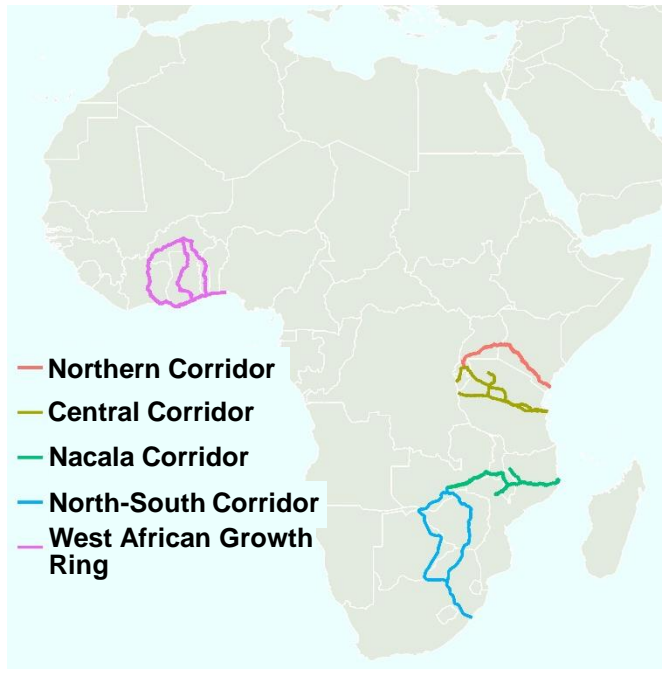


Overall Trends and Issues in African Regional Corridor Development

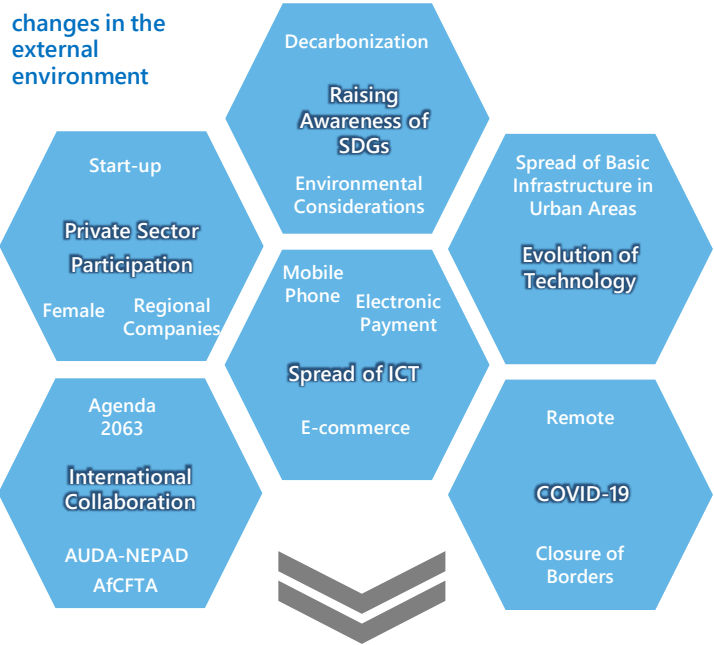
African Regional Corridors

The survey covered the three key corridors as well as the North-South and the Central corridor.



Environmental Changes in African Regional Corridor Development

The environment surrounding the development of corridors in Africa has changed significantly, and future development and implementation of corridor development strategies should take them into account.








Significant impact on corridor development strategy

Five barriers to overcome by corridor development

In corridor development, there are many "barriers" to overcome, depending on regional characteristics such as "coastal and landlocked countries," "cities and provinces," and "borders and gateways." There are "Five Pillars" that combine the hardware and software necessary to overcome those problems.

