Finance Track

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Report

Enhancing pharmaceutical manufacturing capacity in Africa: current scenario and future perspectives for G7 Members

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1. Background and objectives

The COVID-19 pandemic has underscored the vulnerability of low-income countries to disruptions in the supply chain of health products, reinvigorating the discussions on the importance of bolstering manufacturing capacity, particularly for vaccines and other medical countermeasures (MCMs). This is seen as a critical step towards promoting a baseline level of supply security and achieving Universal Health Coverage (UHC), as high reliance on imports has negative effects on the availability and accessibility to essential medicines and vaccines.

The case for developing the manufacturing of health products in Africa is compelling, as the market shows clear potential for development. Despite persisting challenges, strong endorsement from African institutions and governments backed by substantial G7 investments led to significant progress in production capabilities and in other key areas of the enabling environment.

African countries and institutions are making significant efforts to develop their pharmaceutical sector. In 2021, the African Union (AU) Heads of States and Governments established the Partnerships for African Vaccine Manufacturing (PAVM), setting the goal of enabling the African vaccine manufacturing industry to develop, produce, and supply over 60% of the total vaccine doses required on the continent by 2040, with an interim goal of 30% by 2030. The African Development Bank (AfDB) has also taken a leadership role, developing a 2030 Continental Pharmaceutical and Vaccine Manufacturing Vision and Action Plan to guide its strategic interventions in the industry and committing investments for up to $3 billion by 2030.

Since the COVID-19 outbreak, several initiatives have followed from International Organizations (IOs), Multilateral Development Banks (MDBs), and other financial institutions along with bilateral initiatives to prioritize investments, scale up manufacturing and building local expertise. Notably, under the German Presidency in 2022, G7 members prioritized the local manufacturing capacity of low- and middle-income countries on the political agenda, within broader discussions on improving pandemic prevention, preparedness, and response (PPR). This commitment was reaffirmed under the 2023 Japanese Presidency. G7 Members are today investing in a number of initiatives to enhance pharmaceutical production in Africa, and the engagement is growing as the agenda is advancing at a fast pace, including with the launch of the Gavi's African Vaccine Manufacturing Accelerator.

The main objectives of this report are to offer an overview of the current landscape of pharmaceutical manufacturing in Africa, focusing on the key elements that are relevant in a G7 finance perspective, and to review G7 commitments to take stock of progresses to date and support future coordinated actions.

For the avoidance of doubts, in this report "technology transfer" refers to voluntary technology transfer on mutually agreed terms.

2. Regionalize pharmaceutical production: the perspective of pandemic preparedness

The COVID-19 pandemic had a severe economic impact on a global scale. However, compared with advanced economies, developing countries are recovering at a slower pace and experiencing a persisting gap with pre-pandemic GDP trends. Along with pre-existing vulnerabilities and economic factors, delays in accessing MCMs, including vaccines and testing, contributed to exacerbate economic disparities.

Africa was a small supplier and a major importer of COVID-19 vaccines, while depending heavily on donations (53% of total supply); against this backdrop, African countries experienced unpredictability and significant delays, increasing health inequalities and vulnerability to emerging variants. In this scenario, by addressing the dependence on imported health products, an increased pharmaceutical manufacturing capacity would enable the scale-up of production, thus increasing medicine supply and security.

Developing a regional pharmaceutical production, especially for MCMs, has therefore the potential to significantly contribute to prepare the continent to future health emergencies and enhance global security. At the same time, building manufacturing capacity in Africa is notably a matter of achieving health sovereignty, intended to enhance equitable access to affordable and reliable pharmaceutical products with a predictable supply.

Initiatives should therefore be tailored according to a comprehensive understanding of the African health landscape, and prioritizing the needs of African countries goes beyond pandemic preparedness and towards addressing systemic health challenges to promote equitable access to essential health services and medicines. Still, the two goals are self-reinforcing and synergetic, and investments could be evaluated against the potential of contributing to both development and global security goals in the long term, identifying solutions that can meet routine healthcare demand as well as rapidly respond to production needs during health emergencies.

3. The African pharmaceutical market: overview and orientations

The African pharmaceutical market is underpenetrated, with a spending per capita six times lower than the global average, diverse geographic dynamics, and high concentration, with ten countries representing 75% of the total market. Although the growth of generics is supporting the market expansion, there is an increasing demand for innovative technologies and products linked to a rise in the burden of non-communicable diseases. Driven by demographic growth (a population projected to nearly 2.5 billion by 2050) and profound ongoing epidemiological changes, the African pharmaceutical market reached USD 25 billion in 2022 and is expected to grow to USD 34 billion by 2027[1]. In this context, and as the growth of pharmaceutical market value in mature markets slows down, there is a clear potential for development, as well as a growing interest from local and international companies to increase their capacity within the continent.

In the current scenario, African manufacturing capacity is limited. 80% of the production is concentrated in eight countries and focuses on downstream processes such as packaging and fill and finish activities, with limited to no R&D (less than 2% of worldwide projects) and Active Pharmaceutical Ingredient (API) production. Several challenges have hindered the development of the African pharmaceutical industry over the years, including small and fragmented markets and supply chains and a poor regulatory environment. Some of the key strategic orientations for the development of the industry are to invest in more complex and innovative products to increase the maturity of the market, to promote market integration and creating regional hubs to attain sufficient scale, and to promote R&D to reduce the technology gap.

The African Development Bank (AfDB) estimates[2] that, by 2030, an overall envelope of USD 111 billion would be needed in Africa in terms of investment through private and public sector interventions, of which USD 11 billion dedicated to the development of the pharmaceutical manufacturing industry, including the creation of R&D capabilities and the implementation of quality industry standards, and USD 110 billion for infrastructure to enable the logistic integration and development of hubs. The AfDB has committed a USD 3.1 billion envelope, and other financial institutions can play a critical role in closing the gap, deploying coordinated financing based on comparative advantages and synergies, promoting access to capital through a suit of financing instruments to respond to different needs, and harmonizing efforts to support the development of key regional hubs' infrastructures.

[1] https://www.iqvia.com/blogs/2023/09/africas-next-chapter-a-continent-of-opportunity
[2] African Development Bank's data presented during an online seminar on "Enhancing pharmaceutical manufacturing capacity in Africa" organized by the Italian G7 Presidency (April 24, 2024).

