


IGAD REGIONAL INFRASTRUCTURE MASTER PLAN

Final IRIMP Report – Transport Sector Report

December 2020

Document Control

Document title	IGAD REGIONAL INFRASTRUCTURE MASTER PLAN: Final IRIMP Report - Transport Sector Report
Reference no.	IPE IGAD IRIMP Report No 4
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Date	December 24th, 2020

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Foreword by Executive Secretary of IGAD

The Intergovernmental Authority on Development (IGAD) Regional Infrastructure Master Plan (IRIMP) is an ambitious plan, the implementation of which will accelerate the region's growth and structural transformation. The IRIMP consists of policy initiatives and infrastructure investments that will significantly strengthen the process of regional economic cooperation and integration. The IRIMP is aligned with, and furthers the aims of, the Abuja Treaty, the Constitutive Act of the African Union, Agenda 2063, and the national development plans of IGAD Members States.

This Transport Sector Report is part of four sector reports picked from the overall IRIMP Report. The other three reports are for energy, ICT and transboundary water resources. The Sector Reports are intended to be used by IGAD Member States, and in particular the relevant line Ministries, Departments and Agencies responsible for sector development, and their development partners to guide future planning, investment decision-making and funding and financing arrangements.

The process of preparing IRIMP began in March 2006 when the 11th IGAD Summit of the Heads of State and Government, held in Nairobi, recognised the importance of infrastructure projects as a vehicle for the integration of the IGAD region and as a catalyst for the economic growth and development of IGAD Member States.

The following year experts from the European Union (EU), IGAD Member States, and the IGAD Secretariat met in Mombasa (Kenya) to prepare the Horn of Africa Initiative (HOAI). HOAI priority areas were: (i) interconnectivity in transport (focus on transport and trade facilitation) priority road corridors linking region to seaports; (ii) energy; (iii) ICT; and (iv) water resources for food security.

Subsequently, the IGAD Secretariat organised a meeting of Member States, held in Nairobi during December 2010, at which was prepared a comprehensive roadmap for the Minimum Integration Plan which would create a Free Trade Area (FTA) in the IGAD region. The roadmap recommended the preparation of IRIMP, which was cited as crucial to achieving the FTA. The preparation of the IRIMP is very timely as the African Continental Free Area (AfCFTA) has recently been established and all IGAD Member States have signed the Agreement. AfCFTA seeks to accelerate intra-African trade and to boost Africa's trading position in the global market by strengthening Africa's common voice and unified position in global trade negotiations.

In June 2013, IGAD requested support from the African Development Bank (AfDB) to develop the IRIMP. The positive AfDB response culminated in the commencement of the preparation of the IRIMP in May 2018. Support from the AfDB for IGAD initiatives is substantial and includes the Kampala–Djibouti Corridor Studies, and the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI). The AfDB is also supporting a number of regional projects that are connecting the Member States including the construction of Isiolo-Moyale Highway in Kenya and the rehabilitation of Awassa–Moyale Highway in Ethiopia.

The IRIMP covers infrastructure in Transport, ICT, Energy and Transboundary Water Resources. The IGAD region is unfortunately characterised by the low stock of infrastructure, particularly in transport and energy, and the inadequate development of the ICT sector and digital economy. Coupled with the increasingly severe strain placed on water resources the region's productivity and growth, and regional integration, has fallen short of expectations. Studies have shown that inadequate infrastructure shaves off at least 2% of Africa's annual economic growth. Adequate infrastructure would lead to productivity gains by African firms of up to 40%.

The IRIMP will help facilitate regional integration by bridging the gap in national and regional policies and strategies and addressing infrastructure needs in vital areas, including in remote and pastoralist areas. The IRIMP will guide the process of implementation of priority regional infrastructure projects – constituting the basis for IGAD Member States commitment to a common infrastructure development programme, in the form of a Declaration, as well as the basis for regular review of its implementation. The IRIMP will be implemented over three phases; in the short term (2020-2024); the medium term (2025-2030); and over the long term (2031-2050).

There is an urgent need to scale up regional infrastructure development to accelerate regional integration and development. The IRIMP will help address key regional infrastructure deficits. This includes projects that will address transport and energy needs of the region in a manner that ensures accessible and affordable access by the region's population, and the sustainable development of energy and water resources with a special emphasis on renewable sources. The IRIMP will help to enhance the equitable sharing of water resources amongst competing uses. The IRIMP will also further help the region to make necessary steps to expand and deepen the access to modern, affordable, and reliable ICT technologies and services.

The IRIMP focuses on effective implementation of projects by identifying preferable and practical financing strategies, and by proposing policy and institutional frameworks that will ensure the unfettered and seamless implementation of identified projects and interventions.

H.E. Dr. Workneh Gebeyehu

Executive Secretary

Acknowledgements

The IGAD Regional Infrastructure Master Plan (IRIMP) was prepared by a team from IPE Global and Africon Universal Consulting. Preparation was a collective effort that involved the IGAD Member States, and their respective ministries, departments, and agencies responsible for infrastructure planning, finance, and delivery. The Member States, through the Joint Steering Committee, provided valuable feedback on the IRIMP as it progressed through the preparation process and the reporting milestones.

The support and contributions of the African Development Bank team, led by Mr. Mtchera Chirwa, were invaluable in ensuring the IRIMP was firmly focused on delivering sound infrastructure investments that supported wider continental ambitions of inclusive, resilient, and sustainable growth.

IPE Global and Africon Universal Consulting are grateful to the many officials and experts that shared their time and knowledge with us in order to improve the quality of the evidence, review the findings, and to sharpen the recommendations.

The IGAD Secretariat, under the stewardship of Mr. Elsadig Abdalla (Director Economic Cooperation and Social Development) and Mr. Zacharia King'ori (Project Coordinator), ensured that the interests of the Member States were at the forefront of the analysis and prioritisation processes shaping the direction and recommendations of the IRIMP. Mr. Zacharia King'ori provided much valued day-to-day guidance on project management matters. He was a reliable sounding board on technical issues and how they can best be communicated to ensure the IRIMP can be acted on by Member States.

Throughout the IRIMP preparation process, the driving philosophy was 'plan to implement' and to build on the positive infrastructure initiatives that the IGAD Member States were already developing and implementing. The policy and project recommendations reflect this philosophy.

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List of Acronyms

AfDB	African Development Bank
AfCFTA	African Continental Free Trade Area
AFCAC	African Civil Aviation Commission
AFD	Agence Française de Développement (French Development Agency)
AIIM	Africa Infrastructure Investment Managers
AFESD	Arab Fund for Economic and Social Development
AU	African Union
BASA	Bilateral Air Service Agreements
CAGR	Compound Annual Growth Rate
CMI	Corridor Management Institute
COMESA	Common Market for Eastern and Southern Africa
CFA	Cooperative Framework Agreement
CIDCA	China International Development Cooperation Agency
DMIC	Delhi-Mumbai development corridor
EAC	East African Community
ECOWAS	Economic Community for West African States
EDRI	Ethiopian Development Research Institute
EDC	Economic Development Corridor
EPA	Environmental Protection Authority
ESIA	Environmental Social Impact Assessment
GDI	Gross Domestic Income
GDP	Gross Domestic Product
GoK	Government of Kenya
GTP	Growth and Transformation Plan (Ethiopia)
IDP	Infrastructure Development Programme
IGAD	Intergovernmental Authority on Development
IMO	International Maritime Organization
IMF	International Monetary Fund
IRIMP	IGAD Regional Infrastructure Master Plan
KeNHA	Kenya National Highways Authority
KfW	Kreditanstalt fur Wiederaufbau (German Development Bank)
KRC	Kenya Railways Corporation
KPI	Key Performance Indicators
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport Corridor
LCDA	LAPSSET Corridor Development Authority
MoT	Ministry of Transport, Ethiopia
NEPAD	New Partnership for Africa's Development
NETIP	North Eastern Transport Improvement Project
NGO	Non-Governmental Organisation
NDP	National Development Plan
OECD	Organisation for Economic Co-operation and Development
PIDA	Programme for Infrastructure Development in Africa
PAP	Priority Action Plan

PPP	Public Private Partnership
PSO	Private Sector Organisation
REC	Regional Economic Community
SAATM	Single African Air Transport Market
SADC	Southern African Development Community
SDI	Spatial Development Initiative
SEZ	Special Economic Zone
SSATP	Sub-Saharan African Transport Policy Programme.
SPV	Special Purpose Vehicle
UNECA	United Nations Economic Commission for Africa
UNRA	Uganda National Roads Authority
URC	Uganda Railways Corporation

Executive Summary

IRIMP Transport Sector

The IGAD Infrastructure Master Plan (IRIMP) was developed to guide the IGAD region in identifying its priorities in the development of its infrastructure networks and services and implementing them during the period 2020 – 2050. The IRIMP covers four sectors, namely; Transport, Energy, ICT and Transboundary Water Resources and is to be implemented through a three -phase scheme.

The IRIMP architecture is based on a Corridor Approach where programmes and projects are structured along the key nine IGAD corridors that have been serving the region or are expected to do so in the coming years.

Table 1 below shows the Transport sector projects portfolio in the four subsectors over the three phases and their estimated costs of implementation.

