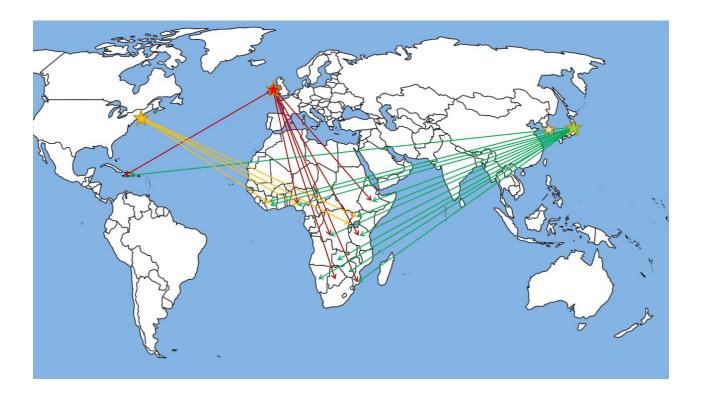
# GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Quarterly Report Fiscal Year 2022 Q3 – April I to June 30, 2022









### Contract No. AID-0AA-I-15-00002/AID-0AA-TO-15-00004

#### July 27, 2022

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the U.S. government



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# ACRONYMS

# **EXECUTIVE SUMMARY**

The USAID Global Health Supply Chain HIV Rapid Tests Kit program (GHSC-RTK) procures HIV rapid test kit commodities in support of the U.S. Presidents Emergency Plan for AIDS Relief (PEPFAR) in its efforts to combat the global HIV/AIDS epidemic. The commodities on this contract include clinical use HIV rapid diagnostic tests kits and HIVSTs. Rapid tests kits play a vital role in combating the global HIV epidemic by providing testing supplies to populations with limited access to health care providers, and advanced laboratory equipment or training.

RMI was awarded the GHSC-RTK contract in 2015 as a small business set-aside to the GHSC program. RMI headquarters is based in Seattle, Washington with the mission of helping clients manage the health of their global workforce. RMI is a bespoke solutions partner that supports operations in complex environments and manages risk through medical, security and technical staffing services. With over 20 years of experience in over 120 countries, RMI delivers on-site medical staff, medical screening, injury and evacuation coordination, and medical equipment to remote locations. GHSC-RTK is a six-person operation located in Northern Virginia.

Key indicators					
	FY2021-Q4	FY2022-Q1	FY2022-Q2	FY2022-Q3	LOP
On-Time-in-full (OTIF)	99%	79%	92%	78%	89%
Value delivered (RTKs)	\$ 7,530,208	\$ 7,096,337	\$ 10,822,427	\$ 12,804,508	\$ 257,626,885
Tests delivered	7,094,195	3,405,550	9,165,555	10,552,134	253,970,184
Self-tests delivered	53,000	1,388,250	946,500	833,669	7,890,659
Recency tests delivered	109,440	143,700	48,000	52,880	850,360
Tests in pipeline (Including requests)				18,554,149	
Logistics services rate	11.0%	5.5%	8.1%	12.1%	9.2%

Please see page 7, Client OTD, to see the breakdown of orders including COVID and Recency manufacturing delays.

GHSC-RTK sometimes fulfills non-PEPFAR funded orders received through the PEPFAR program channel. For consistency, these non-PEPFAR funded orders are included in this report and broken out below:

	Non-PEPFA	R fu	nded or	der	s receiv	ed 1	through t	the	PEPFAR	cha	annel - Ir	cluc	led in th	nis	report				
Country	Funding Client	20	)18-06	2	018-08	2	2018-10	2	020-07	2	020-08	20	)20-11	2	2021-02	2	2021-03	Gr	and Total
Cameroon	CHAMPS - Cameroon							\$	49,654									\$	49,654
Congo, DRC	FHI360 Linkages DRC					\$	13,917			\$	14,543							\$	28,460
Cote d'Ivoire	John Hopkins	\$	1,680															\$	1,680
Malawi	FHI360/Linkages			\$	9,540													\$	9,540
Nigeria	FHI360 NG EPIC									\$	69,717							\$	69,717
Nigeria	FHI360 NG SIDHAS													\$	142,666	\$	397,163	\$	539,828
Nigeria	Heartland Alliance LTD/GTE															\$	208,379	\$	208,379
Nigeria	JHPIEGO/TMEC-RISE															\$	198,807	\$	198,807
Togo	LINKAGES - Togo											\$	5,240	\$	6,300			\$	11,540
Grand Total		\$	1,680	\$	9,540	\$	13,917	\$	49,654	\$	84,259	\$	5,240	\$	148,966	\$	804,348	\$1	,117,604



## RESULTS

#### Accomplishments and Challenges this Quarter

**Workload**: Operational workload continues to be high, with 49 orders delivered, 10.5 million tests in 109 manufacturer lots to 19 countries. Thirty- three new orders were processed for delivery in FY2022/FY2023. There are 17.3 million tests in the funded pipeline and 1.2 million tests pending funding approval.

**HIV-ST:** We have delivered 7.89 million HIVSTs LOP; 1.86 million tests are in the pipeline for delivery in FY2022/FY2023. Reference the chart on page 19.

**HIV Recency tests:** We delivered 850,360 Recency tests LOP and there are 272,840 Recency tests in the pipeline for delivery in FY2022/FY2023.

#### Travel:

No travel this quarter



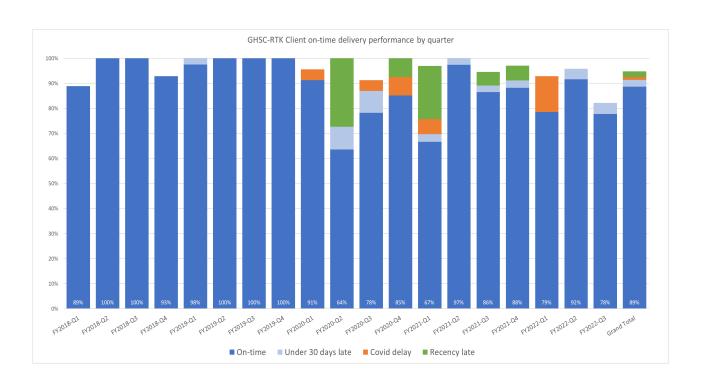
#### Performance Detail

GHSC-RTK established a Performance Monitoring Plan (PMP) designed to allow USAID to monitor key performance elements of the Global Health Supply Chain. The PMP includes several Key Performance Indicators (KPIs) to be provided quarterly. Since program inception, we have expanded our reporting and analysis well beyond the contractual KPIs, as shown in the sections below. Contractual PMP KPIs will be marked as "KPI".

**Data definitions:** "Quotation" amounts are orders inprocess and include both funded orders and funding requests. "PO" are purchase orders generated from funded quotations that have been approved by the client. Undelivered values are estimates based on supplier quotations, fees, and buffer factors. "Delivered" values reflect actual invoiced amounts. "Delivered" dates represent orders that have been delivered in the given financial reporting period of the transaction. "Pipeline" is used to simplify charts by adding together "Quotation" and "PO".

