



WHAT IS ABC?

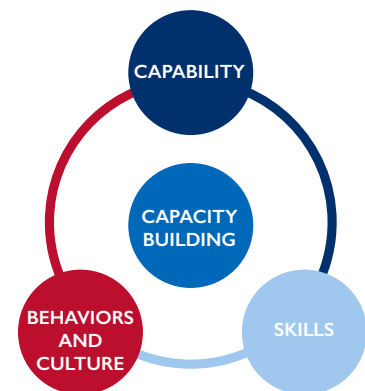
Activity-based costing (ABC) is a methodology that identifies activities in an organization and determines the cost associated with a specific commodity for each of those activities. This is done by identifying the actual related consumption costs, rather than applying an arbitrary fee based on the value of the commodity. The ABC model assigns indirect costs (overhead) combined with direct costs to ascertain the true cost of receiving, storing and transporting products per each specific category. These costs are then normalized per the actual volume of product handled, stored and shipped ([see volumetrics video](#)). This per unit cost is then expressed as a percentage of the total cost of goods and the resulting margin is thus calculated.

WHY ABC?

The question shouldn't be "Why ABC?" but "When?" It's critical now more than ever for supply chains to be lean and productive. ABC is the foundation to strong Key Performance Indicators (KPIs), efficient distribution center (warehouse) management and understanding the operations' true cost. Does your distribution center know their actual cost? Do they know day to day, month to month, and year to year true cost of operating their supply chains (Distribution Centers and Transportation)? Do they understand the cost drivers within their operations that impact those cost? Do they know how to adjust those drivers to become more efficient and productive, ultimately reducing operational cost?

If you answered no to any of the above, then you need ABC. USAID is shifting focus towards a true cost rather than the current value-based mark-up fee (adding a percentage fee based on the value of commodities). Using ABC methodologies allows for the distribution center to charge customers for the actual cost and not a product value-based "tax." ABC is capacity building in one of its greatest forms (empowerment).

BACKGROUND



ABC develops strong operational skills and definitive KPI's that will drive your team to operational excellence.

BENEFITS OF ABC

- Transparent real costs of activities over traditional value-based accounting
- Continuous improvement plans
- Identify individual products that are wasteful
- Understand the true cost of goods to inform pricing and purchasing policy
- Reveal unnecessary costs to eliminate
- Products pay their way - cost and storage are understood
- Activity Based Management (ABM)
- Develops enterprise logisticians
- Discover private sector operations skills
- Drives operational proficiency
- Supply chain capacity building

ACTIVE COUNTRIES / SUCCESS STORIES

Lesotho successfully implemented ABC in their operation in 2017.

Uganda/JMS is in phase III of ABC.

Rwanda/MPPD and Uganda/JMS are both currently actively implementing phase II of ABC.

Zambia has completed phase I.

Cameroon has ABC included it in their 2020 workplan.

HOW DO YOU GET THERE?

It's simple! ABC in its truest form is ABM. It's a phased- in approach that requires support for the change from the top of the organization to the bottom. It will require time be given within the operation for the changes to set in and take hold, approximately four to six weeks between phases. Each phase would require one expert in country for approximately two weeks (phase one may require two experts for more complex or larger supply chains).

A PHASED APPROACH

There are four (4) phases to ABC.

“The line between disorder and order lies in logistics.”

Sun Tzu

Chinese general, military, strategist, writer and philosopher

PHASE I / OVERVIEW AND DISCOVERY – LEVEL OF EFFORT (LOE) 10 DAYS IN COUNTRY

Education/Awareness: ABC is a multi-phased change management tool, using financial data to support supply chain operations and understand how decisions affect costs.

Scope: How much of the supply chain can or should be included in the costing tools.

Identify all existing supply chain cost activities: Review data, financial records, or systems capabilities under stakeholders' care and control that could preclude the application of ABC.

Interview key stakeholder staff: Determine which commodities or activities have similar characteristics or requirements.