Table ES 1. 1:Transport Sector Projects Portfolio

Subsector	Short-term (2024)		Medium-term (2030)		Long-term (2050)		Total	
	Projects	Cost US$M	Projects	Cost US$M	Projects	Cost US$M	Projects	Cost US$M
Roads	23	9,312	23	13,179	7	8,224	53	30,715
Railways	4	8,442	5	9,668	21	47,960	30	66,070
Inland Container Depots (ICDs)	3	209	2	200	0	0	5	409
Border Posts	11	129	2	14	2	40	15	183
Inland Waterways	4	61	6	3,337	0	0	10	3,398
Sea Ports	6	5,041	4	4,200	5	4,680	15	13,921
Aviation	11	4,737	10	2,734	1	600	22	8,071
Total	62	27,931	52	33,331	36	61,504	150	122,766

The projects prioritised include those in physical infrastructure and others in transport facilitation through the development of policy, legal and regulatory instruments; and in the development of capacity covering institutional and human capital development.

In order to effectively implement the IRIMP, instruments have been developed to guide in project identification, prioritisation and in advancing projects preparation from concept to financial closure where investment is undertaken by the appropriate off-taker depending on its economic and financial rates of return.

Table A 2 below shows the IRIMP Implementation Plan including institutional structure to be undertaken by IGAD, Member states corridor management institutions:

Table ES 1. 2: IRIMP Implementation Plan

FOCUS AREA	ACTION	ACTIVITIES	RESPONSIBLE PARTIES	TIME FRAMES
Coordination of Implementation of the IRIMP through a unified platform at IGAD and country levels	Establishment of a Project Coordination Unit (PCU) based at the IGAD Secretariat. PCU to consist of a Programme Coordinator and 4 sectoral experts (Transport, ICT, Energy and Water) – with support staff and office space.	Coordinating member states in the development of transboundary projects Convening meetings, workshops and organising other events; Conducting awareness and sensitisation on project issues and procedures (Public and Private sector) Preparing work plans and working documents and maintenance of projects databases; Coordination of the mobilisation of resources for implementation of projects. Promotion/ coordination of establishment and operation of Corridor Management Institutions (CMIs) Enhancing awareness and sensitisation of IGAD's programmes	IGAD Secretariat	Within Six months of IRIMP endorsement
Institutional set up for management of programmes/projects in Member States	Establishment of a National Multi-Sectoral Coordination Committee comprising all sectors (Transport, ICT, Energy, Water)	Reviewing / aligning national IRIMP projects and national development plans Sectoral Coordination Committees to review and update project budget and funding information Enhancing awareness and sensitisation of IGAD's programmes	Member States	Within Six months of IRIMP endorsement
	Establishment of Sectoral Steering Committees of Senior Officials.	Steering the implementation of the IRIMP Providing regular reports on programme/project implementation progress Maintenance of national project databases Link to IRIMP PCU M&E systems	Member States	(Six Months)
	Establishment of Technical Task	Reviewing Terms of Reference for studies	IGAD Secretariat	Continuous

	Teams/Working Groups	Handling specific programmes/projects requirements		
Harmonisation of national policies, regulations and procedures on cross border and transit trade among member states to enable the development of transboundary projects	Addressing areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region	Identify key areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region; Prepare Model policy, legislative and regulatory instruments for adoption by Member State; Coordinate the states in concluding Multilateral Agreements where necessary; Undertake corridor diagnostics of trade facilitation constraints and develop reform action plans for the corridors drawing lessons on international best practices in trade facilitation; and Creation of awareness in the private sector in the members states.	IGAD Secretariat	(Initiate review / gap analysis within 3 months of setting up of National Multi-Sectoral Coordination Committee- complete within 12 months after the review / gap analysis)
Resource mobilisation for projects preparation and implementation	Develop a database of potential sources of funding for categories of projects and document their requirements for access to funds	Prepare IRIMP project inventory on the basis of potential sources of funding projects. Undertake research mobilisation through structured fora such as Infrastructure Investment Forum, missions to development partners and cooperating partners Promote projects for attraction of interest by private sector including potential PPP off-takers	IGAD Secretariat	Continuous
Capacity Building for Projects Implementation	Development of capacity building at national and IGAD Secretariat	Identification of capacity gaps at human and institutional levels Identification of training instruments and institutions Develop the training curriculum and materials (including online) for the stakeholders. Enhance communication with all relevant stakeholders	IGAD Secretariat	Continuous

Monitoring and Evaluation of programmes and projects implementation	Development of a Monitoring and Evaluation (M&E) Mechanism	Data collection systems on project implementation and trade flows along the corridors to be developed and adopted National and regional fora established to review performance Monitoring the progress of developed work plans and projects Assessment of the wider economic benefits of the corridor investments for impact monitoring	IGAD Secretariat / IRIMP PCU	Long-term and continuous

Chapter One: Introduction to the IRIMP

Chapter 1: Introduction to the IRIMP

1.1 Objectives

The objectives of the IGAD Regional Infrastructure Masterplan (IRIMP) are to:

i. Develop a strategic framework for infrastructure development and investment in the transport, energy, ICT and water resources sectors;
ii. Facilitate intra-regional and inter-continental trade, and the flow of goods, services, and the movement of people across borders of the region;
iii. Support regional economic growth that is inclusive, resilient, and sustainable; and
iv. Reduce isolation and promote regional integration and stability.

The IRIMP aims to catalyse investments in infrastructure in the IGAD region, as outlined in the Terms of Reference (TOR): *"[the] infrastructure master plan will provide an opportunity for Member States, development partners, investors and other stakeholders to* ***pick regionally accepted and bankable infrastructure projects to fund, invest and support****."*

The IRIMP not only focuses on projects but, equally important, highlights the need to invest in building sustainable institutional capacity to improve the delivery and management of investments in the long-term. The IRIMP is also about improving the *quality of growth and investment* by ensuring climate change, social inclusion (bringing vulnerable groups, women, and youth into the development process from design to implementation) and conflict sensitive investment choices are mainstreamed in decision-making and project execution.

The focus of this report is to outline the transport sector plans and investments that form an integral part of the IRIMP.

1.2 IRIMP Strategic Framework

The key institutional and policy drivers of the IRIMP Strategic Framework are:

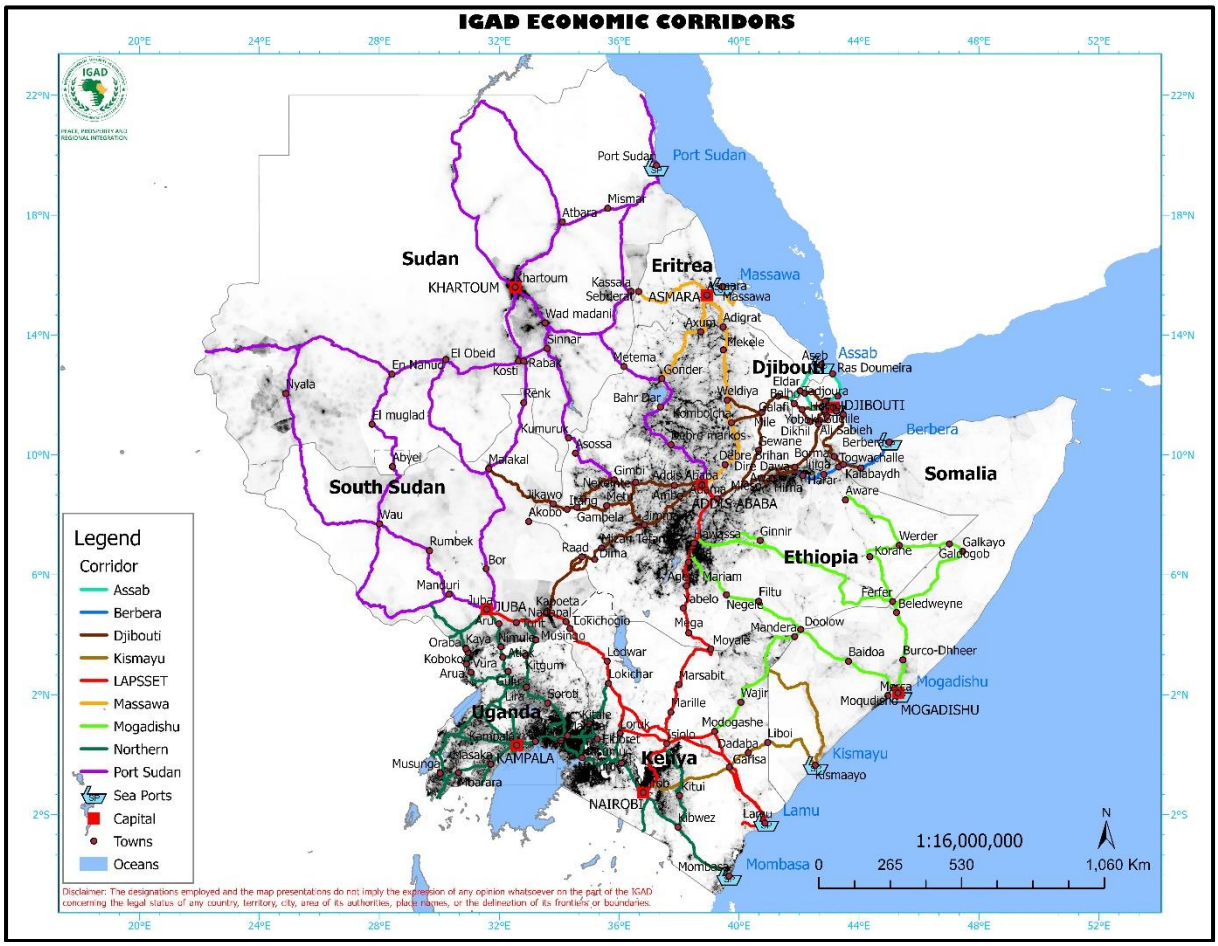
- The IRIMP is a key tool to *operationalise* the African Continental Free Trade Area (AfCFTA) and Vision 2063 through the Regional Economic Communities (REC) institutional arrangements;
- The IRIMP will contribute to the PIDA-PAP 2 planning process, the underlying concept of which is: *"To promote an integrated, multi-sectorial corridor approach that is employment-oriented, gender-sensitive, and climate-friendly and that connects urban/industrial hubs with rural areas";* and critically,
- The expression of IGAD Member State priorities as expressed through *National Development Plans.*

The IRIMP maps out the provision of trans-border physical infrastructure and the implementation of related policy, regulatory and institutional strengthening (economic infrastructure) initiatives over the 2020-2050 period, with three phases of development:

- Short term: 2020-2024
- Medium term: 2025-2030
- Long term: 2031 - 2050

The primary principle guiding the selection of trans-border infrastructure projects for the IRIMP is the degree to which a project promotes the development of the nine economic development corridors that traverse the IGAD region – Figure 1.