Five Barriers in the Development of Regional Corridors in Africa

		Gateway	Capital and big city in a coastal country	Border	Capital of landlocked country	Roadside area
 Barrier of Distance and Time	Longer travel time due to distance from gateway to landlocked country and lack of infrastructure		●		●	●
 Barrier of Transport Infrastructure Quality	Inappropriate maintenance and management, obsolescence due to user's inappropriate behaviors, and aging infrastructure	●	●		●	●
 Barrier of Gateway and Border	Inefficient procedures at borders and gateways	●		●		
 Barrier of Regional Disparities"	Widening gap between cities with improved infrastructure and rural areas without investment	●	●	●	●	●
 Barrier of People and Consciousness	Harassment at national borders, slow progress in women's participation in society, lack of environmental awareness, etc.	●	●	●	●	●

Five Pillars for Overcoming the Five Barriers

Regulatory and Institutional Framework	Hard Infrastructure	Industry & Economy	Human Resources	Technology
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- Multilateral agreement
- Trade agreement
- Business environment
- Tax system
- Document standardization



- Development of transportation infrastructure
- Distribution facility
- Energy-related facility



- Supply chain
- Private sector vitality and PPP
- Activation of regional trade



- Governance
- Technology transfer
- Management and financing
- Compliance






- Logistics DX/IoT
- Transportation ICT
- Decarbonization

Development Impact of Three Corridors JICA Focused on

Corridor Development Impact

The effects and issues of corridor development for the three priority corridors are summarized below.

Corridor Development Impact Verification Results

	Northern Corridor	Nacala Corridor	West African Growth Ring
Countries (Related Countries)	Kenya, Uganda (Rwanda)	Mozambique (Malawi, Zambia)	Ivory Coast, Ghana, Togo, Burkina Faso (Benin)
Corridor Map			
Year of MP Formulation	2017	2015	2018
Effects	<p>✓ Positive Improvements in the operation of the Port of Mombasa and the performance of freight transportation with the partial opening of the freight railway</p> <p>✗ Challenges Inland transport from west of Nairobi including border control still requires time</p>	<p>✓ Positive There have been some improvements, including a reduction in the cost of transporting trucks to Blantyre (Malawi).</p> <p>✗ Challenges The port of Nacala struggles for competing with rival ports</p>	<p>✓ Positive Improvement of all major ports is confirmed and the handling volume is increasing. Reduced transportation costs to inland areas are confirmed for some routes.</p> <p>✗ Challenges Although some issues remain, such as road harassment, relatively good results have been achieved in transportation and logistics.</p>
Wider Economic Benefits	<p>✓ Positive In Development of industrial clusters are confirmed, and the momentum for industrial development incorporating new technologies such as local e-commerce is rising</p> <p>✗ Challenges There are concerns about the negative environmental impact of increased traffic. The effect is expected to spread to inland and roadside areas</p>	<p>✓ Positive The ripple effect of corridor development has not confirmed yet</p> <p>✗ Challenges Strategies based on mineral exports might need to be reconsidered in the decarbonization trend.</p>	<p>✓ Positive Agglomeration of industrial activities are also confirmed in inland areas.</p> <p>✗ Challenges The degree of effectiveness varies from country to country. There are also concerns about environmental degradation caused by increased traffic volume</p>

Summary and Implications



- Overall, direct positive impacts are confirmed, such as improved transportation infrastructure through the implementation of corridor development projects. On the other hand, although the social and economic spillover effects differ depending on the circumstances of each corridor, progress is limited to some regions: industrial agglomeration in the Northern Corridor and the West African Growth Ring.
- Although there are differences in the degree of benefits to each region within the corridor, in order to achieve balanced development throughout the region, it is desirable to develop the corridor in a more inclusive manner, including inland and rural areas, in accordance with the phased development scenario.