Identify gaps in the implementation of activity-based costing Roadmap prior to phase II such as volumetric data requirements and job codes.

“The goal is to make the process from ordering to delivery of product efficient, cost effective, and accurate.”

Bruce Smith

Experienced leader in Supply Chain, Manufacturing, Finance, Six Sigma, and Process Improvement

PHASE II / IMPLEMENTATION – LOE 10 DAYS IN COUNTRY

Put into Action a Daily Planner/PDCA (Plan, Do, Check, Act). The PDCA is a tool to measure and coordinate all internal distribution center activities (Receiving, Put-Away/Replenishment, Selection, Loading). Correctly administered, it eliminates buffers in labor in each functional area.

See Annex A

Develop a Draft Labor Report. The labor report shows your labor cost compared to sales by each functional area of the warehouse (Receiving, Put-Away/ Replenishment, Selection, Loading). It provides insight as to when productivity is maximized.

See Annex B

Indirect Labor Allocation: Determine salary levels for all direct labor employees actively involved in handling and moving product in the warehouse. This information will be used to assign actual hourly costs to an activity.

PHASE III / CUSTOMIZATION – LOE 10 DAYS IN COUNTRY

Collect All Indirect Labor and Transportation Costs: Populate the labor report with payroll information and provide raw data for the draft ABC costing model.

“If you can’t measure it, you can’t improve it.”

Peter Drucker

Writer, teacher,
management consultant
and business visionary

Customize an HSS Database (Tool): Interface database with the specific payroll system to create customized hours tracking reports by function. These reports will be generated at the appropriate frequency to align financial costs to a specific function on the Labor Report. This activity is the critical point for future ABC efforts for the direct labor portion of the ABC model. Collaborate with finance and warehouse managements to assign all warehouse and transportation employees to a specific warehouse function within the HSS Access Database.

Transportation: Collect all monthly costs for transportation, including fuel, maintenance, depreciation, per diem, etc.

Support Labor Allocations: Conduct interviews to ascertain the percentage of support to a specific activity driver for all indirect labor costs, including customer service order entry, procurement, etc.

PHASE IV / OPERATIONALLY EQUIPPED – LOE 5 TO 10 DAYS IN COUNTRY

ABC Model: Customize the ABC-based costing model in collaboration with the Warehouse Operations Manager and Director of Finance. Validate all model assumptions using the unit specific financial documents listed in the ABC Data Collection Requirements Matrix.doc section 4.0. Use the validated model outcomes to determine new pricing structure and/or methodology. Make recommendations to senior staff and donor funding stakeholders on appropriate handling and storage fees.

OUTCOMES:

A variety of outcomes are possible within this activity:

- True supply chain operational cost (monthly & annually)
- Strong and measurable KPI’s
- Never pay for another costing study
- Capacity building

ABC REQUIRED RESOURCES

- Cooperation of all stakeholders
- Experience in supply chain and costing (knowledge transfer to local staff)
- Intermediate spreadsheet skills (Excel)
- Adequate time to collect data
 - **Volumetric** Data for every item/SKU must be captured
 - Job codes need to be created (within main job functions)
- Assess existing systems/interface for potential ad-hoc solutions
- Ad-hoc report creation
- Access to commodity throughput data, operating costs, as well as vehicle, building and equipment depreciation information

COST TO IMPLEMENT ABC IN A GHSC-PSM COUNTRY:

The cost of implementation is four (4) two-week Short Term Technical Assistance (STTA) over approximately six (6) months (LOE for STTA, international travel, in-country transportation costs). Please coordinate with the Warehousing and Distribution Team within Health System Strengthening at HSS_WHandDist_HQ@ghsc-psm.org.

KEY CONSIDERATIONS

- GHSC-PSM HQ staff is available to support implementation, leading to cost savings and a quicker response to country needs.
- STTAs will be conducted in four two-week phases across approximately six months.
- Field office staff are encouraged to participate in the training at each phase.
- See Cost estimates below.

