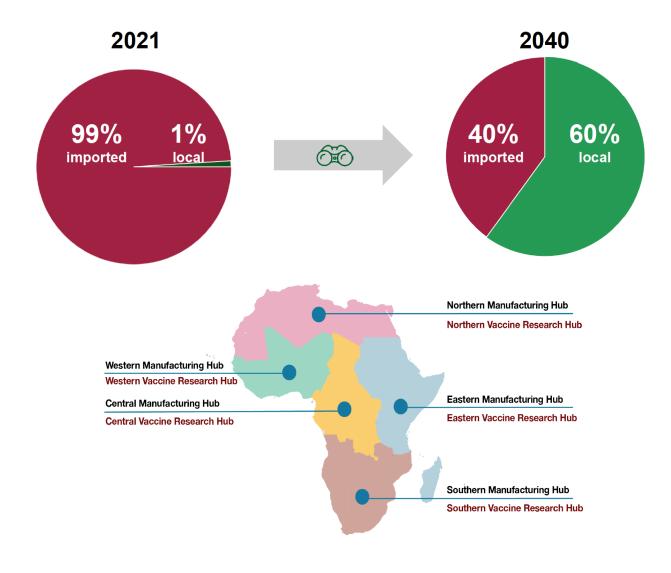


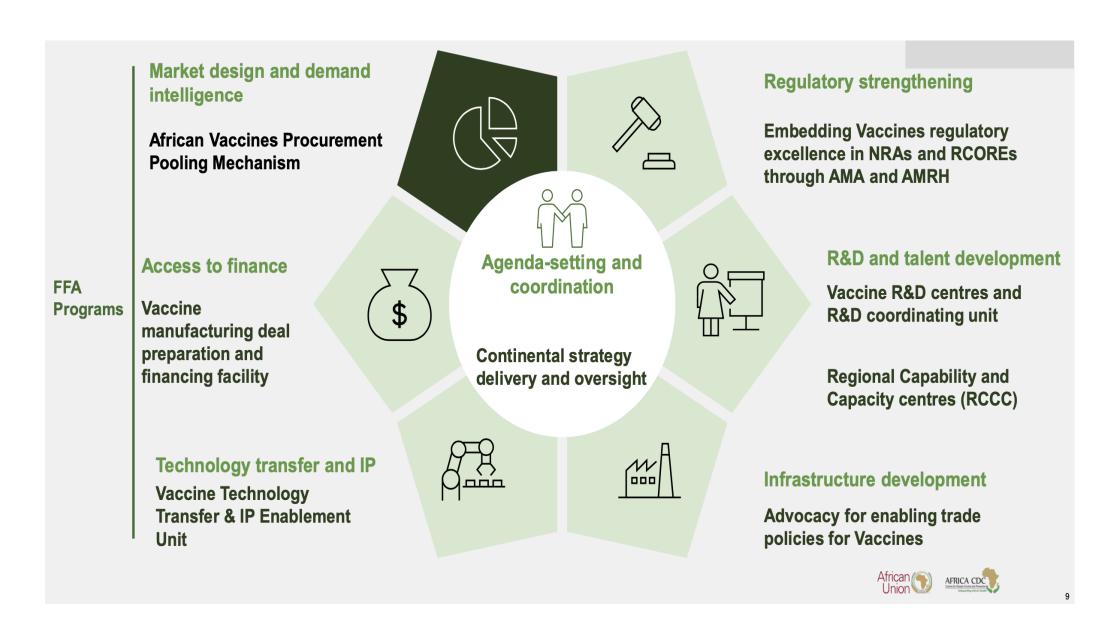


African Union and Africa CDC's ambition





African Union and Africa CDC's agenda





Strategic Vision

Vision

Enable the prosperity of the Next Billion of Africans through reliable access to essential vaccines.

Mission

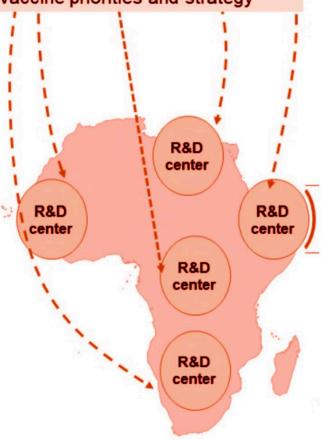
Research, develop, and manufacture vaccines for Africa and for the world.

