Global Fund / FAPMA Consultative Meeting

2017 African Pharmaceutical Manufacturers Conference

Addis Ababa, Ethiopia 14- 15 June 2017

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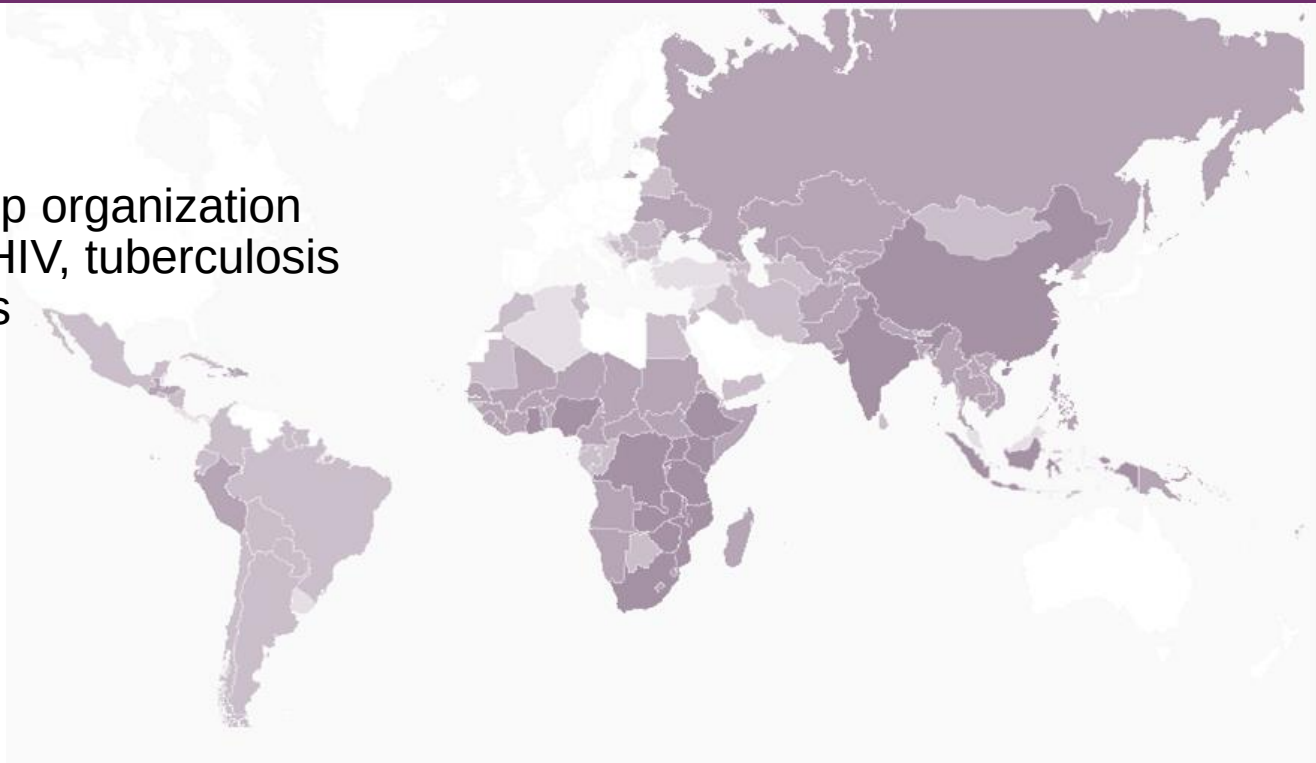
The Global Fund

THE GLOBAL FUND BUSINESS MODEL

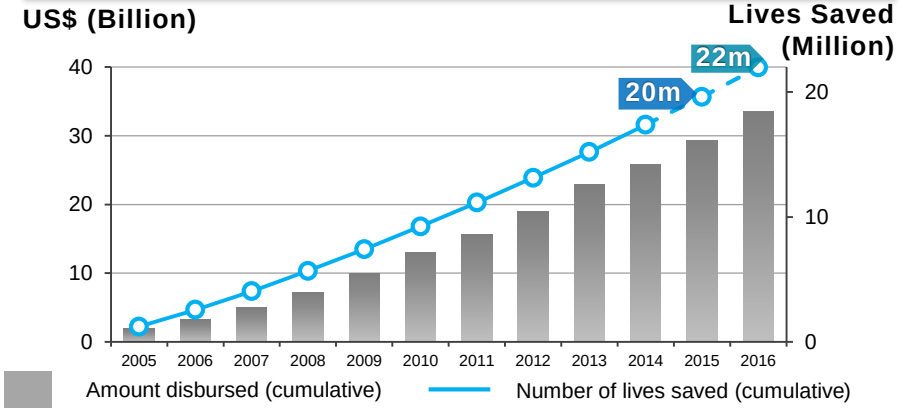
The Global Fund

A 21st-century partnership organization to accelerate the end of HIV, tuberculosis and malaria as epidemics

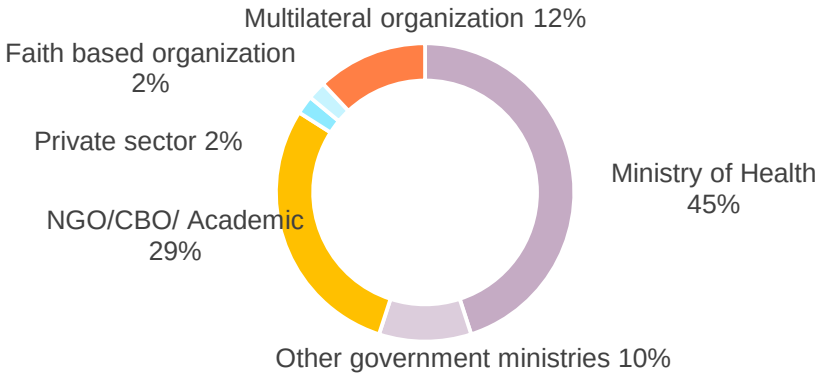


Founded in 2002, the Global Fund is the **leading contributor of resources in the fight against AIDS, tuberculosis and malaria. It mobilizes and invests nearly US$4 billion a year** to support countries and communities most in need. It has an active portfolio of **over 430 active grants in over 100 countries**, implemented by local experts.

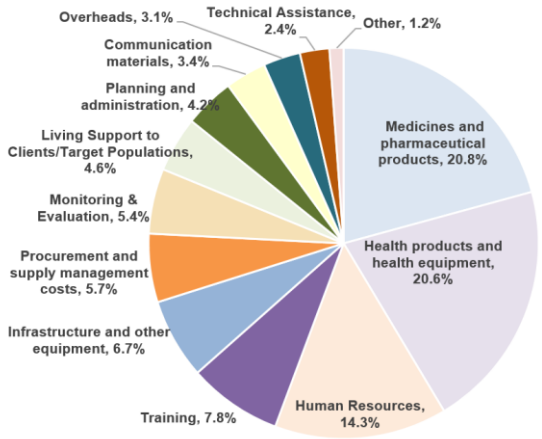
Number of Lives saved through Global Fund-supported Programs



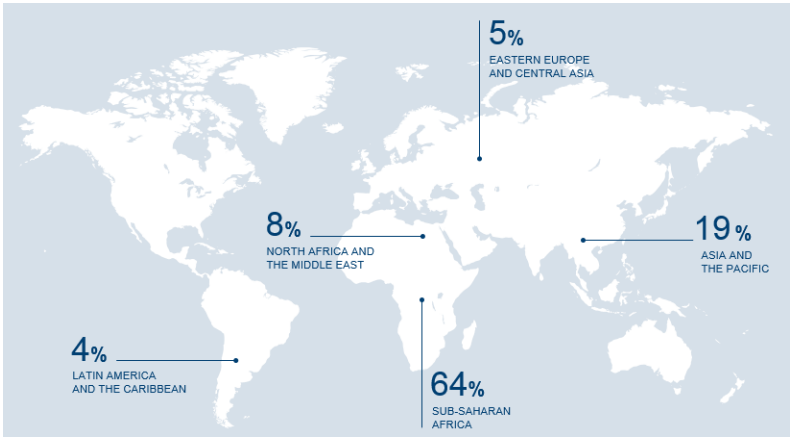
Breakdown of investments by implementer type (active grants)



Portfolio by cost



Breakdown of investments by region (active grants)

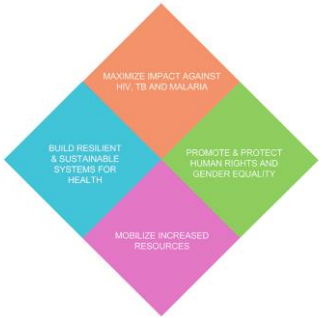


Successful replenishment for the 2017-2019 allocation period for implementing the Global Fund Strategy

- Fifth Replenishment Conference in Canada: September 2016
- Donors pledged **over US$ 12.9 billion for the next three years**
- Nearly US$ 1 billion more than the previous replenishment conference in 2013
- Countries were informed of their funding envelopes in December 2016 to take them through 2020

Funding envelopes	Amount		Countries
	USD million	%	#
HIV/AIDS	**5,098**	**50%**	**105**
Malaria	**3,227**	**32%**	**71**
TB	**1,842**	**18%**	**98**

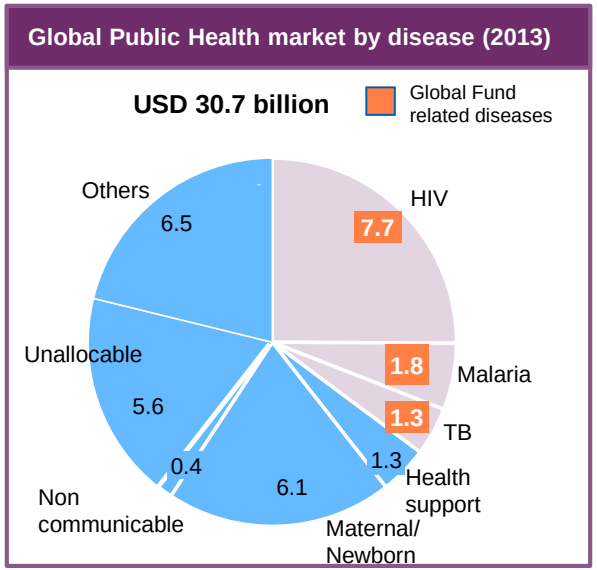
Health products = 40-60% spend depending on category

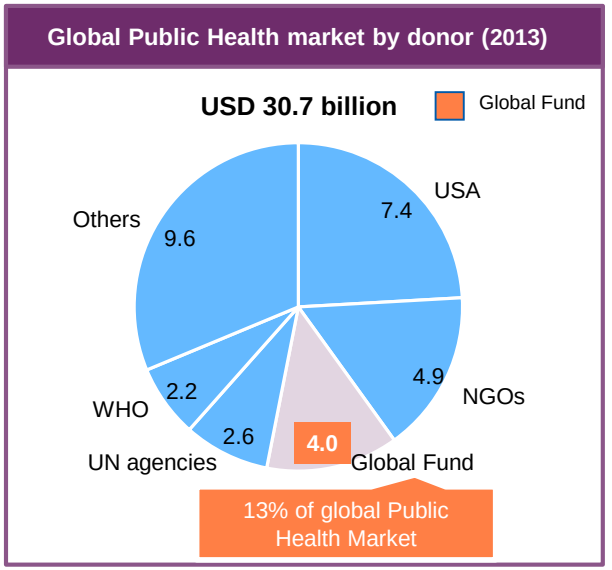


http://www.theglobalfund.org/en/strategy

The Global Public Health Market

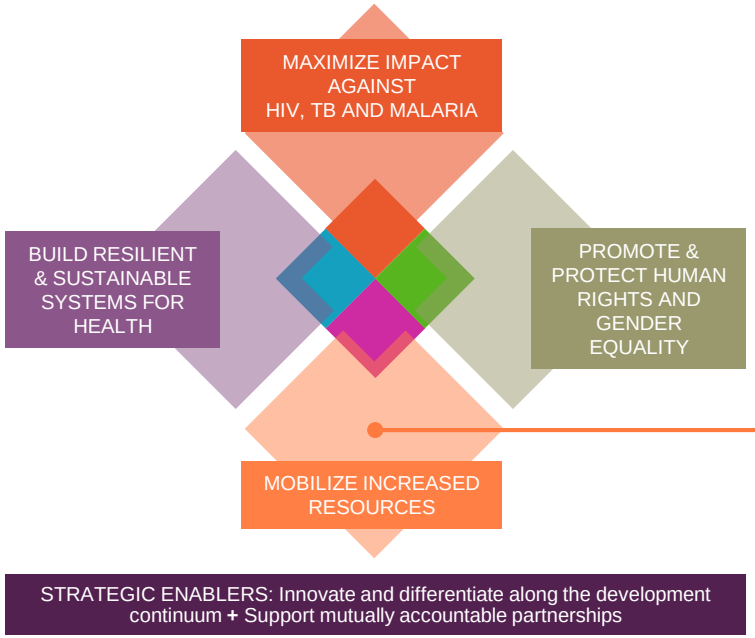
The **Global Public Health market amounts to ~ USD 30.7 billion** annually of which the Global Fund is one of the largest players





SOURCE: http://vizhub.healthdata.org/fgh/

Global Fund Strategy 2017-2022: *Investing for Impact*



- c Implement and partner on market shaping efforts that increase access to affordable, quality-assured key medicines and technologies
- d Support efforts to stimulate innovation and facilitate the rapid introduction and scale-up of cost-effective health technologies and implementation models

Global Fund has proactively shaped markets to improve health outcomes since 2004

2004 — With WHO, recipients transitioned to ACTs from suboptimal therapies

2007 — Board approves first Market Shaping Strategy, including Price & Quality Reporting and Voluntary Pooled Procurement

2011 — Market Shaping Strategy is approved by Board, with focus on pooling procurement, value for money, capacity building and ARVs

2013 — Operational initiatives through Procurement for Impact strengthen market shaping tools

2015

Changing market dynamics, context, and new Global Fund strategy prompted revision of Market Shaping Strategy

The Global Fund has a set of tools it can use to shape markets

Price & Quality Reporting

- Public database with transaction-level data on Global Fund-financed procurements of core health products, after delivery

Quality Assurance policies

- Policies to assure quality of pharmaceutical and diagnostic products financed by the Global Fund

Pooled Procurement Mechanism / wambo.org

- Mechanism to pool procurement of health products. Can be leveraged toward market shaping objectives, reduces grant implementation risks

Revolving fund

- Small revolving fund that provides working capital to scale up new products

PSM policies

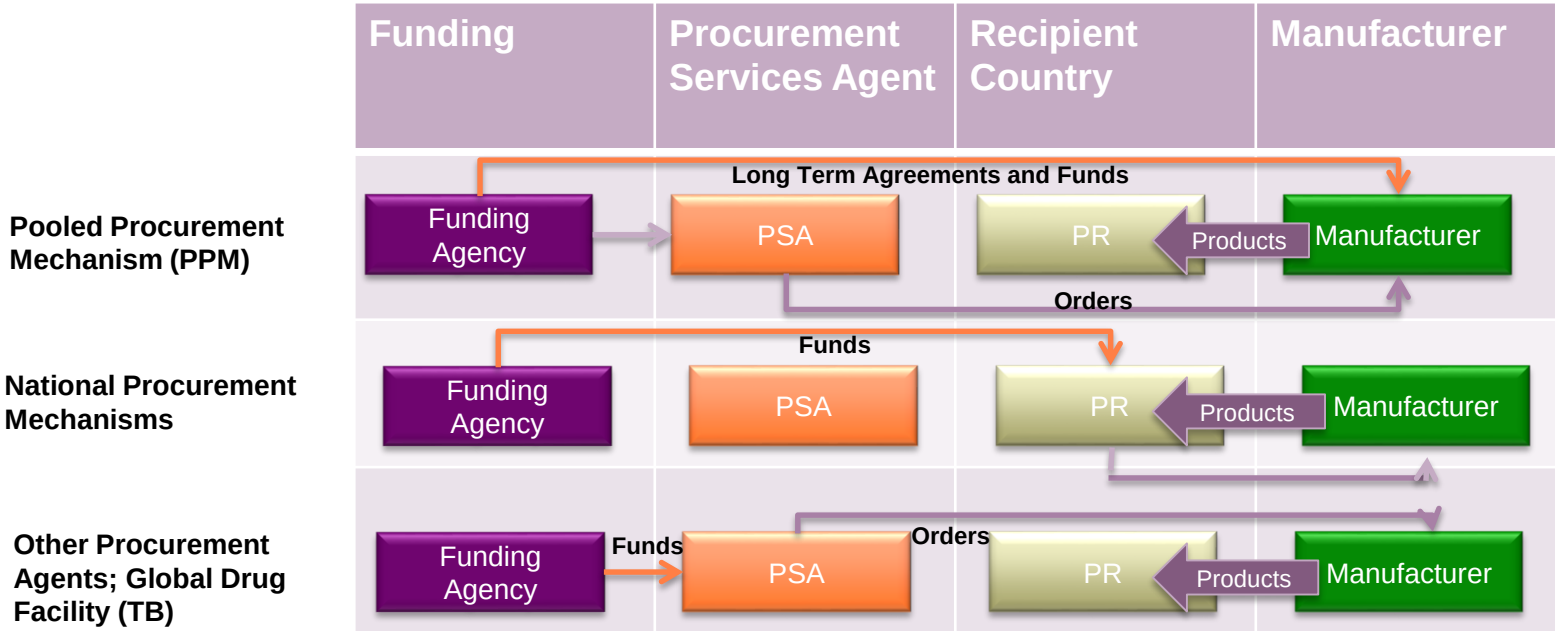
- Legal obligations and best practices that recipients should apply in procuring Global Fund-financed products

Guidance from Health Product Managers

- Country Team members responsible for PSM topics throughout grant-making and implementation

Procurement Channels and Routes to Market

There are a number of procurement channels - with the Pooled Procurement Mechanism representing around 55% total Global Fund health product spend (depending on category)



Implementing the Board-approved (2015) Market Shaping Strategy through the Pooled Procurement Mechanism (PPM)

Vision	***Market shaping supports health outcomes and access to critical health products by…*** ***...leveraging the Global Fund's position to facilitate healthy global markets; generate cost savings and improve procurement and delivery conditions*** **(lead time; on time and in full (OTIF))**
Scope	• All **pharmaceuticals and health technology products** financed by Global Fund • **Sourcing strategies for core products** (ARVs, Antimalarials, LLINs, diagnostics including RDT*, essential medicines used in HIV*) through **Long Term Framework Agreements** (LTAs) with suppliers • Procurement methods for **non-core products** through **PSAs and catalogues**
Process	• **Designing, issuing** and **managing competitive tenders** to support category-specific market shaping objectives • **Managing Supplier allocations** and PR requests & demand of core health products through framework agreements • Execution of PPM orders from requests to deliveries **via wambo.org**, a **PR-facing portal** that increases country ownership of ordering operations with full visibility and a transparent and auditable process

** In progress, as indicated in workplan*

Key expectations for Market Development

Value for Money

- Maximizing Investments
- Competitive pricing
- Board value base

Sustainability

- Reliable, Responsible and Responsive Supply
- **O**n **T**ime **I**n **F**ull deliveries

Quality & Regulatory

- International Standards
- Registration footprints

Market Intelligence

- Technology
- Balanced Demand and Supply
- Market trend

GLOBAL FUND QUALITY ASSURANCE POLICY

Quality Assurance Policy for Health Products

QA Policy for Pharmaceutical Products

Selection

1. Clinical Criteria

Medicines listed in WHO EML or national or institutional Standard Treatment Guidelines

Require applicants/ recipients to provide justification for selection of unlisted products in one of the STGs

+

Procurement

2. Quality Criteria

For all products:

Authorization for use in the recipient countries

For ARVs, anti-TB and anti-malarial products

➡ Specific requirements

+

In-country management

3. Monitoring Quality

Monitoring quality of products all along the supply chain

4. Implementing Pharmacovigilance

Monitoring ADRs of pharmaceutical products

Quality Requirements for Pharmaceutical Products

- For all products
  - Registration / Marketing Authorization for use in the recipient countries
    - National requirements for registration applied

- For ARVs, Anti-TB medicines and Anti-Malaria pharmaceuticals
  - WHO Prequalified by WHO PQ Team
    - Internationally recognized standards (GMP, BE, Stability)
  - Authorized by Stringent Regulatory Authority
    - Internationally recognized standards (GMP, BE, Stability)
  - Found Eligible for procurement following the advise of the **Expert Review Panel (ERP)**

Expert Review Panel (ERP)

- Expression of Interest following extensive consultation
- A panel of experts hosted by WHO
- Eligibility criteria for dossier submission:
  - product manufactured in GMP site; and
  - dossier already submitted to and accepted for review by WHO PQ program or by a SRA
- Assesses the potential risks/benefits associated with the use of FPPs that are not yet WHO-prequalified or SRA-authorized
- Assessment of product dossiers submitted by manufacturers
- Makes time limited recommendations to Global Fund: maximum 12 months

Procurement Criteria for Pharmaceutical Products

For all products:
Procurement complies with the principles set forth in the WHO Model Quality Assurance System for Procurement Agencies (MQAS)

Describes a quality management system for procurement entity + package of useful guidelines

- to harmonize the format of data and information requested to the manufacturers
  - Inter-Agency Pharmaceutical Product Questionnaire
- to harmonize the evaluation of data and information on products
  - SOP for screening and assessing questionnaire
- Unified standards for inspection of manufacturers and suppliers to assess compliance with GMP
  - SOP for planning, preparation, performing and reporting of inspections
- for Good Storage and Good Distribution Practices

WHO Model Quality Assurance System for Procurement Agencies

Main sections of the Inter Agency Finished Pharmaceutical Product Questionnaire

- Product identification
- Manufacturer of the product
- Supplier identification
- Regulatory status
- Samples
- Active pharmaceutical ingredients: Sources, specifications
- Finished product specifications: manufacturing & validation, specifications, stability
- Therapeutic equivalence (BE, Comparative in-vitro dissolution)

No prescribed requirements / standards / technical & regulatory guidelines

Operational arrangement for listing in Global Fund QA Lists

Initial listing

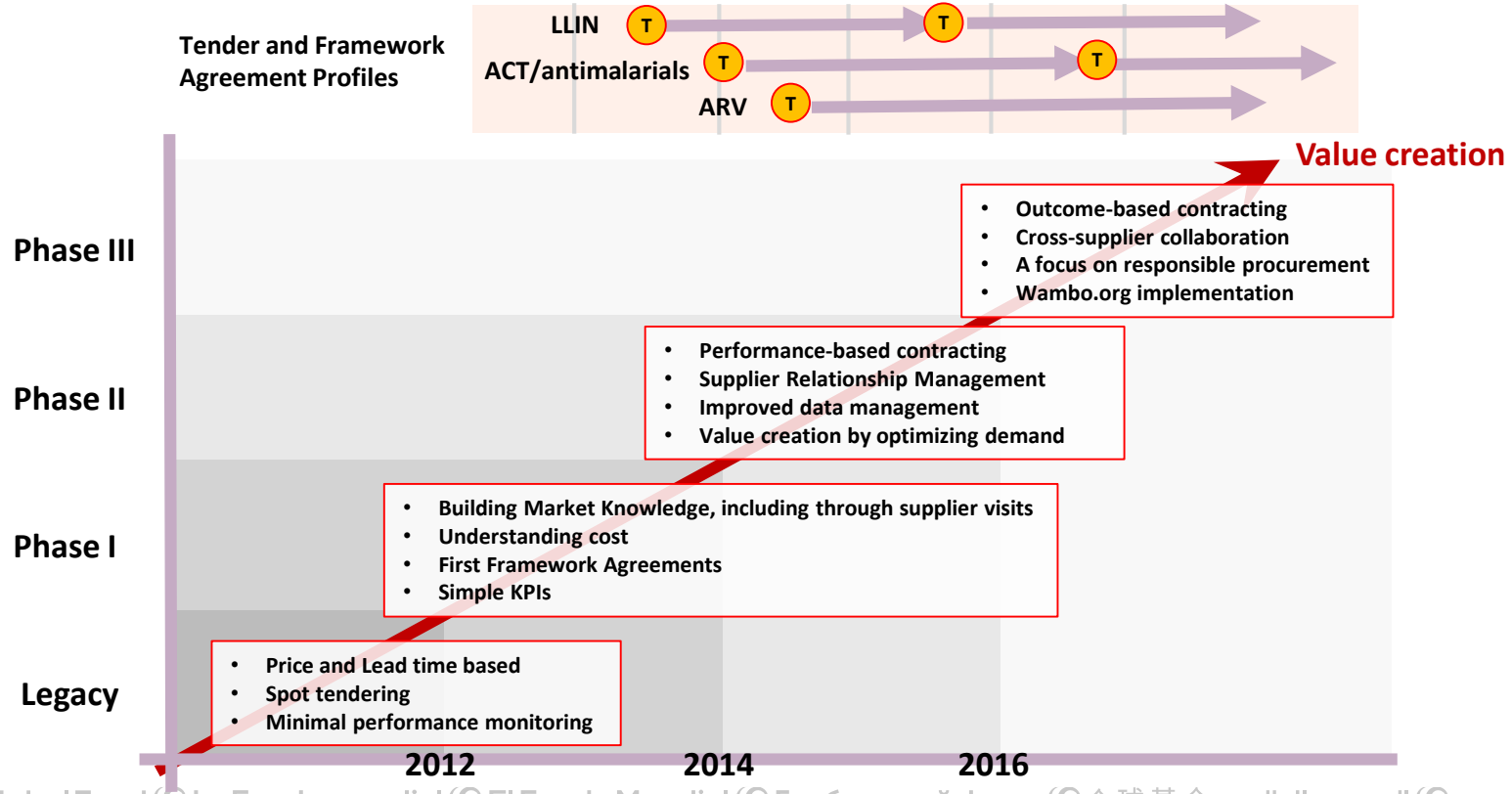
- Filing a product information sheet (PIS) with all requested information

Maintenance in the list

- Information on important variations related to the Product or manufacturing sites
- Information on serious ADRs and NCs
- Information on GMPs issues and potential regulatory actions
- Randomized quality control testing Covered by confidentiality agreement

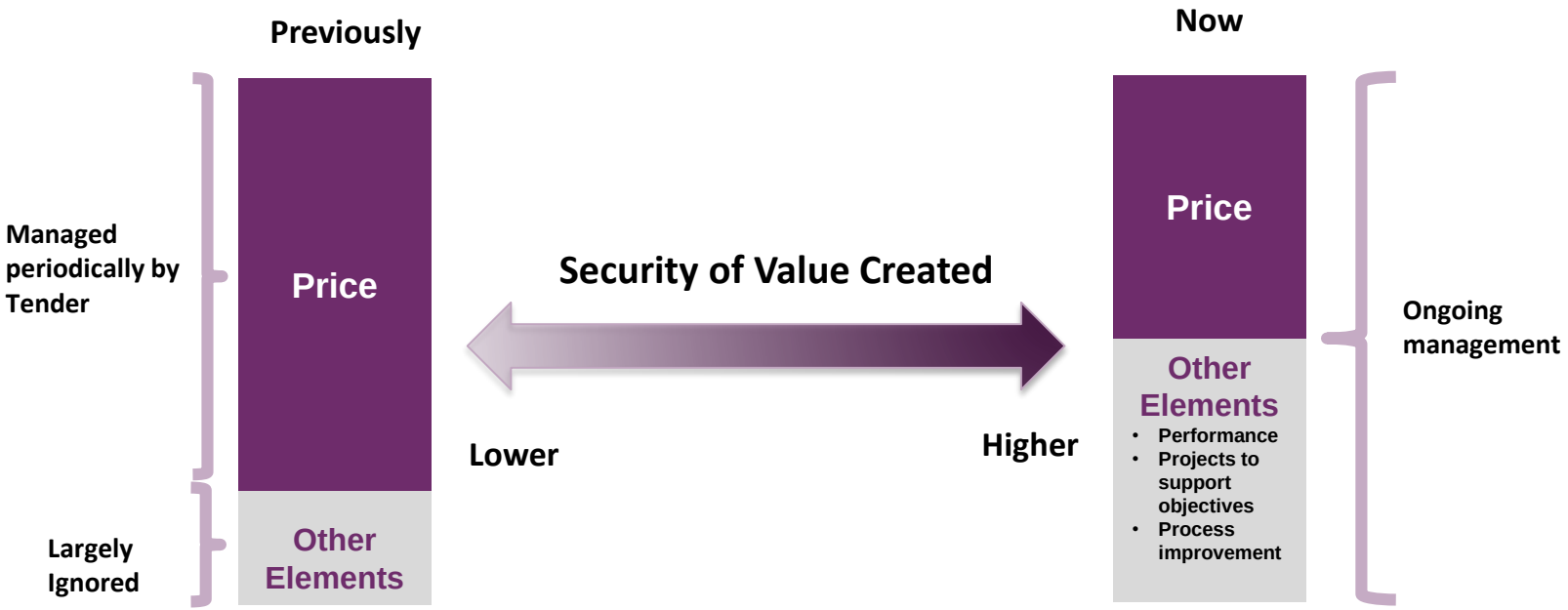
MARKET SHAPING STRATEGY & SOURCING APPROACH

Evolution of the Pooled Procurement Mechanism to implement the Market Shaping Strategy

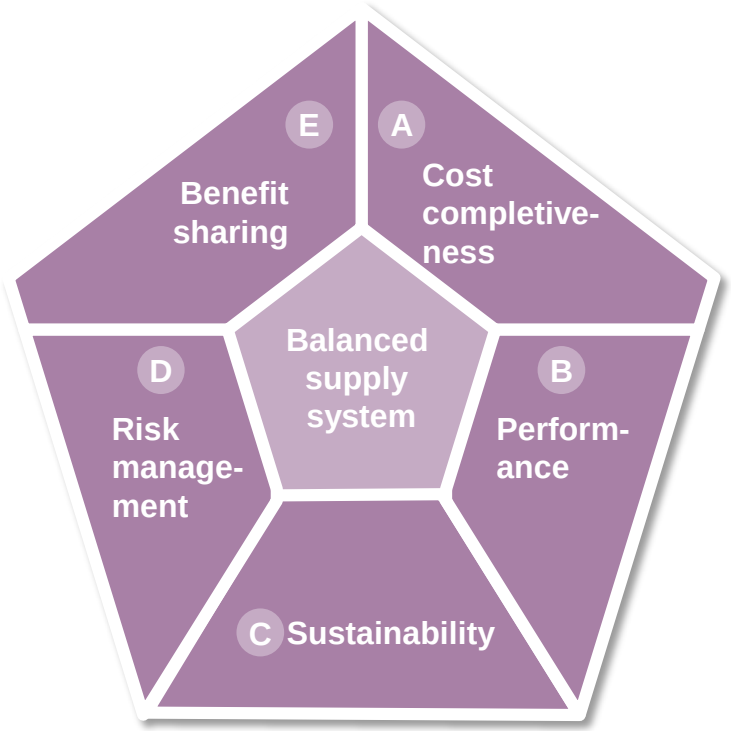


Maximizing Value through Supplier Relationship Management

Previous approaches only focused on the price value lever. Value creation has been extended across a range of levers which will increase in importance as cost is optimized.



