



Africa Automotive Forum

Summary Report
September 2020

A warm welcome to the AAAM Africa Automotive Forum summary.

We believe that Africa has the potential to become the world's next powerhouse in the automotive industry. The objective of the AAAM Africa Automotive Forum was to facilitate the engagement and understanding of how the potential of the auto industry in Africa can be unlocked. Enabling Policy by government, Regional Value Chains and Driving Affordability and Mobility Solutions were unpacked by the speakers as we believe that these topics are the most important aspects to industrialising and growing the auto sector in Africa.

My take outs from these Forums were:

- The Pan African Auto Pact vision won't happen by chance: this requires courageous leadership that is willing to collaborate, in both the public and private sector
- We need countries, regions and the continent to collaborate in support of sound economics that are beneficial to all participants; central to this collaboration is the AfCFTA Secretariat
- The industry on the continent needs to be globally competitive; this requires scale (demand) which will be enabled by driving affordability (this includes affordable vehicle finance), safe 2nd hand cars that were assembled on the continent and an integrated market
- Detailed research needs to take place to understand the sustainable competitive advantage of African countries. Furthermore, we need to develop the manufacturing capability and add the value in Africa (from raw materials to final components)
- Regions will trade components and vehicles with ultimately the assembly of a specific vehicle type taking place in only one location on the continent and in CKD form
- Competitiveness will enable exports from the continent
- A strong communication strategy is required to obtain stakeholder buy-in across Africa

Deloitte has professionally packaged summary reports of the three Forums for your ease of reference; we hope that you can join us at the next AAAM Africa Auto Forum that will take place in Kigali in September 2021 as part of the Afreximbank IATF event.

I wish to thank the Forum speakers, the Council participants along with our partners Afreximbank, VDA, JETRO and AfrikaVerein for their support and participation in the Africa Auto Forum. A big thanks also goes to Martyn Davies and the Deloitte team for making the event a reality and a success.



Dave Coffey

CEO

African Association of Automotive Manufacturers (AAAM)

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About the African Association of Automotive Manufacturers (AAAM)

Established in November 2015, AAAM focuses on the expansion and deepening of the automotive industry across the African continent. It advises governments on policies that aim to attract investors and unlock Africa's economic potential.

Deloitte Africa Automotive Team

Deloitte's Africa Automotive team assists automotive companies, including original equipment manufacturers, suppliers, dealers, aftermarket and finance companies, execute innovative ideas in exceptional ways. The team offers a global, integrated approach combined with business and industry knowledge to help its clients excel across the globe.

Summary insights from the AAAM Africa Automotive Forum. Themes: Enabling government by policy, Regional value chains and Driving affordability and mobility solutions

Hosted by Deloitte Africa on behalf of AAAM in September 2020

Speakers included:

Dave Coffey, Chief Executive Officer, African Association of Automotive Manufacturers (AAAM)

Serge Kamuhinda, Director, Volkswagen Rwanda

Simphiwe Nghona, Group Head for Vehicle and Asset Finance (VAF), Standard Bank

Ridwan Olalere, Country Director for Nigeria, Uber

Gerhard Botha, General Manager, Toyota South Africa Motors

Yves Nono, Vice President – Mobility Solutions Sales, Region Africa, BOSCH Group

Kriengkrai Techakanont, Associate Professor, Faculty of Economics, Thammasat University, Thailand

Gainmore Zanamwe, Senior Manager: Trade Facilitation, Intra-African Trade Initiative; African Export–Import Bank (Afreximbank)

Renai Moothilal, Executive Director, National Association of Automotive Component and Allied Manufacturers (NAACAM)

Dr. Markus Thill, President Region Africa, BOSCH Group

Keletsositse Olebile, Chief Executive Officer, Botswana Investment & Trade Centre (BITC)

Mike Mabasa, Chief Executive Officer, NAAMSA

H.E. Alan Kyerematen, Minister of Trade and Industry, Ghana

Dr Sahar Nasr, Professor Department of Economics, Business School of the American University in Cairo and Former Minister of Investment and International Cooperation, Egypt

Mike Whitfield, AAAM President, Chairman of Nissan South Africa and Chairman and Managing Director of Nissan Motor Egypt

Masa Sugano, Deputy Executive Director - Africa Region, Japan External Trade Organization (JETRO)

Anthony Black, Professor of Economics at the University of Cape Town and the Director of the Research Unit, Policy Research in International Services and Manufacturing (PRISM)

Sen. Gbemisola Saraki, Federal Minister of State for Transport, Nigeria

Philip Lucky, Head of Investment Marketing, Rwanda Development Board

Dr Martyn Davies, Managing Director: Emerging Markets and Africa; Africa Automotive Leader; Dean: Alchemy by Deloitte; Deloitte Africa

Enabling policy by government

Welcome remarks

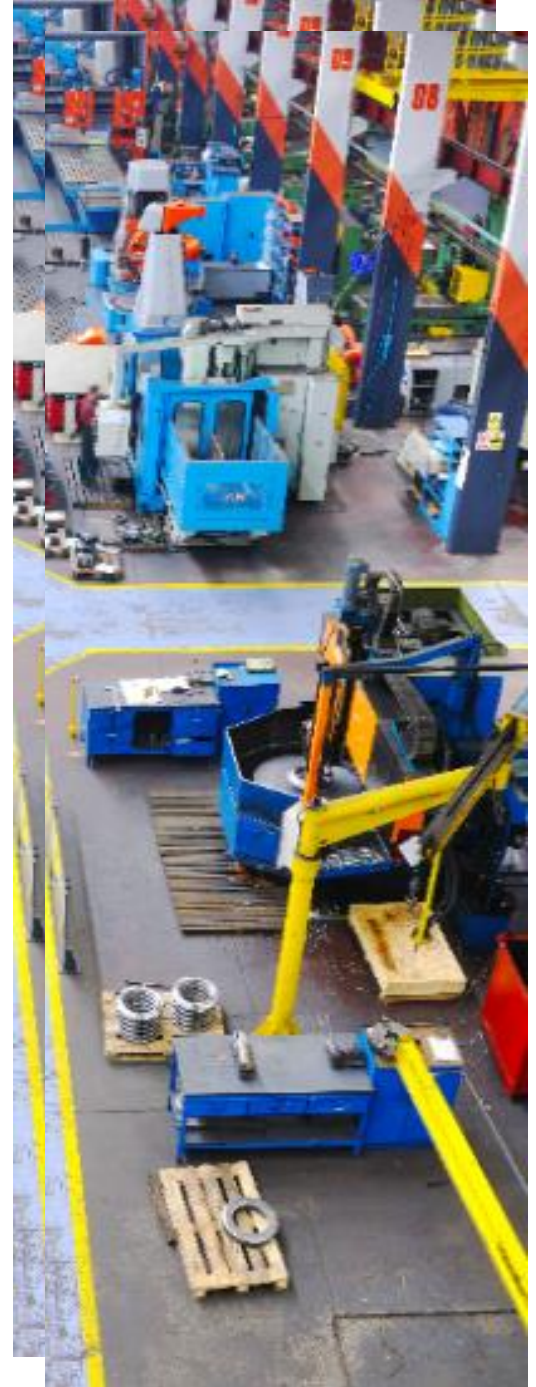
With a relatively young population, growing middle class and rapid urbanisation, Africa has the potential to be an automotive industry powerhouse. Africa has a low motorisation rate of 42 cars per 1 000 individuals compared to a global average of 182 vehicles per 1 000 individuals.¹ The rate of motorisation can be improved with the implementation of well-coordinated, effective automotive policies and ecosystems.