Ambition

Establish a centre of excellence in vaccinology promoting the capacity for life sciences and epidemic preparedness in Africa.

Continental R&D Coordinating Platform

Support information sharing and collaboration within and across centers and guide continental R&D vaccine priorities and strategy





Investing in Sustainable Manufacturing and Supply of Vaccines in Africa, for Africa

Our Goal – Vaccine Sustainability for Africa

Objective: Build a comprehensive supply base of high quality, affordable vaccines that are relevant to Africa in Senegal with IPD as the center of excellence. Portfolio will be responsive to pandemic, outbreak and routine immunization needs

The Approach – State of the Art

- Novel technologies
- Leverage technology transfer
- Meet/exceed global quality & regulatory standards
- Work with trusted partners
- Products with high volume and low COGS













Key Components of the Plan





Facilities. Design, build and deploy – product agnostic.



Drug Substance. Contract Mfg partner licensure, scale out/transfer to IPD.



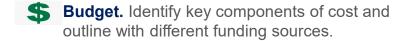
Drug Product. high-volume filling in 200-dose bags with multi-use syringe and disposable, single-use, auto-disable needles. Up to 25M doses per month.



Vaccines. Partenrship with manufacturer with vaccines or from a late-stage developer.



Project Advisory. Strategic advisory services to ensure execution.





Construction of a Vaccinopole in Diamnadio

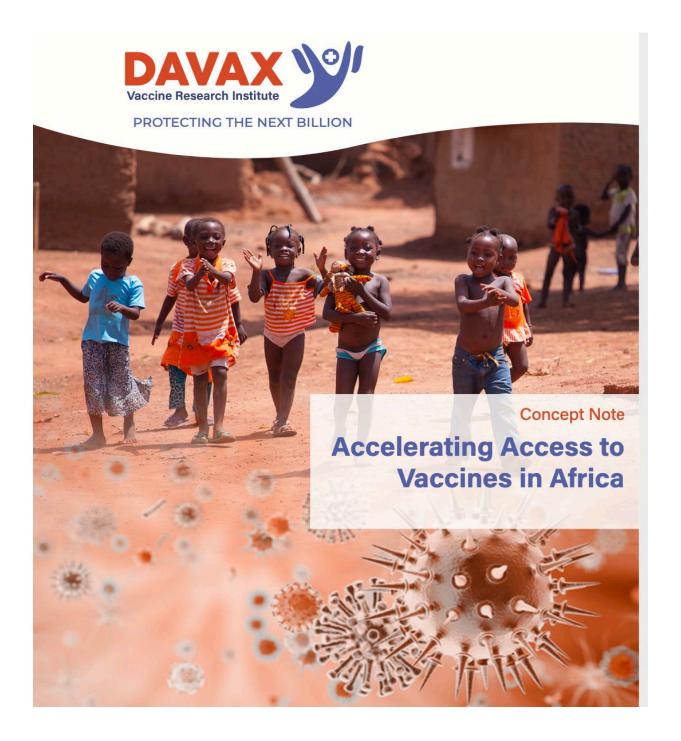




Construction of a Vaccinopole in Diamnadio









Davax Vision

Vaccine **Research & Development**

Subunit, RNA & vector-based Immunology & Adjuvants New delivery devices



Vaccine Contract Manufacturing

Tech transfer & scale-up Fast-track development **Experimental vaccines** Validation batches



Vaccine Studies

Clinical research & testing Vaccine Access & Hesitancy Last-mile delivery & logistics **Community Research**







