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Sent: Monday, March 17, 2025 8:18 PM

To: McNamara, Brendan S. EOP/NSC <Brendan.S.McNamara@nsc.eop.gov>

Subject: Follow up [I-AMS.FID2149054]

Brendan,

Thank you for your time Friday. As promised, here is some additional information:

1. **Northern Corridor.** As noted, Angola has three west-to-east rail corridors that originate in: (1) Luanda via the Luanda Railway (CFL) or “Northern Corridor,” (2) Benguela via the Benguela Railway (CFB) or “Lobito Corridor,” and (3) Moçâmedes via the Moçâmedes Railway (CFM) or “Southern Corridor.” Each line has existing rail that needs to be renovated and extended. In addition to Lobito, there is great importance placed on the Northern Corridor given its link to Angola’s agricultural and mining regions, and critical border crossings with the DRC. Attached are two presentations. Both are dated so I’ll try to find more recent info. Regardless, the first is rail centric and summarizes expansion plans. The other is the national master plan and offers context for broader transportation across the country.
2. **Angola’s Space Agency.** [Dr. Zolana Joao](#) is General Manager of Angola’s National Space Program Management Office (“[GGPEN](#)”). Attached is a recent paper he co-authored.
3. **Starlink.** I understand you’re already in contact with the person with whom I was going to connect you.
4. **DFC.** I’ll share our concept paper when its ready.
5. **US-Africa Business Summit.** This [gathering](#) brings together US and African companies, and African presidents, heads of government, and ministers in late June in Luanda. Lots of commercial discussions and deal-making. It’s an excellent platform for business, policy, and others announcements.

I don't have Ben's contact info, so please share with him as you deem appropriate. I look forward to staying in touch.

Best,

Robert



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REPÚBLICA DE ANGOLA

ANGOLA

**NATIONAL
MASTER PLAN
FOR THE
TRANSPORT
SECTOR
AND ROAD
INFRASTRUCTURE
(NMPTSRI)**

July 2021



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REPUBLIC OF ANGOLA
MINISTRY OF TRANSPORT



PRESENTATION

Financed under the contract between the Government of Angola-Ministry of Transport and the African Development Bank, BAD, the project to prepare the National Master Plan for the Transport and Roads Infrastructure Sector, the PDNSTIR, has been completed.

In preparing the Master Plan we have worked together with our colleagues from the Ministry of Public Works and Land Management and the Plan is the fruit of the coordinated efforts of our teams. The Plan has been enriched also by contributions from a number of illustrious entities, such as: the Vice President of the Republic, the Technical Office of the President of the Republic, ministerial departments and Provincial Governments.

The technical work was concluded by July 2020, and today we have, before our very eyes, the guiding document for the future of the transport and roads infrastructure sectors of our country, Reflecting the synergies between these sectors the document has the title of the National Master Plan for the Transport and Roads Infrastructure Sector, and is co-signed by the heads of the two Ministries.

In addition to the PDNSTIR the project has also delivered a Preliminary Pre-Feasibility Study for the Link between the CFB and the Zambian rail network and terms of reference for the studies to progress some of the projects and initiatives that will be launched in the near future, all contributing towards raising the transport sector to a new level that will be attained over the long term.

The time period that is covered by this planning exercise is 20 years, with periodic revisions over this period called for.

The PDNSTIR is a guideline document. It does not make mention of the technical specifications for the infrastructure, but it does establish the principal vectors for the Transport, Roads and Logistics Sectors, covering the period to 2038, aligned with the objectives of the PDN and harmonized with the principles and rules of the SADC on the development and management of infrastructure.

In the PDNSTIR, we highlight the priority to be attached to the necessary institutional, legislative and regulatory adjustments, with the objective of the maximizing the return from the existing infrastructure, in which investment has had an exclusively public character. Such adjustments are already happening with the approval of legal and regulatory measures that apply to the various transport subsectors, together with the tenders that have already been authorised by the Head of the Executive, and that are in their final phases of preparation for being launched onto the market.

The guidelines on which the new horizons must be based create the conditions that are necessary for a more active and determined investment by the private sector in the construction and management of new infrastructure. The projects and initiatives that are included in the Master Plan have been conceived in a manner that ensures that the investments to be made over the short, medium and long term are not based on the exclusive use of public funds, directly coming from State Budget. The Economics Team is already working on a proposal for the creation of an Investment Fund in the Angolan Transport Infrastructure to be employed as a tool to support the implementation of some of the infrastructure projects and initiatives that are included in the Master Plan.

We expect a mean annual level of investment of approximately US\$ 1.4 billion, representing about 1.4% of the national GDP, for continuous investment in infrastructure. This is highlighted and detailed in the Master Plan, indicating the need for continuous investment in infrastructure in order to ensure the bases for the development of productive economic activity and sustainable growth.

So, we now have a Master Plan that over the coming years will be an essential working in the development - in a sustainable manner - of a transversal sector to the economy, that will be of great service to the economy, and to the wellbeing of the country, of the region and of the Continent.

Thank you very much.

Ricardo Daniel Viegas D'Abreu


Ministro dos Transportes

Manuel Tavares de Almeida


Ministro das Obras Públicas e Ordenamento
do Território

01

INTRODUCTION

Delivering sustainable economic and social progress

The Government of Angola's (GOA) vision for the future progress of the country encompasses diversification of the economy; the rehabilitation of social infrastructure and the infrastructure supporting the productive sectors; the achievement of economic and social stability through economic growth, the alleviation of poverty, territorial integration and national cohesion, and the reduction of regional disparities; and consolidation of the country's regional economic role. The policies to realise this vision are articulated through medium and long-term development plans such as Visao 2025 and the National Development Plan, and sectoral plans such as the Tourism Master Plan for Angola.

The challenge for transport

Developments in the transport and road infrastructure sectors will be critical to the achievement of the Government's goals for sustainable and diversified development with economic and social inclusion. The pace at which progress can be delivered will depend on the financial, human and material resources that can be mobilised. Delivery will be partnership between the private and Government sectors. Private sector intervention in the construction and rehabilitation of infrastructure, the financing and management of infrastructure and transport operations will be essential.

The challenge for the transport and roads sectors will be to deliver modern, efficient and safe transport infrastructure and services that provide the accessibility that promoting territorial integration and economic and social opportunity will depend on, and that can cater effectively for the growth in transport demands that economic and social progress will generate.

This will require substantial investment, both to bring existing infrastructure up to modern standards of efficiency and safety, and to expand networks and services to meet growing demand. Government budgets for such investment will be finite. It will therefore be essential that investment is planned effectively to ensure maximum value is achieved, and that private sector finance is leveraged effectively to supplement the Government budgets. This requires robust short and longer-term plans that identify the required interventions and prioritise them based on systematic analysis of costs and expected outcomes. The National Master Plan for the Transport Sector and Road Infrastructure (NMPTSRI) provides that framework for effective planning of Government investment and for leveraging private finance.

The National Master Plan for the Transport Sector and Road Infrastructure

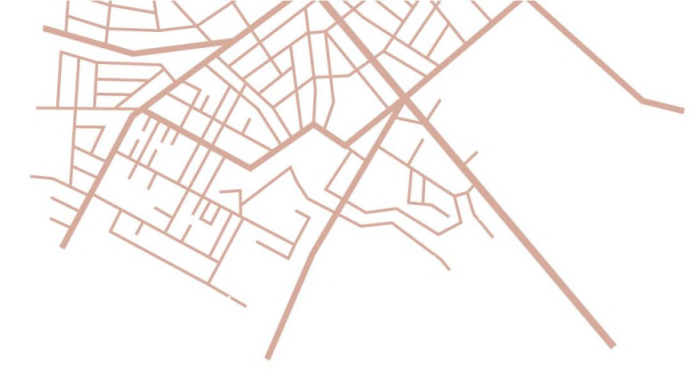
The National Master Plan for the Transport Sector and Road Infrastructure was prepared by the Ministry of Transport (MINTRANS) and the Ministry of Public Works and Land Management (MINOPOT) and was approved by the Council of Ministers in August 2020. It provides the Government of Angola with an integrated multi-modal master plan to guide development of the transport infrastructure and services up to 2038. It identifies priorities for the development and management of transport infrastructure and services; makes proposals for institutional development and capacity building; and identifies the legal and regulatory changes required to deliver the plan.

Thus, the NMPTSRI provides a roadmap for the development of a modern, efficient and safe transport system that will meet the needs of all users for the movement of people and goods, and will support the economic diversification and inclusive economic and social development that is at the heart of the Government's vision for the future of Angola.

It builds upon previous national transport studies and reports, in particular the studies carried out in 2011 for PENAMT (National Strategic Plan for Accessibility, Mobility and Transport) and the key plans and strategies that guide the future economic and social development of Angola. In addition, it takes full account of the regional context and Angola's place in the South African Development Community economic space.

The focus of the plan is on national transport networks. Its investment programmes do not urban transport projects or investment provincial or municipal roads. It is recommended that Provincial Transport Master Plans are prepared to guide investment in local transport networks and services.



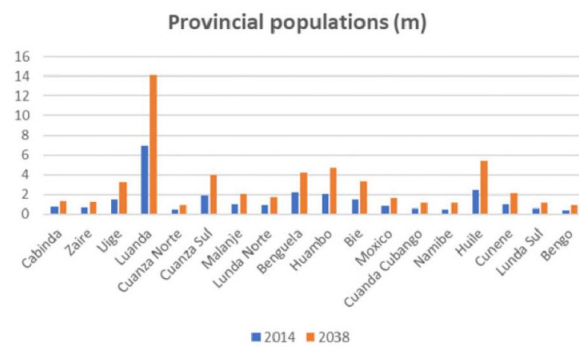


FORECASTING THE FUTURE DEMAND FOR TRANSPORT

Future demand for accessibility and movement will be driven by growth in the country's economy and population, while increasing incomes will mean that Angolan's will travel more and will be more likely to own and use a car for their journeys.

Population growth

The population of Angola was recorded as 25.8m in the 2014 Census and was estimated to have grown to around 29m by 2018. By 2038 based on projections by the National Institute of Statistics (INE), Angola's population will have grown to around 54m, a growth rate of 3.45% per annum. For the analyses of future transport demand a range of projected 2038 populations has been considered, between around 49m (low growth) and 57m (high growth).



INE projections show overall population growth for Angola between 2014 and 2038 of 110%. Bengo (139%), Huambo (134%), Bie (125%) and Namibe (121%) and are projected to have the highest growth. Benguela (90%) and Cabinda (87%) are projected to show least growth.

In 2014 27% of the population (7.0m) lived in Luanda province. This is projected to fall slightly by 2038, to 26% (14.1m).

Economic growth

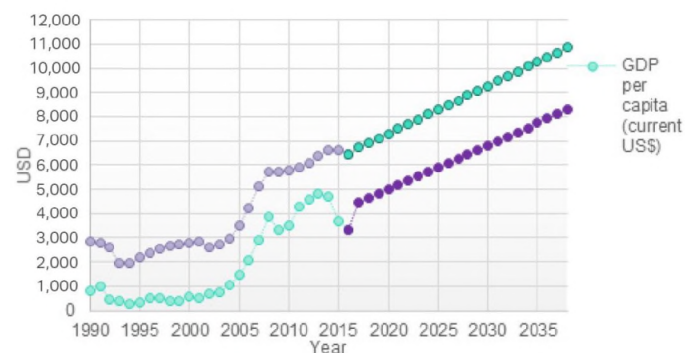
Over the past 20 years Angola's economic growth has been highly variable. Following the cessation of hostilities, the economy experienced a period of high growth. Between 2002 and 2008 the average annual GDP growth was approximately 15%, reducing to 4.5% for the period 2009-2015. More recently, due to declining oil prices and the underperformance of the agricultural sector, growth was negative in 2016 and only marginally positive in 2017.

Assumptions for future economic growth for the NMPTSRI have been based on comparisons of GDP growth in other SADC countries and in other African countries whose economy at present is currently driven by oil production. For the base (medium growth) case the average growth rate of the countries compared was used which equated to some 4% per annum. For high and low growth forecasts the upper limit and lower limit annual average growth rates were used, which equated to 6% and 2.5% per annum respectively.

Incomes

Angola's GDP per capita, an indicator of average incomes, was \$3,308 in 2016. The trend over past 30 years has been generally upwards, and at quite high rates, especially during the post-conflict years and during the period of the recent oil boom. It peaked at \$4,805 in 2013 but has declined recently.