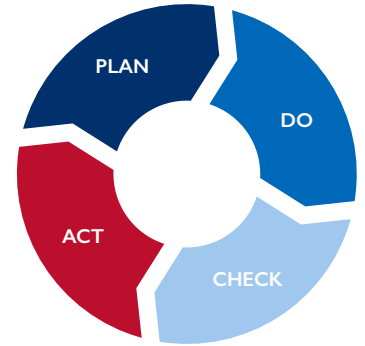
ANNEX A

The PDCA (Plan Do Check Act), Daily Planner is the foundation to a lean supply chain. It splits out the main operational functions of the distribution center. These functions fall under what is called Direct Labor, functions and activities that touch freight/product. These areas are cost drivers and once the operations team understands how these drivers work and interact, they can then begin to adjust them to increase productivity and reduce unnecessary cost. Once this practice and tool is set in place the operational team will not want to operate again without it.

CONTINUOUS IMPROVEMENT

The PDCA Cycle

- PLAN** Set a target for improvement.
- DO** Implement the plan.
- CHECK** Ensure the implementation is going well. See if actions have had the intended effect.
- ACT** Make this the new standard.



PDCA-Plan, Do, Check, Act-Daily Planner										
Day of the Week					Date					
Receiving / Off Loading					Required # of empl.	# Empl Used	Put-Away / Replenishment			
# of Eaches	32000				9.2	8	75000			
					Required # of empl.	# Employee Used				
					6.9	7				
Name										
1 Khalid _____		7 Sean _____		2 Andrew _____		6 Nagesh _____				
2 Kate _____		8 Juan _____		3 Gurivi _____		7 Stefania _____				
3 Susi _____		9 _____		4 Allan _____		8 _____				
4 Eliza _____		10 _____		5 Steve _____		9 _____				
5 Xavier _____		11 _____		6 Chris _____		10 _____				
					Dispatch/Loading		Required # of empl.	# Employee Used		
					# of Cartons	68500		8.5	8	
Picking					Required # of empl.					
# of Eaches	270				0.2					
					# Empl Used					
					8					
1 Ralph _____		9 Cherif _____		1 John _____		7 Ella _____				
2 Jamey _____		10 _____		2 Dan _____		8 Michael _____				
3 Rene _____		11 _____		3 Ashley _____		9 _____				
4 Max _____		12 _____		4 Swaroop _____		10 _____				
5 Kate _____		13 _____		5 Mohammad _____		11 _____				
6 Ishan _____		14 _____		6 Paul _____		12 _____				
7 Maqsoda _____		15 _____								
8 Ryan _____		16 _____								
Required Hours					198					
Employees Used					39					
Comments for Receiving / Off-Loading:										
Comments for Put-Away:										
Comments for Picking:										
Comments for Dispatch & Loading:										

ANNEX B

The labor report captures labor cost compared to the amount of sales per month. Through-put is an output of this report, a grade per say on how you managed the labor against the received and shipped product. Through-put is simply total units received and shipped, divided by the total hours used to preform that task. It is a measure of productivity and provides insight as to when profits are maximized. The Labor Report is customized to the fit each operation.

Example of Labor Report

Monthly Labor Report-Throughput & Activity Based Financial Performance Tracking

Month Ending	June			Period to Date
Period Number	3			
Actual	% to \$		Actual	% to \$
\$ 57,286,900			Sales	121,703,503
			Receiving	
450,339			Units	2,670,902
1,730			Regular Hours	5,190
1,862	7.09%		Total	5,624
66,141		0.12	Cost	200,944
242			Throughput	475
			Put-Away	
210,508			Units	626,038
692			Regular Hours	2,076
786	11.96%		Total	2,481
19,633		0.03	Cost	64,387
140			Throughput	132
			Selection	
228,086			Units	612,875
1,557			Regular Hours	4,498
1,676	7.10%		Total	4,945
40,046		0.07	Cost	125,338
80			Throughput	110
			Loading	
228,086			Units	612,875
692			Regular Hours	2,076
767	9.78%		Total	2,291
27,087		0.05	Cost	80,618
572			Throughput	541
			All	
888,933			Units	3,909,815
6,649			Regular Hours	19,764
7,189	7.51%		Total	21,743
268,415		0.47	Cost	831,931
124			Throughput	180

ANNEX C

An Executive Dashboard is a reporting tool that provides a visual display of organizational KPIs, metrics, and data. The objective of executive dashboards is to give directors and executives an at-a-glance visibility into business performance across all units.

