



Cornell
SC Johnson College of Business

VaccineCo Case Study

**2025 Cornell EMI Corning
Case Competition**



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Welcome to the 9th Cornell Emerging Market Institute Corning Case Competition!

Dear Participants,

Welcome to the 9th Cornell Corning Emerging Markets Institute Case Competition. This case competition is part of the flagship event of the institute – the EMI Annual Conference. On the 15th anniversary of the EMI at SC Johnson College of Business at Cornell University, this year's conference theme is **“New Rules, New Opportunities: Leveraging Uncertainty for Growth”**. The Committee is excited to hold this event with the immense support of the Emerging Markets Institute at Cornell SC Johnson College of Business and the enthusiasm of all participating schools across the globe.

For the case competition, the EMI chooses a different Emerging Market every year, a topical industry, and a company in the country in which the case will be based. This year's case is based on the Pharmaceutical industry in South Africa, a regional hub with a diversified economy.

The panel of judges is eager to see each of your unique responses. We wish you the best of luck in the competition!

Acknowledgements

This case was developed by: Ayodeji Ogunyamoju, Zara Rahman, Fiorina Siamir, Emma Xue, and EMI interns, under the supervision of Lourdes Casanova, Anne Miroux, Sofia Kalantzi, and the contribution of Julian Galarza.

Special thanks to Corning International for its financial support and in particular to Gökhan Doran, International Vice President and General Manager, and the rest of the team at Corning International.

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2025 Cornell EMI Corning Case Competition: Rules

Deadline



Criteria

Content (80%):

Criteria

Quality of Analysis
Quality of Recommendation
Implementation/Plan of Action
Creativity of Ideas

Weight

30%
20%
30%
20%

Form (20%):

Criteria

Handling of Questions
Presentation Style

Weight

60%
40%

Rules

- Each team's submission will be reviewed by judges and evaluated using the rubric on the left.
- Five final teams will be announced during the **first week of October, 2025**.
- Presentation slides must be formatted using Microsoft PowerPoint.
- Each team is allowed a **maximum of 11 slides** (the first slide must be an **Executive Summary**), and a **maximum of 5 slides** of appendices (**Note**: Title slides do **not** count towards the maximum allotted total of 15 slides).
- This presentation will also be used in Round 2 – no edits will be allowed.
- You **must** record an audio presentation using Zoom to accompany your slides. Your recording must be less than 10 minutes and will only be used for Round 1 evaluation.
- Instructions for Recording: If you do not have Zoom, please create a free account and download the free software. Ensure your cameras are disabled and your microphones are enabled. Please share your screen, so the slides are displayed. Press the record button and begin presenting your slides. At the end, please stop recording and submit the recorded file with your submission. If you need further instructions, please reference this [video](#).
- Teams must include their team's name on the submission.
- Teams may not mention their respective university or program in their presentations.
- If your team received assistance from an advisor, include his/her name and position in your team's submission.
- Any avenue of primary and secondary research is allowed so long as it does not violate copyrights. Key details within this Case must be kept confidential and not be shared with external parties.
- Additional media such as music and third-party animation are prohibited.
- File size cannot exceed 15 MB.
- AI usage is permitted but not recommended.

VaccineCo: Case Prompt

Situation

- VaccineCo is a joint venture comprised of private equity firms and the South African government, which holds a minority stake. It operates as one of the continent's key vaccine manufacturers with a core mission to develop and produce essential vaccines for South Africa and the broader Africa.
- Currently, Africa imports over 99% of its vaccine needs, a critical vulnerability highlighted during recent global health crises. Recognizing this, the African Union (AU) has set an ambitious target: by 2040, 60% of all vaccines administered in Africa should be produced on the continent.
- VaccineCo, with existing fill-and-finish capabilities, ongoing technology transfers and ambitions for end-to-end manufacturing, is strategically positioned to play a significant role in achieving this "Vision 2040". The company has government backing and access to some international partnerships, and its success is seen as vital for regional health security and economic development.