4. An enabling environment for regional pharmaceutical production

The realization of benefits associated with an expansion of manufacturing capacity is dependent on a range of other components of the ecosystem. For the African pharmaceutical industry to flourish, broader support to the enabling environment will be critical for success. In particular:

Research & Development: The rate of investment in R&D within the African continent remains notably low, with limited pharmaceutical research projects initiated in the region and poor clinical trials infrastructure. R&D investments are needed to foster product development on the continent and align the production to the demands of the African population, generating knowledge and innovation to tackle the specific burden of diseases and approach the genetic heterogenicity of the African populations. It is therefore crucial to work towards the creation of a favorable research ecosystem that can address Africa's unique healthcare needs, including by leveraging collaboration between pharmaceutical companies, universities, and research centers and networks.

Demand: Growing population and the epidemiologic picture in Africa make a clear and expanding market for pharmaceutical products, both during periods of stability and in response to outbreaks, with substantial room for growth in local production and regional trade. An area of particular attention is the need for stable and predictable demand for Africa-manufactured health products, including through regional procurement mechanisms, to make sure that an increased supply is well matched.

Regulation: While there is progressive improvement in national and regional regulatory capacity, limited harmonization across the 54 countries facilitates the circulation of counterfeit and sub-standard health products, lowering the demand for locally manufactured pharmaceuticals. Strengthening the regulatory environment is therefore essential for creating a stable regional market, while contributing to attract financial support. A strong regulatory framework will also allow for the exportation of health products in other markets, further contributing to the sustainability of the industry.

Workforce: Human capital is central for the success of the pharmaceutical industry across various functions, and the African pharmaceutical sector faces a shortage of specialized professionals. Investments in training and development of a qualified workforce that can support the sector are crucial to address the skills gap in various domains and across the entire value chain, from R&D to fill-finish and distribution.

Access to finance: Several financial barriers hinder the entry of new manufacturers on the market, as well as business sustainability of African manufacturers. Key costs associated with pharmaceutical production include high staffing costs while facing a limited local talent pool (labor costs), and the cost of capital (financing costs), leading to prolonged negative cash flows and making business cases unlikely to be viable in the long term without targeted support.

Product portfolio and diversification of investments: To meet the healthcare needs of the African populations, investments should go beyond pandemic preparedness and routine immunization, building broader capacity also in the areas of therapeutics and diagnostics. A narrow focus on low-cost health products would expose the industry to vulnerabilities, and production of higher value, innovative products is needed to enhance sustainability. To achieve this, investments should be diversified across a range of underserved therapeutic areas with an established market demand, such as non-communicable diseases, including oncology, and neglected tropical diseases. At the same time, the impact of initiatives could be amplified by investing in versatile technologies

such as mRNA or monoclonal antibody, which offer a wide range of applications and can be also rapidly leveraged against novel pathogens.

Support from African Governments: While the case for developing regional production is strongly endorsed by African institutions, this political support needs to translate more widely into commitment and leadership at the national level, required to have the necessary policies, plans and legislation in place and build an environment that is attractive for the engagement of the private sector and conducive to a sustainable pharmaceutical industry. To bring the health product manufacturing capacity agenda forward, it is also critical that countries work towards the strengthening of their health systems and the improvement of the management of health expenditure.

Regional collaboration: Adopting a regional approach is one of the key elements for successfully building a competitive pharmaceutical manufacturing sector and maximize the impact of investments, reducing the risk of creating redundancies, leveraging complementarities between countries, and promoting knowledge sharing. Consolidating markets at the regional level is also critical to create economies of scale and exploit the potential opportunities of the African Continental Free Trade Area.

5. From vision to action

5.1 Key initiatives in the regional manufacturing landscape

Along with providing support to pharmaceutical companies such as Biovac and Aspen Pharmacare, G7 Members are contributing to the development of the African manufacturing capacity in various ways by supporting a number of initiatives that span across the entire sector. Key examples are:

The African Vaccine Manufacturing Accelerator (AVMA)[3]: To support a sustainable African manufacturing base that contributes to strengthen global vaccine markets and increase African resilience to pandemics and outbreaks, Gavi, in partnership with the African Union and the African CDC, and in consultation with various stakeholders, developed and approved the African Vaccine Manufacturing Accelerator (AVMA). This Advanced Market Commitment (AMC) will provide targeted, time-limited incentive payments to African manufacturers to help offset high start-up costs. AVMA is designed to de-risk the investments made by African businesses, their investors and financing partners by providing financial incentives when manufacturers receive WHO regulatory approval ("milestone payments") and when they win a Vaccine Alliance tender ("accelerator payments"). The USD 1 billion, 10-years financial mechanism will provide a strong, long-term signal to the market, facilitating the convergence of the wider enabling environment behind its goals. AMVA has also been designed to incentivize end-to-end manufacturing, as well as the production of vaccines in need of new suppliers (such as Malaria, Cholera and Ebola) and those produced using platforms that can be leveraged in a pandemic (like mRNA or Viral Vector).

Team Europe Initiative on Manufacturing and Access to Vaccines, Medicines, and Health Technologies (TEI MAV+)[4]: The TEI MAV+ aims at boosting local manufacturing capacities in Africa and strengthening pharmaceutical systems, with the overall objective of increasing equitable access to safe, effective, quality and affordable essential vaccines, medicines and health technologies in Africa. Backed by EUR 1 billion from the EU budget, the initiative encompasses the three key dimensions of supply, demand and enabling environment to underpin pharmaceutical systems, and has so far sustained several initiatives at the continental level and mobilized country packages as well as private initiatives.

African Medicine Regulatory Harmonization (AMRH) Partnership Platform[5]: The AMRH initiative started in 2009 as a response to addressing challenges faced by National Medicine Regulatory Authorities (NMRAs) in Africa and works to accelerate access to quality, safe, effective medical products by optimizing the regulatory environment on the continent. The Platform is a convener of multiple stakeholders, aimed at increasing coordination and enhancing the implementation of AMRH and various regulatory systems strengthening programs and harmonization initiatives.

African Medicines Agency (AMA)[6]: AMA will be established as a Specialized Agency of the African Union (AU) dedicated to improving access to quality, safe and efficacious medical products in Africa. The AMA Treaty was adopted by the AU Assembly in 2019 and a minimum of 15 Member States are needed to ratify it for the Agency to become operational.