Project MADIBA

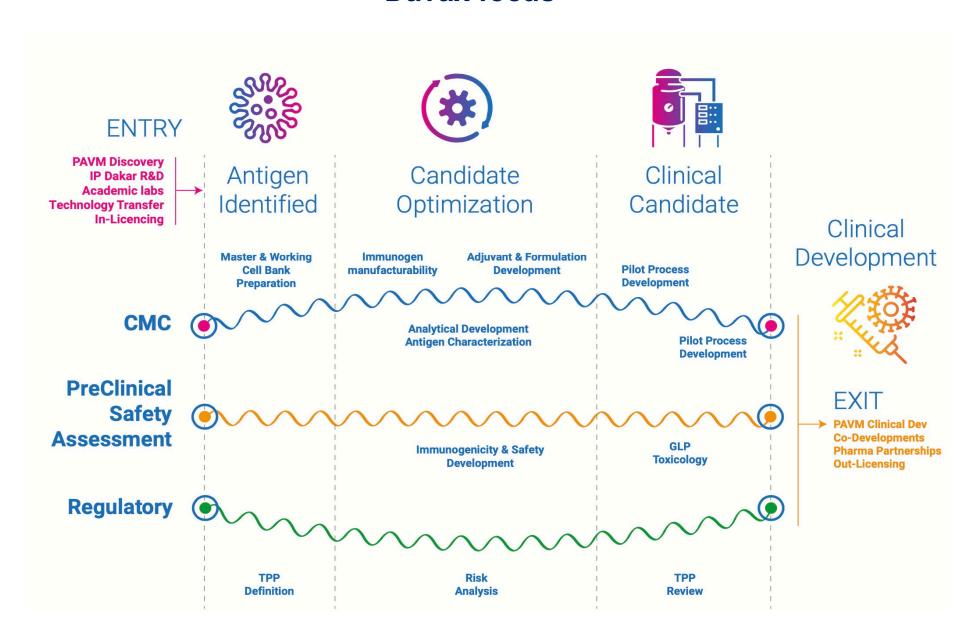
State-of-the-Art technology **High Manufacturing Capacity** 300 Million + Dosis

Benefits for Communities

Epidemiological surveillance **Community Health Care**

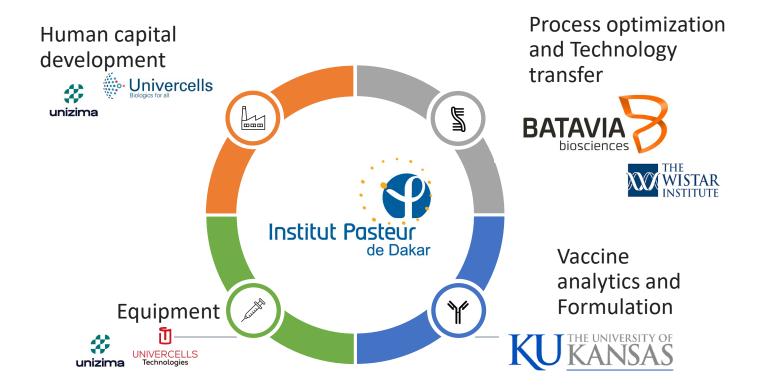


Davax focus





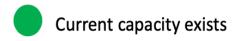
Measles Rubella Drug Substance

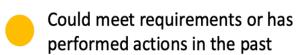


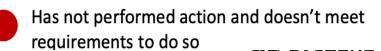


Key players - 10 players in Africa across 8 African countries have established units, but most focus on less complex steps of value-chain

			Increasing complexity				
Country		African Company	Import for distribution	Packaging & labelling	Fill and finish	Drug substance manufacturing ¹	R&D
\gg	• South Africa	Biovac					
*	 Senegal 	Institut Pasteur Dakar					
ăt.	• Egypt	Vascera					
(• Tunisia	Institut Pasteur Tunisia					
	 Nigeria 	Innovative Biotech					
\geq	 South Africa 	Aspen Pharmacare					
	 Nigeria 	Biovaccines					
	• Ethiopia	EPHI					
Œ	 Algeria 	Institut Pasteur Algeria					
*	• Morocco	Institut Pasteur Morocco					







Key players – China, India and South Korea are major vaccine producers

among developing countries

16 developing countries have end-to-end vaccine manufacturing capabilities



otes: CGEB – The center for Genetic Engineering and Biotechnology, RVSRI – Razi Vaccine and Serum stitute TNIIDV – The National Institute of Infectious Diseases and Vaccinology TGPO – The Government

lapping of suppliers for raw materials, equipment on slide 13

These countries have 40+ vaccine manufacturers, of which 12 are WHO pre-qualified



