



**Vaccines: inspiring Innovation**  
**DCVMN 18th AGM**  
25th - 28th September 2017



## **African Vaccine Manufacturers Initiative**

**Establishing sustainable  
vaccine development and manufacturing  
in Africa**

**The best time to  
plant a tree was  
20 years ago.**

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**Do not call the forest that  
shelters you a jungle.**

# The Current Reality

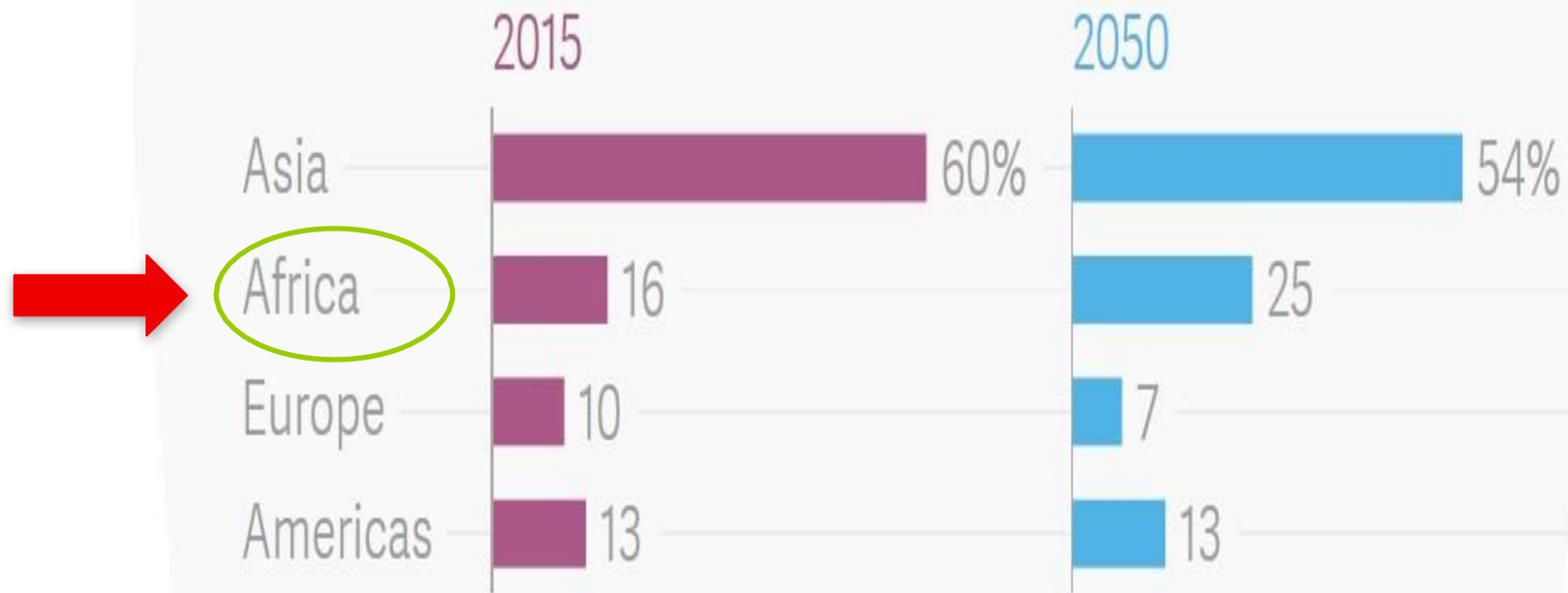
**Africa produces less than 1% of its own vaccine needs!**

Lack of vaccine manufacturing capacity could potentially lead to:

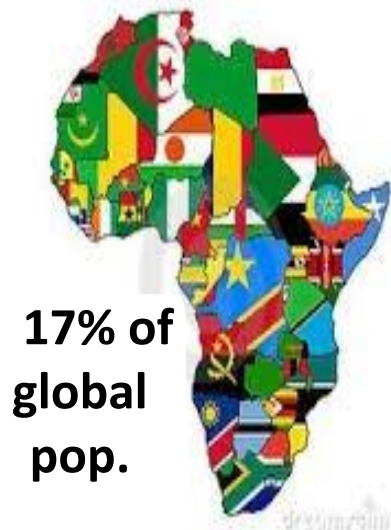


# A quarter of the world's population will live in Africa by 2050

## Share of global population by region



# Vaccine Market at a Glance in 2013



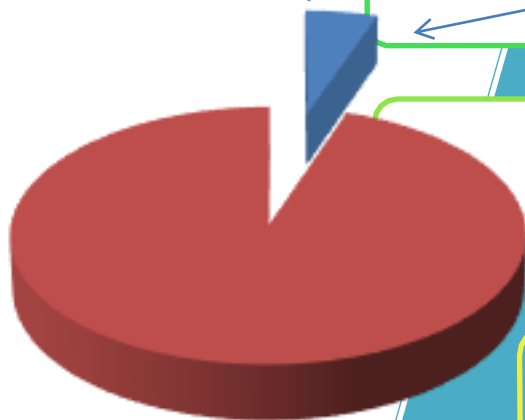
**Global vaccine market estimated at US\$ 24B 2013**

