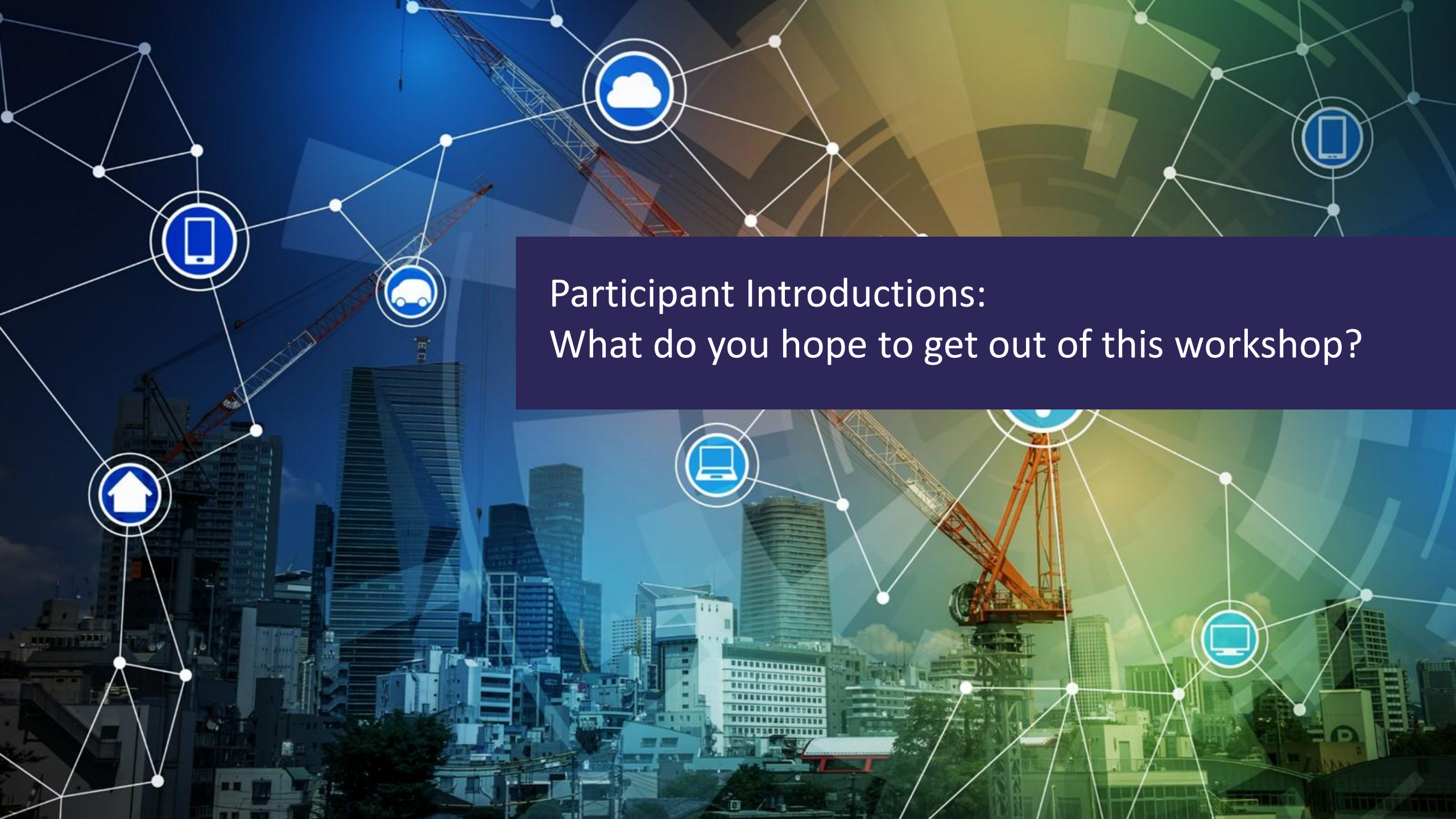
OpenLMIS Business Modeling Workshop

June 25 & 26, 2019 ~ Day 1



Participant Introductions:
What do you hope to get out of this workshop?

Workshop Objectives

Develop a sustainable future-state business model for OpenLMIS to decrease its reliance on donor funding and secure a viable roadmap for the product that meets its core attributes.

DAY 1

Objectives

- Evaluate potential business models and agree on the best model to pursue

Method

- Presentations and large group discussions

DAY 2

Objective

- Lay the groundwork for the Business Plan that takes the chosen business model forward

Method

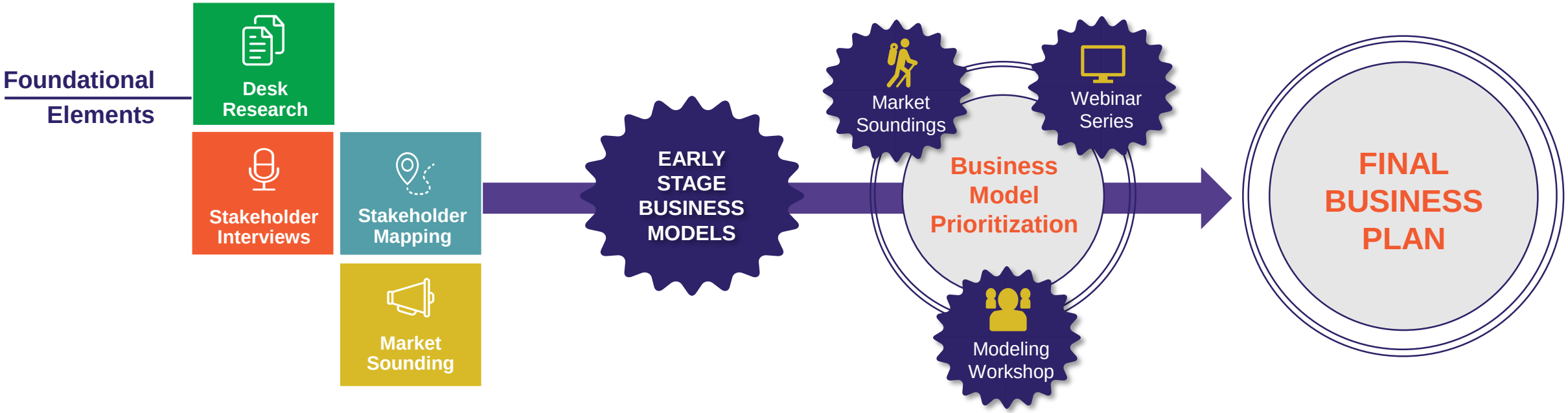
- Facilitated discussions and break out groups

Day 1: Detailed Agenda

9:00 – 9:30 AM:	Introduction & Project Overview
9:30 – 10:00 AM:	Business Models: First Look
10:00 – 11:00 AM:	5 Ways to Take OpenLMIS Forward
11:00 – 11:15 AM:	Break
11:15 AM – 12:15 PM:	Creating an Independent Entity
12:15 – 1:00 PM:	Lunch
1:00 – 2:30 PM:	Future-State Research & Analysis
2:30 –2:45 PM:	Break
3:15 – 4:45 PM:	Evaluate Business Models
4:45 – 5:00 PM:	Reflections & Close
5:30 – 7:30 PM:	Global Health Happy Hour

Project Overview

How We Got Here



Phase 1:
Transform Research into Insights

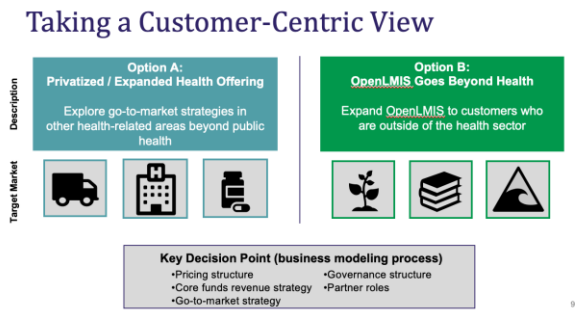
Phase 2:
Refine, Build Out, and Prioritize Models

Business Modeling Process

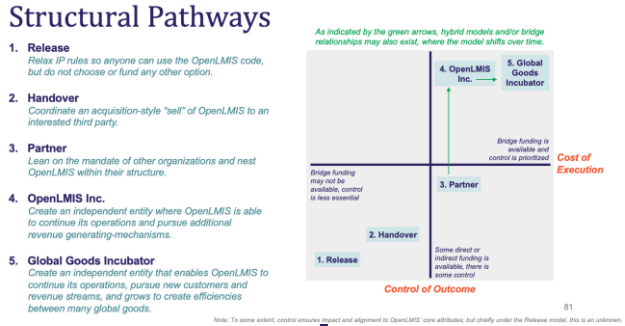
Ongoing research, stakeholder engagement, alignment, analysis, and refinement.

Theoretical Constructs

Focus on Customer



Pathway Approach



Model Narrowing

Business Model Selection

Our process:

- Removed several theoretical constructs reviewed during the workshop
- Determined elements (from the constructs) that are required for sustainability in a future state
- Took these elements and decided to look at future state through a customer-centric lens of two options

Ranking & Score		Name of Business Model	Desired Impact
1	3.77	1. Partner Network	0 green, 3 yellow, 0 red
2	3.55	5. Supply Chain Partners – Pay for Access	2 green, 1 yellow, 0 red
3	3.52	7. Open Source Tiered Model	1 green, 2 yellow, 0 red
~~4~~	~~3.25~~	~~3. Bundled Software Offering~~	~~0 green, 2.5 yellow, 0.5 red~~
5	3.22	4. Multi-vertical Supply Chain Offering	1.5 green, 0.5 yellow, 0 red
~~6~~	~~3.17~~	~~6. Collective Impact for Health Data~~	~~1 green, 2 yellow, 1 red~~
~~7~~	~~2.55~~	~~8. Licensed Software~~	~~0 green, 0 yellow, 3 red~~
~~8~~	~~1.50~~	~~2. Training / Implementation as a Service~~	~~0 green, 1 yellow, 1 red~~

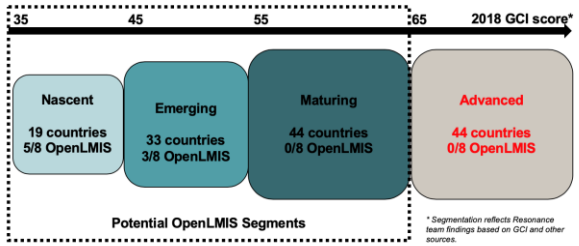
Customer Narrowing

Customer Segment Scorecard

Score	Description	Indicators (Estimated)	Low	Medium	High
Market size	# of potential customers	• # of facilities per country	0-150	150-500	500+
Revenue	% of potential customers in the private sector	• % for-profit private facilities • % nonprofit private facilities (weighed at 50%)	0%-25%	25%-50%	50%-100%
Cost	Additional investment required vs. baseline implementation costs	• Customer research & analysis • Product development & adjustment • Marketing	0-1 true	2 true	All 3 true
Risk	# of potential competitors	• Weak/ absent OpenLMIS competitive advantage • Donors offering similar product at similar cost • Commercial enterprises offering similar product at similar cost	0-1 true	2 true	All 3 true
Impact	% of customers contributing to one or more OpenLMIS core attributes	• % customers improving delivery of key commodities, offering solutions for low- and middle-income countries, and/ or strengthening capacity of local and regional partners	0%-30%	30%-70%	70%-100%

Country Narrowing

Country Segmentation



Business Plan

Community Engagement

We have consistently collaborated, exchanged ideas, and held strategy sessions with key partners.

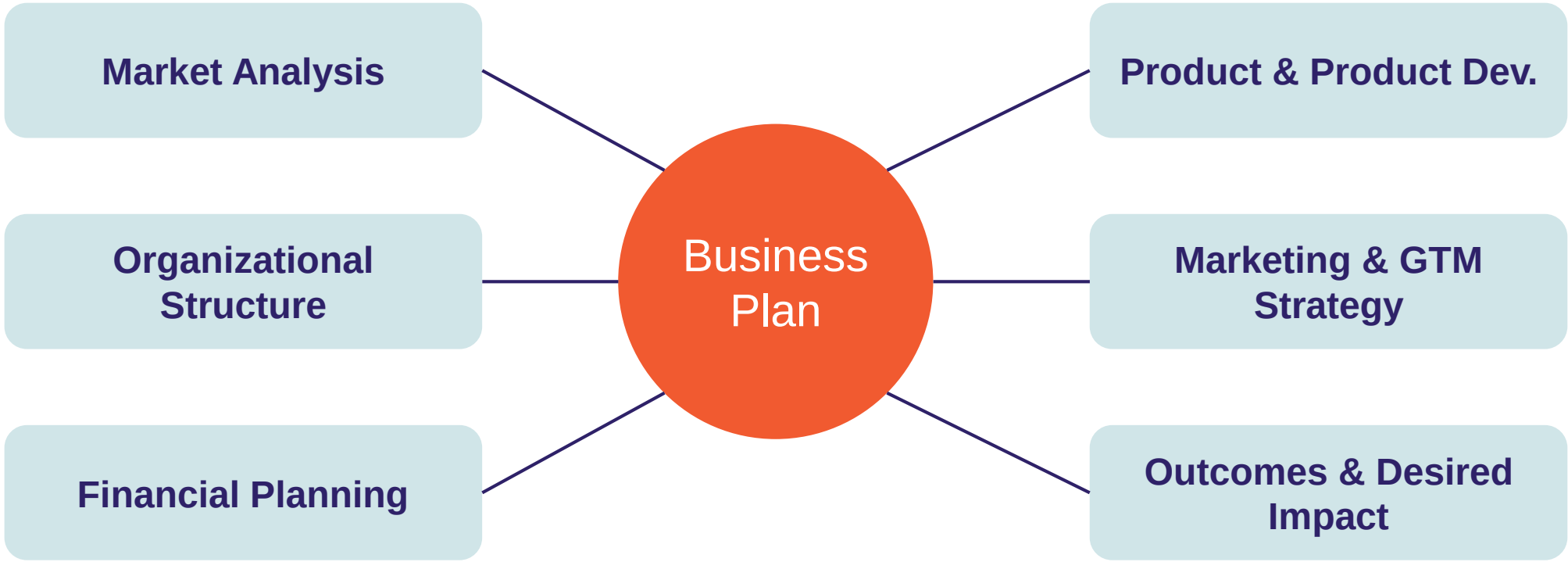
External Stakeholders

We have conducted over 50 interviews to dig into feasibility of the future-state opportunities.

