High expectations for the sector, as well as a certain amount of media hype, can now be found in the offices of many African decision-makers.**



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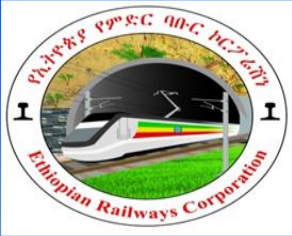
## **E. The solution**

**Opportunities for railways development do exist There are opportunities for railway development in Africa**

**as a consequence of the following drivers :**

- Growing urbanisation and industrialization will pose new transportation challenges that railways are well suited to handle.**
- Africa will produce large volumes of goods such as bulk minerals and commodities that are natural markets for railways.**
- The huge continental mass of Africa and the existence of many landlocked countries will encourage the development of high-capacity and efficient transport corridors.**
- Higher sensitivity towards environmental and safety issues will result in railways getting more public attention and social support**
- The reduction of the extremely high external costs (noise, pollution, congestion, accidents etc.) associated with the constant increase in the use and ownership of private vehicles.**





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## E. The solution Con't.,

- Major African Metropolitan Areas > Urban and suburban passenger railways.
- Densely populated areas and corridors > High volumes for freight or passengers possible.
- Corridors from ports to inland markets > Freight trains moving containerised or bulk materials from/to ports over long distances.
- Major mining basins > Freight trains moving minerals and other raw materials to export ports.
- Railway policy makers may have to bear in mind that new railway projects in Africa will only be sustainable provided that they are **compatible with their natural markets**. Projects should be driven by the “need” within the Transport Sector with a clear set of objectives.
- Robust and detailed feasibility assessments such as cost-benefit analysis (CBA), economic impact analysis or social return on investment analysis need to be part of the evaluation process.



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## **F. The way forward**

### **Learn from the experience of other countries**

**Faced with similar challenges in terms of the financing and development of railways, experiences in other developing and emerging countries are particularly valuable:**

- Countries that pioneered railways concessions, such as Argentina, provide mixed results. While freight transport has grown and proven to be profitable, long distance passenger services have been discontinued, as the subsidies required were unsustainable. However, urban and suburban trains remain crucial to Buenos Aires mobility.**
- The quality of the institutional environment is critical to ensuring that users benefit from private sector participation. In poor institutional environments, private operators may be more interested in courting regulators and politicians (i.e. the source of subsidies), than in really engaging in the improvement of safety and service standards to users, since fares are a minor part of the operator's revenues.**
- Big, and bureaucratic, public railways may create highly professionalized spin-offs to provide flexible, credible and creditworthy instruments to deal with the private sector under a wide range of PPP deals. This is the case of IRFC and RVN in India. This type of African Development Bank Group XVII Executive Summary approach merits the support from IFI's.**



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## **F. The way forward Con't.,**