GDP per capita is predicted to grow steadily, and by 2040 it was projected to range between US\$8,000 to US\$11,000 per annum.



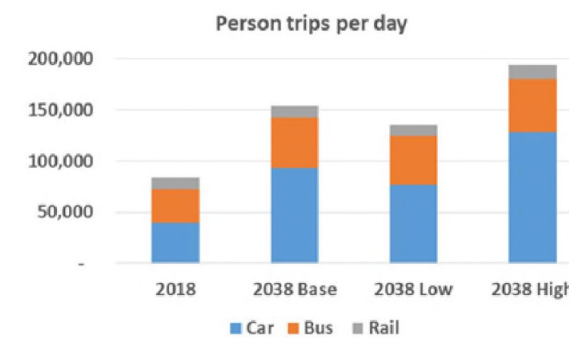
Transport demand

The NMPTSRI has considered a range of possible scenarios for the growth in the demand for personal and freight transport - a base or central growth scenario, and low growth and high growth scenarios. These reflect the range of projections developed for future population, economic and income growth.

Person trips

Driven by the projected population and economic growth total person trips are forecast to increase by 84% between 2018 and 2038. In the low and high growth scenarios the forecast growth is 62% and 131% respectively.

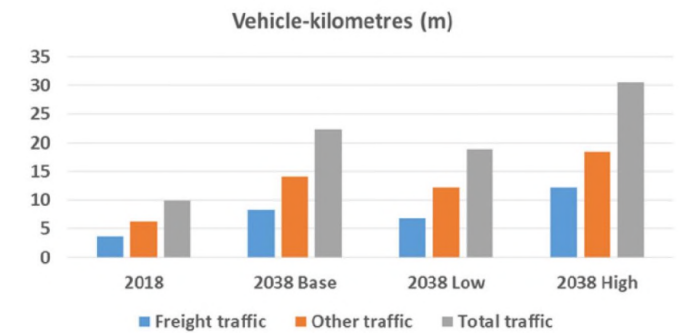
While public transport trips (bus and rail) are forecast to increase in absolute terms, due to the projected increase in personal incomes and car ownership, the share of total trips using public transport is forecast to fall from 53% in 2018 to 40% in the 2038 base scenario. In the low and high growth scenarios the public transport mode share is projected to fall to 43% and 34% respectively, reflecting the lower and higher growth in personal incomes assumed respectively for these scenarios.



Road Traffic

With the growth in personal trips and sector-by-sector projections of growth in commodity flows overall traffic levels on the road network are projected to increase by 125% between 2018 and 2038, with freight and non-freight traffic showing similar rates of growth. In the low growth scenario, the forecast increase is 90% and in the high growth scenario it is 207%. In the high growth scenario, the forecast growth in freight traffic is significantly higher than for non-freight traffic, around 230% compared to 194%

Freight traffic comprises around 37% of total traffic in both 2018 and the 2038 base scenario. In the high growth scenario this increases to 40%.



THE NATIONAL MASTER PLAN FOR THE TRANSPORT SECTOR AND ROAD INFRASTRUCTURE

NMPTSRI investment programmes

Potential infrastructure investment projects for inclusion in the NMPTSRI were identified from an assessment of existing conditions and issues in each modal sub-sector, and of the impact of forecast changes over the 20-year period to 2038. Projects were evaluated with regard to their contribution to delivering GOA objectives for supporting the territorial development, promoting private sector funding, and strengthening Angola's regional economic role; their economic performance; and environmental impacts.

Projects that were demonstrated to be deliverable and value for money in meeting the challenges described earlier have been prioritised into short-term (up to 2023), medium-term (2024 to 2028) and long-term (2029 to 2038) investment programmes. These are illustrated in the following diagrams and detailed in the tables appended to this document. Key interventions in each modal sub-sector are discussed further below.

The estimated total costs of the NMPTSRI investment programmes are shown in the following table, together with the costs of MINTRANS 'pipeline' projects at the time of preparing the master plan.

	SHORT TERM (2019-2023)	MEDIUM TERM (2024-2028)	LONG TERM (2029-2038)	TOTAL
MINTRANS 'pipeline projects'	3,204	3,204	-	6,408
NMPTSRI projects	10,772	8,721	11,798	31,291

Summary of programme costs (\$m)



Short-term (up to 2023) infrastructure investment projects

- Road Infrastructure**
 - Fundamental Road network rehabilitation
 - Tollbooth/weighbridge
- Rail**
 - Existing rail line - improvement to capacity & train control systems
 - Existing rail line - rehabilitation
 - New rail line
- Maritime**
 - New port
 - Port capacity enhancement
 - Terminal rehabilitation
 - Cabotage for Northern Angola
- Road Passenger Transport**
 - Multi-modal bus terminal
- Aviation**
 - Passenger terminal capacity expansion
 - Low cost airfield upgrade
 - New airport
 - Existing airport-infrastructure expansion
 - Cargo terminal capacity expansion
- Intermodal**
 - Logistical platform



Medium-term (2024-2028) infrastructure investment projects

- Road Infrastructure**
 - Fundamental Road network rehabilitation
 - Tollbooth/weighbridge
- Rail**
 - Existing rail line
 - New rail line
- Maritime**
 - New port
 - Port capacity enhancement
 - Terminal rehabilitation
 - Cabotage for Northern Angola
- Aviation**
 - Passenger terminal capacity expansion
 - Low cost airfield upgrade
 - New airport
 - Existing airport-infrastructure expansion
 - Cargo terminal capacity expansion
- Road Passenger Transport**
 - Multi-modal bus terminal
- Intermodal**
 - Logistical platform



Long-term (2029-2038) infrastructure investment projects

- Road Infrastructure**
 - Fundamental Road network rehabilitation
 - Tollbooth/weighbridge
- Rail**
 - Existing rail line
 - New rail line
- Maritime**
 - New port
 - Port capacity enhancement
 - Terminal rehabilitation
 - Cabotage for Northern Angola
- Aviation**
 - Passenger terminal capacity expansion
 - Low cost airfield upgrade
 - New airport
 - Existing airport-infrastructure expansion
 - Cargo terminal capacity expansion
- Road Passenger Transport**
 - Multi-modal bus terminal
- Intermodal**
 - Logistical platform

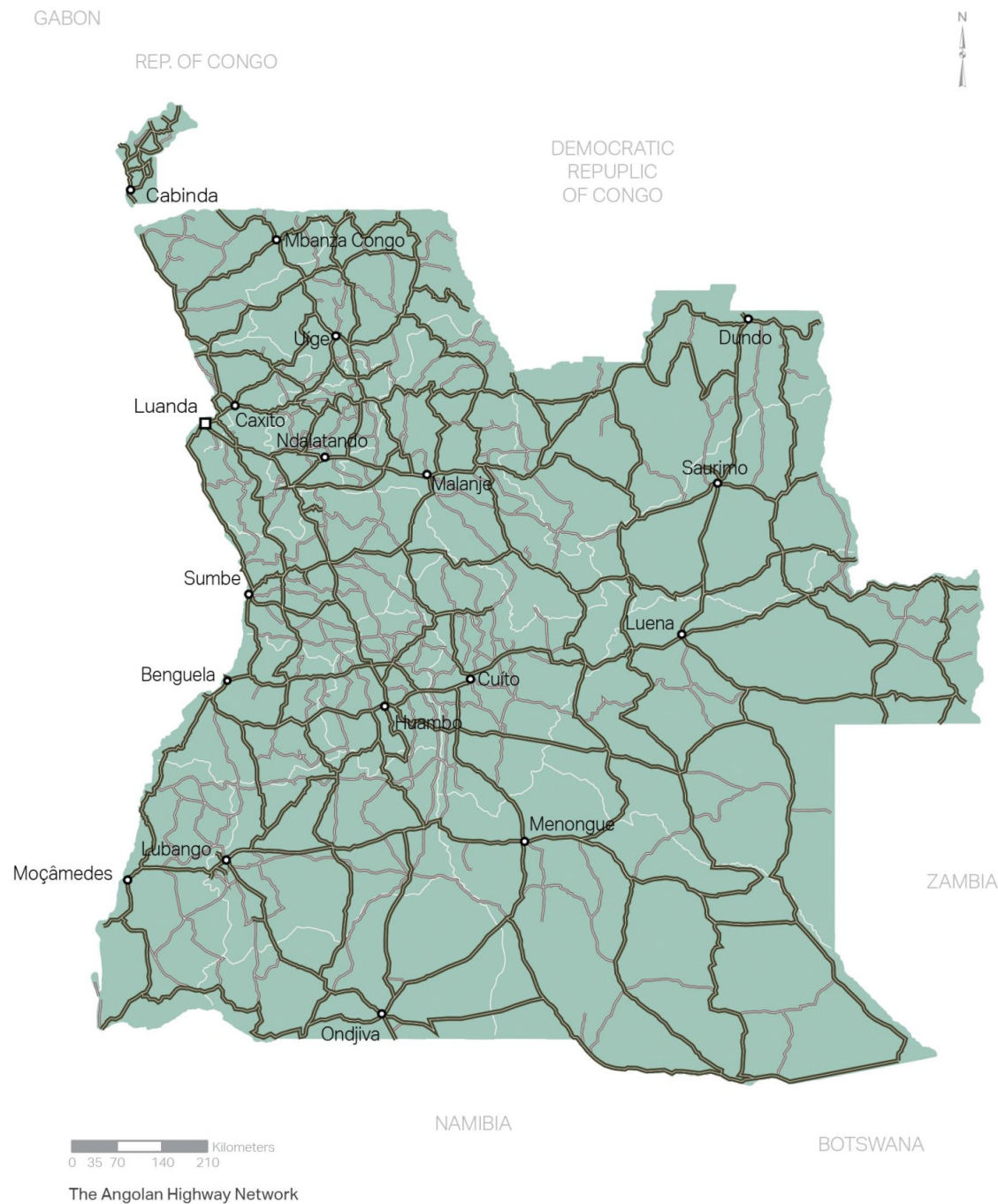
Road infrastructure

The Angolan highway network consists of approximately 76,000 km of roads. The Fundamental Road Network defined in Decree 46/92 of 9 September which constitutes the Angolan Highways Plan, extends for a length of about 26,000 km while Complementary Roads take account of roads developed since 1992 that are integral parts of the national highway network. MINOPOT, through INEA, is responsible for the Fundamental Road Network and Complementary Roads.



The Angolan Highway Network

Being a member country of the South African Development Community (SADC), Angola is also a member of the group of regions that are signatories of the Tripartite Programme for the Facilitation of Transport and Transit (TTTFP). Six Regional Highway Corridors are defined as having a major significance for international trade.





Strategic programmes/plans for intervention in the road network under the responsibility of the INEA include the Road Infrastructure Maintenance Programme (PRIR). This programme to rehabilitate the fundamental road network which was commenced in 2005 and aims to upgrade roads through widening, realignment, paving and drainage improvements, bridge construction, etc. In the five years 2013-2017 some 3,350 km of roads were asphalted under PRIR, although from 2105 onwards the length of works completed annually has decreased due to funding availability.

Master Plan projects

Rehabilitating the road network

Short-term priorities for road infrastructure are to implement the NDP plan for road rehabilitation. Additional short-term priority is to implement a systematic and comprehensive Road Management System (RMS).

In the medium and long terms investment in the fundamental road system will continue to be a priority. Estimated lengths of roads to be subject to rehabilitation and conservation up to 2038, and the estimated costs of these programmes shown in the following table.