The Global Fund has introduced a more balanced supply system based on 5 elements to improve performance



A
- Providing products **at the lowest possible affordable and sustainable price** to reach the maximum number of patients
- **Reducing price volatility** and eliminating predatory pricing

B
- Supplying product **timely and in full (OTIF)**
- Incentivizing suppliers to **introduce better formulations**

C
- **Supporting new suppliers** to ensure sufficient supply and mitigate geographic supply risks
- Investing in suppliers with **sustainable manufacturing practices**

D
- Maintaining **well-diversified supplier base**
- Meeting **The Global Fund and national quality** requirements
- Mitigating **implementation risks**

E
- Publishing **reference prices**
- **Building capacity** and implementing rapid supply mechanisms

C Sustainability: working across product categories, further diversifying our supplier base.

- Procure core health products from a range of suppliers, including originators, licensed generics, generics and Africa-based manufacturers. Newly approved suppliers may also have opportunities to supply, if needed.

Core health product category	# of suppliers supplied to GF PPM	Total eligible suppliers
ARVs	17	20
ACTs	9	10
LLINs	10	13

- We are proactively working on diversifying our supplier base by engaging with **China-** and **Africa-**based pharmaceutical, LLIN and diagnostics suppliers to understand challenges and explore opportunities, which will be considered in on-going procurement strategy development.

D Supply Risk Management

1. **Robust regular performance review and allocation**: ~70% of PPM spend is covered by continuous supplier performance review and annual volume allocation is subject to adjustment based on previous year performance review.

2. Working closely with GF quality specialists team, and regulatory agencies to proactively address any emerging **quality issues** associated with suppliers. Product volume allocation can be timely adjusted to mitigate identified risks.

3. On-going supplier engagement keep our market intelligence up-to-date to inform our procurement strategy development and procurement planning. More importantly it enable us to accommodate any **newly approved products** and **suppliers** into the procurement process if needed.

Our strategy to encourage local production through the Pooled Procurement Mechanism

Defining new sourcing strategies and changing the procurement landscape:

- ✓ Engaging directly with African Manufacturers
- ✓ Encouraging 'local' manufacture for the first time as an explicit objective in procurement strategies (anti-malarial medicines, May 2017)
- ✓ Multi-year Framework agreements to provide a level of certainty that that enables a longer term vision on financing, volume and pricing (underwritten by allocations and commitments in the resulting framework agreements)
- ✓ Adjusting the commercial landscape to 'Level' the competition playing field through:
  - ➢ *Broad definition of value beyond price*
  - ➢ *Responsiveness and customer proximity;*
  - ➢ *Re-balancing of tenders by increasing the emphasis on total landed cost*
- ✓ Diversify our current supply base through intensive supplier engagement, including engaging with Africa-based manufacturers.

Volumes produced in Africa supplied through the Pooled Procurement Mechanism (2016)

Pharmaceuticals:

- Through our global tenders, we have increasingly procured ACTs (and ARVs) from Quality Chemicals, Uganda – reaching 15% total volume in 2016 for artemether-lumefantrine (amongst 7 suppliers)
- For essential medicines are sourced from a limited number of Africa-based manufacturers including Universal (currently through our procurement agents). We see other emerging opportunities with the increasing number of manufacturers and will be launching a **new procurement strategy for essential medicines in H1-2018**

Health technology: LLIN

- The result 2015 GF LLIN tender, A-Z Tanzania was allocated significant volumes: 13% volume in 2016

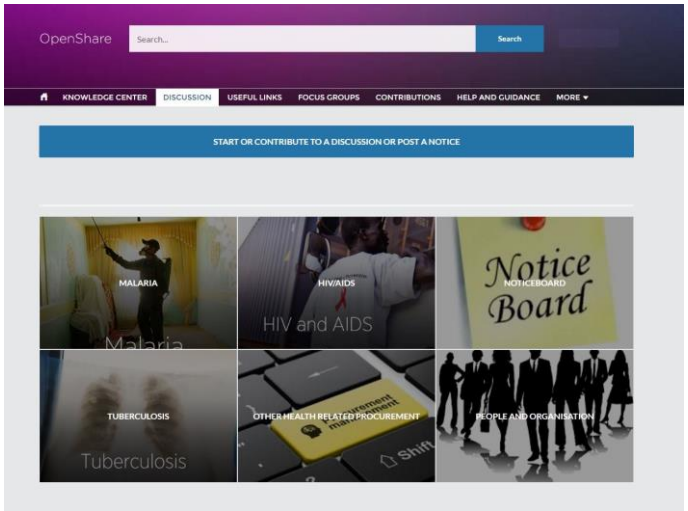
Benefit Sharing and Capacity Development

1. **PPM Reference prices** are published on website and Wambo.org and used for budgeting purpose by The Global Fund and others

2. **Framework Agreements extended** (depending on category) to partner agencies (PAHO; UNDP; UNITAID) and to Governments with national funding (e.g. Cameroun, Georgia, Guyana)

3. Enabling **manufacturing close to the demand and encouraging new entrants**.

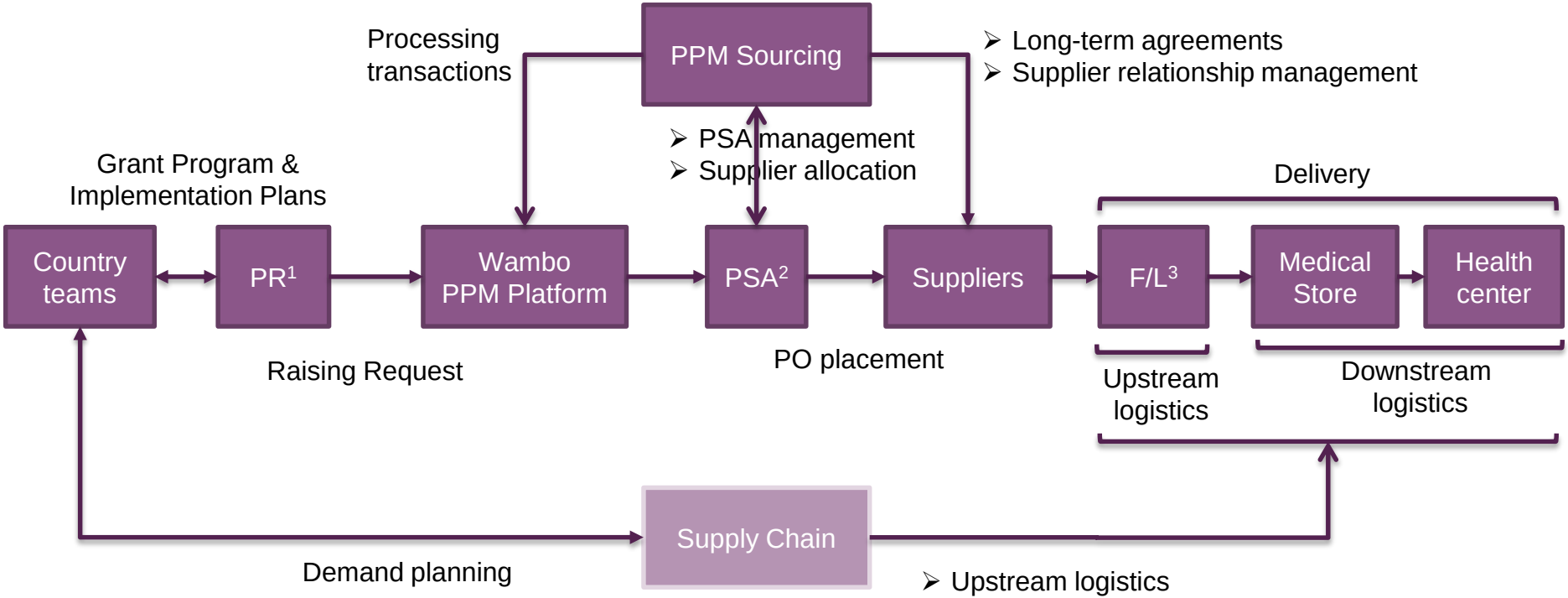
4. **Sharing procurement expertise and experiences:** establishing a procurement community – including The Procurement Portal (Openshare); mentorship programmes etc. (pending launch)



POOLED PROCUREMENT MECHANISM

PROCUREMENT PORTFOLIO

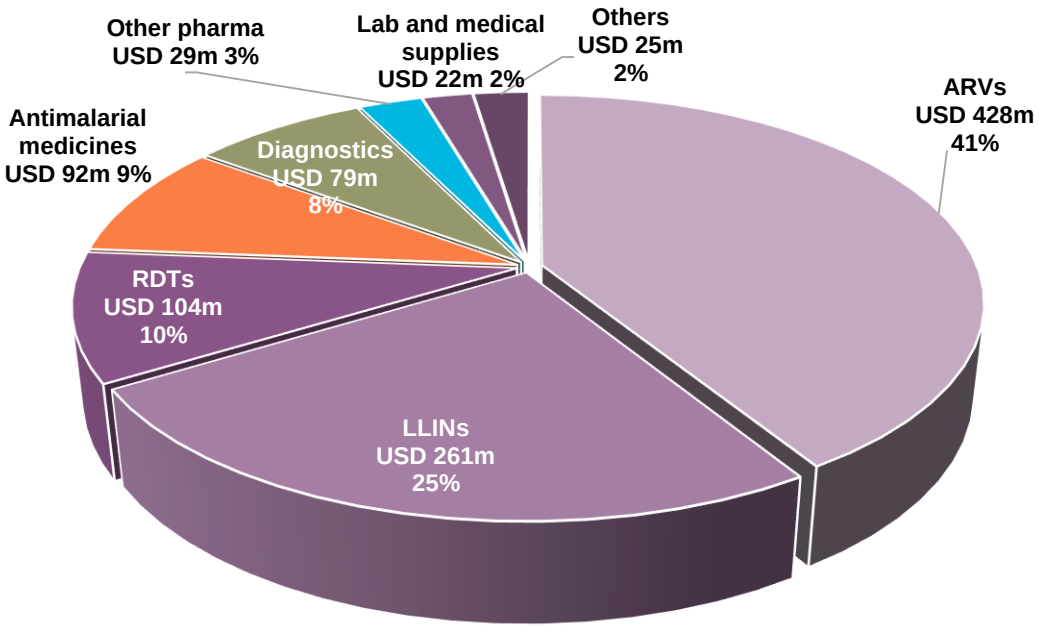
Pooled Procurement Mechanism (PPM) Process Flow



1. *Principal Recipients*
2. *Procurment Services Agent*
3. *Freight Logistics*

Pooled Procurement Mechanism health product spend 2016

PPM spend is approximately 55% of the total Global Fund health product spend



Source: Financial data from PPM 2016 approved orders

"Core products"

- represent +/- 85% of procurement value
- between 25% and 70% of procurements financed by the Global Fund are channeled through PPM (depending on the category)

Acronyms:

ARVs	*Antiretroviral drugs*
ACTs	*Artemisinin Combination Therapy*
LLINs	*Long-Lasting Insecticide treated nets*
RDTs	*Rapid Diagnostic Tests*
Lab	*Laboratory equipment and supplies, medical consumables, etc.*

PPM Countries

(60 Countries --150+ Grants)

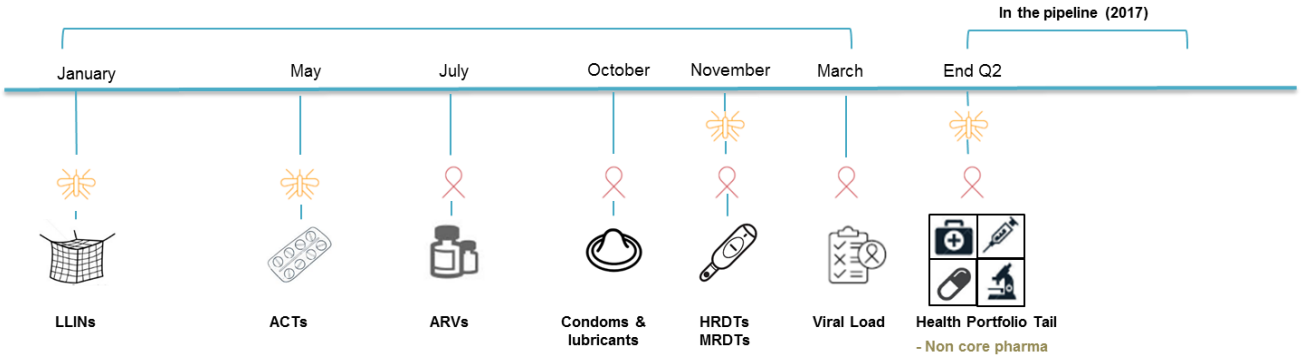
High Impact Africa 1
Cote d'Ivoire
DR Congo
Ghana
Nigeria
High Impact Africa 2
Mozambique
Tanzania
Uganda
Zambia
Zanzibar
Zimbabwe
High Impact Asia
Bangladesh
Indonesia
Pakistan
Philippines
Thailand
Vietnam

Africa
Angola
Benin
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Comoros
Congo
Guinea
Guinea-Bissau
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Niger
Senegal
Sierra Leone
Swaziland
The Gambia
Togo
Yemen

Asia Europe, Latin. America & Caribbean (AELAC)
Eastern Europe and Central Asia
Armenia
Georgia
Kazakhstan
Macedonia
Latin America & Caribbean
Colombia
Dominican Republic
Guatemala
Guyana
Honduras
Nicaragua
South East Asia
Bhutan
Cambodia
Lao PDR
Mongolia
Multi-country Western Pacific
Nepal
Papua New Guinea
Sri Lanka
Timor Leste

PPM underwriting wambo.org – wambo.org as the “face of PPM”

All health products in wambo.org are managed through either PPM framework agreements; Procurement Service Agent (PSA) catalogues; or Partner MoUs. Performance is managed by PPM.



Key enablers:

1. Eligibility of Supplier – QA policy
2. Selection of Supplier – Global Tender
3. Negotiated Prices and conditions – Framework Agreement
4. Order processing - Allocation to supplier and volume

Added value of wambo.org – some key aspects

Country ownership

> Flexible approval chains mirror all different in-country processes
> One more tool available to in-country procurement professionals, empowering them; In synergy with, not in lieu of, capacity building

Transparency and auditability

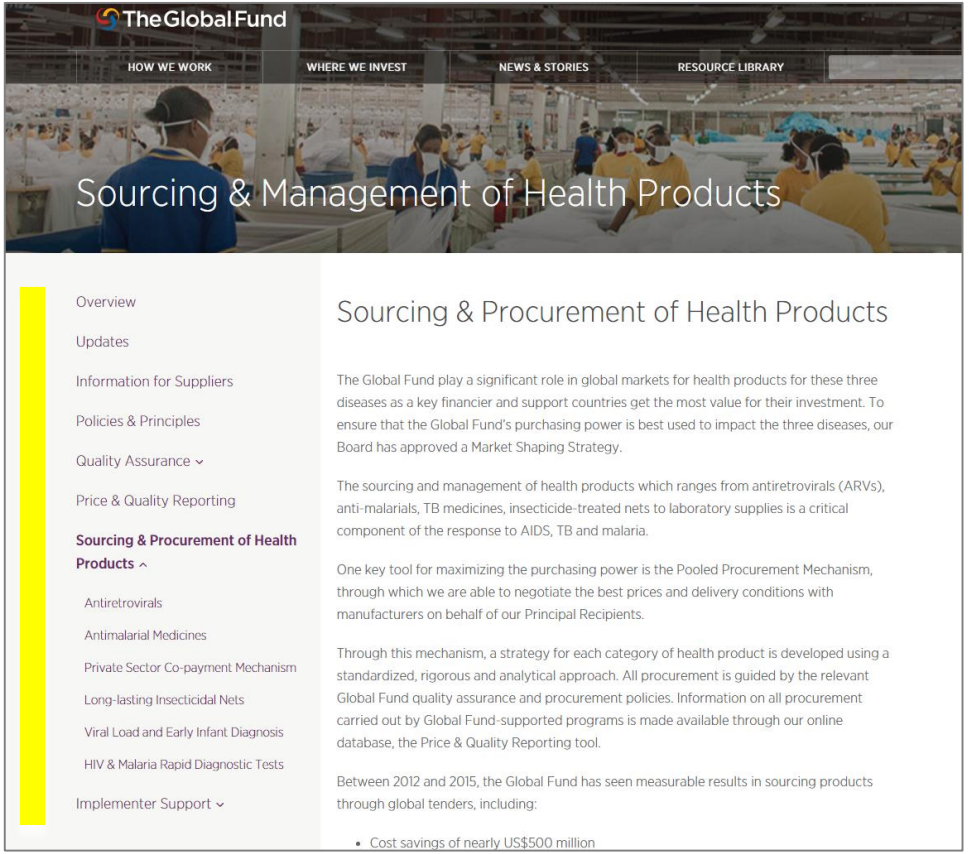
> Complete audit trail automatically generated and stored
> Immediate visibility to country teams, LFAs, empowering preventative controls

Potential to accelerate scale-up of innovative products

> Partnership with UNITAID
> “Levers” in the platform inform the PR about certain characteristics of products at key moments in the P2P process

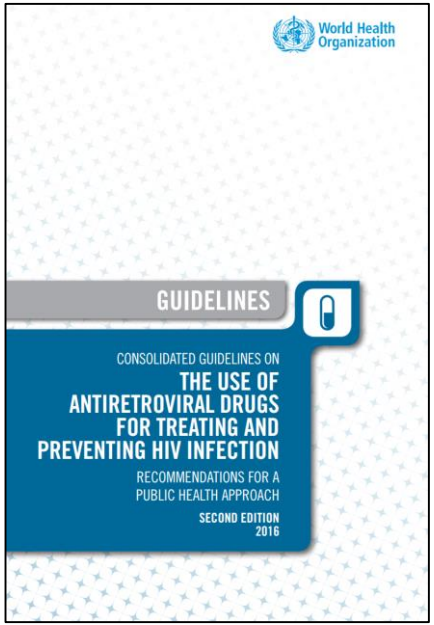
Sourcing & procurement of health products

- Category information
- Supply & demand information
- Previous RFP documentation
- Reference pricing



http://www.theglobalfund.org/en/sourcing-management/health-products/

Antiretroviral medicines

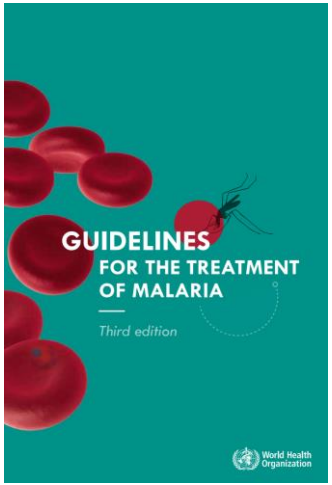


+/- 30 medicines including the following 10 responsible for around 95% spend

- efavirenz+lamivudine+tenofovir – FDC 600mg+300mg+300mg | tab bottle-30
- efavirenz+emtricitabine+tenofovir - FDC600mg+200mg+300mg | tab bottle-30
- lamivudine+nevirapine+zidovudine - FDC150mg+200mg+300mg | tab bottle - 60
- lamivudine+tenofovir – FDC 300mg+300mg | tabbottle-30
- lamivudine+zidovudine – FDC 150mg+300mg | tab bottle - 60
- lamivudine+nevirapine+zidovudine – FDC 30mg+50mg+60mg | dispersible tab bottle - 60
- lopinavir+ritonavir – FDC 200mg+50mg | tab bottle-120
- efavirenz 600mg | tab bottle-30
- nevirapine 200mg | tab bottle - 60
- atazanavir + ritonavir - FDC300mg+100mg | tab bottle-30

https://www.theglobalfund.org/en/sourcing-management/health-products/antiretrovirals/

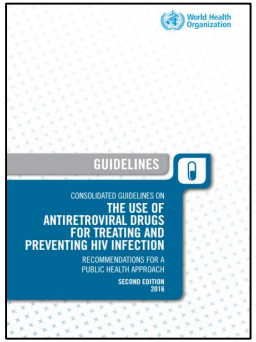
Antimalarial medicines



Product Set		Description	Examples
1	Artemether-lumefantrine Artesunate-amodiaquine	High volume artemisinin-combination therapies (ACTs)	• artemether + lumefantrine (FDC) • artesunate + amodiaquine (FDC)
2	Severe malaria	Injectable and rectal artesunate	• artesunate (powder) • artesunate (suppositories)
3	Specialized use and low volume ACTs	Chemoprophylaxis for special risk groups and low volume ACTs	• sulfadoxine-pyrimethamine (FDC) • amodiaquine + sulfadoxine-pyrimethamine ▪ artesunate + mefloquine (FDC) ▪ artesunate + sulfadoxine-pyrimethamine ▪ dihydroartemisinin + piperaquine (FDC) ▪ artesunate + pyronaridine
4	Other: low transmission, relapse, CQ-sensitive	Medicines for low-transmission, P. vivax relapse prevention and uncomplicated chloroquine-sensitive infections	• primaquine • chloroquine

https://www.theglobalfund.org/en/sourcing-management/health-products/antimalarial-medicines/

Essential Medicines: core WHO-recommended non-ARV interventions



Co-trimoxazole prophylaxis
- Tablets: 960mg; 480mg; 120mg dispersible
- Suspension 200/40mg/5 ml

Isoniazid preventive therapy
- Tablets:100mg, 300mg

Cryptococcal disease
- amphotericin B, injection vial 50 mg (deoxycholate); 50 mg (liposomal)
- flucytosine capsule 250mg; 500 mg scored/preferably slow release tablet; inj 10mg/ml
- fluconazole capsule 50 mg; 200 mg; injection 2mg/ml

Hepatitis C (preferred regimens)
- sofosbuvir 400mg
- ledipasvir 90mg/sofosbuvir 400 mg
- daclatasvir 30, 60mg
- ribavarin 200mg

Isoniazid + co-trimoxazole + pyridoxine tablets 300 mg/ 960 mg/25 mg

Essential medicines: other WHO recommendations for use in HIV*

Antiviral agents
- acyclovir tablets
- gancyclovir injection
- valgancyclovir tablets

Antibacterial agents
- amoxicillin/clavulanic acid, scored/tablet
- azithromycin tablets
- ceftriaxone injection
- ciprofloxacin tablets
- sulfadiazine tablets

Antiprotozoal, antifungal & anti-mycobacterial agents
- clarithromycin tablet
- Clindamycin injection, capsules
- dapsone tablets
- folinic acid tablets
- rifabutin capsules
- itraconazole capsules
- pentamidine injection
- pyrimethamine tablets

Palliative care
- amitriptyline tablets
- chlorphenamine tablets; oral solution
- codeine tablets
- cyclizine tablets; injection
- dexametasone tablets; injection
- diazepam tablets; injection
- docusate capsules; oral solution
- fluoxetine tablets
- hyoscine hydrobromide tablets; transdermal patch
- ibuprofen tablets
- loperamide injection; oral solution
- morphine tablets (immediate release & controlled release); oral solution; sprinkles
- ondansetron tablets; injection
- Prednisolone tablets
- senna tablets; oral solution

Opioid substitution therapy
- buprenorphine sublingual tablets
- methadone, concentrate for oral solution; oral solution

* Source: WHO expression of interest (also details formulation strengths)

Largest volume products – Pooled Procurement Mechanism

Product	2013	2014	2015 Q1 2016	Grand Total	%
Co-trimoxazole	$ 4,510,167	$ 9,971,096	$ 12,135,479	$ 6,911,217	$ 33,527,958	58%
Erythromycin	$ 405,700	$ 1,649,832	$ 2,263,132	$ 2,304,716	$ 6,623,381	11%
Methadone	$ 1,388,662	$ 1,260,603	$ 2,895,963	$ -	$ 5,545,228	10%
Amoxicillin	$ 63,049	$ 1,039,994	$ 2,000,402	$ 912,311	$ 4,015,755	7%
Phenoxymethylpenicillin	$ -	$ 500,000	$ 400,000	$ 652,500	$ 1,552,500	3%
Paracetamol	$ 43,118	$ 233,293	$ 591,968	$ 597,971	$ 1,466,350	3%
Metronidazole	$ 59,524	$ 461,839	$ 563,725	$ 286,401	$ 1,371,490	2%
Azithromycin	$ 16,804	$ 365,783	$ 505,592	$ 288,506	$ 1,176,684	2%
Vincristine	$ 3,362	$ 860,384	$ 131,100	$ 110,933	$ 1,105,779	2%
Ciprofloxacin	$ 68,464	$ 278,910	$ 267,040	$ 230,707	$ 845,122	1%
Bleomycin	$ 57,745	$ 217,594	$ 328,063	$ 149,991	$ 753,393	1%
Grand Total	**$ 6,616,594**	**$ 16,839,328**	**$ 22,082,465**	**$ 12,445,252**	**$ 57,983,640**	**100%**

5 products/ 10 formulations = 89%

Source: IDA Product report 04 April 2016

Spend concentrated in a few countries

Destination Country	Destination Region		Value USD	%
Mozambique	High Impact - Africa II	$	25,867,246	38%
Malawi	AME-CA	$	12,247,061	18%
Uganda	High Impact - Africa II	$	10,481,374	15%
Congo (Democratic Republic)	High Impact - Africa I	$	7,924,192	12%
Viet Nam	High Impact - Asia	$	5,501,228	8%
Cameroon	AME-WA	$	2,823,937	4%
Burundi	AME-CA	$	1,460,048	2%
Liberia	AME-CA	$	1,202,126	2%
Guinea	AME-WA	$	674,615	1%
Grand Total		**$**	**68,181,827**	**100%**

6 countries
= 96%

Source: IDA Product report 04 April 2016
2013 - Q1/2016

Long lead-times of 200 or more days

	PQ Approval to Delivery	
Product	**Days**	**Months**
Co-trimoxazole	213	7.1
Erythromycin	203	6.8
Amoxicillin	206	6.9
Phenoxymethylpenicillin	271	9.0
Paracetamol	175	5.8
Metronidazole	166	5.5
Azithromycin	210	7.0
Vincristine	216	7.2
Ciprofloxacin	159	5.3
Bleomycin	241	8.0
Nystatin	190	6.3
Grand Total	**200**	6.7

Source: IDA Product report 04 April 2016
2013-2015

Long-lasting insecticidal nets (LLIN)

Updated 1 April 2016

WHO recommended long-lasting insecticidal nets

Product name	*Product type*	*Status of WHO recommendation*	*Status of publication of WHO specification*
DawaPlus 2.0	Deltamethrin coated on polyester	Interim	Published
Duranet	Alpha-cypermethrin incorporated into polyethylene	Full	Published
Interceptor	Alpha-cypermethrin coated on polyester	Full	Published
LifeNet	Deltamethrin incorporated into polypropylene	Interim	Published
MAGNet	Alpha-cypermethrin incorporated into polyethylene	Full	Published
MiraNet	Alpha-cypermethrin incorporated into polyethylene	Interim	Published
Olyset Net	Permethrin incorporated into polyethylene	Full	Published
Olyset Plus	Permethrin and PBO incorporated into polyethylene	Interim	Published
Panda Net 2.0	Deltamethrin incorporated into polyethylene	Interim	Published
PermaNet 2.0	Deltamethrin coated on polyester	Full	Published
PermaNet 3.0	Combination of deltamethrin coated on polyester with strengthened border (side panels), and deltamethrin and PBO incorporated into polyethylene (roof)	Interim	Published
Royal Sentry	Alpha-cypermethrin incorporated into polyethylene	Full	Published
SafeNet	Alpha-cypermethrin coated on polyester	Full	Published
Veeralin	Alpha-cypermethrin and PBO incorporated into polyethylene	Interim	Published
Yahe	Deltamethrin coated on polyester	Interim	Published
Yorkool	Deltamethrin coated on polyester	Full	Published

HIV Rapid Diagnostic Tests - 21 products

HIV 1+2 - Determine Complete HIV Kit - accessories included - 100 tests
HIV 1+2 - Determine HIV Kit - no accessories - 100 tests
HIV 1/2 - Determine HIV Combo Kit - no accessories - 100 tests
HIV 1+2 - Chase Buffer - for Determine - 2.5ml vial - 100 tests
HIV 1/2 - Bioline 3.0 Kit - accessories included - 25 tests
HIV 1/2 - Bioline 3.0 Kit - no accessories - 30 tests
HIV 1/2 - SD Bioline HIV/Syphilis Duo complete kit - accessories included - 25 tests
HIV 1+2 - Uni-gold HIV Kit - accessories included -20 tests
HIV 1/2-O - First Response HIV 1-2.0 v.3.0 Cards Kit - accessories included - 30 tests
HIV 1/2-O - First Response HIV 1-2.0 v.3.0 Cards Kit - accessories included - 25 tests
HIV 1+2 - SD Bioline Ag/Ab Combo Kit - no accessories - 30 tests
HIV 1+2 - OraQuick HIV Rapid Antibody Kit - accessories included - 100 Tests
HIV 1+2 - Stat-Pak Dipstick Assay Kit - accessories included - 30 tests
HIV 1+2 - Stat-Pak HIV Kit - accessories included - 20 tests
HIV 1+2 - Vikia HIV Device Kit - accessories included - 25 tests
HIV 1+2 - INSTI HIV Antibody Test Kit - 48 tests
HIV 1 - Generic Rapid Diagnostic Test Kit - 1 test
HIV 1/2 - Generic Rapid Diagnostic Test Kit - 1 test
HIV 1+2 - Generic Rapid Diagnostic Test Kit - 1 test
HIV 1+2 - Determine HIV Kit - no accessories - 20 tests
Capillary Tubes – Determine - EDTA 50 uL- 100 tubes