Complications

Despite the strategic importance of achieving "Vision 2040," VaccineCo faces the following challenges:

- While VaccineCo has successfully secured project-based and expansion funding from partners like the International Finance Corporation (IFC), its revenue comes solely from government contracts, which is insufficient for its broader objectives. The transition to more capital-intensive vaccine manufacturing and investment in novel R&D requires substantial financing.
- Forecasting demand is difficult as there is a lack of a guaranteed long-term off-take agreements from governments. The funding cuts to Gavi, the Vaccine Alliance also adds to this as its capacity to place large, predictable orders may be diminished.

Question

VaccineCo is caught between the urgent need to achieve exponential growth to meet Africa's health security ambitions and a challenging operational landscape where the financial and market conditions are not fully conducive to supporting this rapid scale-up.

As consultants to VaccineCo's executive leadership, **your challenge is to develop a comprehensive and actionable growth strategy for VaccineCo to significantly scale its vaccine manufacturing capabilities** and make a substantial contribution to Africa's "Vision 2040" goal of 60% local vaccine production, despite the prevailing funding constraints and market uncertainties.

Geographic Context: Africa

- **Regional Dynamics and Opportunities**
- **Health Burden and Economic Impact**



African Regional Dynamics and Opportunities



A continent of markets, not a single market

Africa does not present a single economic profile, as the continent is composed of fundamentally different types of markets. This staggering economic heterogeneity means Africa's economies can be grouped into three broad categories: established markets with a GDP per capita above \$3,000, fast-growing markets with a GDP between \$1,500 - \$3,000, and frontier markets with a GDP per capita below \$1,000.

Infrastructure & Trade challenges

Cold-chain infrastructure is fragmented, risking spoilage of critical health products. Power reliability remains inconsistent, undermining vaccine production and storage.

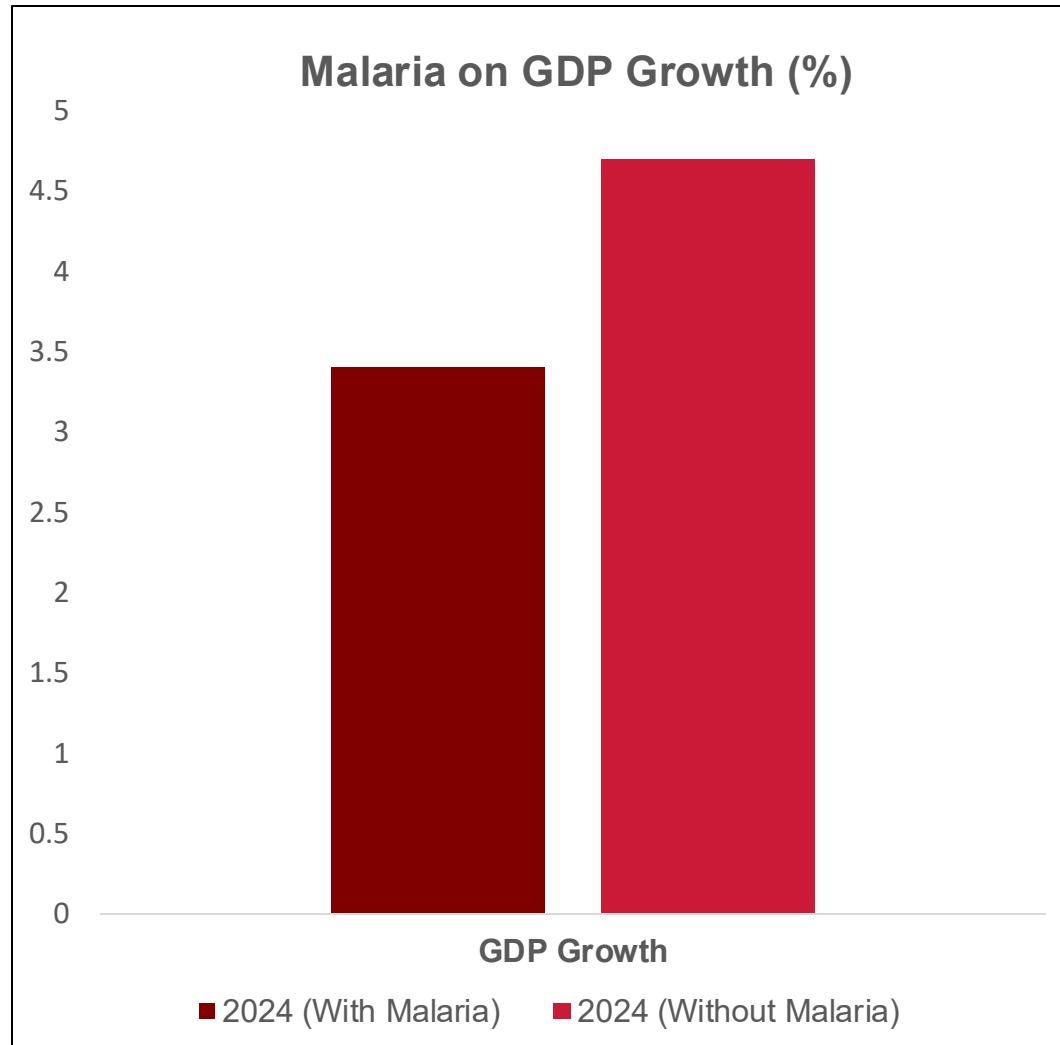
Trade patterns remain heavily oriented toward commodity exports to overseas markets. For example, South Africa directed just 2.55% of its inter-African FDI (2020–25) to North African countries.