Figure 1:Potential IGAD Economic Corridors



The objective of the IRIMP is to develop these potential Economic Development Corridors to maximise job creation, are resilient to climate change, are people-driven and strengthen the role of women through gender-sensitive infrastructure development. A balanced and inclusive approach adopted, with all countries and corridors included in the Infrastructure Development Plan and Action Plan. The sector profile of the IRIMP / Infrastructure Development Programme is given in Table 1.1.

The contribution of the transport sector to development of the respective economic development corridors is subject of this report. The rationale, investment priorities, financing, implementation and safeguards of the transport sector are described in the sections that followed.

Table 1. 1: Summary of Infrastructure Development Programme Projects: Sector Portfolio Breakdown by Implementation Phase

Sector	Subsector	Short-term (2024)		Medium-term (2030)		Long-term (2050)		Total	
		Projects	Cost $m	Projects	Cost $m	Projects	Cost $m	Projects	Cost $m
Transport	Roads	23	9,312	23	13,179	7	8,224	53	30,715
	Railways	4	8,442	5	9,668	21	47,960	30	66,070
	Inland Container Depots (ICDs)	3	209	2	200	0	0	5	409
	Border Posts	11	129	2	14	2	40	15	183
	Inland Waterways	4	61	6	3,337	0	0	10	3,398
	Sea Ports	6	5,041	4	4,200	5	4,680	15	13,921
	Aviation	11	4,737	10	2,734	1	600	22	8,071
	Subtotal	62	27,931	52	33,331	36	61,504	150	122,766
Energy	Petroleum/Gas Pipeline	3	5,214	5	7,235	0	0	8	12,449
	Power Interconnector	6	2,342	6	675	6	2267.5	18	5,285
	Subtotal	9	7,556	11	7,910	6	2267.5	26	17,734
ICT	Fibre Optic Links	10	396	4	264	0	0	14	660
	Data Centre	1	173	1	70	0	0	2	243
	Internet Exchange Point (IXP)	2	7	0	0	0	0	2	7
	Subtotal	13	576	5	334	0	0	18	910
Transboundary Water	Multi-purpose Reservoir	4	662.65	1	2,000	0	0	5	2,663
	Water Aquifer Management	1	2.7	0	0	0	0	1	2.7
	Subtotal	5	665.35	1	2,000	0	0	6	2,665
Grand Total		89	36,728	69	43,575	42	63,772	**200**	144,075

1.3 Scope

The Sector Reports *complement* the IRIMP Strategic Framework and Infrastructure Development Plans which are centred around the core economic development corridors in the IGAD region. The sector plan and related investments have been developed in collaboration with the Member States to ensure alignment with national development plans. In parallel, the sector investments have been developed to align with the African Union PIDA PAP II process. The sector plans and risks have been "tested" through consultations with the IGAD Joint Steering Committee and consultations with civil society and private sector organisations through a series of workshops to ensure inclusion, resilience and environmental and social safeguards are fully considered and incorporated into the IRIMP.

1.4 Users

The Sector Reports are intended to be used by IGAD Member States, and in particular the relevant line Ministries, Departments and Agencies responsible for sector development, and their development partners to guide future planning, investment decision-making and funding and financing arrangements.

Chapter Two: Transport Sector Strategic Context and Situational Analysis

Chapter 2: Transport Sector Strategic Context and Situational Analysis

2.1 Sector Development Drivers

The primary drivers for transport infrastructure are the growth in industry, regional and international trade and opening up remote areas and facilitate access and mobility of people. The IRIMP seeks to ensure that the transport sector infrastructure system is fully interconnected, enabling the free and efficient movement of goods, services and people across national borders.

All major corridors will function effectively as logistics corridors, and the majority will be economic development corridors that attract investment and drive sustainable and resilient growth. The following are the key interventions:

- The primary focus is on the provision of quality and sustainable transport infrastructure to close existing gaps and establish an enabling environment for transport operations along the EDCs;
- Lay the foundations for developing a system of quality transport infrastructure and services which in the long term optimise modal integration and competition; and
- Leverage smart financing options to develop transport infrastructure facilities: innovative mobilisation of resources from domestic, regional and international sources and PSP.

In terms of sector priorities, the provision of modern railway networks through expansion into unserved areas and the upgrading of existing dilapidated legacy networks has been adopted in line with the decision of the AU.

2.2 Current Projections and Trends

The transport sector is projected to experience significant growth as infrastructure along the proposed regional and continental corridors is rolled out. The PIDA/PAP 2 is expected to pick up many of the IRIMP projects in transport, energy and ICT and provide the necessary visibility for their uptake and speed up their implementation.

2.3 Challenges

The following are some of the main challenges that face the transport sector and its various subsector:

Table 2. 1: Transport Sector Challenges

Subsector	Challenges
Road	• Weak and ineffective institutional structures characterised by lack of capacity, poor corporate governance, and inefficient management; • Lack of institutional capacities and technical know-how from other relevant stakeholders including financiers, consultants and contractors; • Inadequate funds for road infrastructure development and maintenance. This is not peculiar to the road mode but also to nearly all modes of transport • Road development encumbered by rights of way issues leading to high costs in land acquisition for road construction. This makes the cost of land a substantial proportion of the asset development compared to the cost of road construction budget; • Participation of the private sector in road development and management is encumbered by lack of proper legal frameworks to enlist the private sector into PPPs and to effectively supervise their operations; and • Delays in procurement of contractors for design, construction and maintenance of road networks.
Railways	• Harmonisation of technical standards for interoperability in terms of infrastructure, technology standards and operating practices. • Financing the development and maintenance of interconnected regional rail networks to adequately serve the region; • Lack of integration with other transport modes and intermodal operability; • Enhancing regional competition policy for the provision of competitive services by separation of network owner from the operators of rail services; • Harmonisation of business and pricing policy for a freight transport whose income covers operating, overheads, capital costs and make a return on the investment; • Harmonisation of policies, rules and regulations to forestall barriers to cross-border transport flows and /or inhibit sub-regional trade integration; and • Developing and equipping the railways training schools in each country to the required standards establishing regional centre of excellence in rail research, operations and management
Maritime Sector	• Low port efficiencies resulting in congestion at berths and terminals and causing delays to vessels and delivery of cargo; • Inefficient counterpart facilities for ports such as poor roads and rail infrastructure and service providers needed to evacuate or deliver cargo in the ports promptly once it is discharged or required for shipment; • Transit trade constrained by lack of alternative port choices due to limited inland transport modes such as roads, railways and pipelines; • Inadequate investment in port infrastructure, equipment maintenance and generally the human capital needed to provide efficient services; • National shipping lines having primarily been state owned and enjoyed cargo reservation schemes have either been wound up or are currently unable to compete at global levels; • Inability to acquire, crew and operate vessels because of high capital costs and lack of global network for local shipowners to access sufficient cargo volumes to generate adequate freight earnings to make investment in vessel operations profitable; • Low investments in in inland waterways facilities such as lake and river ports, dredging of waterways and provision of navigation aids; and • Navigation constrained by inability to clear obstructions in the river fairways, straightening of curves, widening and deepening river beds and construction of navigation locks as required.
Civil Aviation	• Application of Bilateral Air Service Agreements (BASAs) that restrict the market access for airlines; • Restrictive BASAs deny operators opportunities to realise economies of scale resulting in high costs of operations inability to make enough returns on investment and provide sustainable services; • Capital to invest in airports development, procurement of navigation equipment and procurement of aircraft;

	• Lack of human capital to manage the industry efficiently from service provision to the regulatory and oversight responsibilities; • Conditions imposed on type of aircraft, security and environmental standards for developing countries by aeronautical authorities in Europe and North America; and • Demands on traffic rights over and above those provided under the AU SAATM arrangements.

2.4 Demand and Supply Analysis

Prior to identifying potential projects, a demand analysis was undertaken to determine the volumes of traffic that is forecast to pass through the various corridors. volume of traffic expected to utilise the infrastructure. The demand forecasts considered baseline traffic projected through a set of growth rates based on the GDP growth rates compounded with a multiplier determined for each country of a group of countries as provided by the World Bank.

On the supply side, current transport infrastructure together with proposed projects over the coming years were considered. The transport infrastructure inventory and the proposed projects were considered against the traffic levels to determine the adequacy or otherwise of the next five years.