**Africa Vaccine market estimated at U\$1.2B in 2013**


**Africa/Global vaccine market: 5.5 %**

**Low immunization coverage in Africa  
compared to its share of global population**

**Highest global rate of under-five  
mortality**



## Recent trends vaccine demand in Africa

- **Growing demand**
    - Demographic factors
    - Unmet needs
    - Revitalisation of NIP
    - Polio and measles campaigns
    - Introduction of NIPV
  - **Strong donor support to LIC**
  - **Dominant role of UNICEF SD**
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- **Increasing dependancy:** supply and financing
  - **Widening gap** between supply and demand : the only continent with almost no local production



# No Sub-Saharan African capacity - flu



## Countries with influenza vaccine production capacity in 2006 and following implementation of the WHO Technology transfer project



# African Vaccine Manufacturers



**Senegal (IPD):** producer WHO pre-qualified vaccine (yellow fever)

**Egypt (Vacsera):** DTP and some fill-finish

**South Africa (Biovac):** Fill finish

**Tunisia (IPT):** limited BCG and rabies

**Ethiopia (EPHI):** Starting up...



# Public Health Emergencies

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- **2009 H1N1 Influenza pandemic** highlighted the African continent's lack of capacity to develop and manufacture flu pandemic and other strategic vaccines for PHEs
- **2014 Ebola outbreak** in Western Africa has resulted in strong recommendations from the African Union and others regarding support for acceleration of local vaccine manufacturing.

# **POLICY - Pharmaceutical Manufacturing Plan for Africa 2012**

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- **Multi-stakeholder effort by the AUC and UNIDO**
- **Led to the the PMPA, Business Plan 2012**  
(Pharmaceutical Manufacturing Plan for Africa)
- **Viable pharmaceutical industry in Africa would  
+ve impact**
  - **African health systems and capacity to respond to the  
health needs of the people**
  - **Contribute to the overall socioeconomic development  
of the continent.**

## In Favour

- Security of vaccine supply
- Address Africa specific disease burden
- Dealing efficiently with pandemic diseases
- Respond to unmet needs
- Growing population and market
- Socioeconomic, industry and life science development

## USE Negatives

- Good lessons learned from past failures and recent experiences in manufacturing
- New efforts to address the complex/ high cost of dev/manuf
- Booming continental market
- Growing availability of human and technical capacity
- Current political will to invest in public health goods and technologies.

# African Vaccine Manufacturers Initiative

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- AVMI is a partnership platform **to promote** the **establishment** of vaccine manufacturing in Africa
- Stakeholders - manufacturers, academics, scientists from 12 countries came together in 2010