Interview Type	Examples	Value of the conversation
Other Global Goods	OpenCRVS, OpenMRS	Benchmarking and best practices; case studies
Customer possibilities within & outside of health	Medical Teams International, Sigma Pharmacy, MoH	Customer needs, willingness to pay, decision-making
Potential channel partners	Jembi, Mezzanine, Viettel	Business proposition, value of OpenLMIS
Technology innovators	mPedigree, Living Goods, Kasha, mPower	Innovative product and revenue models
Donors and buyers	USAID, BMGF, IQVIA	Available bridge and future funding, impact measures

What Comes Next: The Business Plan

Making the case to investors, funders, and/or buyers.



Workshop Expectations

Mindset for the Workshop:

- Focus on the greater good
- Be thoughtful & collaborative
- Be candid & transparent
- Enable conversations that build
- Optimize collective decision-making
- Advance to the finish line

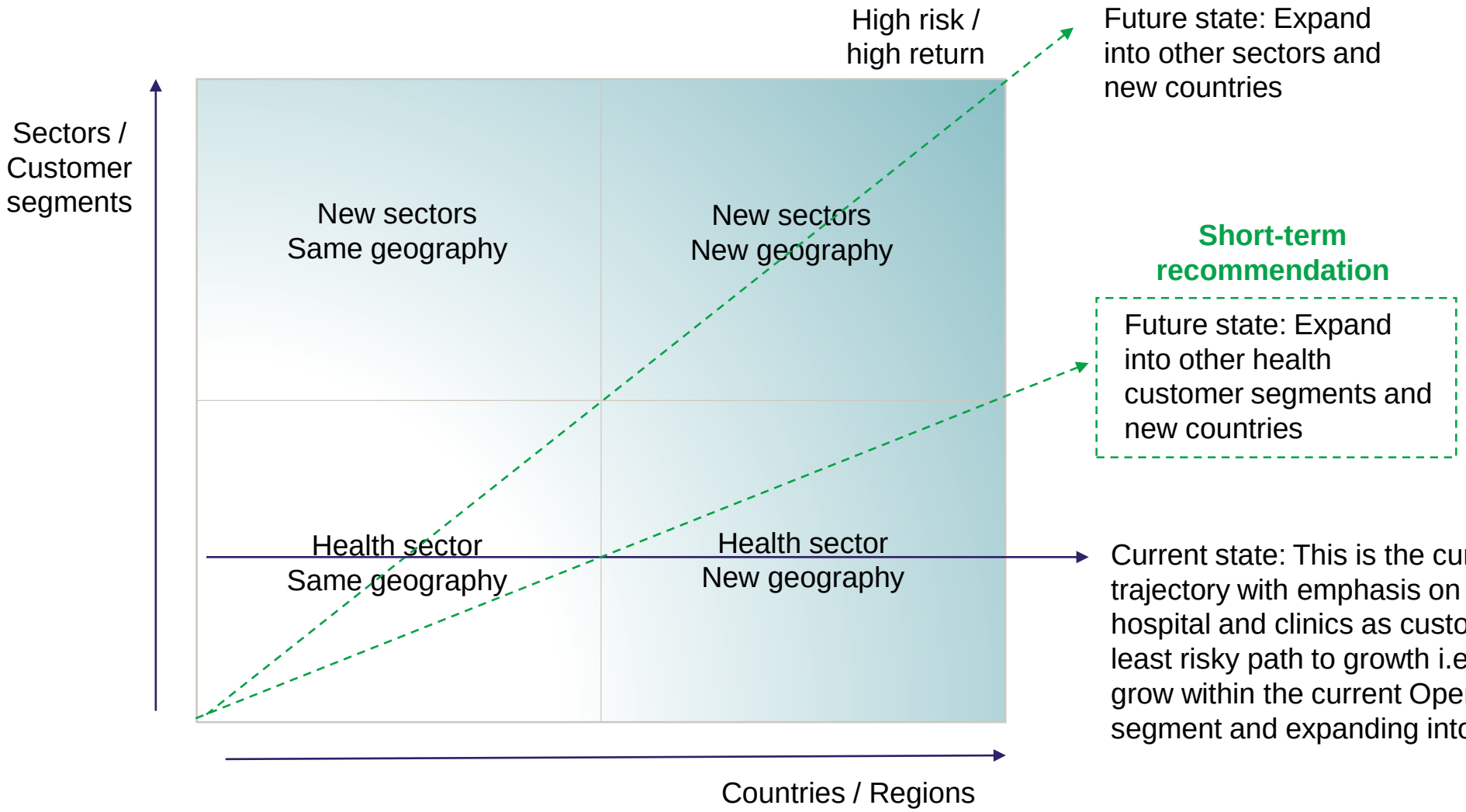
Business Models: First Look

OpenLMIS Core Attributes

Based on feedback collected at the January Workshop

Customer	Product	Partners	Pricing Model
• Remain a solution for low- and middle-income countries • Focus on public health first, then adjacent markets • Be available to humanitarian, agriculture, or other sectors	• Open-source • Automate paper systems • Improve delivery of vaccines and medicines	• Strengthen the capacity of local and regional partners	• Free to governments • Have a model for paying customers

Growth Strategies



Customers: Findings & Considerations

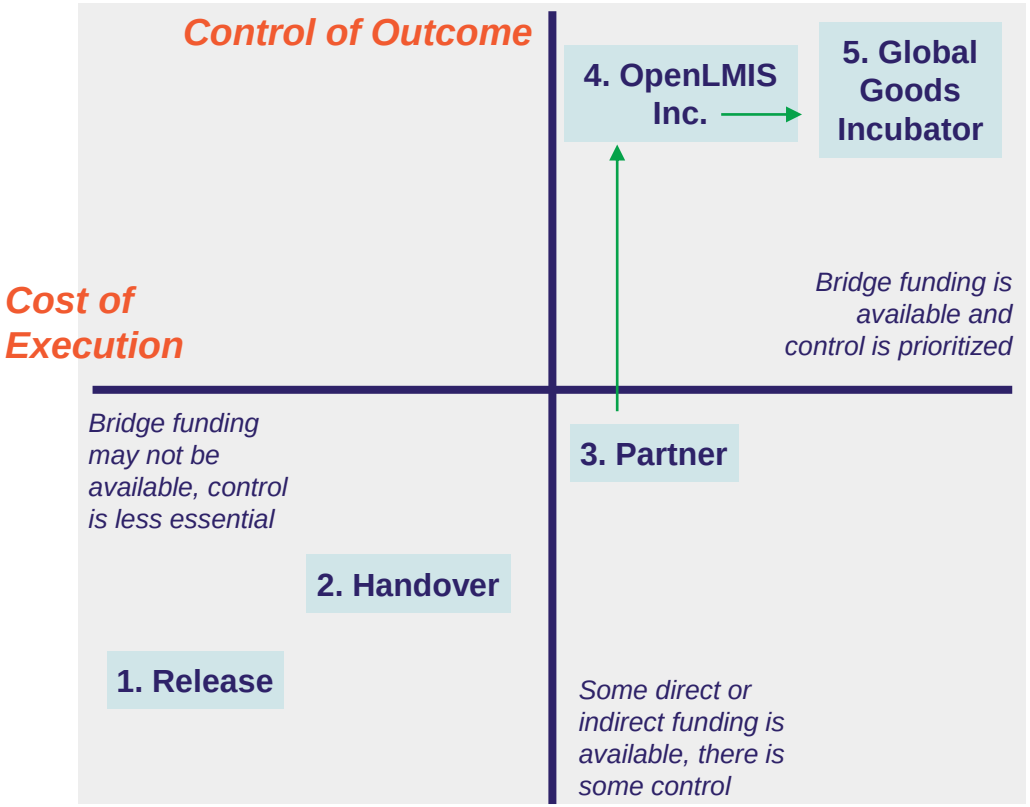
Potential New OpenLMIS Customers

- Short-term: Focus on health
- Long-term: Possible expansion into adjacent markets

Based on

- Country segmentation
- Customer segmentation
- Market sounding visits
- Market sizing
- Growth strategies
- Revenue models

Components of Business Modeling



Structural Pathways

Market Feasibility, Revenue Model, & Growth Strategy

Sustainability Requires a Different Structure

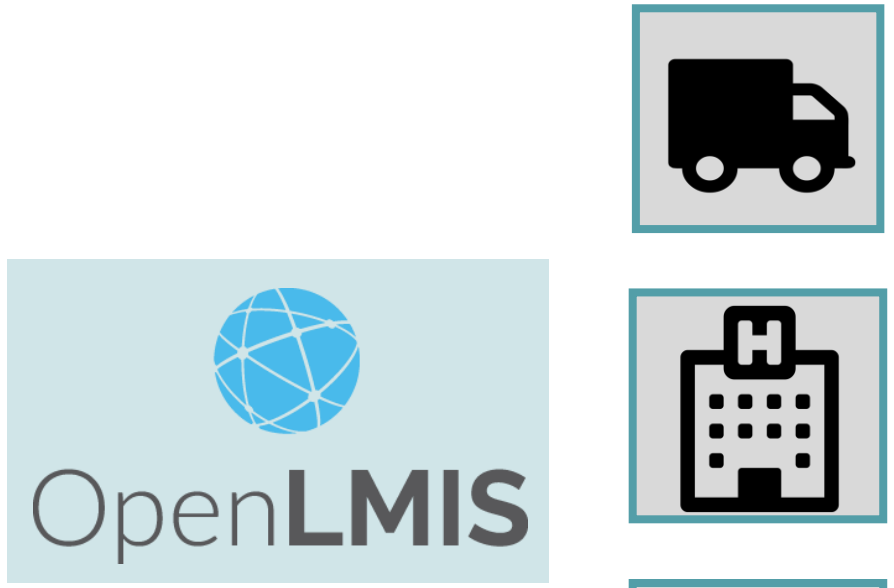
Funding Trail A: Core Funding

Donor — Funds Distribution Mechanism — Implementer

Funding Trail B: Implementation Funding

Implementation -Specific Donor — Funds Distribution Mechanism — Implementer

Current Model



How do we get to a sustainable future?

5 Ways to Take OpenLMIS Forward

Structural Pathways

1. **Release**
   Relax IP rules so anyone can use the OpenLMIS code, but do not choose or fund any other option.

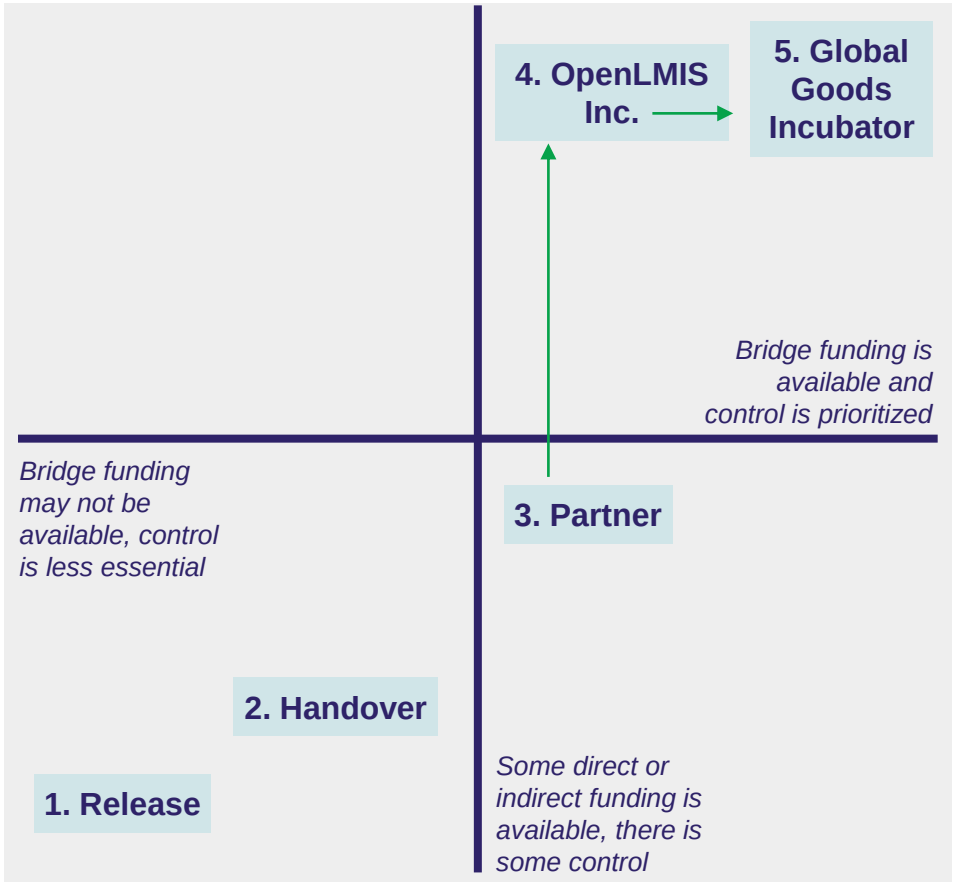
2. **Handover**
   Coordinate an acquisition-style "sell" of OpenLMIS to an interested third party.

3. **Partner**
   Lean on the mandate of other organizations and nest OpenLMIS within their structure.

4. **OpenLMIS Inc.**
   Create an independent entity where OpenLMIS is able to continue its operations and pursue additional revenue generating-mechanisms.

5. **Global Goods Incubator**
   Create an independent entity that enables OpenLMIS to continue its operations, pursue new customers and revenue streams, and grows to create efficiencies between many global goods.

As indicated by the green arrows, hybrid models and/or bridge relationships may also exist, where the model shifts over time.



Note: To some extent, control ensures impact and alignment to OpenLMIS' core attributes; but chiefly under the Release model, this is an unknown.

Key:
= High = Low
= Medium = Unknown

Structural Pathway 1: Release

Relax IP rules so anyone can use the OpenLMIS code, but do not choose or fund any other option.