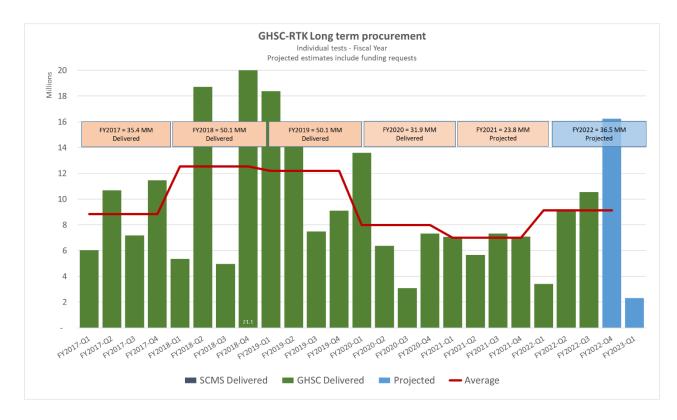
**On-time delivery:** The most challenging element in on-time delivery is calculating the transport and waiver times to assure commodities arrive when they are expected. While manufacturers have consistent lead times, each country has its own transport and waiver times, which may change throughout the year. GHSC-RTK overcomes this challenge by monitoring lead times quarterly for each country and delivery order. With accurate delivery lead times, we can set delivery expectations with the client at the time of order initiation.

**Figure 1 - KPI: Client on-time-in-full (OTIF) performance. Target 85%:** OTIF is the meeting of client delivery expectations as agreed upon in the quotation. GHSC-RTK does not have many deliveries (low denominator), so a single late order can pull OTIF down between 3% and 5%. On-Time delivery for the quarter was 89%.





**Figure 2: Long Term Procurement history.** Tracking year-over-year delivery helps us monitor trends to improve planning. Green bars are deliveries under the GHSC-RTK contract. Light blue bars are quotations, purchase orders and funding request in the "Pipeline". Based on the COP21 budgets, we estimate delivering 36.5 million tests in FY2022.



**Figure 3: Financial dashboard**. GHSC-RTK financial dashboard summarizing the status of operational funding. This chart includes Cost Recovery fees.

GHSC-RTK TO Funding Dashboard:	
Quotation Value - Funding Requests	\$ 1,440,697
Quotation Value - Funding approved	\$ 23,986,863
Delivered Value	\$ 270,483,771
LOP Funded Value	\$ 294,470,634
LOP Funded Commodity Value	\$ 270,272,999
Contract Obligation percent (Funded orders)	96%
Contract TO ceiling percent (Funded Orders)	79%
Contract IDIQ ceiling (Funded orders)	79%

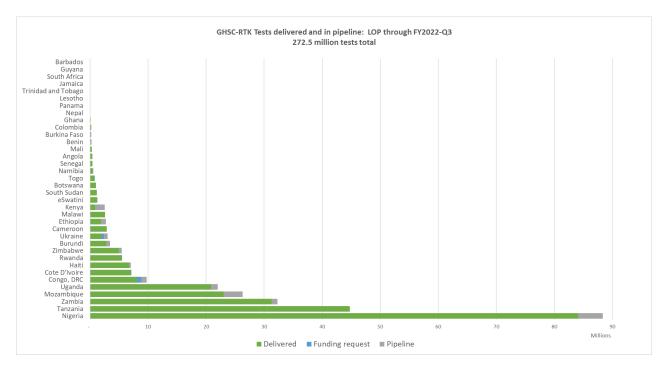
**Figure 4: Country spend history by year.** LOP value delivered and in the pipeline, including unfunded orders. Fiscal years 2016 and 2017 fit into the average annual expenditure for HIV RTKs while FY2018 and FY2019 were above the average. Chart values include commodities, freight, and services. CR overhead is not included in this chart.