There are many fragmented small automotive production facilities on the continent due to ineffective automotive policies. Only two countries, Morocco and South Africa, have a fully-fledged automotive industry. However their long-term reliance on the export of high-volume models to countries outside the continent is questionable.

A newly approved automotive industry by the Government of Ghana is yielding benefits: Ghana has already attracted investment by a global OEM (Volkswagen), with more to follow.²

The automotive industry in Africa plays a disproportionately small role in manufacturing. The economic benefits of having a fully-fledged auto manufacturing sector are numerous. Although this would require advanced manufacturing technologies, the industry creates much needed employment and deepens value chains.

There are several points that governments and the private sector need to consider in formulating and implementing policies that could potentially unlock Africa's automotive sector and improve trade across the continent.



Africa in 2020 Opening Remarks

Key requirements for the automotive sector

Some minimum requirements for enabling a thriving automotive industry includes policy stability and a large market.

Policy stability/certainty

The automotive sector requires long-term planning, therefore OEMs need to have confidence in the longevity of policies that are put in place. Frequent changes to policies or uncoordinated policies tend to undermine investor confidence.

In Africa, OEMs are currently encouraged by the positive developments that are observed from certain countries such as Egypt and Ghana. Both countries are deliberately developing strategic planning in a time horizon of 20-30 years for the automotive industry.

These countries also seem to comprehend that in order to have a developed automotive ecosystem, a combination of environmental and safety regulations, infrastructure policy, power policy and human resource policy is required. Successful developments are attributed to a collaborative approach in policy making among governments and OEMs, with the facilitation of a technical partner such as the AAAM.

Policy making starts with engagement between the African Union and OEMs to define the scope and framework of how countries should work together. Governments can include themselves into the regional matrix that would have been set at the Africa Union level or regional level.

A top-down approach is expected to mitigate the risk of each country developing its own strategy that may not be aligned to the overall strategy of the region.

How OEMs can engage in policy development

South African-based OEMs have learnt to collaborate and engage with government and contribute to policy development. There has been a realisation by OEMs that successful policy development cannot be achieved by focusing on narrow individual commercial interests. Therefore, OEMs have come together and aligned their interests with the country's interests, which has turned out to be a success. Various South African OEMs have openly agreed that collaboration with each other and with government on automotive policy had more impact than what they would have achieved as a single unit.

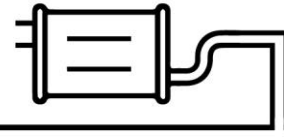
As OEMs look to expand into Africa, collaboration among OEMs is essential.

The idea is not to mimic the South African experience; instead OEMs plan to look at each individual country and align themselves with specific country and regional interests.

Regional trade integration to gain market size

Most African markets are not individually large enough to sustain an automotive industry. However, integration into a regional or continental market could boost the size of the market to become viable to support an automotive industry. OEMs seek to see stronger regional integration that facilitates trade between countries.

OEMs are encouraged with the recently signed African Continental Free Trade Area (AfCFTA) agreement that seeks to liberalise trade and harmonise doing business across the continent.



Evaluating a hub-and-spoke model to support free trade and distribute economic benefits amongst regional countries

A hub-and-spoke model has been put forward to enable multiple countries in one region to share the benefits of having an automotive industry. Each African region should embed a hub-and-spoke production model whereby vehicle components may be manufactured in different countries across that particular region (spokes), which are shipped into the assembling country of that region (hub).

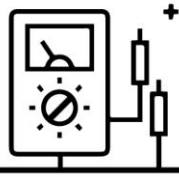
A hub-and-spoke model ensures that there is industrial development in all participating countries, and that associated economic benefits are distributed among participating countries in the form of job creation in each country and intra-regional trade. With each country enjoying the benefits of the hub-and-spoke model, it is envisioned that regional countries' interests are aligned and will not resist opening their markets to import the assembled vehicles.

A good example of a thriving hub-and-spoke model in the automotive sector is that of the Association of the Southeast Asian Nations (ASEAN) regional organisation members. Vehicle components are manufactured in five of the member countries (Indonesia, Malaysia, the Philippines, Vietnam, and Singapore)³ and are shipped to Thailand where the vehicles are assembled.

An alternative argument to the hub-and-spoke model is that the automotive industry tends to cluster together, with component manufacturers setting up operations around the assembly plant, resulting in efficiency gains in production. For example, the industry can practice a just-in-time inventory management system that results in efficiency gains and cost reduction.

Given the tendency of industries to cluster together, it is argued that the expectation that benefits can be directly balanced among countries within the automotive industry may be unrealistic. One suggestion is that countries should consider specialising in specific value-adding industries. For example, South Africa could specialise in automotive manufacturing, and Madagascar could specialise in textile manufacturing. Through the exchange of the products these countries produce, there could be benefits through trade at a manufacturing sector level as opposed to attempts to balancing trade at an industry level.