2.5 Gap Analysis/Assessment

The transport infrastructure gap analysis assesses the capacity of infrastructure to meet forecast traffic demand in each section of the IGAD corridors during the three phases. Gaps arose where capacity from existing transport infrastructure plus the already planned projects could not cope with the forecast traffic demand over any of the three phases.

Where capacity gaps were identified, and there was no existing project in the inventory to address the gap, a new project was proposed and assigned to the relevant phase. The gap assessment covered road, rail, border posts, seaports, and inland waterways for each of the IGAD corridors. However, due to lack of data, the second source (increase in traffic volume) could only be estimated for five of the eight corridors as data was not available for Massawa, Assab, Mogadishu or Kismayu.

In the aviation sector, the capacity requirements provided by the national aeronautical authorities were largely adopted. This was because the aviation sector has comprehensive recent technical studies already conducted taking into account projections in traffic demand made by international organisations such as International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) among others.

2.6 Intervention Priorities

In order to implement the IRIMP projects successfully, interventions will be necessary at various levels among states, IGAD Secretariat. There may be interventions at by other RECs and the AU that may accelerate the projects development. Interventions may be made through under IGAD should be exercised in line with the proposed Implementation Plan and will cover the following areas:

(i) Development of harmonised policy and regulatory framework;

(ii) Project Identification to build consensus among states;

(iii) Project preparation including feasibility studies;

(iv) Resource mobilisation (in order to synchronise construction and commissioning of cross-border projects; and

(v) Capacity building (institutional and human)

Chapter Three: Strategic Framework

Chapter Three: Strategic Framework

3.1 Sector Vision and Strategy

The vision for the transport sector by 2050 is to have its infrastructure fully interconnected, enabling the free and efficient movement of goods, services and people across national borders. All major corridors will function effectively as logistics corridors, and the majority will be economic development corridors that attract investment and drive sustainable and resilient growth.

The strategic objectives will be achieved over time; hence there are three phases with specific strategic objectives directly related to the IRIMP time horizons. These are shown in Table 3.1 below

Table 3. 1: Vision over the Three IRIMP Phases

Short term (2020-2024) Strategic Objectives	Medium term (2025-2030) Strategic Objectives	Long term (2031-2050) Strategic Objectives
All IGAD member states to have access to at least one fully functioning transport corridor	Port Sudan, Djibouti and Northern will be fully-fledged Economic Development Corridors, facilitating efficient intra-regional and inter-continental trade, attracting inward investment, and driving sustainable and resilient economic growth	All IGAD member states will have access to at least one Economic Development Corridor
Port Sudan, Djibouti and Northern will be logistics corridors; all links missing in 2019 will have been completed, ports, dry ports, OSBPs and associated logistics infrastructure will be operational	LAPSSET, Berbera and Massawa will be established as logistics corridors; additional infrastructure will have developed to complement the initial road link; logistics infrastructure and services will be developing; institutional framework (e.g. corridor management institution / corridor development authority) in place to actively manage and develop the corridors	Port Sudan, Djibouti, Northern LAPSSET, Berbera and Massawa will be fully-fledged Economic Development Corridors, facilitating efficient intra-regional and inter-continental trade, attracting inward investment, and driving sustainable and resilient economic growth
LAPSSET, Berbera and Massawa will be functioning transport corridors; all links missing in 2019 will have been completed; ports will have increased their share of trade from neighbouring member states	Missing links will be completed on Mogadishu, Kismayo and Assab so that they are functioning transport corridors	Mogadishu, Kismayo and Assab will be developed, subject to demand, following the EDC model, and will be at least logistics corridors with established institutional framework

Table 3.2 below shows the Strategic Objectives against the identified Key Result Areas in the Transport sector.

Table 3. 2: Result Areas, Strategic Objectives

Key Result Area	Subsector	Strategic Objectives
Policy, Regulatory and Institutional Framework	All subsectors	To develop harmonised policies, regulations and institutional framework to promote cross-border/ transit operations
Physical Transport Infrastructure	Road	To provide adequate regional and cross-border road transport infrastructure
	Rail	To provide adequate regional and cross-border railway infrastructure
	Maritime and Inland Waterways	To provide ports and inland water infrastructure and facilities
	Civil Aviation	To provide modern airports, air navigation facilities and means of air transport
Financing/Resource Mobilisation for project implementation	Road	To mobilise adequate resources to finance road projects
	Rail	To mobilise adequate resources to finance railway projects
	Maritime and Inland Waterways	To mobilise adequate resources to finance maritime and inland waterways projects
	Civil Aviation	To mobilise adequate resources to finance civil aviation projects
Capacity Building	Road	To enhance capacity in human and capital, institutions in the road subsector
	Rail	To enhance capacity in human and capital, institutions in the rail subsector
	Maritime and Inland Waterways	To enhance capacity in human and capital, institutions in the road maritime and inland waterways subsector
	Civil Aviation	To enhance capacity in human and capital, institutions in the civil aviation subsector

3.2 Infrastructure Implementation Programme

This section presents the proposed infrastructure development programme (IDP) for each of the nine IGAD corridors: Northern; Djibouti; Port Sudan; LAPSSET; Berbera; Massawa; Mogadishu; Kismayo; and Assab. The civil aviation sector is presented separately at the end.

The IDP is presented as a series of annotated maps illustrating the current status of physical infrastructure on the corridor, and the physical infrastructure projects that are proposed for each time period (to 2024, to 2030 and to 2050). Following each map is a table providing more detail on each project to be implemented during that planning period. Alternatively, the IDP is presented by sector, rather than by corridor, in Annex Two.

The majority of the projects in the IDP are sourced from the IRIMP project inventory[1] which was assembled during the first phase of the project. These projects have been screened and assessed against forecast demand and capacity in each time period in order to sequence investments. Where capacity gaps were identified, and there was no existing project in the inventory to address the gap, a new project has been proposed – this is particularly the case

[1] Project data sheets for all projects in the inventory are presented under separate cover

in the final planning period (2031-2050), which can be considered more of a long-term vision for the development of each corridor.

The IDP also recommends economic infrastructure initiatives to be implemented in three areas: 1) institutional arrangements; 2) harmonisation of regulations and standards; and 3) logistics services. These are presented as a table following the physical infrastructure development programme for each corridor. Due to the large number of maps and tables, the remainder of this chapter is presented in landscape.

Table 3. 3: Summary of IDP Projects - Sector Portfolio Breakdown by Implementation Phase

Subsector	Short-term (2024)		Medium-term (2030)		Long-term (2050)		Total	
	Projects	Cost US$M	Projects	Cost US$M	Projects	Cost US$M	Projects	Cost US$M
Roads	23	9,312	23	13,179	7	8,224	53	30,715
Railways	4	8,442	5	9,668	21	47,960	30	66,070
Inland Container Depots (ICDs)	3	209	2	200	0	0	5	409
Border Posts	11	129	2	14	2	40	15	183
Inland Waterways	4	61	6	3,337	0	0	10	3,398
Sea Ports	6	5,041	4	4,200	5	4,680	15	13,921
Aviation	11	4,737	10	2,734	1	600	22	8,071
Total	62	27,931	52	33,331	36	61,504	150	122,766

Table 3. 4:Infrastructure Development Programme: Short-term Plan (2020-2024)

	Project	Cost ($m)	Corridor	Sector	Sub-sector type
1	Mombasa Port Second Container Terminal, Phase 3	300	Northern Corridor	Transport	Sea Port
2	Mombasa – Nairobi Expressway	2,180	Northern Corridor	Transport	Road
3	Naivasha –Kisumu (Phase 2B) SGR	3,700	Northern Corridor	Transport	Railway
4	Kenya-Uganda Petroleum Products Pipeline (Uganda Section)	600	Northern Corridor	Energy	Petroleum/Gas Pipeline
5	Kampala – Jinja Expressway	1,000	Northern Corridor	Transport	Road
6	Kampala – Jinja Highway	7	Northern Corridor	Transport	Road
7	Kampala Outer Beltway	1250	Northern Corridor	Transport	Road
8	Rehabilitation of Meter Gauge Rail Between Tororo and Gulu	40	Northern Corridor	Transport	Railway
9	Gulu Logistics Hub	9	Northern Corridor	Transport	Inland Container Depot
10	Nimule – Juba Road Rehabilitation	73	Northern Corridor	Transport	Road
11	Rehabilitation of Jinja Port Facilities	3	Northern Corridor	Transport	Inland Port & Waterway
12	Rehabilitation of Kisumu Pier	30	Northern Corridor	Transport	Inland Port & Waterway
13	Rehabilitation of Port Bell Facilities	3	Northern Corridor	Transport	Inland Port & Waterway
14	Improvement of Navigation Aids on Lake Victoria	25	Northern Corridor	Transport	Inland Port & Waterway
15	Uganda – South Sudan Interconnector (400kV)	300	Northern Corridor	Enegy	Power Interconnector
16	Juba-Kampala Fibre Optic Link (South Sudan Section)	19	Northern Corridor	ICT	Fibre Optic Cable
17	Kocholia Trans-boundary Multipurpose Water Storage	55	Northern Corridor	Water	Multi-purpose Reservoir
18	Nyimur Multipurpose Water Resources Project Studies	2	Northern Corridor	Water	Multi-purpose Reservoir
19	Angololo Multipurpose Water Resources Development Project	1.65	Northern Corridor	Water	Multi-purpose Reservoir
20	Transborder Submarine Fibre Points of Presence (PoPs) and Regional Smart Hub Facility and Data centre	70	Northern Corridor	ICT	Fibre Optic Cable and Data Centre
21	Konza National Data Centre and Smart City Facilities	173	Northern Corridor	ICT	ICT Data Centre
22	Liquefied Natural Gas (LNG) Terminal, Demadjorg	2,800	Djibouti Corridor	Transport	Sea Port and Petroleum/Gas Pipeline
23	Djibouti to Ethiopia Pipeline (Horn of Africa Initiative)	1,550	Djibouti Corridor	Energy	Petroleum/Gas Pipeline
24	Djibouti City - Hol Hol - Ali Sabieh - Galile Highway (Horn of Africa Initiative)	129	Djibouti Corridor	Transport	Road
25	Balho One Stop Border Post	10	Djibouti Corridor	Transport	Border Post
26	Dikhil-Galafi Highway - Djibouti (Horn of Africa Initiative)	70	Djibouti Corridor	Transport	Road