					Pipe	line		clude		+ F	reight + Insura							
		FY2016	FY2017		FY2018		FY2019		FY2020		FY2021	,	FY2022	FY2022	FY2022	FY2023		
Country		Q1-2-3-4	Q1-2-3-4		Q1-2-3-4		Q1-2-3-4		Q1-2-3-4		Q1-2-3-4							and Total
		Delivered	Delivered		Delivered	_	Delivered	_	Delivered	_	Delivered	Fu	Inding request	 Pipeline	 Delivered	 All		
Angola	\$	15,215	\$ -	\$	-	\$	-	\$	-	\$	195,748	\$	-	\$ 12,800	\$ 148,467	\$ 14,320	\$	386,550
Barbados	\$	-	\$ -	\$	-	\$	-	\$	-	\$	4,050	\$	-	\$ -	\$ -	\$ -	\$	4,050
Benin	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$ 240,075	\$ -	\$ 19,618	\$	259,693
Botswana	\$	286,849	\$ 89,715	\$	214,265	\$	401,536	\$	-	\$	38,190	\$	-	\$ -	\$ -	\$ -	\$	1,030,555
Burkina Faso	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$ 92,500	\$ 169,317	\$ -	\$	261,817
Burundi	\$	206,933	\$ 603,856	\$	539,481	\$	520,025	\$	85,405	\$	166,062	\$	-	\$ 706,375	\$ 1,238,419	\$ 218,936	\$	4,285,492
Cameroon	\$	67,778	\$ 1,029,483	\$	238,754	\$	23,445	\$	161,750	\$	1,345,104	\$	-	\$ 123,945	\$ -	\$ -	\$	2,990,259
Colombia	\$	-	\$ -	\$	-	\$	257,047	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -	\$	257,047
Congo, DRC	\$	611,597	\$ 1,350,144	\$	1,175,652	\$	1,230,169	\$	654,975	\$	1,726,309	\$	-	\$ 941,000	\$ 1,222,637	\$ 909,080	\$	9,821,563
Cote d'Ivoire	\$	687,406	\$ 1,792,814	\$	1,375,172	\$	783,565	\$	216,529	\$	1,175,252	\$	53,500	\$ -	\$ 652,145	\$ -	\$	6,736,383
eSwatini	\$	475,281	\$ -	\$	-	\$	318,310	\$	302,970	\$	215,822	\$	-	\$ 55,876	\$ 293,356	\$ 89,740	\$	1,751,355
Ethiopia	\$	48,873	\$ 251,084	\$	-	\$	8,368	\$	767,293	\$	1,341,904	\$	-	\$ 1,191,653	\$ 828,271	\$ 155,643	\$	4,593,088
Ghana	\$	-	\$ -	\$	-	\$	-	\$	-	\$	123,894	\$	-	\$ -	\$ 37,000	\$ -	\$	160,894
Guyana	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$ 4,500	\$ -	\$ 7,560	\$	12,060
Haiti	\$	1,602,906	\$ 1,502,137	\$	1,912,804	\$	495,061	\$	1,148,547	\$	526,457	\$	-	\$ 357,980	\$ 617,601	\$ 74,600	\$	8,238,093
Jamaica	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$ 16,734	\$ -	\$ -	\$	16,734
Kenya	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$ 3,149,139	\$ 1,005,189	\$ 276,000	\$	4,430,328
Lesotho	\$	-	\$ -	\$	21,225	\$	-	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -	\$	21,225
Malawi	\$	-	\$ 39,239	\$	488,396	\$	146,753	\$	169,176	\$	-	\$	-	\$ -	\$ 2,734,648	\$ -	\$	3,578,212
Mali	\$	-	\$ -	\$	159,380	\$	31,786	\$	-	\$	183,181	\$	-	\$ -	\$ -	\$ -	\$	374,347
Mozambique	\$	801,056	\$ 4,026,456	\$	4,543,619	\$	5,113,164	\$	4,144,515	\$	2,428,252	\$	-	\$ 3,142,076	\$ 493,282	\$ 34,070	\$	24,726,490
Namibia	\$	-	\$ 74,822	\$	476,542	\$	91,377	\$	238,370	\$	286,600	\$	-	\$ 190,000	\$ -	\$ 135,750	\$	1,493,461
Nepal	\$	-	\$ -	\$	-	\$	-	\$	-	\$	39,510	\$	-	\$ -	\$ 49,170	\$ -	\$	88,680
Nigeria	\$	15,900,873	\$ 12,461,823	\$	10,398,324	\$	11,227,149	\$	9,073,081	\$	11,643,544	\$	-	\$ 3,847,811	\$ 10,206,149	\$ 421,100	\$	85,179,854
Panama	\$	-	\$ -	\$	-	\$	23,265	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -	\$	23,265
Rwanda	\$	-	\$ 1,861,806	\$	889,255	\$	1,679,292	\$	128,425	\$	1,024,171	\$	-	\$ -	\$ 496,545	\$ -	\$	6,079,493
Senegal	\$	-	\$ -	\$	-	\$	369,870	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -	\$	369,870
South Africa	\$	-	\$ 17,400	\$	-	\$	-	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -	\$	17,400
South Sudan	\$	85,947	\$ 582,406	\$	99,718	\$	388,000	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -	\$	1,156,071
Tanzania	\$	9,968,266	\$ -	\$	15,056,755	\$	11,376,471	\$	6,669,134	\$	75,846	\$	-	\$ 106,060	\$ 1,807,652	\$ -	\$	45,060,184
Тодо	\$	-	\$ -	\$	-	\$	-	\$	406,378	\$	151,590	\$	-	\$ -	\$ 187,545	\$ 24,260	\$	769,773
Trinidad and Tobago	\$	-	\$ -	\$	-	\$	-	\$	-	\$	24,925	\$	-	\$ -	\$ -	\$ -	\$	24,925
Uganda	\$	2,322,875	\$ 1,702,549	\$	2,867,229	\$	5,632,962	\$	2,147,549	\$	1,952,183	\$	-	\$ 64,706	\$ 4,920,169	\$ 2,399,944	\$	24,010,166
Ukraine	\$	-	\$ -	\$	127,225	\$	225,768	\$	659,226	\$	599,526	\$	-	\$ 578,315	\$ 288,537	\$ 545,192	\$	3,023,790
Zambia	\$	2,423,863	\$ 5,180,627	\$	7,433,181	\$	5,460,961	\$	3,403,027	\$	3,457,329	\$	-	\$ 1,940,205	\$ 2,667,291	\$ 98,038	\$	32,064,522
Zimbabwe	\$	419,210	\$ 6,633	\$	798,280	\$	1,233,903	\$	1,568,812	\$	1,881,577	\$	-	\$ 1,727,624	\$ 659,882	\$ 250,000	\$	8,545,921
Grand Total	S	35.924.928	\$ 32.572.994	s	48.815.257	s	47.038.247	s	31.945.160	ŝ	30,607,026		53,500	\$ 18,489,373	\$ 30,723,272	\$ 5,673,851	s	281.843.608





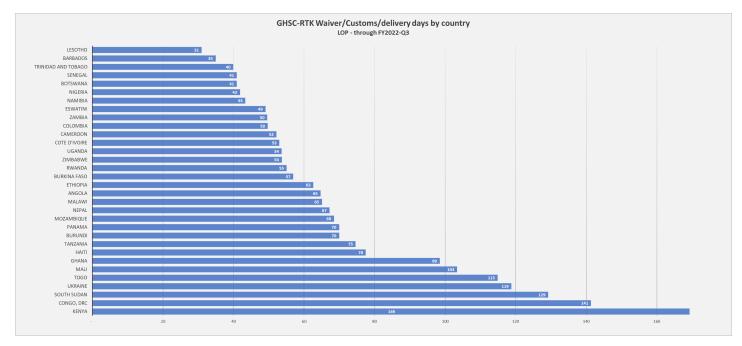
**Figure 5: LOP tests delivered and in pipeline by country.** GHSC-RTK has delivered to 31 countries to-date. Order sizes vary considerably by country. Large quantities do not necessarily suggest a complexity in the delivery/logistics process. A small order may require more LOE than a large order.



**Figure 6 - KPI: Procurement Cycle Time.** Import duty waiver times represent the longest portion of our delivery time and are the least consistent order to order. "Slack time" or "float time", the time on order without a scheduled activity, is omitted from this measurement as it does not drive OTIF. "Process QU" includes time an order may be on hold for funding approval.

	Number of	GHSC-RTK	Country	Country	GHSC-RTK	Sum of
Ship-To Country	Deliveries	Process QU	Approve QU	Waiver days	Shipping days	segments
Angola	2	47	4	40	16	107
Burkina Faso	2	83	15	9	35	142
Congo, DRC	5	16	2	69	35	122
Cote d'Ivoire	3	144	25	-	-	170
eSwatini	1	29	1	27	2	59
Ethiopia	1	107	4	10	18	139
Ghana	1	10	7	77	47	141
Haiti	3	189	19	17	99	324
Kenya	2	14	8	29	44	94
Malawi	1	2	1	14	48	65
Mozambique	1	26	1	5	195	227
Nepal	1	20	24	14	12	70
Nigeria	5	30	4	1	25	60
Rwanda	3	55	20	13	21	109
Tanzania	1	-	-	14	50	64
Тодо	3	117	5	29	43	195
Uganda	4	140	1	8	48	196
Zambia	4	85	5	10	39	137
Zimbabwe	2	35	36	15	24	110
Grand Total	45	71	10	21	41	143

**Figure 7: Waiver and delivery days**. Overall delivery time consistency is a major factor affecting OTIF. By tracking lead times by country, we can adjust delivery lead time projections to set order delivery expectations.



#### **Country importation notes:**

• Nigeria: The U.S. Embassy requires our freight forwarders use only USAID Nigeria prequalified clearing agents. NAFDAC product labeling is required. Weekend shipment arrivals are avoided due to security concerns.