Incentives

African countries have limited fiscal resources to support and extend incentives to industries. However, there are many other levers to attract investors and OEMs. One of the most compelling incentives to invest is for governments to protect nascent automotive industries from cheaper used car imports, as these are highly likely to impede large investments in the sector. Research has shown that countries that have a relatively developed automotive industry, such as in South Africa and Morocco, have partially banned used car imports in their markets. Ghana has recently put in place a policy to limit used car imports and the policy is paying off, with VW recently having set up operations in the country and several OEMs promising to set up operations.

As the continental market opens up through the AfCFTA, considerations should be given to how the African automotive sector handles the influx of used vehicles.

A view from Egypt

Egypt has primarily focused on three pillars to support industries. These include improving the country's business environment, developing necessary infrastructure to support industries, and developing the necessary skills required.

Egypt has gone through structural adjustments to ensure its business environment is conducive for investors, including investors in the automotive sector. Government responded to investor concerns and has made efforts to eliminate bureaucracy and red tape which hinders industry development.

The Egyptian government has invested in the modernisation of the maritime sector to allow better trade flows.

Egypt is strategically located, with access to the Mediterranean Sea and geographically close to the European market. Therefore, a modern and efficient maritime sector is important in supporting exports of vehicles manufactured in Egypt. In addition, Egypt has established special economic zones to attract automotive industry investment.

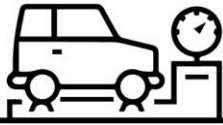
Government has furthermore invested in skills development. Leading companies, including Uber, are setting up centres of excellence to develop relevant skills.⁴

The Egyptian government has also developed incentive packages. However, there is a lot of competition for investment from both regional and international countries in the automotive industry. Furthermore, offering tax incentives is becoming more challenging especially with the effects of COVID-19 where resources are highly constrained. In addition,

Egypt is constrained from offering incentives due to trade agreements with other countries such as the European Union, USA and Israel. Any incentives offered to industries will have to be within the boundaries of these agreements.

A view from Ghana

It is crucial for countries to have political will and commitment to develop their industries, including the automotive industry. Often there is political will but the commitment is moderated by a number of constraints, with many African countries still battling with other fundamental social issues such as inadequate health and education. Therefore, their priorities are directed more towards solving these issues instead of developing certain industries. Although governments need to support the automotive sector, OEMs also need to bring a certain level of commitment to complement government efforts. OEMs face various challenges ranging from fear of failure in their investment plans to starting with Semi-Knocked Down (SKD) vehicles before components manufacturing. This raises the challenge of balancing consumer interests and developing the industry. Strict regulation on used vehicles needs to be complemented with substantial investment in order to justify the trade-off to the population.



Despite commitments from government and OEMs, there is still a need to develop a strong policy and develop skills as well as technical expertise. There needs to be a general understanding of the trade-offs between OEMs and government in order to achieve policy stability. There is a possibility for OEMs to enjoy all the incentives to enable the industry to start - this can limit resistance at a consumer level. However, these incentives will be gradually eased for the industry to be embedded into the overall economy.

The initial decision by VW to invest in Ghana is based on the potential of the local market.⁵ Further to that, it is evident that VW sees the potential to grow into the regional West African market, the African market and even beyond the African market. This approach could help government deal with market criticism and ensure advocacy.

Government procurement policy plays a major role in ensuring government's commitment to the development of a local automotive industry. For example, in Ghana, government has directed its procurement department to give first preference to locally assembled vehicles. This procurement policy can be implemented to some extent without contravening the World Trade Organisation's regulation on international trade.

A view from Japan

As a large share of used vehicles are from Japan, Japanese automotive brands are recognised brands that have also demonstrated their reliability in Africa. Japan has shown interest in maintaining this brand advantage and carrying it into the next era of the automotive industry in Africa.

In its engagement with Africa, Japan's advice to African countries is to follow an organic process as opposed to one big solutions approach in the automotive industry. Africa is encouraged to leverage an existing market of used cars and start by making replacement parts such as spark plugs, brake pads and window wipers to meet the demands of replacement for imported used vehicle parts as the first stage.

Africa ought to also engage and have investment conversations with Tier 2 and Tier 3 component manufacturers such as Denso (a Japanese automotive manufacturer) to invest in African countries. Various components such as wipers or door handles, for example, are still very crucial in the market. The manufacturing capacity for car parts can be used to support both existing demand for imported used vehicle parts as well as the development of a fully-fledged automotive industry that produces new vehicles.

This capacity can be distributed across different countries. One example includes an investment by Japanese manufacturers to make car airbags and car sheets for the export market in Tunisia. Similarly, in ASEAN, car handles are bought in Indonesia, and wipers come from the Philippines and feed into the assembly plants in Thailand.

Regional Value Chains (RVCs)



Introduction⁶

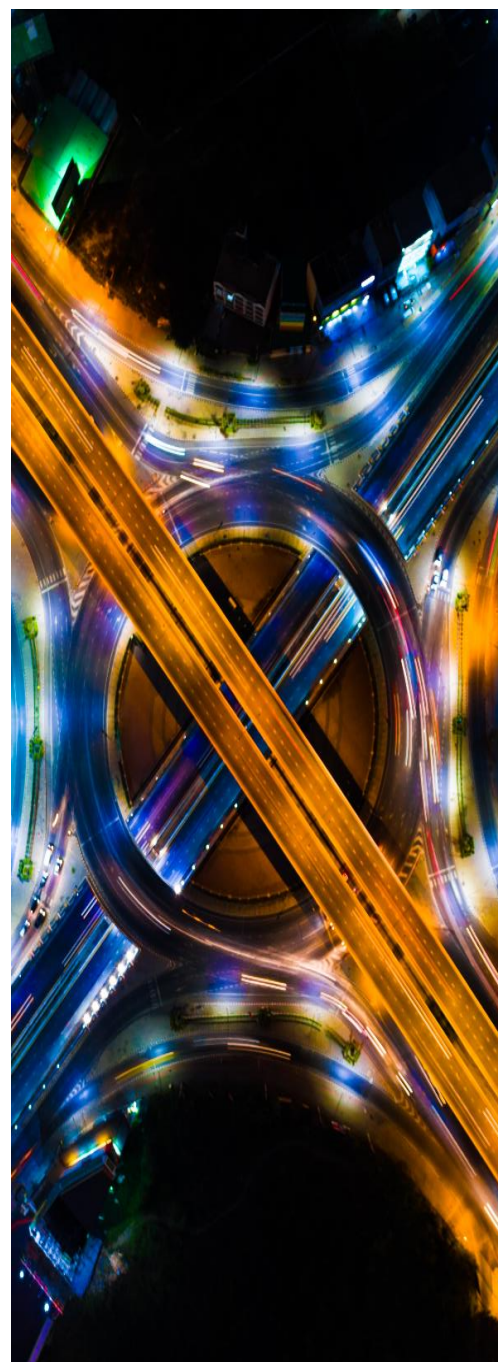
The Africa Automotive Forum seeks to create dialogue as to how Africa's potential can be unlocked by identifying and overcoming the challenges that the continent faces in becoming globally competitive.