27	Galafi One Stop Border Post	10	Djibouti Corridor	Transport	Border Post
28	Galile/Dewele One Stop Border Post	10	Djibouti Corridor	Transport	Border Post
29	Adama-Awash Expressway (Horn of Africa Initiative)	540	Djibouti Corridor	Transport	Road
30	Dima-Raad Highway	40	Djibouti Corridor	Transport	Road
31	Raad/Boma One Stop Border Post	10	Djibouti Corridor	Transport	Border Post
32	Raad-Boma-Kapoeta Highway	336	Djibouti Corridor	Transport	Road
33	Second Ethiopia – Djibouti 230kV Power Transmission Interconnector	100	Djibouti Corridor	Energy	Power Interconnector
34	Djibouti Africa Regional Express (DARE)	100	Djibouti Corridor	ICT	Fibre Optic Cable
35	Installation of 681 km Fibre Optic Cable	32	Djibouti Corridor	ICT	Fibre Optic Cable
36	Doraleh Terminal Extension Phase 2	600	Djibouti Corridor	Transport	Sea Port
37	Loyada One Stop Border Post	10	Djibouti Corridor	Transport	Border Post
38	South Sudan Internet Exchange Point (IXP)	3	Djibouti Corridor	ICT	Internet Exchange Point (IXP)
39	Djibouti – Juba Fibre Optic Link	30	Djibouti Corridor	ICT	Fibre Optic Link
40	Juba – Kampala Fibre Optic Link	19	Djibouti Corridor	ICT	Fibre Optic Link
41	Development of Deep-Water Berths at Osama Digna Port (Suakin)	500	Port Sudan Corridor	Transport	Sea Port
42	Al Damazin-Kurmuk Highway	40	Port Sudan Corridor	Transport	Road
43	El Mujlad-Abyei Highway	120	Port Sudan Corridor	Transport	Road
44	Wau-Gogrial-Abyei Highway	360	Port Sudan Corridor	Transport	Road
45	Metema - Galabat One Stop Border Post	3.5	Port Sudan Corridor	Transport	Border Post
46	Ethiopia-Sudan (500KV) Transmission Interconnector	514	Port Sudan Corridor	Energy	Power Interconnector
47	Assessment and Management of Bagara Transboundary Groundwater Aquifer	2.7	Port Sudan Corridor	Water	Water Aquifer Management
48	Lamu Port Phase 2: Berths 4 to 7	500	LAPSSET Corridor	Transport	Sea Port
49	Lamu – Garissa – Isiolo Highway (Horn of Africa Initiative)	700	LAPSSET Corridor	Transport	Road
50	Crude Oil Pipeline: Lamu to South Sudan	3,064	LAPSSET Corridor	Energy	Petroleum/Gas Pipeline
51	Isiolo-Lokichar Highway	402	LAPSSET Corridor	Transport	Road
52	Nadapal One Stop Border Post	10	LAPSSET Corridor	Transport	Border Post
53	Juba-Torit-Kapoeta-Nadapal Road	294	LAPSSET Corridor	Transport	Road
54	Modjo – Hawassa Expressway	420	LAPSSET Corridor	Transport	Road
55	Multiple 220kV Power Transmission Interconnectors to power the LAPSSET corridor	232	LAPSSET Corridor	Energy	Power Interconnector

56	Nadapal – Juba Fibre Optic Cable	62	LAPSSET Corridor	ICT	Fibre Optic Cable
57	Isiolo Inland Container Depot	100	LAPSSET Corridor	Transport	Inland Container Depot
58	LAPSSET Railway Detailed Design	4000	LAPSSET Corridor	Transport	Railway
59	Berbera Port Upgrade Phase 2	341	Berbera Corridor	Transport	Sea Port
60	Berbera – Hargeisa - Kalabaydh–Togachale Road (Horn of Africa Initiative)	35	Berbera Corridor	Transport	Road
61	Togachale OSBP	10	Berbera Corridor	Transport	Border Post
62	Jigjiga Dry Port	100	Berbera Corridor	Transport	Inland Container Depot
63	Berbera – Togochaale Fibre Optic Cable	10	Berbera Corridor	ICT	Fibre Optic Cable
64	EU Road Rehabilitation	23	Massawa Corridor	Transport	Road
65	Rehabilitation of road between Adigrat and Zalambessa	10	Massawa Corridor	Transport	Road
66	Zalambessa / Serha One Stop Border Post	10	Massawa Corridor	Transport	Border Post
67	OSBP infrastructure and upgrading of border road at Aligider	25	Massawa Corridor	Transport	Border Post
68	Rehabilitation of Massawa – Asmara – Aligider Narrow Gauge Railway line and upgrading of gauge	702	Massawa Corridor	Transport	Railway
69	Upgrading of Kassala – Aligider – Berentu road	10	Massawa Corridor	Transport	Road
70	Sudan - Eritrea 66kv power interconnector (Eritrea Section)	8	Massawa Corridor	Energy	Power Interconnector
71	Construction of the Isiolo – Modogashe – Wajir – El Wak – Rhamu – Mandera Highway (Horn of Africa Initiative)	995	Mogadishu Corridor	Transport	Road
72	Dawa River Multi-purpose Dam	604	Mogadishu Corridor	Water	Multi-purpose Reservoir
73	Ethiopia – Somalia Interconnector (500KV) (Horn of Africa Initiative)	1188	Mogadishu Corridor	Energy	Power Interconnector
74	Nairobi – Mogadishu Fibre Optic Link (Kenya Section) and Point of Presence (PoP)	34	Mogadishu Corridor	ICT	Fibre Optic Cable
75	Somalia Internet Exchange Point (IXP)	4	Mogadishu Corridor	ICT	Internet Exchange Point (IXP)
76	Construction of Liboi – Daadab/Hagadera - Garissa road (Horn of Africa Initiative)	278	Kismayo Corridor	Transport	Road
77	Garissa - Kismayo Fibre Optic Link (Kenya Section)	20	Kismayo Corridor	ICT	Fibre Optic Cable
78	Construction of Liboi OSBP	20	Kismayo Corridor	Transport	Border Post
79	Integrated African Air Transport Market Under Implementation of the Single African Air Transport Market (SAATM) Programme	8	Civil Aviation	Transport	Airport
80	Development of Air traffic management in line with ICAO Global Aviation Plan	4	Civil Aviation	Transport	Airport
81	Isiolo International Airport	175	Civil Aviation	Transport	Airport

82	Entebbe International Airport Expansion Phase 1	70	Civil Aviation	Transport	Airport
83	Construction of Malakal International Airport	40	Civil Aviation	Transport	Airport
84	Wau Airport	40	Civil Aviation	Transport	Airport
85	Rumbek Airport	40	Civil Aviation	Transport	Airport
86	Pakuba Airport Upgrade to International Status	40	Civil Aviation	Transport	Airport
87	Construction of a new Addis Ababa Airport	4000	Civil Aviation	Transport	Airport
88	Djibouti Airport Expansion of the Terminal building facilities	100	Civil Aviation	Transport	Airport
89	Construction of Greenfield Terminal in JKIA	220	Civil Aviation	Transport	Airport

Table 3. 5:Infrastructure Development Programme: Medium-term Plan (2025-2030)