AFRICAN VACCINE MANUFACTURING INITIATIVE

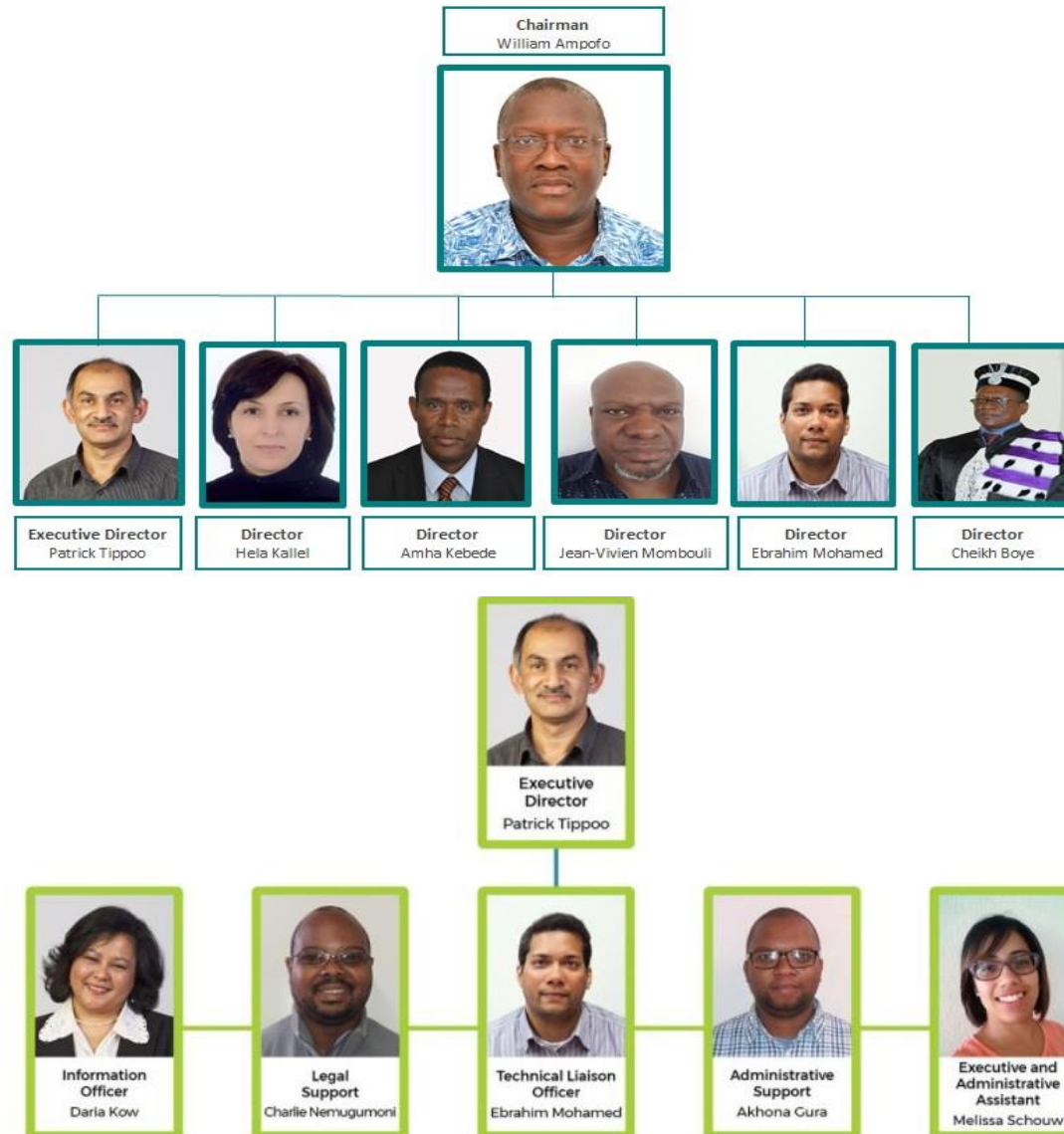
# An African Initiative



## Members from 13 African countries

Democratic Republic of Congo  
Egypt  
Nigeria  
Congo  
Senegal  
South Africa  
Uganda  
Ghana  
Kenya  
Ethiopia  
Morocco  
Tunisia  
Guinea

# Board, Secretariat, Partners



**PARTNERS**  
**WHO**  
**WHO AFRO**  
**HHS**  
**GIZ**  
**UNIDO**  
**AU**  
**NEPAD**



# Strategic Objectives

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## High level Advocacy

### **Mobilise the African continent through high level advocacy**

to manufacture preventive and  
therapeutic vaccines  
and/or other biological products  
against diseases of public health  
importance

## Facilitate partnerships

### **To promote partnerships between African manufacturers**

of vaccines and biologicals and  
other interested stakeholders who  
have a vision of Africa producing  
its own vaccines

# Strategic Objectives

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## Resource Mobilization

**To attract and secure skills  
and financial resources**  
for establishing vaccine  
manufacturing capacity in Africa

## Skills / Capacity Development

**To promote adequate  
scientific and technical  
capacity building of Africa's  
vaccine manufacturers**  
in all aspects of production and  
distribution of vaccines and/or  
other biological products

# Achievements:



## Technical Feasibility Study and Strategic Framework for African Vaccine Manufacturing

With the support of UNIDO and the WHO...

An Africa-wide study: **Vaccine Manufacturing and Procurement in Africa (VMPA)** study completed.