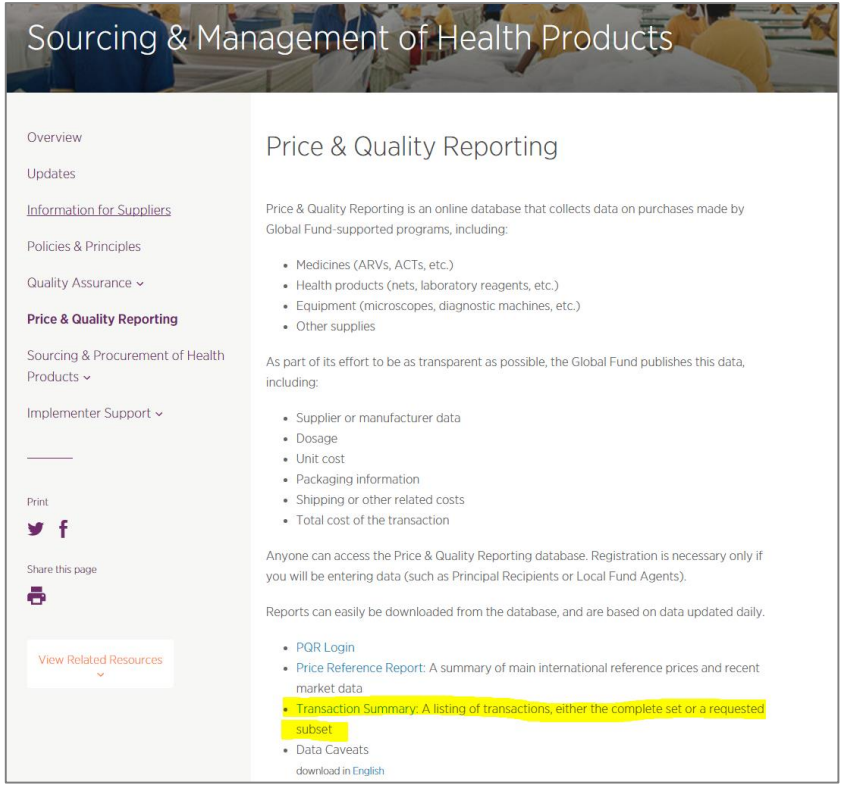
4 products with accessories included represent 91% of total category spend in 2016

Malaria Rapid Diagnostic Tests

	% category spend (2016)
Malaria Rapid Diagnostic Test Kit - Antigen Pf - 25 tests	71%
Malaria Rapid Diagnostic Test Kit - Antigen Pf/Pan - 25 tests	14%
Malaria Rapid Diagnostic Test Kit - Antigen Pf / Pv - accessories included - 25 tests	10%
Malaria Rapid Diagnostic Test Kit - Antigen Pf - POCT - 25 x 1 test	4%
Malaria Rapid Diagnostic Test Kit - Antigen Pf/Pan - POCT - 25 x 1 test	0.4%
Malaria Rapid Diagnostic Test Kit - Antigen Pf / Pv - POCT - accessories included - 25 x 1 test	0.1%

Transaction level data: procured & delivered

Price and Quality Reporting - PQR



http://www.theglobalfund.org/en/pqr/

The business opportunities and requirements for manufacturers

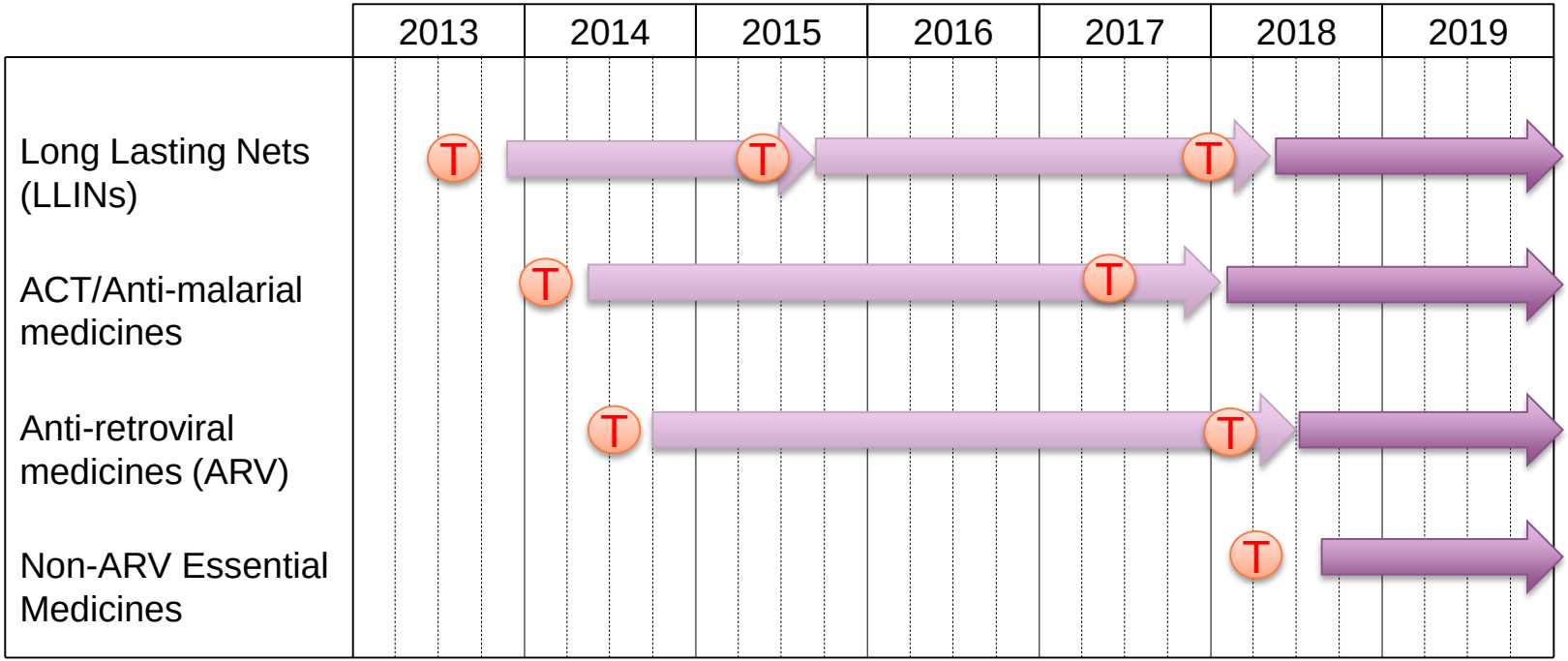
Feature	Impact for Manufacturers
• Long term contracts with volume allocation and potentially commitment (2 - 5 years)	• Ability to make finance plans; • Optimize plant loading
• Annual Volume Commitments	• Risk mitigation
• A focus on total cost of ownership	• Viability of inward investment
• Seek Value-added services	• Opportunity for innovation and investment
Key requirements	
• Product need to be compliant with relevant Global Fund Quality Policy. • National registration also required	• GMP and product approval are required + supporting admin processes.

Non-ARV Essential Medicine – Strategic direction

1. **Differentiated sub-strategies and approach** (and phased implementation)
   - Intervention: e.g. core WHO-recommended interventions; other essential medicines; Hepatitis C; narcotics
   - Volume and value potential
   - Regulatory framework
   - Supplier base: current & potential
2. **Qualification of international and sub-regional/national manufacturers and wholesalers**
   - Including (accelerated) review for new sources/products to enter
   - for those without WHO-PQ/SRA using WHO Model Quality Assurance System “principles”
3. **Contracting with manufacturers both directly and indirectly**
4. **Determine award and allocation criteria:** tender and individual order implementation
5. **Determine implementation dynamics including partnership/collaboration and supplier performance management**

We are listening as we evolve this procurement strategy

Sourcing strategies and procurement timelines



Current/previous contracting periods

Next contracting period

T Tender

*Subject to change

WHO Prequalification of in-vitro diagnostics, medicines, vaccines and vector control products

Overview of prequalification processes & product-specific updates

Deus Mubangizi
Coordinator,
WHO Prequalification Team

2017 African Pharma Manufacturers Conference
Addis Ababa, Capital Hotel

14th -15th June 2017

WHO prequalification of in-vitro diagnostics, medicines, vaccines and vector control products

- Introduction
- Prequalification role
- Prequalification process
- Product-specific updates
- Conclusion

WHO prequalification of in-vitro diagnostics, medicines, vaccines and vector control products

Introduction

Prequalification role

Prequalification process

Product-specific updates

Conclusion

- **WHO-PQ contributed to the Millennium Development Goals (MDGs):**
- Eight international development goals that 192 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015

4. **Reduce child mortality**
5. **Improve maternal Health**
6. **Combat HIV/AIDs, Malaria and other diseases**

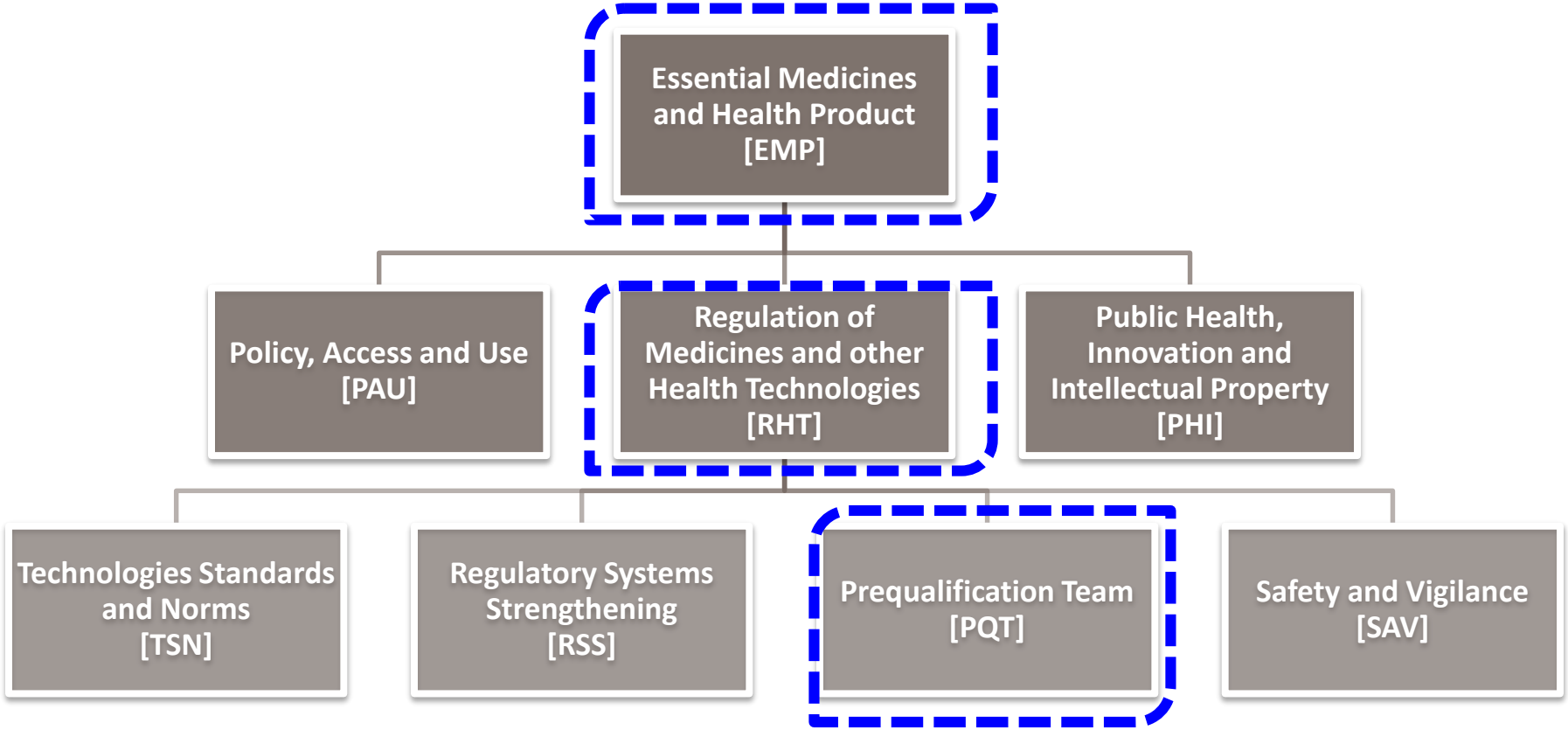
WHO-PQ contributes to the achievement of Sustainable Development Goals (SDGs)

http://www.un.org/sustainabledevelopment/sustainable-development-goals/

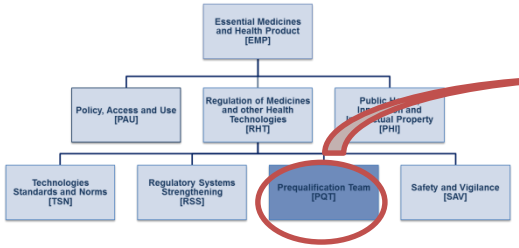
[6] *WHO-PQ by making safe quality priority health products available through efficient and scientifically solid assessment contributes to achieving SDGs and UHC. SDG 3 targets by 2030 include:*

- reduce the global **maternal mortality**
- end preventable deaths of newborns and children under 5 years of age,
- end the epidemics of **AIDS, tuberculosis, malaria and neglected tropical diseases** and combat **hepatitis**, water-borne diseases and other communicable diseases
- ensure universal access to sexual and **reproductive health-care** services, including for **family planning**
- Achieve **universal health coverage**, including access to quality essential health-care services **and access to safe, effective, quality and affordable essential medicines and vaccines for all**
- Support the **research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries and provide access to medicines for all**

Organization structure: PQT within RHT within EMP



Structure of the Prequalification Team



Prequalification Team

Coordinator's office

Vaccines Assessment

Medicines Assessment

Diagnostics Assessment

Inspections

Vector control

Administrative team

Background

→ *The prequalification team is responsible for the quality-assurance of IVDs, MCDs, FPPs, APIs, QCLs, vaccines, immunization devices, VCPs and VCIs*

Diagnostics (Dx) assessment of in-vitro diagnostics (**IVD**) & male circumcision devices (**MCD**)

Medicines (Mx) assessment of finished pharmaceutical products (**FPP**) & active pharmaceutical ingredients (**API**)

Vaccines (Vx) assessment of vaccines & immunization devices (**ImD**)

Vector control (VCx) assessment of vector control products (**VCP**) & vector control active ingredients (**VCAI**)

Inspections
of manufacturing sites

Laboratory evaluation & testing
of Dx, Mx & Vx

&

Laboratory prequalification
of Mx quality control laboratories (QCL)

Technical assistance
to manufacturers, NRAs and other stakeholders

Facilitation of National regulatory approval
for Dx, Mx & Vx

Background

→ *The prequalification team is responsible for the quality-assurance of IVDs, MCDs, FPPs, APIs, QCLs, vaccines, immunization devices, VCPs and VCIs*

Diagnostics (Dx) assessment of
in-vi
male

Medicines (Mx) assessment of
cts (**FPP**) &
nts (**API**)

Vacc
vaccines

ssment of
CP) &
VCI)

Laborat

ation
es (QCLs)

Technical assistance
to manufacturers, NRAs and other stakeholders

Facilitation of National regulatory approval
for Dx, Mx & Vx

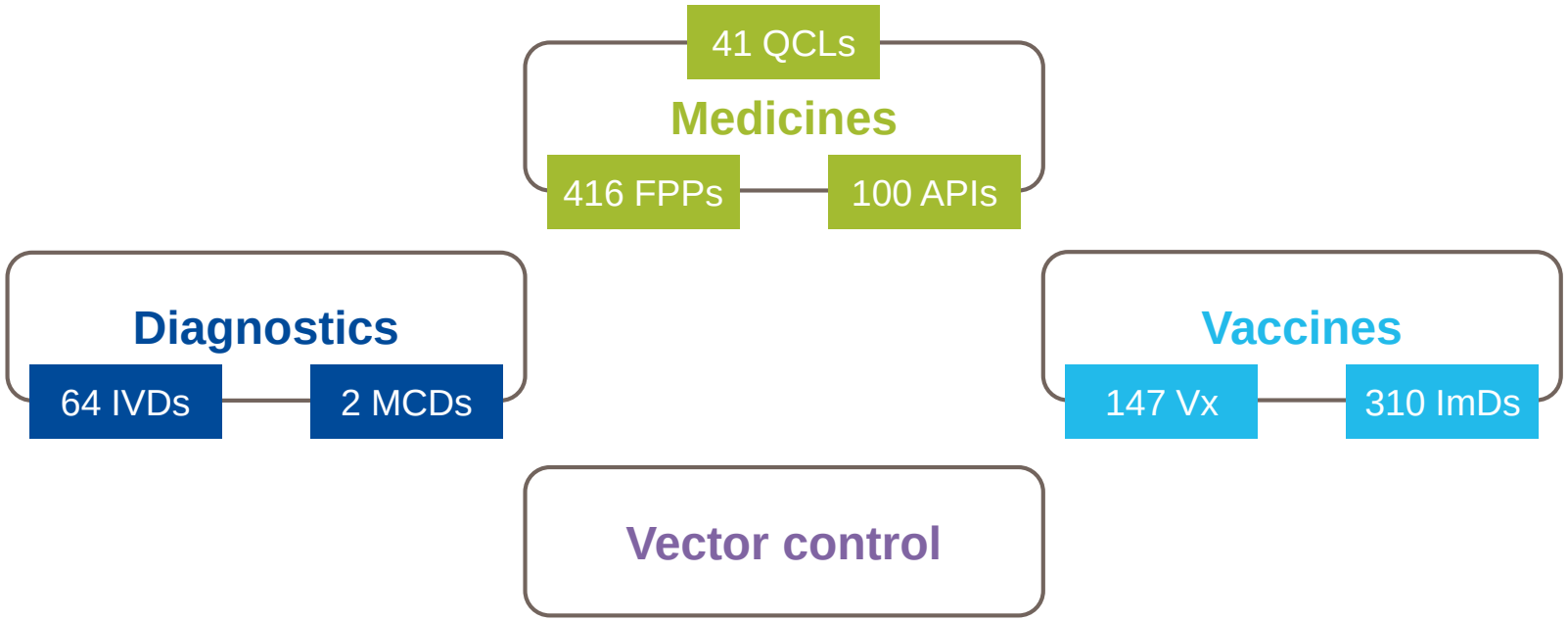
A pilot WHO prequalification process for
similar biotherapeutic products
to be launched on 1 September 2017

→ WHO will invite manufacturers to submit applications for prequalification of biosimilar versions of two products in the WHO Essential Medicines List: rituximab and trastuzumab

Key numbers

→ *Through the prequalification process, WHO has made available numerous quality-assured products to WHO Member State markets*

At the close of 2016, PQT's list of prequalified products included:



Benefits for stakeholders

→ *WHO prequalification serves as a guarantee of good quality for health products, is a reference in terms of internal technical expertise and has the power to convene external expertise*

Patients

- ✓ Access to quality-assured products, adapted to their specific needs
- ✓ Accurate prevention, diagnosis, and treatment

WHO Member States & NRAs

- ✓ Reduced burden for regulatory approval
- ✓ Increased regulatory capacity & harmonization of regulatory practices in WHO MS
- ✓ Implementation of specifically developed and road-tested international guidelines
- ✓ Access to quality-assured products

Donors, procurers and UN agencies

- ✓ List of prequalified products
- ✓ Increased availability of quality-assured products
- ✓ Monitoring quality of prequalified products
- ✓ Healthy market: diversity and affordability of products

Benefits for stakeholders

→ *WHO prequalification serves as a guarantee of good quality for health products, is a reference in terms of internal technical expertise and has the power to convene external expertise*

Manufacturers

- ✓ Access to donor-sponsored tenders
- ✓ Faster regulatory approval
- ✓ Timely assessment of variations and changes
- ✓ International quality-assured product status (improved image)
- ✓ Recognition of GMP status, beyond prequalified products
- ✓ Increased capacity in quality management systems
- ✓ Target Product Profiles
- ✓ Harmonization of regulatory practices within WHO Member States
- ✓ Reduced operating and manufacturing costs

QC labs

- ✓ International recognition of prequalified QCLs
- ✓ Technical assistance and scientific advice

Key successes

→ *WHO prequalification has also raised awareness of the importance of quality-assurance of medical products in resource-limited settings, made available and facilitated the uptake of new products*

Common achievements

- Creation of awareness of **quality issues** to regulators, manufacturers and procurers
- Building of **NRA capacity** and regulatory **harmonization**
- Improvement of manufacturers **GMP status and QMS**
- Development and implementation of **quality policies** with procurement agencies
- Development of a **robust mechanism** applicable to different types of products and diseases
- Adaptation to the **needs of stakeholders**
- Creation of a **sustainable and affordable market** of quality-assured products

Key successes

→ *WHO prequalification has also raised awareness of the importance of quality-assurance of medical products in resource-limited settings, made available and facilitated the uptake of new products*

Diagnostics

- Advocating for medical devices regulation in countries
- Prequalification of point of care devices

Medicines

- Bringing confidence to the quality of generics
- Introduction of the prequalification, hence quality-assurance of ARV monotherapies, FDCs and APIs

Vaccines

- Establishment of prequalification as the sole quality-assurance mechanism for international donor-funded procurement

Vector control

- Establishment of the Vector Control group to accept applications and provide guidance on the PQ process for VCPs on 1 January 2017

WHO prequalification of in-vitro diagnostics, medicines, vaccines and vector control products

- Introduction
- **Prequalification role**
- Prequalification process
- Product-specific updates
- Conclusion

Goal, strategy & outputs

→ *The mission of WHO prequalification is to ensure timely availability of quality-assured medical products for the prevention, diagnosis and treatment of priority diseases in LMICs*

Goal

- Make quality priority products available in a consistent and timely manner
- Ensure sustainable supply of quality-assured products
- Create national capacity to evaluate and monitor the ongoing quality of products

Strategy

- Apply and promote unified quality, safety and efficacy/performance **standards**, for a comprehensive evaluation of medical products
- Build the **capacity** of staff from NRAs, QC labs, manufacturers or CROs

Key outputs

- List of **prequalified products and QCLs**
- WHO **public reports**
- Accelerated **national registration** of prequalified products
- Increased **regulatory capacity** at national level
- Improved **GMP and QMS**

Added-value

→ *WHO prequalification assesses the quality, safety and efficacy/performance of medical products, while focusing on the specific needs in resource-limited settings*

Unique PQ characteristics

- **Programmatic suitability**: specific emphasis on issues of particular relevance to resource-limited settings, such as:
  - ✓ Stability of products (heat conditions)
  - ✓ Adapted specimen type (Dx)/ formulation (Rx)/ presentation (Vx)
  - ✓ Labelling of products
  - ✓ Ease of use (in terms of training and material)
- Efficacy/performance evaluated in the **global population**
- **Life cycle management** of products
- **Strengthening** manufacturers and NRAs **capacity**

Added-value

→ *WHO prequalification assesses the quality, safety and efficacy/performance of medical products, while focusing on the specific needs of resource-limited settings*

Diagnostics

- Focus on the versions of products that have not been stringently assessed (RoW versions)
- Risk classification rules applied with a focus on RLS, therefore the stringency of the review is determined differently

Medicines

- Prequalification of APIs and QCLs
- Participative process: significant involvement of regulators for low- and middle-income countries

Vaccines

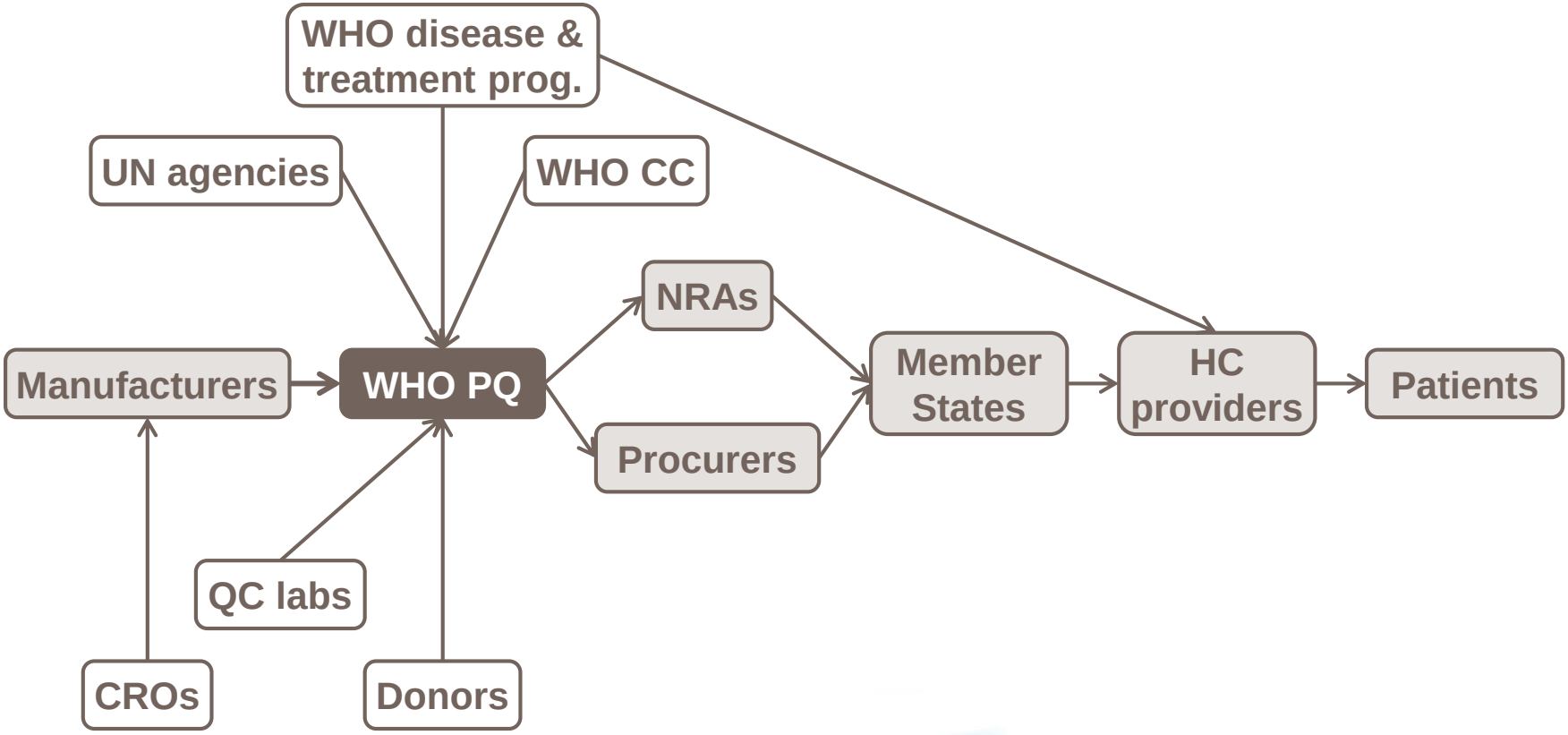
- NRA functionality as an eligibility criteria
- Prequalification of immunization devices

Vector control

- Prequalification of vector control active ingredients (VCAIs)
- Harmonized prequalification process including dossier review and manufacturing site inspection

Stakeholders

→ *The prequalification team interacts with a number of public and private stakeholders within the global public health environment*



WHO prequalification of in-vitro diagnostics, medicines, vaccines and vector control products

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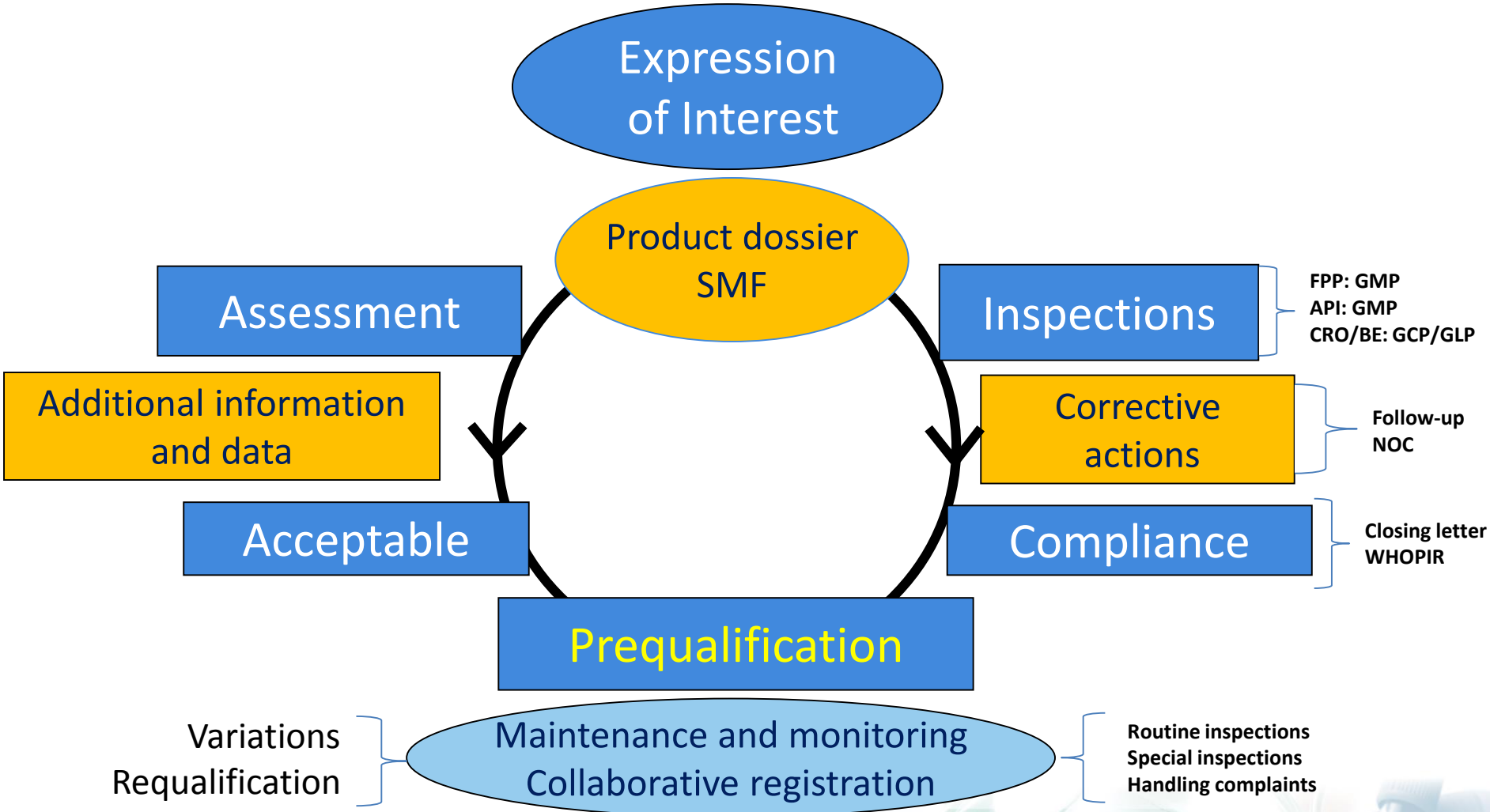
WHO-PQm process



→ *WHO-PQT-Rx Inspections*

- The evaluation of a medicine for prequalification includes inspection of FPP and API manufacturing sites, and CROs, i.e. no dossier, no inspection
- The sites must be GMP, GCP or GLP compliant (as appropriate) for a product to be prequalified
- The need for inspections of API sites and CROs are decided on a case by case risk basis.
- Inspections are conducted during the assessment process, on an on-going basis and in special circumstances

WHO-PQT-Rx: Inspection Timelines

- First inspection: 6 months from dossier acceptance for assessment or from site confirming it is ready for inspection.
- Notification: 1 – 2 months before inspection.
- Onsite days: 3 – 5 days based on scope and complexity.
- Report: 30 days from last date of inspection.
- CAPAs: 30 days from receipt of report (max 2 rounds, comprehensive, soft and not hard copies)
- Closing of inspection: 6 months from inspection.
- Follow-up inspection: 6 months from inspection
- Routine inspection:
  - Due date 1 – 3 years from the previous inspection (risk based)
  - Actual ± 3 months from due date.