	SHORT TERM (2019-2023)	MEDIUM TERM (2024-2028)	LONG TERM (2029-2038)
Road rehabilitation programme – total km	3,125	1,875	1,250
Road conservation programme – km per year	1,480	1,626	975
Estimated cost (\$m)	2,681	1,658	1,146
Cost per year (\$m)	536	332	115

Summary of road improvement investment programmes

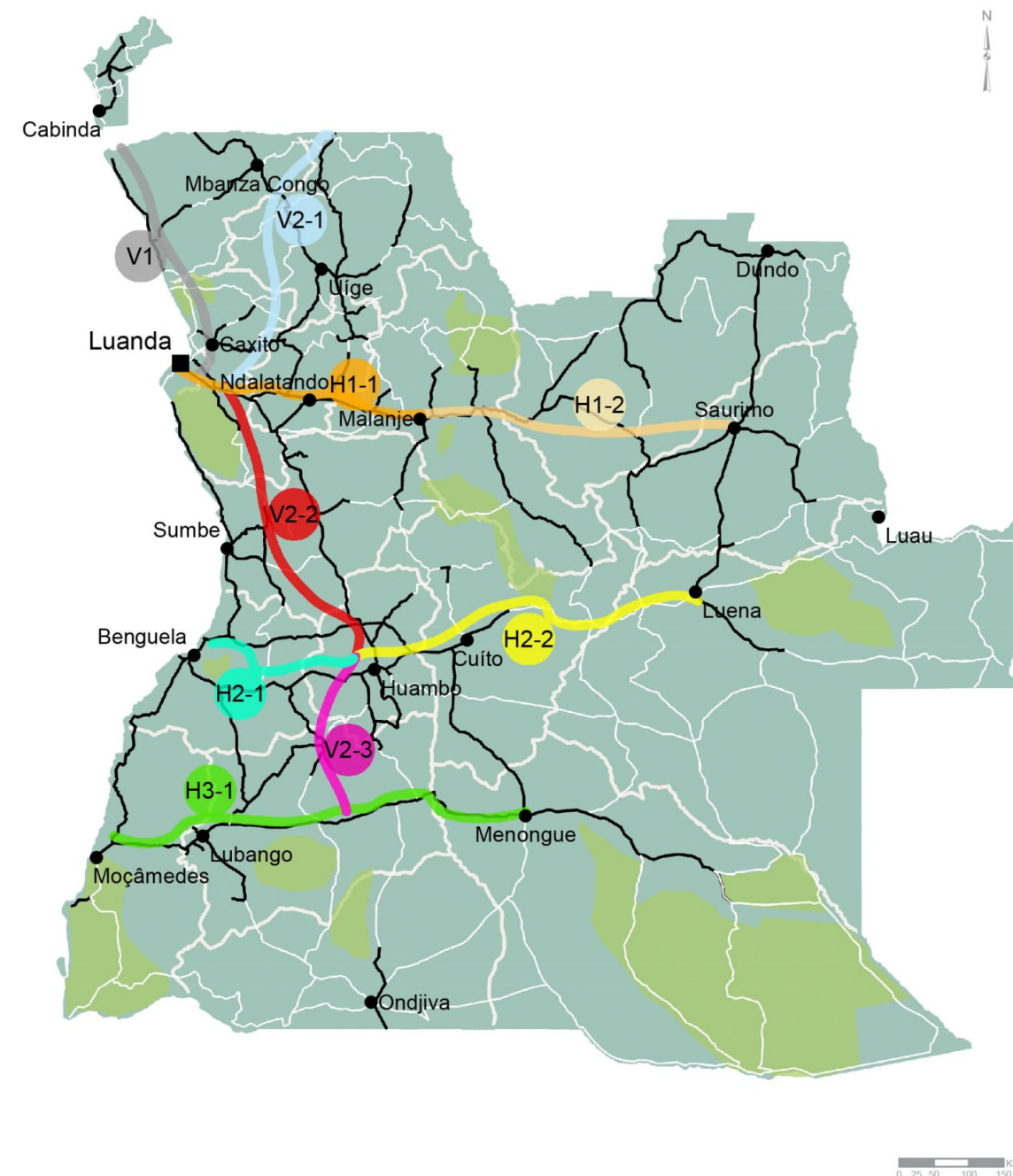
Weighbridges

Presidential Decree 267/19 of 30 August approved the 1st Phase of the National Vehicle Toll and Weighing Plan which provides for the installation of stations at six border-crossings - Massabi and Lema (Cabinda), Noqui and Luvo (Zaire), Luau (Moxico), Santa Clara (Cunene). These are assumed to be implemented in the first five years of the NMPTSRI. The NMPTSRI investment programme assumes that a second phase of the National Plan will be rolled out in the medium term comprising six further projects.

National Network of Expressways

The national network of expressways would connect the main cities to each other, to the main production centres, to the ports and to the neighbouring countries. Based on traffic forecasts the NMPTSRI identifies the higher priority expressway corridors based on current traffic forecasts.

The expressway network is expected to be funded and delivered by the private sector. Expressway projects, priorities and implementation timescales will therefore be determined by their financial viability as privately funded projects, which will depend on how the market develops over the NMPTSRI period. Financial viability of proposed projects will be assessed through feasibility studies. Thus, the network will be implemented over a period of time that may extend beyond the NMPTSRI period.



Higher priority corridors for expressway development

Rail



The existing rail system comprises three separate single-track lines - Luanda Railway (CFL), 500km connecting the Port of Luanda to Malanje; Benguela Railway (CFB), 1,344km connecting the Port of Lobito to Luau on the DRC border; and Moçâmedes Railway (CFM), 856km connecting the Port of Namibe to Menongue. Existing levels of freight traffic are very low and passenger services, other than urban services for Luanda, are infrequent. Traffic levels are well below those required to sustain profitable operations.

All three lines also suffer from significant operational constraints, including capacity constraints due to the lengths and locations of crossing loops and dysfunctional train control systems. 215km of track on CFL has not been rehabilitated. There is insufficient long-term planning for rolling stock capacity and shortages of certain rolling stock types occur. Incomplete rehabilitation of maintenance workshops and equipment is also an issue.

The existing system lacks connectivity – there are no connections between the three lines and the only connection to a neighbouring country is from CFB into DRC. There is also a lack of links to large industrial centres and to port quay-side facilities.

Master Plan projects

National rail network

Projects to address the capacity and operational issues on the existing system that are described above are short-term priorities for the rail sub-sector. Particularly critical is completion of the rehabilitation of CFL with the rehabilitation of the 215 km section between Zenza and Cacuso which is currently responsible for low operating speeds on the Luanda-Malanje route. The technical surveys and studies for this project are being carried out.

Over the Master Plan period the construction of some 6,340km of new lines is proposed to deliver a national rail network for Angola, connecting the existing lines and connecting Angola to neighbouring countries. The cost of this infrastructure is estimated at around \$20,500m, funding for which is anticipated to be shared between the public and private sector.

The proposed phasing of this investment is:

- Short-term (by 2023) – 1,460km, estimated cost \$5,251m - including a priority project to provide a connection from CFB to Zambia
- Medium-term (2024-2028) – 2,130km (estimated cost \$6,377m)
- Long-term (2029-2038) – 2,750km, estimated cost \$8,870m
- Longer-term – a further 1,700km of new lines are identified for potential implementation beyond 2038

The 280km CFB-Zambia rail link will connect CFB in the vicinity of Luacano to the Zambian border at Jimbe, with access from the minerals production areas of Zambia then provided by the Zambian railway system.



Rail Projects



In addition, priority will be given to promoting privately financed construction of railway lines to serve large industries, mining complexes and power plants.

A Cabinda-Soyo Rail Link is not included in the NMPTSRI given its very high costs and uncertainty over its deliverability. However, it may remain a long-term aspiration for GOA, subject to the resolution of economic and implementation issues.

High Speed Rail

Based on the NMPTSRI forecasts of passenger demand high speed rail is unlikely to be a viable proposition that could attract the necessary private sector funding during the NMPTSRI period.

National Rail Company

Restructuring the railway sector is proposed in order to attract private sector participants in railways. Restructuring will establish a National Railway Company that will maintain and operate the network. It will be a private company (or a private-public joint venture) paying a fee to the Government for exclusive rights to maintain and operate the infrastructure. CFM, CFB and CFL would become train operators, contracting with customers to move customers' freight with their trains and paying the National Railway Company track access fees. Access to the track would also open for other private train operators, also paying track access fees.



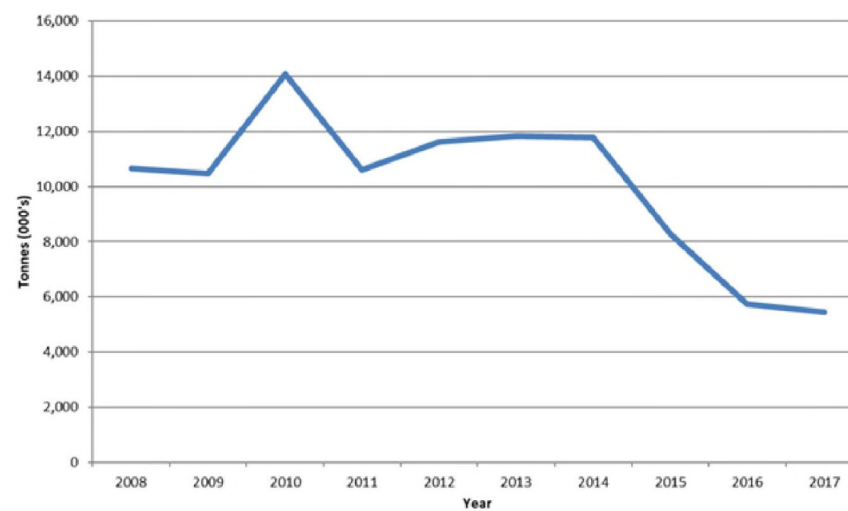
Ports



Angola's ports handle 95% of the country's imports. The Port of Luanda is by far the most heavily utilised, handling some 80% of the total throughputs for all ports, the majority of the cargo being containerised. The other main ports are Lobito, Cabinda and Namibe/Porto Saco. Smaller ports such as Soyo and Amboim mainly service the offshore oil and gas industry.

Strong growth in imported containerised cargo between 2007 and 2014 resulted in severe capacity issues in the international ports and, in particular in the port of Luanda. Restructuring and expansion of facilities in all four main ports was initiated during this period of growth to address capacity issues.

However, a downward trend in volumes since 2014 means that the ports now have significant spare capacity.



Total import cargoes (in thousands of tons) tons per year, Angola ports

The Master Plan projects

Port capacity

Projections of container throughput growth indicate some requirements for increases in port capacity during the life of the NMPTSRI.

In the short-term enhancements to container-handling capacity at the ports of Luanda and Namibe are proposed, together with rehabilitation of the dry bulk export terminal at Namibe. Construction of Phase 1 of the new Port of Caio (Cabinda), which is underway, will be completed.

The medium-term programme includes capacity enhancements at Luanda and at the Port of Soyo. In the long-term further increases in container handling capacity at the Port of Luanda is also projected to be required.

The total cost of this programme is estimated at around \$1,100m, excluding the on-going construction at Caio. A significant proportion of these costs will be financed from the private sector.

New deep-sea ports

During the period of strong growth up to 2014 plans were made for a new deep-sea port at Barra do Dande to address the then capacity issues at Luanda. These

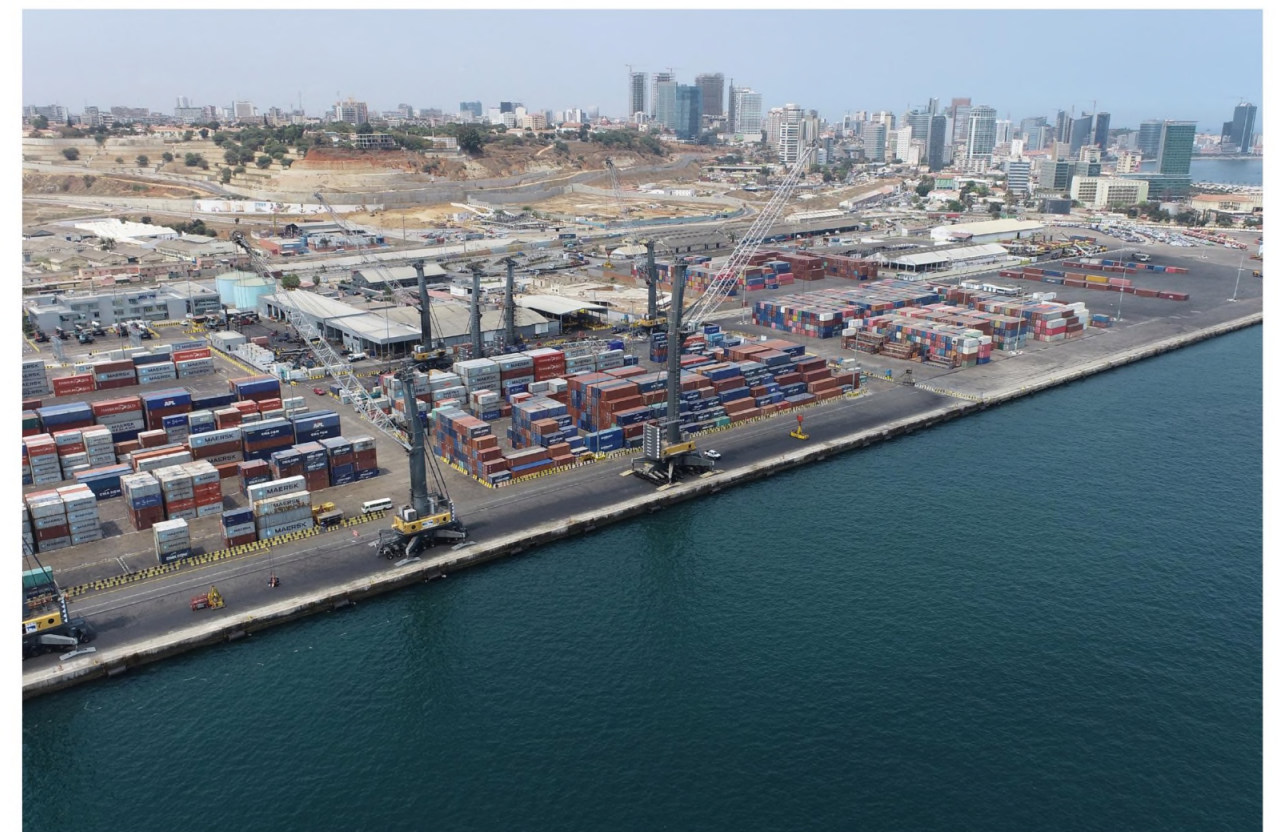
plans have not been progressed to date given the change in the demand situation.