[3] https://www.gavi.org/vaccineswork/african-vaccine-manufacturing-accelerator-what-and-why-important
[4] https://international-partnerships.ec.europa.eu/policies/team-europe-initiatives/team-europe-initiative-manufacturing-and-access-vaccines-medicines-and-health-technologies-africa_en
[5] https://amrh.nepad.org/
[6] https://www.nepad.org/microsite/african-medicines-agency-ama

The European and Developing Countries Clinical Trials Partnership (EDCTP)[7]**:** The EDCTP is a public-public partnership between countries in Europe and sub-Saharan Africa, supported by the European Union. By supporting collaborative research, it aims at enhancing research capacity and accelerating the development of new or improved medical interventions for the identification, treatment and prevention of poverty-related infectious diseases through all phases of clinical trials, with emphasis on phase II and III trials.

African Pharmaceutical Technology Foundation (APTF)[8]: Established by the African Development Bank as an independent agency, the APTF aims at boosting Africa's access to technologies needed to discover, develop, and manufacture a full range of pharmaceutical products, focusing on building capacities of African companies, research institutions and governments to support a strong and competitive pharmaceutical sector in the region.

mRNA vaccine technology transfer hub[9]**:** Launched in July 2021, the objective of the technology transfer hub is to enhance the capacity of low- and middle-income countries to produce mRNA vaccines through center of excellence and training, known as the "mRNA vaccine technology hub". The hub is hosted at Afrigen Biologics and Vaccines, a biotechnology company based in Cape Town and strategically directed, supported and capitalized by Avacare Healthcare Group and the Industrial Development Corporation (IDC) of South Africa, and will collaborate with a network of recipients situated in various low- and middle-income countries, sharing technology and know-how with local producers.

Institut Pasteur de Dakar (IPD)[10]**:** Created in 1924, the Institut is a non-profit foundation of public utility that brings together key capabilities and functions to address public health challenges in West Africa. IPD plays an important regional and continental role, and thanks to significant capital injections is evolving into a large-scale manufacturing facility, equipped with specialized workforce and with high levels of investments in R&D. In addition to its core mission of public health, education, training, and research, the Institut aims to play a pivotal role in bolstering local vaccine manufacturing and capabilities in Africa, thereby improving access to essential vaccines across the continent and strengthening overall health security.

The DFI Surge Financing Initiative for Medical Countermeasures (MCMs): The initiative is creating a first-of-its-kind framework for G7 DFIs, the European Investment Bank (EIB), the International Finance Corporation (IFC), and other global and regional health organizations to build institutional capacity and ensure accelerated financing to procure, produce and deliver MCMs in low- and middle-income countries during future pandemics. 2024 priorities include the development of a Working Capital and Capex Financing Facility, which aims to provide working capital and capital expenditure financing directly or through intermediaries to a network of LIC and LMIC manufacturers of MCMs, including in Africa, based on pre-established eligibility criteria to scale up production during health emergencies.

[7] https://www.edctp.org/
[8] https://www.aptfound.org/
[9] https://www.who.int/initiatives/the-mrna-vaccine-technology-transfer-hub
[10] https://institutpasteurdakar.sn

5.2 G7 financial commitments towards enhancing pharmaceutical capacity in Africa: results from a mapping exercise

From January 2020 up to throughout 2024, G7 Members have committed USD 2.95 billion to 39 initiatives contributing to the objective of enhancing the development of pharmaceutical manufacturing capacity in Africa[11]. The European Union, with a total contribution of USD 780 million, accounts for the largest share of G7 funding (26%), followed by Germany (USD 689 million; 23%) and France (USD 456 million; 15%) (Figure1). As shown in Figure 2, 56% of funds are disbursed as grants and 35% as loans; the remaining part is channeled through other types of assistance (technical assistance, procurement, impact / equity investment) or still to be defined. Around 55% of investments are committed to initiatives at the continental level, for a total amount of USD 1,6 billion. 35% of funding goes to specific countries (USD 1 billion), while 10% is committed to projects at the regional level (USD 304 million).

Figure 1: Funding commitments by G7 Member, 2020 to 2024 (USD).

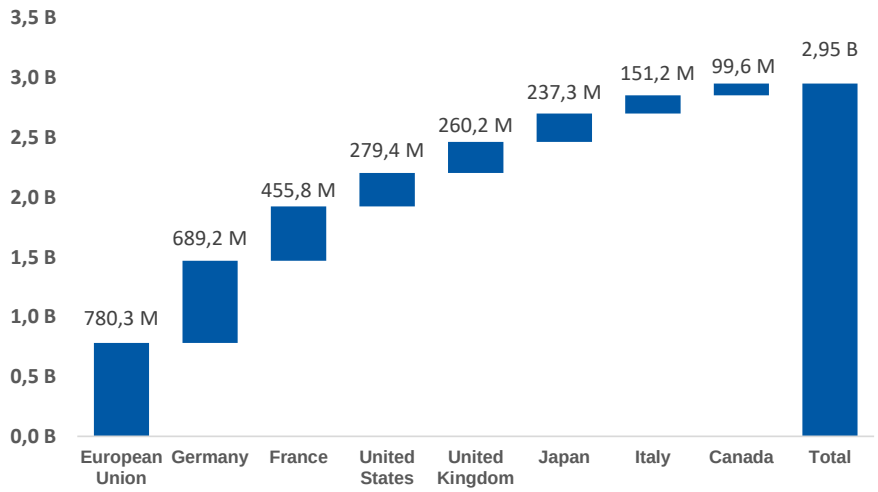
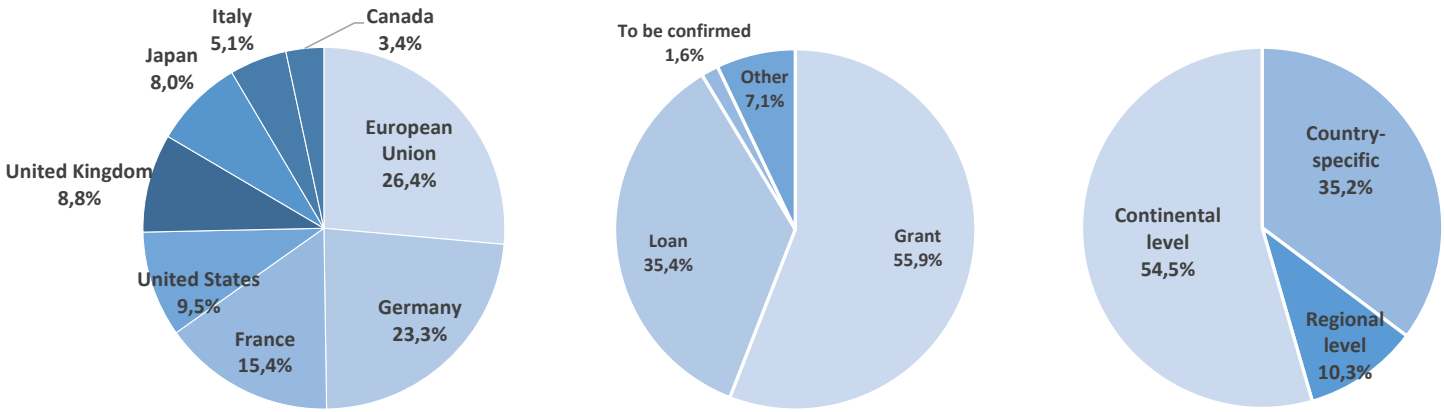


Figure 2: Breakdown of funding commitments by G7 Member, type of funding and geographic level of initiatives.



