SUSTAINABLE MANUFACTURING:
OPTIMIZING DATA FOR DECISION MAKING

Chand Mehta
Elizabeth Eyermann

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Workshop agenda and objectives

Agenda

Overview of CHAI and Vaccine Markets Team

What is sustainable manufacturing, and why is this topic especially important today?

How can suppliers use data to best equip themselves for sustainable manufacturing? – *CASE STUDY*
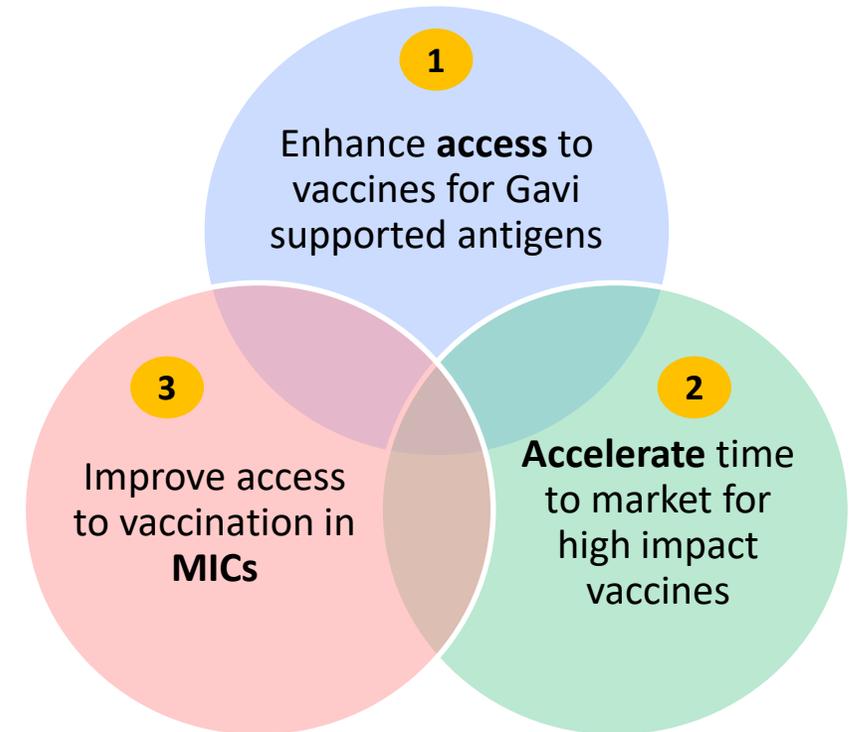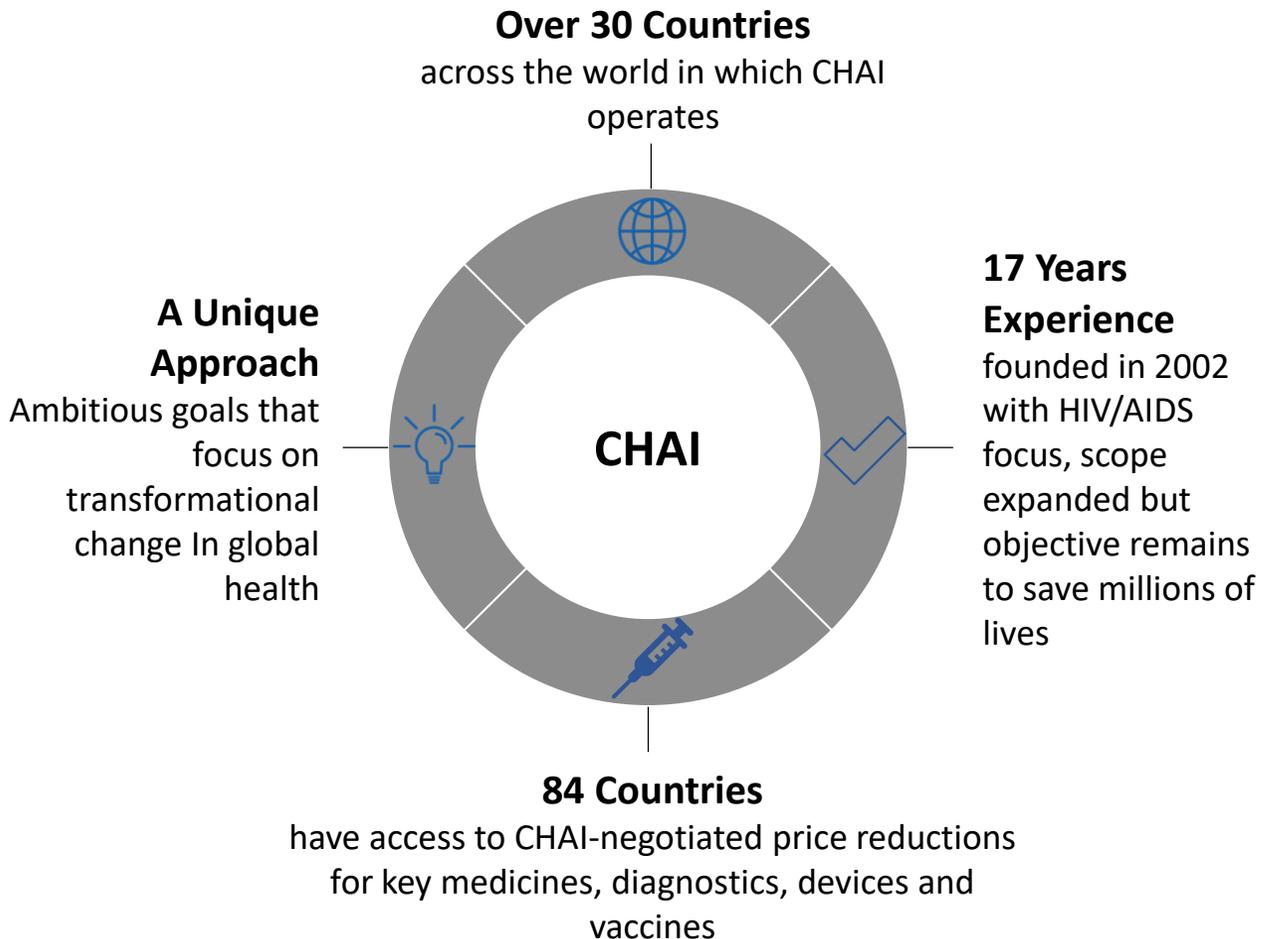
Q&A

