CEO Report 2023 & Plan 2024



Developing Countries Vaccine

Manufacturers Network

Rajinder Suri CEO-DCVMN Cape Town, Sept.19, 2023

Under India's G20 Presidency, African Union, granted permanent membership of G20 in New Delhi, on Sept.9, 2023





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Influence & Impact





Strategic Objectives



- 1. Early access to novel Technology & harness members' R & D capabilities
- 2. Support Regional Manufacturing Excellence and foster South-South Collaborations
- 3. Convergence on Regulatory framework
- 4. Learning & Development to build work force capability and capacity



DCVMN Five-Year Professional Development Strategy



To protect people of all age groups in low-middle income countries and emerging economies against dreaded infectious diseases by augmenting the capacity of vaccine manufacturers in developing countries, to innovate, develop, produce and deliver a consistent and sustainable supply of quality vaccines at affordable prices to accelerate and reach the goal of global vaccine equity!

Mission



To foster a voluntary alliance of vaccine manufacturers from developing countries to develop collaborations and communication amongst them and with other industry associations and academia to leverage research, production and roll-out efforts to meet vaccine needs, strive for international recognition and attaining the status of WHO pre-qualification for a range of vaccines.

Protecting people from global diseases since 2000.



5 year Strategy and Training Road Map



• To provide sustainable, scalable professional development via training for capability enhancement with a focus on:

√ Knowledge sharing activities



Subject matter expertise shared with limited learner direct application or practice

√ Foundational skill building



Experience includes direct application of concepts and/or hands on practice

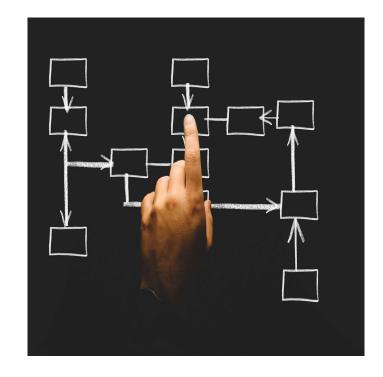
√ Competency building



Experience focuses on building more complex skills or higher-level competency in a specific area

Overview of Implementation Approach

- Implementing the strategy requires a phased plan or roadmap which is broken down into three phases:
 - **Foundation Phase**
 - **Build Phase**
 - **➤** Next Generation Phase



Foundation Phase – December 2022 thru' December 2023

- The Foundation stage enables the "build" phase of the roadmap through the following activities::
 - > Technology Transfer Training
 - ➤ Instructional Design & Delivery
 - > Environmental scanning/partnerships



Build Phase -2024

- The "Build" phase of the roadmap focuses on continuing the offer and improve existing professional development activities and starting to fill in the gaps identified:
 - > Business Modelling Consultancy for self sustainability
 - **➤ Leveraging NIIMBL Training Directory**
 - Exploring Training certificate partnership and designing for talent development
 - Creation of talent program framework and success metrics
 - Implement new course development or existing course improvements



Next generation phase – 2025-2027

As the Talent Program framework gaps are filled, DCVMN will be able to determine the next generation of efforts needed to continue to build Talent Development program.

This phase is dependent on the outcomes of the first two phases.

Following are some areas that might be considered for the next generation phase that meet the DCVMN professional development 5-year strategy

Adding additional staff to the Professional Development Program including any of the following:

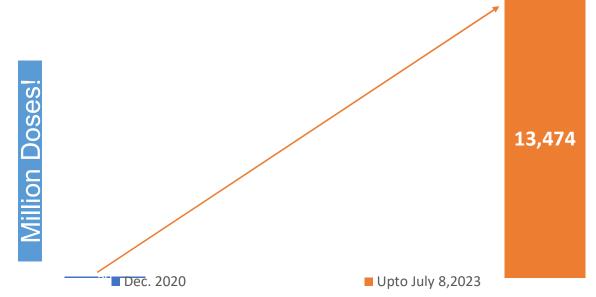
- Implementation of identified diversified funding activities
- Access to existing professional development or training programs
- Providing access to training technologies or licenses to members
- Creation of a professional development community of practice made up of training and professional development staff of member organizations.



Unprecedented Ramp-Up: A Case Study

DCVMs contributing ~60% of Global Volume!