African Union (AU) & Agenda 2063

Agenda 2063: long-term blueprint for Africa's transformation. Includes the creation of the African Continental Free Trade Agreement (AfCFTA), now the world's largest market by population.

Highlights critical goals in healthcare, reducing reliance on imports and to produce 60% of Africa's vaccine demand domestically by 2040.

Health Burden And Economic Impact in Africa



Disproportionate Disease Burden

- Africa carries the vast majority of global cases of key infectious diseases.
- In 2022: 94% of malaria cases, 95% of malaria deaths, and 70% of HIV/AIDS cases occurred on the continent.
- Tuberculosis also remains severe, with 2.5M cases (25% of global total) and 33% of global deaths in 2022.

Economic costs

- Malaria alone cuts African GDP growth by ~1.3 percentage points annually, costing ~500M lost work-days per year.
- Eliminating malaria by 2030 could add \$127B to GDP, and some estimates suggest Africa's GDP could be 30% larger if malaria were eradicated.
- HIV/AIDS and TB impose similar drag by depressing workforce participation and requiring costly treatments

Impact on Development

- Life expectancy remains low at ~64 years, reflecting the ongoing health crisis.
- High fiscal burdens from disease management hinder investment in growth-oriented sectors.
- Recent USAID funding cuts heighten vulnerability, underscoring the need for resilient manufacturing and supply chains to reduce dependency.

Geographic Context: South Africa



- **Economic Landscape**
- **Healthcare Landscape**
- **Political Landscape**

South African Landscape: Economic, Healthcare, Political



Economic Landscape

- South Africa remains one of the largest economies in Africa and a regional hub.
- Persistently high unemployment, hovering above 30%, and significant poverty, with about 55% living below the national poverty line.
- Public debt has risen significantly, estimated to exceed 75% of GDP in 2025, limiting fiscal space for social sectors including healthcare



Healthcare Landscape

- South Africa faces a heavy burden from both communicable diseases and rising non-communicable disease. HIV/AIDS remains a public health challenge.
- The healthcare system is divided between the government-funded system offering services at low or no cost and private healthcare system, mostly funded through medical insurance schemes.
- The pharmaceutical industry in SA is a mix local companies focusing on manufacturing generic medicines & international companies importing a wide range of products to the market.



Political Landscape

- SA's health system governance is split between the national Department of Health and nine provincial health departments responsible for service delivery.
- Medicines, vaccines, and medical supplies are procured through competitive tenders, which are open to local and international suppliers.