Objectives

- The goal of this workshop is to demonstrate that **data** is an important component to **sustainable manufacturing**, and to encourage suppliers to make use of existing data and tools to **better inform decision making**

- Coming out of this workshop, you will be able to use some of the **tools and methods** to:
  — Easily access certain data sets
  — Conduct analyses that can help inform strategic decisions

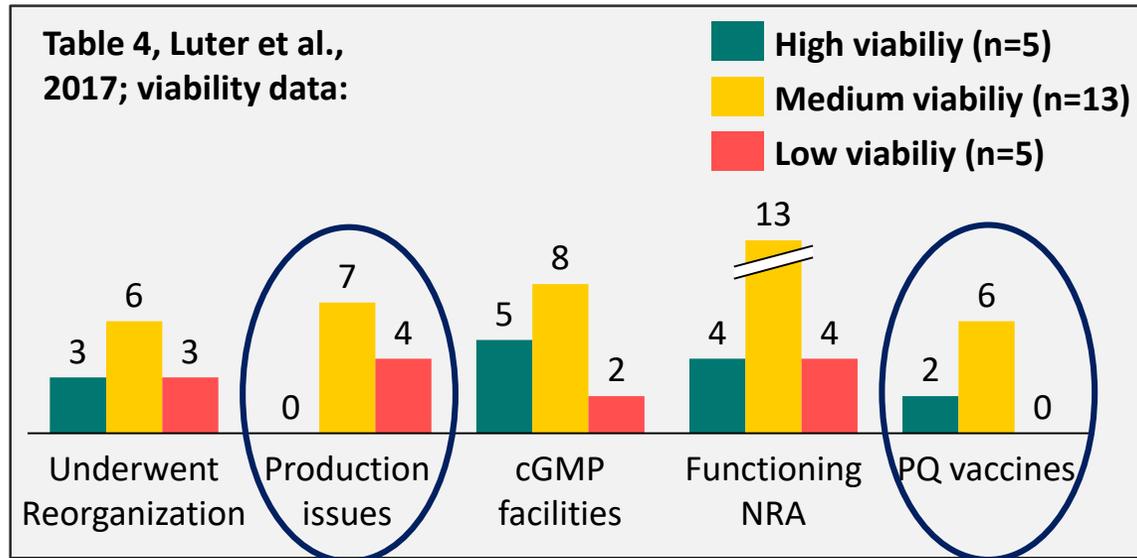# CHAI is an international NGO that aims to increase access to life-saving health products