→ *Inspections – Team and scope*

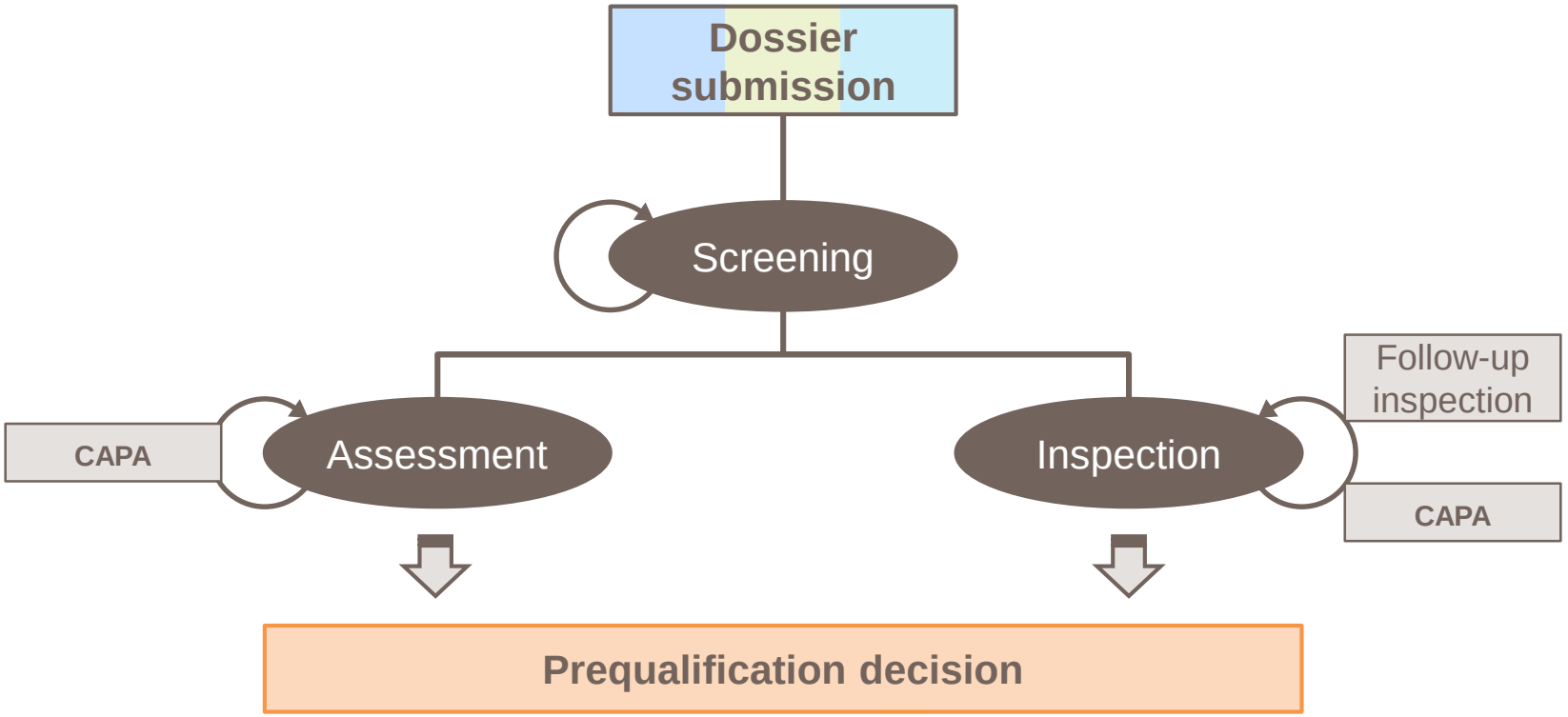
- Broad-based inspection team: qualified and experienced
  - WHO representative (qualified inspector)
  - Inspector from well-established inspectorate (Pharmaceutical Inspection Cooperation Scheme countries – PIC/S)
  - National inspector/s invited to be part and observe the inspection
  - Observer from recipient/developing countries (*nominated by NMRA of the country*)
- Scope
  - Compliance with guidelines: GMP for API and FPP sites, GCP for CROs, GLP for FPP/API factory QCL, CRO-BAL, NQCL, IQCL
  - Data integrity verification – data manipulation, falsification, (validation, stability, clinical, bioanalytical)

Prequalification Programme: Use of Inspection reports from other NMRAs

- **Inspectorates whose reports are recognized:**
  - √ PICS member inspectorates
  - √ EU (EDQM + EMA)
  - √ Level 4 and 5 under Global Benchmarking Tool (GBT)
- **What GMP evidence to submit:**
  - SMF – Up-to-date
  - Inspection report - conducted NMT 2 years
    - **+ CAPAs to deficiencies + final conclusion**
  - Product Quality Review – not more than 1 year old
- **Review of the report:**
  - ✓ **scope covered the specific FPP or API**
  - ✓ Is comprehensive and supports the final outcome.
- **PQP reserves the right to inspect the FPP/API manufacturer** – as long as product is active in WHO-PQP.
- **on-going GMP compliance will be confirmed by WHO**

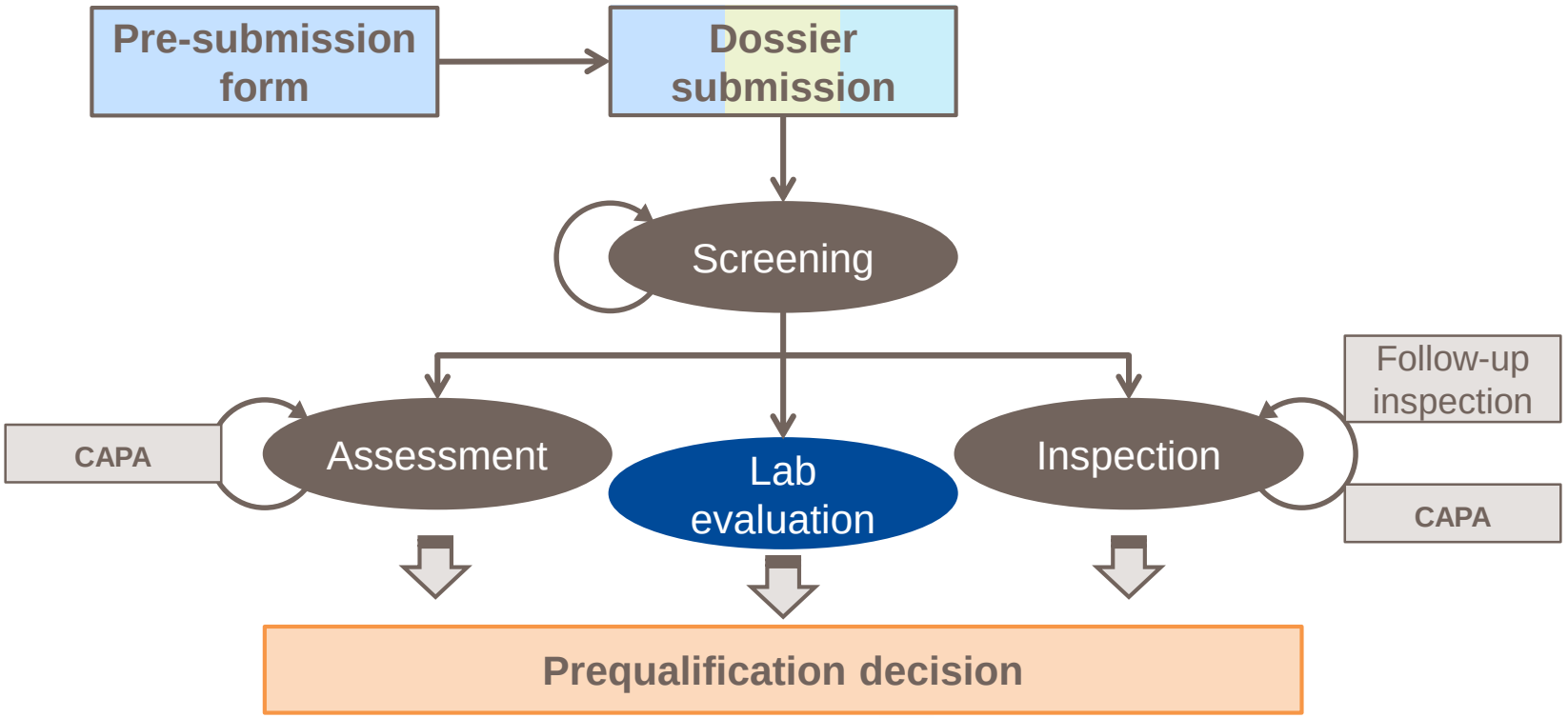
Prequalification workflow

→ *For each type of product, prequalification includes a comprehensive dossier assessment and a manufacturing site inspection, as well as other product-specific elements of evaluation…*



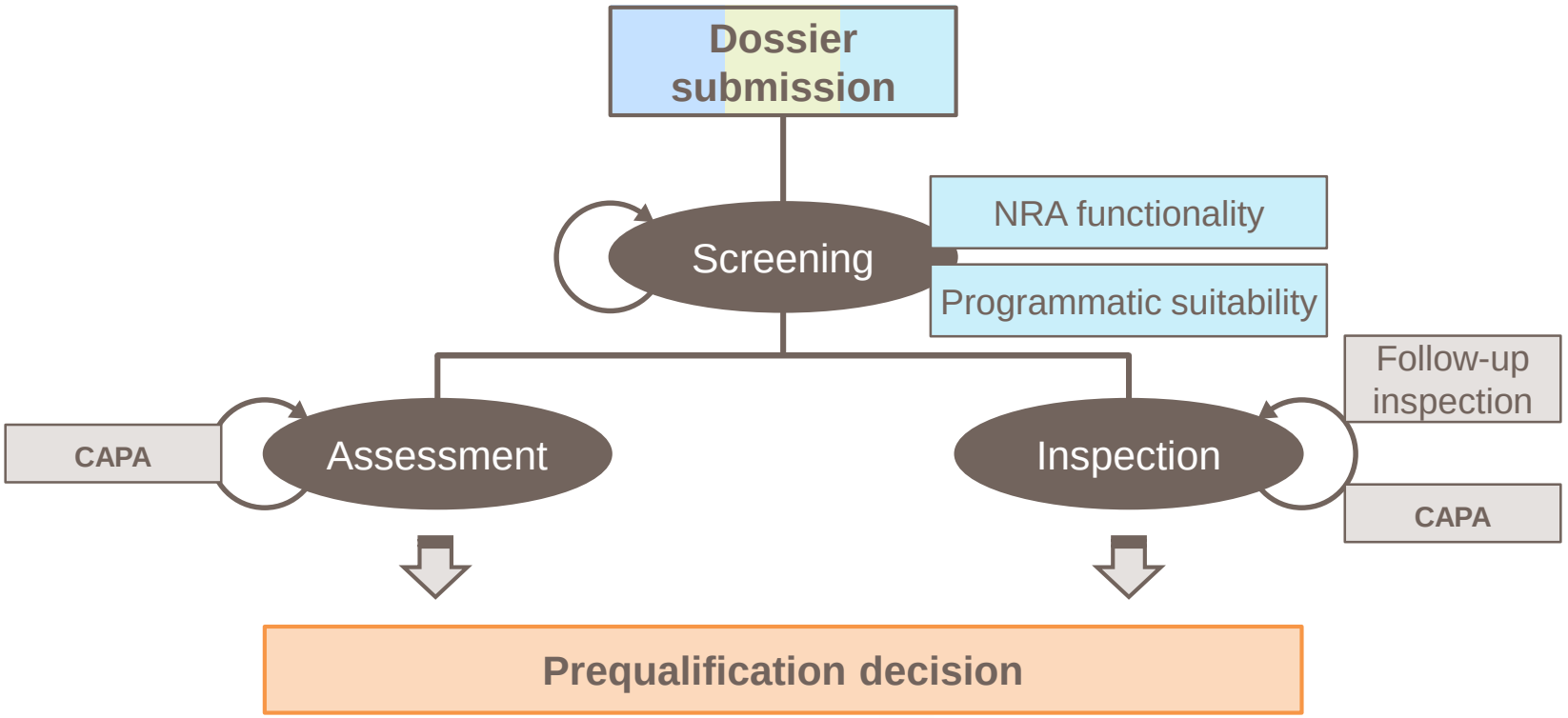
Prequalification workflow

→ *… such as the pre-submission form and laboratory evaluation for in vitro diagnostics*



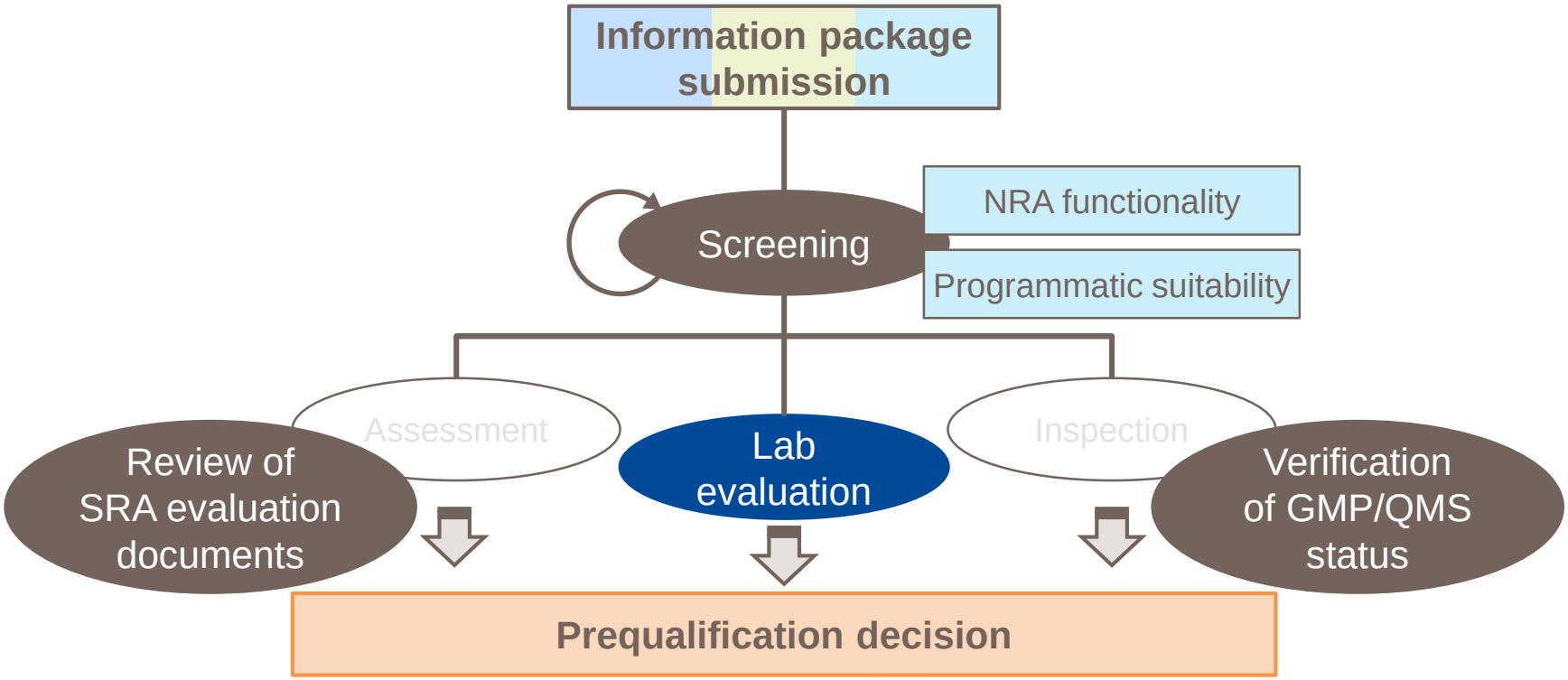
Prequalification workflow

→ *… or NRA functionality and programmatic suitability for vaccines*



Prequalification workflow

→ *In addition, SRA-approved products are evaluated according to the abridged prequalification procedure*



WHO GBT Performance Maturity Levels

	1	2	3	4	5
ISO 9004	*No formal approach*	*Reactive approach*	*Stable formal system approach*	*Continual improvement emphasized*	*Best in class performance*
WHO GBT	SOME ELEMENTS OF REGULATORY SYSTEM EXIST	REACTIVE AND/OR RESPONSIVE REGULATORY SYSTEM EXIST	SYSTEMATIC REGULATORY APPROCH AND FUNCTIONS WITH THE ESSENTIAL CAPACITY ARE IMPLEMENTED	PROACTIVE WELL RESOURCED REGULATORY SYSTEM WITH CONTINUALLY IMPROVING FUNCTIONS ARE IMPLEMENTED.	FULLY INTEGRATED, INITIATIVE TAKING AND AUTONOMOUS REGULATORY SYSTEM IS IMPLEMENTED.
	Can be consider as functional/minimal capacity if rely on other NRAs for some specific functions		Minimal capacity/ functional NRA, eligible for vaccine PQ	Advanced*/reference NRAs, recommended by WHO to be relied on by other NRAs, eligible for PQ streamlining	

*Note: currently known as stringent NRA, however the terminology is supposed to be changed

Regulatory Systems Functions and Maturity Level

PHASE 1

PHASE 2

National Regulatory System (NRS)

Registration & marketing authorization (RMA)

Vigilance (VIG)

Clinical Trials Oversight (CTO)

Laboratory access and Testing (LAT)

Licensing premises (LIC)

Inspection & Enforcement (INE)

Market surveillance and Control (MSC)

Registration of health personnel (RHP)

NRA Lot release (LTR)

Control of Narcotics, Psychotropic & Substances and precursors (NPSP)

NO FORMAL APPROACH

Maturity level

BEST IN CLASS PERFORMANCE

1 ---------- 5

Elements to be considered under relevant functions

Updated Figures of the WHO GBT

Item / Function	NRS	RMA	PVL	MSC	LIC	INE	LAT	CTO	LTR	Grand Total
Number of Sub-Indicators	62	33	25	26	20	29	37	32	24	288
Sub-Indicators measuring maturity level 1	4	5	4	0	2	3	3	2	2	25
Sub-Indicators measuring maturity level 2	6	3	2	5	1	2	2	7	4	32
Sub-Indicators measuring maturity level 3	24	19	14	14	13	15	26	17	15	157
Sub-Indicators measuring maturity level 4	28	5	5	5	4	6	6	6	2	69
Sub-Indicators measuring maturity level 5	0	1	0	0	0	3	0	0	1	5

Phase I

Phase II

Minimal capacity

Advanced/ reference NRAs

→ *In addition, SRA-approved products are evaluated according to the abridged prequalification procedure*

Eligibility criteria for abridged assessment

Diagnostics

- ✓ IVDs only
- ✓ Stringently assessed SRA-approved products & their RoW version if no substantial difference

Medicines

- ✓ FPPs only
- ✓ SRA-approved

Vaccines

- ✓ Vaccines only
- ✓ SRA-approved

Principle of non-duplication

→ *WHO prequalification seeks to add value and never duplicate the work already performed by stringent regulatory authorities, while encouraging NRAs to rely on the work of WHO prequalification*

Example of WHO PQ reliance on other SRAs

- Development of **guidelines** only where gaps exist
- **Abridged assessment** for prequalification of SRA approved products
- Recognition of manufacturing site **inspections** performed by SRAs (Mx only)
- On request from the manufacturer, **listing** of products evaluated under EU art. 58, USFDA tentative approval, PEPFAR and Health Canada approval
- Use of **EDQM CEPs** in FPP and API application

Example of NRAs reliance on WHO PQ

- **Collaborative procedure** for national registration
- **API prequalification** recognized by NRAs

Post-PQ activities

→ *Ensuring the ongoing quality of prequalified products is an equally important responsibility of the prequalification team*

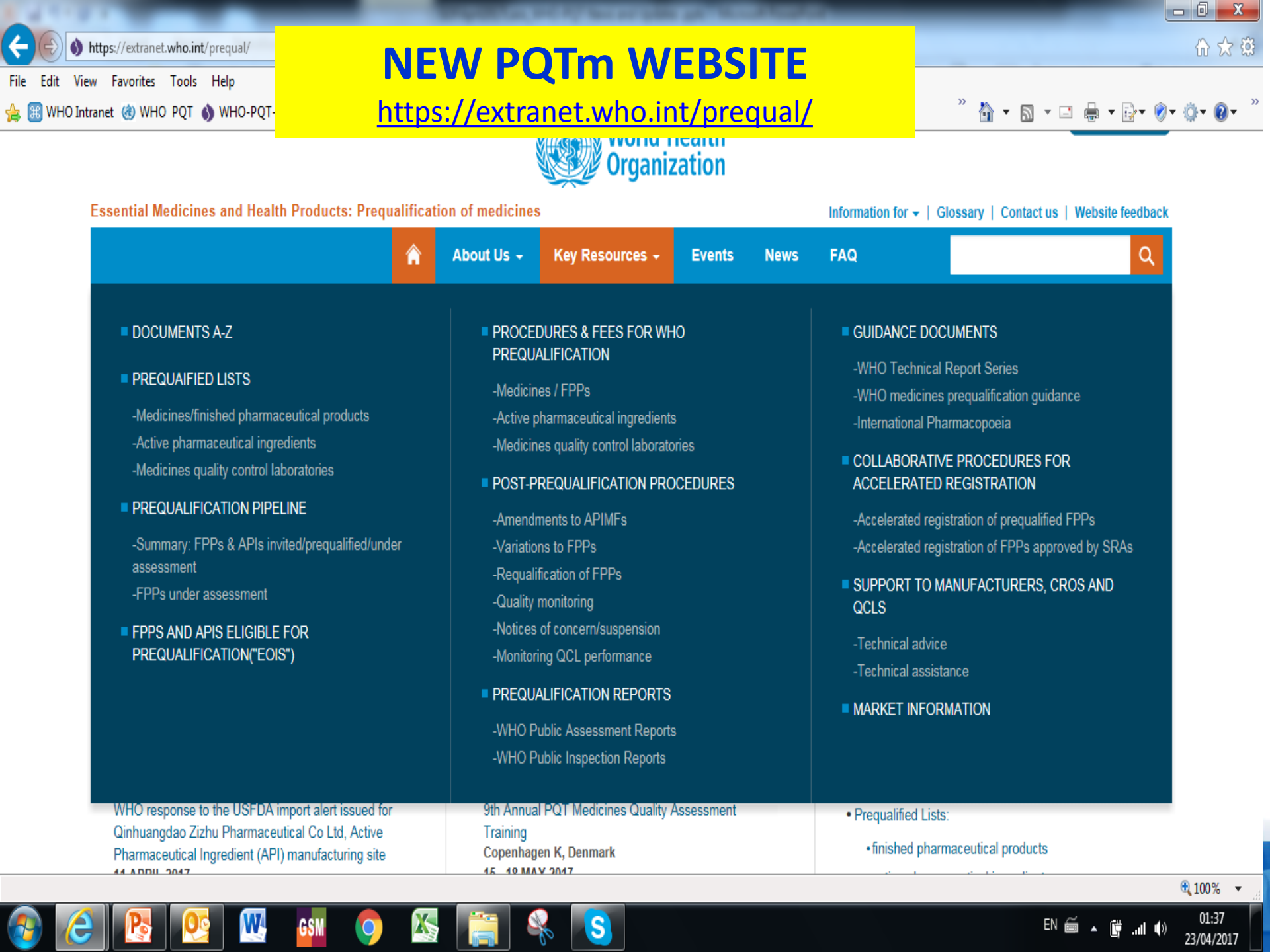
	Post-PQ validation	Post-marketing surveillance
Systematic	✓ Annual report review ✓ Reinspection ✓ Requalification	✓ Sampling & testing
Triggered	✓ Variations/changes assessment	✓ Adverse event monitoring

WHO prequalification of in-vitro diagnostics, medicines, vaccines and vector control products

- Introduction
- Prequalification role
- Prequalification process
- **Product-specific updates**
- Conclusion

NEW PQTm WEBSITE

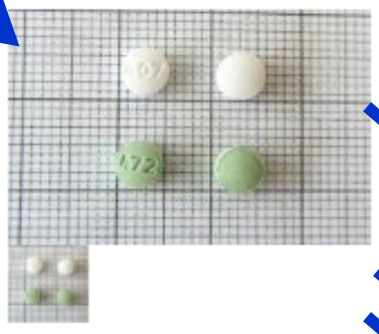
https://extranet.who.int/prequal/



KEY RESOURCES

- Documents A-Z
- Prequalified Lists
  - Medicines/finished pharmaceutical products
    - General Information
    - Active pharmaceutical ingredients
    - Medicines quality control laboratories
- Prequalification Pipeline
- FPPs and APIs Eligible for Prequalification ("EOIs")
- Procedures & Fees for WHO Prequalification
- Post-Prequalification Procedures
- Prequalification Reports
- Guidance Documents
- Collaborative Procedures for Accelerated Registration
- Support to Manufacturers, CROs and QCLs
- Market Information

Medicines/finished pharmaceutical products



Reference Number: RH049 (a)

Date of prequalification: 08 April 2014

Basis of listing: Prequalified by WHO

Status: Active

INN: Desogestrel/Ethinylestradiol + Placebo

Therapeutic area: Reproductive Health

Dosage form & strength:
Desogestrel/Ethinylestradiol Tablet + Placebo Tablet 150mcg/30mcg + 0mcg

Storage condition: Do not store above 30°C

Shelf life (months): 24

Packaging: Blister Alu/PVC/PVdC: (21+7)x1

Applicant:
Mylan Laboratories Ltd, Plot No.564/A/22, Road No. 92, Jubilee Hills, Hyderabad, Telangana, 500034, India

FPP Manufacturing Site:
Mylan Laboratories Limited, Sarkhej- Bavla NH No- 8A, Plot No 20/21 Pharmaceutical Special Economic Zone, Nr Village Matoda, Ahmedabad, Gujarat, 382213, India

FPP WHO Public Inspection Reports:

API Manufacturing Site:
(Desogestrel) Aspen Oss B.V., Site De Geer, Veersemeer 4, JN OSS, 5347 JN, Netherlands
(Ethinylestradiol) Aspen Oss B.V., Site De Geer, Veersemeer 4, JN OSS, 5347 JN, Netherlands
(Desogestrel) Aspen Oss B.V., Kloosterstraat 6, Moleneind, AB Oss, 5349 AB, Netherlands
(Ethinylestradiol) Aspen Oss B.V., Kloosterstraat 6, Moleneind, AB Oss, 5349 AB, Netherlands

API WHO Public Inspection Reports:

WHO Public Assessment Reports

Part 1, Part 2a, Part 2b, Part 7

New Funding Structure for PQ

- **Background and process:**
  - Fees to WHO in place – vaccine since 1999, In-Vitro Diagnostics since 2010 and **medicines since 2013**
  - following a year of discussions between WHO, Industrial groups and key partners
  - **The new fee structure for vaccines and medicines was effective 01 January 2017**, and in early 2018 for diagnostics.
- **Objectives:**
  - ensure the **financial sustainability** of WHO's PQ
  - to make PQ **better equipped** to address current global quality challenges,
  - to lay the ground for **strengthening and expanding services provided**, and
  - to **improve financial predictability and transparency**
- **Fees structure:**
  - Designed to **ensure equity** among manufacturers
  - **modelled on the practice of NRAs** around the world,

New Funding Structure for PQ

- **Fees principles and structure:**
  - product nature: active pharmaceutical ingredient (API) or finished pharmaceutical product (FPP);
  - type of assessment: full or abridged assessment of new application, or assessment of major variation;
  - an annual maintenance fee tailored to whether the initial assessment was full or abridged.