G7 initiatives cover 4 regions and 11 countries, although the level of funding allocated varies greatly (Table 1). South Africa has the largest share of funding channeled to specific countries (21%, USD 623 million), followed by Senegal (9%, USD 252 million). These countries are indeed hosting Aspen Pharmacare, a leading African pharmaceutical group headquartered in Durban (SA), as well as the mRNA technology hub facility at Afrigen (SA) and the Institut Pasteur de Dakar (SN), main

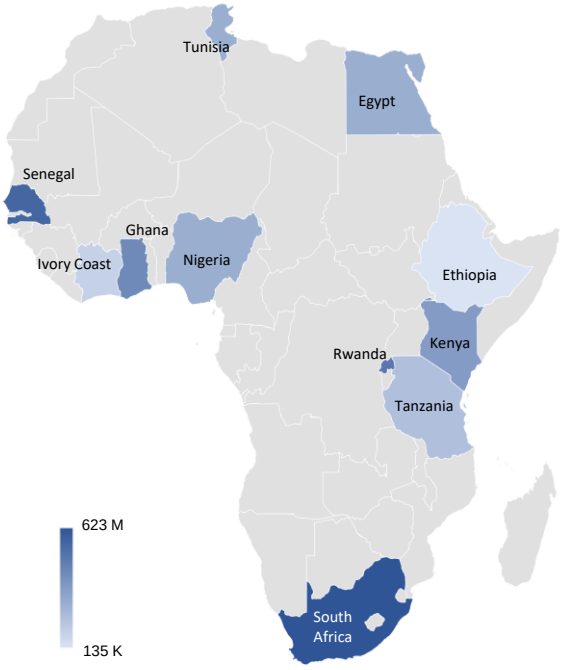
[11] The mapping analysis includes initiatives carried out at the bilateral level, in coordination with other G7 Members, or multilateral initiatives of which funds can be directly and univocally tracked to the objective in scope of the exercise and geographically focused to Africa.

production hubs receiving significant capital injections from multiple donors. Considering the initiatives at the regional level, the largest funding share is dedicated to projects in Sub-Saharan Africa (10%). The rest of funding (6%) is scattered among other 9 countries and 3 regions[12].

Table 1: Amount and % of G7 funding by geographic focus (USD).

Geographic focus	Funding (USD)	%
Continental	1.608.755.988	54,5%
South Africa	623.503.493	21,1%
Regional: Sub-Saharan Africa	297.252.388	10,1%
Senegal	251.733.392	8,5%
Rwanda	76.632.608	2,6%
Ghana	49.622.031	1,7%
Kenya	13.590.516	0,5%
Nigeria	5.898.592	0,2%
Egypt	5.763.467	0,2%
Tunisia	5.763.467	0,2%
Tanzania	4.552.973	0,2%
Regional: West Africa	2.911.669	0,1%
Ivory Coast	2.887.606	0,1%
Regional: Central Africa	2.776.544	0,1%
Regional: East Africa	1.245.743	0,0%
Ethiopia	135.125	0,0%
Total	**2.953.025.601**	**100%**

Figure 3: G7 Funding of initiatives by country (USD).



G7 Members are implementing different funding strategies, with some of them diversifying their investments across a range of workstreams, projects and geographic areas, and others adopting a more streamlined approach. Specifically, the European Union, Germany and France invest in a wider range of geographic and programmatic areas, while the other G7 Members focus on specific workstreams and provide funding for initiatives at continental level or in few countries.

With respect to workstreams, G7 Members contributions cover 11 programmatic areas. Table 2 shows the areas of work addressed by each G7 Member.

Table 2: G7 Members' areas of work

Programmatic area	E.U.	Germany	France	Canada	Japan	Italy	U.K.	U.S.
Access to finance	x	x	x	x	x	x	x	x
Market shaping / demand creation	x	x	x	x	x	x	x	x
Human Capital	x	x	x	x	x	x		
Research & Development (R&D)	x	x	x	x		x	x	
Operations		x	x	x	x		x	x
Technology transfers	x	x	x	x		x		

[12] For the purpose of this analysis, we assumed an equal split of the funds among regions / countries for the 5 projects with more than one geographic focus.

Programmatic area	E.U.	Germany	France	Canada	Japan	Italy	U.K.	U.S.
Feasibility studies and initial investments	x	x	x					
Infrastructure	x	x			x			
Regulatory strengthening	x	x					x	
Technical Assistance				x				x
Public policy	x		x					

Figure 4: % of projects covering each programmatic area.