We operate at the nexus of business, government, and health to save lives and reduce disease.

Over 30 Countries
across the world in which CHAI operates

A Unique Approach
Ambitious goals that focus on transformational change In global health

CHAI

17 Years Experience
founded in 2002 with HIV/AIDS focus, scope expanded but objective remains to save millions of lives

84 Countries
have access to CHAI-negotiated price reductions for key medicines, diagnostics, devices and vaccines

The Vaccines Markets Team achieves this with three strategic goals:

1 Enhance **access** to vaccines for Gavi supported antigens

2 **Accelerate** time to market for high impact vaccines

3 Improve access to vaccination in **MICs**

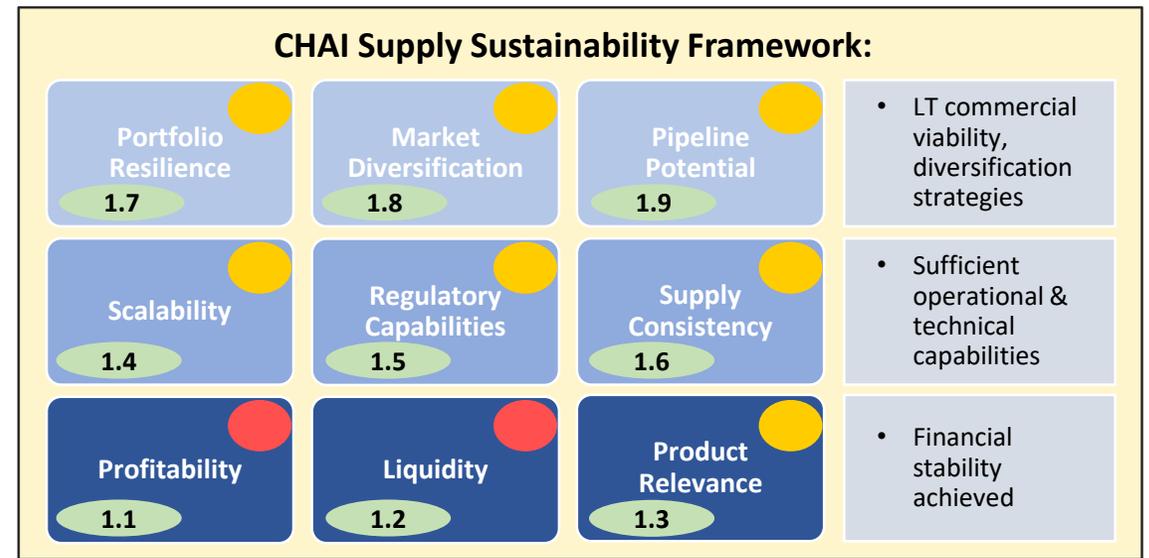CLINTON HEALTH ACCESS INITIATIVE

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What is sustainable manufacturing, and why is this topic especially important today?