Provides:

1. an analytical assessment of current vaccine manufacturing capacity and procurement mechanisms in Africa.
2. pragmatic **evidence and guidance** for consideration by established/new/interested vaccine manufacturers in Africa

# VMPPA Study: Scope

## Vaccine Manufacturing and Procurement in Africa Study



# Key findings VMPPA study



## Vaccine Market

- African demand is booming i.t.o number of doses, vaccine types, increased populations, immunization coverage and vaccine expenditure
- High entry barriers, increasing cost and high risk of failure – still limits the amount of manufacturers interested

## Vaccine Procurement

- UNICEF SD Procurement services is the dominant procurement mechanism in Africa
- 45 out of 54 countries use UNICEF SD
- If status quo remains, African manufacturers should aim to become WHO-prequalified supplier to UNICEF

# Key findings of the VMPPA study



## Vaccine Manufacturing

- Limited to non existing in Africa
- 8 companies with existing or potential manufacturing capacity identified
- Heterogeneous levels of capacities and capabilities, very few with any API capability
- NRA functionality is limited with core emphasis pharmaceuticals
- 171 clinical trials were conducted in Africa between 2002 and 2015

## Vaccine Funding

- Building manufacturing facility cost between USD 60 – 130 million, with CAPEX at 60%
- Financing sources: government, grants, fee income, loans or private.
- Various innovative financing schemes possible



## **A summary of key cost drivers and factors to consider for establishment of a vaccine production facility**

### **Provides:**

- 1. An introduction to the manufacturing of human vaccines,**
- 2. Information about the vaccine market and summarizes the necessary investment costs,**
- 3. Project timeline forecast and other key factors to take into consideration for Human Vaccine Manufacturing**

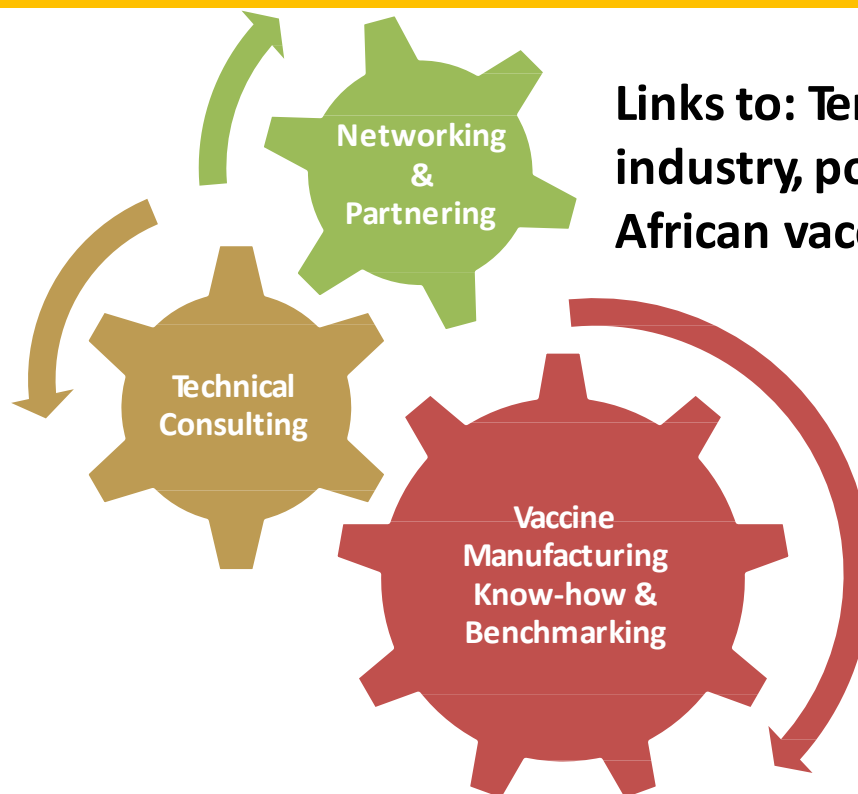
## AVMI Advocacy outline:

1. **Promote AVMI regionally and globally to highlight** local vaccines and biologicals manufacturing in Africa.
2. **Promote the development and adoption of a Pan-African** vaccines and biologicals **policy**.
3. **Leveraging** existing and new PP **partnerships**
4. **Creating a network of advocates** across the region for vaccines and biologicals manufacturing in Africa.
5. **Promote linkages with infectious diseases initiatives**

# Value Proposition

AVMI is well positioned to advocate for increased local development and production of vaccines and biologicals in Africa

