

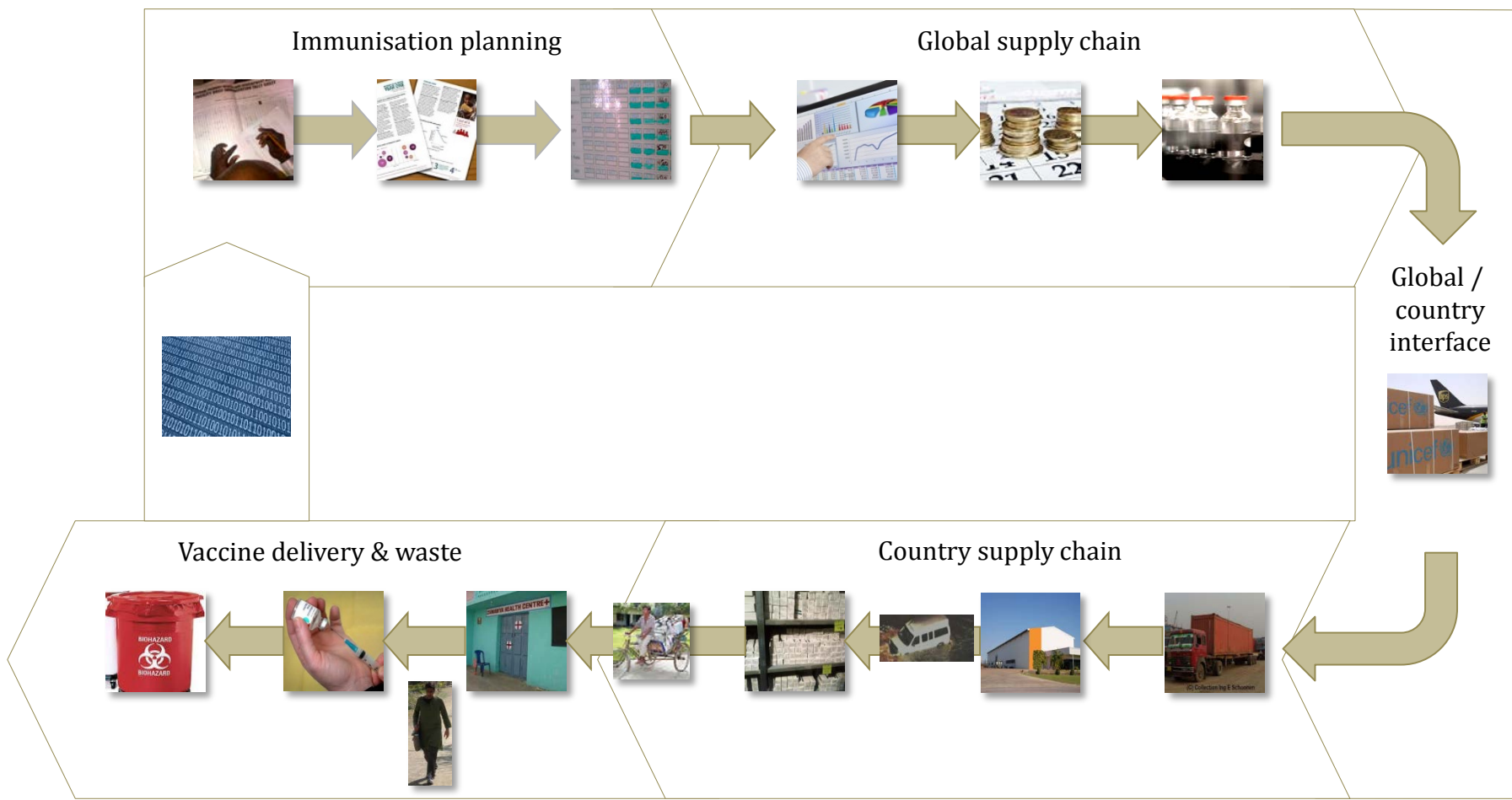


GAVI Immunization Supply Chain Strategy

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Immunization Supply Chain: An Interconnected System Involving Flows of Goods, Funds and Data

