OUTSOURCED TRANSPORT
RESOURCE CENTER
The Challenge

Regular, secure, and quality transport of medicines requires sufficient and well-organized transport assets and staff. But governments typically struggle to buy, operate and maintain transport assets resulting in infrequently delivered and stockouts. Using private sector transport partners to manage/execute transport can be the solution.

The Opportunity: OUTSOURCED TRANSPORT
What is Outsourced Transportation?

**Outsourcing** - Outsourcing involves hiring a party outside an organisation to perform services and create goods that traditionally were performed in-house by the organisation’s own employees and staff. Outsourcing in the supply chain is a process of moving a segment, or segments, of the supply chain from within the organisation to an outside supplier. Examples of supply chain segments that can be transitioned to outside suppliers include production, procurement, warehousing, distribution, transport, etc.

Source: OSTK [https://www.ostkonline.com/](https://www.ostkonline.com/)

**Transport outsourcing key terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Party Logistics (3PL)</td>
<td>A third party that provides product delivery services. This third party may provide added supply chain expertise.</td>
</tr>
<tr>
<td>Fourth Party Logistics (4PL)</td>
<td>Fourth Party Logistics differs from third party logistics in the following ways:</td>
</tr>
<tr>
<td>1. The 4PL organisation is often a separate entity formed by a joint venture or other long-term contract between a client and one or more partners</td>
<td></td>
</tr>
<tr>
<td>2. The 4PL organisation is an interface between the client and multiple logistics services providers (3PLs)</td>
<td></td>
</tr>
<tr>
<td>3. Ideally all aspects of the client’s supply chain are managed by the 4PL organisation</td>
<td></td>
</tr>
<tr>
<td>4. It is possible for a major 3PL organisation to form a 4PL organisation within its existing structure</td>
<td></td>
</tr>
</tbody>
</table>

### From theory to Practice

**Last mile supply chain in Mozambique**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>99.0%</td>
<td>of all deliveries distributed according to plan</td>
</tr>
<tr>
<td>99.5%</td>
<td>of all deliveries received in full (matching quantity sent/received)</td>
</tr>
<tr>
<td>78.0%</td>
<td>of all deliveries made to health facilities within 25-35 days</td>
</tr>
</tbody>
</table>

Based on results through September 2021, LMSC contributed to ensuring health facilities in all provinces received commodities, consistently, in full and on time:


**Last mile drone transport in DRC**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>98.0%</td>
<td>vaccine availability</td>
</tr>
<tr>
<td>98.0%</td>
<td>% facilities stocked according to plan</td>
</tr>
<tr>
<td>00.0%</td>
<td>% facilities with stockouts</td>
</tr>
</tbody>
</table>

Over the last 20 months, outsourced drone transport contributed to ensuring health facilities in Equateur province received commodities, consistently, in full and on time:

Outsourcing Transport in public health requires work in three areas

### 1. Government Strategy Development and Capacity Development
- Develop govt. strategy for use of outsourcing
- Define capacity development needs
- Define financing plan for sustainability
- Implement govt. capacity development and financing plans

### 2. Transport Industry Engagement and Capacity Development
- Inform private sector about the opportunity and how to engage
- Assess the transport market and capacity to respond to govt. needs/tenders
- Develop private sector capacity to reach needed standards

### 3. Outsourced Transportation Implementation

#### 1. Prepare
- Define strategies and implement agreements
- Define Outsourcing Strategy
- Define government service needs and develop RFPs
- Develop contracts with 4PL and/or 3PLs
- Sign MoU between stakeholders
- Sign Service Level Agreements

#### 2. Start Up
- Define SOPs and conduct training for initial scope
- Agree Standard Operating Procedures
- Identify target locations
- Train govt. staff
- Train 4PLs/3PLs

#### 3. Ramp-Up
- Expand implementation and implement regular reviews
- Implement improvement plans
- Expand implementation to full scope
- Conduct Monthly and Quarterly Performance reviews, including cost reviews
- Set targets for on-going performance