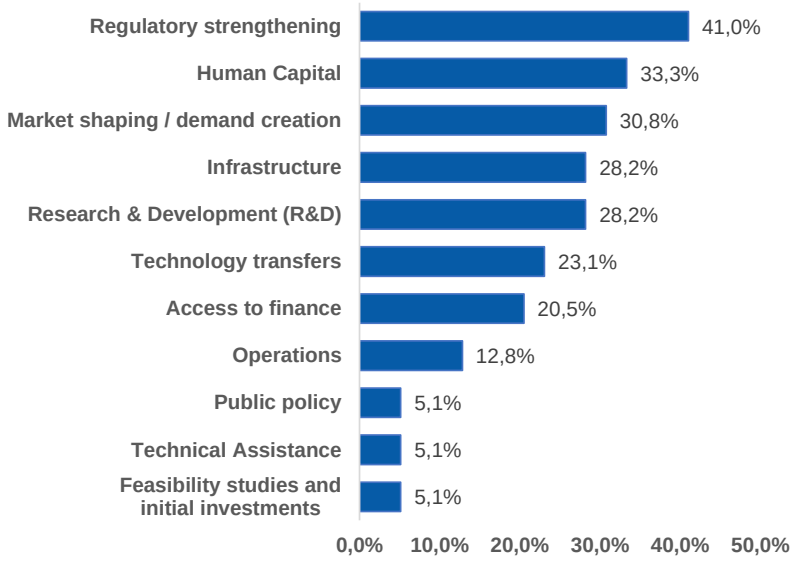
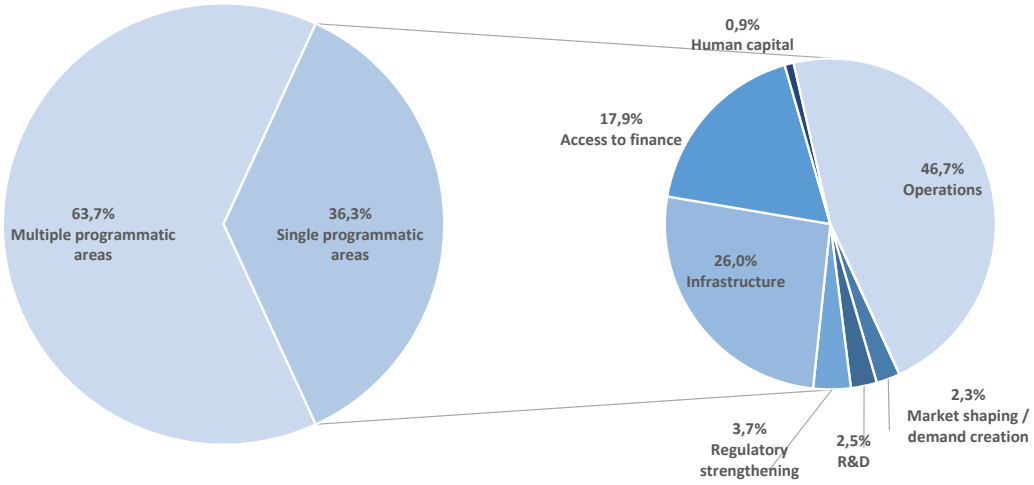


Figure 4 illustrates the percentage of projects currently operating in each workstream. Access to finance and market shaping / demand creation are primary focuses for all G7 Members, and are addressed by 21 and 31% of projects, respectively. Human capital, R&D, and operations are also workstreams covered by most G7 Members. On the other hand, regulatory strengthening, although addressed by the largest number of projects (41%), is only covered by the European Union, Germany, and France.

Around half of the initiatives, corresponding to 64% of funds, targets more than one programmatic area, leveraging the synergies of investing in different components of the enabling environments. Considering the projects operating in a single workstream, 47% of funds is dedicated to finance business operations and 26% is targeted to infrastructure, followed by access to finance (18%) (Figure 5).

Figure 5: % of funding by programmatic area.

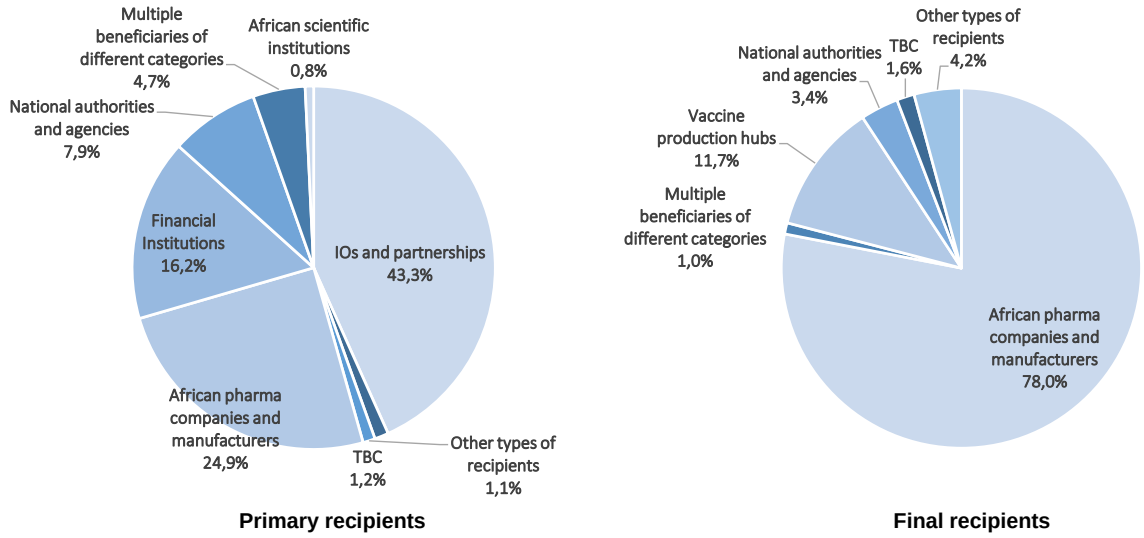


The areas of access to finance and market shaping / demand creation recently received strong attention by G7 Members. Although few initiatives target these two areas individually, they are the

primary programmatic focuses of Gavi's AVMA, which, from the mapping analysis, resulted the initiative with the largest amount of G7 funding (USD 1.1 billion). On the other hand, funding to the critical areas of R&D, technology transfers and human capital, although covered by a range of projects, could be further strengthened. Most dedicated commitments are targeted to the mRNA Technology Transfer Program in South Africa, while other funds are largely diluted in initiatives covering multiple programmatic areas.

As shown in Figure 6, financial flows often involve a range of recipients of funds which then channels resources to other entities. International organizations and partnerships are the main primary recipients (43%), followed by African pharmaceutical companies and manufacturers (25%) and financial institutions (16%). 5% of funding is disbursed for initiatives that target multiple recipients, often including regulatory authorities, African research institutions and government departments. The vast majority of funds is then directed to African pharmaceutical companies and manufacturers (78%), followed by vaccine production hubs (12%), namely a production site at the Institut Pasteur de Dakar, the mRNA technology transfer hub at Afrigen and the BioNTech vaccine hub in Rwanda.

Figure 6: % of funding by primary and final type of recipient.



The detailed list of G7 initiatives that resulted from the mapping conducted by the Presidency is reported in Annex 1. Beyond the analyzed initiatives, of which funds can be directly and univocally tracked to the objective in scope of the exercise and geographically focused to Africa, G7 Members also support a range of multilateral organizations and partnerships that implement projects directly in favor of or beneficial to the development of a pharmaceutical sector in Africa, although it is not always possible to track the amount of G7 resources devoted to this objective. These organizations include, but are not limited to the WHO, CEPI, Gavi, and Unitaid. Other projects, such as the UK "Manufacturing Africa" initiative, do not provide direct funding but offer technical assistance and capacity-building support to governments and manufacturers.