• Uganda: USAID funded products are exempt from the 3% National Drug Authority (NDA) fees, but GHSC-RTK must get approval from the NDA before any goods can be imported into the country.

• Cote d'Ivoire: The country office serves as the consignee and importer of record. Import permits must be in place before an order ships.

• Tanzania: The field office prepares documents (with the help of the nominated broker) and chaperones the movement of the documents to obtain import waivers.

• Mozambique: All documents must be in color. The central medical store (CMAM) requires palletization of all shipments. The country office has staff at the central medical stores to coordinate deliveries and POD signatures.

• Countries requiring Field Office participation for import waivers: Burundi, Cote d'Ivoire, DRC, Namibia, Tanzania, Uganda, Zimbabwe.

Countries that manage their own clearance/delivery: Mozambique, Nigeria, Ethiopia



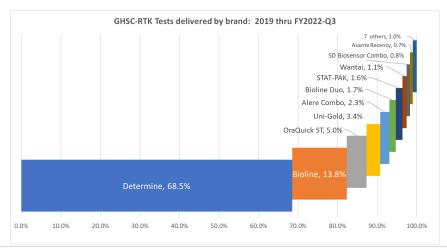
#### Figure 8: HIV RTK brand delivery by country.

Countries use WHO guidelines to develop national testing algorithms that prescribe a set of specific brands to be used in screening, confirmatory and tie-breaker tests for their programs. Countries generally review algorithms every three to five years to ensure they continue to get the most for their budget dollars and to keep up with testing technology. While GHSC-RTK verifies orders comply with the country algorithms, we do not participate in algorithm revision decisions. • GHSC-RTK only procures from the USAID approved list of HIV Rapid Diagnostics/WHO list of prequalified in vitro diagnostic products

- Country Algorithms determine which products we procure for each country
- Most commodities are procured directly from the manufacturer
- GHSC-RTK manages the procurement, fulfilment and delivery of RTKs to country central stores warehouses

**Figure 9: RTK Brand distribution.** While the Determine brand is only 68.5 of overall test delivery, in most countries, it is the primary screening device and represents a much higher percentage (light blue).

						GHSC-R	TK Tests de	elivered by	/ country ar	d brand: 2	2019 thru F	Y2022-Q3							
Ship-To Country	Determine	Bioline	OraQuick ST	Uni-Gold	Alere Combo	Bioline Duo	STAT-PAK	Wantai	SD Biosensor Combo	Asante Recency	STAT-PAK Assay	First Response	SKHB	INSTI-ST	SURE CHECK ST	ABON Tri- Line	VIKIA	Grand Total	% Determin
Angola	322,600			23,660							, i							346,260	93.2
Barbados			500															500	0.0
Botswana	398,200		34,750							2,200								435,150	91.5
Burkina Faso	107,000		23,750															130,750	81.8
Burundi	500,000		73,750		156,300	637,500	51,000											1,418,550	35.2
Cameroon	1,457,800		40,500										103,350					1,601,650	91.0
Colombia	200,000			20,000														220,000	90.9
Congo, DRC	4,208,500		69,000	335,000						43,000							41,250	4,696,750	89.65
Cote d'Ivoire	2,476,000	45,200	116,000				70,800				39,000							2,747,000	90.1
eSwatini	506,000		154,250	19,240						37,100								716,590	70.65
Ethiopia		38,275	159,250				434,760			158,900	640,000					52,960		1,484,145	0.09
Ghana			10,000									105,000						115,000	0.09
Haiti	1,803,600		78,850	253,360														2,135,810	84.49
Kenya	809,500									38,340								847,840	95.5%
Malawi	1,938,200		388,750	96,120														2,423,070	80.09
Mali		3,675			194,500							810						198,985	0.0%
Mozambique	11,653,100			693,780		515,000												12,861,880	90.69
Namibia			203,000															203,000	0.09
Nepal	24,500		16,000							1,800								42,300	57.99
Nigeria	37,470,700		757,750	2,214,140			298,660		1,088,125	202,300	36,920							42,068,595	89.15
Panama	20,000																	20,000	100.09
Rwanda			129,750		2,650,000		54,840			37,260	2,260							2,874,110	0.09
Senegal	370,000	18,750	2,000															390,750	94.79
South Sudan	450,000																	450,000	100.09
Tanzania		16,258,475	1,146,750	795,460						50,000								18,250,685	0.09
Togo	728,000		17,550									39,840						785,390	92.75
Trinidad and Tobago			5,000															5,000	0.05
Uganda	9,373,200	111,300	1,230,750			812,075	1,219,600				38,640			65,250	62,269			12,913,084	72.65
Ukraine		90,050	127,500					1,450,610		7,160		129,915						1,805,235	0.09
Zambia	12,191,800	1,384,650	854,750							126,300								14,557,500	83.75
Zimbabwe	2,073,100		914,500			207,400				146,000								3,341,000	62.15
Grand Total	89,081,800 68.5%	17,950,375 13.8%	6,554,650 5.0%	4,450,760 3.4%	3,000,800 2.3%	2,171,975 1.7%	2,129,660 1.6%	1,450,610 1.1%	1,088,125 0.8%	850,360 0.7%	756,820 0.6%	275,565 0.2%	103,350 0.1%	65,250 0.1%	62,269 0.0%	52,960 0.0%	41,250 0.0%	130,086,579	



**Figure 10: Spend by logistics provider.** Every GHSC-RTK order is bid out to at least three freight providers to ensure we receive best value in terms of freight rate and delivery lead-time. Some freight suppliers may be more familiar with specific shipping lanes and would win more business for that lane. We keep a supplier score card (presented at the bottom of this report) on each supplier to track and rate supplier performance.

		GHSC-R1	IK L		Summary: F services val	22-Q3 (One q	uar	ter)			
	Logenix	MEBS		Bollore	Codix	Lynden		DAMCO	G	rand Total	# of deliveries
Angola	\$ 12,775	\$ -	\$	-	\$ -	\$ -	\$	-	\$	12,775	4
Burkina Faso	\$ -	\$ -	\$	26,007	\$ -	\$ -	\$	10,210	\$	36,217	4
Congo, DRC	\$ 102,451	\$ -	\$	-	\$ -	\$ -	\$	-	\$	102,451	8
Cote D'Ivoire	\$ -	\$ 99,314	\$	-	\$ -	\$ -	\$	-	\$	99,314	6
eSwatini	\$ 21,756	\$ -	\$	-	\$ -	\$ -	\$	-	\$	21,756	2
Ethiopia	\$ 124,271	\$ -	\$	-	\$ -	\$ -	\$	-	\$	124,271	2
Ghana	\$ -	\$ -	\$	-	\$ -	\$ 17,000	\$	-	\$	17,000	2
Haiti	\$ 65,622	\$ -	\$	-	\$ -	\$ -	\$	-	\$	65,622	4
Kenya	\$ 21,107	\$ -	\$	-	\$ -	\$ -	\$	-	\$	21,107	4
Mozambique	\$ -	\$ -	\$	-	\$ -	\$ -	\$	43,401	\$	43,401	2
Nepal	\$ 17,559	\$ -	\$	-	\$ -	\$ -	\$	-	\$	17,559	2
Nigeria	\$ 342,904	\$ -	\$	-	\$ 89,296	\$ 7,301	\$	-	\$	439,502	9
Rwanda	\$ 4,184	\$ -	\$	-	\$ -	\$ 63,994	\$	-	\$	68,178	6
Togo	\$ -	\$ -	\$	34,545	\$ -	\$ -	\$	-	\$	34,545	6
Uganda	\$ 22,607	\$ 103,914	\$	-	\$ -	\$ -	\$	-	\$	126,521	8
Zambia	\$ 27,550	\$ -	\$	50,275	\$ -	\$ -	\$	-	\$	77,825	6
Zimbabwe	\$ 72,142	\$ -	\$	-	\$ -	\$ -	\$	-	\$	72,142	4
Grand Total	\$ 834,928	\$ 203,228	\$	110,827	\$ 89,296	\$ 88,296	\$	53,611	\$	1,380,186	79
% of value	60.5%	14.7%		8.0%	6.5%	6.4%		3.9%			
# of deliveries	40	12		12	1	10		4			
% of deliveries	51%	15%		15%	1%	13%		5%			