Based on the demand forecasts, the new port at Barra do Dande will not be required until towards the end or beyond the NMPTSRI period, subject to the projects to enhance capacity at the Port of Luanda being implemented.

However, more limited development at Barra do Dande to provide a dry bulk terminal is being studied. A Master Plan for the integrated development of the oceanic terminal, a Free Trade Zone containing a mix of industrial uses, and a new city is being formalised.

Cabotage

Coastal domestic shipping (cabotage) between the main ports and smaller domestic ports hardly exist at present as it cannot compete on service and cost with land transport. However, the development of the dedicated cabotage terminals at Soyo and Cabinda is in progress and in the short-term it is proposed to initiate a pilot cabotage project, to be identified through a feasibility study. This is intended to be a first essential step in developing a cabotage network for Northern Angola.



Inland Waterway Transport



A large part of Angola's network of major rivers is not suitable for sustainable IWT due to the presence of water falls, rapids, hydropower dams and strongly fluctuating seasonal water levels. For the rivers discharging in the Atlantic, the shallow water conditions at the river mouths restrict any effective transport of cargo by IWT between the seaports and their inland hinterlands. A limited amount of inland water transport is taking place along the Zaire River in DRC, but IWT facilities have not been developed on the Angolan side of the river. Parts of the interior river system are navigable over short distances for more localised transport of passengers and small cargos.

A 10km long canal has recently been completed, along the River Cuando between Rivungo in southeast Angola and Shangombo in Zambia, with the objective of enabling economic and social exchange between the two countries, and to attract tourism from Zambia into Angola.

The project to develop a Network of Cabotage in the North of Angola initiated by MINTRANS in 2011 proposed the development of a cabotage network of domestic ports, and maritime and river transport services in the provinces of Cabinda and Zaire. The five domestic terminals proposed included two on the River Zaire, at Rock of Feitico and Noqui.

The Master Plan projects

Further technical and economic studies are proposed to establish the feasibility of developing IWT and cabotage services, and define a pilot project to be implemented in the short-term.

Depending on the results of these studies and the performance of the pilot project the cabotage system may be expanded into the River Zaire in the medium/ long-term.





Aviation

The National Airport Management Company (SGA) operates 32 commercial airports and airfields. Over the last decade the Government has rehabilitated, modernised or constructed 18 airports, of these 17 had been completed by the beginning of 2018. Additionally, a new airport for Luanda, termed the New International Airport for Luanda (NAIL), has been under construction for several years. Once completed, it will provide an annual capacity of 15 million passengers and handle all existing commercial traffic being processed by the existing 4 de Fevereiro Airport.

Current plans include the expansion of the passenger handling facilities at the existing Luanda airport to 4 million annual passengers; the completion of construction projects for Cabinda airport and NAIL; the rehabilitation and modernisation of further existing airports; and the construction of a new airport for Mbanza Congo.

Master Plan projects

Investment in airport infrastructure is required to address capacity issues at the main existing airports that are forecast to arise over the master plan period, and to provide accessibility to the more remote provinces - a key issue for the development and integration of remote areas into the national territory, and national cohesion. Thus, infrastructure projects proposed for the aviation sector broadly fall into two categories - 'demand led' capacity enhancements at existing airports, and 'accessibility led' low-cost upgrades of airfields in the remote areas.

Airport capacity enhancements

The major short-term priorities are the expansion of the international passenger terminal at Luanda (estimated cost \$300m) and the new airport at Mbanza Congo (\$802m). A significant level of private sector funding is expected to be sought for both these projects.

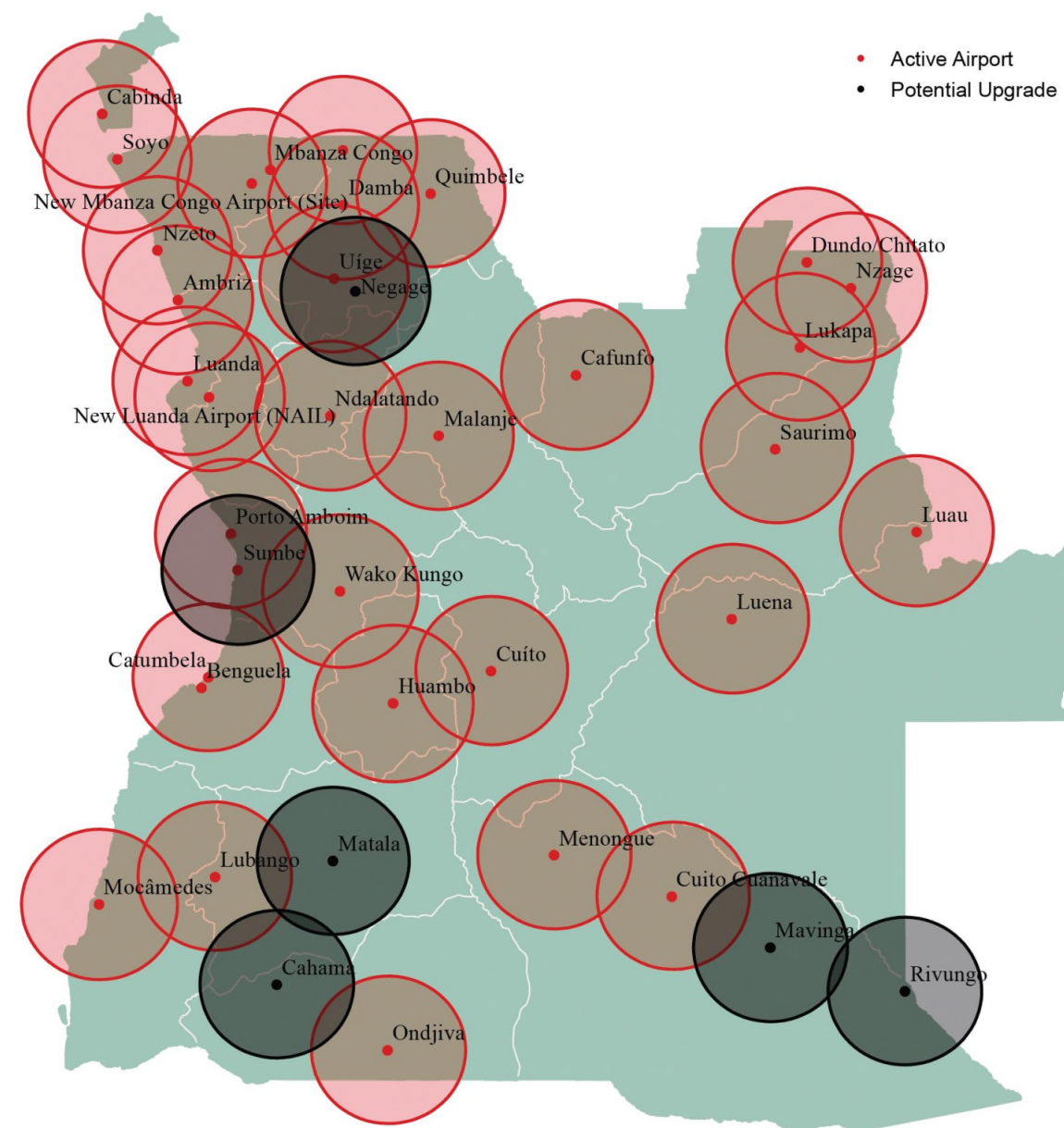
Elsewhere terminal expansions are also forecast to be required in the short-term at Catumbela, Huambo, Lubango and Soyo, and apron expansion at Soyo. In the medium term an expansion of the planned cargo terminal at NAIL is envisaged and new taxiway is proposed for Cabinda. in the long term a need to expand the cargo terminal at Cabinda is also identified.

The total cost of these projects is estimated at around \$81.4m, including £45.8m for the short-term priorities. Private sector funding through PPPs will be potentially applicable to projects involving new terminals.

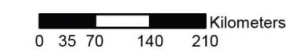
Airfield upgrades

Upgrades are proposed for the following airfields to provide basic infrastructure to operationalise them to be served by small aircraft:

- Short-term – Lucapa, Rivungo, Mavinga (estimated cost \$22.7m)
- Medium-term – Caham, Matala (\$23.1m)
- Long-term – Sumbe (\$11.3m)



Airports Currently Managed by SGA



Regular Road Passenger Transport



Bus services are an essential transport mode for travelling between cities in Angola. An estimated 3.6 million passengers per year travel by inter-provincial buses, with the majority of journeys commencing or ending in Luanda. Bus services within the provinces carry about 70,000 passengers per day, mainly on routes to and from the provincial capitals. The inter-provincial market is highly fragmented with over 20 operators running services on some of the busiest routes in and out of Luanda.

While increases in car ownership will reduce public transport's share of the travel market, growth in population and incomes means that journeys by bus are forecast to grow in absolute terms.

Operators in this sector face a number of issues and challenges in serving this demand, including the problems posed by the poor conditions of roads, competition from illegal operators, and difficulties in accessing foreign currency to buy spares to maintain their fleets.

For passengers a key issue is that central communal bus terminals are not provided in cities. Each company has its own location for pick-up and drop-off of passengers. This limits travel options for passengers. Most locations for pick-up and drop-off are of poor quality with no facilities offered, and in some cases are also not safe. The accessibility of these locations by urban transport services can also be poor.



The Master Plan projects

Central bus terminals and intermodal hubs

The key NMPTSRI proposal for the road passenger transport sector is the implementation of communal bus terminals and multimodal transport hubs serving each of Angola's major cities. Concentrating all bus services at one location will greatly enhance the number of travel options



for passengers on bus routes served by more than one operator. Furthermore, such facilities will greatly improve the comfort and safety of passengers.

Priority will be given in the first phase to the development of terminals in Luanda South (Kilamba), Luanda East (Viana), Luanda North, Benguela, Lubango and Huambo. These terminals should be operational by 2023.

In the medium-term a second phase of projects will include terminals in Malanje, Uíge, Mocimede, Saurimo, Sumbe and Cuito. In the long-term terminals in all remaining provincial capitals will be developed.

The total cost of this programme is estimated at \$350m, of which \$180m is for the short-term priority projects. It is expected that the terminals will be developed and largely funded by the private sector through Public-Private Partnerships.