6. Conclusions and future directions for G7 Members

Despite persisting challenges in enhancing pharmaceutical manufacturing capacity and increasing the overall maturity of the pharmaceutical industry in Africa, various initiatives to support its development, including substantial investments from G7 Members, led to significant progress in production capabilities and in other key areas.

The sector is strategic from different angles, including public health, economic development and global security, and achieving long-term sustainability of the industry is crucial for fostering growth and innovation. This involves collaborating to allocate investments strategically across the entire ecosystem, from research and clinical trials to manufacturing and distribution. Regulatory capacity, qualified human resources, an R&D that is also targeted to address specific population health needs, and predictable demand are, beyond manufacturing capacity, some of the main challenges to be addressed. Gavi's AVMA initiative represents a crucial shaping moment, providing the financial incentives needed from manufacturers to compete on the market and incentivizing other donors and investors to support the wider enabling environment.

In this scenario, there is a critical role for G7 finance actors in enabling the development of the industry, improving the investment environment and catalyze further financing in the sector. Current efforts are moving in this direction, as many DFIs share the same strategy and focus on long-term sustainability of investments across the ecosystem. Overall, with reference to a few major initiatives receiving funding from multiple donors, support from G7 Members seems well-coordinated. However, there is a potential to strengthen investments in some programmatic workstreams, such as R&D, technology transfers and human capital, and consider better alignment on target geographic areas, especially in view of further investments.

To move the agenda forward, stakeholder coordination will continue to be critical at multiple levels, among African institutions and governments, bilateral partners, financial institutions, technical partners, and the private sector, leveraging respective comparative advantages to channel resources efficiently in the ecosystem and maximize collective impact.

7. Acknowledgements

This report summarizes the insights collected during the online seminar on “Enhancing pharmaceutical manufacturing capacity in Africa” organized by the Italian G7 Presidency on April 24, 2024, in the context of the Finance Track. The seminar was designed to offer insights into the African pharmaceutical industry and explore how bilateral and multilateral financial institutions can help tackle prevailing challenges, as well as into the benefits of regional production within the framework of Pandemic Preparedness and Response (PPR). The seminar also aimed to enhance understanding of the current state and key dynamics of the market, with the intention of informing future G7 discussions and in view of the G7 engagement in the Gavi’s African Vaccine Manufacturing Accelerator initiative.

We thank the following speakers who intervened at the seminar for their valuable contribution (in alphabetical order):

- David Kinder, Director of Development Finance at Gavi, the Vaccine Alliance
- Farid Fezoua, Global Director for Health, Education, and Services, International Finance Corp. (IFC)
- Martin Seychell, Deputy Director-General, Directorate-General for International Partnerships, European Commission
- Nafisa Jiwani, Associate Vice President, Health Initiatives at the U.S. International Development Finance Corporation (DFC)
- Ousmane Fall, Director of Non-Sovereign Operations and Private Sector Support Department and Acting Director for Industry and Trade Development at African Development Bank
- Petro Terblanche, Chief Executive Officer at Afrigen Biologics and Vaccines
- Rino Rappuoli, Scientific Director at Fondazione Biotecnopolo di Siena
- Ruchir Agarwal, Research Fellow at Harvard Kennedy School and Executive Director of Global Talent Lab

We also thank the Membership for the productive discussions during several G7 Finance meetings, including the seminar, and for providing the information needed to inform the mapping of G7 efforts included in this report.

8. Annex 1: Detailed list of G7 initiatives and financial commitments[13]

Geographic focus	Year of agreement	Title / Initiative	Funding Member	Primary recipients	Final recipients	Workstream	Health product / technology	Type of funds	Financial commitment (USD)[14]
Continental	2024	Gavi's African Vaccine Manufacturing Accelerator	Canada	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	65.000.000
			European Union	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	233.000.000
			France	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	100.000.000
			Germany	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	318.000.000
			Italy	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	150.000.000
			Japan	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	30.000.000
			United Kingdom	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	60.000.000

[13] All financial commitments provided by the European Commission, Germany and France are part of the Team Europe Initiative on Manufacturing and Access to Vaccines, Medicines and Health Technology (TEI MAV+).
[14] Amounts provided in different currencies were converted according to the years of the agreements: when in EUR, at the average exchange rate between 31/12/2019 and 30/08/2024 (ECB); when in CAD, at the average 2022 exchange rate (Bank of Canada); when in GBP, at the average 2023 exchange rate (IRS).

Geographic focus	Year of agreement	Title / Initiative	Funding Member	Primary recipients	Final recipients	Workstream	Health product / technology	Type of funds	Financial commitment (USD)[14]
			United States	Gavi, the Vaccine Alliance	African vaccine manufacturers	Access to finance; Market Shaping / Demand Creation	Vaccines	Grant	150.000.000
Continental	2024	Unitaid Regional Manufacturing Initiative	United Kingdom	Unitaid	Unitaid partners (TBC)	Market Shaping/Demand creation	Pharmaceutical products	Grant	1.129.600
Continental	2023	British Investment International	United Kingdom	Private sector (various financing investments across continent, incl. Cipla Quality Chemical Industries)	Private sector	Access to finance	Pharmaceutical products	Impact/equity investment	191.000.000
Continental	2023	Product Development Partnerships III	Germany	International AIDS Vaccine Initiative (IAV), European Vaccine Initiative (EVI)	International AIDS Vaccine Initiative (IAV), European Vaccine Initiative (EVI)	R&D	Malaria vaccine, TB vaccine	Grant	19.169.258
Continental	2022	Afreximbank: Funding for vaccine procurement through the African Vaccine Acquisition Trust (AVAT)	France	AfreximBank	Afreximbank	Operations	Vaccines	Loan	55.530.875
Continental	2022	Africa-based manufacturing of HIV tests and drugs	United States	African manufacturers	African manufacturers	Market Shaping / Demand Creation	Diagnostics, therapeutics	Procurement	15.000.000, subject to the completion of domestic procedures
Continental	2022	Support to COVID-19 responses in Africa	Japan	AfreximBank	Private and public entities developing medical care system and producing pharmaceuticals	Infrastructure; Operations	Pharmaceutical products; medical care system	Loan	200.000.000

