Introduction to the Global and DCVMN Supply Chain Initiatives: Objectives and Expected Outcomes

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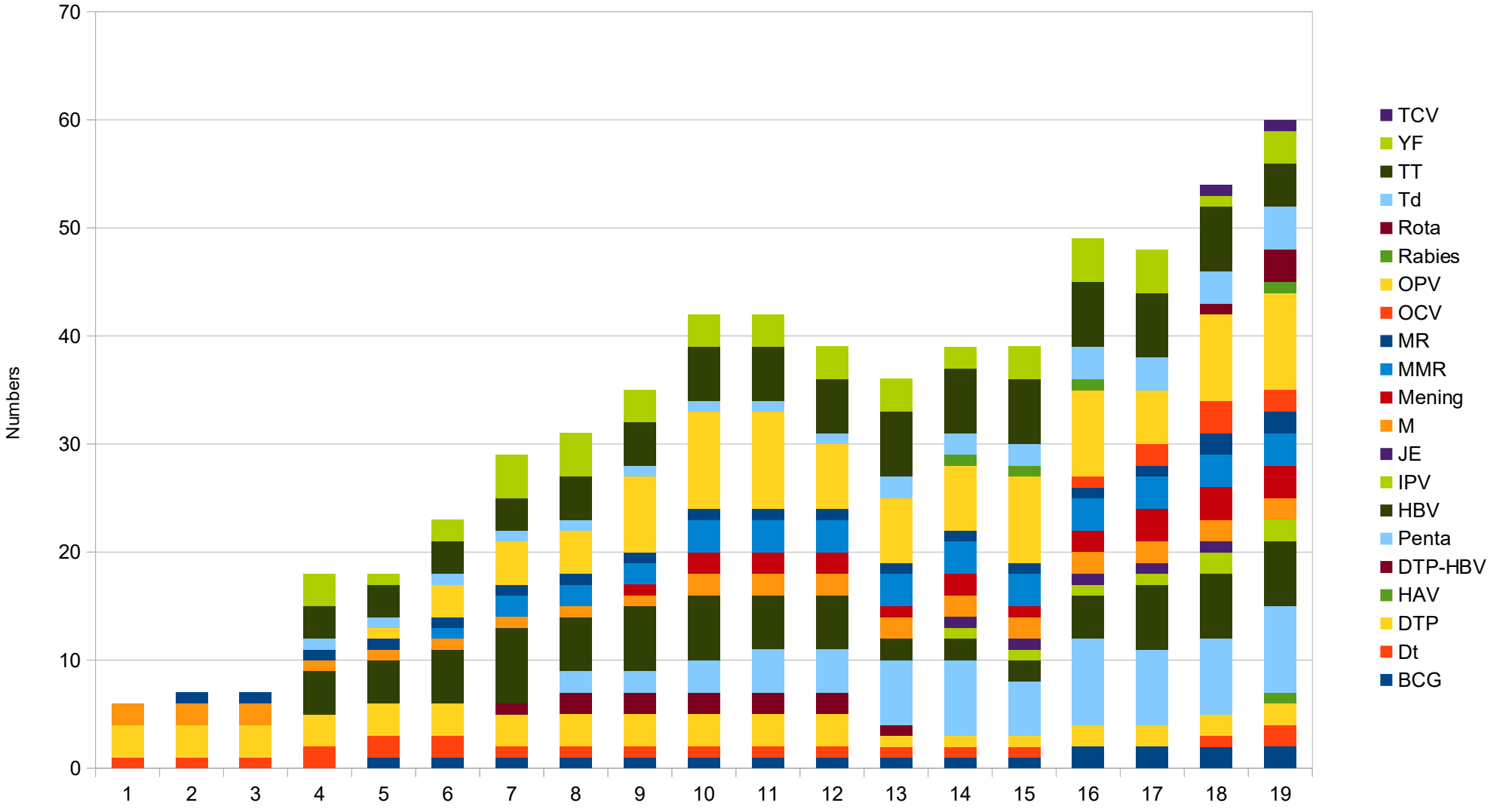
Emerging manufacturers contracted by UNICEF per vaccine presentation



