

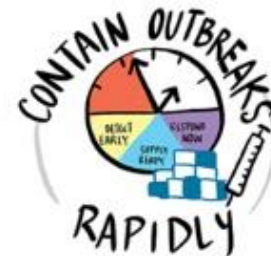
# AFRICA IN THE GLOBAL VACCINE MANUFACTURING LANDSCAPE: ADVANCEMENTS



**INSTITUT PASTEUR DE DAKAR**

# Company Overview

- EYE = Eliminating Yellow Fever Epidemics



- GAVI = Global Alliance for Vaccines
- ICG = International Coordinating Group for Vaccine Provision (MSF, IFRC, UNICEF and WHO)
- UNICEF

# Company Overview



Institut Pasteur  
de Dakar

Virus  
discovery

« Vaccin  
Dakar » strain

1917 1930

IPD starts  
production

1966

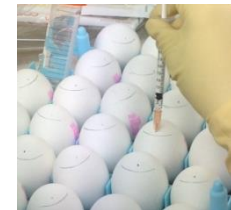
200 millions  
doses  
produced



**Production on  
mouse brains**

1983

17D strain  
& new stabilizer

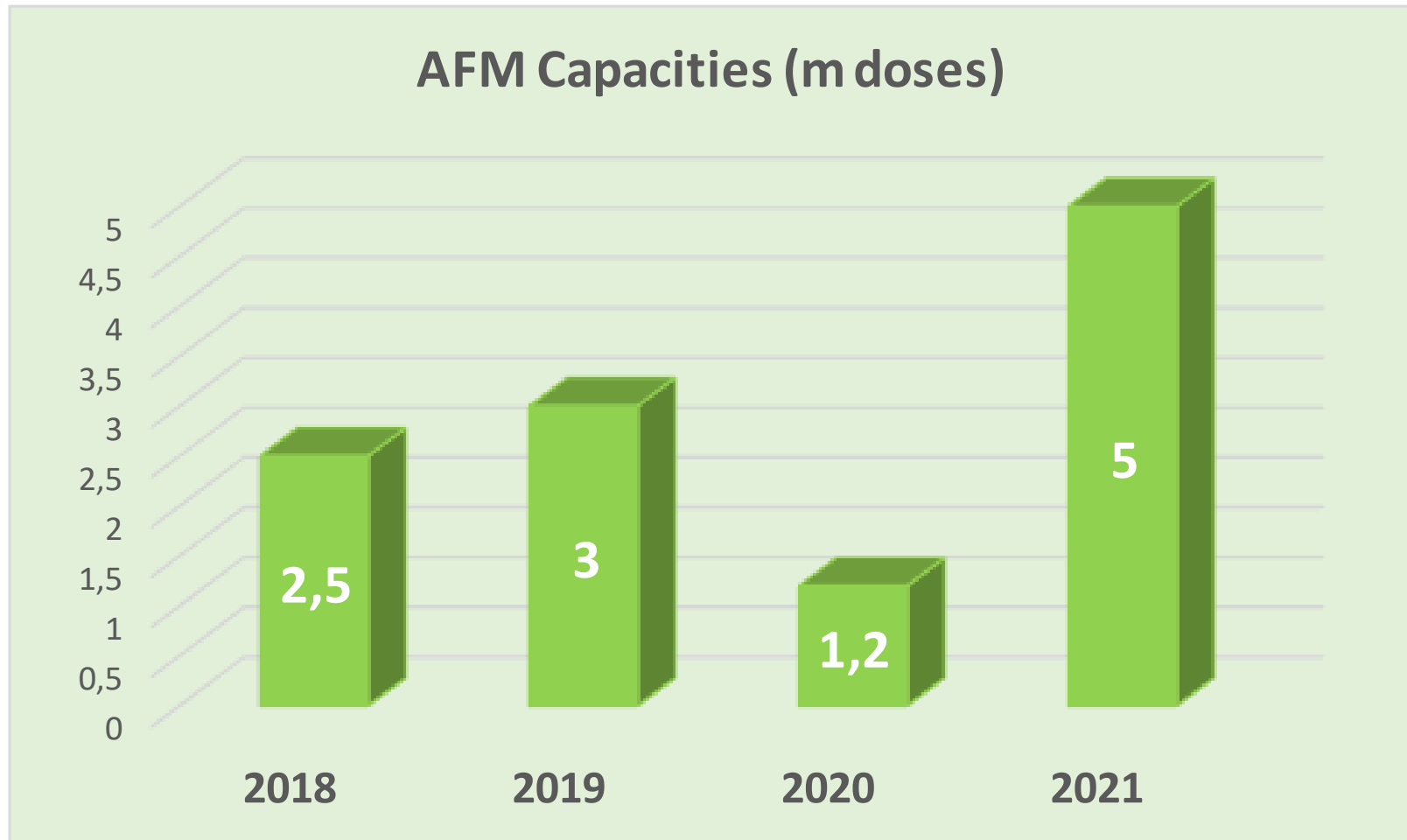


**Production on  
chicken embryos**

2018

- IPD vision : Serving Africa Needs for vaccines of high quality, safety and efficacy
- IPD strategy :
  - Short term
    - Increase YF vaccine manufacturing to meet African needs
    - Improve business model
  - Mid-long term
    - Explore opportunities for other products

# Company Overview



99% African market

# Vaccine Infrastructure (current)

- IPD is producing YF vaccine for decades
- IPD used to produce more than 10 m doses/y

30's to 70's

Increase of  
regulatory requirements



- Investments, refurbishments at a minimum level

80's to 90's

Increase of  
regulatory requirements



2000's

- Discussions start on AfricAmaril project (new facility)

# Vaccine Infrastructure (current)

---

- Current facility objectives
  - Secure production until 2021
  - Optimise processes
  - Meet LTA volumes and additional quantities
  - Prepare transition to AFM
- Ways to meet those targets
  - Get funds to secure the production
  - Improve the team with technical trainings & recruitments
  - Replace remaining aging equipment
  - **Guide the changes**