It is important to consider how regions and the continent can unite to implement the required legislation and policies that will bring about investor confidence and see the creation of hundreds and thousands of jobs. These policies will also drive new vehicle demand while ensuring safe motoring without major disruption to the existing used car market.

The RVCs forum aims to provide insights and guidance on how to unlock the economic benefits of regional value chains. The importance of regional value chains is key for several reasons. Firstly, not every country can assemble vehicles as scale is required in this competitive industry. The AAAM's Pan-African Auto Pact vision envisages the North, South, East and West of Africa assembling higher volumes in limited models supported by surrounding economies or countries sharing in the value chain - depending on their comparative advantage.

Collaboration in the region and understanding shared economic benefits are critical to regional alignment of who does what best, while supporting the manufacturing of components in the assembly hub and the reciprocal purchase of vehicles. Partnerships between countries have been key in the development of automotive industries across the world.

To further enhance scale, AAAM envisages that regions will trade components and vehicles, with the assembly of a specific vehicle type ultimately taking place in only one location per region on the continent. As revealed in one of the forums 'Enabling Policy by Government', the achievement of this automotive development vision for Africa will not happen by chance. It requires courageous leadership, and a willingness to collaborate in both public and private sectors.



Lessons learnt: Southeast Asian automotive industry

Southeast Asian countries at a glance⁷



Kriengkrai Techakanont; Associate Professor, Faculty of Economics, Thammasat University, Thailand

The Association of Southeast Asian Nations (ASEAN) is a regional grouping that promotes economic, political, and security cooperation among its ten members: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. ASEAN countries have a total population of 655 million people and a combined gross domestic product (GDP) of US\$3.1trn.

Formed in 1967, ASEAN replaced the Association of Southeast Asia (ASA), which had been formed by the Philippines, Thailand, and the Federation of Malaya (now part of Malaysia) in 1961.

In 1992 the ASEAN countries signed the ASEAN Free Trade Area (AFTA) agreement aimed at increasing ASEAN's competitive edge as a production base in the world market through the elimination, within ASEAN, of tariffs and non-tariff barriers; and attracting more foreign direct investment (FDI) to ASEAN.

It stands as one of the largest and most important free trade areas in the world currently.

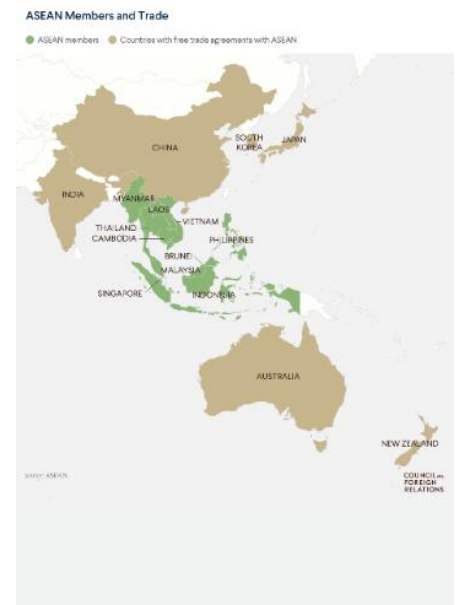
ASEAN has become a single market and production base, and is considered as a highly competitive economic region, with fair economic development and fully integrated into the global community since 2015. In 2019 ASEAN produced 4.1 million cars, however its peak was in 2013 when there were 4.4 million cars produced.

At the time, Thailand launched a 'first car buyer scheme', where the government offered a subsidy to first time car buyers, which increased domestic demand. In 2019, three main producers captured 90% of the total production; namely Thailand, Indonesia and Malaysia. Vietnam is growing rapidly.

Key milestones of automotive industry development

There are three significant stages in the development of the ASEAN countries' automotive industries:

- The **first** stage was in the 1960s-70s. The countries were less developed and the main economic activity was agriculture-based, with high labour availability. Exports were dominated by natural resources and agricultural products. The countries did not have experience in manufacturing. They looked to attract FDI by offering investment incentives and protecting the domestic market. All the countries pursued an import substitution strategy and the industry was characterised mainly by CKD assembly.



- The **second** stage was in the 1980s-2000s. Governments and Technocrats in ASEAN realised that deepening and supporting the industry was important. Countries pushed to regulate the industry by requiring companies to localise parts and components. The objective was the same although the countries had different names for their policies. Thailand named its policy the 'local content requirement regulation' where all car makers who want to produce cars in Thailand had to procure parts locally. In Malaysia the policy was called the 'mandatory deletion policy', where they tried to delete parts from the CKD list and produce them in the country in order to obtain benefits from the government. That was the first time that the local supporting industry emerged in the country.

- The **third** stage was from 2000 onwards. The year 2000 marked the period of free trade and trade integration that has become stronger among ASEAN countries. Although all the countries adopted the same policies, they achieved different outcomes. Thailand ranked number 11 in the production of automobiles, producing 2.1 million cars; Indonesia ranked number 17, producing 1.2 million vehicles; and Malaysia ranked number 24, producing 0.5 million vehicles. Among the three, Thailand did not have a national car policy.

Supporting factors for strong regional value chain integration (intra-regional trade)

1. Pressure from the WTO in the 1990s. As a result of this pressure, trade integration and intra-regional trade became more and more important for the ASEAN members.



2. Members agreed to abolish the local content regulation as a result of pressure from the WTO.



3. The Asian Financial Crisis in 1997 severely affected Thailand and Indonesia. The devaluation of their currencies led to competition causing the automotive industry to develop.



4. Southeast Asia was chosen as a production hub for Japanese Car Manufacturers.



5. Growth of global production network in SE Asia

Thailand and Indonesia are now leading production bases in ASEAN. Toyota's IMV (Innovative

International Multipurpose Vehicle) project is the biggest production hub in Thailand, the second largest is in Indonesia followed by South Africa and Argentina. This intra-regional trade and division of labour developed Thailand into an export-oriented country.