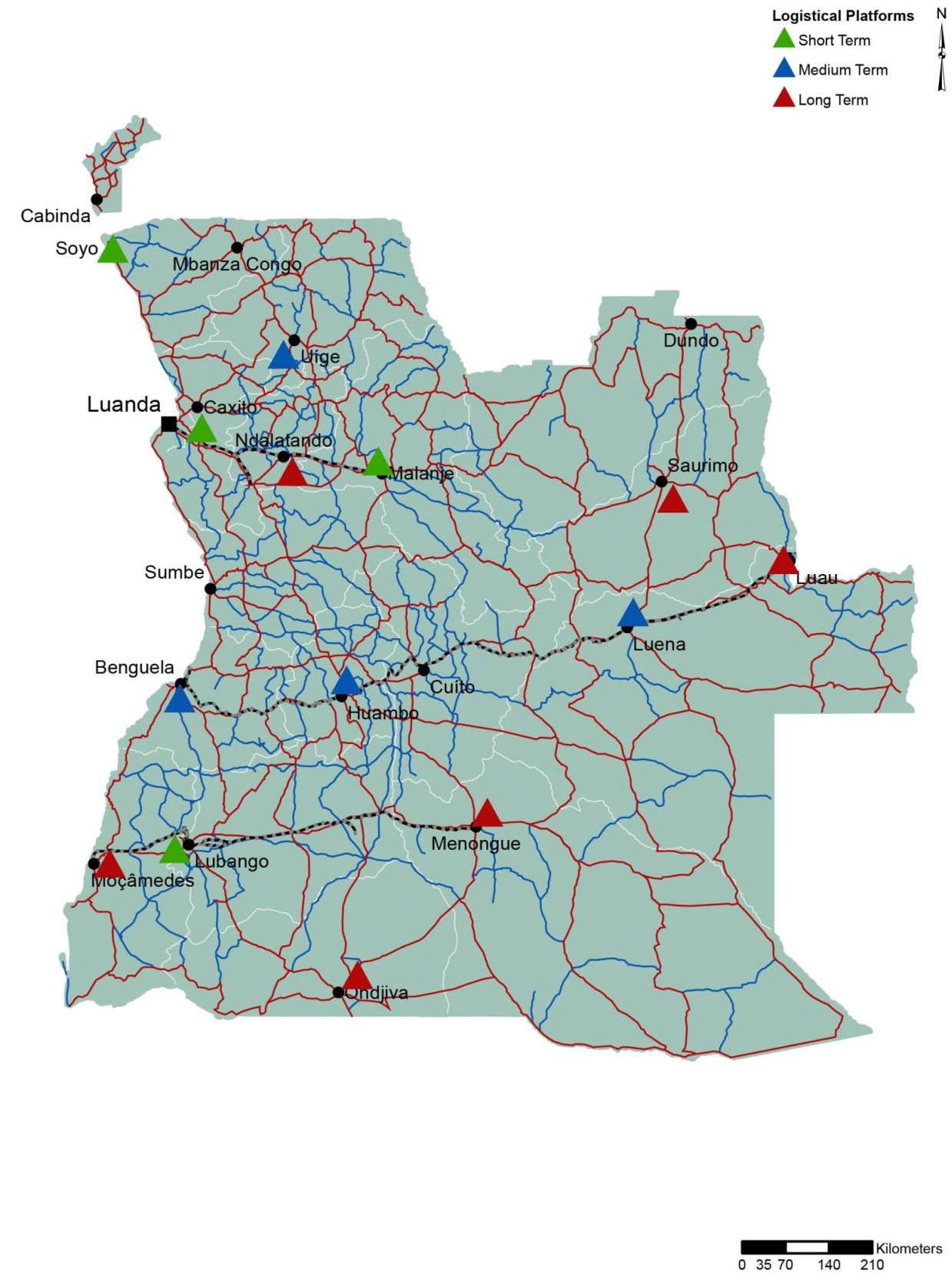
Supporting measures

The NMPTSRI also proposes a number of institutional and regulatory changes to enhance the supervision and monitoring of road passenger transport, as well as initiatives to introduce ticketing and improved dissemination of passenger information.

Airport strategy

The Global Strategy for Airport Management has been approved. The strategy integrates airport concession and the process of placing aerodromes at the service of local administration or private entities. These are two important initiatives for the consolidation and stabilization of the scope of action of the SGA. The attraction of private international partners will have a positive effect on improving the quality of the service provided.

MINTRANS is in the process of consulting with the market, investors and other stakeholders about the airport concession process.



Intermodal logistics

Angola performs poorly on international indices on transport and logistics. Its transport and logistic costs as a proportion GDP are also high, at 16.7% in 2017 compared to 8 to 9% of GDP in developed economies.

Following from a study in 2011, MINTRANS has adopted a major policy initiative to develop logistical platforms (LPs) for intermodal freight. The main benefits of logistical platforms are expected to be lower transport costs and faster and more reliable freight services, as well as wider economic benefits such as reduced congestion costs, regional economic growth, and employment generation.

The Master Plan projects

The 2011 study proposed an extensive national network of some 44 LPs related to major urban areas, ports, airports and border crossings. At the time of preparing the NMPTSRI 21 of these were being considered by MINTRANS for implementation. These 21 LPs have been reviewed in the NMPTSRI and prioritised with reference to forecast demand, access to national transport networks, economic viability, social benefits, and potential for private sector funding.

LPs at Soyo, Lubango, Malanje and Luanda are proposed for implementation the short-term (by 2023) at an estimated cost of \$172.2m. Other than Soyo (which was already under construction) the majority of these costs are expected to be funded by private sector finance.

Medium-term projects include LPs for Huambo, Lobito, Central Benguela, Luina and Uige. The estimated costs of \$136.8m are expected to be shared between the Government and private sector.

In the long-term up to 2038 LPs at Ndalatando, Luau, Ondjiva, Nmaibe and Menonge are proposed, at an estimated cost of \$136.5m. Again, these projects are expected to be jointly funded by the Government and private sector, although it is anticipated that in some case the majority of costs will be met from Government budgets.

IMPLEMENTING THE MASTER PLAN

Responsibilities

Responsibility for implementing the NMPTSRI will be shared across different levels of government, industry and the community. The two key implementing ministries will be the Ministry of Transport (MINTRANS) and Ministry of Public Works and Land Management (MINOPOT).

The planning for the development of the road network is the responsibility of MINOPOT. Thus, MINOPOT will define the investment and intervention priorities with respect to road infrastructure, and establish the target dates for attaining defined goals.

MINTRANS has overarching responsibility for formulating, executing and regulating the execution of policy in the field of transport and will be responsible for implementing the NMPTSRI in the rail, ports, inland waterways, air transport and road transport sectors. MINTRANS is also charged with promoting the development and coordination of intermodal transport.

Financing the investment

The total cost of the NMPTSRI investment programmes is estimated at around \$31,300m. Of this some \$20,200m is assumed to be funded from GAO budgets and \$11,100m by the private sector.

In addition, at the time of preparing the master plan there were a number of MINTRANS 'pipeline projects' under consideration with an estimated cost of around \$6,400m. Thus, the total GOA budget required to deliver the proposed transport infrastructure investments to 2038 amounts to an estimated \$26,600m. This compares to an estimate of the total amount of GOA funding that may be available for all transport infrastructure investment over this period (i.e., including elements not covered by the master plan such as urban transport and provincial/municipal roads) of \$37,000m.

Angola Transport Infrastructure Fund (FITA)

The Transport Infrastructure Fund was created in 2020 to secure the sustainable future investment in the development of strategic transport infrastructure projects. The Fund is to be resourced with revenues from the fees for port, rail and airport infrastructure concessions, reinforced from other public revenues. The Fund may also receive revenues generated through investments in economically viable projects delivered through Public-Private Partnerships.

Involving the private sector

Concession agreements

Significant steps are already being taken to increase the involvement of the private sector in the delivery of transport infrastructure and services through concession agreements and public-private partnerships (PPPs), in particular in the port sector.

In January 2021 DP World was awarded the 20-year concession for the Multipurpose Terminal at the Port of Luanda. Over the concession period US\$ 190 million will be invested by DP World in the development, modernisation and expansion of the terminal.

International tenders for the concessions for the General Cargo and Container Terminal at the Porto do Lobito, the Corredor do Lobito and the Mineral do Porto do Lobito Terminal, are due to be issued in the first half of 2021. Concessions are also in preparation for maritime terminals in Luanda, Cabinda and Soyo.

In the aviation sector the procedure to launch the international tender for the concession for Luanda's 4 de Fevereiro Airport are in preparation.

The launch of international tenders for the concessions for the four logistics platforms (Caala in Huambo, Lombe in Malange, Soyo and Luvo in Zaire), that form the first phase of the National Network of Logistics Platforms, is also planned for 2021.

Privatisations

As part of the Government's PROPRIV programme privatisations of the airport management company SGA, the shipping agency Secil Marítima and port management and cargo transportation company Unicargas, are planned for 2021.

The operator of urban bus services in Luanda TCUL and the national airline TAAG are part of the privatisation programme for 2022.

A programme of further studies

In the short-term a number of studies will be required to develop the NMPTSRI projects. These include feasibility studies and design studies for specific projects and studies to develop more detailed policies and plans in specific areas such as road maintenance, road safety, PPP, roads and rail financing, Luanda urban transport and climate change.

Institutional development and capacity building

Proposals are made for institutional and regulatory changes and capacity building to support the achievement of NMPTSRI objectives. A list of these is appended.

Monitoring, evaluation and review

A rigorous process of monitoring and evaluating the implementation of the NMPTSRI will be essential, to allow implementation issues to be identified and addressed in a timely fashion and to inform the periodic review and refreshing of the plan that will be required to maintain its relevance within a dynamic national and international environment.

Monitoring will involve systematically tracking progress in the implementation of projects and measuring the impacts, or outcomes, of completed projects. Progress and outcomes can then be compared with expectations/forecasts, and the analyses to understand reasons for the achievement or the lack of achievement of expected progress and outcomes. A framework for monitoring and evaluation will be structured around core indicators and targets.

It is recommended that the reviews and updates of the master plan take place every three years. Updates will reflect the experience in implementing the NMPTSRI and the impact of any changes in 'external' factors, such as Government priorities and policies, economic prospects etc.



05

TRANSPORT INVESTMENT AS A CATALYST FOR DEVELOPMENT

Airport City

Airport City is a major development project based on the aerotropolis concept of urban development. The project site encompasses an area of some 13,700 hectares, including the New International Airport in Luanda (NAIL).

The project will function as an economic catalyst and stimulate long-term sustainable development. It will exploit the potential of the new airport, and the site's strategic location with respect to existing industrial and economic zones and transport links, to develop a totally new urban centrality, to stimulate economic growth and diversification, as well as to accommodate the growing population of Luanda.

Development will be phased over a period to 2040 and possibly beyond. Phase 1 is proposed to comprises logisitcs and industrial zones. Over the development period the project will evolve into a city supporting a full range of industrial, commercial, social and leisure activities.

Free trade zones

Barra do Dande

A Master Plan for the integrated development of an oceanic terminal, a Free Trade Zone and new city at Barra do Dande is being formalised. The plan for the 5,500 ha site promotes a mix of uses including light and heavy industries, residential, mixed use, retailing, tourism, education and training centres and public facilities. The Free Trade Zone will be a location for the industries of the future. Upon completion it is estimated that the plan has the capacity to generate in the region of 150,000 jobs and a residential population of approximately 300,000.

Due to its scale, the development will be implemented in phases over a number of years up to 2030 and beyond. In Phase 1 around 750 ha are planned to be developed by 2025, integrated with the planned new oceanic terminal. With an existing 40 ha industrial park at its centre, Phase 1 will include industrial/logistics zones, together with residential and mixed-use areas overlooking the Dande River.

A Concept Master Plan for Phase 1 provides maximum flexibility to adapt the industrial, residential and educational proposals in response to market conditions and economic change.



Airport City



Barra do Dande - Phase 1

REFORMING THE REGULATION OF THE TRANSPORT SECTOR

	ANAC	INIPAT	AMN	INTT	ARCCLA
STRATEGY	Air traffic authority	Transversal prevention	Maritime administration	Land-based transport	Logistics activities
ORGANIZATION	Specialized	Transversal of the sector	Integrated	Integrated	Multi-sectorial transversal
PERSONNEL	Reinforcing competences	New competences	Reinforcement of inspection	Intermodal focus	Focus on the regulations
PROCESSES AND TECHNOLOGY	Supervision	Prevention	Maritime control	Tickets	PSW and LSW

In parallel with implementing the NMPTSRI MINTRANS has initiated wide-ranging reforms of the regulatory bodies that it oversees. These reforms which will be completed during 2021, aim to enhance the efficient regulation of the transport subsectors, integrating the regulation of cross-cutting sub-sectors and aligning regulation in the Angolan transport sector with internationally recognised models. The MINTRANS reforms will reduce the regulatory and supervisory bodies under its oversight from seven to five.