2010-2021



# Vaccine Infrastructure (TERANGA project)

---

- Focus on facility upgrade
- Partial critical equipment replacements

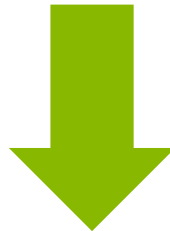
2016-2017



BILL & MELINDA  
GATES foundation

1,7 m US\$

- Partial improvement in process & volumes



- Need additional funds to complete the action plan



# Vaccine Infrastructure (GARAP project)

---

- Achieve critical equipment replacement

2019-2020



1,9 m US\$

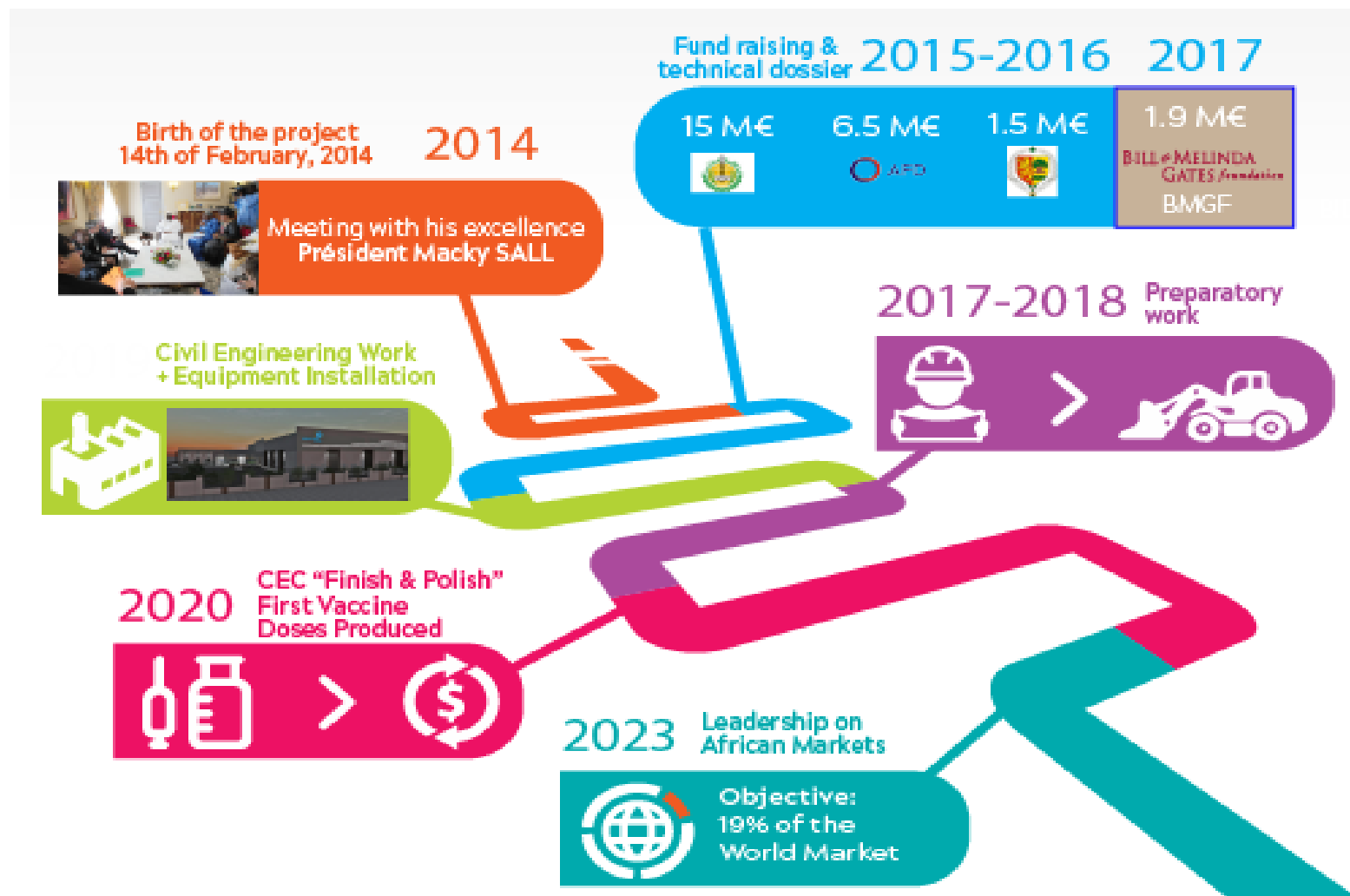
BILL & MELINDA  
GATES foundation

- Increase bulk production capacity
- Increase vaccine production up to 20% by 2021

# Advances: AFM project leadtimes



Institut Pasteur  
de Dakar



# Advances: Infrastructure



# Advances: Infrastructure

---

- Filling line & freeze-driers : contract signed
- Predesign study completed
- First tenders launched
  - Foundations
  - Qual/validation for the line
  - Civil work
  - HVAC
- Foundations work
- Other works
- Commissioning

july 2018

june 2018

dec.2018

year 2019

march 2020



# Advances: Skills and recruitment

---

- Current facility
  - 35 people
  - Using IPD support services : calibration, logistics etc
- Targets from now to AFM
  - Hire people with vaccine/aseptic production experience
  - Diaspora Senegalese community (4)
    - QA & regulatory : done
    - Project manager : done
    - Validation
    - Maintenance
- Final team : about 75 people



# Advances: Current capability

African COMPANIES	Group 1 : Companies with locally produced and marketed products		Group 2 : Companies at late stage of vaccine development & manufacturing	Group 3 : Companies at preliminary planning of vaccine development				
	Institut Pasteur Dakar (Sénégal)	Vacsera (Egypt)	Biovac South Africa)	Institut Pasteur (Algeria)	Institut Pasteur (Morocco)	Institut Pasteur (Tunisia)	EPHI (Ethiopia)	Biovaccines (Nigeria)
CAPABILITIES								
Level 1 : Import for distribution								
Level 2: Packaging and Labeling								
Level 3: Product manufacturing (fill & finish)								
Level 4: API manufacturing								
Level 5: Research and Development								

	<i>Insufficient information Provided</i>
	<i>Current capacity</i>
	<i>Could meet requirements or has performed action in the past</i>