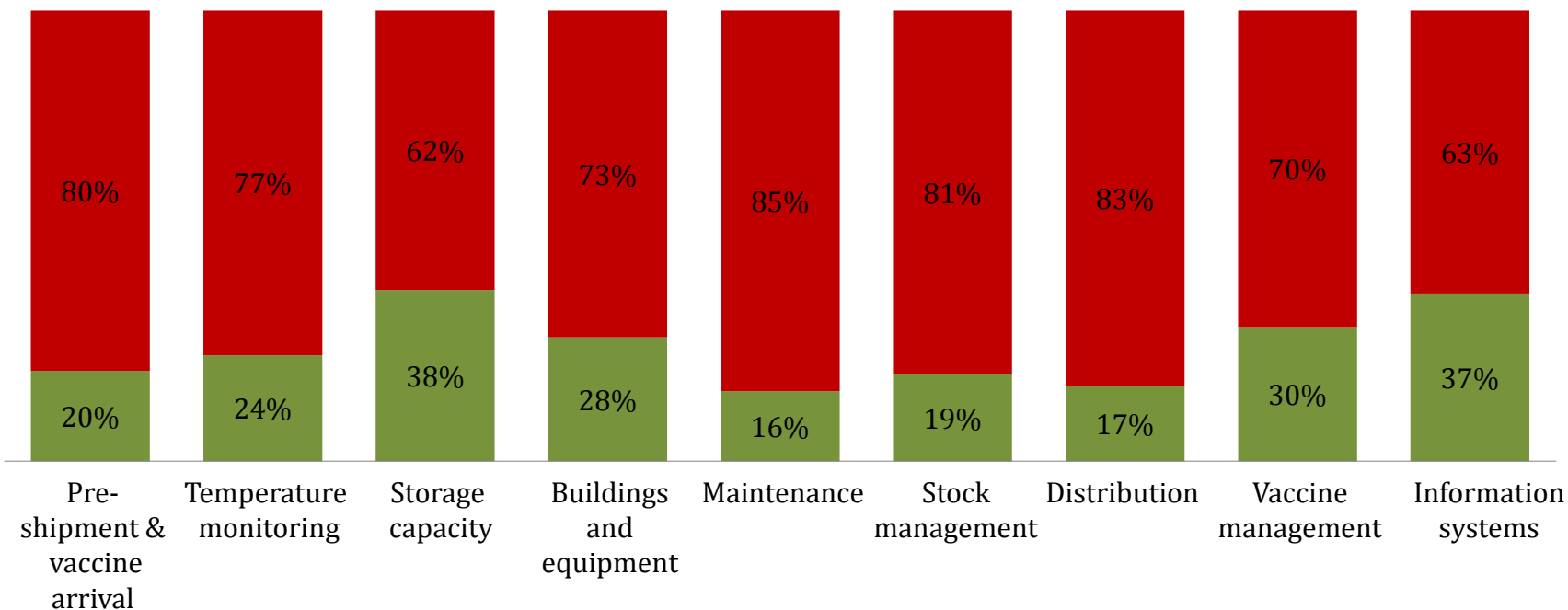


Source: GAVI Alliance task force

Country Immunisation Supply Chains Do Not Meet WHO standards today

% of countries that reach 80% target on relevant supply chain WHO standards¹

■ Not reaching standard
■ Reaching standard

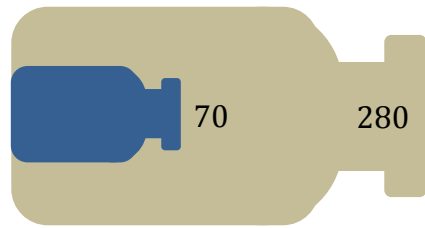


1. EVM (Effective Vaccine Management) Assessments – Average score of Principal, Sub-National, Local District and Service Point Level;
Source: EVM assessment for 57 GAVI countries, WHO