	Project	Value (in million USD)	Corridor	Sector	Sub-Sector
1	Kisumu – Malaba (Phase 2C) SGR	1,230	Northern Corridor	Transport	Railway
2	Malaba – Kampala SGR	2,638	Northern Corridor	Transport	Railway
3	Construction of a New Bukasa Port Facilities	180	Northern Corridor	Transport	Inland Port & Waterway
4	Dire Dawa-Awash Expressway	1,000	Djibouti Corridor	Transport	Road
5	Musingo-Tsertenya – Ikotos - Torit Road	210	Djibouti Corridor	Transport	Road
6	Ethiopia – South Sudan Interconnector (400KV)	235	Djibouti Corridor	Energy	Power Interconnector
7	Ethiopia – South Sudan Interconnector (230KV)	100	Djibouti Corridor	Energy	Power Interconnector
8	Expansion of Djibouti Free Zone Phase 2	3,500	Djibouti Corridor	Transport	Port/Free Zone
9	South Sudan – Djibouti port crude oil pipeline	5000	Djibouti Corridor	Energy	Pipeline
10	Loyada – Borema – Hargeisa – Berbera Highway (Horn of Africa Initiative)	1096	Djibouti Corridor	Transport	Road
11	Hargeisa – Burao (Burco) Highway	310	Djibouti Corridor	Transport	Road
12	Port Sudan- Haya -Atbara-Khartoum SGR	1,400	Port Sudan Corridor	Transport	Railway
13	Weldiya-Gondar-Metema – Al Qadaref SGR	2,900	Port Sudan Corridor	Transport	Railway
14	Sudan-Ethiopia Petroleum Pipeline	300	Port Sudan Corridor	Energy	Petroleum/Gas Pipeline
15	Sudan-South Sudan Petroleum Pipeline	250	Port Sudan Corridor	Energy	Petroleum/Gas Pipeline
16	South Sudan/Sudan (Renk) One Stop Border Post	10	Port Sudan Corridor	Transport	Border Post
17	Juba-Bor-Malakal-Renk-Sudan Border Road	200	Port Sudan Corridor	Transport	Road
18	Kurmuk One Stop Border Post	10	Port Sudan Corridor	Transport	Border Post
19	Asosa-Kurmuk Highway	900	Port Sudan Corridor	Transport	Road
20	Improvement of port facilities (Juba, Bor, Malakal and Renk) on the White Nile	900	Port Sudan Corridor	Transport	Inland Port & Waterway
21	Improvement of port facilities at Kosti on the White Nile	150	Port Sudan Corridor	Transport	Inland Port & Waterway
22	Rehabilitation of facilities for ports on Sobat River	1804	Port Sudan Corridor	Transport	Inland Port & Waterway
23	Provision of Navigation Aids on the White Nile	200	Port Sudan Corridor	Transport	Inland Port & Waterway
24	El Showak-Kono-Sabarna- El Homara	1200	Port Sudan Corridor	Transport	Road
25	El Fasher – Kabkabiya – El Geneina-Adri	900	Port Sudan Corridor	Transport	Road

26	Nyala - Rihaid El Birdi – Om Dafuq	900	Port Sudan Corridor	Transport	Road
27	Khartoum – Juba fibre optic cable	25	Port Sudan Corridor	ICT	Fibre Optic Cable
28	Dredging of River Channel (Juba to Renk) and Rehabilitation of 11 ports and Provision Navigation Aids	102.5	Port Sudan Corridor	Transport	Inland Water Ways
29	Product Oil Pipeline: Kenya to Ethiopia	885	LAPSSET Corridor	Energy	Petroleum/ Gas Pipeline
30	Nairobi to Isiolo SGR	1,500	LAPSSET Corridor	Transport	Railway
31	Crude Oil Pipeline: Jonglei to Nadapal	800	LAPSSET Corridor	Energy	Petroleum/ Gas Pipeline
32	Kenya – South Sudan Interconnector (220KV)	85	LAPSSET Corridor	Energy	Power Interconnector
33	Moyale Inland Container Depot	100	LAPSSET Corridor	Transport	Inland Container Depot
34	Lokichogio Inland Container Depot	100	LAPSSET Corridor	Transport	Inland Container Depot
35	High Grand Falls Multi-Purpose Dam	2,000	LAPSSET Corridor	Water	Multi-purpose Reservoir
36	Lamu Special Economic Zone	500	LAPSSET Corridor	Transport	Special Economic Zone
37	Transborder Submarine Fibre Points of Presence (PoPs) and Regional Smart Hub Facility and Data centre	70	LAPSSET Corridor	ICT	Fibre Optic Cable and Data Centre
38	Construction of Moyale – Banisa – Rhamu road	330	LAPSSET Corridor	Transport	Road
39	Ethiopia – Somalia Interconnector (230KV) (Horn of Africa Initiative)	40	Berbera Corridor	Energy	Power Interconnector
40	Massawa Port Expansion Phase 1	100	Massawa Corridor	Transport	Sea Port
41	Eritrea – Sudan Interconnector (230KV)	140	Massawa Corridor	Energy	Power Interconnector
42	Eritrea – Ethiopia Interconnector (230KV) (Horn of Africa Initiative)	75	Massawa Corridor	Energy	Power Interconnector
43	Sudan-Eritrea Fibre-optic Link	10	Massawa Corridor	ICT	Fibre Optic Cable
44	Rehabilitation and upgrading of Assab Port	100	Assab Corridor	Transport	Sea Port
45	Construction of Bure – Assab Port road (Horn of Africa Initiative)	163	Assab Corridor	Transport	Road
46	Rehabilitation of the Mellondi – Manda – Bure – Assab Road	700	Assab Corridor	Transport	Road
47	Upgrading and rehabilitation of the Negele – Filtu – Siftu highway (Horn of Africa Initiative)	393	Mogadishu Corridor	Transport	Road
48	Upgrading and rehabilitation of the Ginir – Gode - Ferfer highway (Horn of Africa Initiative)	253	Mogadishu Corridor	Transport	Road
49	Rehabilitation of the Mogadishu – Afgooye – Baidoa – Dollow highway (Horn of Africa Initiative)	600	Mogadishu Corridor	Transport	Road

50	Construction of Aware – Warder - Ferfer /Somalia border highway (Horn of Africa Initiative)	764	Mogadishu Corridor	Transport	Road
51	Construction of Kebridahar – Warder – Turdibi /Galdogobi highway (Horn of Africa Initiative)	148	Mogadishu Corridor	Transport	Road
52	Construction of Mogadishu – Beled weyne - Galkayo highway (Horn of Africa Initiative)	796	Mogadishu Corridor	Transport	Road
53	Construction of Mogadishu -Jowhar - Beled weyne - Ferfer highway (Horn of Africa Initiative)	338	Mogadishu Corridor	Transport	Road
54	Galkayo – Bossaso	700	Mogadishu Corridor	Transport	Road
55	Mogadishu-Baidoa-Mandera Road	270	Mogadishu Corridor	Transport	Road
56	Nairobi – Mogadishu Fibre Optic Link (Somalia Section) and Point of Presence (PoP) at Mogadishu	134	Mogadishu Corridor	ICT	Fibre Optic Cable
57	Construction of Kismayo – Elwak road	681	Kismayu Corridor	Transport	Road
58	Construction of Kismayo-Bilis Qooqani – Liboi highway	327	Kismayu Corridor	Transport	Road
59	Garissa - Kismayo Fibre Optic Link (Somalia Section) and Point of Presence (PoP) in Kismayo	25	Kismayu Corridor	ICT	Fibre Optic Cable
60	Entebbe International Airport Expansion Phase 3	161	Civil Aviation	Transport	Airport
61	Arua Airport Upgrade to International Status	15	Civil Aviation	Transport	Airport
62	Gulu Airport Upgrade to International Status	15	Civil Aviation	Transport	Airport
63	Hoima Airport Upgrade to International Status	100	Civil Aviation	Transport	Airport
64	Kasese Airport Upgrade to International Status	40	Civil Aviation	Transport	Airport
65	Lamu International Airport	190	Civil Aviation	Transport	Airport
66	Moi International Airport Upgrade Project	370	Civil Aviation	Transport	Airport
67	Construction of New Khartoum Airport	1200	Civil Aviation	Transport	Airport
68	Turkana International Airport	143	Civil Aviation	Transport	Airport
69	Upgrade and expansion of airport facilities in Dire Dawa, Semera, Mekele, Gondar, Gambela	500	Civil Aviation	Transport	Airport

Table 3. 6:Infrastructure Development Programme: Long-term Plan (2031-2050)

	Project	Value (in million USD)	Corridor	Sector	Sub-Sector
1	Tororo – Gulu SGR	1,900	Northern Corridor	Transport	Railway
2	Gulu –Nimule –Juba – Wau SGR	4700	Northern Corridor	Transport	Railway
3	Nairobi – Nakuru Expressway	1256	Northern Corridor	Transport	Road
4	Nakuru – Kisumu Expressway	1464	Northern Corridor	Transport	Road
5	Kisumu – Busia Expressway	968	Northern Corridor	Transport	Road
6	Nakuru – Eldoret – Malaba Expressway	2320	Northern Corridor	Transport	Road
7	Malaba – Kampala Expressway	1128	Northern Corridor	Transport	Road
8	Conversion of Mombasa – Nairobi SGR to double track + electrification	100	Northern Corridor	Transport	Railway
9	Kenya – Uganda upgrade on Uganda side to 400kV	520	Northern Corridor	Energy	Power Interconnector
10	Expansion of Mombasa Port	380	Northern Corridor	Transport	Sea Port
11	Asayta - Tadjourah Port SGR	1,300	Djibouti Corridor	Transport	Railway
12	Hara Gebeya - Asayta SGR	1,300	Djibouti Corridor	Transport	Railway
13	Addis Ababa - Jimma - Dima - Raad SGR	4,400	Djibouti Corridor	Transport	Railway
14	Raad-Boma-Kapoeta SGR	2,400	Djibouti Corridor	Transport	Railway
15	Upgrade Djibouti – Adama SGR to double track / double stack	2000	Djibouti Corridor	Transport	Railway
16	Djibouti - Somalia 230kV Power Transmission Interconnector	100	Djibouti Corridor	Energy	Power Interconnector
17	Haya-Kassala-Gedarif – Metema SGR	1,000	Port Sudan Corridor	Transport	Railway
18	Gedarif-Sennar-Kosti-Babanusa-Meram SGR	2,000	Port Sudan Corridor	Transport	Railway
19	Ad-Damazin - Kurmuk Railway SGR	750	Port Sudan Corridor	Transport	Railway
20	Juba-Bor-Malakal-Renk-Sudan Border Railway	4,800	Port Sudan Corridor	Transport	Railway
21	Ambo – Nekemte–Asosa–Kurmuk SGR	3,300	Port Sudan Corridor	Transport	Railway
22	Juba-Wau-Meram SGR	5200	Port Sudan Corridor	Transport	Railway
23	Khartoum – Kosti – Renk – Malakal – Juba high voltage power transmission interconnector	111.6	Port Sudan Corridor	Energy	Power Interconnector
24	Lamu Port Phase 3: Remaining Berths	4,000	LAPSSET Corridor	Transport	Sea Port
25	Lamu to Isiolo SGR	1,500	LAPSSET Corridor	Transport	Railway
26	Isiolo to Moyale SGR	1,600	LAPSSET Corridor	Transport	Railway
27	Modjo-Awassa-Moyale SGR	6,400	LAPSSET Corridor	Transport	Railway
28	Isiolo to Nakodok/Nadapal SGR	3,900	LAPSSET Corridor	Transport	Railway
29	Nadapal-Kapoeta-Juba SGR	1,900	LAPSSET Corridor	Transport	Railway