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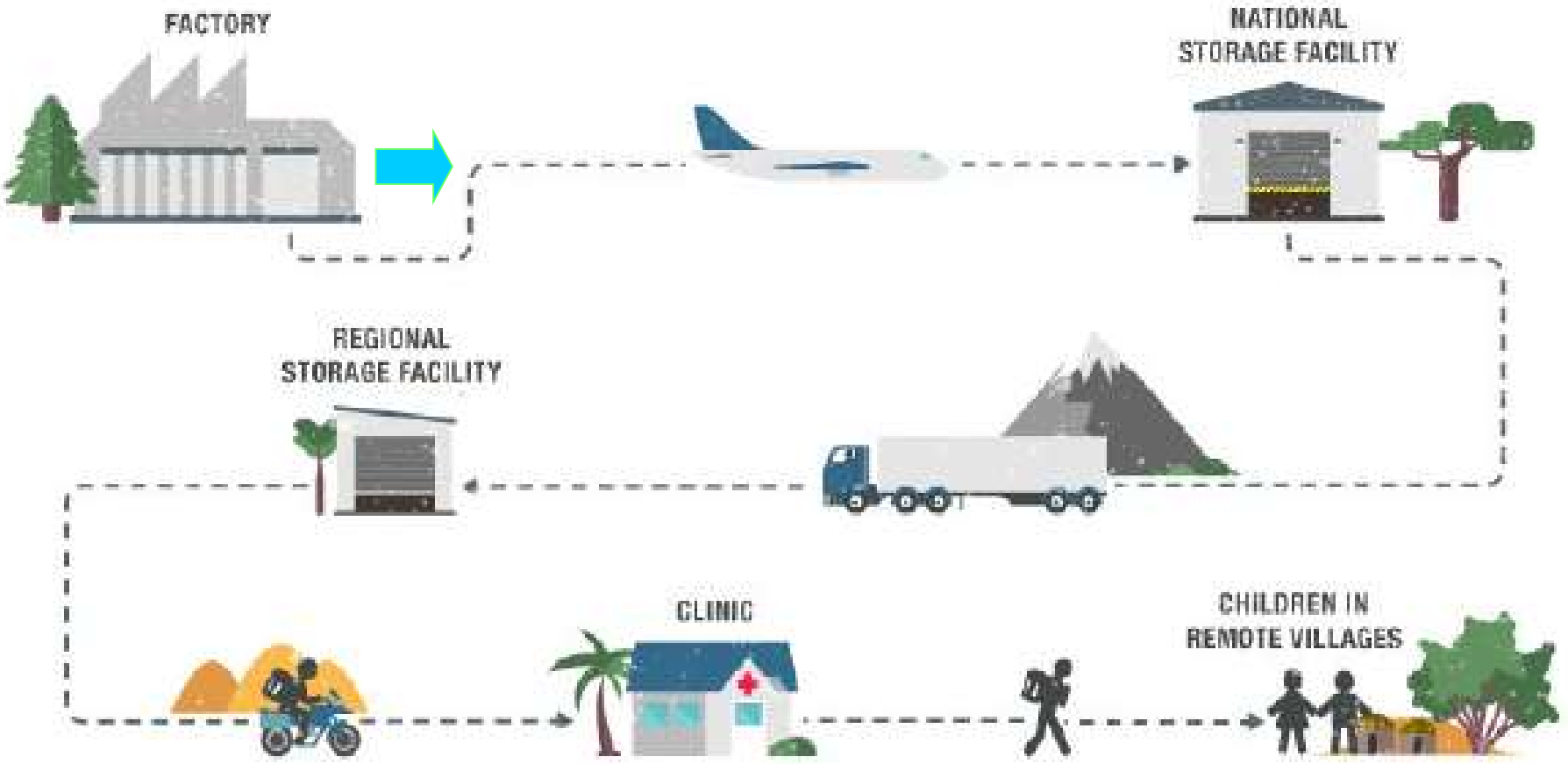
Argentina
Bangladesh
China
India
Indonesia
Russian Federation
Republic of Korea
Thailand
Vietnam