**KPI: Commodities procured by supplier contract type: Target is 75%.** This is the number of suppliers on IDIQ pricing contract. We continue to use global pricing on all orders, IDIQ or not. The actual for this quarter was 73%. Sedia/Mylan Recency is the only regularly used supplier not under IDIQ contract. Their orders tend to be lower in value and an IDIQ reduces workflow steps only on higher value orders. The OraSure has been expanding their local supplier base in Africa and we procured from three local suppliers this quarter: Axis, Sciex, and Codix.

**KPI: Product Loss:** Approximately 76 Determine kits were lost due to water damage in Nigeria. The incident is closed and replacement kits are being procured.

**KPI: Error rate from quarterly data audits:** We continue to monitor data to assure accuracy and auditability.

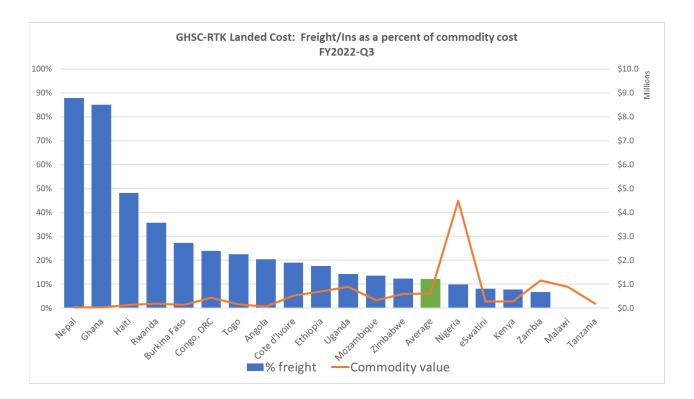


**Figures 11 and 12 - KPI: Freight rate.** The landed cost as a percentage of commodity value tracks how expensive it is to operate the freight portion of the supply chain as a percentage of the commodity cost. This indicator is useful in comparing freight costs across commodity groups, shipping lanes and programs.

GHSC-RTK is averaging 9.2% cost of freight over the LOP. Figure 14 (below) highlights how smaller shipments have a much higher percent of commodity costs than larger shipments. Most GHSC-RTK shipments are sent via air, as shipments often have few pallets and limited

		Cost of clin	nical RTKs	compared to S	elf T	ests FY	2018-FY2022	-Q3
	Total	Total	Clinical CP	Г Clinical	Self	Test CPT	Self Test	Notes
	Commodity	Commodity	w/o FRT	FRT rate (%)	v	∥o FRT	FRT rate (%)	Notes
FY2018-Q1	\$ 5,719,312	5.8%	\$ 1.0	6 5.4%	\$	2.00	49.8%	
FY2018-Q2	\$ 15,978,905	5.5%	\$ 0.8	5 5.2%	\$	2.00	37.2%	
FY2018-Q3	\$ 4,859,048	10.0%	\$ 0.9	4 8.2%	\$	2.00	34.2%	
FY2018-Q4	\$ 19,089,432	7.7%	\$ 0.8	5 5.9%	\$	2.00	24.3%	
FY2019-Q1	\$ 16,084,870	8.0%	\$ 0.8	7 7.7%	\$	2.00	43.0%	
FY2019-Q2	\$ 12,302,038	8.1%	\$ 0.8	3 6.9%	\$	2.00	31.1%	
FY2019-Q3	\$ 6,544,827	6.8%	\$ 0.8	5 5.3%	\$	2.00	40.4%	
FY2019-Q4	\$ 8,484,741	10.1%	\$ 0.9	0 8.5%	\$	2.00	33.3%	
FY2020-Q1	\$ 11,685,763	9.4%	\$ 0.8	5 9.1%	\$	2.47	28.4%	
FY2020-Q2	\$ 6,320,660	11.2%	\$ 0.8	4 5.4%	\$	2.00	27.2%	
FY2020-Q3	\$ 3,477,082	22.0%	\$ 0.9	3 8.5%	\$	2.01	50.6%	
FY2020-Q4	\$ 7,105,417	10.5%	\$ 0.9	1 8.3%	\$	2.42	29.8%	
FY2021-Q1	\$ 7,119,508	10.0%	\$ 0.9	9.2%	\$	2.55	18.8%	
FY2021-Q2	\$ 5,744,746	10.4%	\$ 0.9	4 11.2%	\$	2.88	3.7%	ST- local supplier, higher CPT, lower FF
FY2021-Q3	\$ 7,617,569	16.9%	\$ 0.9	12.5%	\$	2.05	46.9%	
FY2021-Q4	\$ 6,785,946	11.0%	\$ 0.9	10.0%	\$	2.18	64.5%	
FY2022-Q1	\$ 6,723,340	5.5%	\$ 1.4	0 9.5%	\$	2.81	2.7%	ST- local supplier, higher CPT, lower Ff
FY2022-Q2	\$ 10,011,461	8.1%	\$ 0.8	9 8.8%	\$	2.82	6.3%	ST- local supplier, higher CPT, lower Ff
FY2022-Q3	\$ 11,424,322	12.1%	\$ 0.9	4 11.4%	\$	2.79	14.7%	High Frt, Togo, BF, etc.
Grand Total	\$173,078,984	9.2%	\$ 0.8	39 7.9%	\$	2.39	19.9%	

shelf-life. Larger orders are sometimes shipped via ocean when we have a long lead time and an extended product shelf-life. The steady increase in freight rate in is largely due to the increase in the larger and heavier HIV-ST kits which scaled up in FY2018-Q3 (see page 15 for breakdown). When we have a combination of high HIV-ST shipments and low (lower cost) clinical HIV kit shipments, the quarterly freight rate spikes upward. The COVID-19 pandemic has also caused an increase in shipping costs.