A goal where suppliers continuously produce affordable vaccines in a commercially viable way

Table 4, Luter et al., 2017; viability data:

Legend:
- High viabiliy (n=5)
- Medium viabiliy (n=13)
- Low viabiliy (n=5)

Chart data:

Category	High	Medium	Low
Underwent Reorganization	3	6	3
Production issues	0	7	4
cGMP facilities	5	8	2
Functioning NRA	4	13	4
PQ vaccines	2	6	0

- 1997 viability framework identifies **DCVM strengths & weaknesses**
- 2017 update:
  - **Significant production issues:** 4/5 ''low viable'', 7/13 ''medium viable''
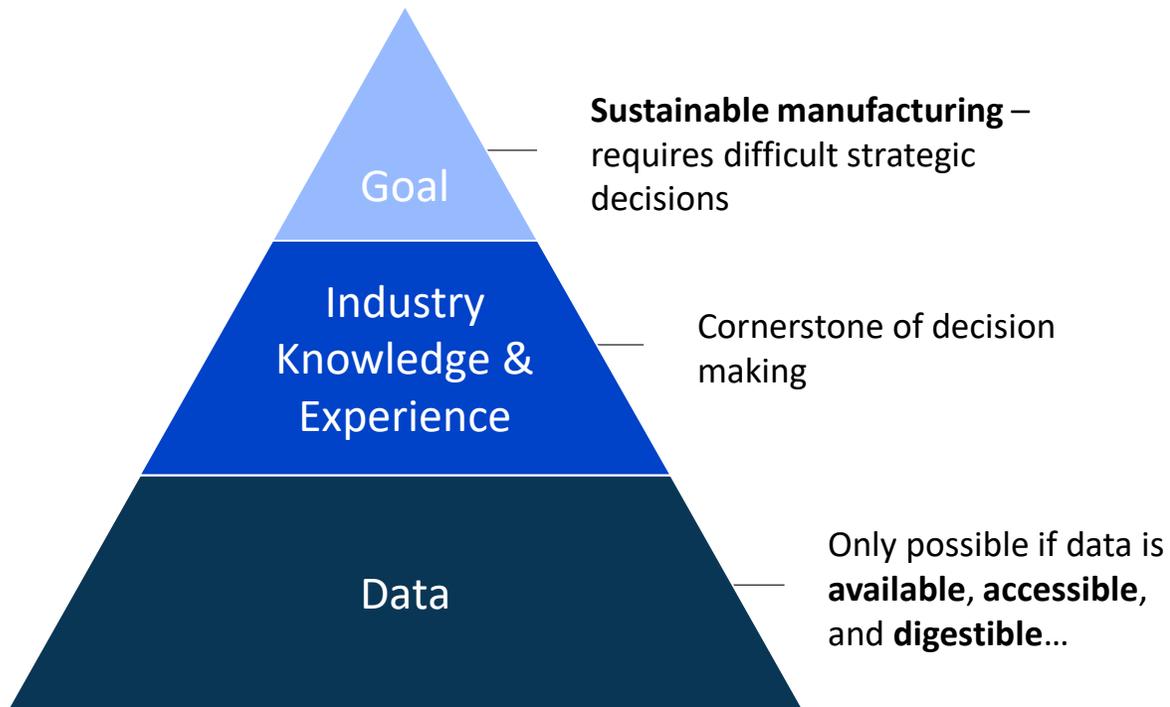 - **Limited PQ vaccines**: 0/5 "low viable", 6/13 "medium viable"

Heightened importance today due to COVID-19 'knock on effects' threatening commercial viability

CHAI Supply Sustainability Framework:

Portfolio Resilience — 1.7	Market Diversification — 1.8	Pipeline Potential — 1.9	• LT commercial viability, diversification strategies
Scalability — 1.4	Regulatory Capabilities — 1.5	Supply Consistency — 1.6	• Sufficient operational & technical capabilities
Profitability — 1.1	Liquidity — 1.2	Product Relevance — 1.3	• Financial stability achieved

- To complement Luter's work, CHAI's framework used to assess **individual supplier sustainability**
- COVID knock on effects expected to affect all aspects of sustainability, especially **short term profitability and liquidity**
- Sustainable manufacturing **important now**, more than ever...

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How can suppliers best position themselves for sustainable manufacturing?