During the 1990s – 2000s, Thailand experienced a trade deficit. By 2011 it had a trade surplus of US\$13m, driven by a trade surplus in the automotive sector. More recently, incentives for environmentally-friendly vehicles have led Thailand, Indonesia and Malaysia to promote new vehicles in the form of electric vehicles (EVs) and vehicles that are more efficient in fuel consumption. In Thailand the vehicles are called Eco-cars, and in Indonesia the vehicles form part of the low cost green car project (LCGC).

Thailand's distinctive automotive policy

Thailand's distinctive policy is aimed at creating a vibrant automotive industry. The government's incentive initiatives such as the low 3% excise tax for pick-up trucks compared to the 25% excise tax on normal cars creates sufficient demand for the pick-up truck. Therefore, car makers in Thailand can expand production and invest in equipment and realise economies of scale, creating dynamic growth on the supply side. The electric vehicles trend has seen the government lower the excise tax for Eco-cars to 12%, lower than the passenger car charged at 25%, making the Eco-car very popular among Thai people.

Thailand is not only a production, base but there is evidence that it has moved up the value chain and currently many companies invest in research and design activity in Thailand like Toyota, and Honda.

Nissan is likely to do so too in future. Thailand has become the engineering hub for the region. When a new model is being developed in ASEAN, the development is likely to take place in Thailand.

Lessons learnt from ASEAN

1. Plugging into Global Value Chains (GVCs) can enhance competitiveness. Thailand developed from an agricultural country to expanding light industry and then became a major exporter of automobiles
2. Understanding and leveraging comparative advantages has seen growth from low value-added activities to higher value-added in the country and region
3. Industrial and liberalisation policies are complementary. It is a matter of timing of when to promote the industry and how to promote the linkage with neighbouring countries. There is no one country that can produce all cars. There is a need to rely on the comparative advantage of neighbouring countries in the region or outside the region.

“The automotive industry cannot develop without government intervention”

Professor Kriengkrai Techakanont;
Associate Professor, Faculty of
Economics, Thammasat University,
Thailand

Strategies to unlock the economic benefits of RVCs in the automotive industry in Africa

The vision for Africa is to have assembly hubs in the South, East, West and North of Africa with countries in each region participating in the value chain depending on their comparative advantage.

Africa: the final frontier for the automotive industry

Africa's median age is below 20,⁸ while Europe's is over 40.⁹ The global motorisation rate is 180¹⁰ vehicles per 1 000 inhabitants, with Europe (602),¹¹ USA (830)¹² and Australia (747)¹³ substantially higher; and Africa (44)¹⁴ significantly lower. Considering these factors, there is huge potential for automotive growth in Africa. According to the AAAM, new vehicle sales could grow from 1.1 million today to 5 million in the medium-term, dependent on the implementation of effective automotive policies and development of a viable ecosystem.

Building an automotive ecosystem

The plethora of fragmented, small automotive production facilities rather than a singular ecosystem across the continent appears to be the result of ineffective automotive policies, with only Morocco and South Africa standing out as having fully fledged industries.

South Africa is home to Africa's most advanced automotive industry. Seven major Original Equipment Manufacturers (OEMs) with operations in the country produce more than 50% of all vehicles made in

Africa. In 2018, over 550 000 vehicles were registered in the country, more than anywhere else on the continent. With approximately 370 000 passenger vehicles sold per year, South Africa accounts for more than 40% of Africa's passenger vehicle market.¹⁵ South Africa has created a unique automotive ecosystem supported by industry programmes such as the Motor Industry Development Programme (MIDP) and the Automotive Production and Development Programme (APDP). The South African Automotive Masterplan (SAAM) now aims to double the production capacity in South Africa in the next 15 years.¹⁶

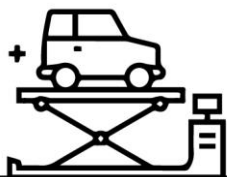
The well-developed SAAM contributes to the attractiveness and competitiveness of local industry by offering incentives and support to OEMs and suppliers.

Morocco was recently ranked first in the Middle East and North Africa (MENA) region in the Fitch Solutions' Autos Production Risk/Reward Index.¹⁷ According to Fitch Solutions, Morocco's overall Autos Production Risk/Reward Index (RRI) score was 46.7 out of a possible 100. The global average is 50.0 and the higher the score the more attractive a market is.

Morocco tops the ranking due to its robust outlook for production growth, low labour costs and positive industry policy, making it an attractive automotive market in the MENA region.

The Moroccan automotive industry is expected to register a Compound Annual Growth Rate (CAGR) of over 7% during the forecast period (2020-25).¹⁸ FDI has been continually increasing, as companies are attracted to the country's favourable economic conditions, government support through initiatives such as tax exemptions for the first five years, VAT exemptions, land purchase subsidies, skilled workforce and modern infrastructure.

Although South Africa and Morocco's current regulatory and economic environments are supportive, the industry needs to develop the automotive ecosystem and take advantage of opportunities across the continent.