**Figures 13: Freight rate by country and test kit.** This table shows the freight cost per test for the top five highest volume RTKs, HIV-ST, and Recency tests. For budget calculations, high and low freight rate tests should be separated. Costs do not change significantly Q over Q, this is the Q2 chart and data will be updated in Q4.

Ship-To Country	Dete	ermine	Bioline	U	ni-Gold	Alere	Combo	STA	T-PAK	Asante	Recency	uick Self Test	Freigh	I country nt cost per test
Angola	\$	0.09		\$	0.44								\$	0.11
Barbados												\$ 5.10	\$	5.10
Botswana	\$	0.04								\$	1.34	\$ 0.50	\$	0.07
Burundi	\$	0.07				\$	0.11	\$	0.09			\$ 1.03	\$	0.17
Cameroon	\$	0.08										\$ 1.04	\$	0.11
Colombia	\$	0.10		\$	0.25								\$	0.11
Congo, DRC	\$	0.06		\$	0.28					\$	0.45	\$ 2.00	\$	0.10
Cote d'Ivoire	\$	0.10	\$ 0.39					\$	0.18			\$ 1.05	\$	0.14
eSwatini	\$	0.07		\$	0.38					\$	0.52	\$ 0.79	\$	0.25
Ethiopia			\$ 0.28					\$	0.15	\$	0.27	\$ 0.93	\$	0.34
Haiti	\$	0.08		\$	0.28							\$ 1.37	\$	0.12
Kenya	\$	0.08										\$ 0.20	\$	0.56
Malawi	\$	0.06		\$	0.22							\$ 1.16	\$	0.12
Mali			\$ 0.52			\$	0.12						\$	0.13
Mozambique	\$	0.06		\$	0.16								\$	0.07
Namibia												\$ 1.04	\$	1.04
Nepal	\$	0.11								\$	0.95	\$ 1.43	\$	0.64
Nigeria	\$	0.05		\$	0.09			\$	0.17	\$	0.21		\$	0.06
Panama	\$	0.16											\$	0.16
Rwanda						\$	0.06	\$	0.14	\$	0.41	\$ 0.72	\$	0.08
Senegal	\$	0.06	\$ 0.17									\$ 1.97	\$	0.07
South Sudan	\$	0.06											\$	0.06
Tanzania			\$ 0.10	\$	0.20					\$	0.35	\$ 0.56	\$	0.12
Тодо	\$	0.08										\$ 2.06	\$	0.11
Trinidad and Tobago												\$ 1.99	\$	1.99
Uganda	\$	0.04	\$ 0.25					\$	0.04			\$ 0.77	\$	0.06
Ukraine			\$ 0.16							\$	0.68	\$ 0.91	\$	0.60
Zambia	\$	0.05	\$ 0.15							\$	0.28	\$ 1.05	\$	0.09
Zimbabwe	\$	0.06								\$	0.23	\$ 0.67	\$	0.25
Grand Total	\$	0.06	\$ 0.11	\$	0.29	\$	0.07	s	0.09	\$	0.28	\$ 0.72	\$	0.10



**Figure 14: Total spend and landed cost by country.** Total cost per test (CPT) varies by country based on the cost of the tests in the algorithm, freight, overhead, import fees and/or special labeling requirements. GHSC-RTK uses global pricing for almost all countries, so cost variations are due to country specific factors. This chart details the total expenditure by country, average cost per test, freight services, and overhead costs.

	 GHSC-RT	K Landed cos	st	by country:	L	OP thru FY	20	22-Q3	
Ship-To Country	Amount (RTKs)	Quantity (individual tests)	(	CPT: Commodities		CPT: Fees, Services		CPT: Total Landed Cost	Fees, Services as % of commodity cost
Angola	\$ 306,926	358,068	\$	0.86	\$	0.20	\$	1.05	23.0%
Barbados	\$ 1,500	501	\$	2.99	\$	5.49	\$	8.49	183.5%
Botswana	\$ 951,723	1,016,281	\$	0.94	\$	0.13	\$	1.06	13.7%
Burkina Faso	\$ 133,100	130,754	\$	1.02	\$	0.34	\$	1.36	33.6%
Burundi	\$ 2,936,113	2,780,383	\$	1.06	\$	0.21	\$	1.27	20.2%
Cameroon	\$ 2,559,445	2,855,157	\$	0.90	\$	0.16	\$	1.05	17.6%
Colombia	\$ 232,320	220,000	\$	1.06	\$	0.17	\$	1.23	16.2%
Congo, DRC	\$ 7,156,268	8,074,444	\$	0.89	\$	0.15	\$	1.04	16.8%
Cote d'Ivoire	\$ 6,047,194	7,049,767	\$	0.86	\$	0.14	\$	1.00	16.0%
eSwatini	\$ 1,402,390	1,205,760	\$	1.16	\$	0.24	\$	1.40	20.2%
Ethiopia	\$ 2,774,571	1,879,564	\$	1.48	\$	0.34	\$	1.81	22.8%
Ghana	\$ 130,250	115,003	\$	1.13	\$	0.34	\$	1.47	29.7%
Haiti	\$ 7,088,024	6,706,858	\$	1.06	\$	0.17	\$	1.22	15.6%
Kenya	\$ 921,820	847,847	\$	1.09	\$	0.16	\$	1.24	14.5%
Lesotho	\$ 16,000	8,000	\$	2.00	\$	0.79	\$	2.79	39.3%
Malawi	\$ 3,185,230	2,608,475	\$	1.22	\$	0.22	\$	1.44	18.0%
Mali	\$ 327,095	303,971	\$	1.08	\$	0.22	\$	1.29	20.2%
Mozambique	\$ 20,014,322	22,956,790	\$	0.87	\$	0.11	\$	0.98	13.0%
Namibia	\$ 907,392	448,802	\$	2.02	\$	0.71	\$	2.73	35.1%
Nepal	\$ 61,500	42,307	\$	1.45	\$	0.75	\$	2.20	51.4%
Nigeria	\$ 76,544,723	84,120,094	\$	0.91	\$	0.10	\$	1.01	11.0%
Panama	\$ 20,000	20,000	\$	1.00	\$	0.22	\$	1.22	22.1%
Rwanda	\$ 5,617,303	5,498,076	\$	1.02	\$	0.14	\$	1.16	13.6%
Senegal	\$ 340,975	390,750	\$	0.87	\$	0.12	\$	0.99	13.9%
South Africa	\$ 17,400	3,000	\$	5.80	\$	0.29	\$	6.09	5.0%
South Sudan	\$ 1,055,127	1,153,670	\$	0.91	\$	0.14	\$	1.05	15.0%
Tanzania	\$ 41,083,433	44,720,572	\$	0.92	\$	0.14	\$	1.06	14.9%
Тодо	\$ 647,380	785,404	\$	0.82	\$	0.17	\$	1.00	20.9%
Trinidad and Tobago	\$ 15,000	5,001	\$	3.00	\$	2.23	\$	5.23	74.5%
Uganda	\$ 20,229,733	20,851,764	\$	0.97	\$	0.11	\$	1.08	11.8%
Ukraine	\$ 1,452,245	2,003,247	\$	0.72	\$	0.27	\$	1.00	37.4%
Zambia	\$ 27,638,125	30,443,347	\$	0.91	\$	0.13	\$	1.04	14.1%
Zimbabwe	\$ 5,580,304	4,379,825	\$	1.27	\$	0.30	\$	1.57	23.5%
Grand Total	\$ 237,394,930	253,983,482	\$	0.93	\$	0.13	\$	1.06	13.9%