South Africa plays a leading role in both the Southern African Development Community (SADC) and African Union (AU) health initiatives, acting as a policy and technical anchor

Vaccine Market Landscape

- **Landscape**
- **Funding Sources**
- **Vaccine Value Chain**
- **Trends: Internationalization**



African Vaccine Market: Landscape

A market on the rise

- **Current vaccine market value: ~\$1.3 billion (2025)**, projected to reach \$4.7 billion by 2030 (some forecasts range ~\$1.4B to ~\$2.8-5.6B by 2040 depending on scope).
- Africa consumes nearly 25% of global vaccines but imports 99% of vaccines and 95% of medicines.
- **Heavy reliance on global suppliers** (Pfizer, Moderna, BioNTech, etc.) and international initiatives (COVAX, Gavi).

Strategic Procurement Pathways

- Regional demand pooling & procurement mechanisms building on AU/AVAT COVID legacy.
- **National “Buy African” preference policies** and exploration of Advance Market Commitments (AMCs) to shift from price-based to value-based procurement.

Shift to self-reliance

- **Current procurement mainly price-driven** with vaccines treated as interchangeable commodities.
- Most African Vaccine Manufacturers perform only packaging & bottling operations (“fill and finish”).
- Emerging regional procurement efforts, advance purchase commitments, and investment incentives aim to build a resilient, locally anchored vaccine supply chain.

African Vaccine Market: Landscape

Ecosystem Development

- Stabilize vaccine demand & delivery lead-times
- Incentivize local manufacturing scale-up & innovation

Demand vs Local Capacity

- **Local manufacturing limited** to fill & finish services; full vaccine production is scarce.
- 25 active African Vaccine Manufacturers (AVM) projects:
 - Commercially operational with tech transfers (e.g., Institut Pasteur)
 - Facilities ready, awaiting tech transfers
 - Projects in development or early investment phase
- Some overcapacity in drug product manufacturing (~1.4 billion doses capacity by 2030) but very limited drug substance capacity (~61 million doses annually), especially for mRNA vaccines.
- The African vaccine manufacturing landscape is expanding, with around 10 manufacturers existing before COVID-19 now scaling up, and several new entities planning to enter

Demand vs. Supply Reality

- Africa's vaccine need: ~1.4 billion doses.
- Accessible through AVMs ~240 million doses projected.
 - ~45M via bilateral procurement
 - ~145M via UNICEF procurement (8 near-to-market vaccines)
 - Up to 50M additional UNICEF-linked demand (contingent on alignment with production/tech transfer)

African Vaccine Market: Funding Sources

NON-EXHAUSTIVE

- **African Vaccine Acquisition Trust (AVAT)**

AVAT functions as a pooled procurement agent on behalf of African Union member states to secure COVID-19 vaccines. The support comes from Afreximbank, Mastercard Foundation and UNICEF.

- **African Vaccine Manufacturing Accelerator (AVMA)**

AVMA is a long-term financing mechanism to build sustainable vaccine manufacturing capacity in Africa. Designed and backed by Gavi, the African Union (AU), and Africa CDC, African Vaccine Manufacturing Accelerator (AVMA) secured US\$1.2 billion in pledges from 12 sovereign and philanthropic donors.

- **IFC's Contributions**

In Senegal, IFC supported the Institut Pasteur de Dakar's "Madiba" facility with a \$15 million loan, \$14 million in early grant funding, and by mobilizing an additional \$30 million from partners, enabling the plant to target annual production of 300 million doses.

In South Africa, IFC partnered with local vaccine manufacturers to expand production capacity, contributing roughly €350 million as part of broader financing packages.

- **Potential Donation from Philanthropic Foundations**

Major philanthropic foundations have played an important role in funding vaccines, complementing government and multilateral support.

- **Bill & Melinda Gates Foundation** – The largest private donor to vaccines globally, with over \$4 billion to Gavi since 2000. Supported COVAX during COVID-19 for vaccine procurement and delivery in low-income countries, and continues to fund R&D, immunization campaigns, and long-term capacity building.
- **Mastercard Foundation** – Pledged \$1.3 billion to Africa CDC's Saving Lives and Livelihoods initiative, financing COVID-19 vaccine purchases, logistics, and health worker training across Africa.
- **Mark Zuckerberg / Chan Zuckerberg Initiative (CZI)** – Focused on disease research, data infrastructure, and pandemic preparedness, including \$600 million to the Chan Zuckerberg Biohub and COVID-19 grants for genomic sequencing and vaccine effectiveness tracking. Less direct funding for vaccine procurement compared to Gates and Mastercard.

