

## Supplement

**Table S1. List of costable elements with sources and assumptions.** These include costs that are used iteratively throughout the costing calculations which can also be edited by the end user.

Cost name	Description	Default (USD 2017)	Sources and assumptions
Annual salary 1 (low)	Annual salary for an entry-level employee such as an assistant, manager, coordinator, IT Specialist, Public Relations Officer, or other entry-level position	16,000 USD per year	Approximation based on WHO-CHOICE personnel costs ( <a href="http://www.who.int/choice/costs/prog_costs/en/">http://www.who.int/choice/costs/prog_costs/en/</a> ).
Annual salary 2 (mid)	Annual salary for a mid-level employee such as a Public Health Specialist, lawyer, or other mid-level position	26,000 USD per year	
Annual salary 3 (high)	Annual salary for a high-level employee such as a Public Health Director or other high-level position	40,000 USD per year	
Consultant fees (daily)	Daily fees and per diem for a typical consultant to provide expert advice and support (e.g., review legislation, draft plans, facilitate exercises)	1,000 USD per day	Fees per day (750 USD) plus daily per diem (298 USD), rounded to nearest hundred. Default fees per day is UN Level D maximum daily rate established October 2013 (Source: ST/AI/2013/4). Default per diem is official WHO/UN per diem for Nairobi, Kenya.
Consultant travel	Per trip travel expenses for a typical consultant	1,200 USD per trip	Cost of typical roundtrip airfare from US or Europe to national capital (1,200 USD). Based on average round-trip airfares from Washington, DC USA to multiple African and Asian air hubs with 30-day advance purchase.

<b>Cost name</b>	<b>Description</b>	<b>Default (USD 2017)</b>	<b>Sources and assumptions</b>
Trainer / supervisor per diem, with meals	Per diem for trainer / supervisor that includes meals to provide training and oversight (e.g., conduct training sessions, audit surveillance systems, evaluate reporting)	105 USD per day	Default domestic per diem (105 USD) is WHO-CHOICE National-Level Per Diem in USD 2017 ( <a href="http://www.who.int/choice/costs/prog_costs/en/index10.html">http://www.who.int/choice/costs/prog_costs/en/index10.html</a> ).
Cellular phone (per person)	Cost of a mobile phone (per person)	300 USD per phone	Divided approximate handset cost (200 USD) over 5 years and added to approximate annual cellular data plan cost (240 USD), rounded to nearest fifty. Handset cost based on typical range of handset costs (examples: <a href="https://www.safaricom.co.ke">https://www.safaricom.co.ke</a> ; <a href="https://www.statista.com/statistics/283334/global-average-selling-price-smartphones/">https://www.statista.com/statistics/283334/global-average-selling-price-smartphones/</a> ).
Cellular and data plan (per person)	Cellular and data plan for mobile phone (cost per person)	250 USD per phone per year	Informed by regional costs per smartphone user from ICT ( <a href="http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2016/MISR2016-w4.pdf">http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2016/MISR2016-w4.pdf</a> ). Also compared to 4 sequential Safaricom 90-day plan costs (240 USD), rounded to nearest fifty ( <a href="https://www.safaricom.co.ke">https://www.safaricom.co.ke</a> ).
Computer system with office software (per person)	Computer system with standard office productivity software (cost per person)	750 USD per system	Approximate desktop computer cost (544 USD) plus approximate office software cost (200 USD), rounded to nearest fifty. Desktop computer cost is approximate average worldwide ( <a href="https://www.statista.com/statistics/203759/average-selling-price-of-desktop-pcs-worldwide/">https://www.statista.com/statistics/203759/average-selling-price-of-desktop-pcs-worldwide/</a> ). Software cost is 2017 institutional monthly per-user licenses for Microsoft Windows and Office 365 Business.
Office broadband data plan	Annual cost for office-wide broadband computer internet access (per office)	600 USD per year	Approximated annual broadband cost ( <a href="http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2016/MISR2016-w4.pdf">http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2016/MISR2016-w4.pdf</a> ).

<b>Cost name</b>	<b>Description</b>	<b>Default (USD 2017)</b>	<b>Sources and assumptions</b>
Office cost per square meter (to lease)	Cost of leasing office space per square meter (tool calculations assume WHO-CHOICE estimate of 8 square meters per employee)	135 USD per square meter per year	Assumes space is rented. Annual rent cost estimated based on rent of large commercial building in Kilimani, Kenya (about 132 USD per square meter per month, rounded to nearest five). Source: <a href="http://www.buyrentkenya.com/">http://www.buyrentkenya.com/</a>
Office cost per square meter (to buy)	Cost of purchasing office space per square meter (tool calculations assume WHO-CHOICE estimate of 8 square meters per employee)	1,580 USD per square meter	Assumes building is purchased. Purchase cost estimated based on cost of large commercial building in Kilimani, Kenya (about 1578.69 USD per square meter, rounded to nearest five). Source: <a href="http://www.buyrentkenya.com">http://www.buyrentkenya.com</a>
Small print job	Cost per small print job (10 - 200 pages)	10 USD per copy	0.05 USD per page for 200 pages. Based on industry low-end estimate for black and white printing.
Large print job	Cost per large print job (> 200 pages)	25 USD per copy	0.05 USD per page for 500 pages. Based on industry low-end estimate for black and white printing.
Meeting - Small	Cost to hold a small, full-day meeting, including those that are training sessions or workshops, assuming 15 attendees	500 USD per day	Assumes about 30 to 35 USD per person, which includes approximate cost of stationery, refreshments, other incidentals, and venue; does not include per diems.

<b>Cost name</b>	<b>Description</b>	<b>Default (USD 2017)</b>	<b>Sources and assumptions</b>
Meeting - Medium	Cost to hold a medium, full-day meeting, including those that are training sessions or workshops, assuming 30 attendees	1,000 USD per day	
Meeting - Large	Cost to hold a large, full-day meeting, including those that are training sessions or workshops, assuming 85 attendees	3,000 USD per day	
Per diem for meeting - Domestic	Domestic per diem for attendees of meetings (cost per person)	105 USD per day	Default domestic per diem (105 USD) is WHO-CHOICE National-Level Per Diem in USD 2017 ( <a href="http://www.who.int/choice/costs/prog_costs/en/index10.html">http://www.who.int/choice/costs/prog_costs/en/index10.html</a> ).
Per diem for meeting - International	International per diem for attendees of meetings (cost per person)	298 USD per day	Default international per diem (298 USD) is official WHO/UN per diem for Nairobi, Kenya ( <a href="http://apps.who.int/bfi/tsy/PerDiem.aspx">http://apps.who.int/bfi/tsy/PerDiem.aspx</a> ).