#### 4. Sustain
- Improve performance and update SOPS
- Evaluate implementation and impact
- Update the SOPs and associated Toolkits
- Transition Strategy development

#### 5. Transition to Government
- Transition management of OT to government personnel
- Transition Readiness Assessment
- Transition Planning
- Transition Execution
Outsourcing Transport - Obstacles in Public Health

Private Sector obstacles

- Low understanding of public health challenges and of the overall ecosystem
- Private sector transporters missing needed capabilities to guarantee quality deliveries, provide needed data for management and ensure on-going continuous improvement
- Public sector seen as slow to pay invoices
- Public sector service needs and RFPs may not be clearly formulated
- Public sector clock speed is slow; hard to reconcile with private sector
- Considered as “just a supplier” by public sector

Difficult to even start discussions between private and public sectors

- Outsourcing efforts too small to have a meaningful impact
- Outsourcing efforts are short-term and not scalable

How to Bridge the Gap?

Public Sector obstacles

- Low understanding of the private sector
- Limited understanding of the range of outsourcing options available
- Limited experience or capacity in managing private sector relationships
- Negative perception of the private sector as “too expensive”, potential conflict(s) of interest
- Difficult to promote outsourcing without a government strategy
- “Collaborative” working with private sector needed to unlock efficiencies is not well understood
Outsourced Transport Resource Center - Overview

OTRC, funded by BMGF, works in Sub-Saharan Africa to enhance public health supply chains by leveraging private sector transport. Serving as a catalyst, OTRC improves outsourcing skills of partners and government staff for effective implementation. The initiative provides free support, tools, coaching, and training to ensure successful outsourcing. Additionally, OTRC conducts assessments and evaluations to assist government decisions on adopting outsourcing practices.

Objective

1. Increased the number of countries catalyzed to adopt outsourcing, with at least 6 countries, in addition to Mozambique
2. Provide high quality technical assistance in their transportation/warehouse outsourcing journey
3. Development tools, SOPs, guidelines to support stakeholders in implementing the outsourcing in their public health supply chain
4. Implement coaching and training session to the interested stakeholders
Outsourced Transport Resource Center services

- Government education on value and pre-requisites for outsourcing
- Private sector participation development

Outsourced Transport Resource Center

Supporting Government & technical partners to implement Outsourced Transport

- Transition Strategy development
- Transition Readiness Assessment
- Transition Planning

Advocacy

• Government capacity development
• Transporter capacity development
• Outsourced transport implementation planning

Strategy

- Transport market capability assessment
- Land- vs. air-based (drone) transport assessment
- Social impact assessment
- Government outsourcing strategy development including for drone transport
- Government service needs definition
- Outsourced Transport performance evaluation framework
- Transport costing

Implementation Support

• 4PL, 3PL and drone transport service provider contracting support
• RFP and Service Level Agreements development
• Cost management
• Performance management for outsourcing
• 4PL, 3PL and drone transport service provider performance management

Transition to government

Supporting Govt. & technical partners to implement Outsourced Transport
OTRC Experience profile – Last mile supply chain program

Description of overall program objectives, challenges, and outsourcing needs

- **Objective**: The program was conducted in 2018-2023 and aimed to improve the effectiveness and efficiency of the transport of health products.
- **Challenges**: The government faced several challenges, including out-of-stock, delays in deliveries, and a lack of the necessary skills and tools to effectively manage distribution operations. These challenges were impacting the efficiency and effectiveness of the supply chain for health products.
- **Outsourcing support need**: Strategy, planning and implementation support to address these challenges.

OTRC services provided

- Transport market capability assessment
- Government outsourcing strategy development
- Government service needs definition
- Social impact assessment
- Implementation planning support
- Outsourced Transport performance framework
- Government & transporter capacity development
- Outsourced transport implementation planning
- 4PL and 3PL contracting support and performance management
- RFP and Service Level Agreements development
- Transport costing and cost management

OTRC support scope

- Mozambique
- Ethiopia (focus on transport market assessment)

Key results

LMSC ensured health facilities in all provinces received commodities consistently, in full, and on time.