African Vaccine Market: Vaccine Value Chain

Regulations

- Validation and approval

	Pre-production	Production	Storage	Distribution	Customers
Description	<ul style="list-style-type: none">R&D for vaccineOrdering raw materialsReceipt of raw materials from suppliers	<ul style="list-style-type: none">Production of antigen, i.e., the biological partVaccine formulation, i.e., the pharmaceutical partFill & finishTesting and inspection	<ul style="list-style-type: none">ImportationStorage of lotsAllocation of lots and serial numbersCold chain initiation	<ul style="list-style-type: none">Cold chain maintenanceRegional and local distributionLast-mile logistics	<ul style="list-style-type: none">Community outreach and uptakeReturn and recalls
Pain Points	<ul style="list-style-type: none">Limited R&D capacity; most innovation occurs outside AfricaRaw materials suppliers typically international	<ul style="list-style-type: none">Few facilities; scope to scale production capabilitiesSome regulatory bottlenecks	<ul style="list-style-type: none">Cold chain infrastructure often inadequate	<ul style="list-style-type: none">Logistical challenges, especially in rural areasStockouts and wastage due to poor inventory management	<ul style="list-style-type: none">Dire and growing need of vaccinesLack of vaccinesOf vaccines available, shortage of supply

African Vaccine Market Trends: Internationalization

Internationalization: Africa Union's *Agenda 2063* and *Vision 2040* prioritize regional manufacturing capacity and reduced dependence on imports.

- **West Africa**

- Home to the continent's largest population, representing the single biggest vaccine demand in Sub-Saharan Africa.
- Serves as the anchor of the regional economic and political bloc (ECOWAS), influencing procurement and health policy in the region.

- **East Africa**

- Recognized as a regional health and innovation hub, hosting leading NGOs (including AMREF) and global health organizations.
- Key part of the AU's mRNA technology transfer initiative, and a gateway to the East African Community (~300M).

- **North Africa**

- Diversified \$390B economy with an established pharmaceutical ecosystem (including VACSER and Minapharm).
- Holds WHO Maturity Level 3 regulator status, and is a strategic bridge to MENA (Middle East and North Africa) and EU markets through strong trade and regulatory links.

- **Southern Africa**

- Combined population of ~100M, with high infectious disease burdens such as HIV, TB, Malaria, and more.
- Geographic proximity and existing cold-chain/logistics links with South Africa, and regional integration under SADC trade agreements, facilitating easier vaccine movement across borders.

VaccineCo



- **Company profile**
- **Company positioning**
- **Company financials**

About VaccineCo

VaccineCo is a leading vaccine manufacturer in Africa

Foundational Structure

Founded in 2006, VaccineCo was established by a consortium of private equity firms, with a minority investment from the KwaZulu-Natal provincial government in South Africa.

Strategic Mandate

VaccineCo was launched to address a critical national need: **to build and scale human vaccine manufacturing capabilities within South Africa**. Its core mission is to improve the nation's self-reliance on immunization vaccines

Operational Scale

VaccineCo's current operational output is significant, with **more than 10 million vaccines produced annually**. The company's portfolio includes critical immunization vaccines for Measles, Tetanus, Hepatitis B, and Pneumococcal Conjugate.

Current capabilities include:

Distribution, Packaging & Labelling

Foundation of VaccineCo's operations as it has established capabilities in importing, packaging, labeling and distributing vaccines.

Fill & Finish

VaccineCo has developed formulation, fill, and finish capabilities through technology transfers for products such as the COVID-19 vaccine.