In the aviation sector, under the new law on Civil Aviation, the Instituto Nacional da Aviação Civil (INAVIC) will be replaced with the Autoridade Nacional da Aviação Civil (ANAC). ANAC will evolve into an autonomous and independent authority in line with ICAO guidelines.

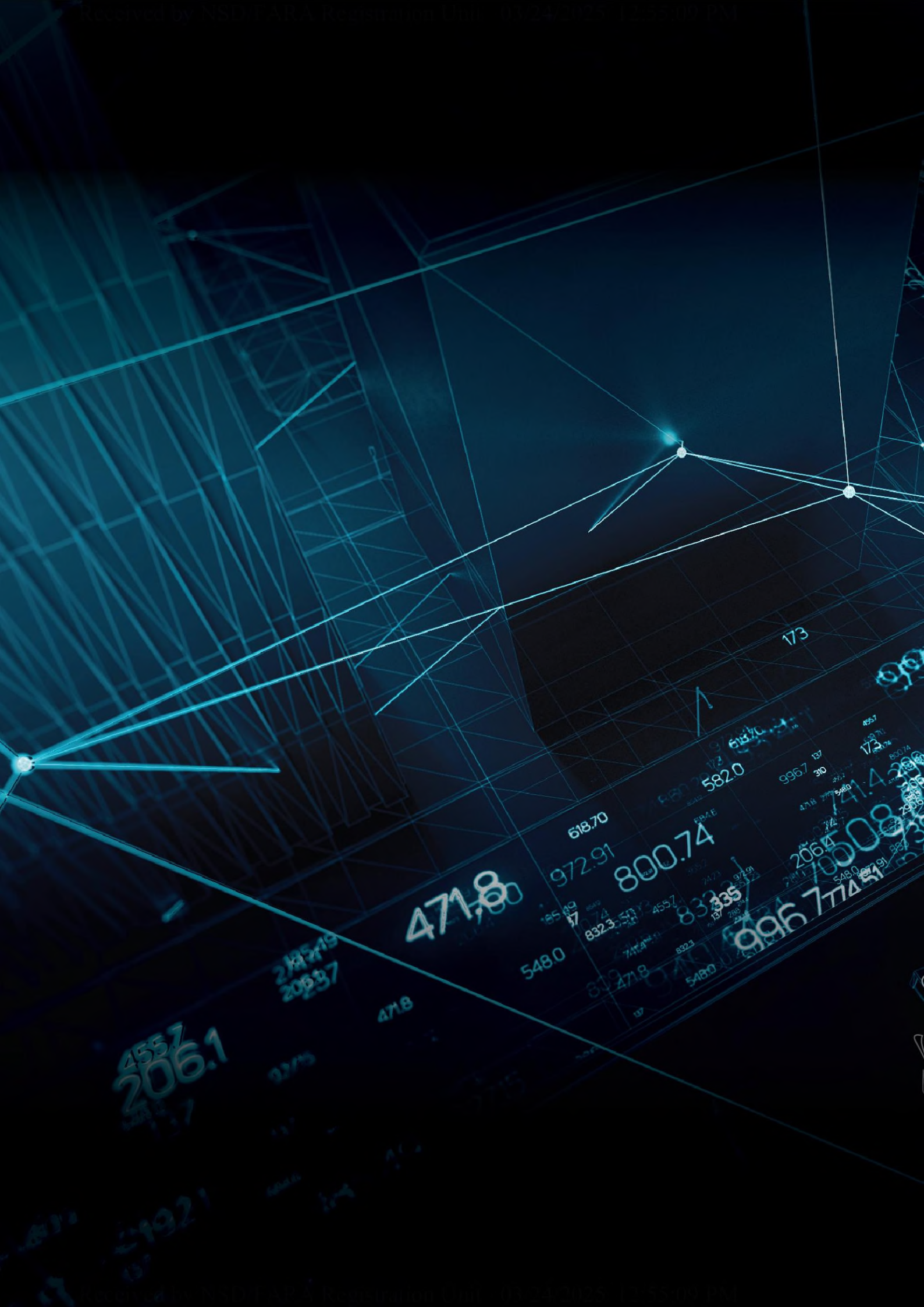
In the rail and road transport sub-sectors the merger of the Instituto Nacional dos Caminhos de Ferro de Angola (INCFA) and the Instituto Nacional dos Transportes Rodoviários (INTR) to form the Instituto Nacional dos Transportes Terrestres (INTT) has been completed. This reflects the synergies between the land transport sub-sectors and ensures co-ordinated

and complementary actions on land transport.

The Instituto Marítimo e Portuário de Angola (IMPA) and the Instituto Hidrográfico e Sinalização Marítima de Angola (IHSMA) have been merged to form the Administração Marítima Nacional (AMN). AMN will evolve towards the National Maritime Authority recommended by the NMPTSRI that will have responsibility for the implementation of international conventions and regulations in the maritime sector.

In the logistics sector the Conselho Nacional de Carregadores (CNC) and the Gabinete do Corredor do Lobito (GCL) are to be merged into the Agência Reguladora de Certificação de Carga e Logística de Angola (ARCCLA)

Finally, GPIAA, which has responsibility for air safety and accident investigation, will be reformed to create the Instituto Nacional para os Incidentes e Prevenção de Acidentes nos Transportes (INIPAT). The reform will create an institute for the prevention of accidents and incidents in air and land transport.



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800.74

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Opinion

Why more US-African space cooperation is the answer

by Scott Firsing and Zolana João
February 6, 2025



A July 6, 2015 image of Africa and Europe taken by NASA's Deep Space Climate Observatory (DSCOVR) satellite. Credit: NASA

As President Donald Trump and Secretary of State Marco Rubio settle into their roles, the administration's priorities for the coming years are coming into focus. Trump has laid out an ambitious vision for America in space, **speaking of** a "manifest destiny" that extends "into the stars," with plans to send astronauts to plant the American flag on Mars. Meanwhile, Rubio's **agenda at the State Department** emphasizes an America that is safer, stronger and more prosperous.

This vision dovetails perfectly with an opportunity for increased United States-African collaboration in space. While Trump's sights are set on celestial bodies like the moon and Mars, the practical implications of space technology are profoundly grounded on Earth, where it's vital for economic and strategic gains in countries, including those in Africa.

Enhanced U.S.-African space cooperation promises mutual benefits, particularly in addressing Africa's most critical challenges: its digital divide and food insecurity.

It's time for Africa to get connected

For most Americans, internet access is a given, integral to daily activities like work, banking, education, healthcare and communication. However, in Africa, **only about 36%** of the population is connected, highlighting a significant digital divide.

The U.S. has a unique opportunity to leverage space technology to bring Africa online. Companies like SpaceX with its Starlink service have begun this effort, providing satellite internet in **various African** nations. Yet, despite the growth in Non-Geostationary Orbit (NGSO) satellite users globally, these services have **not fully reached** the most disconnected regions due to the prohibitive costs of both equipment and subscriptions for many local communities.

To make a real impact, U.S. tech companies must adapt their strategies to fit Africa's unique socio-economic landscape, focusing on affordability and local infrastructure compatibility. For example, Africans often benefit from pay-as-you-go or tiered prices, meaning pricing structures are better matched to the income levels in the various

demographics. Jumia, founded in Nigeria and now **the leading e-commerce platform in Africa** also known as the “Amazon of Africa” offers products at various price points to cater to the different levels of consumers. **M-KOPA customers** now operating in Kenya, Uganda, Nigeria, Ghana and South Africa can pay daily or weekly as part of their pay-as-you-go services to own cell phones, access digital services and help progress towards financial goals. America’s Google in **January 2024 launched** the Johannesburg cloud region in South Africa to allow businesses in the area access to high-performance, secure and low-latency cloud services. Then later in 2024, Google announced DigiCloud Africa as its chosen reseller enablement partner in Africa to create an ecosystem of Google Cloud partners across Africa. Such adaptations not only unlock new markets for American businesses but also support U.S. foreign policy objectives in Africa, centered around digital inclusion, security and economic growth.

Enhanced connectivity through space technology can significantly improve communication infrastructure, making Africa a more attractive destination for American investment and business expansion. There’s a clear demand for U.S. expertise in satellite manufacturing, launch services and data analytics.

Successful models already exist across the continent, including Angola’s **Connect Angola project** with ANGOSAT-2, Rwanda’s **Smart City** broadband initiatives and South Africa’s efforts through Sentech and SANSa. These projects illustrate how satellite technology can deliver crucial services like education and healthcare to underserved areas.

U.S. companies can foster additional and deeper partnerships by: providing cutting-edge satellite technology tailored to African needs; investing in ground infrastructure to complement satellite solutions; and co-developing satellite-based applications for sectors like mining, energy and agriculture, which are fundamental to African economies. We are already starting to see this in certain African countries like Rwanda where the Rwandan Space Agency **partnered in February 2023** with America’s ATLAS Space Operations to expand its network of global ground stations.

Harnessing U.S. space technology for food security in Africa

Like connectivity, access to food is often taken for granted in the U.S. But the United Nations **highlights** a stark contrast in Africa, where 20.4% of the population faces hunger — the highest rate globally. If current trends persist, this figure could double, underscoring the urgent need for intervention.

Earth observation satellites offer a powerful tool to address this challenge by monitoring crop health, soil conditions and weather patterns — all information that’s vital for agricultural success. This technology is particularly impactful in Africa, where agriculture is central to many national economies.

The U.S. has already started to engage with African nations in this field, promoting sustainable agricultural practices through space technology. A compelling example is the Angolan Drought Management System, **a NASA-funded project** with MIT and Angolan collaborators. This initiative uses satellite data to integrate soil moisture information with socio-economic data, improving decision-making for climate resilience and food security.

Investment from the U.S. in African agriculture not only drives innovation but also opens new markets for American companies, while advancing agro-technology. The incorporation of advanced technologies like AI, satellite data and enhanced communication systems into agricultural decision-making tools can revolutionize the sector. These advancements aim to boost sustainability, productivity, resilience, and profitability, thereby significantly reducing food insecurity in Africa and fostering international technological and developmental partnerships.

Moreover, by tapping into Africa’s vast agricultural potential, these collaborations can stabilize global food supply chains, potentially lowering food price volatility worldwide. This stabilization benefits not just African communities but also impacts food availability and pricing for American consumers.

The risks of inaction on U.S.-Africa collaboration

Failure to enhance connectivity and cooperate on food security with Africa could have dire consequences for America. Malnutrition and health crises originating in Africa could become global issues, directly threatening both international health security and U.S. national security.

Moreover, without adequate employment and food security, political instability often occurs, which can lead to increased migration. In 2023, the number of Africans apprehended at the U.S.-Mexico border **surged to** 58,462 from 13,406 the previous year, highlighting a significant uptick in migration pressures driven by insecurity back home and the pull factor of a better life in America.

When migration isn’t an option, conflict might be the next resort. This can manifest as extremism or terrorism, potentially necessitating costly U.S. military interventions in Africa to maintain stability.

Further, enhanced U.S.-Africa cooperation in space technology, especially satellite surveillance, could serve multiple strategic interests. Satellites could monitor military movements, rebel activities, or terrorist threats, as well as track climate change, natural disasters and illegal activities like piracy in strategic maritime routes where U.S. interests lie. This cooperation could bolster maritime security and environmental protection, thereby aligning with broader U.S. security objectives.

The math checks out

Doing the math, the above facts mean more U.S.-Africa space cooperation would produce a stronger, safer and more prosperous America.

Greater U.S.-Africa space relations would foster stability, enhancing cooperation in diplomatic and security matters, and would counter adverse foreign influences. It will open new markets for increased trade. This engagement also aligns with broader American objectives of promoting stability, prosperity and leadership on a global scale.

Yes, Africa has its challenges like most: infrastructure hurdles, political ups and downs, and economic volatility. However, there are success stories as well, and it’s time to change the **narrative** around foreign investments. This isn’t aid; it’s about mutual growth. It’s time to see Africa not just as a challenge, but as a landscape of opportunity for American innovation and investment.

As Trump alluded to, America is the world’s technological leader and must remain so. By assisting Africa in its space ambitions, the U.S. continues to lead in global governance issues on Earth and in space, ensuring that American standards, technologies and values are an integral part of the international community.