- Least proactive model; the code is released to the community with no other global support
- Existing implementations can continue to maintain the solution on their own accord; anyone (or no one) can choose to utilize or build upon the source code
- VillageReach maintains legal ownership of IP
- Global support through core funding trail would no longer exist (e.g. no website maintenance)

Key Considerations:

- Confidence in ability to improve the delivery of vaccines and medicines and remain an inclusive open source solution
- Capacity to strengthen local and regional partners
- Level of control and risk management to ensure a positive impact and outcome
- Capability to transition to this business model without donor funding
- Ability to reduce reliance on donor funding and achieve long-term sustainability

Next Steps Preview:	*Assess ownership of IP, copyrights, v3 code, previous code, trademark(s), and any other legal components. Determine the best path forward to maximize opportunities for the code to be carried on. Communicate changes, create a transition plan for implementations and staff.*

Key:
= High = Low
= Medium = Unknown

Structural Pathway 2: Handover

Coordinate an acquisition-style "sell" of OpenLMIS to an interested third party.

- A for-profit or non-profit entity takes ownership and control of (i.e. "acquires") OpenLMIS, though funds may not be exchanged
- Enables a continuation of OpenLMIS' services through a third party, which would expand and/or complement what the community has built
- While control after the "sale" will be limited, put into place transactional requirements to make sure there is alignment with OpenLMIS' core attributes and mission

Key Considerations:

- Confidence in ability to improve the delivery of vaccines and medicines and remain an inclusive open source solution
- Capacity to strengthen local and regional partners
- Level of control and risk management to ensure a positive impact and outcome
- Capability to transition to this business model without donor funding
- Ability to reduce reliance on donor funding and achieve long-term sustainability

Next Steps Preview:	*Determine timeline, establish process for seeking out partners (e.g., RFP, existing partners, roadshow), develop requirements for the "purchaser," understand legalities, explore, evaluate, and pursue opportunities, potentially secure transition funding.*

E.G., Mezzanine

- **Who is Mezzanine?**

  For-profit, mission-driven information systems company and subsidiary of Vodacom; offers a mobile app for last mile health patient services called Stock Visibility Solution (SVS)

- **Why are they interested?**

  From their SVS customer base, they are interested in moving upstream to gain more market share and looking for the right LMIS solution

- **What are they looking for?**

  The right LMIS solution needs a growth strategy for Mezzanine to invest

- **Does this meet the core attributes?**

  The solution can stay open-source and will be hosted on the Mezzanine Helium platform; current implementations will increase Mezzanine customer reach

mezzanine
creating productive societies

HQ: Stellenbosch, Western Cape, SA

Has developed & deployed solutions in South Africa, Kenya, Zambia, Tanzania, Mozambique, and Nigeria

11-50 employees

E.G., IQVIA

- **Who is IQVIA?**

  A publicly traded multinational company serving the combined industries of health information technologies and clinical research, with a focus on unleashing the power of Human Data Science

- **Why are they interested?**

  The public health group has the capability to track pharmaceutical sales and medicine use, but not product availability; sees synergies

- **What are they looking for?**

  Partnerships where they understand operational costs, can pilot a program, and work with governments to map out data use and sharing

- **Does this meet the core attributes?**

  IQVIA is committed to advancing public health and sees public-private partnerships as an asset

IQVIA™

HQ: Durham, North Carolina, USA

Global, with a presence in over 100 countries

58,000 employees

Opportunities Comparison

mezzanine
creating productive societies

- Continue to serve existing customers
- Volume-based transactional model; service and support costed into product implementation
- Health products funded through government and donors
- Network and implementation partner agnostic
- Opportunity to expand outside of health: education, agriculture, and disaster relief

IQVIA™

- Continue to serve existing customers
- Alternative “free” option for governments, with reduced long-term reliance on donor funding
- Public-private partnership
- Value exchange
- Data for good
- Need to establish a new level of trust
- Manage messaging around data sharing
- Opportunity within health only

Key:
= High = Low
= Medium = Unknown

Structural Pathway 3: Partner

Lean on the mandate of other organizations and nest OpenLMIS within their structure.

- Third-party partner organizations (e.g. DIAL, Digital Square) split the current operational and fiscal responsibilities of OpenLMIS, nesting OpenLMIS amongst other funded global goods
- Current IP ownership would be transitioned
- Partners work together to determine the most optimal distribution of tasks and how to operationalize OpenLMIS in a way that is in keeping with the vision of its new and current partners

Key Considerations:

- Confidence in ability to improve the delivery of vaccines and medicines and remain an inclusive open source solution
- Capacity to strengthen local and regional partners
- Level of control and risk management to ensure a positive impact and outcome
- Capability to transition to this business model without donor funding
- Ability to reduce reliance on donor funding and achieve long-term sustainability

Next Steps Preview:	*Take an inventory of current tasks supported by the core funding trail and create a plan to transition those tasks to the right avenue(s) of partner organizations. Evaluate options for bridge funding. Execute a comms and change management strategy; determine long-term funding.*

Key:
= High
= Low
= Medium
= Unknown

Structural Pathway 4: OpenLMIS Inc.

Create an independent entity where OpenLMIS is able to continue its operations and pursue additional revenue-generating mechanisms.

- Spin OpenLMIS off as its own independent entity, securing a legal structure that enables the pursuit of new customers while maintaining the inclusivity of its current offering
- Transition all tasks supported by core funding to a new, independent entity
- Empower entity to reach new customers and/or revenue streams for OpenLMIS and over time, replace donor-supported core funding

Key Considerations:

- Confidence in ability to improve the delivery of vaccines and medicines and remain an inclusive open source solution
- Capacity to strengthen local and regional partners
- Level of control and risk management to ensure a positive impact and outcome
- Capability to transition to this business model without donor funding
- Ability to reduce reliance on donor funding and achieve long-term sustainability

Next Steps Preview:	*Select an appropriate legal entity or entities. Prioritize new customers and/or revenue generating mechanisms and secure transition funding. Communicate new model and conduct a roadshow as needed. Take an inventory of tasks supported by core funding and create a transition plan.*

Key:

= High = Low

= Medium = Unknown

Structural Pathway 5: Global Goods Incubator

Create an independent entity that enables OpenLMIS to continue its operations, pursue new customers and revenue streams, and grows to create efficiencies between many global goods.

- Create a new independent entity, or partner with an organization with a similar mission, to help promote sustainability across many global goods, starting with OpenLMIS
- Transition all core funding-supported tasks to a new, independent entity or partner
- Be empowered to create new customers and/or revenue streams for OpenLMIS and over time, efficiencies between digital global goods, and replace donor-supported core funding

Key Considerations:

- Confidence in ability to improve the delivery of vaccines and medicines and remain an inclusive open source solution
- Capacity to strengthen local and regional partners
- Level of control and risk management to ensure a positive impact and outcome
- Capability to transition to this business model without donor funding
- Ability to reduce reliance on donor funding and achieve long-term sustainability

Next Steps Preview:

Select an appropriate legal entity or entities, with other global goods in mind. Prioritize new customers and/or revenue generating mechanisms and secure transition funding. Partner as needed. Create communications and transition plan; and conduct a roadshow as needed.

Key:
= High = Low
= Medium = Unknown

Cross-Pathway Comparison

Key Considerations	1. Release	2. Handover	3. Partner	4. OpenLMIS Inc.	5. Global Goods Incubator
Confidence in ability to improve the delivery of vaccines and medicines and remain an inclusive open source solution	●	●	●	●	●
Capacity to strengthen local and regional partners	●	●	●	●	●
Level of control and risk management to ensure a positive impact and outcome	●	●	●	●	●
Capability to transition to this business model without donor funding	●	●	●	●	●
Ability to reduce reliance on donor funding and achieve long-term sustainability	●	●	●	●	●

Digital Public Goods Sustainability

Open Source Center, Digital Impact Alliance

Led by Heath Arensen

Digital Public Goods Sustainability

How Open Source Digital Public Public Goods, software at the intersection of Humanitarian, International Development, and Peacemaking, are planning for long term sustainability

dial Digital Impact Alliance

June 2019

UNITED NATIONS FOUNDATION | BILL & MELINDA GATES foundation | SWEDEN | USAID FROM THE AMERICAN PEOPLE

Understanding Problems & Challenges

Challenge: Digital Public Goods are investments in technology to achieve the sustainable development goals. Guided by the Principles for Digital Development, these products have embraced open source with the promise that collective investment in common shared assets will lead to better development outcomes. Open Source Digital Public Goods have struggled to achieve scale, maturity, and sustainability. **Why?**

The Case for DIAL's Open Source Center:

Challenges for Open Source Public Goods

1. **Underfunded products**
2. **Duplication of effort and fragmentation**
3. **Weak community and governance**
4. **Unclear ownership and responsibility**
5. **Local talent developed to support implementations**

DIAL OSC Value Proposition

1. **Neutral central coordination**
2. **Centralize public/private partnerships and funding**
3. **Non-competitive, won't distort market**
4. **Provide community governance, licensing, and organizational home**
5. **Strengthen local talent**

Open Source Center Services

The vision of the DIAL Open Source Center is to convene a vibrant and inclusive community for builders of free and open source software, promote knowledge sharing, collaboration, and co-investment in technology and human capacity for positive social change.

1. **Technical Assistance:** Supplement and extend the capabilities of member projects
2. **Mentorship Programs:** Support projects with Outreachy, Google Summer of Code, Google Code-in
3. **Grants:** Help open source projects used in development reach advanced levels of project maturity

Partners:

Google Open Source

OUTREACHY

digital square

software freedom conservancy

Member Organizations receiving grants:

Ushahidi

InSTEDD

RapidPro

MEDIC MOBILE™

HOT Humanitarian OpenStreetMap Team

LibreHealth

Mifos

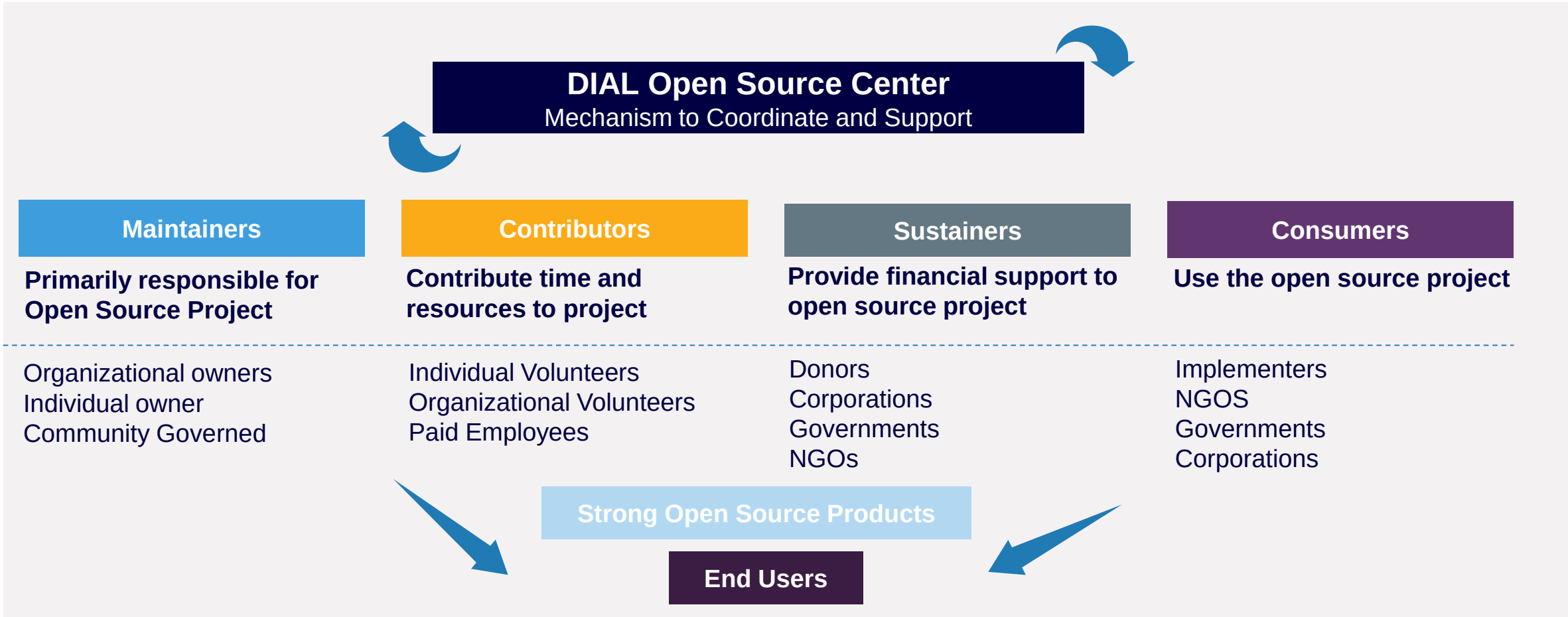
Bahmni™

OpenLMIS

publiclab.org

Open Source Public Goods Ecosystem

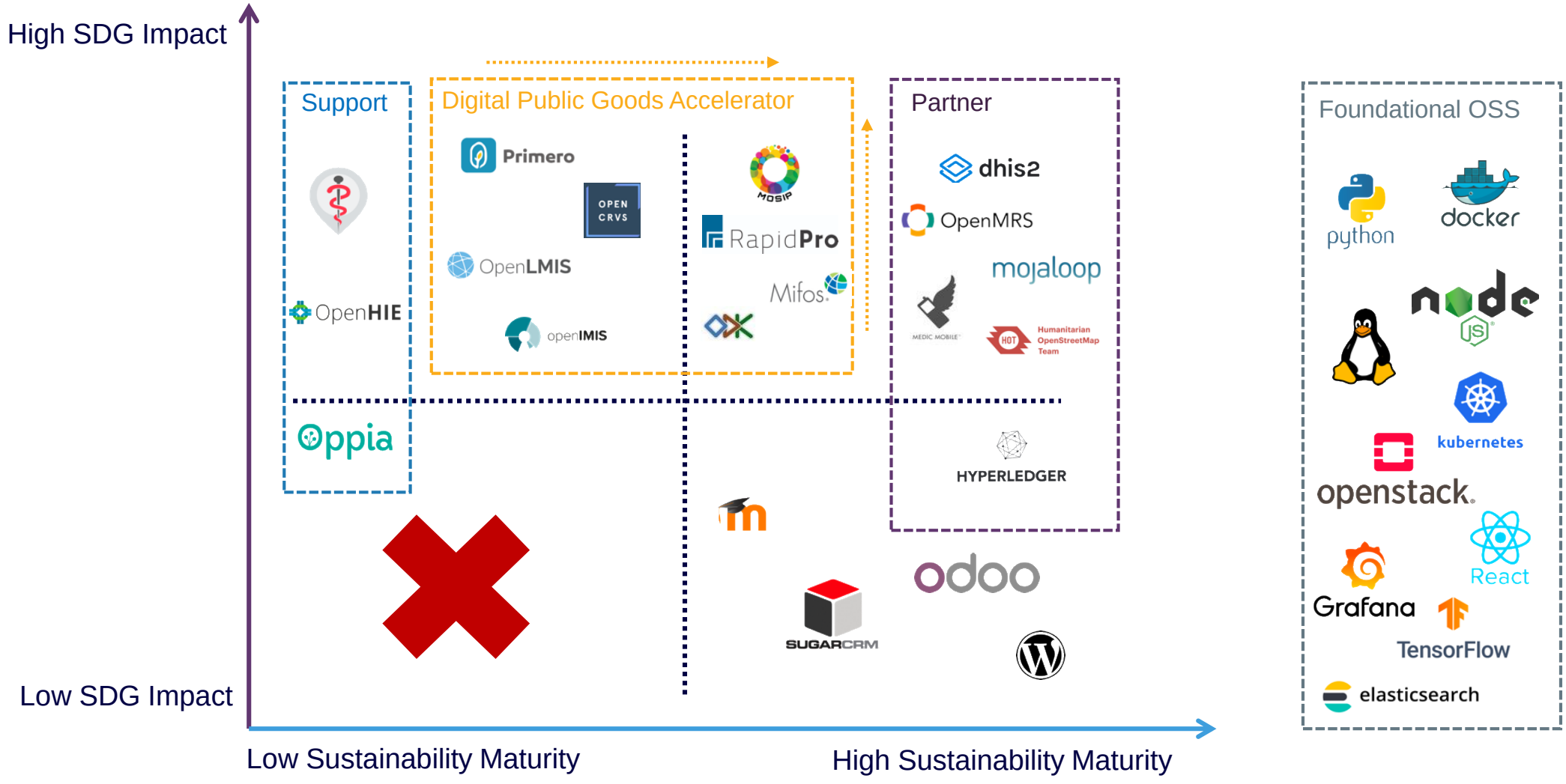
Successful stewardship requires a diverse set of stakeholders to coordinate responsibilities and contributions.



*Ecosystem Categories from: https://sustainoss.org/summit/2017/

Product Sustainability Impact Matrix

DIAL's Open Source Center strengthens Open Source Public Goods focused on achieving the Sustainable Development Goals. Increased sustainability and impact is achieved through supporting nascent initiatives, accelerating proven technologies, and partnering with mature projects.



Open Source Digital Public Goods: What they Need

The vision of the DIAL Open Source Center is to convene a vibrant and inclusive community for builders of free and open source software, promote knowledge sharing, collaboration, and co-investment in technology and human capacity for positive social change.

1. **Fiscal Sponsorship:** The OSC, Software Foundation, or other legal sponsor to provide legal entity to facilitate back-office needs and funds management.
2. **An Organizational Home:** The primary maintainer of the project, with a role leading project governance, community management, product road map, etc.
3. **Advisory and Technical Assistance:** Access to resources and consultants to solve project specific challenges.
4. **Access to Funding:** Stable sources of funds to support core product development. Both grants and internally generated revenue.
5. **Connection to a Community of Practice:** The value of being connected to and collaborating with others solving or facing similar challenges.

Examples: Assigning Critical Responsibilities for OSPGs

	Legal Fiscal Sponsor	Primary Maintainer	Operational Activities
	A legal entity that can hold trademarks and licenses while being able to accept funding on behalf of the project's contributors & governance body.	The primary organizational owner of the project with a role in community management, product road map, community governance, etc.	Operational Activities necessary to support the project including core development, partnership development, etc. Can be spread across multiple organizations in Community.
Mifos	Software Freedom Conservancy → The Apache Software Foundation	Grameen Foundation → Mifos	Mifos
OpenMRS	Regenstrief Institute → OpenMRS Inc.	OpenMRS Community	OpenMRS Community + Implementers
OpenCRVS	PLAN International → ?	PLAN International → ?	PLAN International → ?
OpenLMIS	VillageReach → ?	VillageReach → ?	VillageReach → ?

The Case for a Common Organizational Home for Digital Public Goods

Open Source Projects are increasingly choosing to create an organizational home within existing software foundations that cater to multiple projects. The largest include the Linux Foundation, Software Conservancy, Apache Foundation, and the Mozilla Foundation. There is a strong case to create a similar organization for projects with an international development and humanitarian focus.

Benefits:

1. **Cost Savings:** By pooling resources across multiple projects, cost savings **of 40%** *[appendix 6] can be achieved through economies of scale with ability to fully utilize internal employees vs more costly external consultants.

2. **Focused Team:** Digital Public Goods who have set up their own non-profits have not had the consistent scale or funding to employ more than 1 or 2 full time staff instead relying on part time contractors and volunteers.

3. **Grant Audit Requirements:** Ability to meet audit requirements of larger grants and sub-contract to smaller organizations, particularly local software implementors.

4. **Long Term Support Capabilities:** A full time dedicated staff will more easily allow for post launch project and implementor support. Can facilitate, train, and certify a network of implementors.

5. **Facilitate synergies between projects:** Acting as a primary organizational home for multiple projects will allow for the use of common building blocks, libraries, architectures, etc. Reduce duplication of effort while building components for interoperability.

Open Source Center: Structural Options

The Open Source Center is a support organization for Open Source Public Goods. Identifying a long term organizational home is a common challenge for many projects and the demand to expand the OSC's offerings beyond product support to product ownership is being validating.

1 Advisory and Services

2 Legal Fiscal Sponsor

3 Operational Owner

Activities:

Community Forum, network access, events, tools, member discounts, access to advisory, participation in mentoring programs, apply to grants.

Contractual legal home, advisory, trademark ownership, receive grants, pay contractors, support community management needs & resources.

Primary maintainer of project, central community leadership role, maintain product roadmap, manage core development, facilitate implementors, partnership development, revenue generating activities.

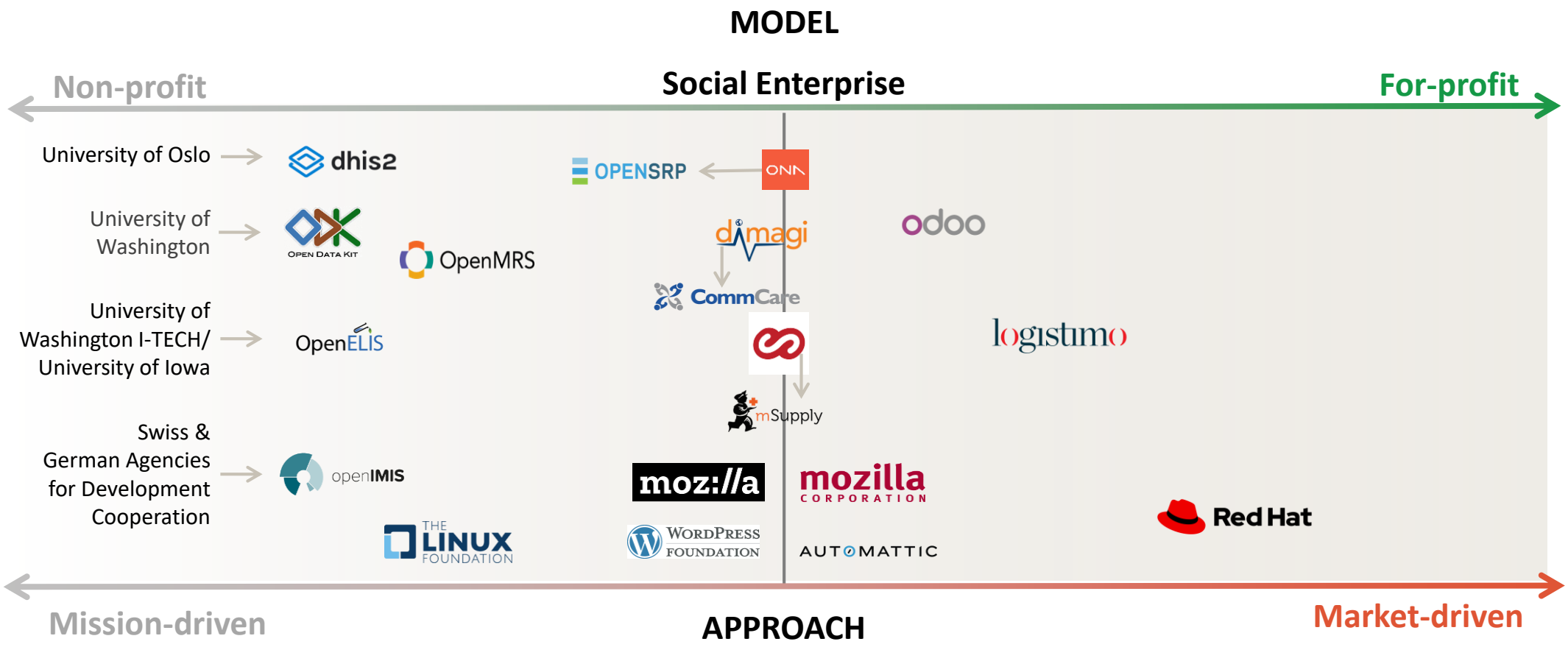
Session Break

15 Minutes

Creating an Independent Entity

A presentation, Q&A, and facilitated discussion led by Jeff Tenenbaum

A Creative, Mixed Landscape



Lunch Break

45 Minutes

Future-State Research & Analysis

Contents

Country Segmentation

Assumptions for Model Prioritization

1. OpenLMIS landscape can shift to achieve sustainability.

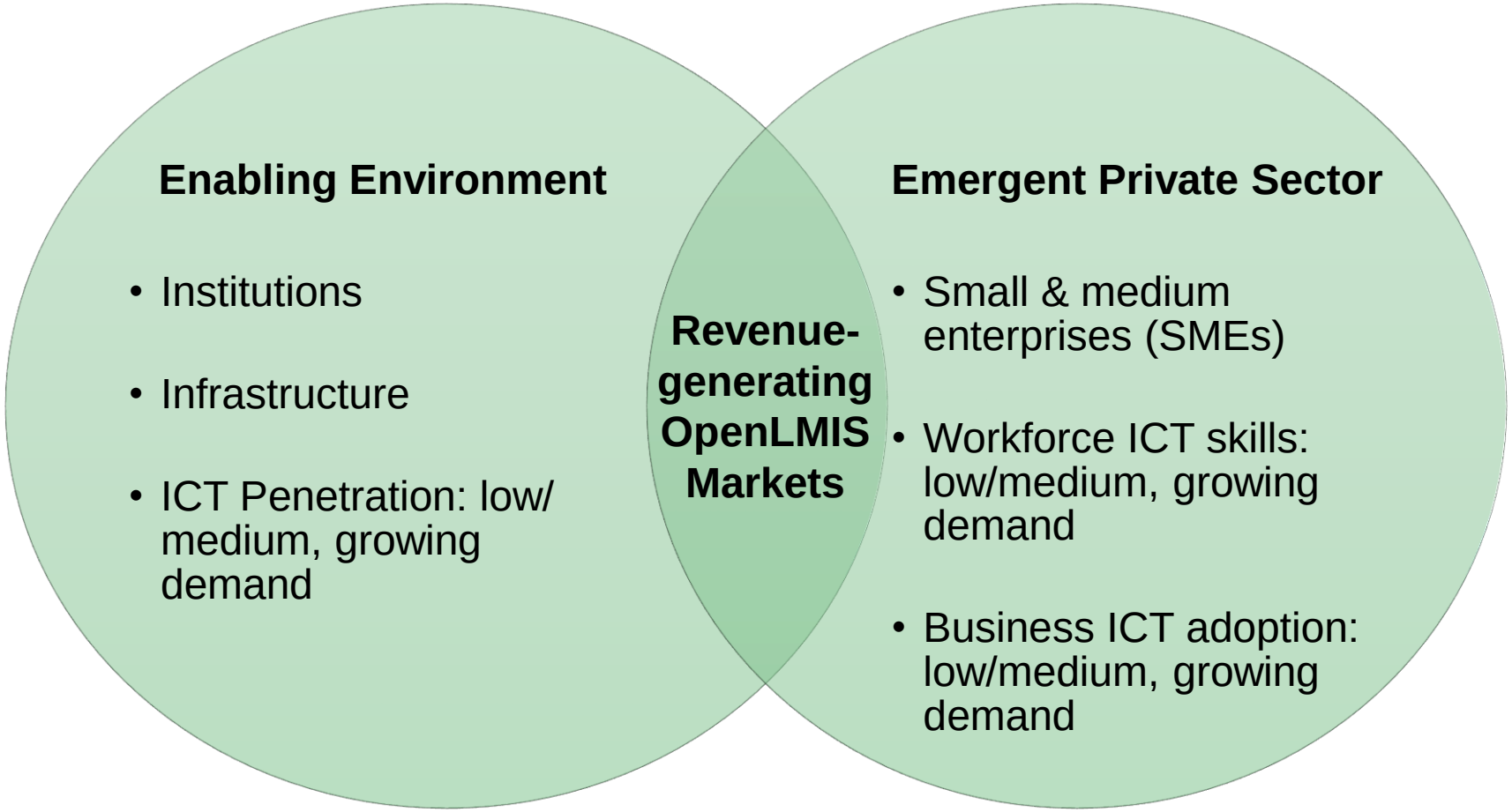
- Potential markets:
  - Multiple regions
  - Multiple market types
- Potential paying customers:
  - Private and public sector
  - Customer needs match OpenLMIS product(s) – current or future

2. OpenLMIS product(s) can shift to achieve sustainability.

- Products/features:
  - Fit customer needs or can be adapted, possibly for adjacent markets
  - Can be continuously maintained/ developed through a sustainable business model