40% of world's children

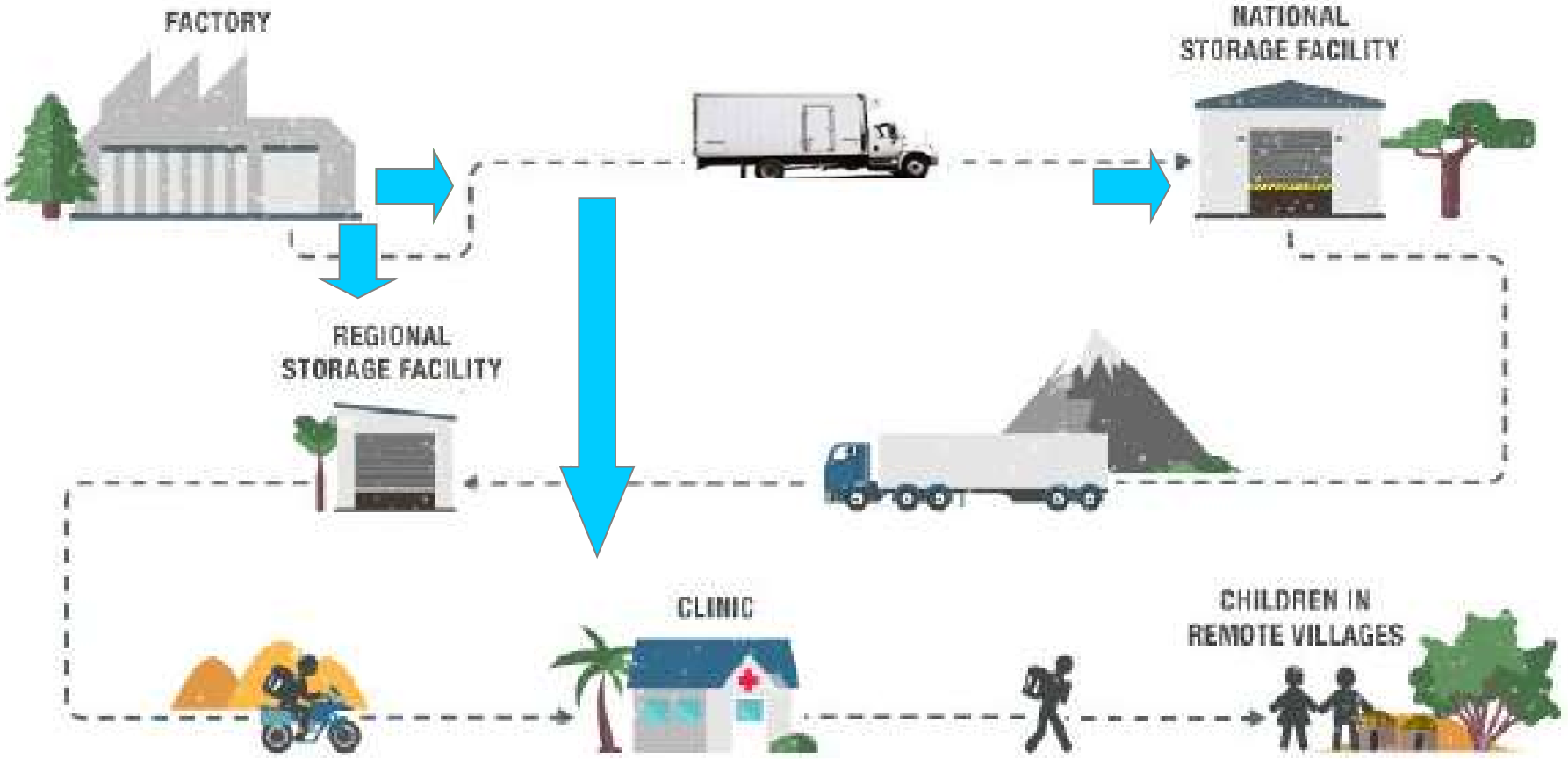
The vaccine supply chain (international shipments) – manufacturer control ends ex-factory



Source: MSF

Manufacturers' Reputation

The vaccine supply chain (national shipments) – manufacturer control may extend into the supply chain