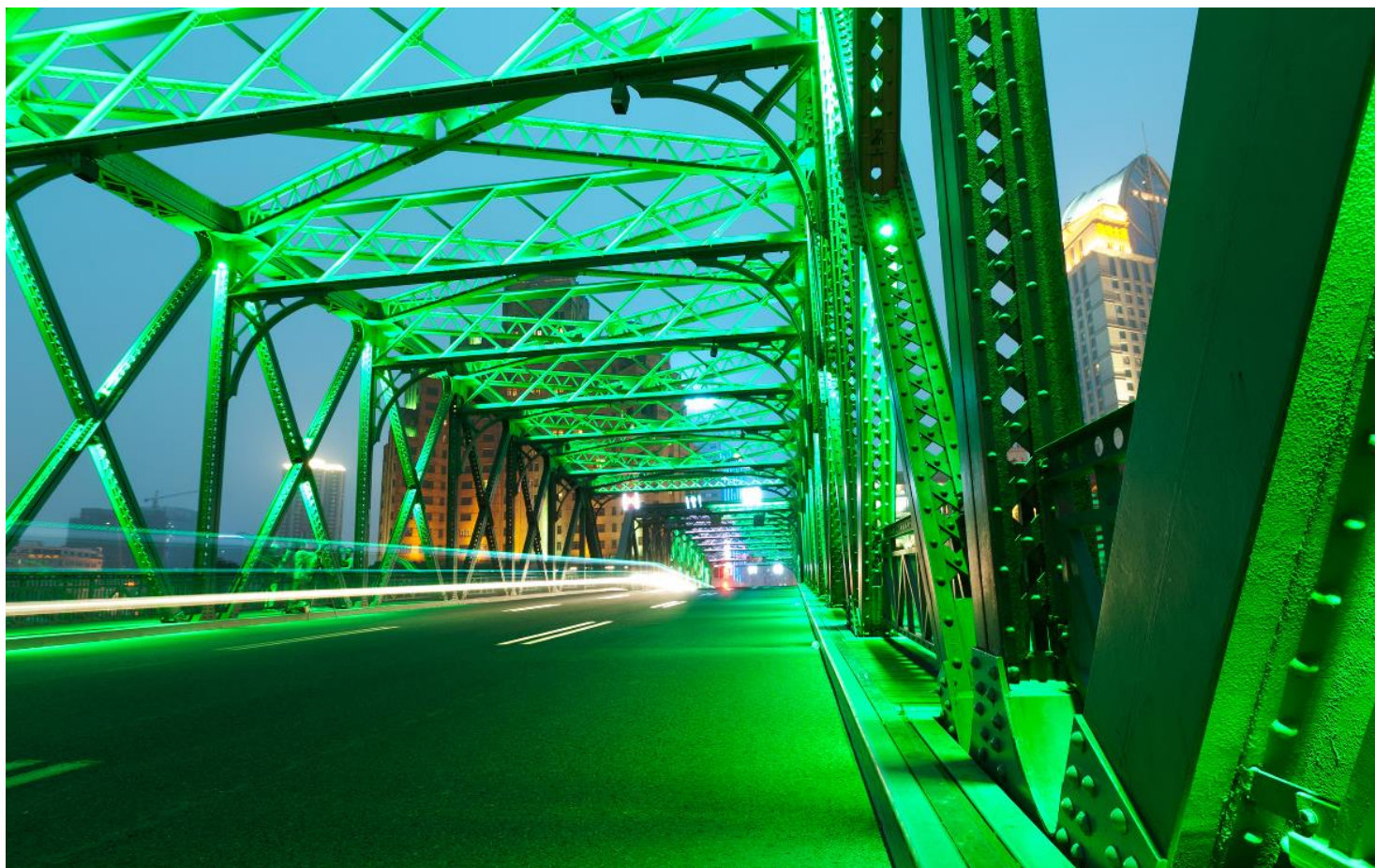
Driving regional integration in Africa

Industrialisation is a priority for Africa. The concept of RVCs proves useful in identifying opportunities for more integrated industrialisation.¹⁹ Greater regional integration supports economic diversification and draws together capacities from different countries. RVCs in Africa have been suggested as one of the means by which the continent could develop a viable automotive ecosystem. RVCs in the automotive sector have played a major role in driving regional integration in trade groupings such as Mercosur and ASEAN.²⁰

Prerequisites for the establishment of a network of RVCs in the automotive industry

1. Developing a **viable 'automotive space'** means having a larger regional market into which a smaller country can integrate its production. This helps to create the economies of scale required for competitive manufacturing.
2. African countries need to diversify their economies through boosting their **competitive manufacturing capability**. By assessing their comparative advantages, countries will specialise in the product/s for which they have a relative, if not an absolute advantage.

3. Not every African country is able to grow and industrialise a fully-fledged automotive industry sector. Beyond assembly hubs, there is a need to build a **regional hub-and-spoke model** which could, for example, see Ghana becoming the champion of West Africa, reaching out to countries such as Benin and Togo to redirect some of the work in the value chain to them.
4. **Political will** is required to implement effective automotive policy and develop automotive manufacturing.
5. **A supportive policy environment** with an emphasis on regional integration is important. AAAM is developing the **Pan-African Auto Pact (PAAP)** which aims to connect potential automotive powerhouses to trade quickly and easily. PAAP can potentially create a market of 5 million new vehicles a year.²¹ Current regional policies in place include:
 - **The Ghana Automotive Development Policy**²² is aimed at making Ghana a fully integrated and competitive industrial hub for the automotive industry in the West Africa sub-region. Volkswagen has been one of the first movers to invest in Ghana as a result of a supportive policy.
 - The implementation of the **African Continental Free Trade Area (AfCFTA)**²³ agreement allows for countries to import parts from anywhere in Africa duty-free e.g. component makers that meet Rules of Origin (ROO) requirements can sell components duty-free such as South Africa selling to Ghana and Kenya.
 - A concept note was prepared in relation to the **Tripartite Free Trade Area (TFTA)**²⁴ for a regional Southern African Customs Union (SACU) – East African Community (EAC) motor vehicle strategy. This note outlines how the automotive industries in the SACU and the EAC would be integrated through value chains.
 - The **National Automotive Industry Development Plan (NAIDP)**²⁵ is intended to drive the comprehensive development of the automotive industry in the long run and make Nigeria a regional powerhouse in the industry.
 - In 2019 the Economic Community of West African States (ECOWAS) executive met to consider the **Automotive Industry Policy Framework (AIPF)**²⁶ which is designed to promote investment across the supply chain, increasing domestic vehicle and parts manufacturing in the region.



6. The development of **components manufacturing** by supporting lower tiers, aftermarket demand and extending manufacturing to additional countries in the value chain through regional distribution of production.
7. Coordinated implementation of **skills development** interventions that empower manufacturing through manufacturing specific curricula, incubation skills programmes, awareness in technical schools, developing engineering institutions, partnering with established institutions, developing skillsets for Tiers 3 and 4 and the aftermarket.
8. Introduction of **incentives** that attract investment in Africa's automotive industry.
9. Improvement of **logistics connectivity**, infrastructure, security, transparency and combatting corruption between countries, and creating a network of logistics hubs.
10. Facilitation of required industry investments, and promotion of industry benefits to unlock **funding** from governments, the World Bank, the G20, EU, IFC, Afreximbank and other key funders.
11. **Homologation** of vehicles where new vehicle models, built up vehicles and modifications of vehicles conform to compulsory specifications and standards.
12. Development of a regional business case from **a techno-economic assessment** of the industry which then informs policy framework formulation and lobbying.
13. Development of **global value chains** for established automotive players to redirect production capacity globally to avoid regional competition.
14. **Job creation** through increased production capacity.