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Continental	2021	Expansion of the African Quality Infrastructure in the pharmaceutical and healthcare sector	Germany	African Medicines Agency (AMA) and national regulatory institutions, ASO, AUDA-NEPAD	African Medicines Agency (AMA) and national regulatory institutions, ASO, AUDA-NEPAD	Regulatory strengthening	Pharmaceutical Products and Vaccines	Grant	6.663.705
Continental	2021	Global Programme BACKUP Health	Germany	Platform for Harmonized African Health Products Manufacturing (PHAHM), African Manufacturers, WHO, UNCTAD, African Vaccine Manufacturing Initiative (AVMI), Medicine Patent Pool, University of Johannesburg, Wits University, Regional Centers of Regulatory Excellence (RCORE)	Platform for Harmonized African Health Products Manufacturing (PHAHM), African Manufacturers, WHO, UNCTAD, African Vaccine Manufacturing Initiative (AVMI), Medicine Patent Pool, University of Johannesburg, Wits University, Regional Centres of Regulatory Excellence (RCORE)	Market shaping; Regulatory Strengthening; Technology Transfer; R&D; Human Capital	Pharmaceutical Products and Vaccines	Grant	13.016.437
Continental	2021	International Centre for Genetic Engineering and Biotechnology	Italy	International Centre for Genetic Engineering and Biotechnology	African Scientific Institutions	Technology transfers; R&D; Human capital	Biotechnology	Grant	1.246.113
Ghana	2024	Strengthening vaccine and pharmaceutical production in Ghana	European Union	TBC	TBC	R&D; Human Capital; Regulatory Strengthening; Infrastructure	Pharmaceutical Products and Vaccines	Grant	25.655.264
			Germany	TBC	TBC	R&D; Human Capital; Regulatory Strengthening; Infrastructure	Pharmaceutical Products and Vaccines	Grant	10.995.113
Ghana	2022	DeveloPPP Partnership Ghana	Germany	Dek Vaccines Ldt	Dek Vaccines Ldt	Access to finance	Vaccines	Grant	555.309

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Ghana	2021	Program for Private Sector and Financial Sector Development	European Union	Food and Drugs Authority (FDA), Presidential Vaccine Manufacturing Committee (VMC), National Vaccine Institute	Food and Drugs Authority (FDA), Presidential Vaccine Manufacturing Committee (VMC), National Vaccine Institute	Market shaping; Regulatory Strengthening; Technology Transfer; R&D; Human Capital	Vaccines	Grant	2.998.667
			Germany	Food and Drugs Authority (FDA), Presidential Vaccine Manufacturing Committee (VMC), National Vaccine Institute	Food and Drugs Authority (FDA), Presidential Vaccine Manufacturing Committee (VMC), National Vaccine Institute	Market shaping; Regulatory Strengthening; Technology Transfer; R&D; Human Capital	Vaccines	Grant	5.375.389
Ivory Coast	2022	The Ivorian medical products regulatory Agency is implemented and fully operational	France	Agence ivoirienne de regulation pharmaceutique	Agence ivoirienne de regulation pharmaceutique	Regulatory strengthening	Health products	Grant	2.887.606
Kenya, Ghana	2023	UK Vaccine Network	United Kingdom	Chanjo Hub	Chanjo Hub	R&D	Vaccines	Grant	8.084.577
Kenya, Tanzania	2024	Medical Oxygen Regional Manufacturing Expansion for Africa (MO2 RE for Africa)	Japan	Unitaid	African manufacturers	Infrastructure; Human Capital	Medical oxygen	Grant	7.299.270
Nigeria, Ethiopia, Kenya, Tanzania, East Africa, West Africa	2023	Increasing African production of vaccines and essential medicines through business linkages and technology transfer	Germany	UNIDO	ECOWAS and EAC Secretariats; WAHO	Access to finance; Technology Transfer	Pharmaceutical Products and Vaccines	Grant	810.751
Regional: Central and West Africa	2023	REG-PHARMA: strengthen the regulation of the pharmaceutical	France	CEMAC/EEAC and UEMOA/CEDEAO	CEMAC/EEAC and UEMOA/CEDEAO	Regulatory strengthening	Health products	Grant	5.553.088

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		sector in West and Central Africa							
Regional: East Africa	2022	Support to the EAC Integration Process	Germany	Secretariat of the East African Community (EAC)	Secretariat of the East African Community (EAC)	Regulatory strengthening	Pharmaceutical Products and Vaccines	Grant	1.110.618
Regional: Sub-Saharan Africa	2024	Africa Health Resilience Investment Initiative (part of the EU Global Gateway initiative)	European Union	AfreximBank	Private and public entities developing and producing medical goods and pharmaceuticals	Infrastructure	Pharmaceutical products (excl. vaccines)	Framework loan	222.123.501
Regional: Sub-Saharan Africa	2024	SafeBirth Africa	European Union	Unitaid	Unitaid partners (TBC)	Market Shaping / Demand Creation	Medicines for prevention /treatment of post-partum haemorrage (PPH)	Grant	8.884.940
Regional: Sub-Saharan Africa	2022	Global Health Protection Programme (GHPP)	Germany	Paul-Ehrlich-Institut, Bundesinstitut für Arzneimittel und Medizinprodukte	Paul-Ehrlich-Institut, Bundesinstitut für Arzneimittel und Medizinprodukte	Regulatory strengthening	Vaccines, blood products, medicinal products	Grant	10.713.072
Regional: Sub-Saharan Africa	2020	COVID-19 essential active pharmaceutical ingredients (API) manufacturing in Africa	European Union	African manufacturers	African manufacturers	Infrastructure	Active Pharmaceutical Ingredients (API)	Loan / Grant	55.530.875
Rwanda	2024	Manufacturing and Access to Vaccines, Medicines and Health Technologies in Rwanda	European Union	Ministry of Health, Rwanda Medical Supply, University of Rwanda, Rwanda Food and Drugs Authority	BioNTech vaccine hub	Human capital; Regulatory strengthening	Pharmaceutical products	Grant	54.975.566
Rwanda	2022	Supporting the development of the Rwandan pharmaceutical and biotechnology sector	Germany	Ministry of Trade and Industry, Ministry of Education, Office of the	Ministry of Trade and Industry, Ministry of Education, Office of the President, Food	Regulatory strengthening	Pharmaceutical Products and Vaccines	Grant	12.216.793