- 99% of all commodities deliveries were distributed according to plan.
- 99.5% of all deliveries were received in full.
- 78% of all deliveries to health facilities were made within 25-35 days.
OTRC Experience profile – Polio Lab Sample Transportation

Description of overall program objectives, challenges, and outsourcing needs

- **Objective:** Implement Polio Labs sample transport program across 14 African countries to improve polio sample transportation.
- **Challenges:** Data problems in some countries, difficulty in collecting complete data, and issues with sample arrival date and quality data.
- **Outsourcing support need:** Engage private sector transporters for quality, timeliness, and data availability improvements. Assistance required for Implementation Support due to the new approach for many governments and partners

<table>
<thead>
<tr>
<th>OTRC services provided</th>
<th>OTRC support scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Government capacity development</td>
<td>• Cameroon</td>
</tr>
<tr>
<td>• Transporter capacity development</td>
<td>• Chad</td>
</tr>
<tr>
<td>• Outsourced transport implementation planning</td>
<td>• Democratic Republic of Congo</td>
</tr>
<tr>
<td>• 4PL and 3PL contracting support</td>
<td>• Guinea</td>
</tr>
<tr>
<td>• RFP and Service Level Agreements development</td>
<td>• Malawi</td>
</tr>
<tr>
<td>• Transport costing and cost management</td>
<td>• Mozambique</td>
</tr>
<tr>
<td>• 4PL and 3PL performance management</td>
<td>• Niger</td>
</tr>
<tr>
<td></td>
<td>• Nigeria</td>
</tr>
</tbody>
</table>

**Key results**

In most countries, time for polio sample transportation reduced, and sample quality improved.

- **Guinea:** Average transport time decreased from 6.5 days in 2022 to 3.2 days (Jan-May 2023), with 100% of samples arriving in good condition.
- **Malawi:** Average transport time reduced from 5.8 days in 2022 to 2.0 days (Jan-May 2023).
- **Mozambique:** Average transport time for on-demand system samples decreased from 12.1 to 6.4 days.
# OTRC Experience profile – Drone Transportation

## Description of overall program objectives, challenges, and outsourcing needs

- **Objective:** The program aimed to improve health products transport effectiveness, efficiency, and reverse logistics to/from remote and hard to reach facilities.

- **Challenges:** The government faced several challenges, including out-of-stock, delays in deliveries, poor lab. sample quality, and high cost of transport. These challenges were impacting the efficiency, cost, and cost-effectiveness of the health supply chain in remote and hard to reach locations.

- **Outsourcing support need:** Strategy, planning and implementation support to address these challenges.

## OTRC services provided

<table>
<thead>
<tr>
<th>OTRC services provided</th>
<th>OTRC support scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify &amp; evaluate use case(s) opportunity/ies based on local context</td>
<td>DR Congo</td>
</tr>
<tr>
<td>Assistance in navigating Civil Aviation Authorities and other regulatory bodies to obtain mandatory authorizations</td>
<td>Malawi</td>
</tr>
<tr>
<td>Selection of drone OEM/transport service provider</td>
<td>Mozambique</td>
</tr>
<tr>
<td>Facilitate drone equipment importation</td>
<td>Central African Republic</td>
</tr>
<tr>
<td>Design drone transportation network</td>
<td>Dominican Republic</td>
</tr>
<tr>
<td>Sensitize local communities to the utilization of the solution</td>
<td></td>
</tr>
<tr>
<td>Provide initial oversight of drone transport services and/or ongoing role as liaison with relevant government ministries</td>
<td></td>
</tr>
<tr>
<td>Monitor and evaluate service</td>
<td></td>
</tr>
<tr>
<td>Facilitate capacity building and tool development</td>
<td></td>
</tr>
</tbody>
</table>

## Key results

Outsourced to drone transport ensured remote and hard to reached health facilities received commodities consistently, in full, and on time.