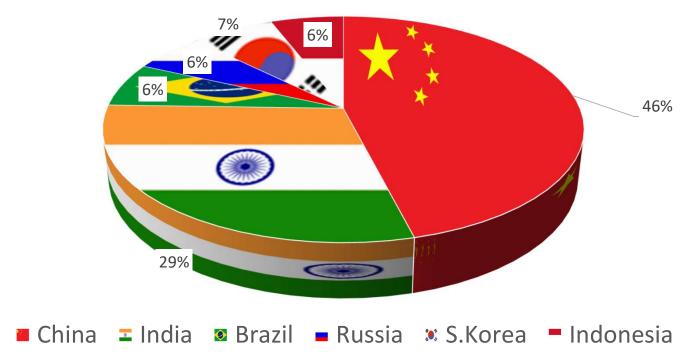
Global Vaccination reaching 13.474 Billion dose landmark on July 8, 2023



*As on July 08, 2023: WHO COVID19 DASHBOARD

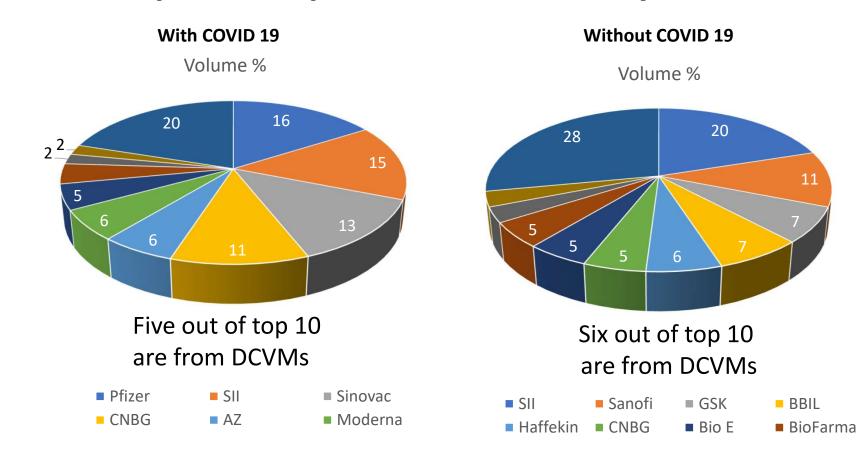
COVID19 Vaccines: DCVM's Contribution

8.0 Billion Doses!



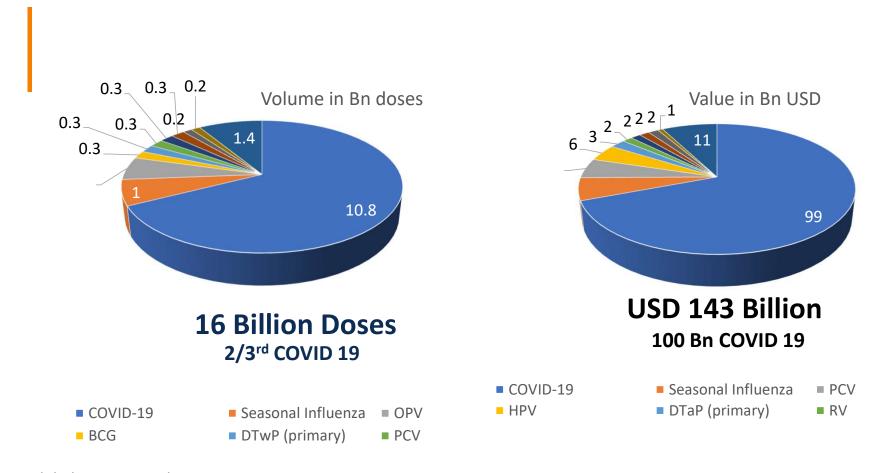
Source: Internal Estimates as of 8th July, 2023

2021: Top 10 Companies in Vaccines by Volume



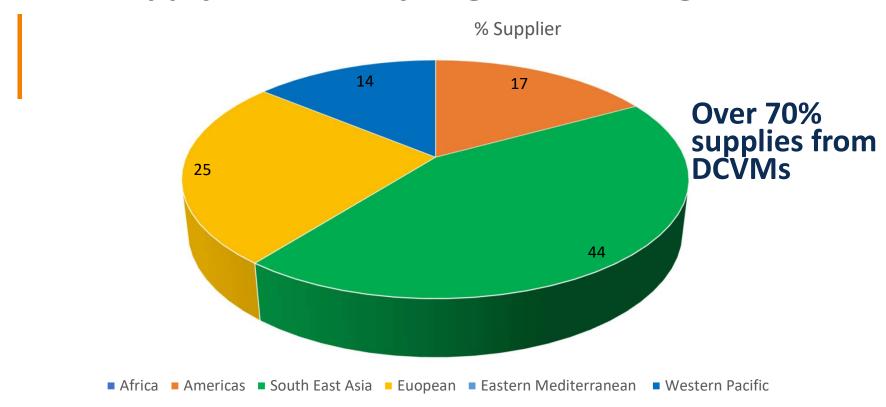
Source: WHO Global Vaccine Market Report 2022