 ANLIS Incepta Vaccine Limited

BioManguinhos/Fiocruz

Instituto Butantan

Beijing Minhai Biotechnology Changchung BCHT Biotechnology

Sinergium Biotech

China National Biotech Corporation

Output

Sinovac **Tiantan Bio**

Hualan Bio

Walvax Biotechnology

Liaoning Chengda Biotechnology

Xiamen Innovax Biotech

Cuba Egypt

Vascera

Finlay Institute

CGEB

India

Indian Immunologicals **Bharat Biotech**

Cadilla Pharmaceuticals

Panacea BioTech

Biological E

Haffkine Bio-Pharmaceutical

GreenCross Corporation

Institut Pasteur Dakar

Serum Institute of India

Indonesia

BioFarma

Pasteur Institute of Iran

Iran

RVSRI

LG Life Sciences

Korea

EuBiologics Co

SK Chemicals

Mexico

Birmax

Senegal

Biovac

Bold = WHO prequalified

South Africa

Taiwan

TNIIDV

BioNet Asia Co

TGPO

Queen Saovabha Memorial Institute



Vietnam

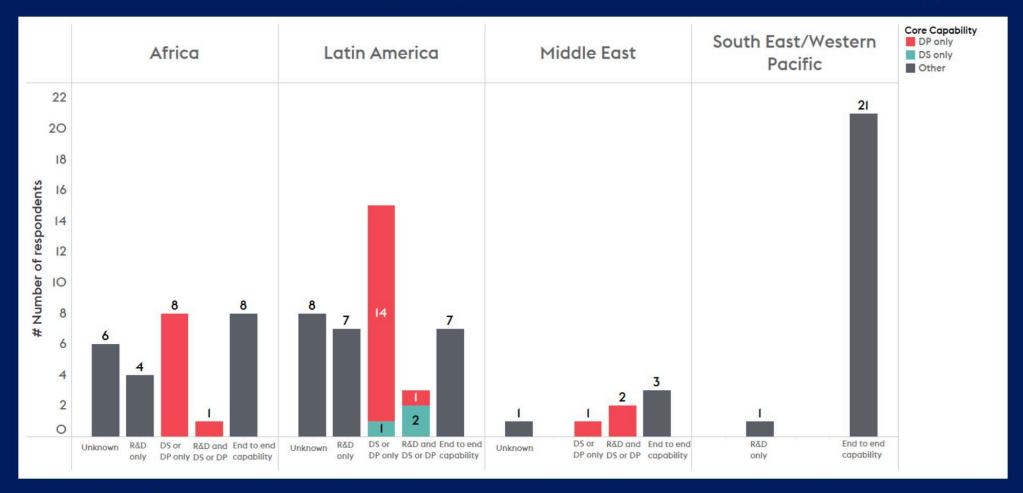
Thailand

IVMB

Vabiotech



Vaccine manufacturing capabilities vary across regions



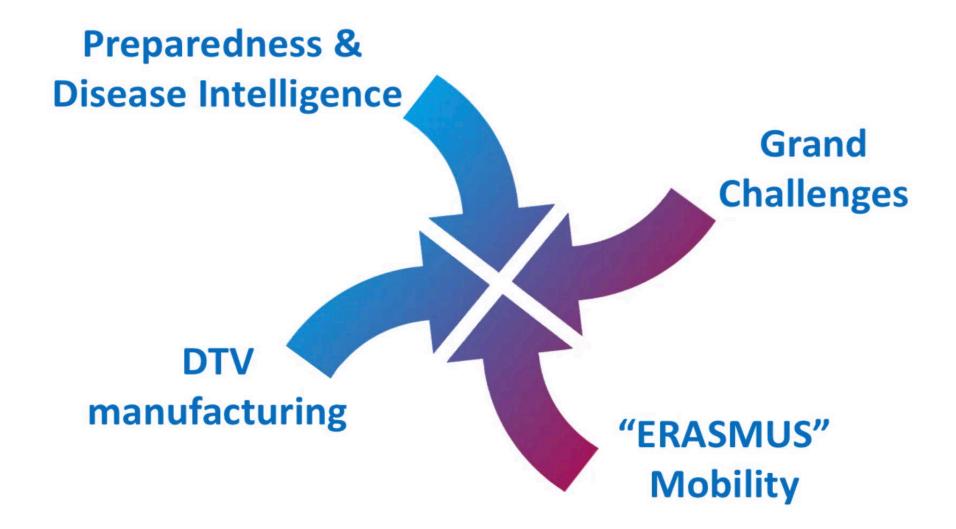
Key take-aways

- SE Asia/W Pacific with most of end to end capability
- C P | Vaccine manufacturing in Africa, Middle East and Latin America is focused on DP and fill / finish



11

PASTEUR NETWORK TO WORK ON 4 MAIN LINES



Boldness and Ambition





Thank you!