- **DR Congo:** Stock outs decreased from 6-24% to 0% (tracer vaccines); Transport time decrease from 2 days to <2 hours for 50% of facilities (EPI products); Vaccine availability increased from 78% to 94%.

- **Malawi:** Stock outs decreased from 12 to 2 days (essential medicines); Turn around time decreased from 16 to 2 days (HIV samples).

- **Mozambique:** Turn around time decreased from 19 to 11 days (HIV VR); Waiting time for referral down from 3 to 2 days (HIV VR).
For more information:

Outsourced Transport Resource Center Webpage otrcsupport.org

For more information on the OTRC approach, please contact
Angelina Cumba — Outsourced Logistics Expert & Team Lead of OTRC
angelina.cumba@villagereach.org
Tel: +258 850570762

Pour plus d’information sur l’OTRC en français:
Cedric Ekembe — Outsourced Transport Advisor of OTRC
cedric.ekembe@villagereach.org
Tel: +243 813260616

For more information on the Outsourcing Perception Survey
Angelo Langa — Outsourced Transport Technical Assistant
Angelo.langa@villagereach.org
Tel: +258 846987413

For more information on the OTRC approach and the OTRC toolkit
Esselina Brito — Outsourced Transport Advisor of OTRC
esselina.brito@village reach.org
Tel: +258 864708872
<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICES</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
</table>
| Advocacy     | Government education on value and pre-requisites for outsourcing | Government understanding and adoption of outsourced transport | • Provide attitude/perception survey tools  
• Support development of event objectives (conferences, workshops, etc.) | • Country interest to explore the opportunity for outsourcing transport in their PHSC  
• Countries that are interested in implementing outsourcing for their Public Health Supply Chain (PHSC) need to evaluate the potential opportunity |
|              | Private sector participation development | Support private sector participation in public health system transport | • Provide needed materials  
• Co-delivery for conferences/workshops  
• Support development of promotional videos | • Private sector firms committed to collaborate with MOH  
• Private sectors firms improving their infrastructure, HR and services to reach needed standards |
| Strategy     | Transport market assessment | Conduct transport assessment to understand availability and capability of transport resources in the country | • Provide tools for market assessment  
• Review assessment results | • Identify the gaps from the private sector and implement action plan to develop the local market  
• Land- vs. air- based (drone) transport assessment |
<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICES</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
</table>
| Social Impact | Foresee the significant and positive changes caused by outsourcing that aimed to improve the well being | • Provide tools and questionnaire to be implemented  
• Analyzing transport needs to improve healthcare access | • Government and society with evidence of the results of the outsourcing their PHSC |
| Develop country strategy and roadmap for outsourced transportation of health commodities including for drone transport | Work with government stakeholders to develop an Outsourcing Strategy and roadmap | • Define strategies and implement agreements  
• Provide tools for strategy development covering services, 4PL vs 3PL model, multi-supplier strategy, funding sources, geographical scope and implementation timeline.  
• Co-delivery of strategy development | • Government developed strategy that promotes OT in PHSC  
• Existence of private sector firms with the qualification required to collaborate with government |
| Government service needs definition | Outlines the comprehensive services required for implementation by both the government and private sector, fostering transparency and ensuring a productive partnership | • Jointly facilitate workshop implementation with stakeholders.  
• Supply tools and guides for collecting necessary services following existing SOPs. | • Government SOPs and guides have been revised and updated.  
• Private sector possesses approved tools, templates, and guides endorsed by the government. |
| Outsourced Transport performance evaluation framework | Establish a framework for assessing Key Performance Indicators (KPIs) post-implementation to drive ongoing enhancements. | • Formulate strategies and synchronize evaluation frequency.  
• Specify roles and responsibilities for assessing each KPI. | • Performance framework developed |
| Transport costing | Generate an annual cost estimation for outsourced transportation, incorporating capital and operating expenses, to be used as input for budgeting and donor funding solicitations | • Provide the tools and templates utilized to offer a comprehensive and transparent breakdown of the incurred costs | • Cost element for monthly review agreed |
## Outsourced Transport Resource Center services (3/8)