Scott Firsing, PhD is a U.S.-Africa expert and President of Scott Sky Advisors, a global aviation and aerospace consultancy based in Austin, Texas USA. Dr Firsing is also a Senior Research Associate at the Institute for Global Dialogue in Pretoria South Africa associated with UNISA.

Zolana João, D.Eng., is the first General Manager of Angola's National Space Program Management Office (GGPEN). He serves as the Vice Chair for Africa for ITSO, a research affiliate with MIT's Space Enabled Research Group, and a co-founder of Arusha Space.

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Scott Firsing

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Ministério dos Transportes

ANGOLAN RAILWAYS



NETWORK EXPANSION PLAN

3. Network Expansion Plan

The main objective of the expansion is to **establish trans-African connections** through the interconnections with the rail networks of the **Democratic Republic of Congo, Zambia and Namibia**, in accordance with the African Union's Agenda 2063 and to **increase Angola's integration** into the **Tripartite Free Trade Zone**.























In order to **further enhance transport logistics** it is also **necessary to promote the interconnections** between the three existing lines with the deployment of **north-south radials**, as well as to **operationalise strategic logistics platforms**, which will concentrate and **improve the distribution of materials/products** focusing on a reduction in flow and costs, thus increasing the **efficiency** of the activity itself and boosting the **growth of business and access to new markets**.

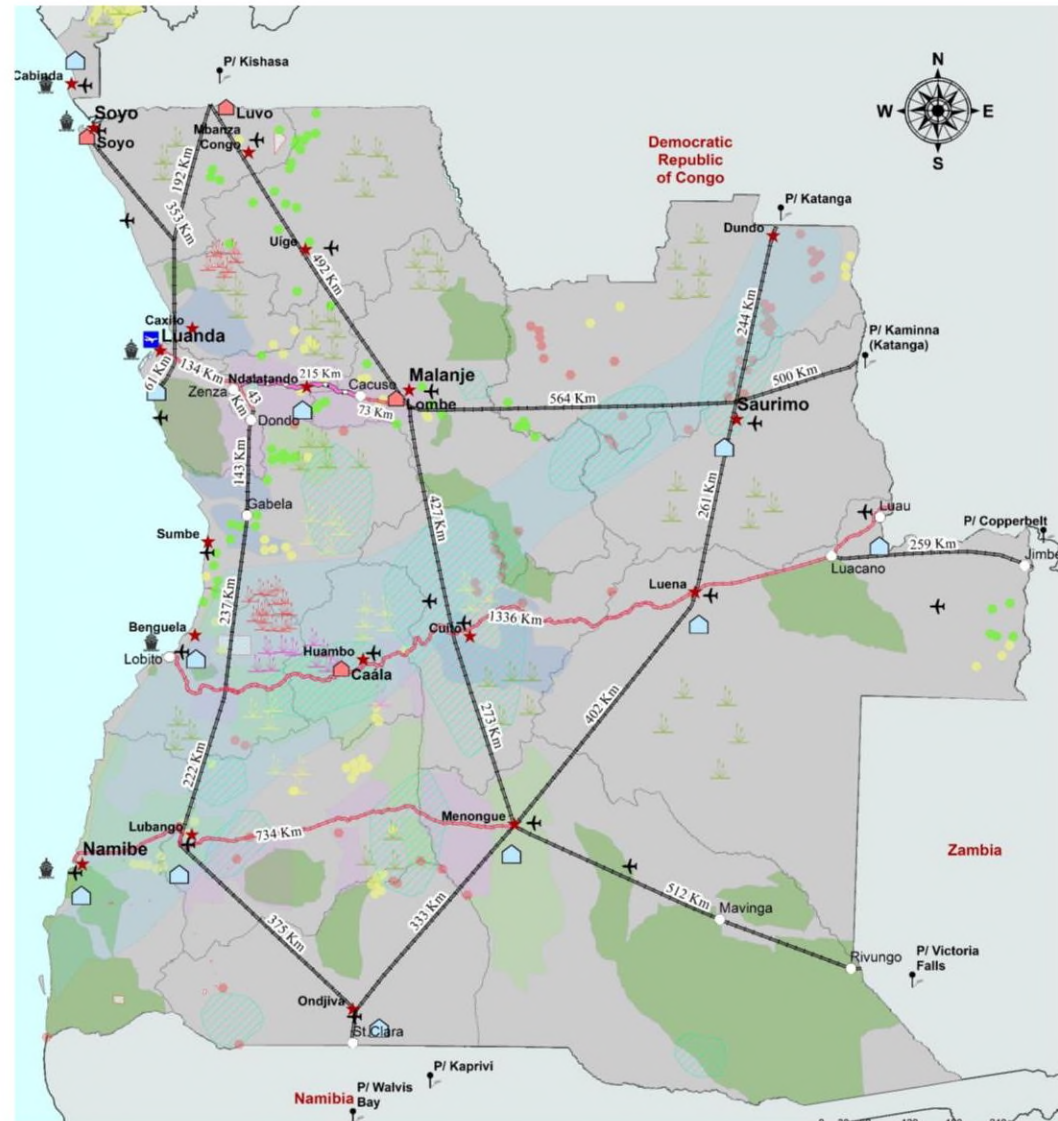
Tripartite Free Trade Zone



3. Network Expansion Plan

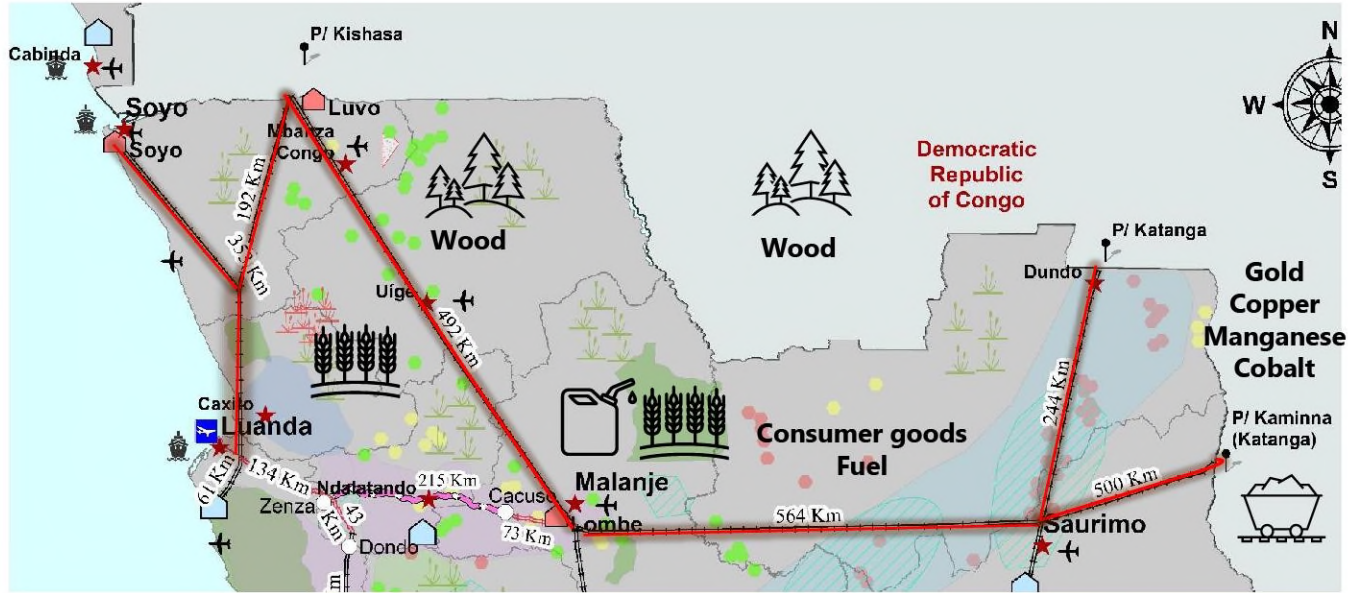
Subtitle

-  Existing Rail Corridor
 -  Existing Rail Corridor (rehabilitation)
 -  Planned Rail Corridor
 -  Priority Logistic Platform
 -  Planned Logistic Platform
 -  Port
 -  International Airport
 -  Domestic Airport
 -  Capital of the Province
 -  Cities
 -  International Connections
-
-  Vegetables
 -  Fruits
 -  Tubers
 -  Cereals
 -  Diamond
 -  Gold
 -  Copper
 -  Deposits
 -  Kimberlites
 -  Lucapa Corridor
 -  Natural Reserve





3.1. Connection Luanda railway (CFL) to RDC



Route	Extension*	Cost*
Zenza – Cacuso	215 km	USD 376 465 000,00
Luanda/ Entroncamento/ Soyo	353 km	USD 618 103 000,00
Entroncamento/ Kishasa (DRC)	192 km	USD 336 192 000,00
Malanje/ Uíge/ Kinshasa (DRC)	492 km	USD 861 492 000,00
Malanje – Saurimo	564 km	USD 987 564 000,00
Saurimo – Kamina (DRC)	500 km	USD 875 500 000,00
Saurimo – Dundo – DRC	244 km	USD 427 244 000,00

The Luanda railway begins at Angola's most important port, the Port of Luanda. Its northern expansion also covers the movement of the **ports of Soyo and Matadi (DRC)**.

The interconnection with the RDC focuses on **oil production and wood and mineral extraction**. There is also the possibility of marketing agricultural products produced in Uíge, Kwanza-Norte, Bengo, Malange and Zaire with the support of the **Soyo, Malanje, Luvo and Lombe Logistics Platforms**.

The expansion of the Luanda railway (CFL) to the DRC will enable interconnection with Kamina, known as an **important railway junction**. Three lines of RC railways run from Kamina to the north, west and southeast of the country, also interconnecting with other neighbouring countries; **Katanga** is known to be part of the **copper belt of Central Africa**, from where there is also gold, cobalt, manganese, tin, radio, uranium and diamonds mining.



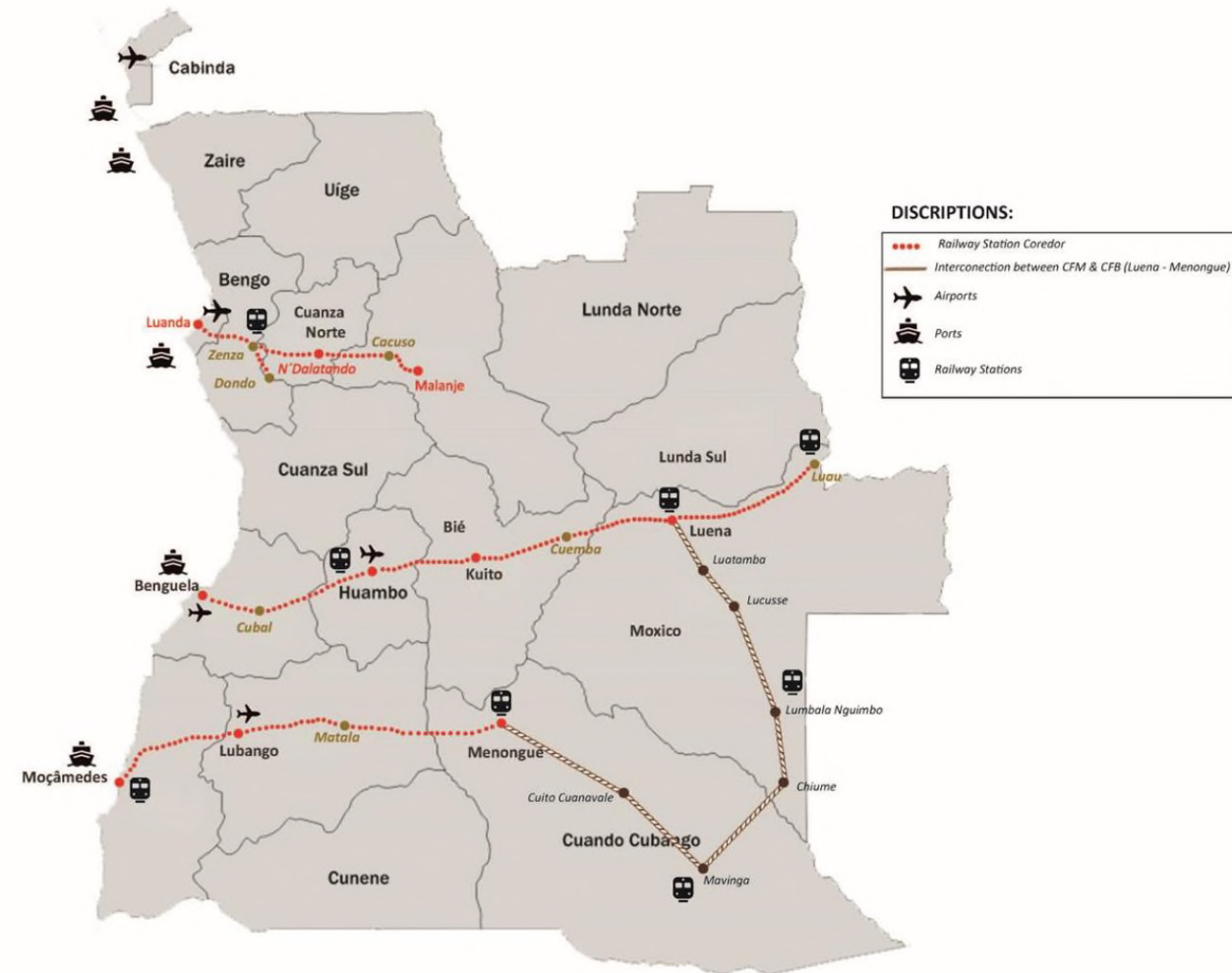
PRIORITY SEGMENTS

Interconnection of Benguela Railway and Moçâmedes Railway

Connection of the Benguela Railway (CFB) to the Moçâmedes Railway (CFM) between the Cities of **Luena** and **Menongue**.