Underpinning sustainable manufacturing and the topics in the sustainability frameworks is data
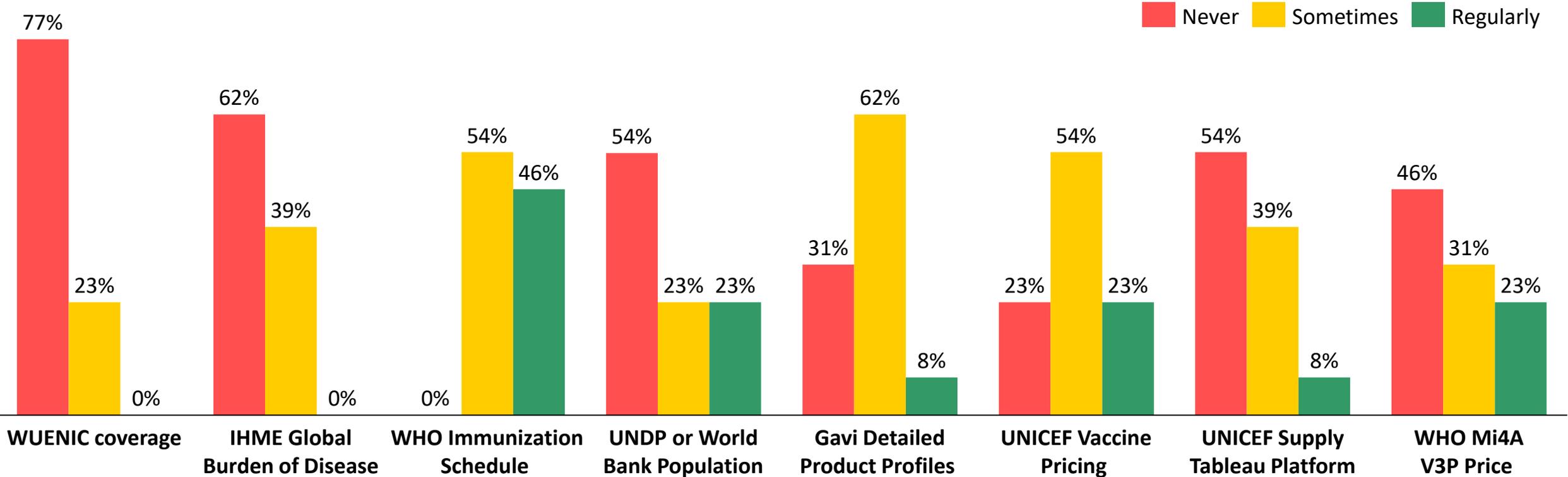
There is a wealth of available data, but it is not always accessible or easily digestible

Goal — **Sustainable manufacturing** – requires difficult strategic decisions

Industry Knowledge & Experience — Cornerstone of decision making

Data — Only possible if data is **available**, **accessible**, and **digestible**…

1. What decisions can data help inform?

2. Where can the data be found?

3. How can data best be used to support decision making?

What decisions can data help inform and where can that data be found?

	1 Products to invest in	2 Markets to prioritize	3 Presentation to develop	4 Capacity allocation	5 Pricing strategy	6 COVID-19 response
WUENIC coverage rate	✓	✓				
IHME GBD	✓	✓				
WHO immunization schedule	✓	✓				
UN Population Database	✓	✓				
Gavi DPP					✓	
UNICEF vaccine pricing	✓				✓	
UNICEF supply tableau				✓	✓	
V3P price database			✓	✓	✓	
Linksbridge GVMM	✓	✓				
CHAI COVID tool						✓

How can data be used to support decision making?

CASE STUDY - BacloVir vaccine development…

Wrap up and Q&A

Recap

1. What is sustainable manufacturing, and why is this topic is especially important today?

2. How can suppliers best position themselves for sustainable manufacturing?

3. How can data be brought in to support decision making?

Next Steps

- Get familiar with these data tools and start running your own analyses

- Use these analyses to support decisions

- Give us feedback on how to improve the tools, what data you are missing, what kinds of analyses would be most helpful to focus on next time

Q&A:

Question to the audience:
*"If you were VaxBio, what further analysis would you want
to conduct to confirm the market potential of BacloVir?"*

Appendix – DATA SOURCES

WUENIC coverage rate

IHME Global Burden of Disease

WHO immunization schedule

UN Population Database

Gavi Detailed Product Profiles

UNICEF vaccine pricing

UNICEF supply tableau

V3P price database

Linksbridge Global Vaccine Market Model – *coming soon*

CHAI COVID tool – *coming soon*