3. These shifts may come in multiple stages.

OpenLMIS Target Markets



Research Approach

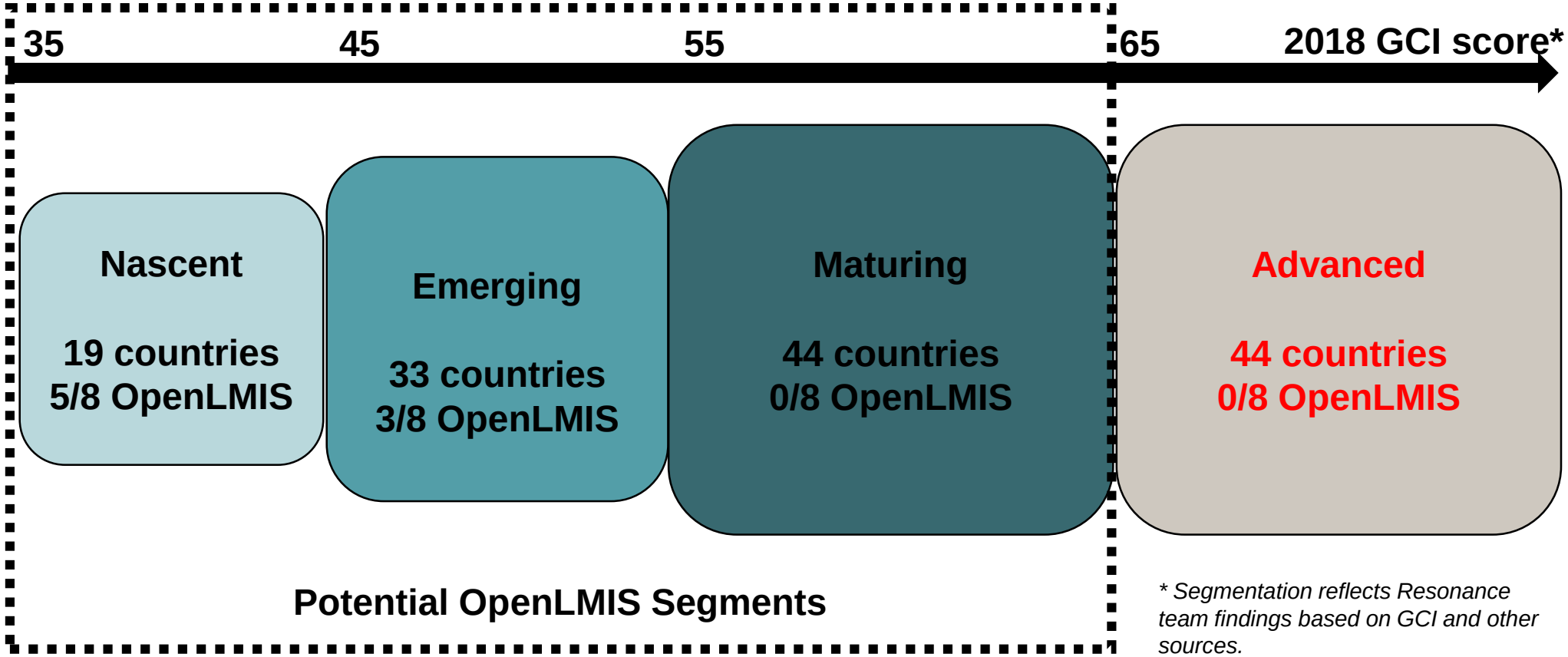
Focus: Developing countries where OpenLMIS can capture market share.

Sources

- World Economic Forum Global Competitiveness Index (GCI) 2018
- World Economic Forum Networked Readiness Index 2016 – Business ICT Use
- Additional country-level economic and demographic data

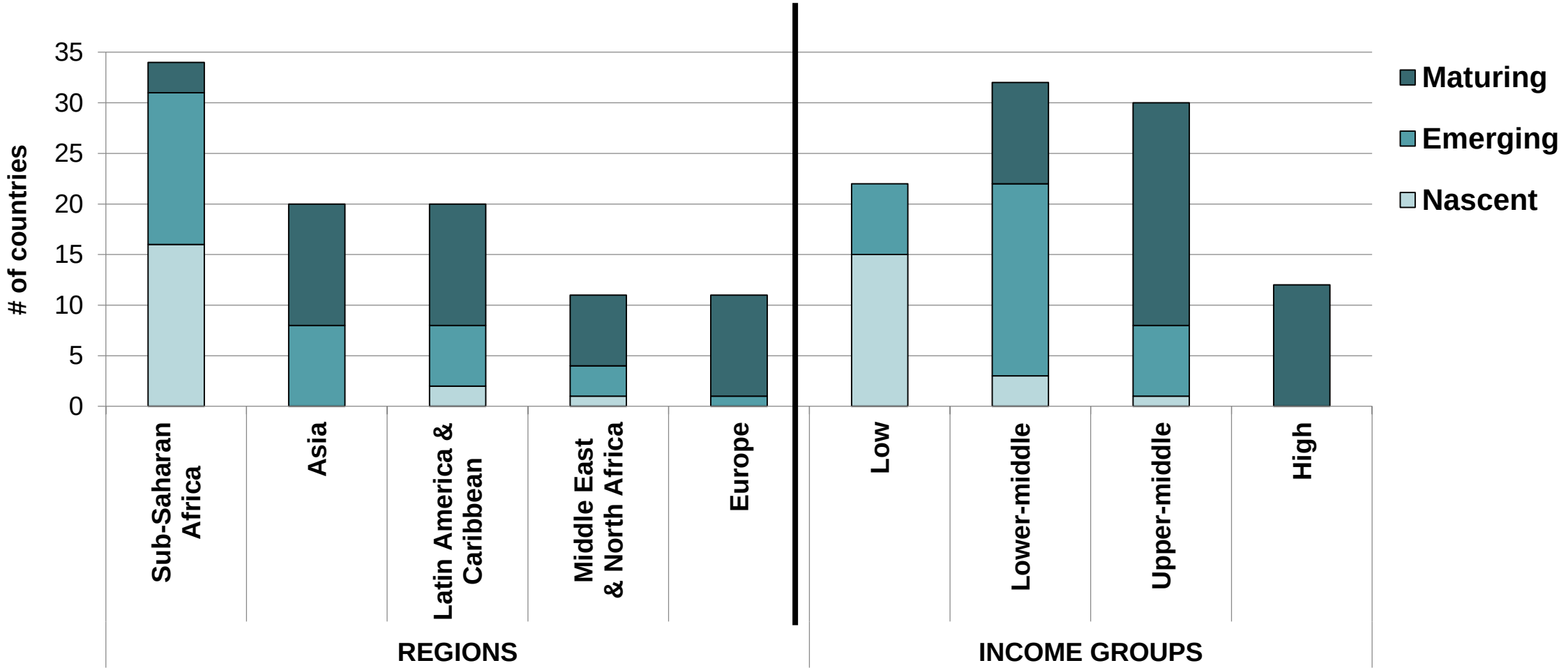
2018 GCI Pillars	
1	Institutions
2	Infrastructure
3	ICT Adoption
4	Macroeconomic Stability
5	Health
6	Skills
7	Product Market
8	Labor Market
9	Financial System
10	Market Size
11	Business Dynamism
12	Innovation Capability

Country Segmentation



** Segmentation reflects Resonance team findings based on GCI and other sources.*

Country Segment Characteristics



Key Takeaways

	Institutions	Infrastructure	Private Sector	Business ICT	OpenLMIS Implications
Maturing	Functional	Mostly complete, reliable	Established, competitive	Medium	+ Higher revenue potential - Lesser known markets - Advanced customers - Tough competition
Emerging	Functional	Somewhat complete, reliable	Burgeoning	Low to medium	
Nascent	Limited	Incomplete, unreliable	Limited	Low	+ Known markets - Limited revenue potential

Recommendations:

- **Short-term: Focus on Nascent and Emerging countries with growing private sectors**
- **Long-term: Explore expanding OpenLMIS to customers in all country segments**

Customer Segmentation

Approach

Focus: Potential revenue-generating customers across all country segments in multiple markets:

- Health
- Agriculture
- Education
- Logistics
- Humanitarian/ Disaster Relief

Sources

- Regional ***/*** country-level data, market analysis and case studies
- Market Sounding visits
- Firm websites

Key Considerations

- Current OpenLMIS customers
- Customer affiliations, target customers, quality controls

Customer Segments

	Customer Segment	LMIS Need*		
Health	Hospital Network	✓	✓	✓
	Clinics Network	✓	✓	✓
	Pharma Manufacturer	✓	✓	✓
	Pharma Supplier/ Retailer network	✓	✓	✓
	Diagnostics Lab	✓	✓	✓
	Medical Device/ Tech Supplier	✓	✓	✓
Education	K-12 Schools		✓	✓
	University/ Technical & Vocational Education & Training (TVET) Institutions	✓	✓	✓
	EdTech			
Logistics	3PL	✓	✓	✓
	4PL			
Agriculture	Input Supplier	✓	✓	✓
	Co-op	✓	✓	✓
Humanitarian/ Disaster Relief	NGO, UN Organizations	✓	✓	✓

Maturing
Emerging
Nascent

Segments that need a logistics management information system. Other factors will determine whether OpenLMIS is the right fit.

Customer Segment Scorecard

Score	Description	Indicators (Estimated)	Low	Medium	High
Market size	# of potential customers	• # of facilities per country	0-150	150-500	500+
Revenue	% of potential customers in the private sector	• % for-profit private facilities • % nonprofit private facilities (weighed at 50%)	0%-25%	25%-50%	50%-100%
Cost	Additional investment required vs. baseline implementation costs	• Customer research & analysis • Product development & adjustment • Marketing	0-1 true	2 true	All 3 true
Risk	# of potential competitors	• Weak/ absent OpenLMIS competitive advantage • Donors offering similar product at similar cost • Commercial enterprises offering similar product at similar cost	0-1 true	2 true	All 3 true
Impact	% of customers contributing to one or more OpenLMIS core attributes	• % customers improving delivery of key commodities, offering solutions for low- and middle-income countries, and/ or strengthening capacity of local and regional partners	0%-30%	30%-70%	70%-100%

Customer Segments in Health

Segment Attribute	Pros & Cons	
Market size	+	Known and growing customer base
	+/-	Market fragmentation
Revenues	+	Growing private sector
	+	Existing buy-in for product
	-	Possible perception/ reputation of OpenLMIS / other open-source products as "free"
Costs	+	Limited investment in product development required compared to adjacent markets
	-	Some investment in understanding diverse customers required
	-	Some investment in entering/ navigating new markets required
Risks	+	OpenLMIS competitive advantage and partner network
	-	Donors offering similar products at similar cost
	-	Commercial enterprises offering similar products at similar cost
	+/-	Market fragmentation
Impact	+	Significant contribution to OpenLMIS mission and core attributes

Health Customers- **Nascent Countries**

Customer Segment	Market Score	Revenue score	Cost Score	Risk Score	Impact Score
Hospitals Network	🟡	🟡	🟢	🟢	🟢
Clinics Network	🟢	🟡	🟢	🟢	🟢
Pharma Manufacturer	🔴	🟡	🟡	🟡	🟢
Pharma Supplier/ Retailer	🟡	🟡	🔴	🟡	🟢
Diagnostics Lab	🔴	🟡	🔴	🟡	🟢
Medical Device/ Tech Supplier	🔴	🟡	🟡	🟡	🟢

Recommendation

- Hospital Networks
- Clinic Networks

GO

- Other Health Customers

WAIT

Advantages

- OpenLMIS competitive advantage

Barriers

- Smaller markets with lower revenue potential
- Cost to analyze and adjust customer needs
- Competition from donors

Health Customers- **Emerging Countries**

Customer Segment	Market Score	Revenue score	Cost Score	Risk Score	Impact Score
Hospitals Network	●	●	●	●	●
Clinics Network	●	●	●	●	●
Pharma Manufacturer	●	●	●	●	●
Pharma Supplier/ Retailer	●	●	●	●	●
Diagnostics Lab	●	●	●	●	●
Medical Device/ Tech Supplier	●	●	●	●	●

Recommendation

- Hospital Networks
- Clinic Networks

GO

- Other Health Customers

WAIT

Advantages

- Larger markets with revenue potential
- OpenLMIS competitive advantage

Barriers

- Substantial cost to analyze and adjust to diverse customer needs
- Competition from donors and commercial software enterprises

Health Customers- **Maturing Countries**

Customer Segment	Market Score	Revenue Score	Cost Score	Risk Score	Impact Score
Hospitals Network	🟢	🟡	🔴	🟡	🟢
Clinics Network	🟢	🟢	🔴	🟡	🟢
Pharma Manufacturer	🟡	🟡	🔴	🔴	🟢
Pharma Supplier/ Retailer	🟢	🟡	🔴	🟡	🟢
Diagnostics Lab	🟡	🟡	🔴	🔴	🟢
Medical Device/ Tech Supplier	🟡	🟡	🔴	🟡	🟢

Overall Recommendation

WAIT

Advantages

- Larger markets with good revenue potential

Barriers

- High cost to analyze and adjust to needs of advanced/ diverse customers
- Competition from commercial software enterprises
- Weaker OpenLMIS competitive advantage

Customer Segments in Adjacent Markets

Segment Attribute	Pros & Cons	
Market size	+	Potential customer base
	+/-	Market fragmentation
Revenues	+	Growing private sector
	-	No existing buy-in for product
	-	Possible perception/ reputation of OpenLMIS / other open-source products as "free"
Costs	-	Substantial investment in product development required compared to health customers
	-	Substantial investment in understanding diverse customers required
	-	Substantial investment in entering/ navigating new markets required
Risks	-	No OpenLMIS competitive advantage or existing partner network
	-	Donors offering similar products at similar cost
	-	Commercial enterprises offering similar products at similar cost
	+/-	Market fragmentation
Impact	+	Significant contribution to OpenLMIS core attributes

Adjacent Markets Customers

Adjacent Market	Customer Segment	Market Score	Revenue score	Cost Score	Risk Score	Impact Score
Education	K12 School Network	🟡	🟡	🔴	🟡	🟢
	University/ TVET	🟡	🟡	🔴	🟡	🟢
Logistics	3 PL	🟡	🟢	🔴	🔴	
Agriculture	Inputs Supplier	🟡	🟡	🔴	🟡	🟢
	Co-op	🟡	🔴	🔴	🟡	🟢
Humanitarian/ Disaster Relief	NGO/ UN Org.	🟡	🔴	🔴	🟡	🟢