	Assessment fee		Annual Fee per product		Variations	
	Full	Abridged	Full	Abridged	Major	Minor
FPP	$25,000	$6,000	$20,000	$5,000	$3,000	
API	$20,000		$8,000		$3,000	

Table 1: Fees for FPP and API prequalification applications (effective 1 January 2017)

	Single Registration Fee Per Product	Annual Fee Per Product	Post-PQ Changes
	Application Fee	Annual Fee	Major variation
FPP – Full assessment	$25,000	$20,000	$3,000
FPP – Abridged assessment[1]	$6,000	$5,000	NA
API	$20,000	$8,000	$3,000

[1] Refer to SRA-Approved Multisource (Generic) or Innovator FPPs procedure - https://extranet.who.int/prequal/content/abbreviated-assessment-multisource-generic-or-innovator-product-0

Table 2: Fees for Vaccine prequalification applications (effective 1 January 2017)

	Single Registration Fee Per Product			Annual Fee Per Product				Site Audit
	Application Screening Fee	Abridged assessment procedure[2]	Full assessment procedure	Tier 1	Tier 2	Tier 3	Tier 4	Site Audit Fee
Simple / Traditional Vaccines	$2,500	$25,000	$100,000	$4,800	$19,200	$41,500	$140,000	$30,000
Combinations or Novel Vaccines	$5,000	$66,500	$232,750	$8,400	$33,600	$72,500	$250,000	$30,000

[2] Refer to Streamlined Process. TRS 978 annex 6, http://www.who.int/entity/immunization_standards/vaccine_quality/TRS_978_61st_report_Annex_6_PQ_vaccine_procedure.pdf?ua=1

PQT – revised fee model

- The fees are structured to consider the type of product, complexity, assessment procedure, and manufacturer sales (vaccines only)
- The model includes both an application fee and annual fee.
- The annual fee:
  - for medicines and APIs is fixed, whereas for vaccines the annual levy is linked to sales from PQ'd vaccines (PQ enabled sales).
  - The annual fee will be invoiced on the 1 October each year for all products that have been present on the list of prequalified APIs, or FPPs for 12 months or greater as of the 1 September of that year.
- The Medicine and API fee covers both assessment and inspection activities, whereas for vaccines assessment and inspection activities are charged separately.

http://who.int/medicines/news/finance-arrangements-prequal-med/en/

Collaborative procedure

→ *The collaborative procedure enables NRAs to accelerate the registration of prequalified products so that they can enter local markets more quickly*

Principles

- WHO PQ shares the reports that served as the basis for the prequalification decision, so that NRAs do not conduct assessment and inspections
- National registration based on PQT evaluation

Diagnostics

- Procedure in development
- Ongoing discussions with NRAs

Medicines

- Started in 2012

As of December 2016:

- ✓ 30 countries participating
- ✓ 183 registrations in 20 countries for 73 different products

Vaccines

- Procedure published in 2007, harmonized for medicines and vaccines as of 2014

In 2015:

- ✓ Adopted by expert committee (ECBS)

Participating NMRAs

1. Armenia
2. Botswana
3. Burkina Faso
4. Burundi
5. Cameroon
6. *Caribbean Community (CARICOM)
7. Cote d'Ivoire
8. Dem. Rep. Congo
9. Eritrea
10. Georgia
11. Ghana
12. Kenya
13. Kyrgyzstan
14. Lao PDR

* CARICOM

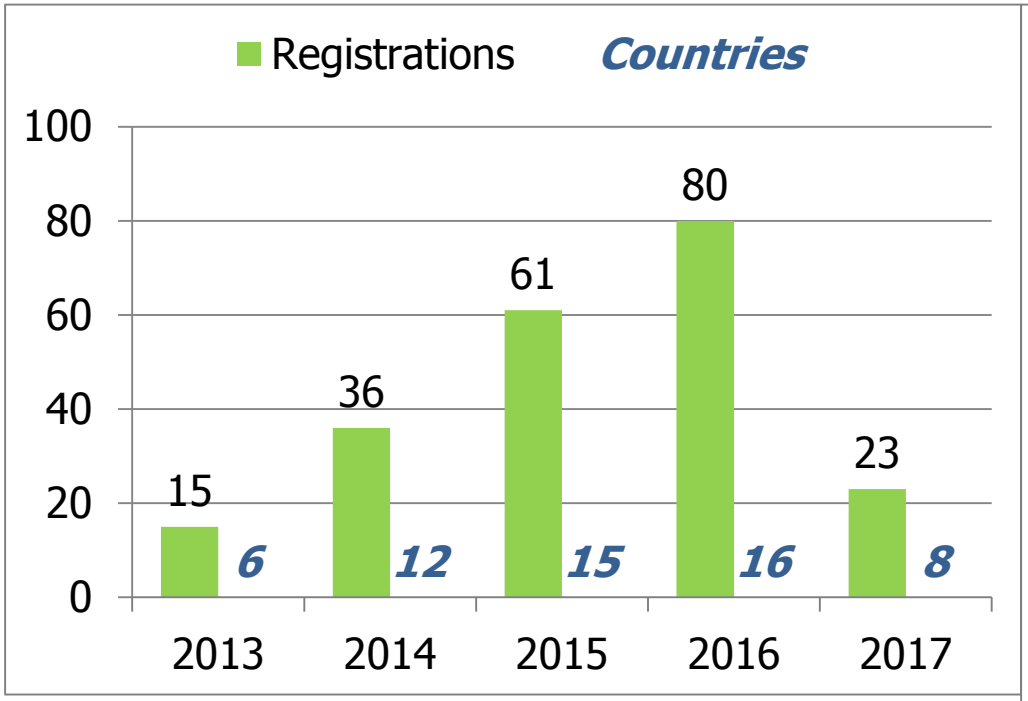
Member States: Antigua and Barbuda, Bahamas, Belize, Dominica, Grenada, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St Vincent and the Grenadines, Suriname and Trinidad and Tobago

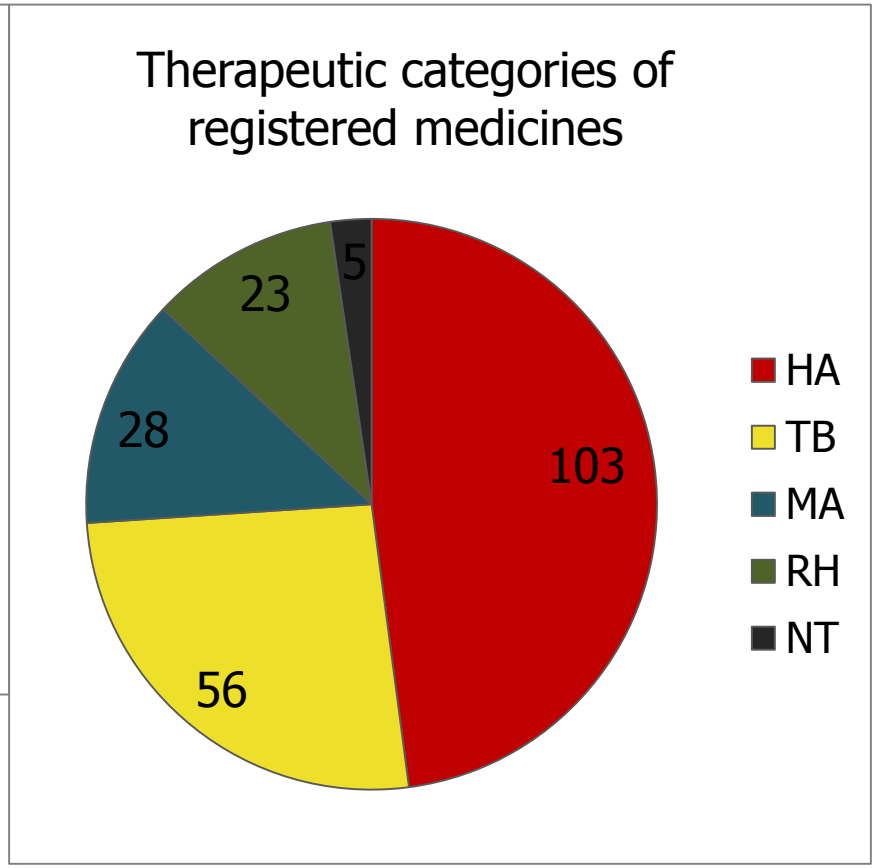
Associate Member States: Anguilla, Bermuda, British Virgin Islands, Cayman Islands and Turks and Caicos Islands

15. Madagascar
16. Malawi
17. Mali
18. Mozambique
19. Namibia
20. Nigeria
21. Philippines
22. Senegal
23. Sierra Leone
24. South Africa
25. Tanzania
26. Uganda
27. Ukraine
28. Zambia
29. Zanzibar
30. Zimbabwe

As at 12 May 2017

Country registrations & therapeutic area

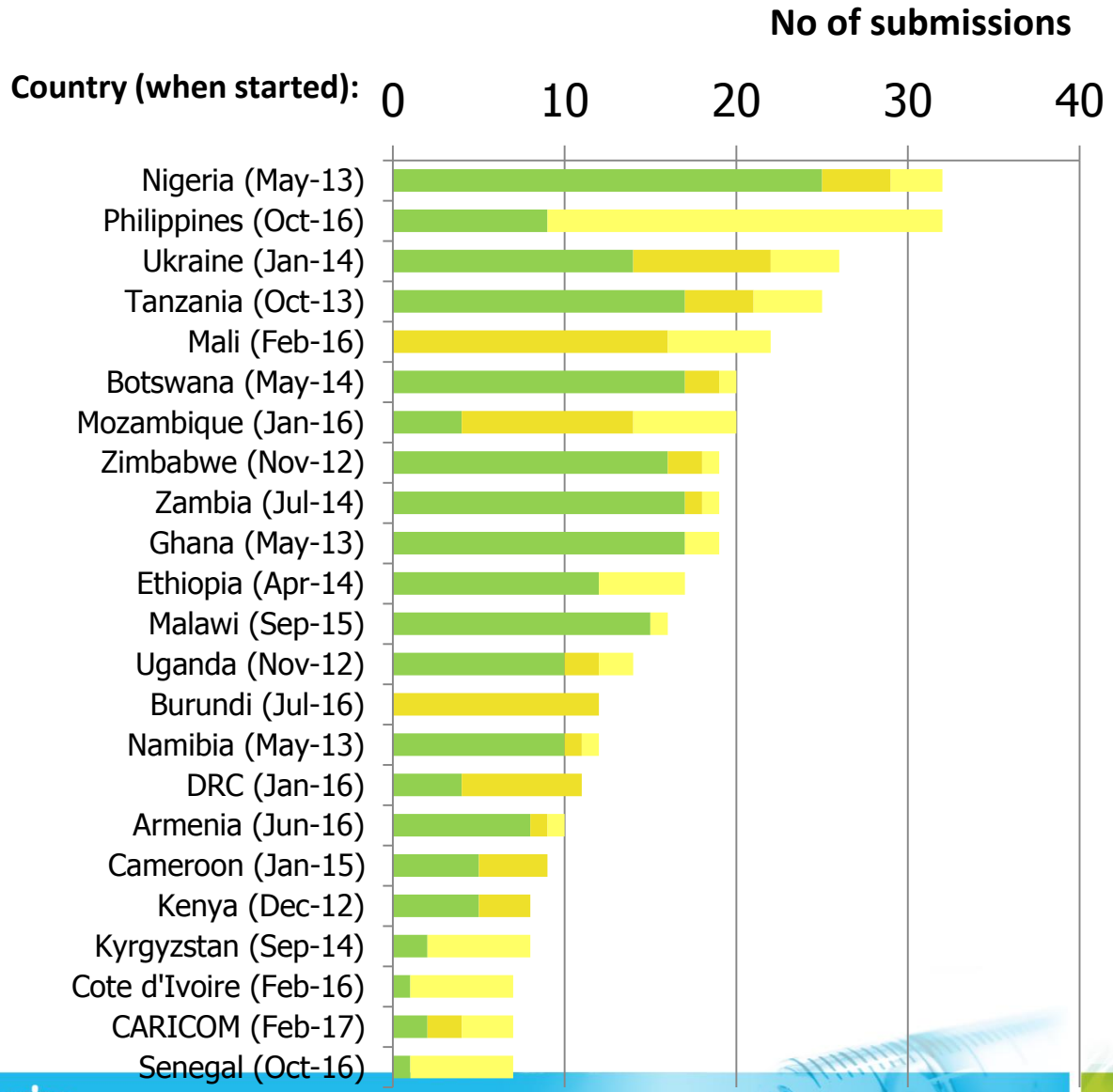




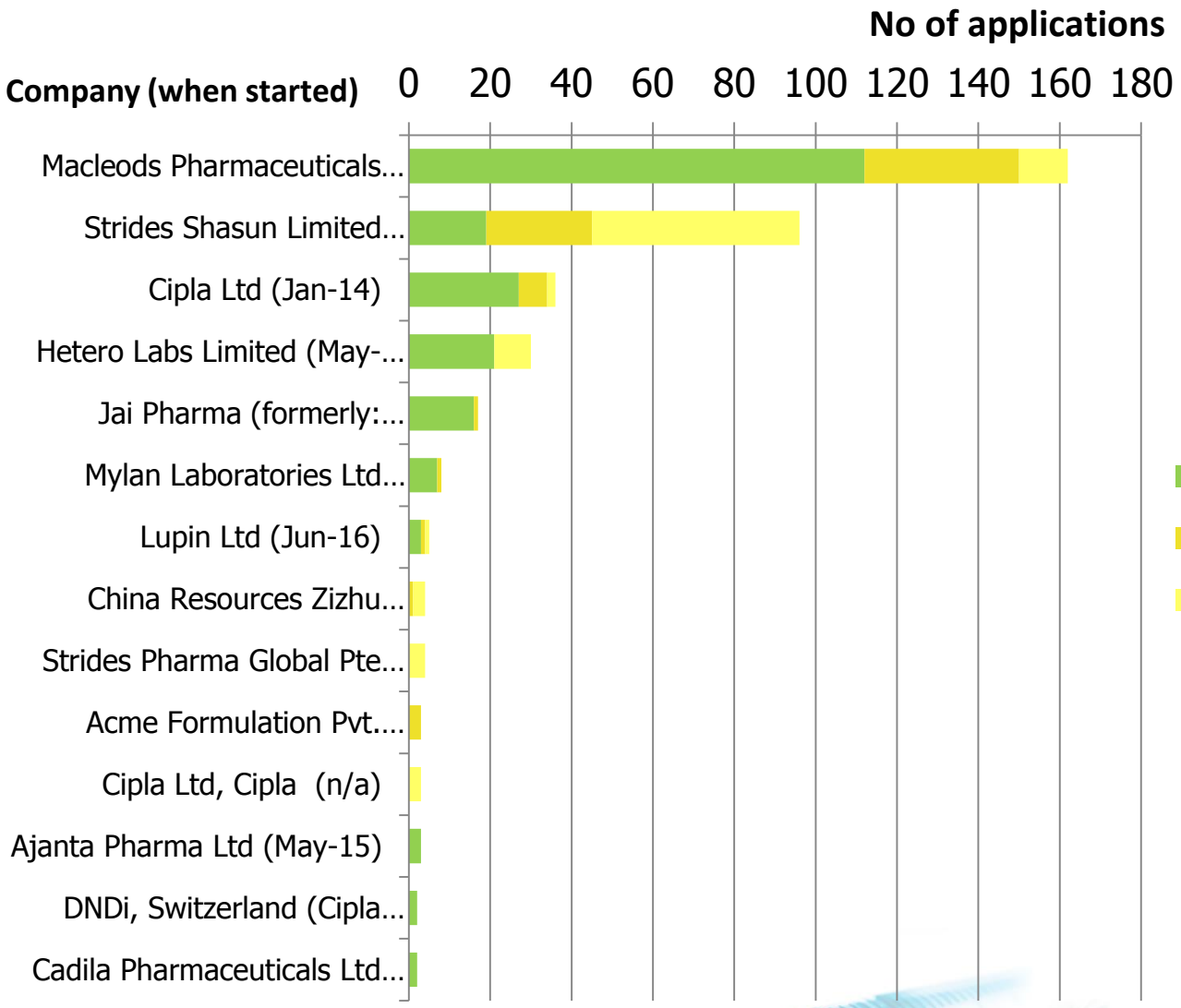
Total registrations: 215
(As at 12 May 2017)

Pipeline of applications in countries

As at 12 May 2017



No products registered or under review yet: Georgia, Lao PDR, Sierra Leone, Zanzibar



Pipeline of applications, by company

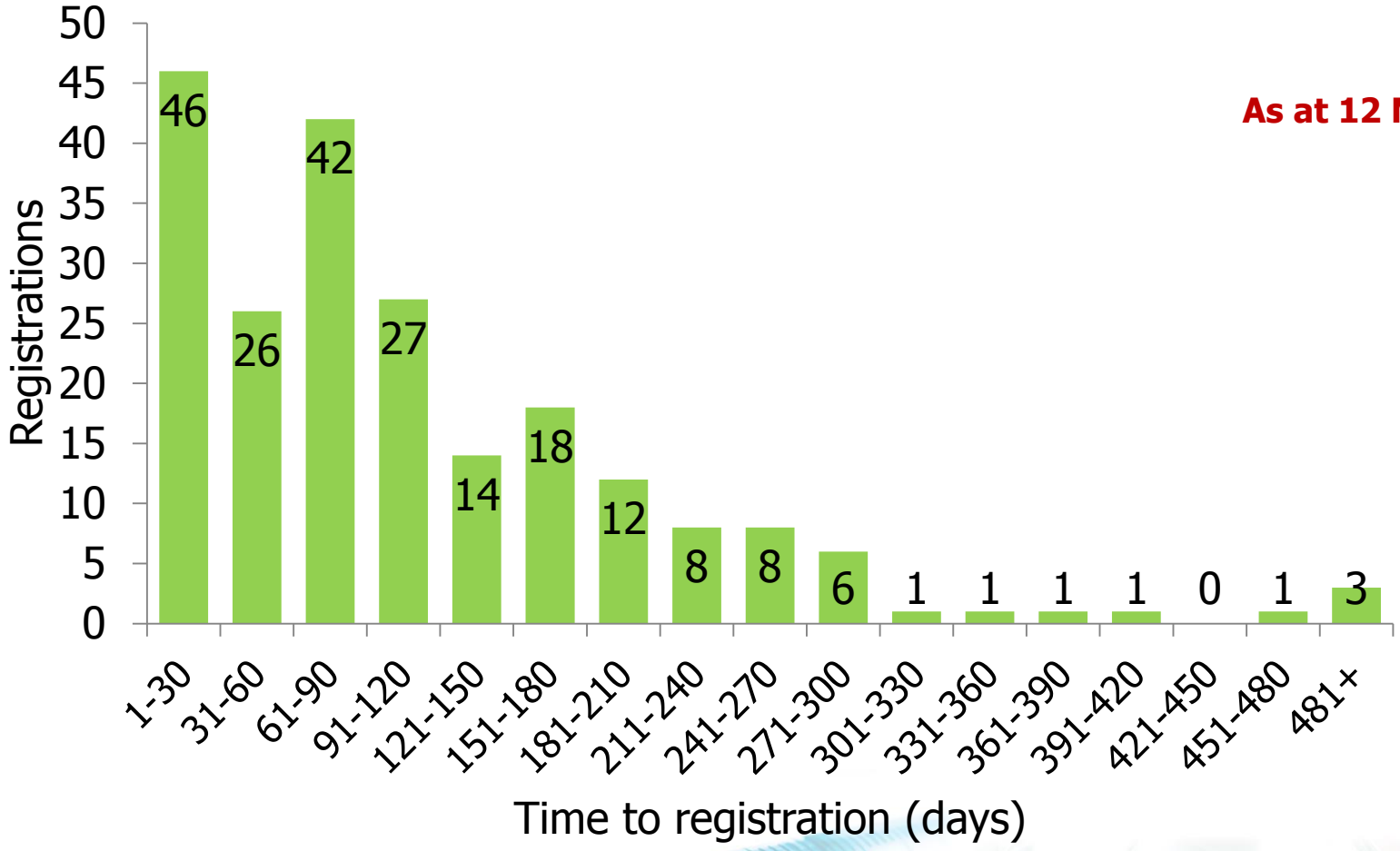
- Registered
- Under review
- Dossier awaited

As at 12 May 2017

Time to registration

(2013 – 2017 to date, n=215)

Including regulatory time and applicant time

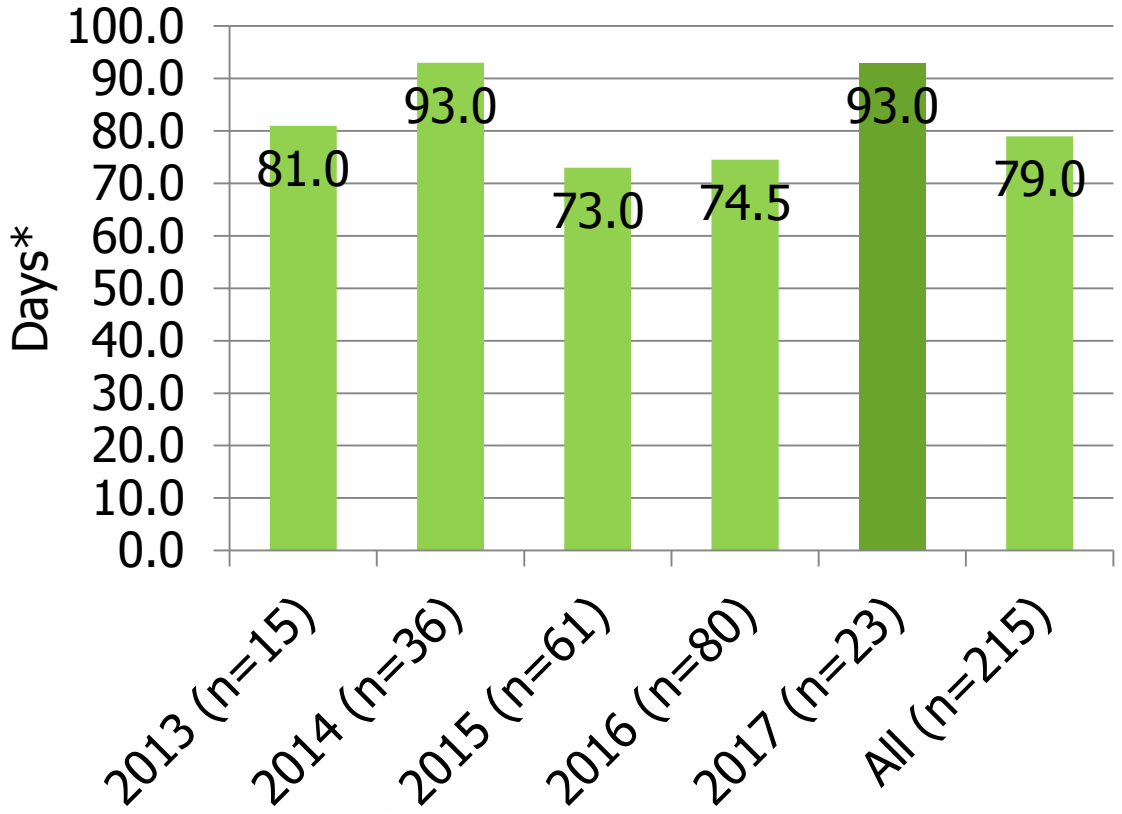


As at 12 May 2017

Median time to registration

*Including regulatory time and applicant time

Days



As at 12 May 2017

The same pharmaceutical product…

① **Product (technical content) dossier,**

② **Manufacturing chain, processes and control of materials,**

③ **API and FPP specifications**

④ **Bioequivalence information and**

⑤ **Essential elements of product information.**

World Health Organization

Overview of Essential Medicines and Health Products

By

Deus Mubangizi

Coordinator, WHO Prequalification Team

on behalf

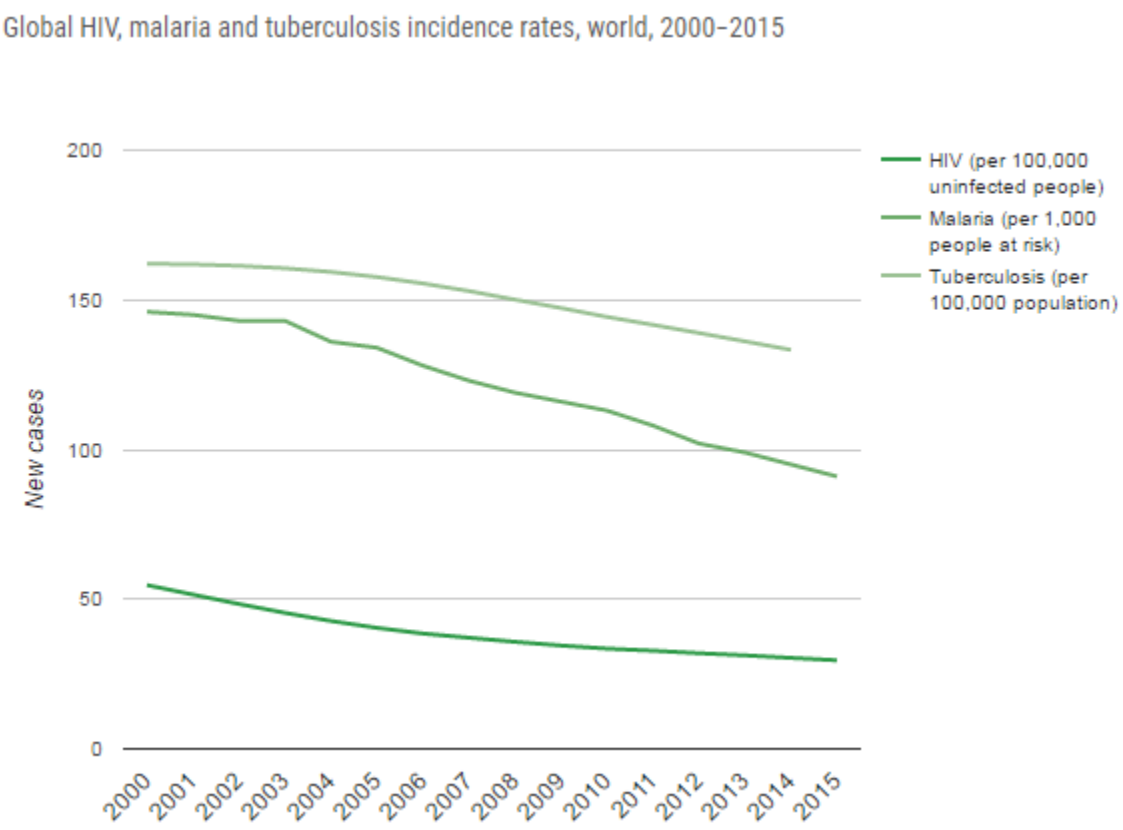
Dr Suzanne Hill, Director

- Transition from MDGs to SDGs
- Challenges, opportunities and trend
- Vision and strategic agenda
- How we work
- Measuring results

1

CHANGING LANDSCAPE: FROM THE MDGS TO THE SDGS

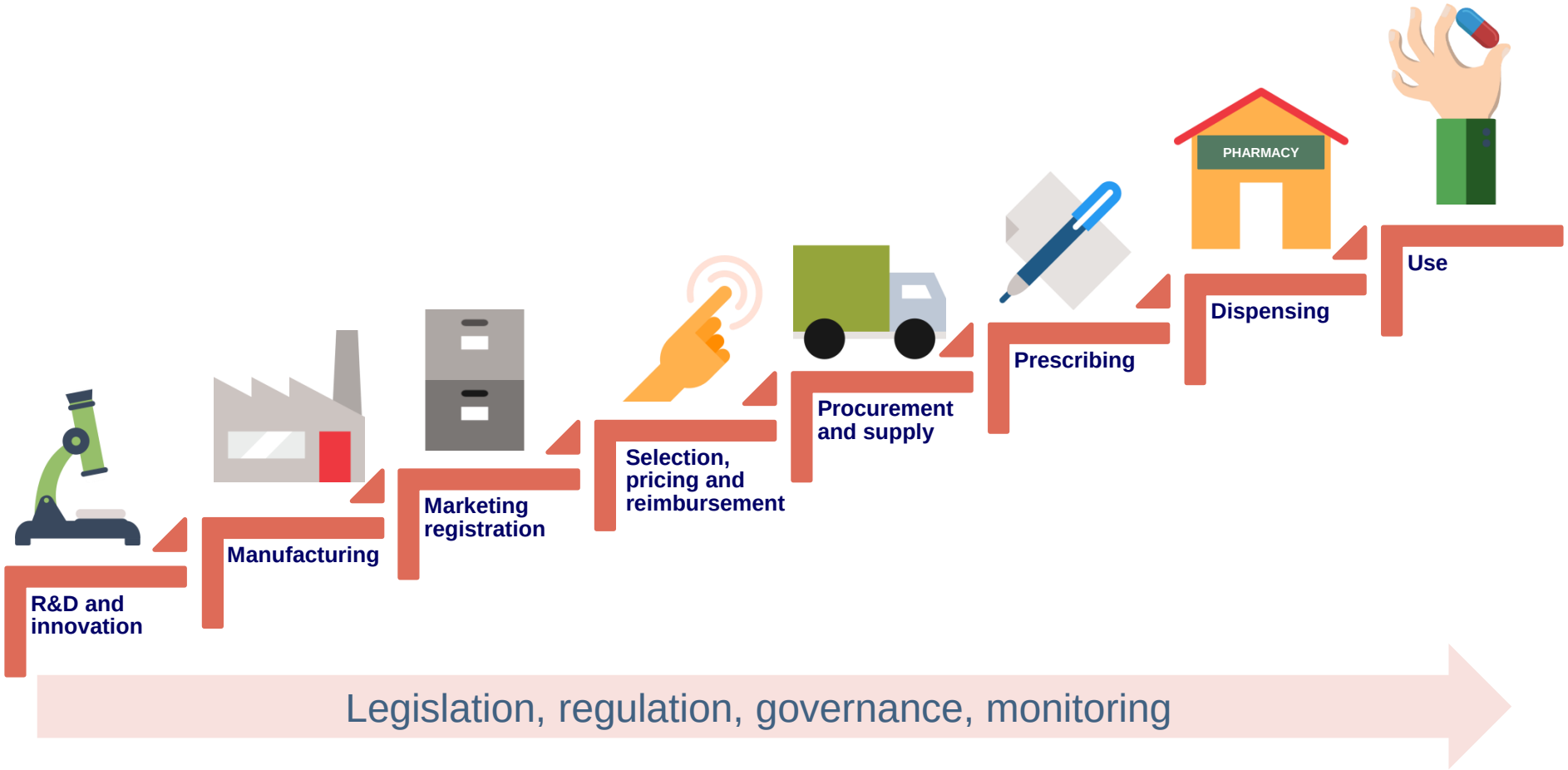
Progress under MDGs – HIV, malaria, TB examples