### General services offered

<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICES</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
</table>
| Implementation support                    | Government capacity development | The government is prepared to initiate, expand, and conduct routine reviews of the implementation process. | • Collaboratively conduct workshops with government personnel to grasp existing competencies.  
• Jointly execute surveys among pertinent stakeholders to capture essential competencies required from the government’s perspective. | • Government minimum competencies developed                                         |
| Transporter capacity development          | Private transportation companies are prepared to furnish the necessary services for a collaborative partnership with the government. | • Guiding pertinent stakeholders to offer necessary training to private sector firms.  
• Collaboratively creating guidelines to guarantee a private sector action plan for continuous improvement. | • Private sector minimum competencies developed                                      |
| Support outsourced transport implementation planning | Develop 3-year roadmap with year 1 workplan covering implementation and pre-requisites | • Provide readiness assessment  
• Provide descriptions of phase, steps and deliverables  
• Provide roadmap template  
• Co-develop/Co-delivery Implementation Plan  
• Coach/Train government TA partners on Implementation Plan development | • Improvement of the implementation strategy according the in-country need  
• Development of government and technical partners skills for OT management          |
<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICES</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation support</td>
<td>4PL, 3PL and drone transport service provider contracting support</td>
<td>Develop government stakeholders’ capability to apply transport procurement best practices</td>
<td>• Provide tools for 3PL and 4PL company evaluations                                       • Contracted the 4PL and 3PL with the requirements needed in-country</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Co-deliver training of govt. personnel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Organize capacity building sessions with target 4PLs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Define and agree standard operating procedures (SOPs)</td>
<td></td>
</tr>
<tr>
<td>RFP and Service Level Agreements development</td>
<td></td>
<td></td>
<td>• Provide examples of Request for Proposals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Co-deliver training of govt. personnel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Organize capacity building sessions with target 4PLs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Define and agree standard operating procedures (SOPs)</td>
<td></td>
</tr>
<tr>
<td>Support outsourced cost management</td>
<td></td>
<td>Assisting in managing outsourced costs effectively.</td>
<td>• Provide an outsourced transport cost model for operating</td>
<td>• Identify opportunities for cost management improvement;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Generate standard cost reports for managing transportation expenses.</td>
<td>• Sustainable outsourcing model implemented in country;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Supply tools for conducting Transport Cost Reviews.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Collaboratively create and deliver yearly cost estimates for outsourced transport.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Develop and deliver tools for cost reporting and reviews.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Coach and train TA partners in creating annual cost estimates for outsourced transport.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Coach and train TA partners in performing cost reporting and reviews.</td>
<td></td>
</tr>
</tbody>
</table>

General services offered
## General services offered

<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICES</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
</table>
| Implementation support| Support 4PL and 3PL performance management | Conduct monthly and quarterly performance reviews, including cost reviews to manage 4PLs/3PLs according to the SLA and support Government and Private Sector collaboration | • Co-identify the KPIs  
• Provide tools to evaluate the 4PL/3PL performance and impact  
• Provide tools and template for performance reviews  
• Provide coaching on Monthly Operational Performance reviews  
• Provide coaching on the Quarterly Joint Performance review  
• Update the SOPs and associated Toolkits | • Actively TWG to evaluate the outsourcing distribution performance  
• Action plan development and follow up; |
## Drone transport-related services offered