**Figure 15:** Delivered shelf-life by manufacturers lot. GHSC-RTK tracks supplier and client shelf-life, and shelf-life lost during logistics. Most countries require an 85% remaining shelf-life upon delivery - **after shipping**. Most suppliers guarantee an 85% shelf-life upon delivery - **before shipment**. It is GHSC-RTK's goal to manage this discrepancy with the country clients and work to limit shelf-life loss due to shipping time. Clients will often agree to accept lower shelf-life product to expedite delivery. Blue bars represent the shelf-life at time of delivery to the shipping (source) location. Orange bars represent the shelf-life lost in logistics - the time between supplier delivery and client delivery, including import waivers. The KPI target is 85% average at delivery (blue bar only) across all deliveries. Average delivered shelf-life for this quarter is 79%. Waivers and logistics consumed an average of 6% of shelf-life this quarter.

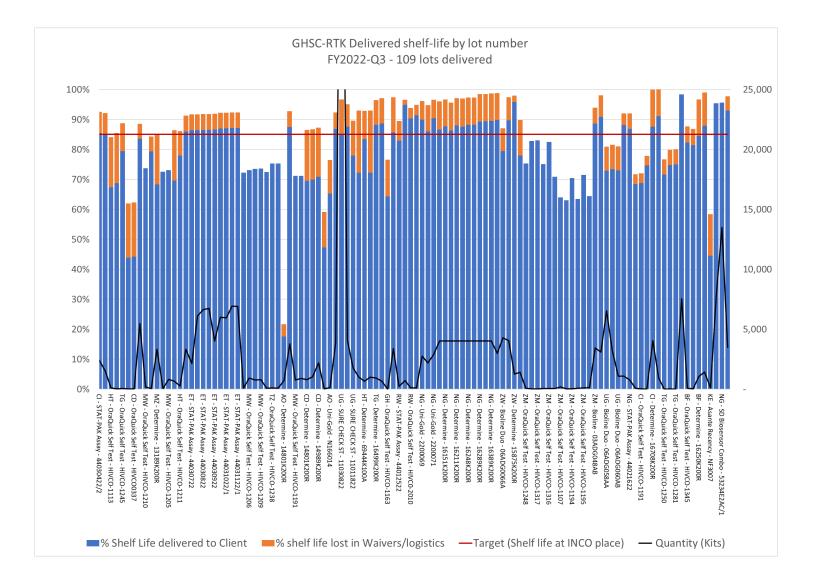


Figure 16:	<b>HIV-ST delivery</b>	y and pipeline.
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GHSC-RTK HIVST Summary: LOP thru FY2022-Q3								
	Delivered FYs:	Delivered:	Delivered:	Delivered:	Pipeline:	One walk to tal		
	2017-2018-2019	FY2020	FY2021	FY2022	FY2022	Grand total		
Barbados	-	-	500	-	-	500		
Benin	-	-	-	-	8,500	8,500		
Botswana	27,000	-	7,750	-	-	34,750		
Burkina Faso	-	-	-	23,750	-	23,750		
Burundi	13,000	28,750	-	35,000	75,000	151,750		
Cameroon	-	38,500	2,000	-	40,500	81,000		
Congo, DRC	3,500	3,500	39,500	22,500	20,000	89,000		
Cote d'Ivoire	48,750	21,000	10,000	40,000	-	119,750		
eSwatini	93,000	61,250	-	-	-	154,250		
Ethiopia	-	99,250	60,000	-	-	159,250		
Ghana	-	-	-	10,000	-	10,000		
Guyana	-	-	-	-	2,000	2,000		
Haiti	27,500	-	19,500	45,600	-	92,600		
Jamaica	-	-	-	-	3,000	3,000		
Kenya	-	-	-	-	900,000	900,000		
Lesotho	8,000	-	-	-	-	8,000		
Malawi	235,000	50,000	-	288,750	-	573,750		
Namibia	60,800	75,500	92,500	-	95,000	323,800		
Nepal	-	-	6,000	10,000	-	16,000		
Nigeria	-	122,500	-	635,250	-	757,750		
Rwanda	86,190	10,000	-	53,750	-	149,940		
Senegal	2,000	-	-	-	-	2,000		
South Africa	3,000	-	-	-	-	3,000		
Tanzania	100,000	475,000	-	571,750	-	1,146,750		
Тодо	-	-	4,250	13,300	-	17,550		
Trinidad and Tobago	-	-	5,000	-	-	5,000		
Uganda	59,750	123,500	128,250	1,058,769	332,074	1,702,343		
Ukraine	-	33,750	24,000	69,750	77,000	204,500		
Zambia	805,500	275,000	289,500	290,250	-	1,660,250		
Zimbabwe	428,500	333,500	281,000	-	307,250	1,350,250		
Grand Total	2,001,490	1,751,000	969,750	3,168,419	1,860,324	9,750,983		

### Figure 17: HIV-Recency delivery and pipeline.

GHSC-RTK HIV Recency Summary: LOP thru FY2022-Q3								
	Delivered FY: 2019	Delivered: FY2020	Delivered: FY2021	Delivered: FY2022	Pipeline: FY2022	Grand total		
Botswana	-	-	2,200	-	-	2,200		
Congo, DRC	-	-	15,000	28,000	31,000	74,000		
eSwatini	-	18,100	19,000	-	19,740	56,840		
Ethiopia	-	30,000	128,900	-	46,100	205,000		
Kenya	-	-	-	38,340	-	38,340		
Nepal	-	-	-	1,800	-	1,800		
Nigeria	-	15,800	44,600	141,900	-	202,300		
Rwanda	-	10,360	12,360	14,540	-	37,260		
Tanzania	15,000	-	15,000	20,000	21,000	71,000		
Ukraine	-	2,160	5,000	-	7,000	14,160		
Zambia	-	-	126,300	-	68,000	194,300		
Zimbabwe	-	50,000	96,000	-	80,000	226,000		
Grand Total	15,000	126,420	464,360	244,580	272,840	1,123,200		

### Figure 18 - KPI: Supplier scorecards:

eliveries : Score 64%	14 Tolerance band 80-100%	Pass Tolerance 80%	\$ C	6,600,521.00 Comments
			C	Comments
64%	80-100%	80%		
0%	0-1%	1%		
93%	86-100%	86%		
73%	80-100%	80%		
	93%	93% 86-100%	93% 86-100% 86%	93% 86-100% 86%