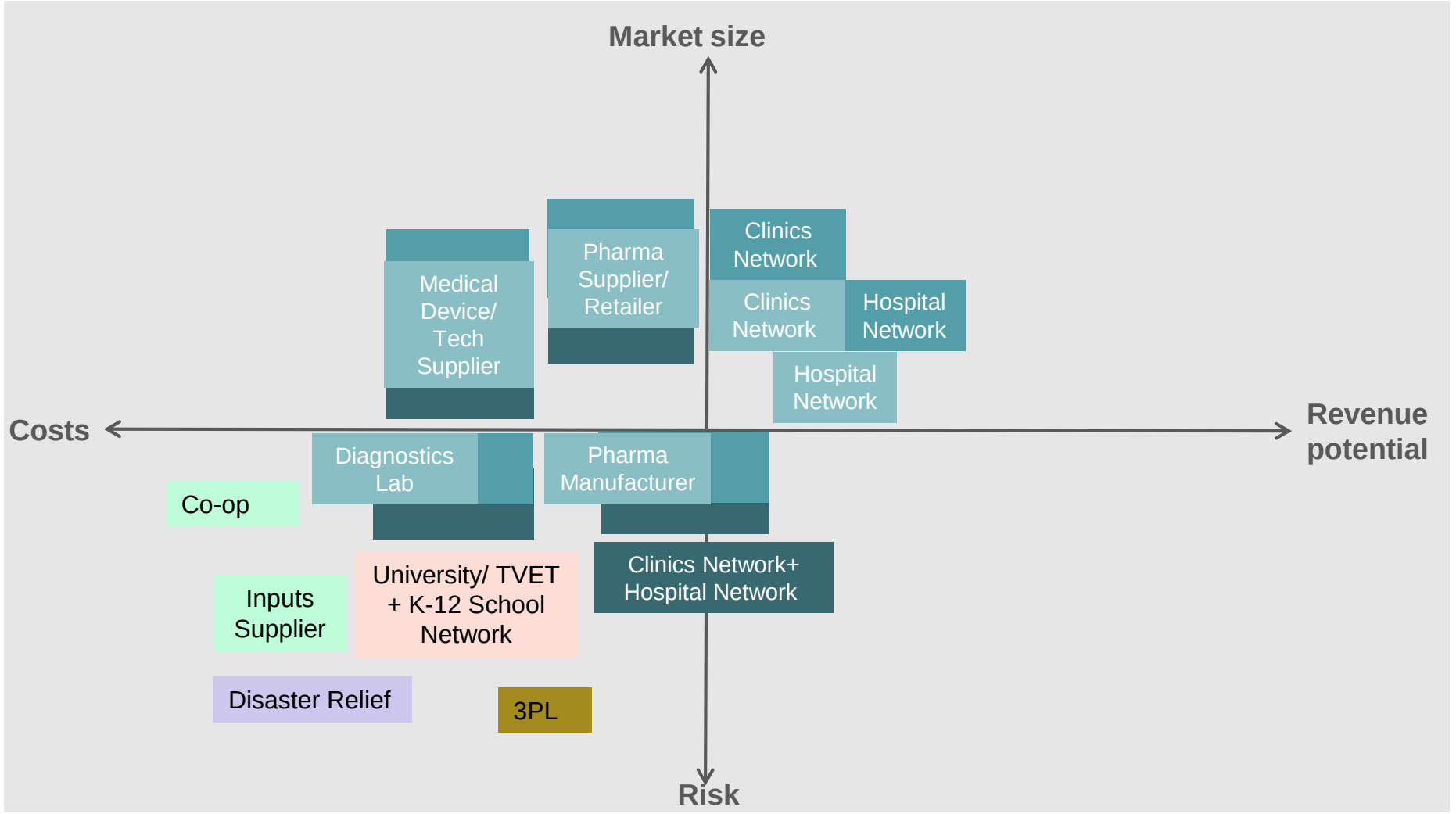
Overall Recommendation

WAIT

Barriers

- High cost to analyze and adjust to needs of advanced/ diverse customers
- Competition from donors and commercial software enterprises
- No OpenLMIS competitive advantage

Customer Segment Assessment*



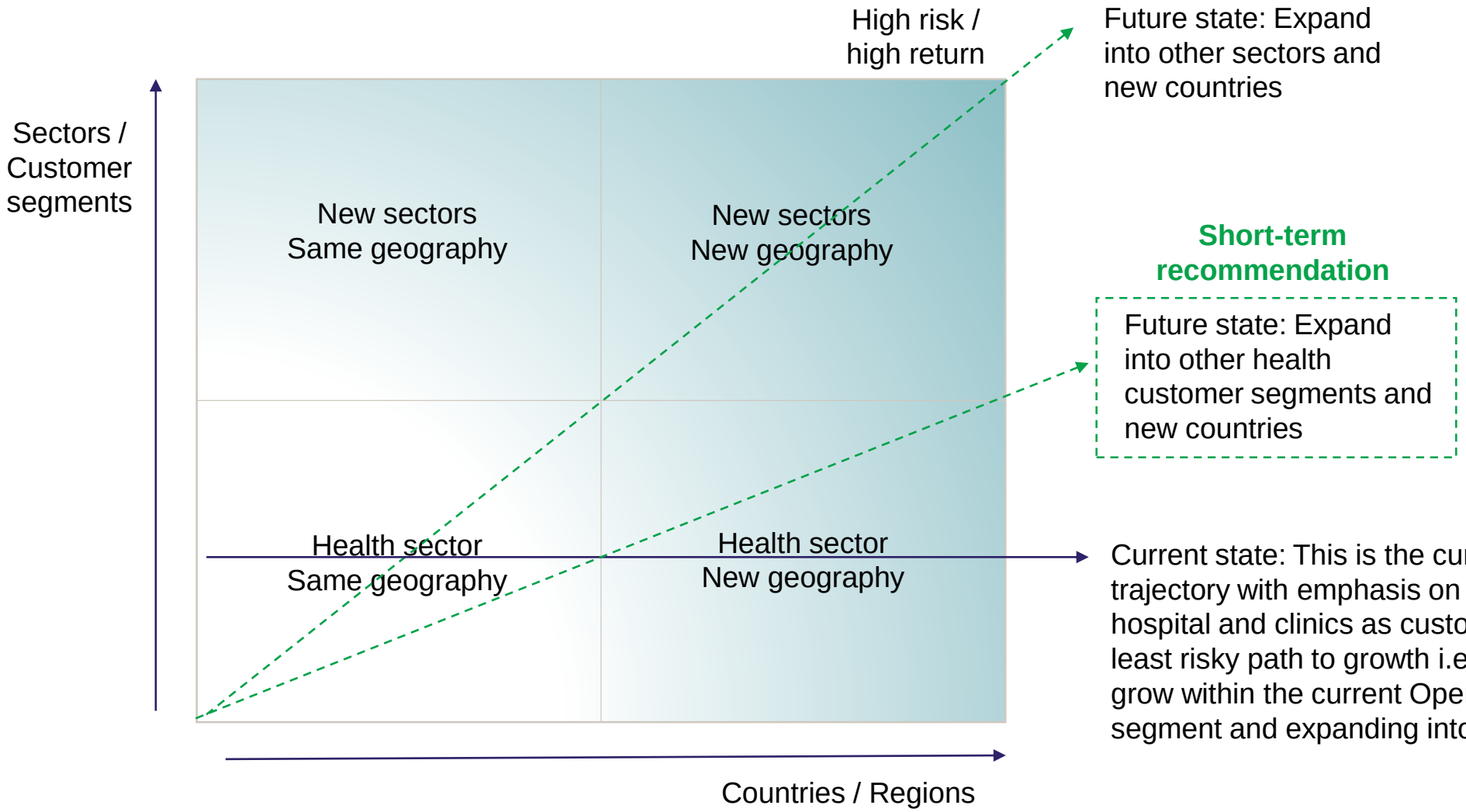
*Meant to be illustrative and as a guide for discussion, placement is not exact.

Revenue Models

Approach and Goal

- Recommend a short and long term growth strategy based on country and customer segment analysis
- Pricing options that can be tested
  - What is available in the market?
  - What are average software spending budgets?
- Cost and revenue estimates based on comparatives and growth projection
- Goal: show that this revenue model could be self sustainable

Growth Strategies



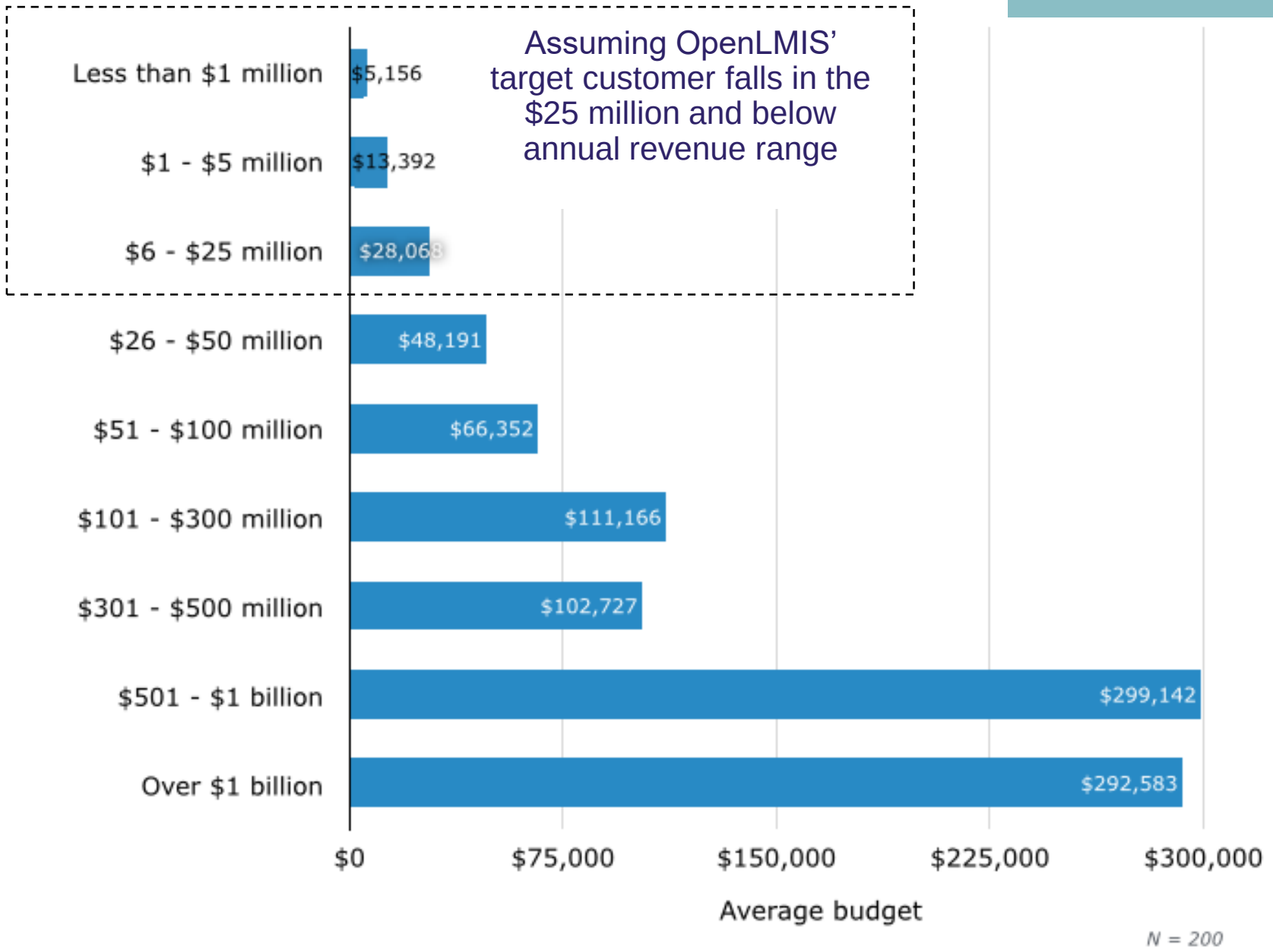
Pricing Options Currently in the Marketplace

- Prices for editions differ mainly based on increased features, increased customer service, or faster response times to customer requests
- Most companies such as Logistimo do not list their prices on their website and provide quotes upon request
- Other options to earn revenue include: fees from advertisements (e.g. Mozilla), enterprise software training fees (e.g. Red Hat)

	MySQL	Dynamics 365	Red Hat	salesforce	SAP Business One
Description	MySQL is an open-source relational database management system	Dynamics 365 is a product line of enterprise resource planning and customer relationship management applications by Microsoft	Provides enterprise open source solutions, using a community-powered approach to deliver high-performing Linux, cloud, container, and Kubernetes technologies.	Salesforce is a cloud computing service as a software company that specializes in customer relationship management (CRM)	SAP Business One is a fully integrated ERP suite specifically designed for manufacturers and distributors, retailers and service companies
Free edition	Free downloadable version of open source database available	n/a	Offers some versions for free	n/a	Free trials available
Pricing model	Per server	Per user	Per subscription	Per user	Per user
Standard edition	$2,000/yr	$1,380/yr	$2,499 (virtual datacenter version)	$300/yr	$1,188
Pro edition	n/a	$2,280/yr	$5,000 (standard developer support version)	$900/yr	$1,980
Enterprise edition	$5,000/yr	$2,520/yr	$10,000/yr (developer support version)	$1,800/yr	$3,840
Other editions	“Cluster Edition”: $10,000 /yr Subscription, Support & Maintenance: $60,000 for 3 years or $20,000 / yr	$18,000/yr for customer insights	They offer 8 core pricing options for linux platforms with additional variations within each of the core options; they also offer training for a fee	$3,600/yr for unlimited support	$3,213/user for a Professional license and $1,666/user for a Limited license; They focus on small and medium sized businesses

Prospective Buyers' Average Supply Chain Management Software Budget, by Annual Revenue

- Even though the chart for this data set includes hospitals, there is not much transparency for health customer segment revenues in general and especially so in countries OpenLMIS operates in
- Therefore, for our purposes, we assume most of OpenLMIS' target customers will be in the $1-$5 million annual revenue range with some falling in the less than $1 million category and some in the $6-25 million category



Source: Supply Chain Management Software Buyer Report – 2015, https://www.softwareadvice.com/resources/scm-buyer-report-2015/

Pricing Tier Options (via benchmarking)