A value chain analysis recognises that a country may achieve optimal specialisation not by producing finished products, but by participating in a chain of shared production with other countries.²⁷

Regional Value Chains in the automotive sector are viable in Africa

RVCs in the automotive industry in Africa require a coordinated, aligned, continent-wide approach that takes into account existing and potential strengths and also addresses issues of equity and barriers to trade.

It is important to work with regional governments, and develop a network of stakeholders committed to unlock the economic potential and promote the industry across the continent.



Driving affordability and mobility solutions

The automotive industry currently plays a disproportionately small role in manufacturing sectors across Africa. There is a need to develop effective automotive policies and ecosystems, as the industry could also provide significant economic benefits.

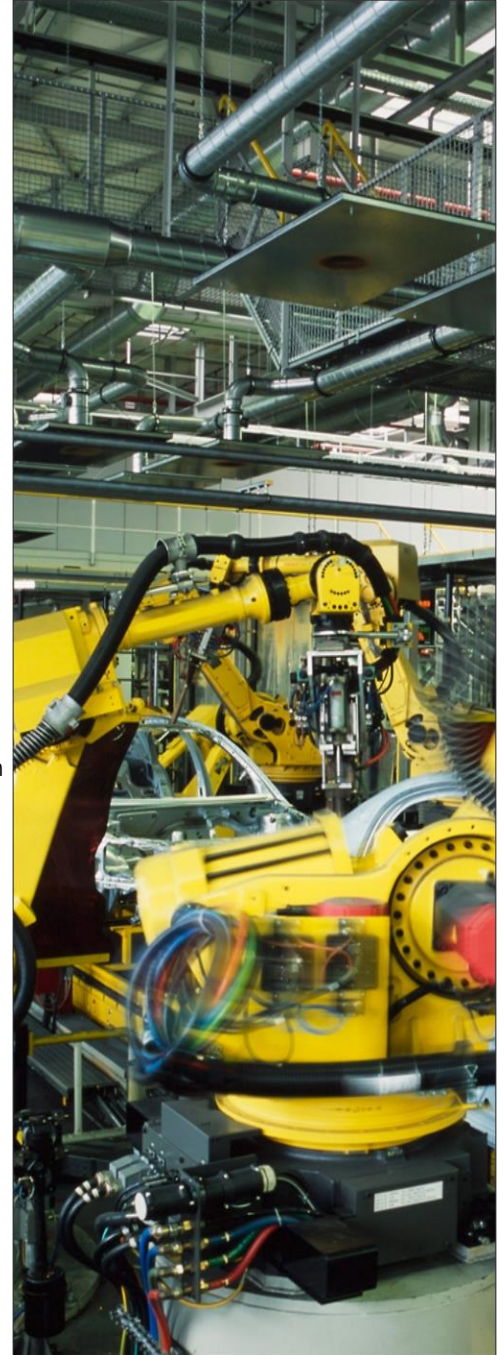
The continent has a growing population, growing rates of urbanisation and low motorisation rates. In 2019, Africa's new vehicle sales accounted for only 1.3% of global demand despite its population contributing 17.2% to the global population.²⁸

To develop a sustainable automotive industry, Africa needs advanced manufacturing capability, technology, deep value chains and the development of skills.

Country partnerships in value chains and vehicle purchasing from 'hub countries' are key to regional alignment. Regional collaboration is significant in facilitating the required scale needed to enable global competitiveness.

Furthermore, the issue of imported used vehicles and 'grey imports' should be handled responsibly. Imported used vehicles and 'grey imports' constitute over 80% of the number of vehicles in Africa. An effective automotive ecosystem can reduce this to more acceptable levels that enables integrated automotive manufacturing without harming consumers and without major disruption to the existing used vehicle market.

The aim should be for the used vehicle market to be supplied through used vehicles that were initially produced within the continent.





Key factors to drive mobility and affordability

A number of factors are critical to driving affordability and mobility in the continent. By addressing these factors and finding solutions to the associated challenges, great strides can be made towards creating a well-functioning continental automotive industry.

Financing

The growth of the automotive industry in the continent is dependent on a sufficiently-sized market for original equipment manufacturers (OEMs) to sell locally produced new vehicles into the global market. Used imported vehicles are generally charged at a lower price and therefore remain a constraint to new vehicle sales. It is therefore important that vehicle financing solutions are introduced to ensure affordability of new vehicles and thus improve new vehicle sales.

Access to vehicle finance remains a significant barrier in Africa. In many countries, interest rates are high, resulting in expensive payment terms for consumers. This often leads to consumers purchasing imported used vehicles or taking up alternative financing options such as unsecured loans. Imported used vehicles also create challenges for banks as it is difficult to determine the most

accurate current and future values of new vehicles in markets with a large population of imported used vehicles.

The formalisation of financial channels in countries is seen as an important part of improving access to finance. In addition, mobility suppliers, such as Uber, are collaborating with prospective drivers to create financing packages that offer payment options at rates below the market rate. Several banks such as Standard Bank are also working with mobility suppliers such as Uber by providing financing services for prospective drivers in securing financing.²⁹

In Nigeria, the government has looked to collaborate with automotive associations, transport associations and automotive users to improve the condition of the vehicle population through buy-back schemes that allow operators to sell their older vehicles to the government.³⁰ This provides operators with significant funds to purchase new vehicles that are in better condition.

In the long term, the development of local automotive industries can assist with providing access to finance. If vehicles are produced locally and can be sold into the local markets as used cars at some point, there is an opportunity to develop schemes to decrease interest rates and provide favourable payment terms and guaranteed future values for new vehicles.

Infrastructure

Infrastructure is a necessary component for mobility. In many African countries, infrastructure has not been well-maintained and in some instances, the required infrastructure for mobility does not exist at all. It is important to note that poor infrastructure is unfavourable for the automotive market as it can increase the total cost of ownership of a vehicle by significantly increasing vehicle maintenance costs.

Looking forward, the building and maintenance of infrastructure should also take the future of vehicles into consideration. For example, electric vehicles (EVs) require a sufficient rollout of charging stations.