Deliveries :	2		\$	1,538,238.00
Score	Tolerance band	Pass Tolerance		Comments
50%	80-100%	80%		
0%	0-1%	1%		
76%	86-100%	86%		
60%	80-100%	80%		
	Score 50% 0% 76%	Score Tolerance band   50% 80-100%   0% 0-1%   76% 86-100%	Score Tolerance band Pass Tolerance   50% 80-100% 80%   0% 0-1% 1%   76% 86-100% 86%	Score Tolerance band Pass Tolerance   50% 80-100% 80%   0% 0-1% 1%   76% 86-100% 86%

Commodity Supplier:				
Chembio	Deliveries :	7		\$ 1,055,713.00
Metric	Score	Tolerance band	Pass Tolerance	Comments
% of order on-time	29%	80-100%	80%	
% of order inaccuracies	0%	0-1%	1%	
% of shelf life available	92%	86-100%	86%	Local supplier
Responsiveness to RMI (Subjective)	67%	80-100%	80%	

Deliveries :	1		\$ 504,94	49.00
Score	Tolerance band	Pass Tolerance	Comments	
100%	80-100%	80%		
0%	0-1%	1%		
96%	86-100%	86%		
80%	80-100%	80%		
	100% 0% 96%	100% 80-100%   0% 0-1%   96% 86-100%	100% 80-100% 80%   0% 0-1% 1%   96% 86-100% 86%	100% 80·100% 80%   0% 0-1% 1%   96% 86-100% 86%

Commodity Supplier:				
Mylan	Deliveries :	3		\$ 354,190.00
Metric	Score	Tolerance band	Pass Tolerance	Comments
% of order on-time	67%	80-100%	80%	
% of order inaccuracies	0%	0-1%	1%	
% of shelf life available	85%	86-100%	86%	
Responsiveness to RMI (Subjective)	60%	80-100%	80%	

Commodity Supplier:					
OraSure	Deliveries :	11		\$	420,300.00
Metric	Score	Tolerance band	Pass Tolerance	Con	nments
% of order on-time	45%	80-100%	80%		
% of order inaccuracies	0%	0-1%	1%		
% of shelf life available	76%	86-100%	86%		
Responsiveness to RMI (Subjective)	80%	80-100%	80%		

Commodity Supplier:				
Sciex	Deliveries :	1		\$ 178,800.00
Metric	Score	Tolerance band	Pass Tolerance	Comments
% of order on-time	0%	80-100%	80%	
% of order inaccuracies	0%	0-1%	1%	
% of shelf life available	86%	86-100%	86%	
Responsiveness to RMI (Subjective)	60%	80-100%	80%	
				·

Commodity Supplier:				
Std Diagnostics	Deliveries :	1		\$ 405,788.00
Metric	Score	Tolerance band	Pass Tolerance	Comments
% of order on-time	0%	80-100%	80%	
% of order inaccuracies	0%	0-1%	1%	
% of shelf life available	78%	86-100%	86%	
Responsiveness to RMI (Subjective)	70%	80-100%	80%	

Commodity Supplier:				
Trinity	Deliveries :	9		\$ 365,824.00
Metric	Score	Tolerance band	Pass Tolerance	Comments
% of order on-time	43%	80-100%	80%	
% of order inaccuracies	0%	0-1%	1%	
% of shelf life available	91%	86-100%	86%	
Responsiveness to RMI (Subjective)	50%	80-100%	80%	



Deliveries:	6			
	0	Value:	\$	106,872.00
Score	Tolerance Band	Pass Tolerance	Comments	
8%	0-100%	N/A		
16	<b>Country Specific</b>	Country Specific		
25	Country Specific	Country Specific		
41	Country Specific	Country Specific		
0%	0-1%	1%		
70%	80-100%	80%		
	8% 16 25 41 0%	8%0-100%16Country Specific25Country Specific41Country Specific0%0-1%	8%0-100%N/A16Country SpecificCountry Specific25Country SpecificCountry Specific41Country SpecificCountry Specific0%0-1%1%	8%0-100%N/A16Country SpecificCountry Specific25Country SpecificCountry Specific41Country SpecificCountry Specific0%0-1%1%

Deliveries:	2	Value:	\$	51,503.00
Score	Tolerance Band	Pass Tolerance	Comments	
7%	0-100%	N/A		
34	<b>Country Specific</b>	<b>Country Specific</b>		
3	Country Specific	Country Specific		
120	Country Specific	Country Specific		
0%	0-1%	1%		
70%	80-100%	80%		
	Score   7%   34   3   120   0%	ScoreTolerance Band7%0-100%34Country Specific3Country Specific120Country Specific0%0-1%	ScoreTolerance BandPass Tolerance7%0-100%N/A34Country SpecificCountry Specific3Country SpecificCountry Specific120Country SpecificCountry Specific0%0-1%1%	ScoreTolerance BandPass ToleranceComments7%0-100%N/A34Country SpecificCountry Specific33Country SpecificCountry Specific120Country SpecificCountry Specific0%0-1%1%

Deliveries:	20	Value:	\$ 791,038.00
Score	Tolerance Band	Pass Tolerance	Comments
60%	0-100%	N/A	
14	<b>Country Specific</b>	Country Specific	
28	<b>Country Specific</b>	Country Specific	
30	Country Specific	Country Specific	
0%	0-1%	1%	
67%	80-100%	80%	
	Score 60% 14 28 30 0%	ScoreTolerance Band60%0-100%14Country Specific28Country Specific30Country Specific0%0-1%	ScoreTolerance BandPass Tolerance60%0-100%N/A14Country SpecificCountry Specific28Country SpecificCountry Specific30Country SpecificCountry Specific0%0-1%1%

Freight Forwarder:				
Lynden	Deliveries:	5	Value:	\$ 86,898.0
Metric	Score	Tolerance Band	Pass Tolerance	Comments
Percent of business won	7%	0-100%	N/A	
Days to clear customs	12	<b>Country Specific</b>	<b>Country Specific</b>	
Days to obtain importation waivers	21	<b>Country Specific</b>	<b>Country Specific</b>	
Delivery time	29	<b>Country Specific</b>	<b>Country Specific</b>	
% of delivery inaccuracies	0%	0-1%	1%	
Responsiveness to RMI (Subjective)	60%	80-100%	80%	

Freight Forwarder:					
MEBS	Deliveries:	6	Value:	\$	197,561.00
Metric	Score	Tolerance Band	Pass Tolerance	Comments	
Percent of business won	15%	0-100%	N/A		
Days to clear customs	29	<b>Country Specific</b>	<b>Country Specific</b>		
Days to obtain importation waivers	8	<b>Country Specific</b>	<b>Country Specific</b>		
Delivery time	46	<b>Country Specific</b>	<b>Country Specific</b>		
% of delivery inaccuracies	0%	0-1%	1%		
Responsiveness to RMI (Subjective)	80%	80-100%	80%		