Annual revenue / Features / product bundles	<$1MM	$1MM to $5MM	$6MM to $25MM	$26MM to $50MM	$51MM to $100MM
Basic	$4,000	$8,000	$12,000	TBD	TBD
Basic + additional customer service	$5,000	$10,000	$15,000	TBD	TBD
Advanced bundle 1	TBD	TBD	TBD	TBD	TBD
Advanced bundle 2	TBD	TBD	TBD	TBD	TBD
Advanced bundle 3	TBD	TBD	TBD	TBD	TBD

- The annual revenue categories could be changed to # of users
- Please note that features to be included in “basic” or “advanced” bundles have to be determined
- “TBD” is laid out here to show that eventually OpenLMIS could offer more features and services and have more pricing options accordingly; It’s also possible to target larger customers if moving into other industries

Customer Segment Breakdown

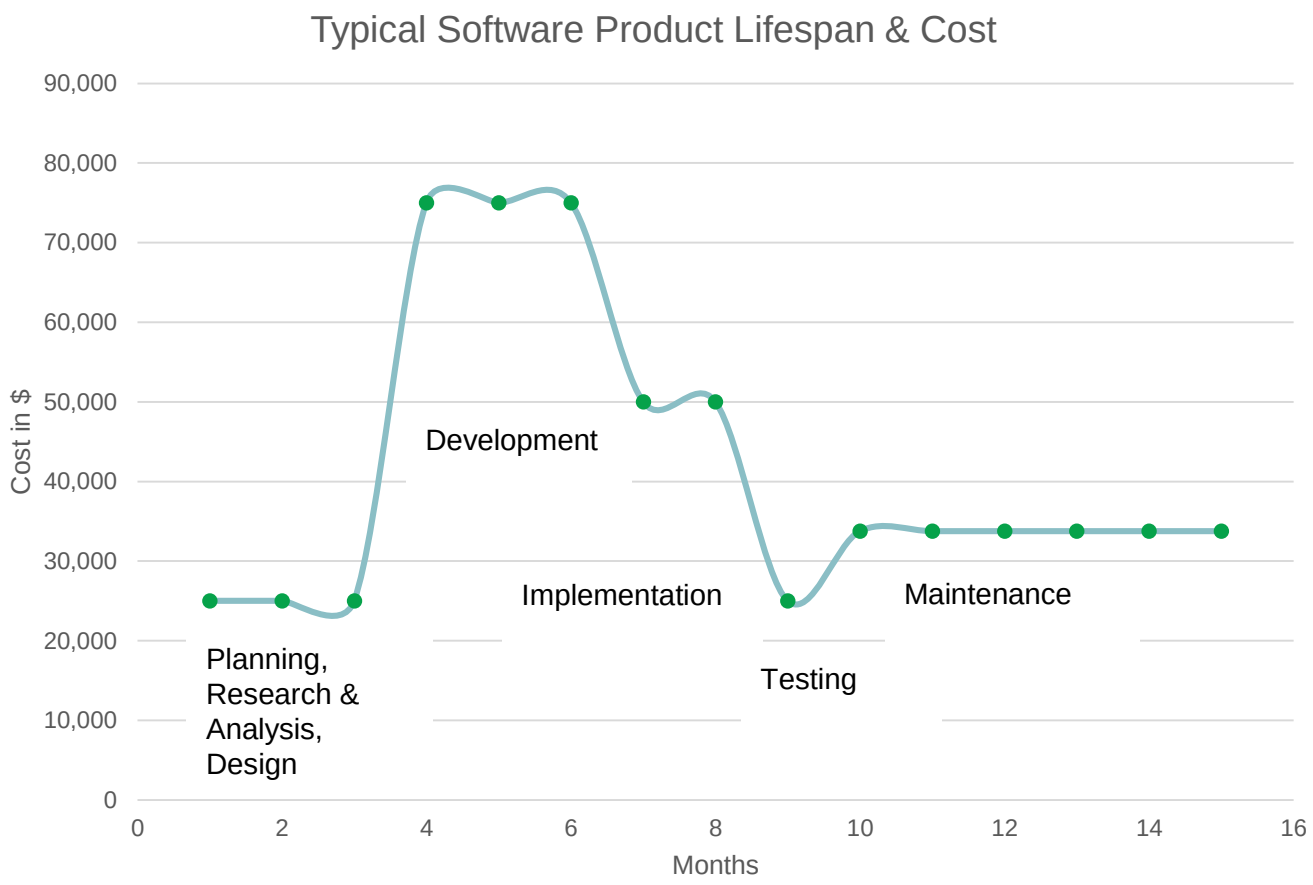
Annual revenue / Features / product bundles	<$1MM	$1MM to $5MM	$6MM to $25MM	$26MM to $50MM	$51MM to $100MM
Basic	15%	25%	10%	TBD	TBD
Basic + additional customer service	15%	25%	10%	TBD	TBD
Advanced bundle 1	TBD	TBD	TBD	TBD	TBD
Advanced bundle 2	TBD	TBD	TBD	TBD	TBD
Advanced bundle 3	TBD	TBD	TBD	TBD	TBD

We assume most of OpenLMIS' target customers will be in the $1-$5 million annual revenue range with some falling in the less than $1 million category and some in the $6-25 million category

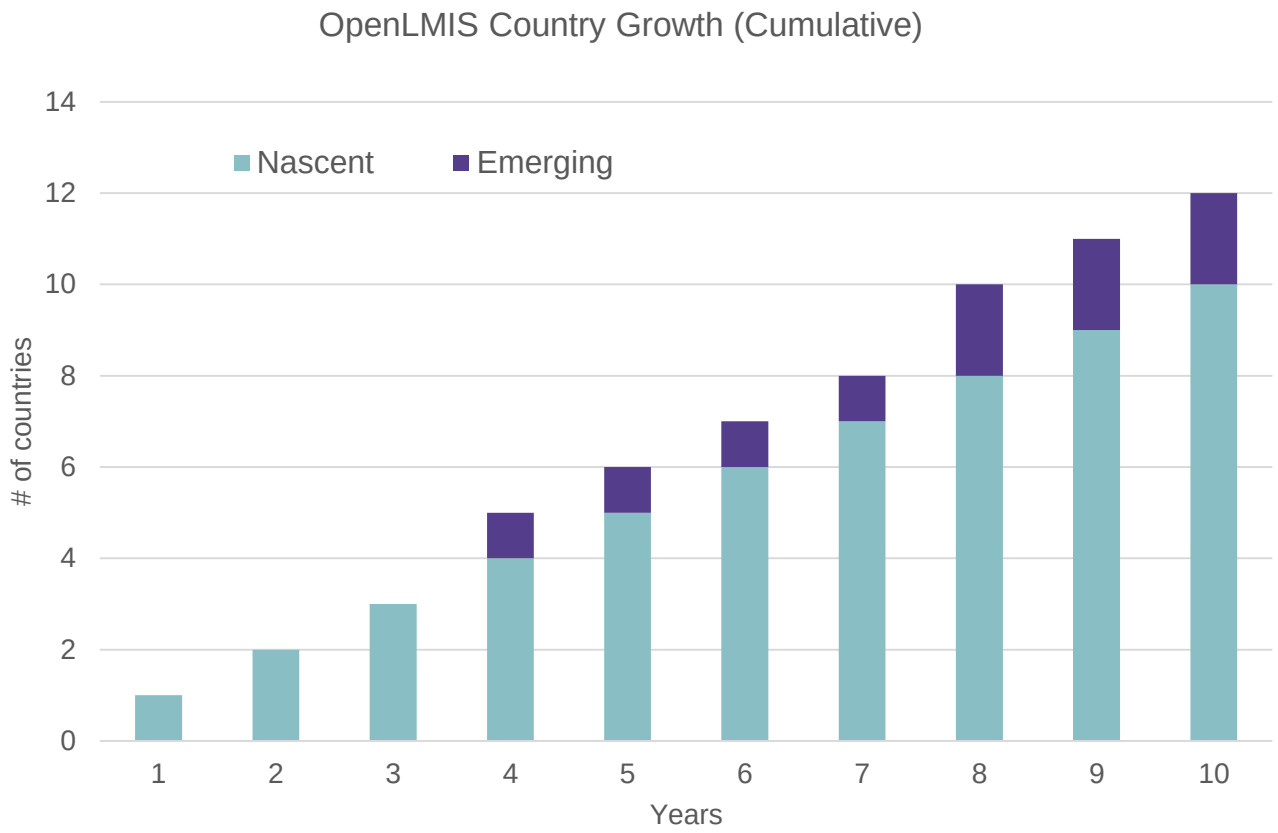
Estimated New Costs (of implementation)

New Country	New Customer Segment	Product Cost	Marketing Cost
No	No	-	-
Yes	No	$112,500	$15,750
Yes	Yes	$225,000	$15,750
No	Yes	$225,000	$15,750

- Anytime we enter a new country or new customer segment, there will be new marketing costs
- Anytime we enter a new customer segment, the cost will be $225,000 as we will have to go through all the phases of development
- If we enter a new country in the same customer segment, we assume the cost is 50% less since we will not have to do as much research on the segment, design, etc.
- Maintenance cost = 15% of total cost
- Marketing cost = 7% of total cost



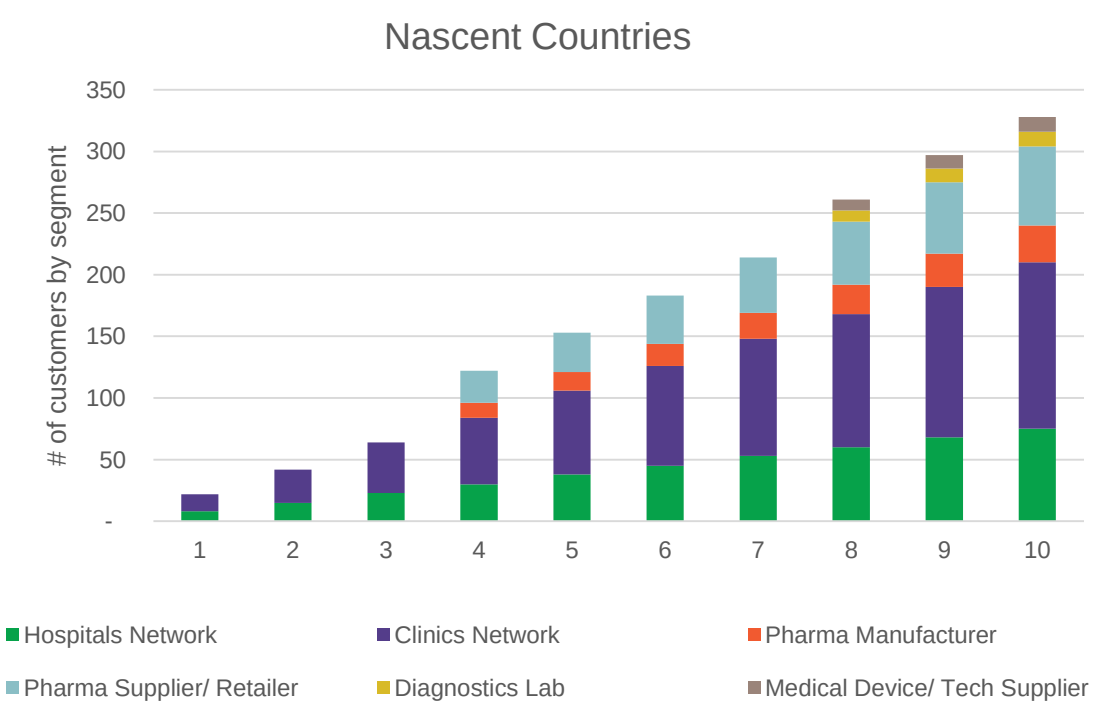
Growth Rate Assumptions – New Countries

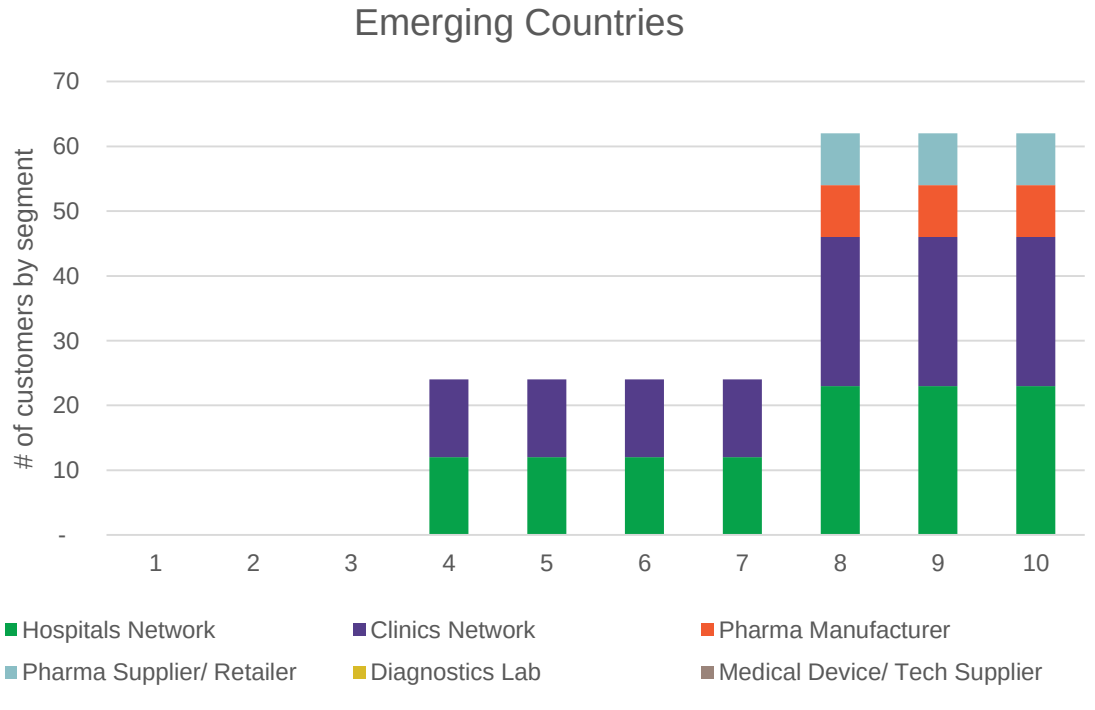


- OpenLMIS has grown by 1 country per year over its lifespan – assuming the same growth rate for nascent markets and one new country in year 4 and 8 each, in emerging markets
- We assume that there will be a re-evaluation every 3 years regarding current growth strategy