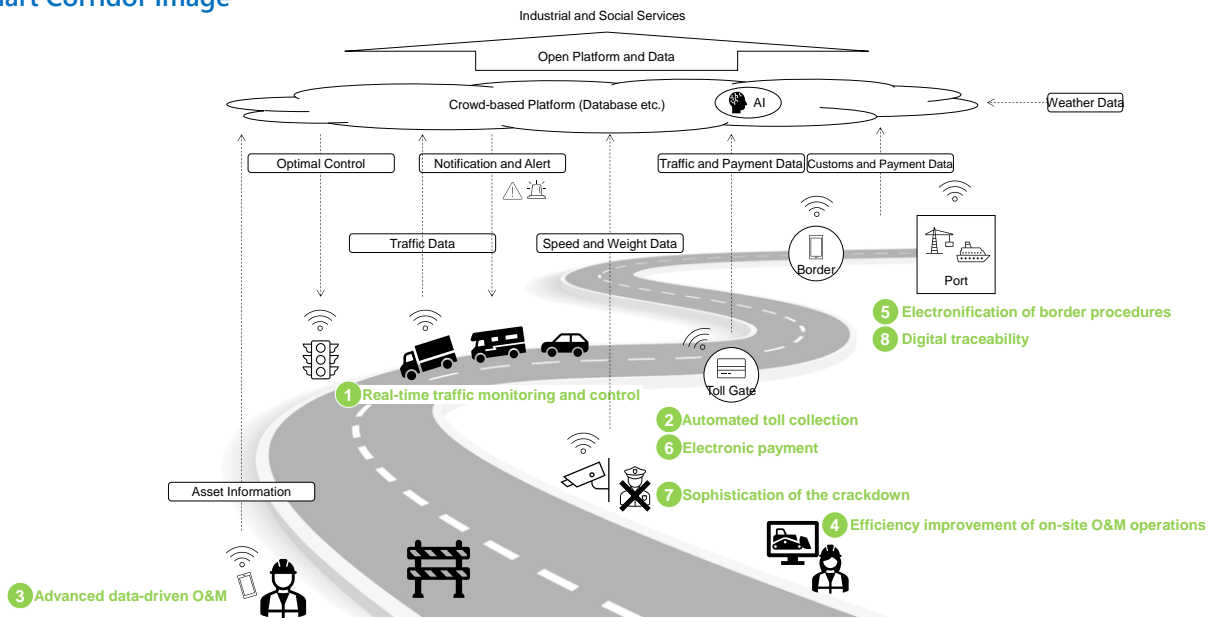
Smart Corridor

In future corridor development, we will use ICT and digital transformation (DX) to promote industry, increase value-added, and create innovation by facilitating transport and trade, improving safety, and achieving high-quality maintenance, based on the concept of SMART+I.

The Concept of SMART + I

		Methodology
Transport	Safety Safety Improvement	<ul style="list-style-type: none"> ◆ Use ICT to strong enforcement on traffic rule violations ◆ Advance O&M
	Mobility Traffic facilitation	<ul style="list-style-type: none"> ◆ Optimal control of traffic using ICT ◆ Adopt non-stop toll booths
ICT	Automation Electronics/Automation	<ul style="list-style-type: none"> ◆ Electronification and automation of operations and administrative procedures ◆ Standardization of administrative operations and procedures
	Real-Time Data Utilization	<ul style="list-style-type: none"> ◆ High-frequency, detailed data collection and accumulation ◆ Decisions making system based on data analysis
Trade	Trade Trade Facilitation	<ul style="list-style-type: none"> ◆ Electronification of trade procedures and transparent supply chains using ICT
Industry & Society Dev't	Innovation Creation and Development of Industrial and Social Services	<ul style="list-style-type: none"> ◆ Accessible business platform to everyone ◆ Create and Increase values in industry and society through public data utilization

Smart Corridor Image



When solutions are introduced, it is expected to promote the integration and standardization of data formats and standards in the region for building smart corridor platforms and operating systems from a medium- to long-term perspective. JICA will assist the creation of new industrial and social services through prompt and transparent policy decisions and the provision of open data to enhance the added value in industrial and social services.

Approach towards smart corridors

Short-Term

Introduction of individual ICT solutions

- Real-time understanding and control of traffic conditions
- automatic toll collection
- Data-driven O & M
- Electronic border procedures, etc.

Middle-Term

Development of national/regional guidelines

- Guaranteed compatibility of different services and functions
- Standardization of data specifications and security rules
- Collection and accumulation of data necessary for performance and status analysis, etc.