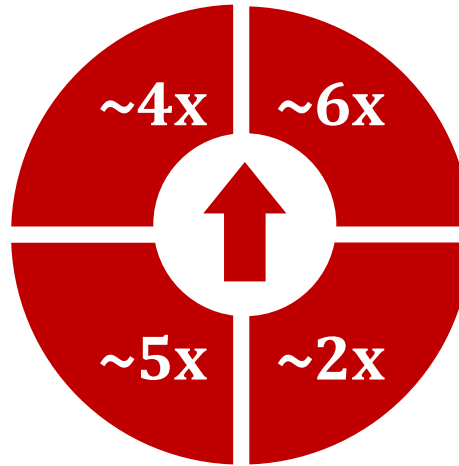
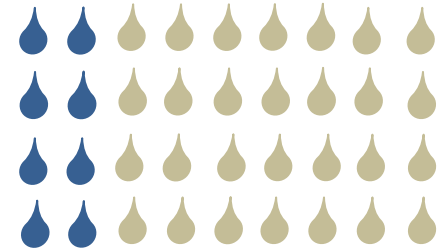
Immunisation Supply Chain Challenges Will Increase Due to Higher Volumes, Doses and Vaccine Cost

Supply chain requirements ■ 2010 ■ 2020

Growing volume (cm³) to vaccinate per child¹



Increasing number of doses²



\$0.8

2010
Vx mix³

\$4.1

2020
Vx mix
(price 2013)³

Introduction of more expensive vaccines³

Increase in stock keeping units per year for GAVI vaccines⁴

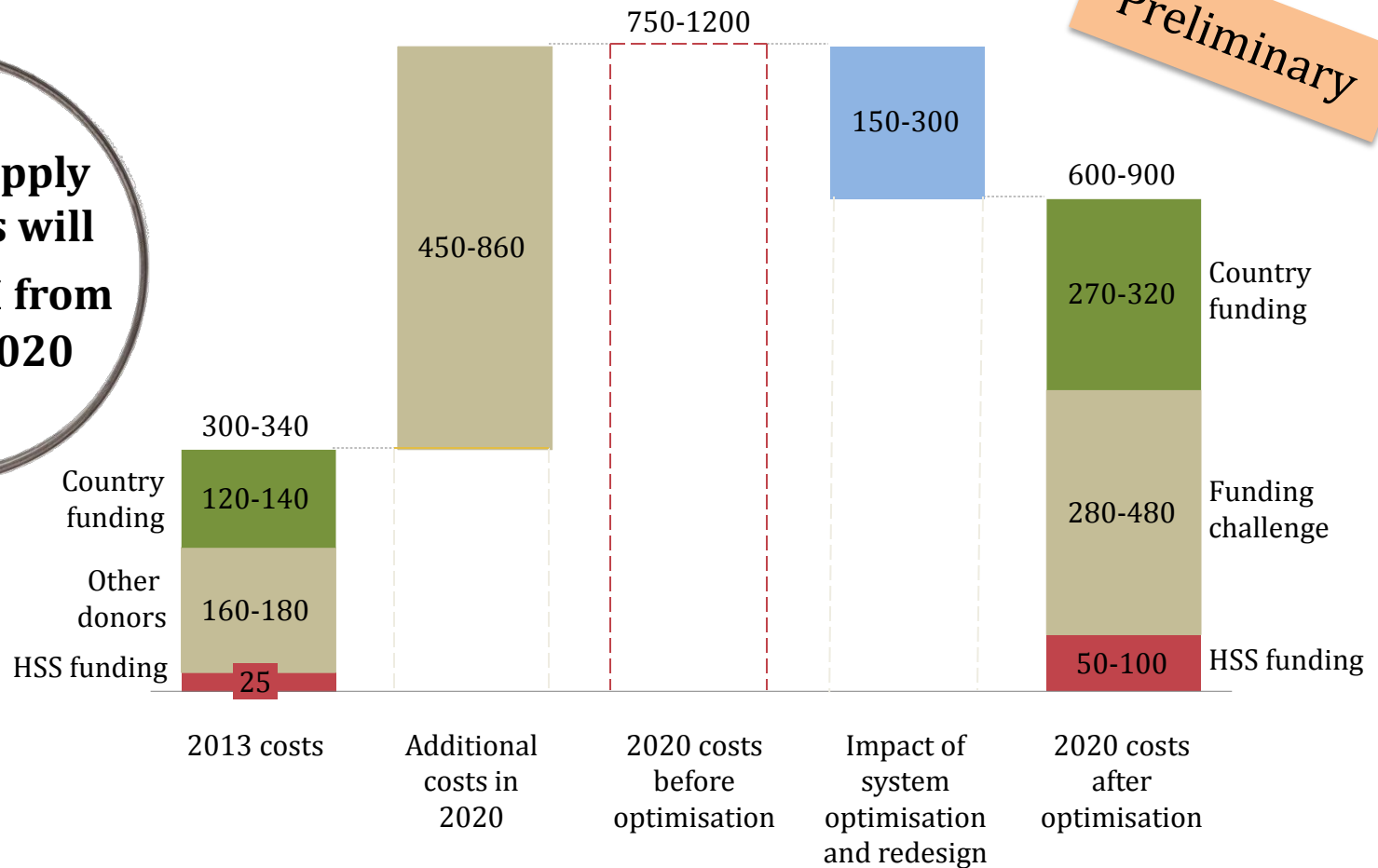


Note: All figures relate to GAVI-funded vaccines

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

Catalytic Investments Aim to Contain Cost Increase But Increased Funding Needed

Annual estimated/projected immunization supply chain costs (\$m)



Source: BCG Analysis, GAVI Alliance task force preliminary estimates and projections based on 53 GAVI eligible countries.