Growth Rate Assumptions – New Customer Segments

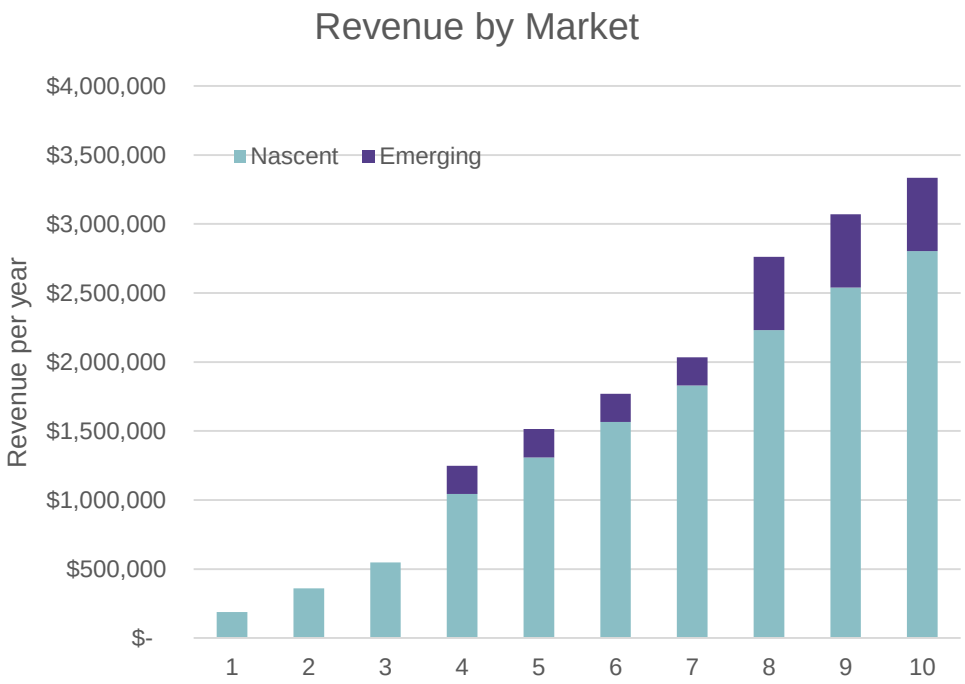
- Hospital and clinics are customer targets throughout our evaluation time period
- We enter into the pharma customer segments in the nascent countries in year 5 and enter the diagnostic and medical customer segments in year 8
- For the emerging countries, we only stay in the hospital and clinics customer segments for a longer time period and enter the pharma customer segments in year 8

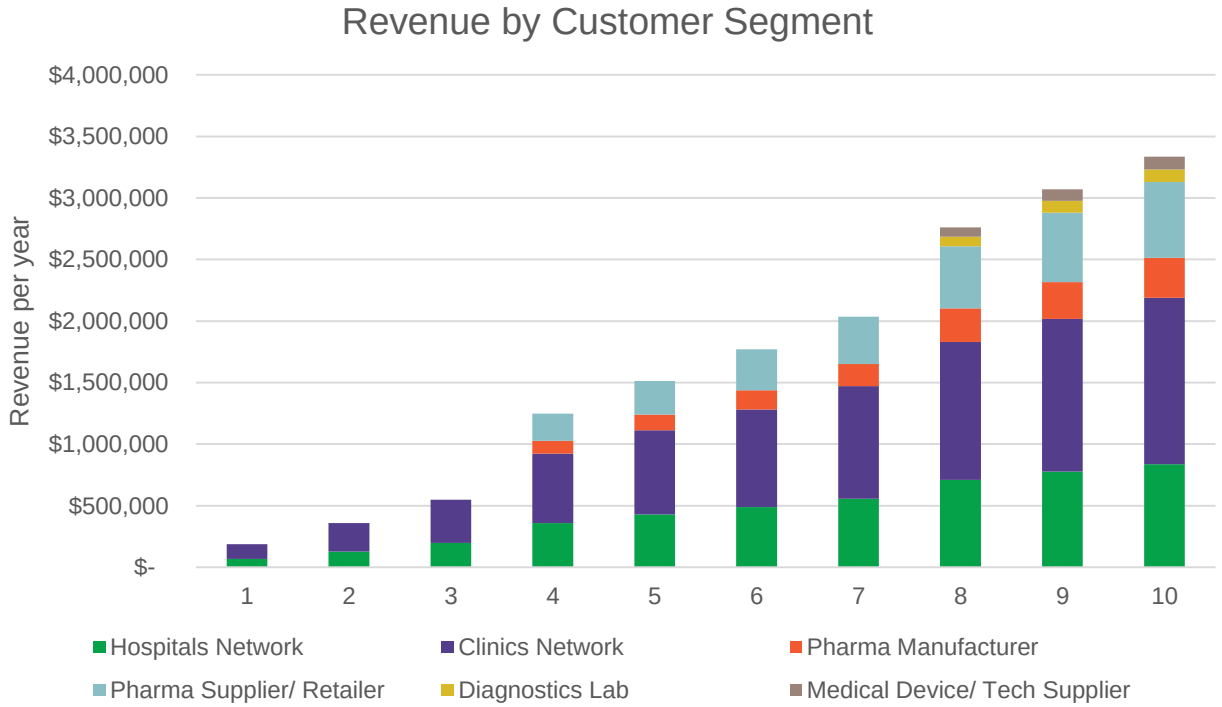




Revenue Estimates

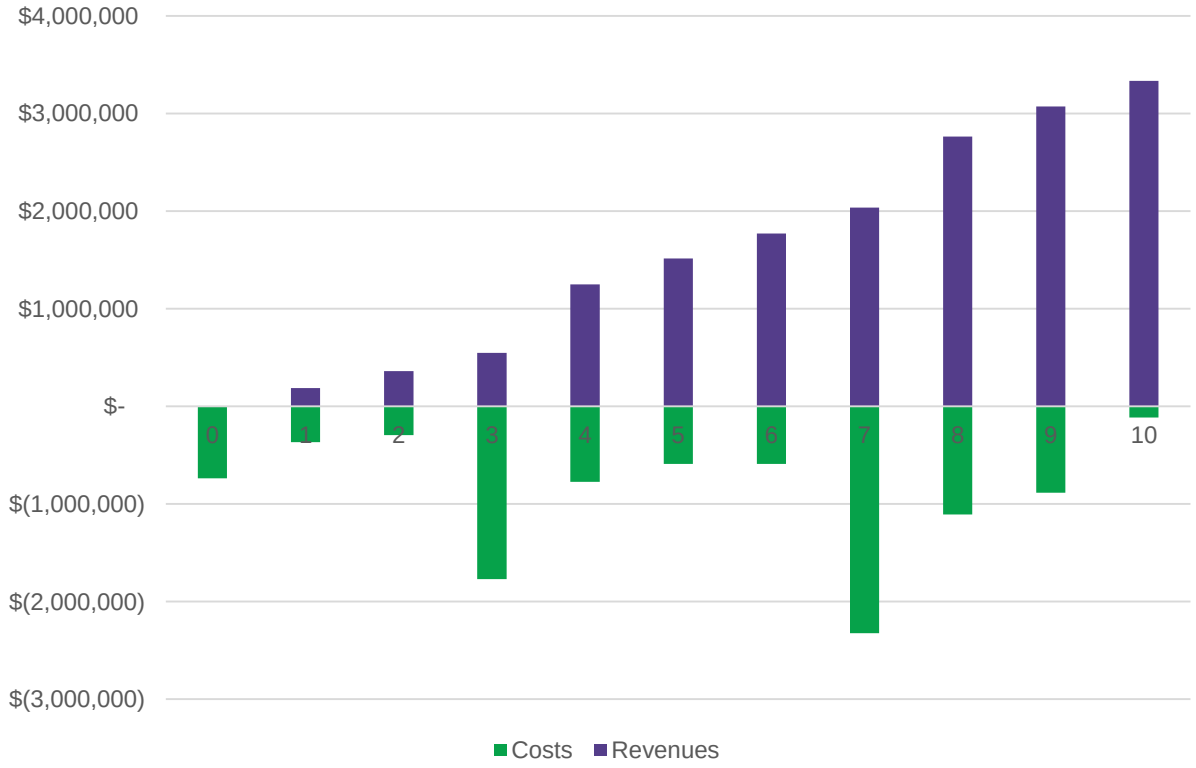
- Most of the revenue is coming from nascent market growth and from hospital and clinics customer segment growth
- We assume private customers are more likely to be paying customers





Return Estimates

- Assuming that costs are incurred the year before the revenues for that segment are received
- This is just one revenue estimate based on growth path laid out in previous slide – there are many pathways that we can explore



Average cost per year	$ 955,305
Average revenue per year	$ 1,682,640
NPV	$ 4,179,028
Break-even (years)	4.72

Session Break

15 Minutes

Evaluate Business Models

OpenLMIS Core Attributes

Based on feedback collected at the January Workshop

Customer	Product	Partners	Pricing Model
• Remain a solution for low- and middle-income countries • Focus on public health first, then adjacent markets • Be available to humanitarian, agriculture, or other sectors	• Open-source • Automate paper systems • Improve delivery of vaccines and medicines	• Strengthen the capacity of local and regional partners	• Free to governments • Have a model for paying customers

Assumptions for Model Prioritization

1. OpenLMIS landscape can shift to achieve sustainability.

- Potential markets:
  - Multiple regions
  - Multiple market types
- Potential paying customers:
  - Private and public sector
  - Customer needs match OpenLMIS product(s) – current or future

2. OpenLMIS product(s) can shift to achieve sustainability.

- Products/features:
  - Fit customer needs or can be adapted, possibly for adjacent markets
  - Can be continuously maintained/ developed through a sustainable business model

3. These shifts may come in multiple stages.

Structural Pathways

1. **Release**
   Relax IP rules so anyone can use the OpenLMIS code, but do not choose or fund any other option.

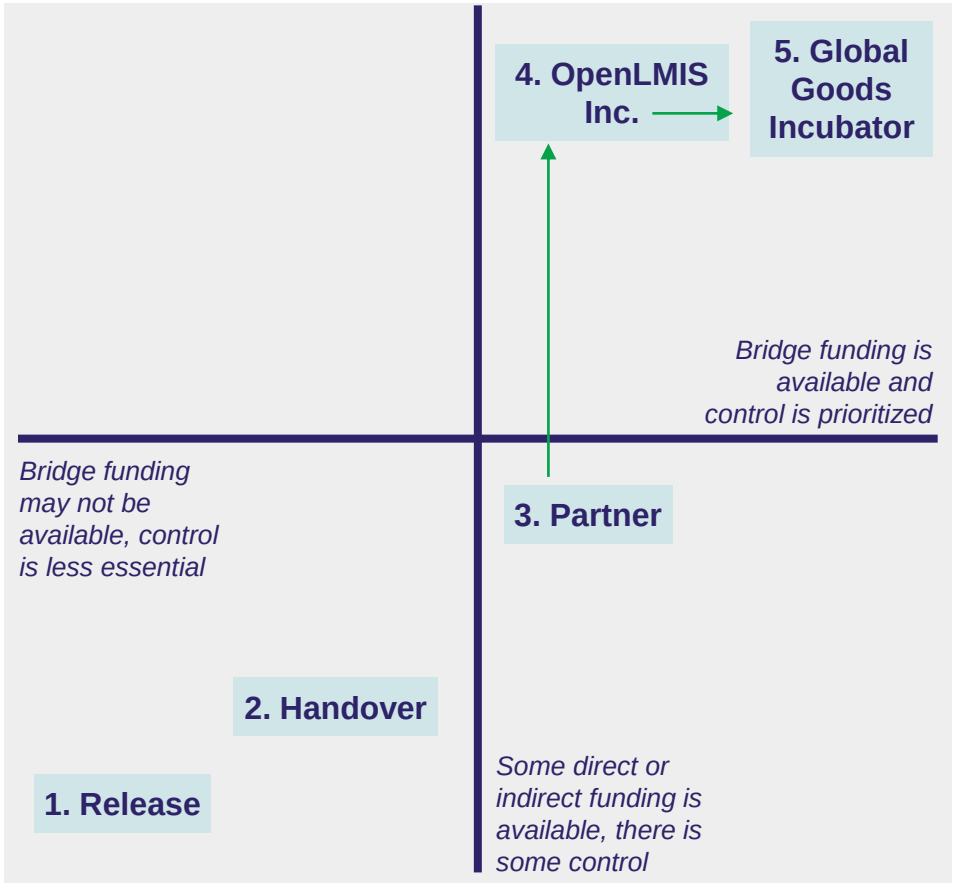
2. **Handover**
   Coordinate an acquisition-style "sell" of OpenLMIS to an interested third party.

3. **Partner**
   Lean on the mandate of other organizations and nest OpenLMIS within their structure.

4. **OpenLMIS Inc.**
   Create an independent entity where OpenLMIS is able to continue its operations and pursue additional revenue generating-mechanisms.

5. **Global Goods Incubator**
   Create an independent entity that enables OpenLMIS to continue its operations, pursue new customers and revenue streams, and grows to create efficiencies between many global goods.

As indicated by the green arrows, hybrid models and/or bridge relationships may also exist, where the model shifts over time.



Note: To some extent, control ensures impact and alignment to OpenLMIS' core attributes; but chiefly under the Release model, this is an unknown.

Business Model Prioritization Framework

Business Model Considerations	Attributes
Customers	• Customers would be interested in this product • Customers are ready for and need this product • Customers are likely to pay for a product like this
Product	• The current features and workflows could be used in this model (front end) • The current technical architecture could support this model (back end) • With this business model, the product has a lifespan of more than 5 years
Competition	• OpenLMIS is well differentiated in this space compared to competitors • Barriers to entry are navigable
Structural Pathways	• The level of control and risk are manageable to ensure a positive impact and outcome • The pathway includes the right partners and mix of partners
Sustainability	• The revenue model enables a reduced reliance on donor funding • Revenue is generated and allows for a reasonable break even
Impact	• The model meets the OpenLMIS core attributes (i.e., Improves delivery of key commodities, offers solutions for low- and middle-income countries, strengthens the capacity of local and regional partners)

Discussion

Evaluate future-state business models

Thank You!

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