30	2nd Kenya – Ethiopia 400kv Power Interconnection (Horn of Africa Initiative)	1115	LAPSSET Corridor	Energy	Power Interconnector
31	Berbera – Dire Dawa SGR	1,800	Berbera Corridor	Transport	Railways
32	Berbera – Burao (Burco) – Lascanood – Garowe	600	Berbera Corridor	Transport	Road
33	Misrak Gashamo -Bohotle – Quyale – Burao - Berbera	500	Berbera Corridor	Transport	Road
34	Massawa Port Expansion Phase 2	100	Massawa Corridor	Transport	Sea Port
35	Mekele – Massawa SGR	2,000	Massawa Corridor	Transport	Railway
36	Upgrade Capacity of Mogadishu Port	100	Mogadishu Corridor	Transport	Sea Port
37	Mandera OSBP	20	Mogadishu Corridor	Transport	Border Post
38	Ferfer OSBP	20	Mogadishu Corridor	Transport	Border Post
39	Kenya – Somalia power transmission line (Somalia section) (Horn of Africa Initiative)	192	Mogadishu Corridor	Energy	Power Interconnector
40	Garissa – Wajir – Mandera 220KV power transmission line	192	Mogadishu Corridor	Energy	Power Interconnector
41	Upgrade Capacity of Kismayo Port	100	Kismayu Corridor	Transport	Sea Port
42	Expansion of other existing airports (Port Sudan, El Obeid, Nyala, Al Fasha Dongola and Wadi Halfa)	600	Civil Aviation	Transport	Airport

3.3 Funding Requirements and Financing

Funding of infrastructure projects rests on who will pay for the resources employed to finance such projects whether public, loans or private capital. Depending on the structuring of the operation of the assets created, funding could be made through revenue streams received from payments of the use of infrastructure either wholly or partly.

Public projects in areas such as ports, airports and tolled roads could be funded wholly through revenues collected from the tariffs raised and partly for railways. Funding for private sector financed and operated projects would be expected to be through the revenue streams made from the operation of the projects.

Financing for transport infrastructure is available from many sources ranging from national capital budget allocations, loans and grants. The private sector may also finance infrastructure projects either directly or through PPP arrangements depending on the expected project yields and risk profiles.

Conventionally, governments have financed projects with positive economic returns but where the private sector has no appetite because of low commercial returns. The projects that are financed by governments are eventually funded through a mixture of user charges and public budgets. Most roads, railways, inland waterways and airports where traffic levels are not high enough are funded by governments through own resources or through borrowing.

In cases where the traffic levels are high and hence returns are high enough, financing may be made through governments and the private sector while the revenue streams from user charges will fund the repayments of the monies utilised. This is possible with busy ports, airports and road segments with high traffic that the private sector may invest in directly or through PPPs and levy users through port charges or tolls as appropriate.

3.4 ESIA, Climate Resilience and Safeguards

Transport may cause challenges to the environment including pollution and climate change due to the construction of infrastructure and the energy used in powering the transport equipment. The choice of modes between rail and road in terms of pollution is desirable as rail emits less pollution on carbon-based fuels and could be electrified.

Transport also brings in challenges in safety especially on the road where injuries and mortalities arise due to accidents. Issues of safety also occur in maritime transport and in civil aviation and need to be addressed through at design and through effective oversight during the operational phases.

It is therefore important that in the development of infrastructure, the ESIA's, climate change impacts and safety are taken into account during feasibility studies so that the negative externalities can be mitigated.

3.5 Risks

The success of implementation of IRIMP projects may be encumbered by various risks that may arise prior to, during or after their execution. The risks could be internal or external to the projects. Internal risks may be related to faults or omissions made during the preparation of technical designs, financial structuring and procurement of incompetent contractors for construction and supervision.

These internal risks could be mitigated by ensuring that project studies and designs take into account all the necessary areas of potential externalities including environmental and social impacts, resettlements, compensation. Further, procurement of contractors for design, construction and supervision need to be rigorously done with the necessary due diligence. Finally, capacity building should be provided for client's personnel that undertake procurement and project administration coupled with elaborate quality control systems put in place.

External risks arise due to various factors and are external to a specific project. Such risks include country risks predominantly due to political, economic or financial states of countries. External risks could be due country noncompliance with agreements or instruments adopted at bilateral or multilateral levels which may include failure in meeting their regulatory obligations such as the issuance of licences, permits and tax exemptions where provided for in projects implementation.

External risks can be mitigated by countries ensuring peace through preservation of law and order, honouring of regulatory obligations and compliance with commitments made at bilateral and multilateral levels which enhance predictability in business climate.

Chapter Four: Action Plan

Chapter Four: Action Plan

4.1 Action Plan Projects

The detailed IRIMP Action Plan which comprises projects selected according to the prioritisation criteria is presented below. Each of listed projects is profiled in the project fiche.

Table 4. 1:IRIMP Action Plan Projects

	Project	Sector	Sub-Sector	Cost (US$ M)	Corridor	Country(ies)
1	Juba – Nimule Road Rehabilitation	Transport	Road	73	Northern	South Sudan
2	Kampala – Jinja Expressway	Transport	Road	1,000	Northern	Uganda
3	Kisumu – Malaba SGR (Phase 2C)	Transport	Railway	1,230	Northern	Kenya
4	Malaba – Kampala SGR	Transport	Railway	2,638	Northern	Uganda
5	Djibouti City – Hol Hol – Ali Sabieh – Galile Highway	Transport	Road	129	Djibouti	Djibouti
6	Raad – Boma – Kapoeta Road	Transport	Road	336	Djibouti	South Sudan
7	El Mujlad – Abyei Highway Upgrade	Transport	Road	120	Port Sudan	Sudan
8	Wau – Gorgrial – Abyei Highway Upgrade	Transport	Road	360	Port Sudan	South Sudan
9	LAPSSET Port Phase 2	Transport	Port	1,760	LAPSSET	Kenya
10	Isiolo – Lokichar Highway	Transport	Road	402	LAPSSET	Kenya
11	Juba – Torit – Kapoeta – Nadapal Road Upgrade	Transport	Road	294	LAPSSET	South Sudan
12	Togochaale Border Post and Road Upgrade	Transport	Road / Border Post	50	Berbera	Somalia
13	Single African Air Transport Market	Transport	Civil Aviation	8	N/A	All

4.2 Implementation Plan

An IRIMP Implementation Plan was prepared proposing the coordination mechanisms including resource mobilisation and institutional arrangements. The following are key assumptions are made on the implementation of the IRIMP:

i. The physical infrastructure projects in the IRIMP will be implemented by member states;

ii. Coordination will be at the corridor level by a Corridor Management Institution (CMI); and

iii. The IGAD Secretariat will provide oversight, advocacy and act as a facilitator for discussions with donors, IFIs and multilateral institutions including other RECs, AU and building consensus among member states

Table 4.2 below contains the proposed IRIMP Implementation Plan.

Table 4. 2:IRIMP Implementation Plan

FOCUS AREA	ACTION	ACTIVITIES	RESPONSIBLE PARTIES	TIME FRAMES
Coordination of Implementation of the IRIMP through a unified platform at IGAD and country levels	Establishment of a Project Coordination Unit (PCU) based at the IGAD Secretariat. PCU to consist of a Programme Coordinator and 4 sectoral experts (Transport, ICT, Energy and Water) – with support staff and office space.	• Coordinating member states in the development of transboundary projects • Convening meetings, workshops and organising other events; • Conducting awareness and sensitisation on project issues and procedures (Public and Private sector) • Preparing work plans and working documents and maintenance of projects databases; • Coordination of the mobilisation of resources for implementation of projects. • Promotion/ coordination of establishment and operation of Corridor Management Institutions (CMIs) • Enhancing awareness and sensitisation of IGAD's programmes	IGAD Secretariat	Within Six months of IRIMP endorsement
Institutional set up for management of programmes/projects in Member States	Establishment of a National Multi-Sectoral Coordination Committee comprising all sectors (Transport, ICT, Energy, Water)	• Reviewing / aligning national IRIMP projects and national development plans • Sectoral Coordination Committees to review and update project budget and funding information • Enhancing awareness and sensitisation of IGAD's programmes	Member States	Within Six months of IRIMP endorsement
	Establishment of Sectoral Steering Committees of Senior Officials.	• Steering the implementation of the IRIMP • Providing regular reports on programme/project implementation progress	Member States	(Six Months)