Source: MSF

Manufacturers' Reputation

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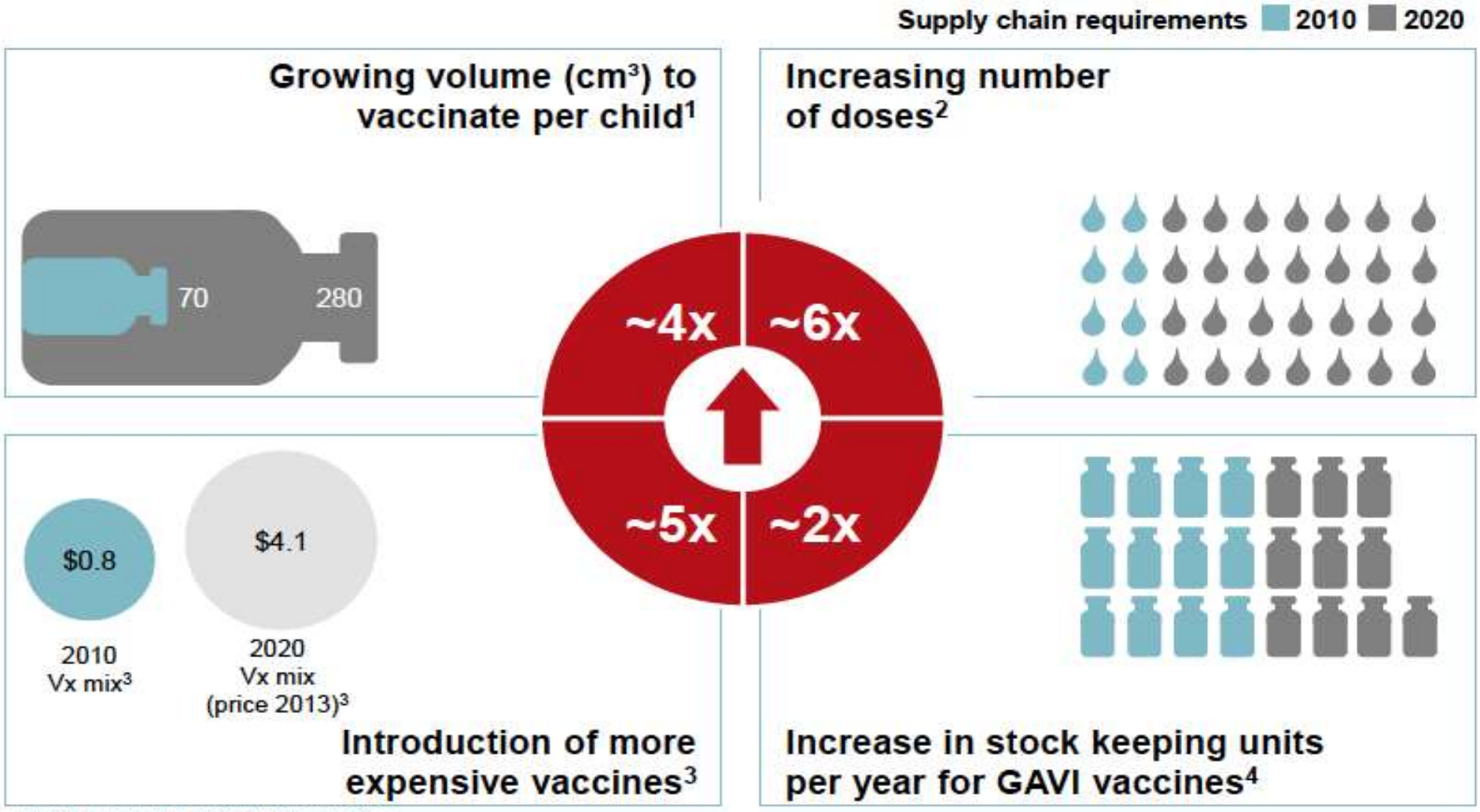
Vaccine supply chain challenges in countries

- Limitations in supply chain system design
- Insufficient and misallocated human resources
- Ineffective use of data for management
- Weak distribution systems
- Inadequate budget and distribution systems
- Deficient cold chain equipment
- Increasing volume and value