Putting Fundamentals in Place in Every Country and Improve System Design

Supply chain managers



Ensure supply chain manager with right capabilities, authority and accountability is in place in every country

Supply chain management and improvement plans



Support development and implementation of comprehensive supply chain management plans

Supply chain dashboards



Establish visibility of supply chain performance and use to improve management through dashboard

System design



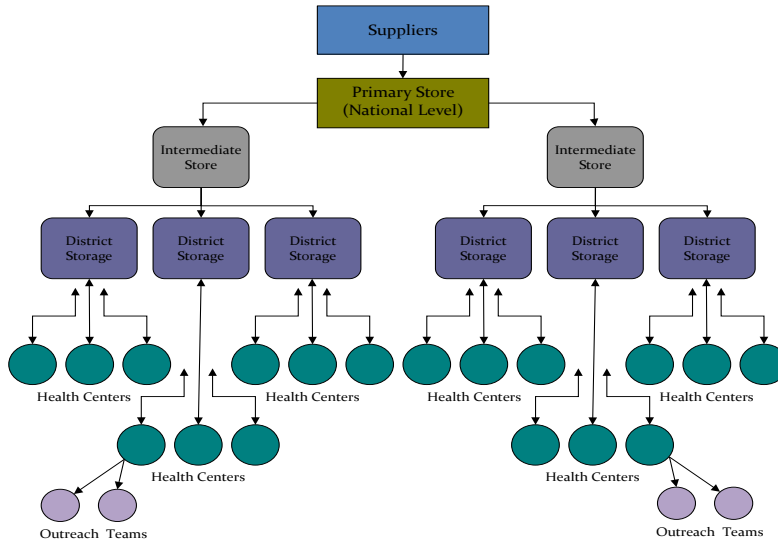
Support priority countries in improving system design

Source: GAVI Alliance Task Force

System Design

Multi-Tier - Aspirational

Replenishment decision/distribution responsibility at each tier. Must resource each tier for inventory management and distribution.