		• Maintenance of national project databases • Link to IRIMP PCU M&E systems		
	Establishment of Technical Task Teams/Working Groups	• Reviewing Terms of Reference for studies • Handling specific programmes/projects requirements	IGAD Secretariat	Continuous
Harmonisation of national policies, regulations and procedures on cross border and transit trade among member states to enable the development of transboundary projects	Addressing areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region	• Identify key areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region; • Prepare Model policy, legislative and regulatory instruments for adoption by Member State; • Coordinate the states in concluding Multilateral Agreements where necessary; • Undertake corridor diagnostics of trade facilitation constraints and develop reform action plans for the corridors drawing lessons on international best practices in trade facilitation; and • Creation of awareness in the private sector in the members states.	IGAD Secretariat	(Initiate review / gap analysis within 3 months of setting up of National Multi-Sectoral Coordination Committee - complete within 12 months after the review / gap analysis)
Resource mobilisation for projects preparation and implementation	Develop a database of potential sources of funding for categories of projects and document their requirements for access to funds	• Prepare IRIMP project inventory on the basis of potential sources of funding projects. • Undertake research mobilisation through structured fora such as Infrastructure Investment Forum, missions to development partners and cooperating partners • Promote projects for attraction of interest by	IGAD Secretariat	Continuous

		private sector including potential PPP off-takers		
Capacity Building for Projects Implementation	Development of capacity building at national and IGAD Secretariat	• Identification of capacity gaps at human and institutional levels • Identification of training instruments and institutions • Develop the training curriculum and materials (including online) for the stakeholders. • Enhance communication with all relevant stakeholders	IGAD Secretariat	Continuous

4.3 Prioritised projects and PIDA 2 Alignment

The prioritised transport projects have been uploaded in an IGAD portal which has been developed in line with the AID Database structure in the same format as PIDA.

During the preparation of the PIDA/PAP2, IGAD submitted some of the priority projects. In transport sector, most of the projects submitted by IGAD were shortlisted for consideration by the PIDA Steering Committee.

4.4 Enabling Environment, Institutional Arrangements and Capacity Development

The enabling environment for the development of transport infrastructure and provision of services across along transboundary corridors is sine qua non in a regional environment. Such environment requires regional harmonisation of policy and regulatory regimes with clear facilitation instruments that are developed and adopted by relevant players across the region.

There is also need for common standards to enhance cross-border rail networks interoperability, road vehicles dimensions and axle load limits and the application of international regulations and standards in with regard to safety and environmental pollution in maritime transport and civil aviation.

The adoption of similar institutional frameworks and structures across the region is also beneficial in order to enhance the development of common standards, knowledge exchange and secondment of experts for training and experience sharing.

Finally, capacity building handled at regional level would be highly beneficial as countries reduce duplication of learning facilities by making use of existing training institutions that have built their capacities over time. The sharing of training institutions would also stimulate the development of Centres of Excellence which would specialise in specific areas and provide training on a regional basis.

4.5 Key Success Factors and KPIs

The transport sector has many factors in its favour to facilitate the development of physical infrastructure and provision of services expected to deliver for the IGAD region. The following are some of the main success factors:

- IGAD Member countries share common platforms to discuss transport in IGAD and other institutions such as COMESA, AFCAC, AU, IMO and ICAO;
- The road subsector has dedicated institutions dealing with road development and maintenance sharing common instruments under the SSATP and existing regional associations;
- The IGAD ports are members of the Port Management Association for Eastern and Southern Africa (PMAESA) and exchange data in the ports industry;
- There is increased interest in the port sector for development through PPPs as in the cases of Djibouti; Berbera and Mogadishu;
- The IGAD railway operators are members of the Union of African Railways that shares information on railways;
- The aviation subsector has received increased attention from the RECs through their own air transport liberalisation programmes and the AU through SAATM; and
- The funding of transport infrastructure in the IGAD region is given high priority by the African Development Bank, World Bank and various development partners

Regarding KPIs, the performance of the various subsectors can be assessed through standard indicators already established international auspices especially in ports, railways and civil aviation. The corridors also have specific KPIs with respect to modal and intermodal performance and the impact of transport projects can be measured using them.

Finally, in terms of KPIs for project development and implementation, the IGAD region can develop KPIs on the same lines that PIDA/PAP has applied in its dashboard that is contained in its PIDA portal.

4.6 The IRIMP Implementation Strategy

The physical infrastructure projects that comprise the IRIMP will be implemented by member states, coordinated at the corridor level by a Corridor Management Institution (CMI), with the IGAD Secretariat providing oversight and advocacy.

Coordination will be essential in interactions with IFIs and multilateral institutions including other cooperating partners and donors. Coordination will also be necessary in building consensus among member states and also with other RECs and the African Union.

Role of IGAD Secretariat

As indicated above, the role of the IGAD Secretariat in implementing physical infrastructure projects will be one of advocacy, for example promoting the Action Plan at investor forums, commissioning feasibility studies to demonstrate bankability, ensuring projects appear in continental level plans such as PIDA etc., and consensus building to ensure that the goals and priorities of member states are aligned. In the immediate future, until CMIs are established for corridors (except Norther Corridor which has already established NCTTCA), the IGAD Secretariat will also play the coordination role.

IGAD has an important role to play in the harmonisation of policies and regulations to create a conducive enabling environment for investment in each of the four sectors, and removal of non-tariff barriers to trade.

Given the high degree of overlap between IGAD and other RECs in relation to the corridors, it is recommended that, where possible, the IGAD Secretariat adopts successful policies, strategies and systems already operational in other RECs, and that regulations, customs procedures and systems are also harmonised with other RECs. This will accelerate IGADs integration into the Tripartite Agreement and wider Africa Continental Free Trade Area. A good example of this is the adoption of the COMESA Virtual Trade Facilitation System (CVTFS) for use on all IGAD corridors.

Similarly, for corridors that overlap with more than one REC, it may make sense for a REC other than IGAD to play the primary oversight role and for IGAD to take an observer status – this is particularly the case for corridors that traverse member states outside of IGAD (i.e. the Northern Corridor). However, even where IGAD is not the primary REC, the Secretariat may still play an advocacy role, in particular for specific projects implemented in IGAD member states (e.g. the Nimule-Juba road).

Role of Corridor Management Institutions (CMIs)

As discussed in Chapter 1 (Section 1.3), the development of successful Economic Development Corridors (EDCs) has most often been driven by a CMI, which is mandated to coordinate investment along the corridor on behalf of national governments (examples include the Maputo Development Corridor and Walvis Bay Corridor). CMIs are established by a multilateral treaty signed by countries that comprise the corridor, which sets out the agreement for the roles and responsibilities of the CMI.

The Northern Corridor Transit and Transport Agreement (NCTTA), for example, has defined 11 Protocols on strategic areas for regional cooperation relating to: Maritime Port Facilities; Routes and Facilities; Customs Controls and Operations; Documentation and Procedures; Transport of Goods by Rail; Transport of Goods by Road; Inland Waterways Transport of Goods; Transport by Pipeline; Multimodal Transport of Goods; Handling of Dangerous Goods and Measures of Facilitation for Transit Agencies; Traders and Employees.

Once established, CMIs will be responsible coordinating all investment, operation and maintenance decisions for physical infrastructure projects relating to the corridor, as well as economic infrastructure investments including logistics, SEZs, natural resources etc. and removal of barriers to trade including road blocks, inefficient border controls, weighbridges etc. The CMI will adopt the recommendations of the IGAD Secretariat on harmonisation of policies and regulations to ensure harmonisation across all corridors in the region, and ultimately the Tripartite Agreement area.

To ensure that the CMI represents the interests of all member states, and is not acting separately to nationally determined development objectives, the most senior organ will be the Council of Ministers, with each relevant ministry from every member state represented, which will be responsible for all decisions of the CMI. Below the Council of Ministers sits the Executive Committee comprised of Permanent Secretaries of the same ministries, and below the Executive Committee are working groups or committees responsible for making recommendations on CMI activities to the Executive Committee.

The executing organ of the CMI will be a Permanent Secretariat of staff employed by the CMI and based permanently in a single location (often this is the port city of the corridor) who are responsible for implementing all decisions and activities determined by the Executive Committee and approved by the Council of Ministers. It is recommended that the Permanent Secretariat has a unit responsible for monitoring and evaluation of the CMIs activities, as well as collecting regular data on corridor performance, and a unit responsible for providing assistance and support to member states in implementing projects.

The CMI may be funded from three sources: charges levied on users of corridor infrastructure; contribution from member states; and possible contributions from donors. It is envisaged that, over time, resources from member states will become increasingly pooled and that the Project Support Unit will plan an increasingly active role in the implementation of physical infrastructure projects. In the short and medium-term, however, member states will be responsible for implementing projects, coordinated by the CMI. In a shorter timeframe, the CMI could take on the responsibility for maintenance of corridor infrastructure, assuming all user charges are pooled and made available to the CMI.

Roles of Member States

While decisions regarding which projects to implement (prioritisation and sequencing, identification of new projects) should be the remit of the CMI, once established, project implementation will remain in the jurisdiction of the individual member states, who will also be responsible for organising funding or concluding financing arrangements for the projects as appropriate.

The IRIMP projects will be implemented by the national agencies, for example Roads Authorities, Ports Authorities, Electricity Transmission Companies etc., with the Project Support Unit of the CMI playing a coordination role, particularly for trans-border projects involving two or more member states across the region.