Significant increased throughput increases the pressure on the supply chain



Note: All figures relate to GAVI-funded vaccines

1. UNICEF Supply 2012 Financial report, WHO data for Pneumo and Rota vaccines, and HPV (only for girls);
2. 2010: GAVI Shipment Data; 2020; GAVI SDF Forecast; Including volume for GAVI future graduated countries;
3. Comparison based on 2013 Price; 2020 Vaccines include: Rota, Pneumo; HPV; 2010' vaccines include:YF, Measles, DPT, OPV (UNICEF SD);
4. GAVI Background SDF Information; 2010": estimates based on 2009 data; 2020: estimates based on 2013 forecast

An example of refrigerator failure (from private practitioners in Germany)

"Of the 75 refrigerators analyzed, only 32% maintained the vaccine cold chain - 68% were beyond the target range and 15% reached a critically low temperature of 0℃. We found that continuous freezing temperature exposure lasted longer than one day on average (39 hours) with a longest episode of seven days recorded. These data suggest that freeze damage likely occurred."

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WHO - IPAC Call to Action

The Immunization Supply Chain and Logistics systems, designed in the 1980s, have supported the achievement of acceptable vaccination coverage, using ad-hoc solutions to overcome challenges in vaccine storage, distribution and management.

The dedication, intelligence and creativity of health workers acting within outdated supply chain systems have substituted for much-needed assets and capital.

Despite many efforts, national immunization programmes, which are struggling to meet the demands of routine immunization and supplemental campaigns, may not be in the best position to respond to the introduction of new vaccines.

Ref: WHO, Immunization Supply Chain and Logistics, A Call to Action, WHO/IVB/14.05

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Gavi – Five Supply Chain Fundamentals

1. Immunization supply chains require dedicated and competent managers as well as adequate numbers of skilled, accountable, motivated and empowered personnel at all levels of the health system.

2. Supply chains are systems that must be continuously monitored, managed and improved.

3. Managers need reliable and relevant data to manage key aspects of immunization supply chains, including vaccine availability, quality of storage and transport facilities, and stock management efficiency.

4. Reliable, well-maintained and cost-effective cold chain equipment is vital to ensure that there is adequate, sustainable vaccine storage for current and planned vaccines, maintenance requirements are kept low and running costs are reduced.

5. New approaches to supply chain design aim to improve supply chain performance and contribute to increasing immunization coverage.