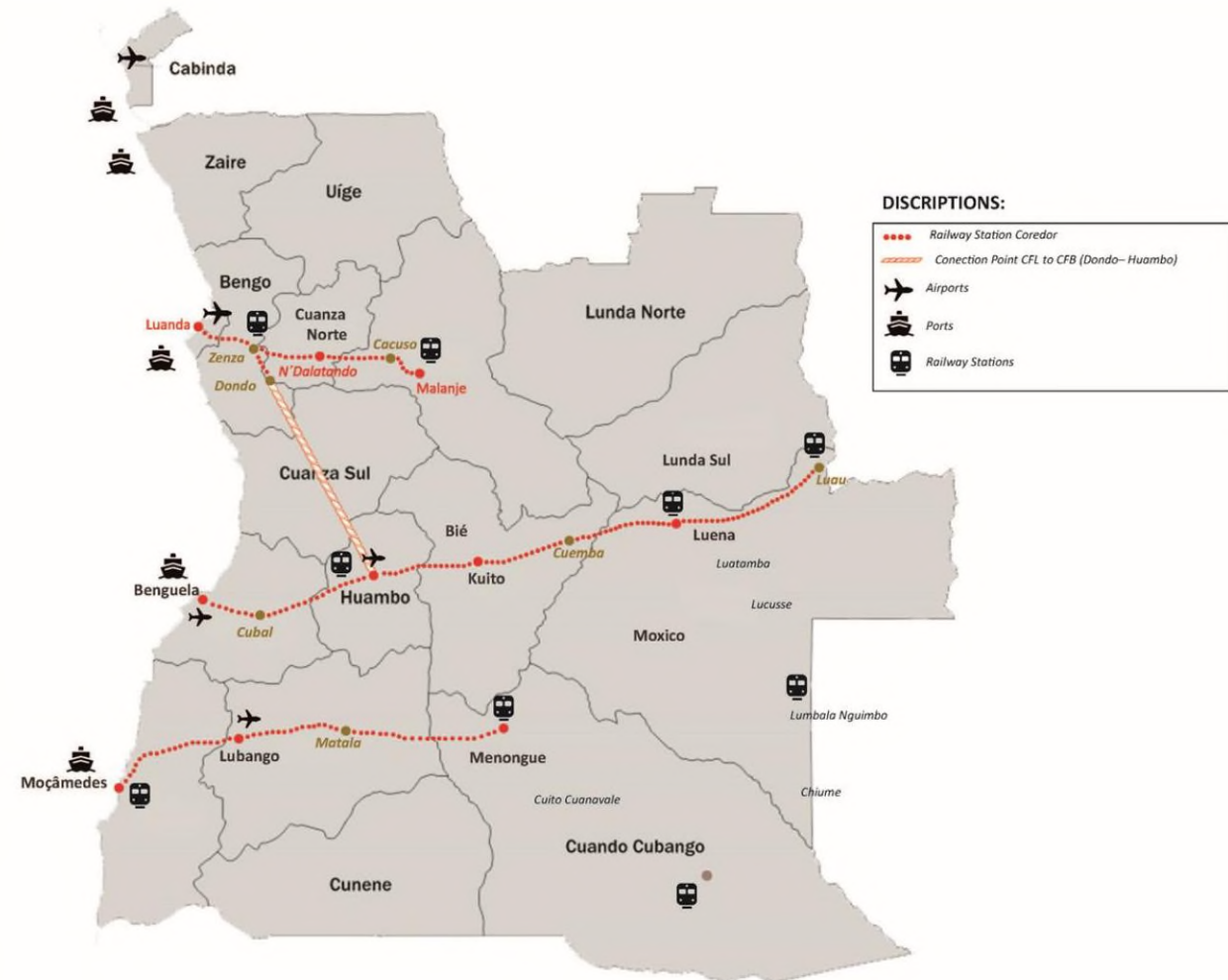
The rail link between the two Railways is a necessary project, which will be implemented, will **contribute to sustaining the development of the region**, and it will boost the transportation of goods, cargo and passengers in the North- South Corridor of Angola on a large scale and Zambia

- Passing through the following locations: **Luatamba, Lucusse, Lumbala N' guimbo, Chiume, Mavinga and Cuito Cuanavale**
- Length: 843 km.
- Total cost of the investment: USD ± 1,476,093,000



Interconnection of the Luanda Railway and the Benguela Railway

- Connection of the Luanda Railway (CFL) to the Benguela Railway (CFB) between the Cities of **Dondo** and **Huambo**.
- Passing through the following locations: **Dondo, Quibala, Waco Kungo and Huambo**, with huge potential on Agrobusiness
 - Length: 416 km
 - Total cost of the investment: USD ± 728,416,000

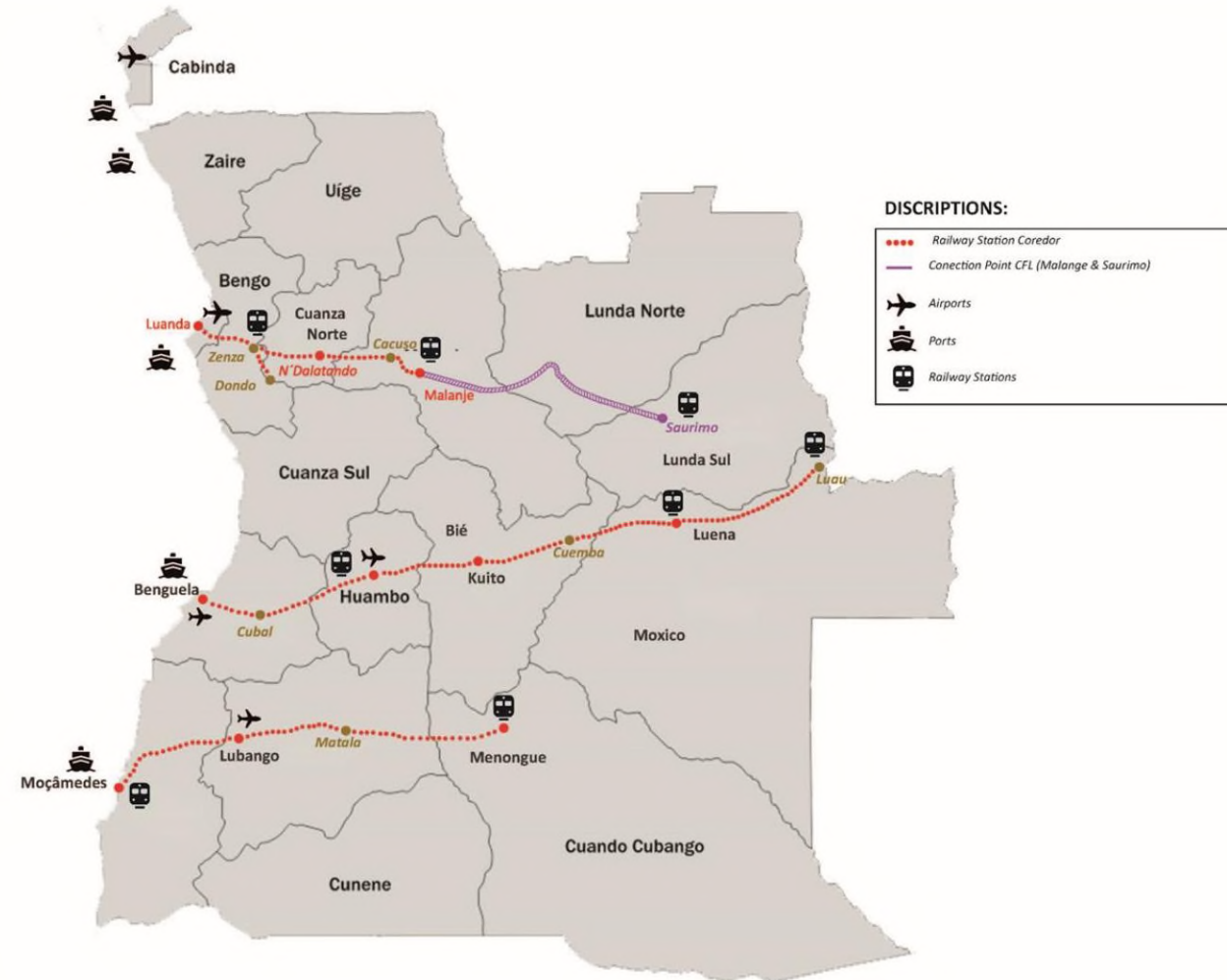


Luanda Railway (CFL)

- The Angola Railway development project comprises several national development corridors and at least six (6) Railway Connection Points in neighboring countries.

Malange → Saurimo, future connection with the DRC Railway in Kamina and Kasai.

- Length: ± 564 km
- Total investment cost: USD ± 987,564,000



4.2.3. Total Investment

The summary of the implementation costs of the priority segments

PRIORITY SEGMENTS			
Route	Extension *	Total Cost*	Remarks
1 – Luena ->Menongue	843 km	USD 1,476,093,000	Connection CFM/CFM
2 – Dondo ->Huambo	416 km	USD 728,416,000	Connection CFL / CFB
3 – Malange ->Saurimo	564 km	USD 987,564,000	Connection CFL / DRC
4 – Saurimo ->Luena	261 km	USD 457 011 000	Connection CFL / CFB

Total Investment – 2.084 Km

USD 3,649,084,000

* Approximate value established through conceptual studies to be confirmed after project detail. The margin of error is approximately 30%

4. CONCLUSION

The creation of an intelligent network structure for any single transporter not only allows the **development** of a large **supply of transporters**, but also promotes **synergetic effects** in almost all life and functional fields. Among the main impacts resulting from the implementation of this expansion plan are:

- The **interconnection** of Angola's railways **with a transcontinental rail network** will promote greater **integration** between Angola and other countries within the **Tripartite Free Trade Area**, boosting the economy in the entire region of influence, with the capacity to **connect the Indian and Atlantic oceans**;
- The **import of products** from Atlantic ports **into the southern African region** will be more efficient and **on optimised routes**;
- The implementation of **a broad network will** provide an appropriate outflow network, which associated with logistical platforms will **boost** agricultural and industrial **production in Angola**;
- Angola's **Atlantic ports** will have a large increase in hinterland, also **servicing southern African countries**;
- **Mineral production** in Angola, DRC and Zambia will have its **outflow optimised**;
- The **high demand** generated makes the Angolan railway profitable and **will make it possible to exploit the various systems and platforms proposed**.
- **For the feasibility of the mentioned projects** it is important to have **the master plans of the Ministry of Transports, Ministry of Natural Resources, Petroleum and Gas and Ministry of Agriculture and Fisheries** as supporting documents.
 - **NSTMPRI** – National Master Plan for Transport Sector and Road Infrastructure - **Ministry of Transports**
 - **PLANAGEO** - Geological Master Plan of Angola - Geological Institute of Angola (**IGEO**)
 - **IDA** - Agrarian Development Institute - **Ministry of Agriculture and Fisheries**



THANK YOU

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