<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICE</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation &amp; support</td>
<td>Proof-of-Concept Adoption</td>
<td>Identify use case(s) opportunity/ies based on local context</td>
<td>• Use VillageReach’s aggregated data and learnings to inform proof of concept and business plan.</td>
<td>Proof of concept document</td>
</tr>
<tr>
<td></td>
<td>Feasibility</td>
<td>Evaluate opportunity/ies, potential challenges and mitigation actions</td>
<td>• Undertake feasibility assessment.</td>
<td>Feasibility report</td>
</tr>
<tr>
<td>Authorization</td>
<td>Provide assistance in navigating Civil Aviation Authorities and other regulatory bodies to obtain mandatory authorizations</td>
<td>• Organize working sessions with Civil Aviation Authorities and other regulatory bodies • Provide TA in completing authorization applications • Submit authorization documents</td>
<td>Authorization application submitted to relevant authorities</td>
<td></td>
</tr>
<tr>
<td>Procurement</td>
<td>Facilitate the selection of drone OEM/transport service provider</td>
<td>• Developing and publishing international RFI/RFP • RFI/RFP responses analysis • For shortlisted candidates, conduct interview, check references and/or visit manufacturing and testing facilities</td>
<td>Contract and SLA signed</td>
<td></td>
</tr>
<tr>
<td>Importation</td>
<td>Facilitate drone equipment importation</td>
<td>• Coordinate with customs and relevant importation authorities, • Coordination with chosen in-country service provider/operator</td>
<td>Drone equipment available in country</td>
<td></td>
</tr>
</tbody>
</table>
## Drone transport-related services offered

<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICE</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
</table>
| Implementation & support   | Network Design               | Design drone transportation network                                                | • Facilitate data collection required for network design  
• Organize and facilitate network design workshop  
• Summarize and consolidate network design outcomes | Network design report                      |
|                            | Community Outreach           | Sensitize local communities to the utilization of the solution                    | • Design & implement community perception surveys  
• Develop communication and outreach strategy  
• Implement community outreach | Relevant communities sensitized to the solution                             |
|                            | Operation Oversight          | Provide initial oversight of drone transport services and/or ongoing role as liaison with relevant government ministries | • Oversee drone transport services  
• Define mitigation actions when needed  
• Liaise/report regularly with relevant governmental authorities | Smooth ongoing operations                |
|                            | Monitoring & Evaluation      | Monitor and evaluate service according to agreed service level agreement          | • Manage drone transport service data collection  
• Conduct performance evaluations (including impact & sustainability metrics)  
• Provide performance updates at agreed intervals | Monitoring & evaluation report(s)            |
|                            | Training                     | Facilitate capacity building and tool development                                  | • Organize and facilitate training sessions with government staff on solution use and its implementation  
• Organize and facilitate training sessions with solution provider and local service provider/operator staff on local health supply chain processes | Trained work forces                  |
## Outsourced Transport Resource Center services (8/8)

### General services offered

<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICES</th>
<th>SHORT DESCRIPTION</th>
<th>TYPICAL ACTIVITIES AND TOOLS</th>
<th>DELIVERABLE/OUTPUT</th>
</tr>
</thead>
</table>
| Transition to Government or Government TA partner | Develop Transition Strategy | Develop a Transition Strategy that describes which organization will be responsible for specific elements of the outsourced transport solution post-transition | • Provide templates of Transition Strategy  
• Provide guidance for TS  
• Co-facilitate the workshop to define the TS  
• Work with TA partners to develop transition strategy aligned with Government strategy to execute the transition | • Commitment from all stakeholders in TW process development;  
• Clearly guidelines and involvement of all stakeholders in TW process |
| Conduct Transition Readiness Assessment (TRA) | Conduct Transition Readiness Assessment to understand the capability of each stakeholder to manage specific elements of the outsourced transport solution | • Provide TRA tools to be used as capacity building tools and sustainability  
• Co-deliver TRA reports  
• Coach/Train the TA partner to execute the assessment | • Action plan developed that focus in development of skills according identify to the gaps |
| Develop Transition Plan | Develop the Transition Plan that includes all activities needed to reach the end-state described in the Transition Strategy | • Provide Transition Plan tools and guidance  
• Review Transition Plan performance  
• Provide coaching and mentorship on Transition Plan implementation | • Commitment from all stakeholders in developing the TW plan |
The Outsourced Transport Resource Center – Examples of Resource

Outsourcing Perception Survey

Advocacy material (video, presentation, etc.)