In addition, due to the positioning of batteries in many EVs (i.e. underneath the car), poorly maintained roads and roadway features such as speed humps could result in costly damage. It is imperative that investment in adequate infrastructure goes hand in hand with other actions that are taken to drive affordable mobility.

Technology

The rise of e-hailing platforms offering increased access to mobility for consumers, as well as more affordable mobility, have made it clear that technology is an important enabler to mobility.



In many African countries, laws and regulations were enacted prior to the surge of mobile phone use and associated internet connectivity. These laws and regulations must facilitate new types of mobility as consumers seek to experience mobility differently using mobile phones. In addition to this, technology can be used to improve the mobility experience, for example, by using data to ensure better city planning and organisation.

Innovation

The African continent and various African countries face their individual set of mobility challenges. Therefore, a copy-and-paste approach from other geographies may not be applicable. Innovation plays a key role in identifying challenges in specific geographies and developing new solutions such as business models and financing solutions that address those country-specific challenges.

It is important for major players in the mobility industry to support and facilitate innovation that seeks to address the different mobility challenges in Africa. For example, in 2019, Bosch held a competition for start-ups that looked to solve Africa's mobility problem.³¹ This initiative helped to understand the dynamics around smart mobility in the region, problems that need solving and identifying partners to collaborate with to develop solutions.

The emergence of innovative business models will be the result of an iterative process which will require dedication by the automotive industry in order to bring the right efficient mobility services as well as internal processes to deliver an affordable and accessible mobility market in Africa.

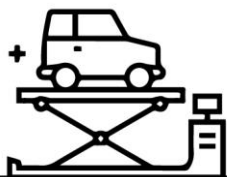
Future of vehicles

Although the African automotive industry is still largely nascent, the future of vehicles and smart mobility is significant for its long-term ambitions, more so as OEMs move towards environmentally friendly vehicles, and towards being more aligned to global emission standards.

If production of such vehicles is to be undertaken in the continent, this shift will require more advanced manufacturing technology. This kind of manufacturing technology and capability will also be required for the maintenance of vehicles. While a vehicle produced in Europe or the US in recent years can be easily maintained locally, this may not be the case for vehicles that may be produced in the coming years, which may be electrical and may need smart mobility to operate.

Due to the availability of sustainable energy sources, the future of vehicles also provides opportunity in Africa. A number of African countries have abundant sources of sustainable energy which can be used to power alternative power vehicles such as EVs. Ghana in particular is looking to introduce EVs to stimulate demand for excess gas-generated electricity. In addition, the use of sustainable energy to power vehicles can drastically improve trade deficits for countries that currently import petroleum and diesel.

As governments address used and 'grey imports', emission standards are also expected to start to align with international standards. OEMs are keen to provide vehicles that align to the demand for vehicles that meet international standards. In Rwanda, Volkswagen (VW) has already introduced a small fleet of EVs.³² Toyota has also indicated its interest in supplying its hybrid vehicles into the continent when conditions become suitable and possibly move towards assembling these vehicles in Africa in future.³³



Collaboration

Given the market size and scale requirements for a thriving automotive industry, collaboration is key in creating attractive investment opportunities, functional regional value chains, access to mobility and safety, as well as environmentally friendly vehicles.

Government and private sector

The collaboration between governments and private sector actors (OEMs and component manufacturers) plays a vital role in the development of an automotive industry. Governments understand the total cost of used vehicles such as pollution, accidents, and missed opportunities for local value creation. Similarly, it requires an understanding that transformation in the automotive industry requires manufacturing capacity and the creation of automotive value chains.

There is a need to create an attractive and enabling political and policy environment in the continent along with incentives that will attract OEMs. This includes collaboration between stakeholders around conditions and incentives that need to be put in place for OEMs. This may include a commitment to certain infrastructure development, policy certainty on how used vehicle imports will be addressed and financial incentives such as tax holidays.

Collaboration between countries and regions

The scale required for a fully-fledged automotive industry means that very few countries on the continent can create a viable market individually. This presents opportunities for collaboration in order to create an effective ecosystem.

Countries can collaborate in the manufacturing of vehicles through a hub-and-spoke model. In this manner, countries within the model can benefit as they all participate in the production of vehicles, in component manufacturing or vehicle assembly.

This ensures that some form of value addition takes place within each country and creates deep regional value chains. This approach requires trade facilitation, alignment of standards and supplier development programmes to develop locally manufactured parts. Trade facilitation will also play a significant role in opening up a large market for vehicle producers to sell their vehicles as they can now sell vehicles at a regional level.

Countries can also collaborate through the creation of a multidisciplinary competence centre in sub-Saharan Africa. This centre should help to develop the capabilities required to actively participate at various levels of the value chain. Although this may initially be challenging to justify given new vehicle sales, the rewards will be

seen in the long run for OEMs that develop on-the-ground knowledge in the countries where they operate. With the African Continental Free Trade Area (AfCFTA) currently gaining momentum, this investment seems justified, more so as the AfCFTA is expected to create greater opportunities for the automotive industry in the continent.

Learnings from Rwanda

Rwanda has had a successful partnership with VW and Siemens. As part of VW's mobility programme, the partnership between the two has seen the opening of an assembly plant in Kigali, as well as the introduction of a new fleet of fuel efficient cars, EVs, ride hailing and corporate car sharing.³⁴

The collaboration between the Rwanda government and VW was vital in creating an attractive environment for investment. With Rwanda not having a large enough market to attract OEMs to invest, the government of Rwanda sought to position the country as a hub in the region. As the hub, Rwanda will enable OEMs to expand their operations and offerings to the East African Community which has quite a large population in excess of 170 million.

The absence of infrastructure, such as well-connected roads and electricity supply, makes it rather challenging to incentivise investors. Therefore, there has been a wide focus to ensure that

infrastructure planned for the next seven years is in place to attract more players within the mobility space.

Rwanda has also designed financial incentives to attract OEMs. For example, companies that make investments exceeding US\$50m qualify for corporate tax holidays.

Driving mobility and affordability on the continent will not occur automatically. To enable this, the creation of a well-functioning ecosystem is required. This necessitates active participation of all players within the ecosystem. It is important to diversify and not only focus on one initiative that is implemented by government and supported by stakeholders. Rather, there is a need for participation and implementation by all stakeholders.

Achieving the automotive development, mobility and affordability vision for Africa will not be by chance. It will require courageous leadership and active willingness to collaborate in the public and private sectors across the continent.

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