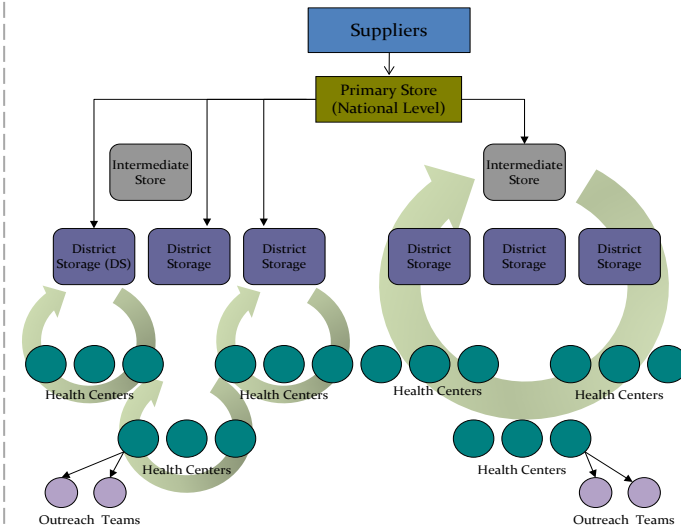
- Each level responsible for replenishment decision, inventory management, and delivering to level below
- Requires significant human resources, infrastructure and funds at each level to create functioning system
- Devolves into ad hoc due to insufficient resources/infrastructure

Multi-Tier – Ad-Hoc

- Lack of resources/infrastructure = lack of a “system” and no regular distribution
- Health workers must use personal resources and leave posts to collect vaccines
- Ad-hoc is more expensive and less efficient, but costs are dispersed so easy to hide/ignore

Informed Push

Replenishment decision/distribution responsibility moved up to dedicated logistics teams. Resources for inventory management and distribution consolidated and focused at that tier



- Removes burden from health workers
- Creates regular distribution
- Costs consolidated at one level, so looks expensive, but actually more cost-effective

System Design Impact on Personnel

(Data from VillageReach cost study comparing two provinces, each with ~100 health centers)

	Multi-tier Ad-hoc Model	Informed Push Model
Personnel	Task diffused to 134 workers	Task consolidated to 6 workers
Personnel Costs	<ul style="list-style-type: none"> \$75,482.23 (\$40,106 more) Per diems for many health workers Personnel costs are 28% of vaccine logistics costs 	<ul style="list-style-type: none"> \$35,376 Negotiated per diems for small number of full-time distribution workers Personnel costs are 12% of vaccine logistics costs
Staff Days/Month	348	138
Results	<ul style="list-style-type: none"> 498,624 vaccines delivered (per year) \$1.50 total cost per dose of vaccine delivered 70% DTP-3 coverage rate 	<ul style="list-style-type: none"> 889,152 vaccines delivered (per year) \$1.18 total cost per dose of vaccine of delivered 95.4% DTP-3 coverage rate

- The additional 210 staff days required to run the Ad-hoc Model falls entirely on health workers
- The Informed Push Model reallocates this time to health workers providing healthcare rather than collecting supplies and filing stock inventory reports

“With informed push mothers started trusting the program . . . they come now, because they know they will find vaccines. This system solved the problems of vaccine stock-outs . . . before I didn’t have money to get public transport to go to the district to collect vaccines.” – Emilia Albino Chilaule, Alto Changane Health Center, Mozambique

Impetus for Change

- Standardized assessment tool shows similar supply chain weaknesses across multiple GAVI countries
- Need more efficient supply chains due to greater cost and size of new vaccines
- New vaccines backing up due to supply chain capacity constraints
- Growing evidence base of better results from
 - Pilot projects
 - Modelling
- Equity goals can't be met and new vaccine investments will be wasted unless in-country supply chain challenges are addressed