Example of Executive Dashboard

Year to Date Sales																		
Actual	Projected	Variance																
\$ 380,992,044	\$ 279,289,565	\$ 101,702,479	Distribution Center						All	Transportation/Customer Service								All
Cumulative	Monthly Sales	Throughput	Wages	Overtime %	Labor % of Sales	DC Assessment	Wages	Labor % of Sales	Fuel \$	Fuel Usage	Fleet Cost	Kilometers	\$ per Kilo	Fleet Yield-U.P.H.	Kilos per Litre	Labor % of Sales		
November	\$ 22,919,094	144	\$ 325,796	17.34	1.42	82.7	\$ 79,418	0.0035	\$ 80,990	7,632	55,743	63,891	\$0.30	294	8.37	1.423		
December	\$ 148,083,516	417	\$ 256,832	4.89	0.17	83.76	\$ 79,418	0.0005	\$ 69,616	6,567	55,743	48,266	\$0.24	259	7.35	0.171		
January	\$ 12,734,618	221	\$ 257,823	5.14	2.02	86.29	\$ 79,418	0.0062	\$ 72,532	6,761	55,743	45,191	\$0.22	289	6.68	2.026		
February	\$ 13,626,858	130	\$ 236,778	0.86	1.74	84.2	\$ 79,418	0.0058	\$ 59,214	5,817	55,743	47,976	\$0.25	241	8.25	1.746		
March	\$ 60,277,238	424	\$ 251,348	4.59	0.42	85.16	\$ 79,418	0.0013	\$ 75,451	7,189	55,743	54,046	\$0.26	305	7.52	0.421		
April	\$ 10,062,444	197	\$ 253,421	5.14	2.52	75.78	\$ 79,418	0.0079	\$ 63,380	6,437	\$55,743	53,485	\$0.27	248	8.31	2.528		
May	\$ 12,940,872	116	\$ 254,640	5.65	2.07	N/A	\$ 79,418	0.0061	\$ 58,281	6,307	\$55,743	56,472	\$0.29	253	8.95	2.076		
June	\$ 12,273,654	178	\$ 254,640	3.38	2.07	N/A	\$ 79,418	0.0065	\$ 65,968	6,934	\$55,743	45,615	\$0.23	301	8.74	2.076		
July	\$ 18,645,976	134	\$ 307,479	13.32	1.65	N/A	\$ 79,418	0.0043	\$ 49,269	5,640	\$55,743	49,269	\$0.27	228	8.74	1.654		
August	\$ 37,677,188	207	\$ 262,637	5.07	0.7	N/A	\$ 79,418	0.0021	\$ 63,905	6,934	\$55,743	52,527	\$0.26	368	9.22	0.702		
September	\$ 20,755,726	166	\$ 288,533	9.48	1.39	N/A	\$ 79,418	0.0038	\$ 60,122	7,002	\$55,743	52,731	\$0.27	281	8.59	1.394		
October	\$ 10,994,860	146	\$ 290,759	8.69	2.64	N/A	\$ 79,418	0.0072	\$ 47,286	5,351	\$55,743	33,065	\$0.18	245	8.84	2.647		
Average	\$ 31,749,337	207	\$ 270,057	6.96	1.57	82.86	\$ 79,418	0.0054	\$ 61,541	\$ 6,437	\$55,743	49,038	\$0.25	276	8.77	1.73		