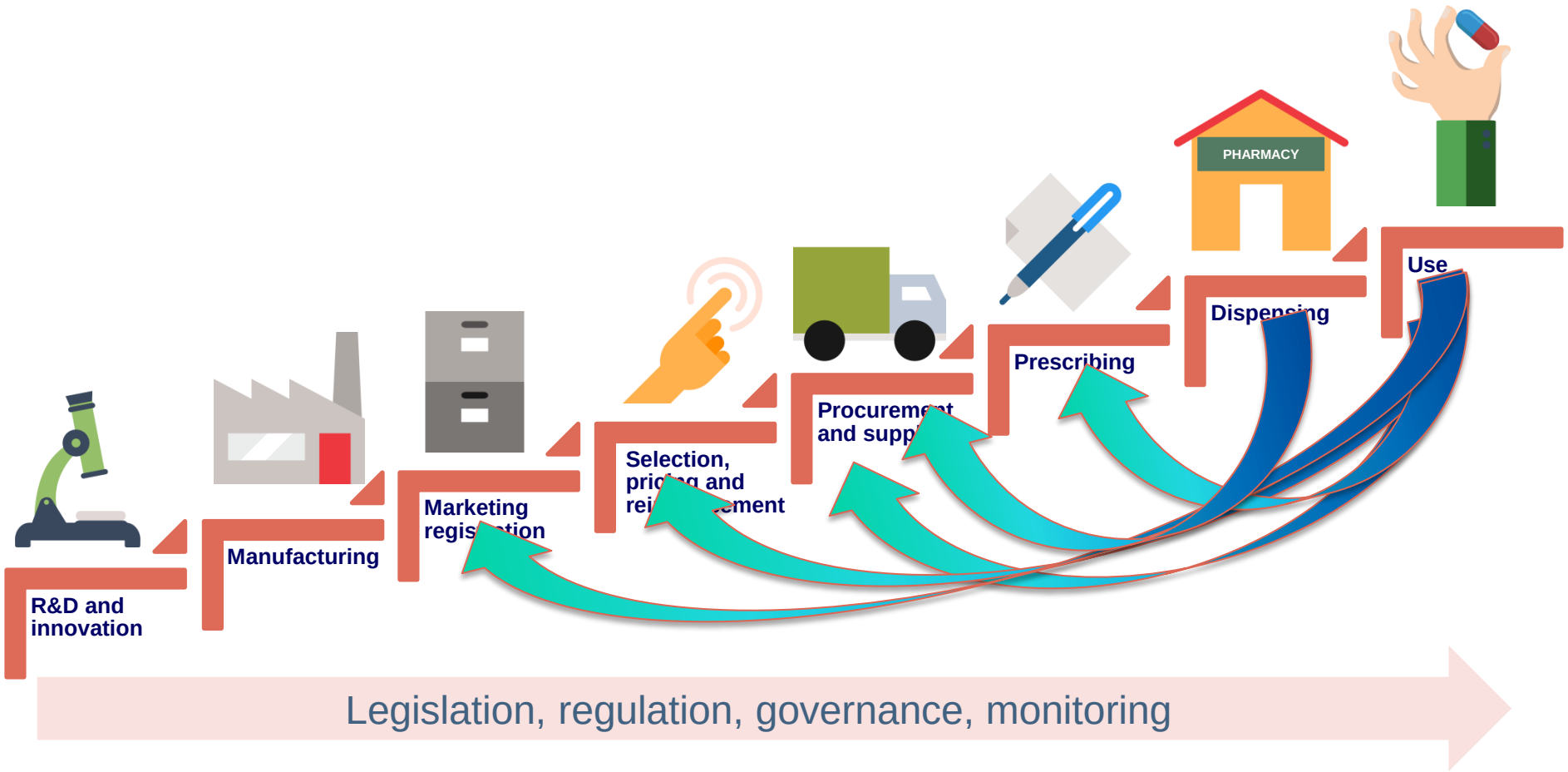
2

CHALLENGES, OPPORTUNITIES AND DOMINANT TRENDS

Achieving access to medicines and health products



Achieving access to medicines and health products



Targeting specific products

- Innovation and R&D focused on public health priorities
- New products needing regulatory and policy support, i.e. biosimilars, , in vitro diagnostics, medical devices

Targeting priority diseases and conditions

- Antimicrobial resistance
- NCDs and ageing
- Health products for new and re-emerging threats (R&D preparedness for public health emergencies)

3

VISION AND STRATEGIC AGENDA

Vision

A world where every child, man and woman has access to the quality essential medicines, vaccines and other health products they need to have a healthy and productive life

Two areas of work to get there

Facilitator

Innovation

Access

Use

Guardian

Quality

Safety

Efficacy

Towards Access 2030

WHO's role in promoting access to quality medical products

- WHO has long supported regulators in fulfilling their mandates through:
  - Developing norms and standards
  - Promoting regulatory convergence and harmonization
  - Training and capacity building
  - Supporting information and work sharing initiatives
- Experience to date has helped characterize the benefits, challenges and potential evolution of such initiatives in accelerating in-country regulatory decisions

4

HOW WE WORK

One-WHO approach

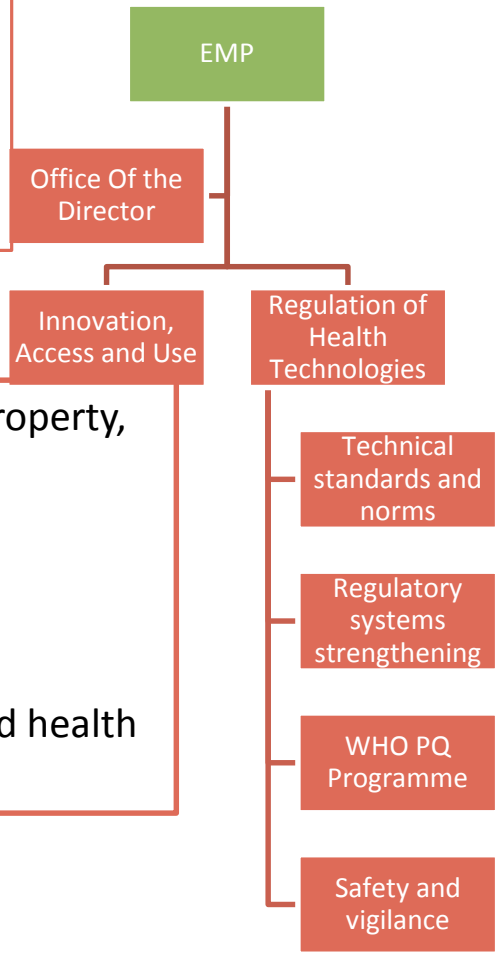
Regional and country offices

Health system strengthening network

Disease departments

EMP Structure

- Knowledge management
- New policy development
- Resource mobilisation, project management
- Monitoring and evaluation



- Innovation/R&D, intellectual property, local production
- Evidence based selection
- Pricing, reimbursement, HTA
- Procurement and supply chain management
- Improving use of medicines and health products

See next slide…..

RHT Structure in details

Regulation of Medicines and other Health Technologies (RHT)

Technologies Standards and Norms (TSN)

- Set global standards & nomenclature
- Global measurement standards*
- Quality assurance for Medicines Quality Control (QC) labs

*Including:
biotherapeutics;
blood products;
in vitro diagnostic;
medical devices;
vaccines

Regulatory Systems Strengthening (RSS)

- Strengthen regulatory system
- Capacity building:
  - Good manufacturing practices
  - Laboratory quality systems
- Harmonization initiatives
- Collaborative registrations
- ICDRA support
- Technical assistance

Prequalification Team (PQT)

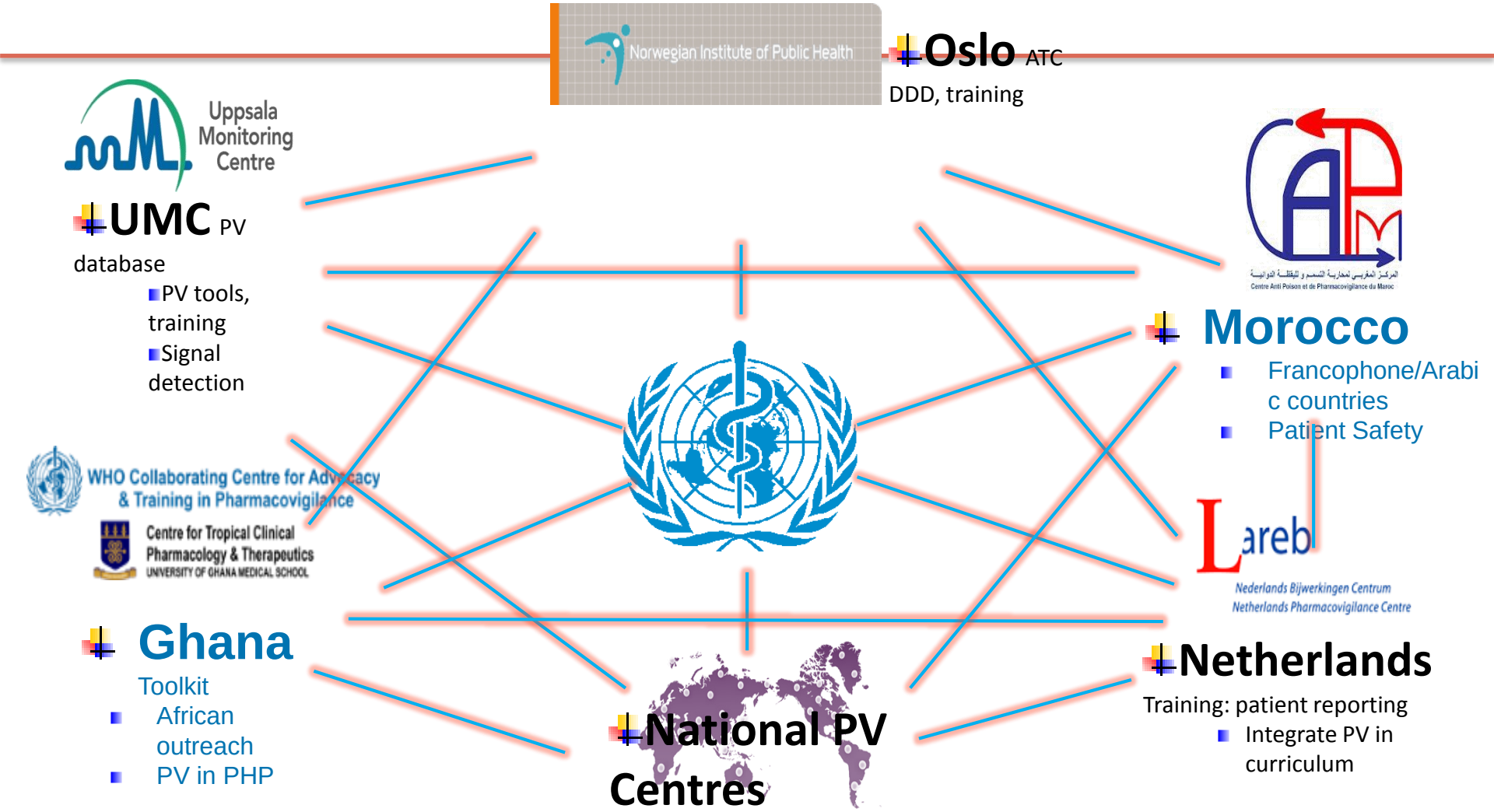
Prequalification (PQ) of medicines, vaccines, diagnostics, medical devices & vectors

- Dossier assessments
- Inspection
- Laboratory testing
- PQ of medicines QC laboratories
- Scientific advice

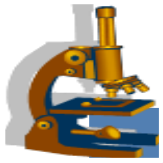
Safety and Vigilance (SAV)

- Global surveillance & monitoring, including substandard & falsified medical products
- Coordination of global response to health / safety events
- Policies, norms, standards & guidelines
- Classify medicines & assign defined daily doses (ATC/DDD)

Partners for Global Pharmacovigilance



The challenges we address



R&D and Innovation

- Limited budgets
- Changing markets
- Low capacity for evidence based selection methods
- Lack of legal frameworks
- Undue influence

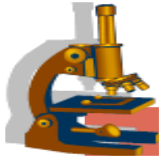
Manufacturing

- Lack of market incentives for low priced products, small markets, low demand, excessive competition
- Shortages of APIs
- Products not adapted for LMICs
- Evergreening
- Poor manufacturing practice
- Lack of regulatory capacity to ensure GMP
- Trade barriers

Marketing authorization/quality assurance

- Low capacity to assess and approve
- Inadequate resources
- Differing regulation from country to country
- Emergence of biological products, cell and gene therapies require new capacities for regulation
- Lack of regulatory process for medical devices in many countries
- Lack of regulatory pathways or slow processes for emergency preparedness or childrens medicines
- Incoherent policy frameworks

WHO response



R&D and Innovation

- Creation of global platforms for public health driven R&D
- Global Strategy and plan of Action on Public Health, Innovationa and Intellectual Property
- Consulative Expert Working Group on Research and Development
- R&D Blueprint for epidemics

Manufacturing

- Defining international reference preparations for priority diseases with epidemic potential
- Strategic local/regional production according to regulatory capacity and need
- Defining internatinal standards
- Global nomenclature
- Prequalification

Marketing authorization/quality assurance

- Support for harmonization initiatives
- Promotes work sharing and convergence between regulatory authorities
- Good regulatory practices
- Good Reliance Practices
- Quality management systems for NRAs
- Prequalification
- Strengthening of regulatory capacity and frameworks for biosimilars

WHO Perspective on Local production

Recent Activities

China report *Cuba report* *India report*

- Series of case studies studying approaches to promoting local production
  - China, Cuba and India
  - Supported by European Commission

- Co-organized two meetings in Ethiopia:
  2016 NSPA-Pharma Implementation Review Meeting and *Workshop to Establish a Consortium of RBEC Supporters*
- Supported by BMGF-WHO DG Strategic Grant

- Inter-agency consultation with UN and international agencies
- WHO's key leadership in strengthening local production is in regulatory system strengthening

WHO Perspective on Local production

Way Forward

- WHO's key leadership in strengthening local production is in strengthening regulatory systems and quality
- Continued technical support for Member States
  - Strategic local production of select products
  - PMPA-BP and AMRH under AUC and NEPAD leadership
  - Etc.
- Collaboration with other stakeholders (e.g. Member States, development partners, private sector, academia, civil society, donors, etc.)

WHO Perspective on Local production
Technical support

- Dependent on available resources, WHO engagement in providing technical support to manufacturers will be based on the following criteria:

  -Response to an official request from the government identifying particular manufacturers

  -For medicines, manufacturers must be considered within 2 years of reaching prequalification status and preferably target products subject to EOIs with low numbers of available manufacturers

  -For vaccines, on a case by case assessment for products for which there is a recognized public health need, the WHO has the expertise, capacity and is seen as the most viable option, and there is a good expectation of success.

- WHO will increasingly explore opportunities to support technical assistance to manufacturers through trusted 3rd parties.

The challenges we address

Selection/ pricing/ reimbursement

- High prices of new products
- Limited budgets
- Changing markets
- Low capacity for evidence based selection methods
- Lack of legal frameworks
- Conflict of interest influence

Procurement and supply

- Move away from reliance on donor funding for procurement of health products
- Lack of price control leading to mark-ups
- Weak management
- Lack of coordination between donors, programmes and partners
- Corruption
- Entry of substandard and falsified medicines
- Poor purchasing decisions

Prescribing

- Irrational prescribing
- Slow uptake of biosimilars and generics
- Over prescribing
- Lack of STGs or adherence to STGs
- Undue influence

WHO response

Selection/ pricing/ reimbursement

- Building evidence for a fair pricing model
- Evidence based selection
- Support for TRIPs flexibilities
- Ensuring that equipment purchases are costed throughout their life cycle
- Interagency lis of medical devices for essential interventions for reproductive, maternal and child health
- Priority assistive devices list

Procurement and supply

- Coordination and collaboration: Interagency Supply Chain Group
- Model quality assurance systems
- Support for development of Logistics Management Information Systems
- Prequalification programme
- Convened and hosted international mechanism to stop circulation of sunstandard and falsified medicines
- Contributed to creation of global health financing and procurement programmes

Prescribing

- Standards for training of health care workers
- Measurement of prescribing
- Quality improvement processes

The challenges we address

Dispensing

- Inappropriate fees structures and incentives
- Stock outs

Use

- Irrational use
- Need for appropriate diagnosis
- Need for assistive care products

Cross cutting

- AMR
- Controlled substances
- Rise in epidemic prone pathogens
- Rise in NCDs
- Poor capacity for routine monitoring
- Low levels of transparency
- Lack of accountability

WHO response

Dispensing

- Monitoring of price
- Monitoring of availability
- Capacity building on AMR

Use

- Pharmacovigilance
- Training of patients
- Routine monitoring
- Monitoring and surveillance of antibiotic use
- Monitoring of SF products

Cross cutting

- Strengthen links with other health system initiatives
- Leverage knowledge of Ros and Cos
- Reinforce partnerships
- Data systems for monitoring
- Support for good governance

Threat of Substandard and Falsified products

Understand the global picture through validated evidence

Identify vulnerabilities in health systems and influence change

Provide technical support and capacity building

PROTECT PUBLIC HEALTH

WHO Response: Protect Public Health

POLITICAL RESPONSE

Member State Mechanism

- Political support
- Promote access to affordable, safe, efficacious, and quality medical products
- Effective Member States' collaboration and coordination

OPERATIONAL RESPONSE

Global Surveillance and Monitoring System

- Immediate technical and operational support
- NRA capacity building and policy guidance
- Improve current knowledge for in depth analyses. landscape, SWOT, etc.

Global Surveillance and Monitoring System

since July 2013…

TRAINING of 126 member states and 18 procurement agencies…

…who have **REPORTED JUST UNDER 1400 PRODUCTS**

in **90 COUNTRIES**

WHO provided **TECHNICAL ASSISTANCE** for 100+ incidents…

and issued **17 GLOBAL ALERTS**

PORTAL and **SEARCH TOOL** available in 3 languages

Healthcare professionals will also have a **SMART PHONE APPLICATION**

Update on AMR

WHO Global Action Plan on Antimicrobial Resistance

Five strategic objectives

1. Improve awareness and understanding of antimicrobial resistance through effective communication, education and training
2. **Strengthen the knowledge and evidence base through surveillance and research**
3. Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures
4. **Optimize the use of antimicrobial medicines in human and animal health**
5. Develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions

5

MEASURING RESULTS

Measuring impact

- Broader SDG 3 targets on access to medicines
- Number of countries with national policies on medicines and other health technologies updated within past five years
- Number of countries that report data on product research and development investments for health
- Number of national regulatory authorities ensuring essential regulatory functions for vaccines.

What does impact look like?

1	EFFECTIVE REGULATION	➔ Regulatory networks established / NRAs' capacity improved
2	QUALITY PRODUCTS	➔ PQ expanded to include broader range of essential medicines
3	NEEDS DRIVEN INNOVATION	➔ GARD funded and running / New quality assistive products
4	PATENT TRANSPARENCY	➔ Patent transparency for all patented essential medicines
5	EVIDENCE BASED SELECTION	➔ More countries effectively using EML, HTA, APL, EDL
6	EFFICIENT PROCUREMENT AND SUPPLY	➔ Policy on governance mechanisms in place for procurement and support systems
7	FAIRER FINANCING AND PRICING	➔ Model legislation for reimbursement developed and greater transparency in global price setting
8	QUALITY AND APPROPRIATE USE	➔ Improved skills of prescribers and greater patient awareness of responsible use of medicines
9	DATA, MONITORING AND EVALUATION	➔ Countries' access indicators established and measured

Thank you

UNICEF: PROCUREMENT OF MEDICINES & NUTRITION PRODUCTS

UNICEF SUPPLY DIVISION

David Muhia; Contracts Manager, Medicines & Nutrition Centre

unicef

UNICEF expenditure by material groups, 2015

$3.428 billion of supplies and services

Vaccines
$1.725 billion

Pharmaceuticals
$151.4 million

Nutrition
$150.6 million

Medical supplies & equipment
$110.4 million

Bed nets & insecticides
$58.7 million

Construction
$ 102.3 million

Cold chain equipment
$75.6 million

Water & sanitation
$96.4 million

Education
$66.1 million

International freight
$104.3 million

Approximately $1.754 billion is procurement on behalf of governments and partners.

Focus areas for medicines and Nutrition

Procurement focus that addresses UNICEF **programmes, Emergencies and Procurement Services for governments**

Follow and promote **WHO recommendations** on selection and use of medicines

Ensure availability of **affordable** essential medicines for primary health care and emergency relief

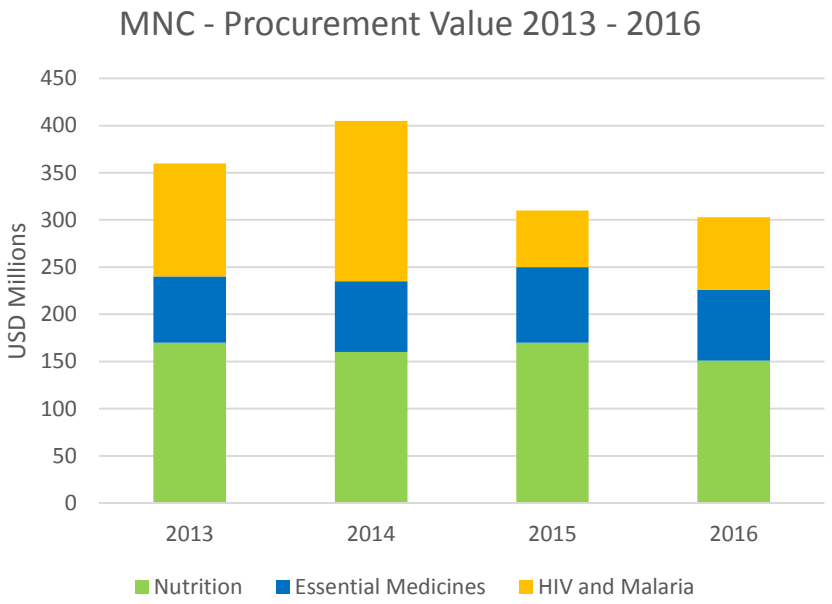
To ensure availability of **therapeutic food** (RUTF, F75/100), **supplementary food** (RUSF, CSB+), **micronutrients** (MNP, iron, zinc), and other nutrition supplies

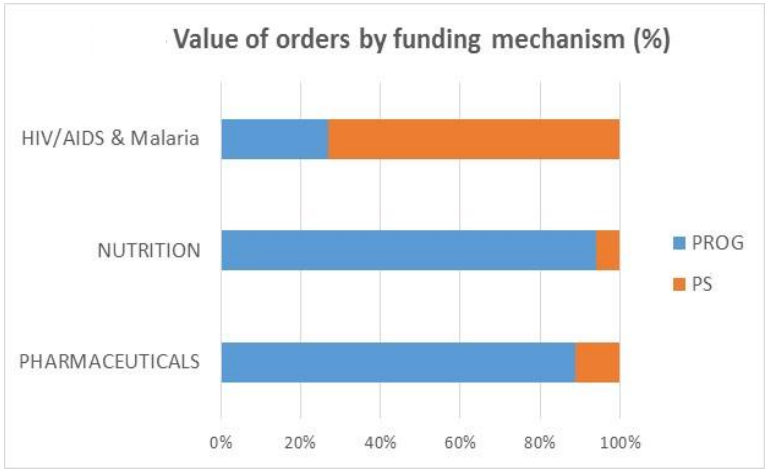
Develop local sources in UNICEF program countries

Medicines and Nutrition Centre
Essential Supplies for Health Programmes

	Product Focus
Nutrition	Products for severe acute malnutrition, stunting and supplements for pregnant and lactating mothers
Essential Medicines	Medicines for Primary Health Care, including NCDs, and emergency relief
ARVs and antimalarials	All medicines in WHO treatment guidelines
Health Kits	Development and supply of kits for delivery of basic services, including in emergencies

MNC Procurement by product categories





>120 suppliers in 35 countries
Delivery to >110 countries

UNICEF Catalogue: Product range and USD value

Microsoft Excel
Binary Worksheet

Medicines Product Selection: Sources

EVIDENCE AND ADVOCACY

- 1st WHO Model List of Essential Medicines for Children, 2007
- 2nd WHO Model List of Essential Medicines for Children, 2010
- 3rd WHO Model List of Essential Medicines for Children, 2011
- Recommendations for management of common childhood conditions, 2012

Priority medicines for mothers and children 2011

Priority life-saving medicines for women and children 2012

ACTION

United Nations Commission on Life-Saving Commodities for Women and Children

Global Plan towards the elimination of new HIV infections among children by 2015, and keeping their mothers alive

http://www.who.int/maternal_child_adolescent/documents/management_childhood_conditions/en/index.html
http://www.who.int/medicines/publications/emp_mar2012.1/en/index.html
http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities
http://www.unaids.org/believeitdoit/the-global-plan.html

Nutrition products range

Women	Pregnancy and Lactation	• Iron + Folic Acid tablets • Multiple Micronutrient tablets
Children	Micronutrient Supplementation	• Multiple Micronutrient Powder (MNP) • Vitamin A capsules
	Moderate Acute Malnutrition (MAM)	• Ready to Use Supplementary Food (RUSF) • Lipid Nutrition Supplements (LN-SQ/MQ)
	Severe Acute Malnutrition (SAM)	• Therapeutic Milk (F-75, F-100) • Resomal • Ready to Use Therapeutic Food (RUTF) • Antibiotics, deworming…

UNICEF Procurement Process

NEED Assessment (product range, warehouse replenishment, direct orders)

VENDOR SELECTION

SOLICITATION

AWARD

CONTRACT MANAGEMENT

GMP Assessment

Dossier Assessment

FIRST AND FOREMOST…
QUALITY

*UNICEF supplies products to many countries world-wide, including those that have little or no **regulatory control** of the products supplied. UNICEF is therefore committed to ensure the **quality of the products** it supplies.*

UNICEF Quality Assurance system is based on:

- Standard Operating Procedures
- International Standards for Quality Assurance (including WHO-GMP)
- Continuous review of product specifications

Evaluation of offers

- Technical Evaluation
  - Quality: product characteristics and manufacturing GMP
- Commercial Evaluation
  - Based on technical and QA reports received
  - ITB “lowest evaluated bid”
  - RFP “most responsive evaluated proposal”
  - Based on lowest acceptable offer, including landed cost and possible discounts for early payment (payment terms), lead times, minimum order quantities, etc.
  - Considers commercial risks

Source: UNICEF Supply Division

Type of Contracts and Agreements

- UNICEF awards contracts (**Purchase Orders**) or establishes framework agreements (**Long Term Agreements or LTAs**) under which Purchase Orders are placed.

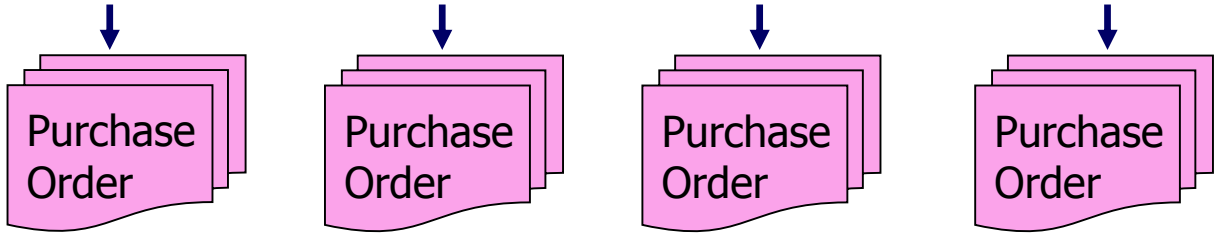
- LTAs can be time-bound (open quantity) or value targeted (specific quantity). Value targeted LTAs are established when there is confidence in forecast and consideration of multiple awards.

- Duration of LTAs vary from 1 to 3 year, with options for revision and renewal.