2021:Top 10 Vaccines by Volume & Value including COVID-19



Source: WHO Global Vaccine Market Report 2022

2021:Supply to Africa by Region including COVID-19



Source: WHO Global Vaccine Market Report 2022

DCVMN Learning & Development Plan



Hilleman Tech Transfer Training

- Two On-site Programs already conducted in Singapore in 2022-2023
- 30 participants from 15 DCVMN member companies trained
- 360 degree Evaluation: Participants, Trainers, Third party technical expert and HODs
- Supports Global Access & Supply for Pandemic resilience
- Ensures Local Vaccine Security
- Next Hybrid Program planned in November 2023 with IDD inputs

Cross Functional Groups (CFGs)

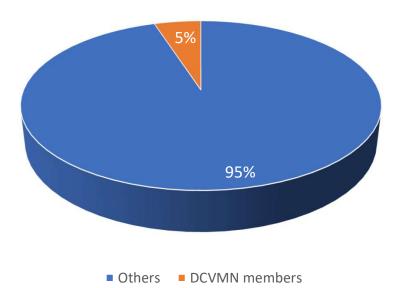
- Instructional Design Workshop
 (IDW) conducted on 23-24 March,
 2023 in Bangkok, Thailand
- Task force of 24 highly skilled, knowledgeable, high-level executives created. Workshop plan, course curriculum created
- European GMP expert and PATH
 IDD expert involved
- Creating learning objectives, needs and content
- Proposal shared with Africa CDC for workforce in Africa for Africa

Virtual Reality (VR) Program

- First of its kind in vaccine space
 Three modules already designed
- 16 participants from 7 DCVMN member companies trained
- Member company trained 100 people
- Discussion with WHO ongoing to utilise in Biomanufacturing hubs
- WHO interested to utilise in Biomanufacturing hubs
- The VR training uploaded on the DCVMN website and advertised on social media
- Demonstration Unit on display during AGM

Challenge: Product Development Funding

> 60% of COVID-19 vaccines supplied by DCVM's



R & D Funding: \$ 5.6* Billion in 2020-21

Need for reflection:
disproportionate allocation vs.
success rate of deployed
funding



Healthy Industry Framework

During last AGM in Pune, Dr. Richard Hatchett CEO,CEPI emphasized the need for strengthening institutional arrangements and financing mechanisms that are being put in place in the global architecture.

Rationale



- DCVMN is a diverse group of vaccine manufacturers with all keen to continue evolving their development journey
- DCVMN members have broadly the following objectives:
 - Acquire new technology and capabilities
 - Secure funding to develop products
 - Establish partnerships/collaborations
 - · Advocacy for suitable pricing to ensure healthy markets
- **Healthy Industry Framework (HIF)** will try to categorize the DCVMs in four archetypes depending on their expertise, state-owned enterprise/private /public, revenues, portfolio etc. The archetypes will define the near-term objectives for the DCVMs

Archetypes



Manufacturers with 1-2 Description licensed vaccines No WHO PQ experience

State-owned Enterprise or small private manufacturers supplying to domestic and nearby countries

1

Revenues less than US\$50M

 Manufacturers with 2-5 licensed vaccines

2

WHO PQ experience

Revenues up to U\$\$100M

Supply to UNICEF markets

 Manufacturers with 10 licensed vaccines

3

WHO PQ experience

Revenues US\$100-\$500M

Key supplier to UNICEF markets

· Expertise in developing innovative vaccines

Manufacturers >10 licensed vaccines

WHO PQ experience

• Revenues over \$500M

Key supplier to UNICEF markets

Expertise in developing innovative vaccines

Investing in new technology platforms

 Geo-diversified with manufacturing plants located in more than 1 country

· Acquire new technology and capabilities

• Establish partnerships

· Establish partnerships

 Secure funding to develop products

· Acquire new technology and capabilities

· Secure funding to develop products

 Establish partnerships/collaborations

· Advocacy for suitable pricing

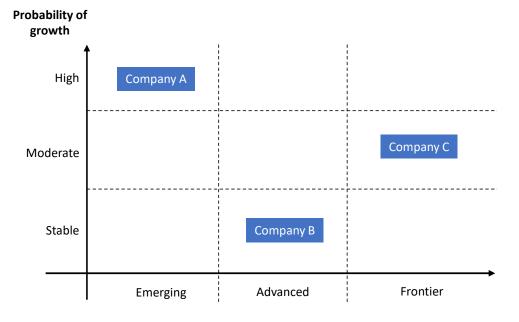
 Establish partnerships/collaborations

· Advocacy for suitable pricing

Courtesy: CEPI

Defining an opportunity niche





Manufacturer archetype

Company A

- Emerging. 2 vaccine candidates, US\$10M revenue
- High growth potential. Active product development with a public funder.
- Opportunity: Product development to advance global health security, meeting demand and expansion based on strengths of a focused offering.