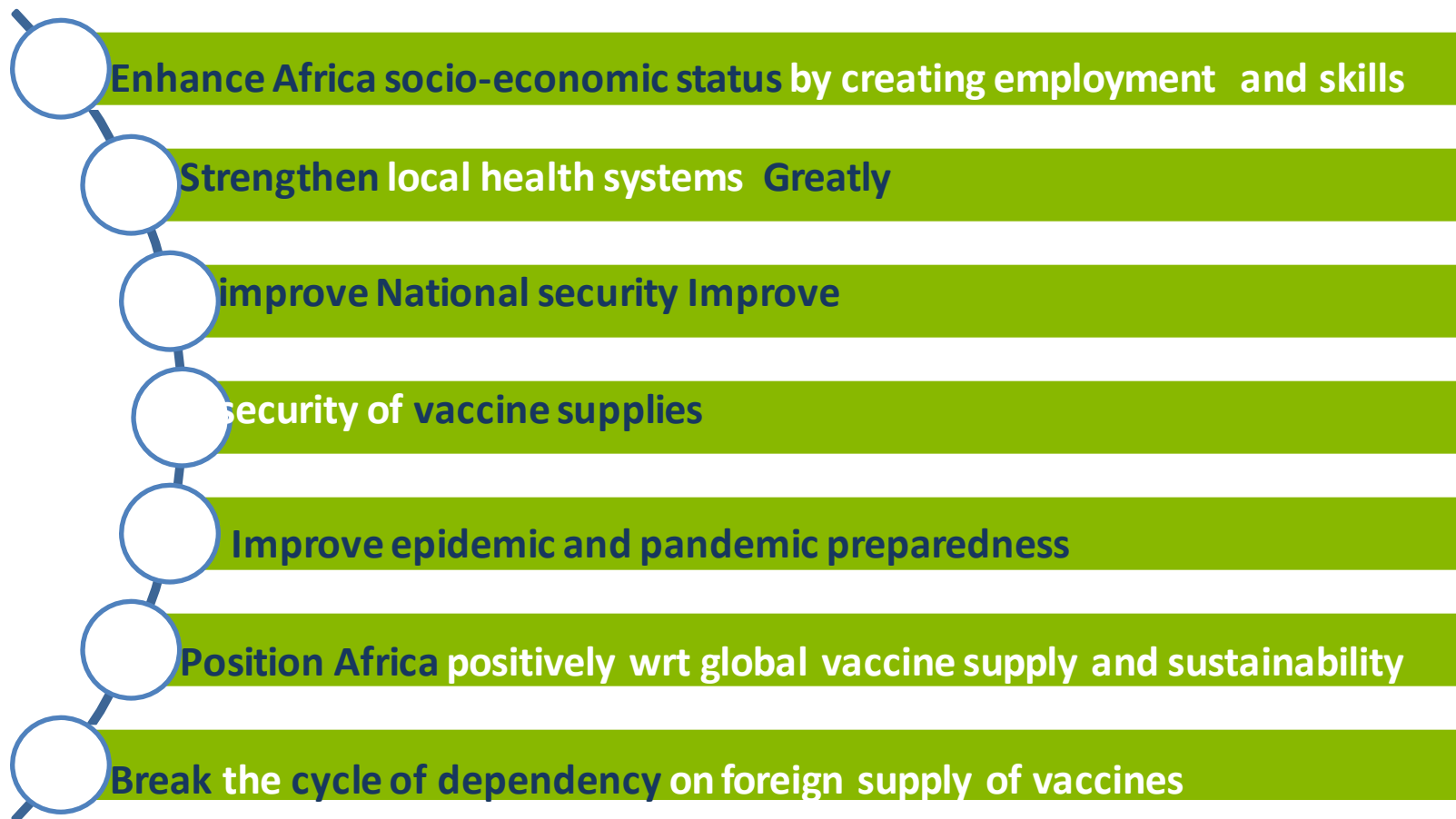
**Vaccine manufacturing is complex! AVMI has a database of consultants and evidence-based guidance documents that can help!**



**Links to: Tertiary institutes, industry, policy makers, African vaccine manufacturers**

**AVMI is the only African organisation to which all the presently known vaccine and biologicals manufacturers belong. Best positioned to articulate the views and needs of the industry**

## SUMMARY





AFRICAN VACCINE MANUFACTURING INITIATIVE

# African Vaccine Manufacturing Initiative

AVMI HOME

ABOUT US ▾

PARTNERS &amp; PROJECTS

MEETINGS &amp; EVENTS

MEDIA

CONTACT US

## Background

### Vision

#### African Vaccine Manufacturing Initiative (AVMI)

In September 2010 during the International Vaccine Technology Workshop (IVTW) in India, a group of interested Africans launched the Africa Vaccine Manufacturers Initiative (AVMI).

Looking beyond the provision of vaccines in emergency situations the AVMI intends to coordinate efforts of African vaccine manufacturers and other interested parties, who have a vision to see Africa produce its own vaccines [Read more...](#)