1

Establishment of Long Term Arrangements to supply for 1 to 3 years

2



Source: UNICEF Supply Division

Sourcing

- Suppliers can contact us directly through emails etc.
- Our online tender calendar (http://www.unicef.org/supply)
- U.N. roster (UNGM -www.ungm.org)
- Requests for Expressions of Interest (REOIs)
- Market surveys
- Internet
- Sources and Prices
- Contacts made at trade fairs
- Recommendations from other partners

Source: UNICEF Supply Division

Thank you!

unite for children

unicef

FAPMA

Federation of African Pharmaceutical Manufacturers' Associations

Improving Access to Medicines the Benefits of Local Production of Pharmaceuticals

Global Fund/FAPMA Conference 14-15 June 2017 Addis Ababa Ethiopia – Capital Hotel

Emmanuel Mujuru Chairman

Federation Of African Pharmaceutical Manufacturers Associations

Objectives of The Conference

- Come up with modalities and programs to have affiliate companies of FAPMA who produce pharmaceuticals to a recognized international standard participate in the procurement schemes of the global fund
- Work out a roadmap for capacity building initiatives to assist the affiliate member companies of FAPMA who are not yet ready to participate in the procurement scheme to do so

Federation Of African Pharmaceutical Manufacturers Associations

VISION AND MISSION of FAPMA

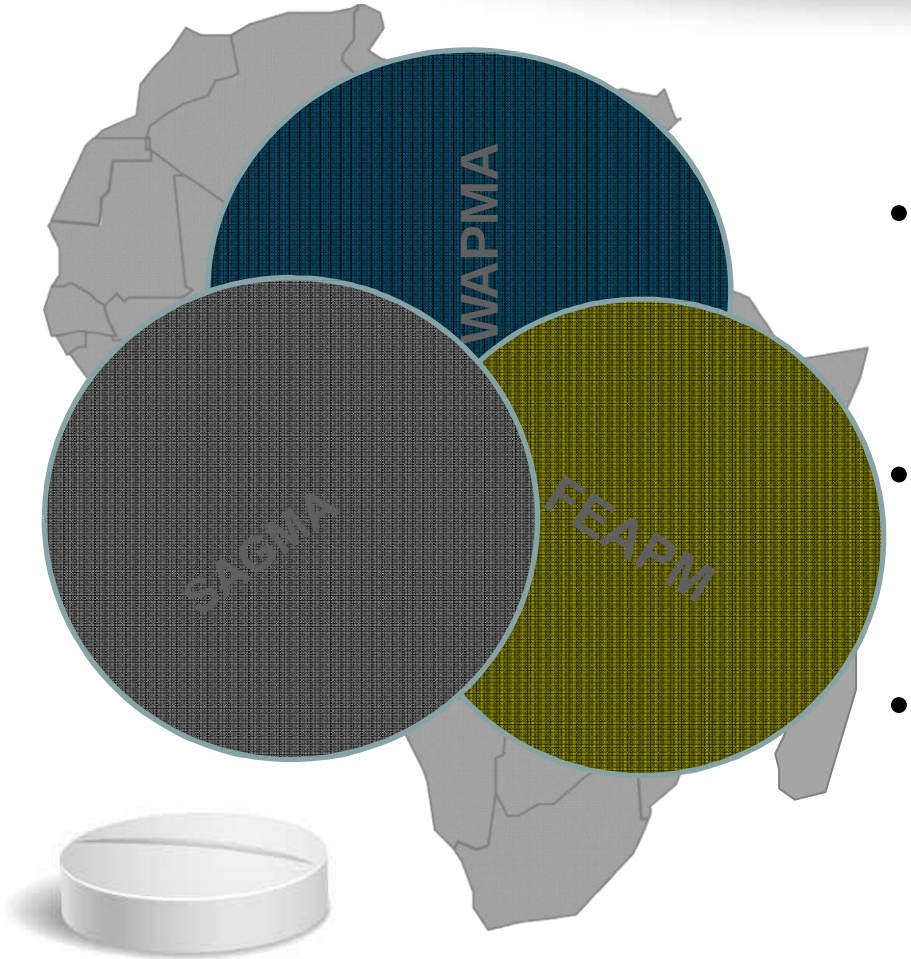
- Is to to be a vibrant and self-sustaining pharmaceutical manufacturing industry in Africa by providing quality and affordable medicines so as to contribute to the reduction of disease burden and promote economic development of the continent.

  To facilitate collaboration between regional pharmaceutical manufacturing associations to address the common challenges faced by the industry and enhance opportunities towards self-sufficiency.

  This will be achieved through advocacy and partnership with other stakeholders in promoting the production of quality, affordable medicines" (1)

Federation Of African Pharmaceutical Manufacturers Associations

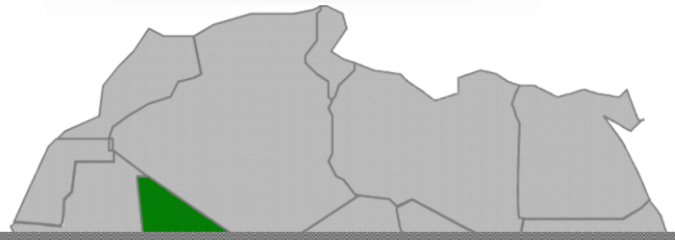
Member Organizations'



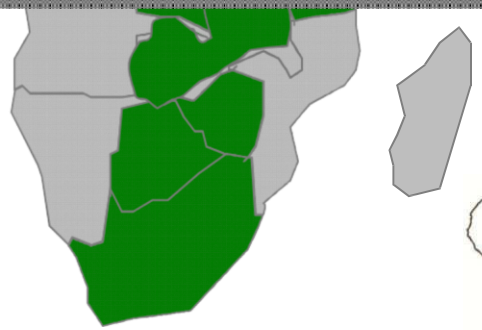
- **Federation of East African Pharmaceutical Manufacturers' Association**
- **Southern African Generic Medicines Association**
- **West African Pharmaceutical Manufacturers Association**

Federation Of African Pharmaceutical Manufacturers Associations

Cote d'Ivoire
DR Congo
Ghana
Kenya
Lesotho
Malawi
Nigeria
South Africa
Swaziland
Tanzania
Uganda
Zambia
Zimbabwe



- **Critical mass of 231 manufacturers**
- **Multiple technologies**
- **Potential to meet most of Africa's needs for generic medicines**



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Disproportionate High Disease Burden

25% of the global disease burden

- 75% of the global HIV/AIDS pandemic
- 90% of the malaria cases and deaths
- 9 countries (excluding North Africa) among the 15 countries with the highest TB burden in the world.
- MDR-TB and XDR-TB rated among the highest in the world.
- Significant child mortality – diarrhoeal, measles, URTI

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Background

Market

Although it is relatively small in global terms (worth US $23.1 billion in 2011, or less than 2% of the global market), Africa's pharmaceutical industry is the fastest growing in the world (Afdb)

Pharmaceutical manufacturing

There is clear momentum in Africa for developing the pharmaceutical industry. African Heads of State stressed the potential for local production and technology transfer in the Pharmaceutical Manufacturing Plan for Africa. (afdb) the creation of PMPA

African manufacturing is still in its infancy and is curtailed by a number of structural shortcomings….. Manufacturing sectors around the continent are however showing signs of expanding, driven by factors like strong growth in demand, improving infrastructure, and increased openness to foreign investment (KPMG report 2014 Manufacturing in Africa)

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Benefits of Local Manufacture

i. Local Pharmaceutical Production (LPP) makes it easier for national medicines regulatory authorities to ensure proper quality and safety of medicines sold in the country
ii. LPP reduces dependence on foreign sources supplies and improves sustainability of reliable medicines supplies
iii. LPP promotes local value addition, generates income, economic growth and scientific development
iv. LPP creates jobs and reduces balance of payment positions through import substitution
v. LPP can serve the expanding markets that are brought about by a growing population and the advance of non-communicable diseases in Africa
vi. LPP can be a step towards sustainable treatment programs and prepare grounds towards access beyond the current era of drug donations

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Core Objectives of PMPA

Support local pharmaceutical manufacturing to:

- increase access to affordable quality medicines
- ensure sustainable supply of essential medicines
- improve public health outcomes
- promote industrial and economic development

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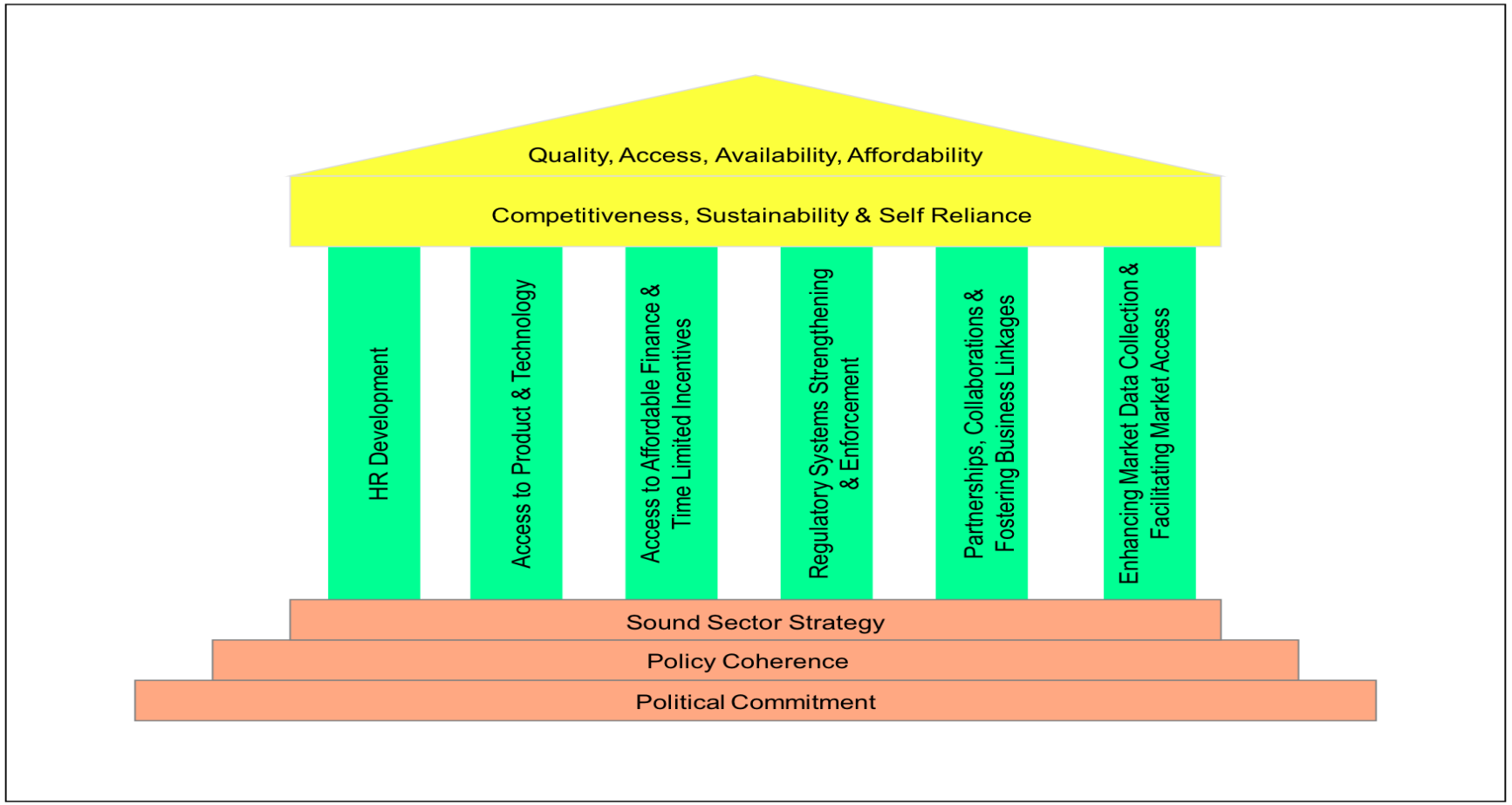
PMPA Package of Solutions



Pharmaceutical Manufacturers Associations

Quality and GMP Improvements by African Pharmaceuticals Companies

A number of companies in Africa have achieved High GMP standards e.g.

WHO PQ:

- Universal in Kenya – WHO PQ Products
- Quality Pharmaceuticals in Uganda – WHO PQ
- Varichem in Zimbabwe – WHO PQ
- Aspen in South Africa – WHO PQ

GMP Certified by WHO:

- Chi Pharmaceuticals; Evan Medical Plc; May and Baker Nigeria Plc and Swiss Pharma Nigeria Limited.

However, the anticipated business from the donor markets has not been forthcoming.

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Major Challenges

- Cost competiveness
- Failure to access donor markets (e.g. Global Fund) by WHO PQ or certified companies leading to lack of confidence and poor return on investment
- Prices of medicines and the perception that this will negatively affect access
- Low capacity utilization and its impact on prices and profitability
- Quality issues – regulators seen as non stringent and industry as non GMP compliant
- Proliferation of fake counterfeit and substandard medicines – challenge to both local companies and NMRA's
- Lack of Capital

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Shaping African Markets

Global Fund plays an important and sometimes active role in shaping African market dynamics for medicines used in HIV/AIDS, Malaria and Tuberculosis and other complimentary medicines. The decision it makes with regards to:

- Quality
- Price
- Sustainable supply

Will have an impact on the long term development of African pharma industry and sustainable access to quality, affordable and efficacious medicines long after the donations will have dried up.

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Inclusive and Sustainable Industrial Development

Achieving Industry-related goals and targets in the 2030 Agenda for sustainable Development

- **Goal 3.** Ensure health lives and promote well being for all at all ages
- **Goal 8.** Promote sustained, inclusive and sustainable economic growth, full and productive employment
- **Goal 9.** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

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Global Fund Policy Support for LPP

- Policy clarity and commitments to procure from African based pharmaceutical manufacturing companies that meet quality standards
- volume or price based procurement system leveraged on the value offered by LPP that incudes proximity, short delivery times, distribution efficiencies/effectiveness and sustainability.
- Long term supply contracts for LPP
- Time limited incentives for LPP and levelling of playing field

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"*The time for Africa to break its dependence on foreign imports is now. The local manufacture of pharmaceuticals in Africa is an opportunity to develop a broader manufacturing and knowledge based economy*"

Michel Sidibe UNAIDS Executive Director 7th AUC Conference of Ministers Abuja Nigeria 25-30 November 2014

Federation Of African Pharmaceutical Manufacturers Associations

Mission Report to The Global Fund and World Health Organization - Final Version (page 1 of 11)

Search

Mission Report to The Global F...

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Mission Report of FAPMA's Visit to The Global Fund & World Health Organisation, Geneva, Switzerland.

26th – 27th of September 2016.

AFRICANS FOR AFRICA
AFRICAINS POUR L'AFRIQUE

Pharmaceuticals made in Africa for Africa
the economic opportunity

Africa is rapidly changing…

Demographic, epidemiological and economic shifts are transforming the pharmaceuticals market.

The population is growing and aging; new areas of medical need are emerging; and the diseases from which people in developing countries suffer are increasingly like those that trouble people living in the developed world.

Africa will have the world's largest workforce.

Africa's urbanization is at 40% and expected to reach 50% in the near future.

Household spending in Africa is rising and expected to reach USD 2.4 trillion by 2020.

The African market for pharmaceuticals will be worth between USD 40 billion and USD 60 billion by 2020.

Africa's attractiveness lies not in its market size but in its rapid growth.

All pharma segments are expected to grow in Africa:

1. Prescription drugs
2. Generic drugs
3. Over-the-counter drugs
4. Medical devices

…and to realize its potential we need to meet the challenges of our lifetime

Challenges

- Chronic Diseases is soaring
- Health policy makers and players are increasingly mandating what doctors can prescribe
- The boundaries between different forms of healthcare are blurring
- Emerging economies are driving demand for medicines
- Governments are beginning to focus on prevention rather than treatment
- Regulators are more cautious

Required Shift

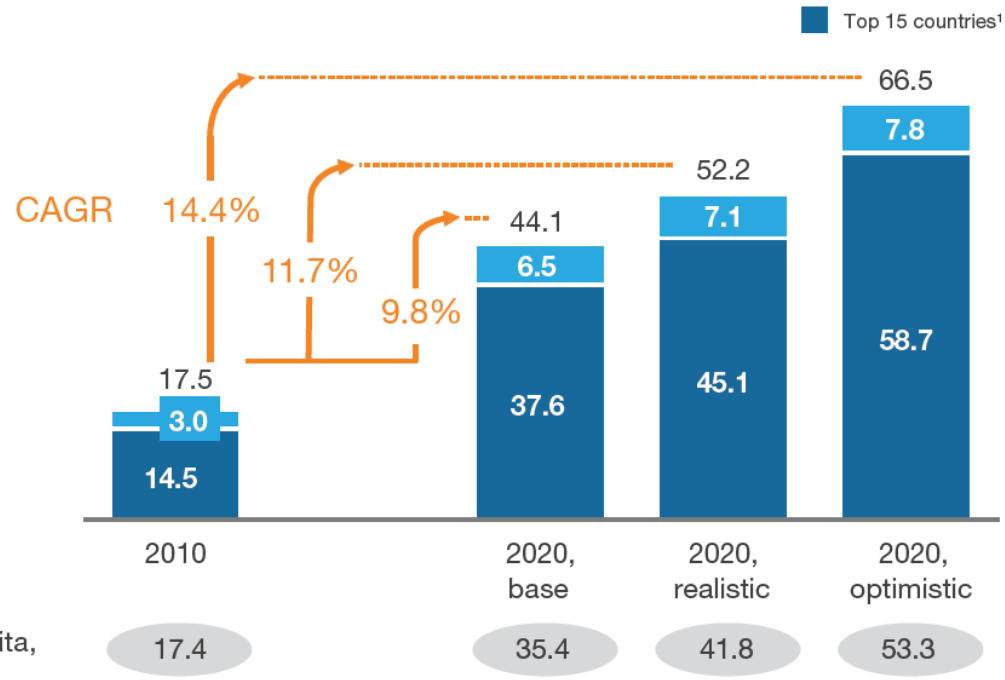
- Collaboration with key actors inside and outside the sector
- Switch from selling medicines to managing outcomes
- Increase Research and Development Productivity

Source: PwCPharma 2020 report

Research shows that Africa Pharma Market is Growing (1/2)

Africa's pharma markets can expect strong growth

A clear correlation between a company's DQ and its financial performance

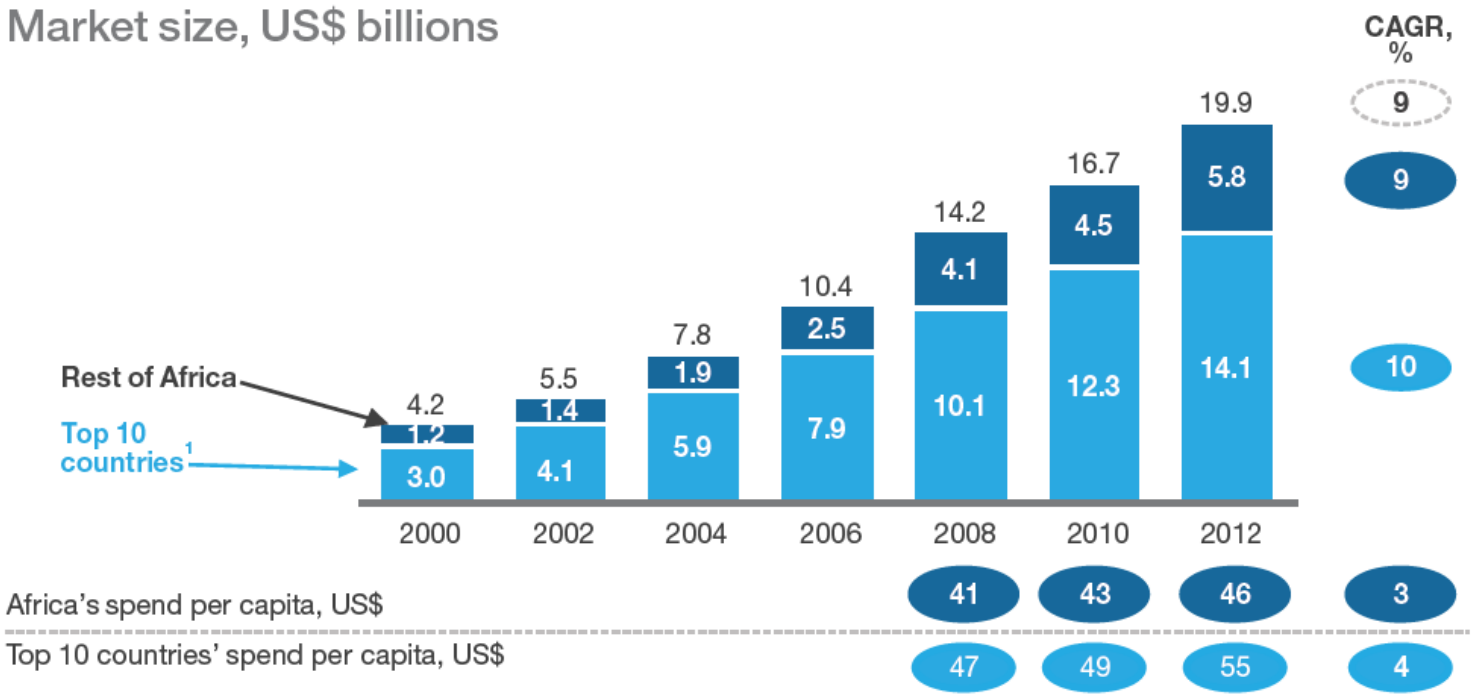


1 Algeria, Angola, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Libya, Morocco, Nigeria, South Africa, Sudan, Tanzania, Tunisia, and Uganda
Source: WHO; World Bank; IMF; African Development Bank; BMI Research; McKinsey analysis

Source: McKinsey&Company

Research shows that Pharma Market is growing (2/2)

Ten countries represent 70 percent of Africa's pharma market



1 Algeria, Egypt, Kenya, Ivory Coast, Libya, Morocco, Nigeria, South Africa, Sudan, and Tunisia

Source: BMI Research; World Bank; McKinsey analysis

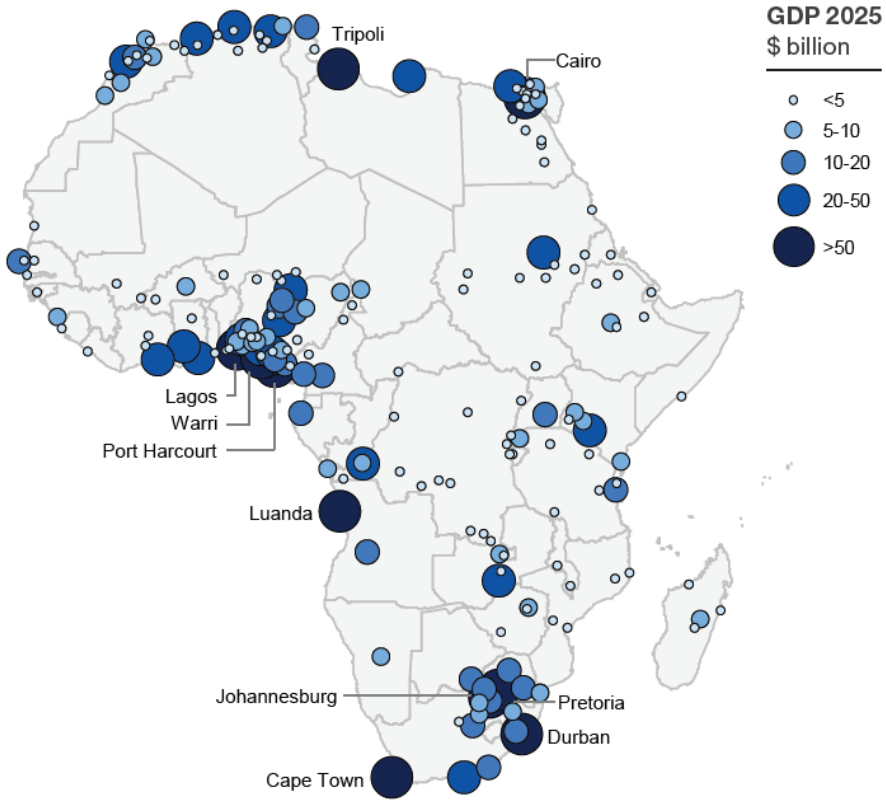
Source: McKinsey&Company

Manufacturing Pharmaceuticals: An Untapped Opportunity

Africa carries 25% of world disease burden but consumes less than 1% of global health expenditures

Africa's capacity for pharmaceutical R&D and local drug production is amongst the lowest in the world

There is a reliance on imported active ingredients. Pharmaceutical market in Africa is at 70%



Source: Map - McKinsey&Company

To pave a sustainable path for Africa's health systems, scaling up pharmaceutical production is essential

It involves legal, scientific, technical, fiscal and financial aspects. Local will create modern jobs and stimulate economic activity.

There is a need for fewer structures and harmonization of policies through regional integration

To accelerate this growth Africans needs to own their destiny and play an active role like Africans for Africa (A4A)

Commenced the journey to raise over **$1 billion USD for catalytic interventions to turn hope into tangible socio-economic transformations**, whilst making a sustainable impact in the lives of over 1 billion Africans.

Working together with like-minded leaders, individuals, and institutions, A4A is mobilising African resources, will and skills to **enable prosperity, and a thriving African continent in our lifetime.**

A4A is an Initiative by the MyAfricaThriving Foundation and the Ecobank Foundation, in Collaboration with The Global Fund

What differentiates A4A?

Leveraging Private Sector Mechanisms to accelerate and achieve sustainable development

An investment vehicle focused on increasing return on investments for institutional and private investors to enable prosperity in Africa

Philanthropic Giving on the following focus areas:

- Health
- Education
- Economic Inclusion

Driven by Africans

- African Private Sector
- HNWI & Philanthropists across the continent
- African private sector employees
- African diaspora

Sustainable Impact

- We leverage Private Sector mechanisms to increase return on equity for greater impact
- We maximize investments to raise new sources of funding
- We invest in communities through high impact organizations to scale programs

Innovative Investment Vehicle

- Raise new funds through targeted share classes philanthropic investments for catalytic interventions on the African continent.
- Generate supplemental outcomes based on existing partner portfolio in Africa

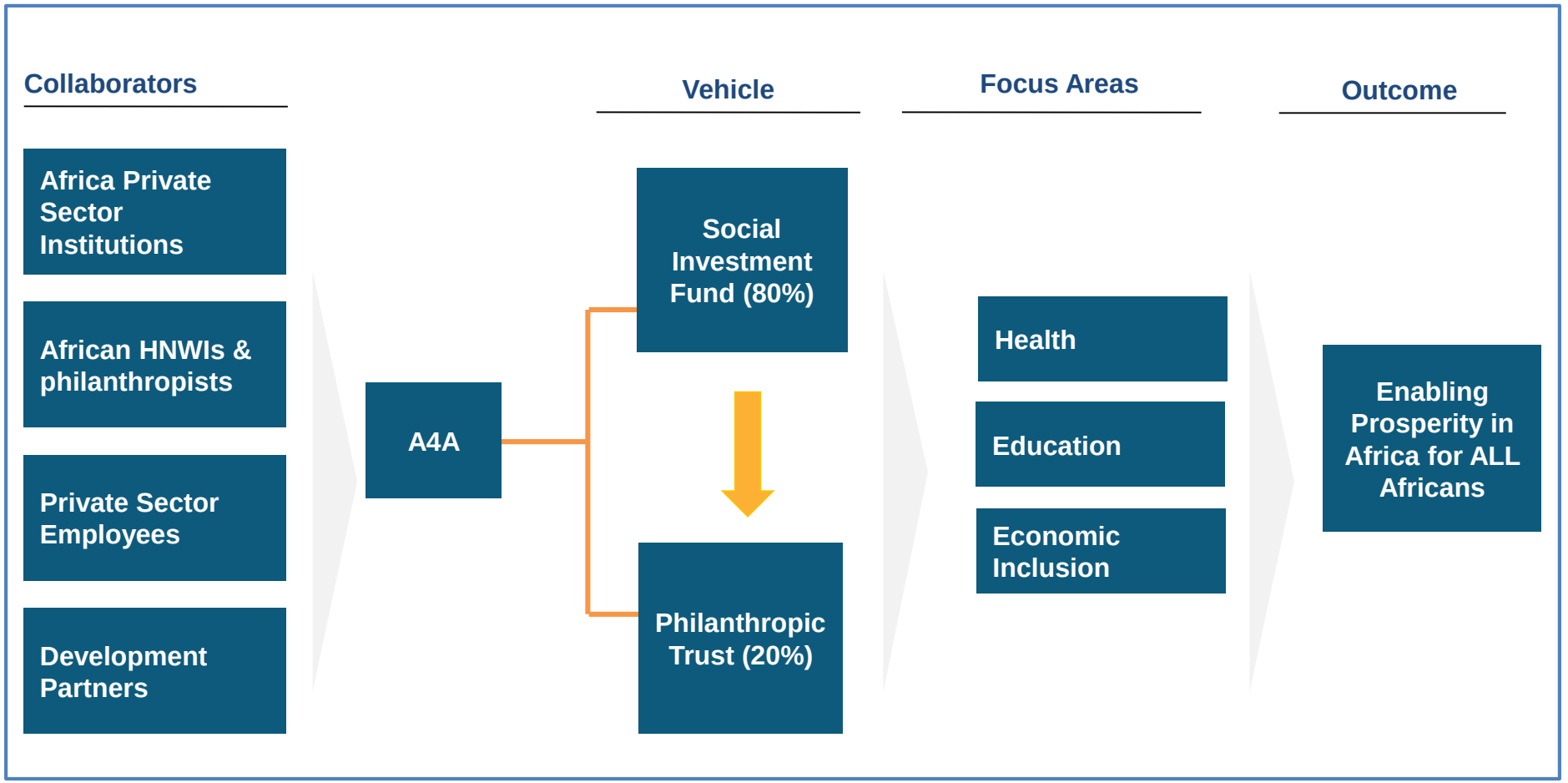
A World Class Innovation Hub

- Build a center of innovation where ideas can be tested and deployed across the continent
- Provide subject matter expertise on solving Africa's most pressing community challenges

Global Visibility

- Execute a forward looking branding and marketing campaign
- Publish and share best practices in global arenas through innovation and stories of sustained impact.