Company B

- Advanced. 4 vaccine candidates. US\$30M revenue.
- Stable growth. No active product development, domestic market focused.
- Opportunity: Steady state business model.

Company C

- Frontier: 11 vaccine candidates. US\$120M revenue.
- Moderate growth potential. Platform approach, domestic market with 2 other region markets, engaged with public bodies but no active projects.
- Opportunity: Partnerships to accelerate product development and facilitate entry into overseas markets.

Courtesy: CEPI

Steps to becoming a High Performing Vaccine Manufacturer



1. Stabilize

- Establish Vision & Mission
- Define Strategy
- Review GMP and capabilities
- Address regulatory & system issues
- Operating Model Assessment

2. Optimize

- Embed Operational Excellence and implement new Operating model
- Focus on CMC and business outcomes
- Invest in next generation capabilities

3. Innovate

- Lead industry in GMP and automation
- Establish / contribute to next generation mfr. technology adoption
- Best in class manufacturing operations

Time



- ➤ MCM Johannesburg February 2023
- ➤ World Vaccine Congress, Washington DC, USA-April 2023
- ➤ 17th World Congress on Public Health, Rome, Italy-2-6 May, 2023 and
- ➤ Platform for WHO-DCVMN meeting in Rome
- ➤ International Convention, Seoul, Korea-10-12 May, 2023
- ➤ A high-level Round Table by French Mission, Geneva, Switzerland-22 May, 2023
- ➤ 3rd Health Working Group Meeting, G-20, India's Presidency, Hyderabad, India-4-5 June, 2023
- ➤ GAVI-Mid Term Review, Madrid, Spain-13-15 June, 2023
- > PATH/CEPI: June, Hyderabad
- ➤ G-20 4th Health WG- June, Hyderabad & Aug, Ahmedabad
- ➤ BMGF's Event Examining the R&D Ecosystem: Shifts needed to catalyze progress and save lives over the next 20 years, London
- ➤ BRICS —PPPR for Health Security Johannesburg

AGM: Offering a Platform for bilateral & multilateral collaborations

- WHO
- Gavi
- CEPI
- UNICEF
- PAHO
- BMGF
- Afrigen-MPP
- Adjuvant Capital
- IFC
- DFC and many more!



Africa: Key Success Factors for a Public Health Impact

For sustainable capacity building in Africa, the use of innovative technologies and methods is essential e.g. the WHO mRNA Technology
Transfer Hub

New Platform Technologies

Political Prioritization

Ensure the continued commitment of different ministries and Departments with a governance structure in place at the national level in each country to maintain political will and national funding

Africa

Optimal mix of public and private financing to increase the level of resources, investments, accountability and commercial viability and cover the right levels of risk sharing

Sustainable Funding

Partnerships

Leveraging collaborations and augmenting skilled workforce capacity and tech-transfer partnerships to ensure timely access to vaccines is the key



DCVMN Publications

1. <u>Vaccine patches could transform immunisation coverage in lower-income countries</u>

Micro Array Patches deliver vaccines without syringes, making them easier to distribute and administer. VaccinesWork asked the Developing Country Vaccine Manufacturers' Network (DCVMN), a group representing manufacturers across the Global South, how they could make a difference in lower-income countries worldwide. 6 July 2023 by Rajinder Suri, Aila Marini

2. Global Equity and Timely Access: COVID-19 & Beyond in Vaccine X

by Rajinder Suri, Aila Marini

- **3. ACT-A Reflections Compendium**, published by WHO, contributor Rajinder Suri with other learned authors
- **4. Urgent Need for Coordinated Action to Accelerate TB Vaccine Access**, The Union World Conference on Lung Health 2023 June, 2023, contributor Rajinder Suri with other learned authors
- 5. Vaccine traceability: Key learnings from the supply chain initiative by manufacturers from emerging countries in JVAX by Sonia Pagliusia, Yvette Madridb, Yudha Bramantic, Taufik Wilmansyahd, Huilin Yue, Analia Acebalf, Komarapuram R. Krishnamurthyg, Venkatapathi Raju Pinnnamarajuh,, Padmakar Jadhavh, Rachel Parki, Lingjiang Yangj

Strategic Priorities 2024



To collaborate actively and support:

- 1. Pandemic Preparedness Prevention & Response: Access to Medical Countermeasures: VTD
- 2. Pandemic Accord
- 3. Global Health Architecture
- 4. Equity, Inclusivity & Transparency
- 5. Immunization Agenda 2030: increasing Universal immunization Coverage (UIC)
- 6. Regional Sustainable Vaccine Manufacturing Initiative
- 7. 'Train the Trainers' with Africa CDC to build capability and capacity in Africa for Africa!



Thank you