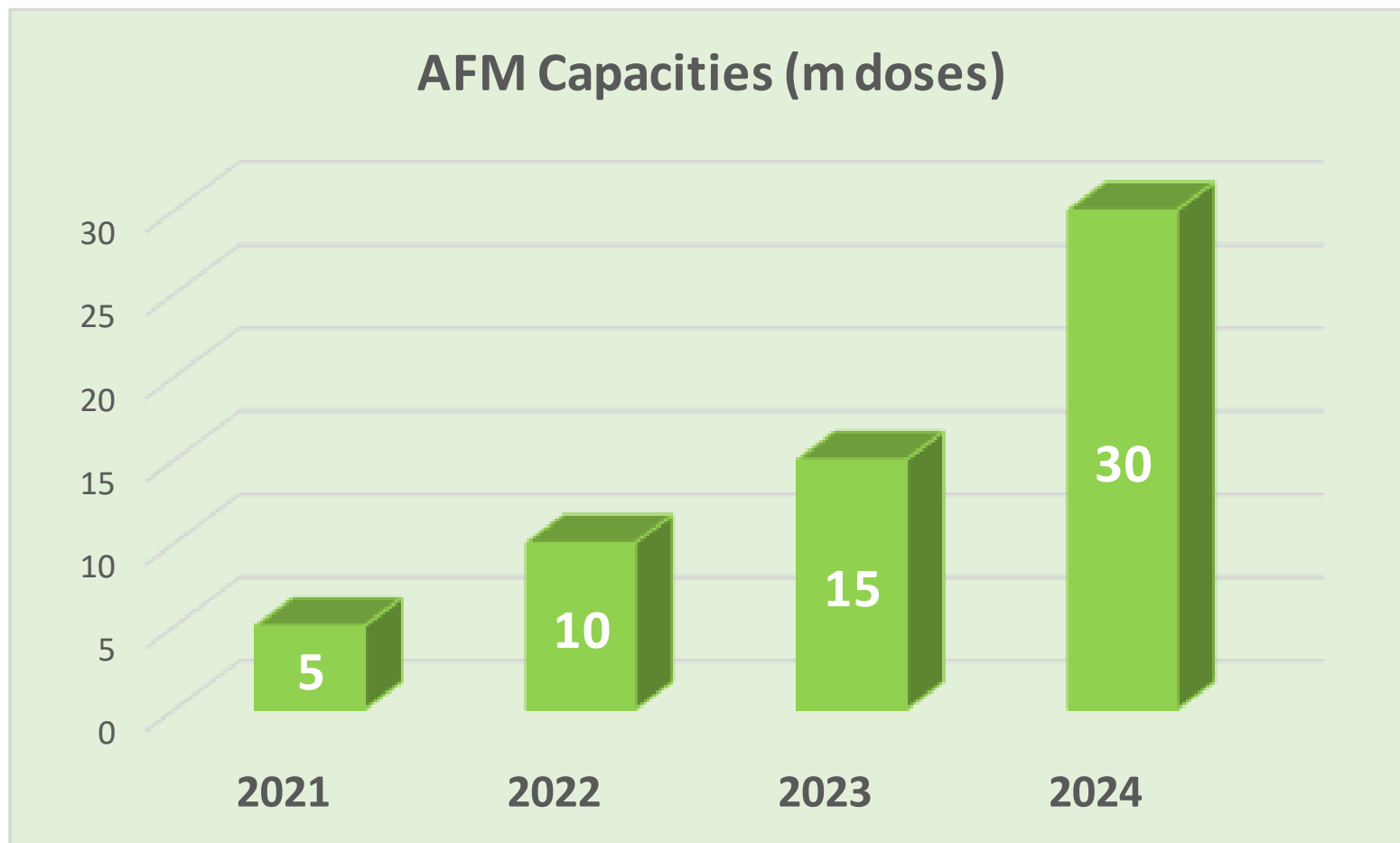
# Advances: Capability objectives

---

- Partnerships
  - Improve the process in yield
  - Improve the vaccine features
  - Capacity building on core and new competencies
- AFM possible extensions
  - 500 m<sup>2</sup> possible extension in the production building
  - Other building options



# Advances: Capacity for YF vaccine





# Advances: Projects/Programs RELEVANT to ADVANCING VACCINE DEVELOPMENT & MANUFACTURE IN AFRICA

---

## Guidelines

- AfricAmaril project
- Several partnerships on going for :
  - Cell culture production
  - Other vaccines

# Future Plans

---

- Current facility future use options
  - R&D for vaccines
  - Other small vaccines productions
  - Training facility for aseptic skills
- AVMI possible value generation for IPD in :
  - Regulatory support to submit YF dossier to local NRA's
  - Training sessions for African countries
  - Project management : founders, project managers etc



# UNE NOUVELLE UNITÉ DE PRODUCTION DE VACCIN CONTRE LA FIÈVRE JAUNE

OBJECTIF

30 Millions de doses par an