A4A Strategy in Action



Thank You

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www.africans4africa.com

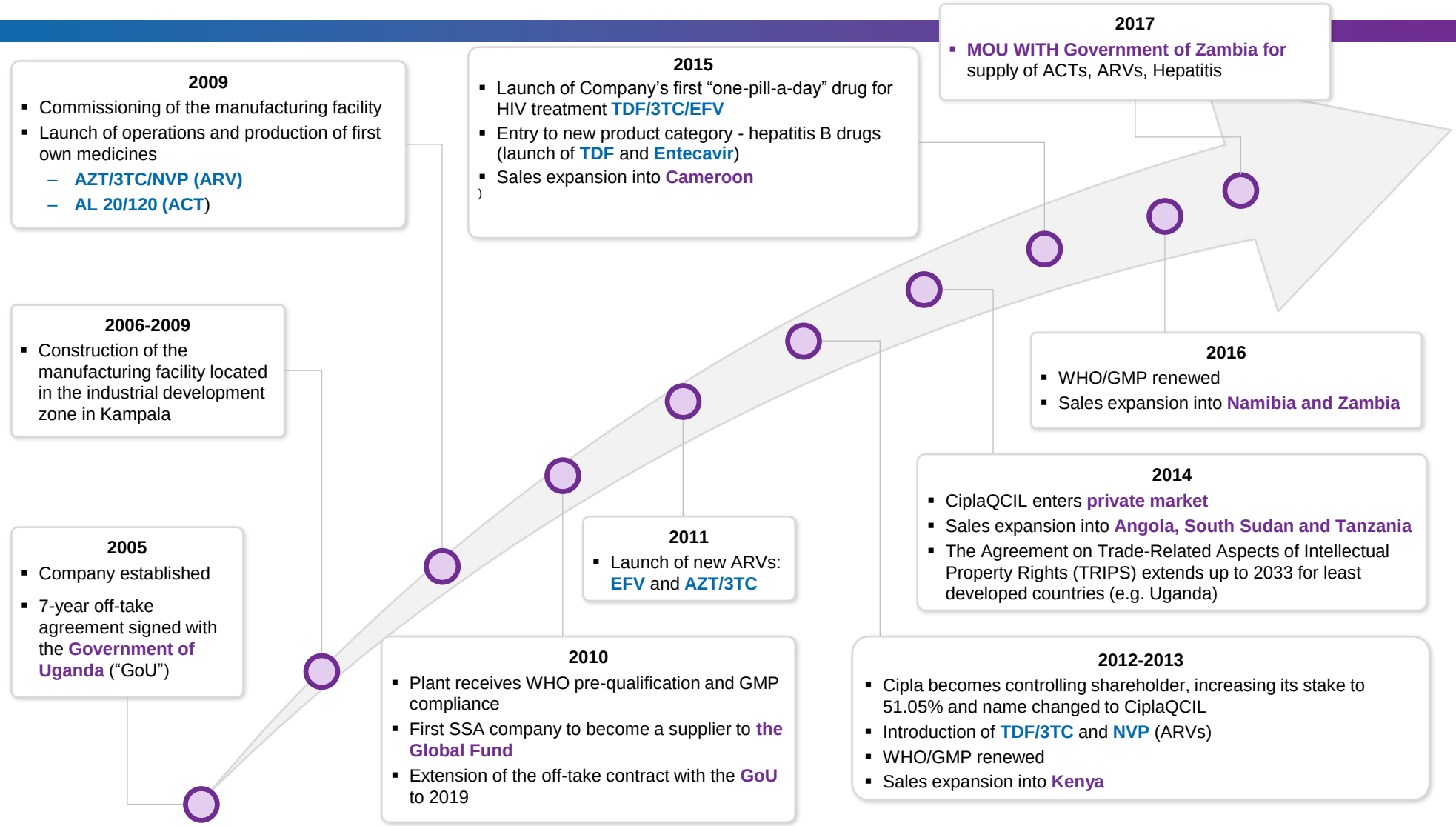
African Pharmaceutical Manufacturer's Conference

Addis Ababa | 14 June 2017

OUR MISSION

To provide long-term, sustainable access to high quality and affordable medicines in order to improve the quantity and quality of life

OUR JOURNEY



2005
- Company established
- 7-year off-take agreement signed with the **Government of Uganda** (“GoU”)

2006-2009
- Construction of the manufacturing facility located in the industrial development zone in Kampala

2009
- Commissioning of the manufacturing facility
- Launch of operations and production of first own medicines
  - **AZT/3TC/NVP (ARV)**
  - **AL 20/120 (ACT**)

2010
- Plant receives WHO pre-qualification and GMP compliance
- First SSA company to become a supplier to **the Global Fund**
- Extension of the off-take contract with the **GoU** to 2019

2011
- Launch of new ARVs: **EFV** and **AZT/3TC**

2012-2013
- Cipla becomes controlling shareholder, increasing its stake to 51.05% and name changed to CiplaQCIL
- Introduction of **TDF/3TC** and **NVP** (ARVs)
- WHO/GMP renewed
- Sales expansion into **Kenya**

2014
- CiplaQCIL enters **private market**
- Sales expansion into **Angola, South Sudan and Tanzania**
- The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) extends up to 2033 for least developed countries (e.g. Uganda)

2015
- Launch of Company’s first “one-pill-a-day” drug for HIV treatment **TDF/3TC/EFV**
- Entry to new product category - hepatitis B drugs (launch of **TDF** and **Entecavir**)
- Sales expansion into **Cameroon**

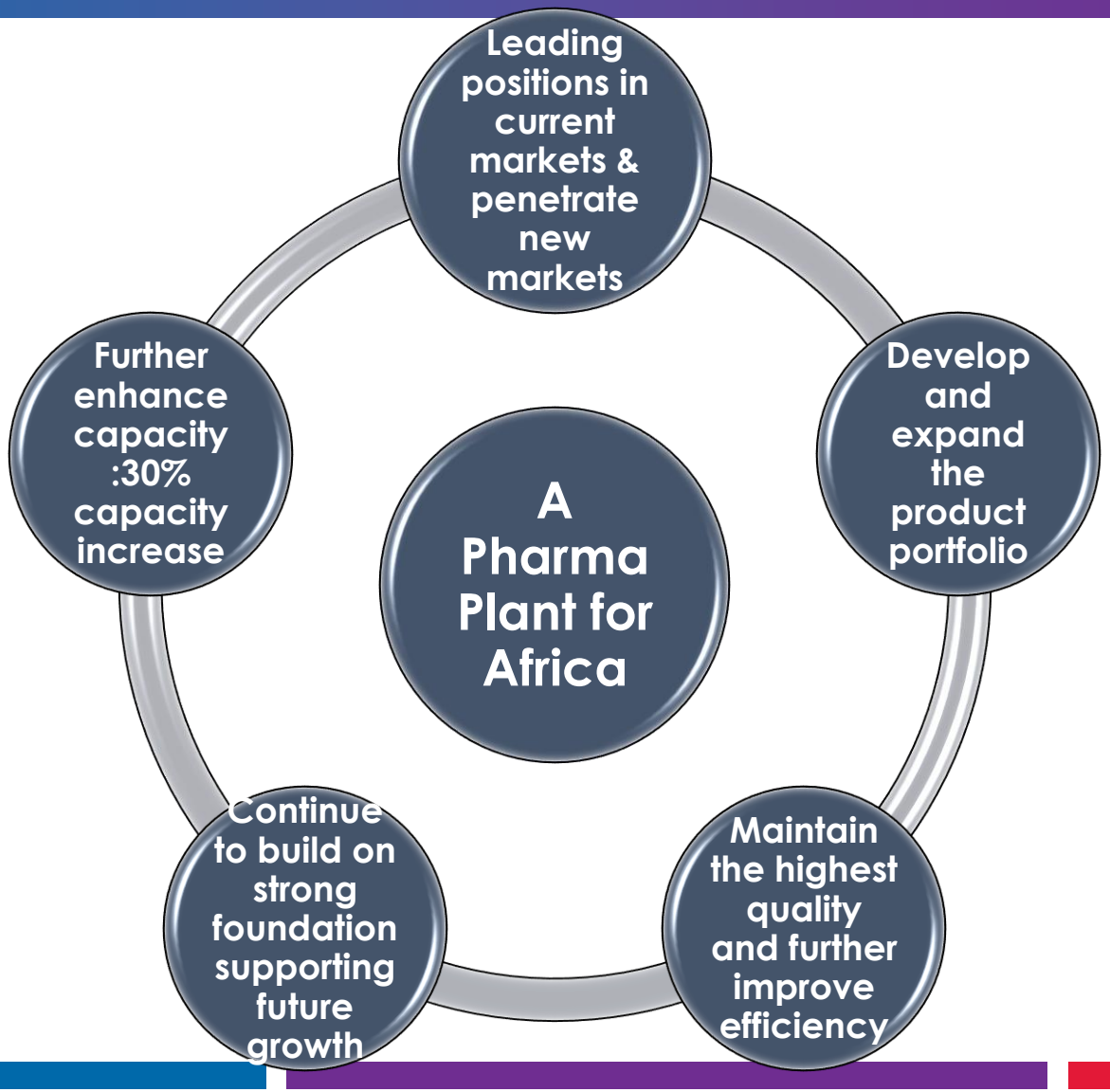
)

2016
- WHO/GMP renewed
- Sales expansion into **Namibia and Zambia**

2017
- **MOU WITH Government of Zambia for** supply of ACTs, ARVs, Hepatitis

(1) Quality Chemicals Limited (“QCL”) – a leading pharmaceutical distributor in Uganda and Company’s second largest shareholder owning a 22.05% stake

ASPIRATION TO BECOME ONE OF THE LEADING PHARMACEUTICAL MANUFACTURERS IN SSA



EVOLVING PRODUCT PORTFOLIO

- The Company's product portfolio is currently tailored to target the three major communicable diseases that are widespread in Uganda and SSA and comprises anti-malarials, anti-retrovirals and hepatitis B medications
- All products are approved and recommended by WHO as preferred treatment methods for the respective diseases
  - Company's ARV portfolio comprises 6 products, all of which are in line with WHO's latest treatment guidelines

Anti-retrovirals (ARV)

- Company started ARV production in 2009
- Released in 2015, TDF/3TC/EFV became Company's first "preferred option" drug as per latest WHO guidelines for HIV treatment (thanks to its formulation). It is a convenient "one-pill-a-day" drug and represents a fixed-dose combination therapy (several active ingredients in one pill):
  - Maximizes the level of HIV suppression
  - Simplifies treatment (one daily pill, instead of three or four) and decreases dosing errors
  - Decreases likelihood that the virus will become resistant to the treatment
- All of Company's drugs can form a part of combination therapy

Anti-malarials (ACT)

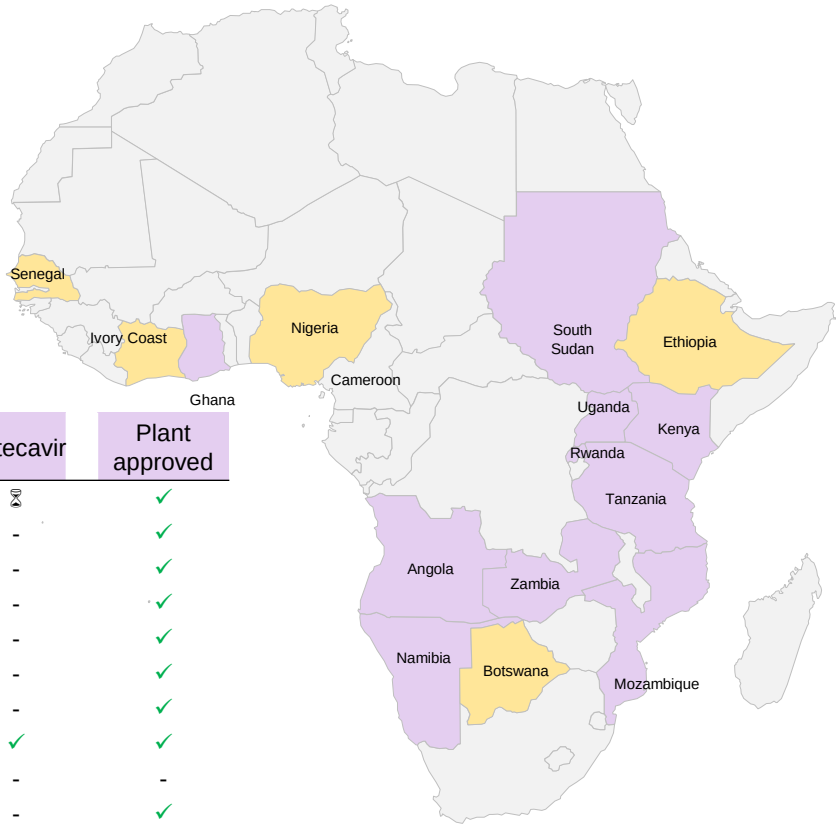
- Artemether 20mg/Lumefantrine 120mg is the only anti-malarial medication produced by the Company
  - The medicine has been manufactured since CiplaQCIL's launch in 2009
  - Product is still considered to be the most effective anti-malarial treatment globally with very few cases of resistance
  - A combination therapy medicine comprising two active ingredients
- Artemether 20mg/Lumefantrine 120mg was included in the WHO list of pre-qualified medicinal products for malaria treatment in 2009

Hepatitis B

- Driven by the rising health issues dictated by hepatitis across the African continent, in 2015 the Company launched its first hepatitis B medications – TDF and Entecavir
  - TDF is recommended by WHO as the first-line treatment
  - Entecavir, also recommended by WHO, is the first-line treatment for children and second-line treatment for adults

EXPANDING THE REGULATORY FOOTPRINT ACROSS AFRICA

- CiplaQCIL's medications are currently approved in 10 countries across Eastern , Western and Southern Africa
- Company will complete registration of its key products in at least 7 other countries by end of 2017
- Despite each country having its own regulatory requirements, the approval process is facilitated by the fact that most products have already been WHO Prequalified
- Company's production facility also has GMP approvals for Ethiopia, Ghana and Ivory Coast



Registration status and 2016-2017 pipeline

	AL 20/120	AZT/3TC/NVP	AZT/3TC	TDF/3TC	EFV	NVP	TDF/3TC/EFV	TDF	Entecavir	Plant approved
Uganda	✓	✓	✓	✓	✓	✓	✓	✓	⌛	✓
Kenya	✓	✓	✓	✓	✓	✓	✓	⌛	-	✓
Tanzania	✓	✓	✓	✓	✓	✓	⌛	-	-	✓
Namibia	✓	✓	✓	⌛	✓	✓	⌛	⌛	-	✓
Zambia	✓	⌛	-	⌛	⌛	-	✓	⌛	-	✓
Rwanda	✓	✓	✓	✓	✓	✓	-	-	-	✓
South Sudan	✓	✓	✓	✓	✓	✓	-	-	-	✓
Angola[1]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mozambique	✓	-	-	-	-	-	-	-	-	-
Ivory Coast	-	-	-	-	-	-	-	-	-	✓
Ethiopia	⌛	-	-	-	-	-	-	-	-	✓
Ghana	✓	-	-	-	-	-	✓	-	-	-
Nigeria	-	-	-	-	-	-	-	-	-	-
Botswana	-	-	-	-	⌛	-	⌛	-	-	-

✓ Approved
⌛ Submitted
- To be submitted

EXPANDING THE FOOTPRINT ACROSS AFRICA

- Commissioned in 2009, WHO all ARV's and ACT WHO prequalified
- Currently a supplier of ACTs to the Global Fund in the SSA region
- Fully-invested state-of-the-art production facility with all necessary infrastructure and land required for further expansion. Initial investment $45 million, further capex $22 million. 2017 $ 7 million capex on expanding capacity by 30% and $3million on state of the art pharma warehouse

Products manufactured at CiplaQCIL have been distributed to:

Uganda, Kenya, Zambia, Tanzania, Namibia, Cameroon, Angola, South Sudan

The list of international and regional institutions that have pre-qualified CiplaQCIL

- WHO
- National Drug Authority of Uganda (NDA)
- Red Cross
- Drugs for Neglected diseases Initiative (DNDI)
- Kenya Pharmacy and Poisons Board
- Tanzania Food and Drugs Administration
- Rwanda Biomedical Centre
- Malawi PMPB
- Ethiopia FMHACA
- Namibia Ministry of Health
- Ivory Coast Ministry of Health
- Ghana Ministry of Health

I INTRODUCING CIPLAQCIL

II **STRATEGIC PARTNERSHIPS**

III EVOLVING RELATIONSHIP WITH THE GLOBAL FUND

CIPLA: MAJORITY SHAREHOLDER AND A KEY TECHNICAL PARTNER TO THE BUSINESS

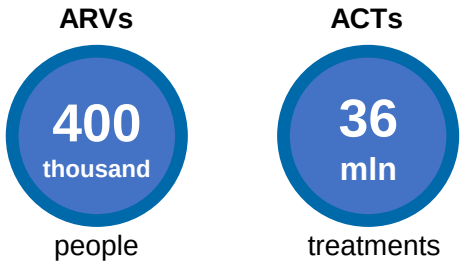
Selected key areas in the business supported by Cipla

Technical knowledge	✓ Expertise related to new product launch, production operations, adoption of new technologies, efficiency improvements, expansion programs, etc.
New product development	✓ Cipla's product portfolio exceeds 1,000 medicines, that can potentially be transferred to the Company should commercial opportunity arise ✓ Since Cipla's products are already registered globally, local market authorization time (e.g. if the Company is registered as an additional manufacturing site) can be significantly reduced
Procurement	✓ Through Cipla, CiplaQCIL has access to API's at competitive rates and on favorable payment terms ✓ Cipla's technical services include pre-qualifing suppliers consistent with WHO standards
Quality control	✓ Regular and rigorous audits from Cipla ensure compliance with strict international standards ✓ Established procedures across all areas of operations facilitate meeting global regulatory and customer standards (WHO pre-qualification and GMP have to be renewed every 3 years)
Important relationships	✓ Access to global pharma producers, including for securing license agreements in cases when such agreements were provided to Cipla

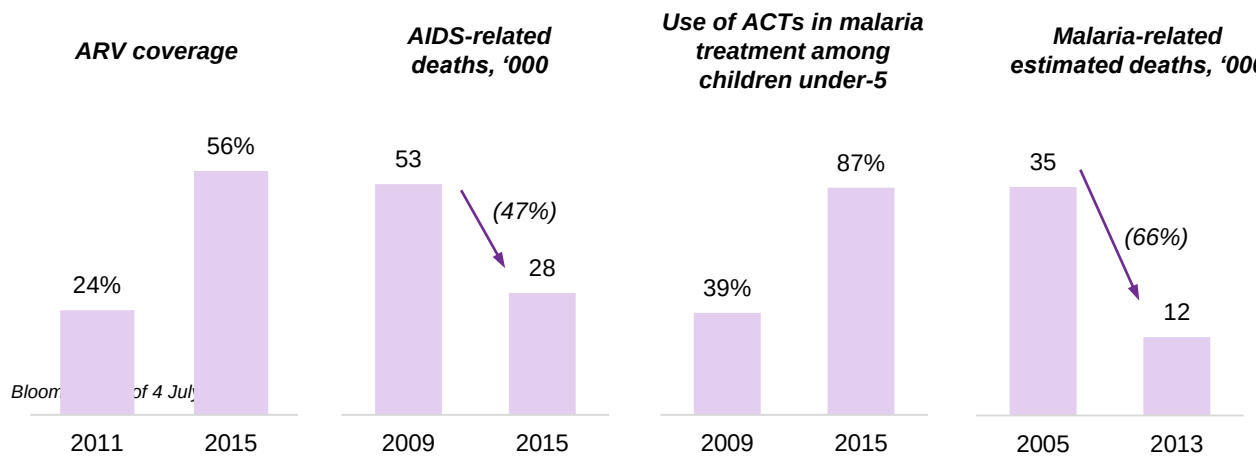
PARTNERSHIPS WITH GOVERNMENTS OF UGANDA AND ZAMBIA. OTHERS IN NEGOTIATION.

- ✓ Long term guaranteed offtake for supply of ACTs, ARVs and Hepatitis medicine
- ✓ Provision of locally-manufactured lifesaving medicines for Uganda and other African markets in need
- ✓ Local production guarantees consistent supply of high quality products (minimum level of adherence for ARV to work properly is 95%, which means one cannot miss more than 1 ARV pill per month on a "one-pill-a-day" treatment)
- ✓ Shorter lead time compared to imports

Aggregate medicines CiplaQCIL in 2016-17



Gradual improvement of HIV- and malaria-related healthcare treatment in Uganda



(1) Bloom[illegible]of 4 Jul[illegible]

CiplaQCIL's positive impact on the domestic economy

- ✓ Sizeable investments in construction of the industrial park and production facilities in Kampala
- ✓ Mentioned as a top-100 tax payers in Uganda by President Yoweri Kaguta Museveni in 2016[2]
- ✓ Improving national trade balance (growing exports)
- ✓ Over 270 employees (over ca. 98% are Ugandans) provided with consistent training, competitive wages and a range of other benefits
- ✓ Regular teaching sessions organized for Ugandan and other pharma students and participation in numerous charity events

I INTRODUCING CIPLAQCIL

II STRATEGIC PARTNERSHIPS

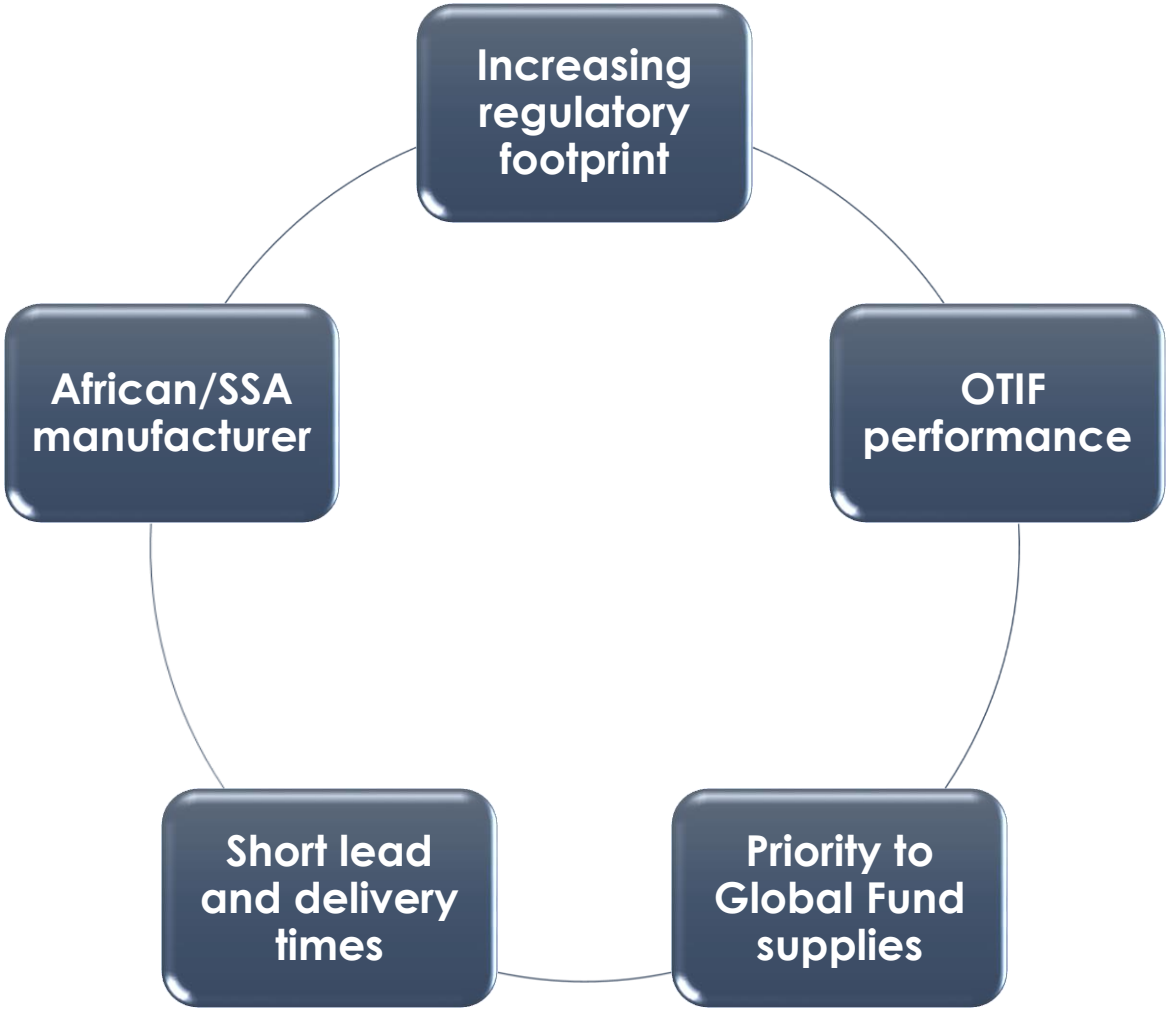
III **EVOLVING RELATIONSHIP WITH THE GLOBAL FUND**

EVOLVING RELATIONSHIP WITH THE GLOBAL FUND

- ✓ Currently supplying Anti-malarials financed by the Global Fund : both Co Payment and PPM.
- ✓ From tender award for 3 countries in 2014, CiplaQCIL supplied to 6 countries in Africa in 2016/17; #treatments ~5X of the 2014 allocation
- ✓ Entrusted with holding the GF's rapid supply mechanism stock
  - CQCIL holds and regularly rotates 30 million Artemether 20mg/Lumefantrine 120mg tablets and undertakes to pack and deliver medicines to anywhere in Africa within seven days if the GF places an emergency order
  - the last emergency order for Comoros Islands was delivered in five days from receipt of order)

EVOLVING RELATIONSHIP WITH THE GLOBAL FUND

- 0 days Uganda
- 24 hours Kenya
- 48 hours Tanzania
- 8 days Zambia (over land)



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"THANK YOU"

PHARMACEUTICAL MANUFACTURING PLAN FOR AFRICA

PHARMACEUTICAL MANUFACTURING PLAN FOR AFRICA (PMPA) STRATEGIC DIRECTION

PRESENTED AT THE AFRICAN PHARMA MANUFCATURERS CONFERENCE

CAPITAL HOTEL, ADDIS ABABA, ETHIOPIA

14-15 JUNE 2017

Dr. Janet Byaruhanga
African Union Commission, Social Affairs Department

Presentation outline

- Mandate, Vision & Mission,
- Areas of Focus
- Initiatives
- Indicators of Success
- Governing Structure
  - PMPA Technical Committee composition
  - PMPA Consortium of Partners
  - AUC and NEPAD Agency
  - UNIDO
- Challenges
- Upcoming Events

Mandate, Vision & Mission

- **Mandate**

January 2005 AU Assembly decision 55 taken during the Abuja Summit which mandated the African Union Commission to develop a Pharmaceutical Manufacturing Plan for Africa within the framework of NEPAD

- **Vision**

African people have access to essential, quality, safe and effective medical products and technologies

- **Mission**

Facilitate the development of a competitive pharmaceutical industry in Africa to ensure self-reliance

Areas of Focus(1/2)

- Developing a Business Plan
- Building a Consortium of Partners for PMPA
- Developing a joint work plan
- Resource mobilization
- Development of solutions where further work is needed
  - GMP
  - Essential Medicines List risk assessment
  - Detailed design of syllabus for HR development along different dimensions of human capital requirements

Areas of Focus(2/2)

- Identification of member states and, if appropriate, RECs who wish to actively engage with the PMPA
- Identification of experts and service providers
- Interaction with other stakeholders involved in activities related to pharmaceutical manufacturing in order to derive inputs and identify opportunities for collaboration/alignment with the PMPA
- Setting up field representation for the PMPA

Initiatives(1/2)

- Legislation, policy and incentives
- Regulatory strengthening
- Good Manufacturing Practice
- Access to Capital
- Human resource development

Initiatives 2/2

- Market/management information system
- Business linkages
- Bioequivalence centre
- Innovation, research and development
- Traditional medicine
- Advocacy and communications

Indicators of Success(1/3)

- Proportion (value and volume) of pharmaceutical market supplied by Africa-based manufacturers
- Proportion of products in the market place that are found to be sub-standard and the severity of the non-conformity with requisite parameters
- Number of companies achieving Good manufacturing Practice (GMP) standards
- Proportion of products procured by international donors sourced from Africa-based manufacturers

Indicators of Success(2/3)

- Improved Capacity of National Medicines Regulatory Authorities
- Number of National Quality Control Laboratories prequalified by WHO
- Number of countries that have developed and are implementing strategies for local production
- Amount of capital investment in pharmaceutical manufacturing activities
- Number of countries amending legislation to incorporate TRIPS flexibilities and the number of products on the market as a result of exploiting the flexibilities and price of products versus originators

Indicators of Success(3/3)

- Number of industry professionals trained across different disciplines required by the pharmaceutical manufacturing system
- Number of Partnerships and Business Linkages facilitated
- Number of Partnerships and Business Linkages facilitated
- Emergence of supportive industries e.g. for manufacture of excipients and packaging material and are able to service and retool equipment

Governing Structure(1/2)

PMPA Technical Committee composed of

- 12 member states from across the five regions of the AU namely: East (Kenya, Ethiopia), West (Ghana, Nigeria, Senegal), North(Libya, Egypt), Central(Cameroon, Burundi), South (South Africa, Angola, Mozambique);
- Representatives from 8 regional economic communities recognized by AU and representing steering committees on AMRH
- UNIDO
- WHO
- Academia
- Federation of African Pharmaceutical Manufacturers Associations (FAPMA) and
- AUC&NEPAD Agency(serve as Joint secretariat)

Governing Structure(2/2)

- **PMPA Consortium of Partners:**
  - UNIDO(secretariat)
  - UNAIDS
  - WHO
  - UNFPA
  - UNECA
  - USP
  - ANDI
  - FAPMA
  - AfDB
  - NEPAD AGENCY

CHALLENGES

- Inadequate Funding
- Insufficient Human resources
- Limited Institutional capacity

Upcoming events

- Organize Continental conference on local production of pharmaceuticals in Africa;(24-26 October 2017)
- Preceded by the PMPA Partners Platform

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