Long-Term

Building a platform (OS)

- Centralized construction and management of common functions
- Developing Solutions with Different Data Combinations
- Linkage with and utilization of own and external services by common OS rules

Update the Corridor Development Approach

The future corridor development approach is the "Corridor Development Approach 2.0", which considers changes in the external environment in recent years, results of evaluation of development impact, and smart corridor concepts, focusing on the Corridor Infrastructure Development Plan, Industrial Development Strategy, and Social Sector Development Strategy.

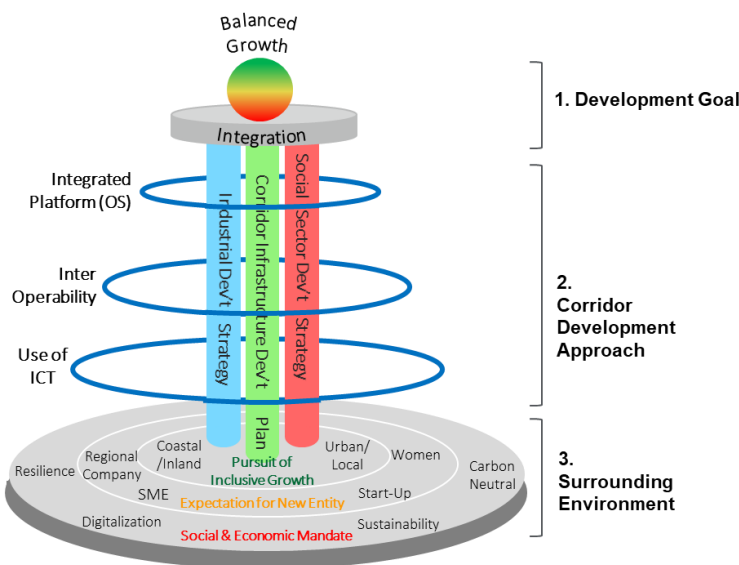
Review of the JICA Corridor Development Approach

	✓ Results	✗ Challenges
JICA corridor development Approach	<ul style="list-style-type: none"> ◆ Comprehensive and Combined Development: A Combined Industrial and Social Development Approach ◆ Site Development: Effects of Gateway Enhancements ◆ Improving Border Issues: One Stop Border Post (OSBP) to Facilitate Logistics ◆ Corridor Development Approach Spillover: Agencies Respond 	<ul style="list-style-type: none"> ◆ More time is needed to realize the effect of closing the gap ◆ Awareness of local base development ◆ Support for small businesses and startups ◆ Use of ICT ◆ Strengthening Awareness of the SDGs Perspective

Corridor Development Approach 2.0

The Corridor Development Approach 2.0 aims to promote the SDGs and pursue inclusive growth in the regions by incorporating the advancement of SMEs and startups, the use of ICT/DX, and other factors into corridor development.





Concept of Corridor Development Approach 2.0



JICA's Cooperation Policy

Item	Description
System/ Mechanism	✓ Support improvement of database for corridor development
	✓ Build impact assessment and feedback structures
	✓ Horizontal expansion of OSBP
Hard Infrastructure	✓ Develop key infrastructure projects to strengthen connectivity
	✓ Support for improving infrastructure operations using ICT
Industry/ Economy	✓ Enhance logistics functions with the idea of value chains
	✓ Create local industries
	✓ Strengthen the financial system
Human Resources	✓ Strengthen administrative capacity for Post-ODA era
	✓ Support entrepreneurial activities
Technology	✓ Promote the use of ICT solutions
	✓ Promote decarbonization

Concrete Idea of JICA Cooperation in Corridor Development

Smart Corridor	Support for Startup Companies	Elimination of Bottlenecks/ Enhancement of Connectivity to Inland Areas	Expansion of OSBP
Promote corridor development by linking issues and solutions in each country, considering development of the corridor-related database	Contribute to creation of local industries and to the vitalisation of trade by supporting start-ups (e.g. Project NINJA)	Support development of infrastructure which contributes to improving value chains for regional integration	Promote intra-regional through the horizontal development of the OSBP
			
Image of Kampala Traffic Control Centre Source: JICA	Cashless Service in Ghana (Project NINJA) Source: JICA	Tema Motorway Interchange (Ghana) Source: JICA	OSBP at the Kenya-Tanzania Border Source: AfDB