Ref: Gavi's immunization supply chain strategy, www.gavi.org

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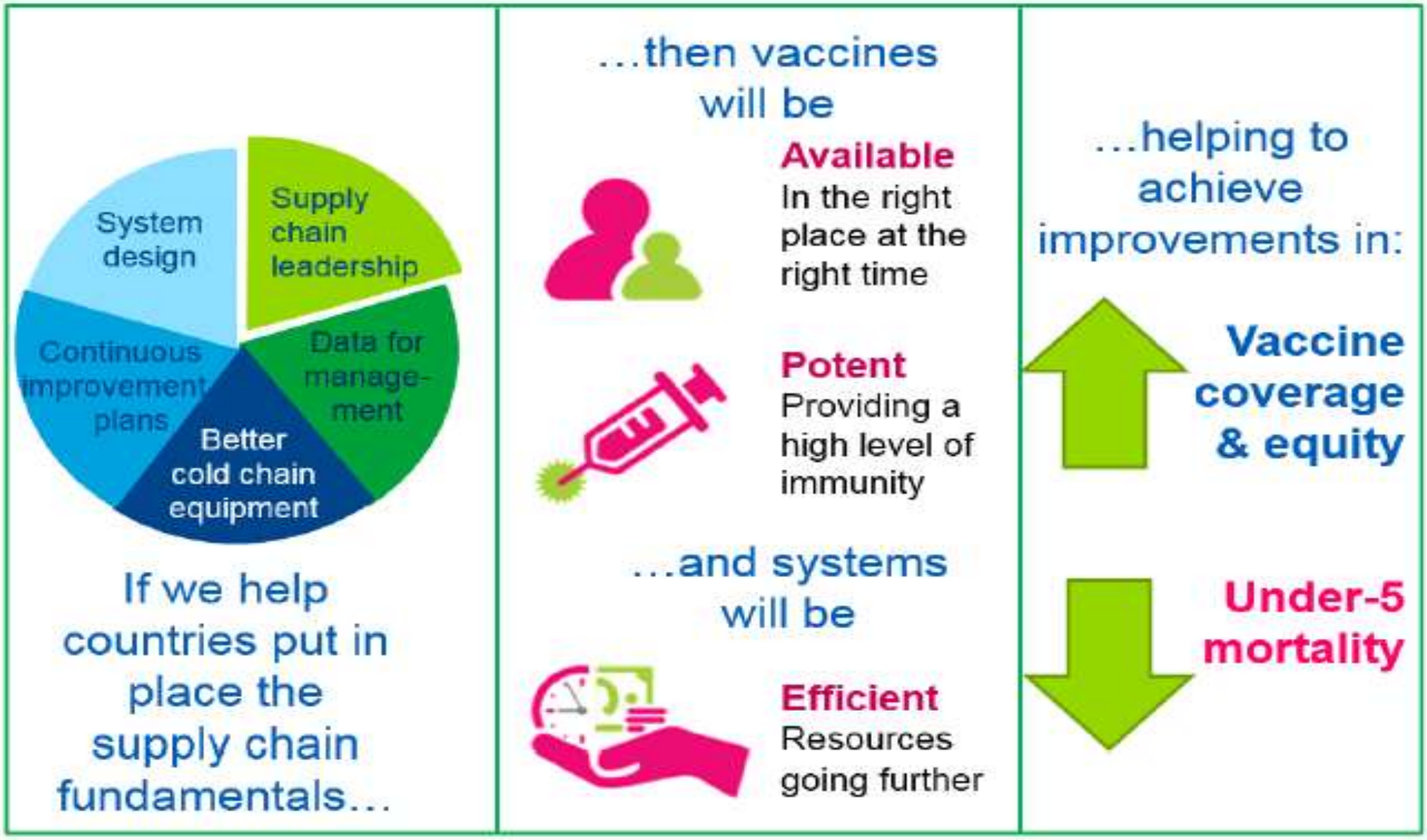
Outcomes of the 5 Fundamentals



UNICEF efforts at country level

The UNICEF goal is to work closely with its country offices and governments to strengthen and optimize key segments of supply chains for vaccines to reduce costs, stock-outs, wastage and improve performance, supporting:

Ref: UNICEF, Immunization Supply Chain Strengthening, 2015 Vaccine Industry Consultation , Copenhagen, 26-27 October 2015

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Gates Foundation strategy

- Strengthen country immunization systems by supporting the collection, analysis, and use of high-quality vaccine-related data, improving the measurement and evaluation of vaccination efforts, and developing new diagnostic tools to help health workers assess population immunity to disease.

- Strengthen vaccine-related supply chains and logistics, supporting the development of new ways to help countries improve the storage, transportation, and distribution of vaccines. This is particularly crucial as countries prepare to deliver a greater volume of vaccines to a greater number of people. Many vaccines are temperature-sensitive and require special storage, transport, and handling to ensure that they maintain their potency.

Ref: www.gatesfoundation.orghttps://www.gatesfoundation.org/What-We-Do/Global-Development/Vaccine-Delivery

DCVMN Selected Goals and Objectives

1. To combat infectious diseases, especially those of the developing world, by strengthening the capacity of vaccine and vaccine-related product manufacturers in developing countries, to produce and deliver quality vaccines effectively in the long-term for national immunization programs in a sustainable manner;

2. To encourage investment on research, technology innovation and development efforts to meet vaccine needs of developing countries;

3. To improve the access of manufacturers to technologies necessary to improve the quality of vaccines and vaccine-related products currently being produced and to prepare for the transfer and production of newly developed health technologies;

4. To encourage continuing research and development efforts of Members to meet the emerging vaccine needs in developing countries;

Ref: https://www.dcvmn.org/Mission-and-Vision

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Vaccine Supply Chain Innovation

DCVMN Focus:

Challenges where manufacturers can impact positively the vaccine supply chain in countries to make it more responsive and resilient for improved supply security

Challenges where manufacturers can effectively work together to promote and enhance innovations in strengthening the vaccine supply chain