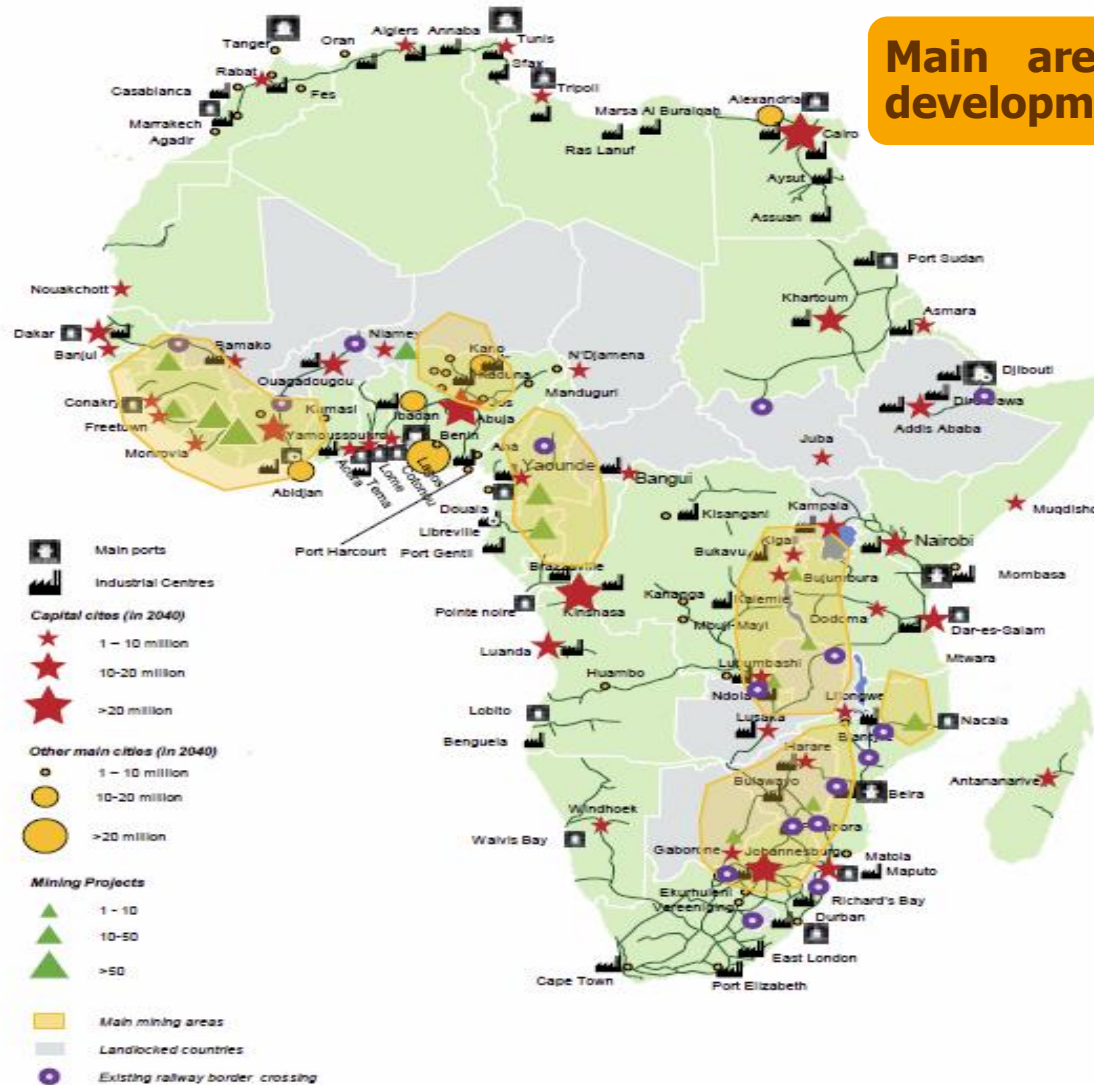
**Public railways such as Transnet and PRASA in the RSA may provide acceptable to good service delivery and sound financial performance, under adequate institutional arrangements, and has experience with big PPP deals such as the Gautrain.**

- Although it is a politically sensitive issue, the use of a share of fuel taxes to fund railway infrastructure is possible in emerging countries, as Poland's experience shows. This fund can eventually underwrite the issue of bonds to finance railway projects.**
- Unless there is a clear political will to push forward with liberalization and integration of national networks, it can be difficult to get agreement to a legal framework that neatly separates infrastructure, operation and regulation.**
- Partnerships between railways and logistics/transport operators have been successfully achieved in some of the leading railways in Europe and some examples already exist in Africa. The strong synergies obtained seem to favour this approach.**
- The decision to change gauge within a country has many implications. It can hinder, almost irreversibly, the development of rail traffic as has happened in some EU countries without standard gauge. Any new project, that involves the introduction of a different gauge from the one existing on the network, needs to be carefully assessed before any decision is made. The assessment needs to take into account the requirements of stakeholders in the logistics chains and all the operational and day-to-day impacts.**



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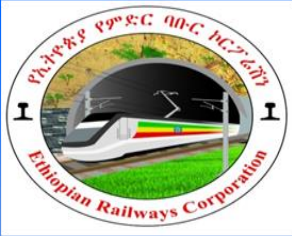
Main areas suitable for railway developments in Africa



Source: ALG based on PIDA

Main areas suitable for railway developments in Africa

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**Thank you for your Attention!**

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