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				President, Food and Drugs Authority (FDA)	and Drugs Authority (FDA)				
Rwanda	2021	Job partnership and SME support (with component: Skills Development for the pharmaceutical industry)	Germany	Ministry of Trade and Industry, Ministry of Education, Office of the President, Rwanda Food and Drugs Authority	Ministry of Trade and Industry, Ministry of Education, Office of the President, Rwanda Food and Drugs Authority	Human Capital	Pharmaceutical Products and Vaccines	Grant	9.440.249
Senegal	2024	2nd Sectoral budget financing Strengthening of local vaccine production	European Union	Government of Senegal - Ministry of Health, Ministry of Economy	Government of Senegal - Ministry of Health, Ministry of Economy	Market shaping; Access to finance; Regulatory strengthening; Infrastructure	Vaccines	Grant	11.106.175
	2024		Germany	Government of Senegal - Ministry of Health, Ministry of Economy	Government of Senegal - Ministry of Health, Ministry of Economy	Market shaping; Access to finance; Regulatory strengthening; Infrastructure	Vaccines	Grant	33.318.525
Senegal	2023	Strengthening vaccine and pharmaceutical production in Senegal	Germany	Ministry of Health, National Regulatory Authority, Institut Pasteur de Dakar	Ministry of Health, National Regulatory Authority, Institut Pasteur de Dakar	Market shaping; Regulatory Strengthening; Technology Transfers; Human Capital	Pharmaceutical Products and Vaccines	Grant	8.884.940
Senegal	2022	Development of a vaccine production hub	European Union	Government of Senegal: Ministry of Health	Fondation Institut Pasteur de Dakar (IPD)	Public policy	Pharmaceutical products	Loan	83.296.313
			Germany	Government of Senegal: Ministry of Health	Fondation Institut Pasteur de Dakar (IPD)	Access to finance; Market Shaping / Demand Creation; Regulatory Strengthening; Infrastructure	Pharmaceutical products	Grant	22.212.350

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Senegal	2021	Construction of a facility for manufacturing vaccines against COVID-19 and other endemic diseases	European Union	University, Ministry of Health, Fondation Institut Pasteur de Dakar (IPD)	Fondation Institut Pasteur de Dakar (IPD)	Feasibility studies and initial investments	Vaccines	Grant	52.754.331
			France	Fondation Institut Pasteur de Dakar (IPD)	Fondation Institut Pasteur de Dakar (IPD)	Feasibility studies and initial investments	Vaccines	Grant	1.999.112
				Ministry of Health	Fondation Institut Pasteur de Dakar (IPD)	Public policy	Pharmaceutical products	Loan	27.765.438
			Germany	Fondation Institut Pasteur de Dakar (IPD)	Fondation Institut Pasteur de Dakar (IPD)	Feasibility studies and initial investments	Vaccines	Grant	222.124
Senegal	2021	Development of a vaccine production hub	United States	Fondation Institut Pasteur de Dakar (IPD)	Fondation Institut Pasteur de Dakar (IPD)	Technical Assistance (project development)	Vaccines	TA	3.300.000
Senegal	2021	Support to vaccine manufacturing enabling environment in Senegal, as regional hub in ECOWAS	Germany	Institut Pasteur de Dakar, Ministry of Health, Ministry of Economy, National Regulatory Authority	Institut Pasteur de Dakar, Ministry of Health, Ministry of Economy, National Regulatory Authority	Market shaping; Access to finance; Regulatory strengthening; R&D; Human Capital	Vaccines	Grant	1.110.618
South Africa	2024	Southern Africa Vaccine Facility	France	Biovac	Biovac	Access to finance; Market shaping	Vaccines	TBC	11.106.175
South Africa	2023	Support of development and production of vaccines in South Africa	Germany	Medical Research Council, South African Department of Science and Innovation	Medical Research Council, South African Department of Science and Innovation	Regulatory Strengthening; Technology Transfer; R&D; Human Capital; Infrastructure	Vaccines	Grant	22.212.350
South Africa	2022	DeveloPPP Partnership SA	Germany	Aspen Pharmacare	Aspen Pharmacare	Operations	Vaccines	Grant	569.879

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South Africa	2022	Southern Africa Vaccine Facility	European Union	Biovac	Biovac	Feasibility studies and initial investments	Vaccines	Grant	16.659.263
South Africa	2022	Vaccines for Africa: Roll-out and Production in South Africa (SAVax)	Germany	South African Department of Health, South African Department of Science and Innovation, South African Health Products Regulatory Authority	South African Department of Health, South African Department of Science and Innovation, South African Health Products Regulatory Authority	Market shaping; Regulatory Strengthening; Technology Transfers; R&D; Human Capital	Vaccines	Grant	23.545.091
South Africa	2022	The mRNA Technology Transfer Programme (SA)	European Union	Medicines Patent Pool	mRNA technology Hub facility at Afrigen	Human Capital; R&D; Technology transfers	mRNA vaccines	Grant	13.327.410
South Africa	2022	Joint Investment Plan to Boost Vaccine Manufacturing Capacity in Africa	France	Aspen Pharmacare	Aspen Pharmacare	Operations	Vaccines	Loan	173.256.331
			Germany	Aspen Pharmacare	Aspen Pharmacare	Operations	Vaccines	Loan	159.928.920
			United States	Aspen Pharmacare	Aspen Pharmacare	Operations	Vaccines	Loan	111.061.750
South Africa	2021	The mRNA Technology Transfer Programme (SA)	France	Medicines Patent Pool and WHO	mRNA technology Hub facility at Afrigen and its 15 partners	Human Capital; R&D; Technology transfers	mRNA vaccines	Grant	77.743.225
			Germany	Medicines Patent Pool	mRNA technology Hub facility at Afrigen	Human Capital; R&D; Technology transfers	mRNA vaccines	Grant	8.329.631
South Africa, Senegal, Kenya, Nigeria, Egypt, Tunisia	2022	The mRNA Technology Transfer Programme	Canada	Medicines Patent Pool	Medicines Patent Pool, Afrigen (South Africa), Biovac (South Africa), Institut Pasteur de Dakar (Senegal), Biovax Kenya (Kenya),	Human Capital; Operations; Technical Assistance; R&D; Technology transfers	mRNA vaccines	Grant	34.580.804

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					Biovaccines Nigeria (Nigeria), Institut Pasteur de Tunis (Tunisia), BioGeneric Pharma (Egypt)				
Tanzania	2021	DeveloPPP Partnership Tanzania	Germany	action medeor International	action medeor International	Infrastructure	Pharmaceutical Products and Vaccines	Grant	768.213