Strategic capabilities in development include:

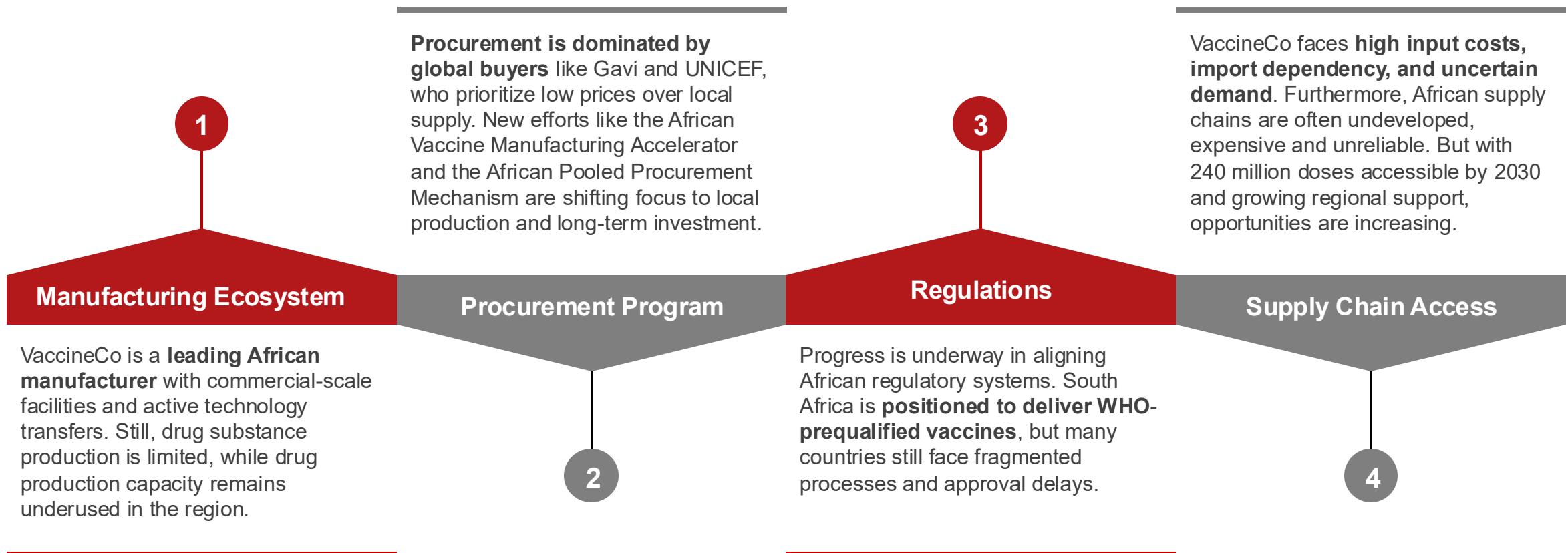
Drug Substance Manufacturing

VaccineCo is currently developing a new drug substance manufacturing capability. This initiative is a technically challenging and capital-intensive investment.

In-house R&D

The long-term strategic objective is to become a fully integrated vaccine company with an in-house R&D function. This includes the development of novel vaccines but currently has no financial commitments.

VaccineCo Positioning in Africa's Vaccine Market



VaccineCo's Financials

Income statement (USD '000)

	2023	2024
Revenue	44,706	40,709
Cost of sales	(21,775)	(25,252)
Gross profit	22,931	15,457
Selling & distribution expenses	(5,799)	(6,481)
Administrative expenses	(3,627)	(3,657)
Other operating income	1,543	696
Other operating expenses	(2,382)	(3,681)
Operating profit	12,666	2,334
Investment income	529	1,059
Financing costs	(1,796)	(2,343)
Profit before tax	11,399	1,050
Tax	(1,327)	(805)
Profit	10,072	245
Other comprehensive income, net of tax		
Currency translation* (losses)	(11,563)	(4,274)
Remeasurement of retirement and other employee benefit obligations	20	7
Total comprehensive (loss)	(1,471)	(4,022)

*Depreciation of the South African Rands



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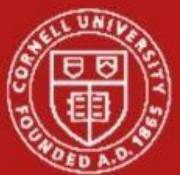
**Thank you very much for your participation in the
2025 Cornell EMI Corning Case Competition!**

Submission deadline: September 17, 2025 11.59pm EST

Submission link for PowerPoint and Audio:

https://johnson.qualtrics.com/jfe/form/SV_d1kdDKLhDmcikPI

For additional questions, please refer to the PowerPoint and the recording of the informational session or reach the EMI at contactemi@cornell.edu.



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Emerging Markets Institute

Building Bridges and Encouraging Dialogue

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