Technical notes

For more information about the Outsource Transport Resource Center and its resources, please click this link
Operating principles of the Outsourced Transport Resource Center

1. Focus on developing the **capacity** of Technical Partners and, or Governments directly to support the implementation of outsourced transportation; do not replace or do work targeted by existing in-country government TA partners

2. Support a Technical Partner only when Government **expresses interest** in outsourcing transportation

3. Support **3PL and 4PL capacity development**, so they are qualified to work with Governments, as part of OTRC work with an in-country technical partner

4. Technical Partner role: to **work directly with 4PLs or 3PLs in contracting** to implement outsourcing transportation, **fund the costs** of transport; OTRC to only provide support
Technical Partners supporting Government already have many capabilities; OTRC will help the technical partner fill capability gaps related to outsourced transport.
Countries will be at different starting points

OTRC support can be injected at any phase

- **EXPLORE**
  - Country wants to understand benefits of outsourcing and assess the opportunity

- **PLAN**
  - Country has started planning implementation and wants to enrich their plans

- **IMPLEMENT**
  - Country has started implementing outsourcing and wants to strengthen its implementation approach

- **OPTIMIZE**
  - Country wants to improve the delivery, quality or cost of the existing outsourced solution

- **TRANSITION**
  - Outsourced solution managed by a technical partner is to be transferred to Govt. management
Who developed this toolkit?
The Outsourcing Toolkit (OSTK) project is directed by Africa Resource Centre (ARC), with the delivery team – Lighthouse Strategic Leadership (LSL). The OSTK has been developed with support from the United States Agency for International Development (USAID), the Global Fund to Fight Aids, Tuberculosis and Malaria (The Global Fund), and the Bill & Melinda Gates Foundation. Read more about the development on the Acknowledgements page. https://www.ostkonline.com/ostk1-0
How do you engage with the OTRC?
Engaging with the OTRC is a 4-step process

**Pre-intervention**

1. **Govt. Expression of Interest**
   A government technical partner obtains an expression of interest by government to explore the opportunity for outsourcing transport

2. **1. Evaluate the opportunity**
   The Govt. TA partner discusses with the OTRC whether OTRC support could be useful to help the technical partner achieve its objectives and that of Government

3. **3. Assess the Capacity needs**
   The OTRC works with the TA partner to assess TA partner, Govt. and private sector capacity and to define a workplan. Gain TA partner agreement on workplan.

4. **4. Provide OTRC Support**
   The OTRC provides capacity building to the government TA partner based on the agree workplan using coaching and by developing joint deliverables

**Post-intervention**

Assess impact of OTRC support

At a pre-agreed interval, OTRC conducts a joint evaluation with the local TA partner to assess skills acquisition and the partner’s ability to continue outsourced transport work without OTRC support.
Typical situations which might trigger a need for the OTRC

**EXPLORE**
- Today’s health commodity transportation isn’t working well, and the Ministry of Health (MoH) want to explore different options and innovations, like drones, to improve transportation.
- Current transportation only reaches the Province or District levels. There is a desire to reach Health Facilities and the MoH wants to options before making a major investment in vehicles and maintenance.
- A few people in the MoH think outsourcing might be a good idea but others are not convinced. Facts are needed to reach a consensus on the right direction.

**PLAN**
- The implementation teams at the MoH and the private transporter want to improve how their collaboration and are looking for ideas on their roadmap, team structure and standard operating procedures.

**IMPLEMENT**
- Quality, Cost and Delivery times achieved with transport outsourcing are not at the targeted levels. The MoH has decided that delivery performance needs to be improved and is looking for ideas on how to improve performance.

**OPTIMISE**
- A technical partner is supporting the MoH in implementing and managing outsourced transport, but the government now wants to transfer those activities to its government personnel. The MoH wants to know the organizational structure, capabilities, positions and Level of Effort needed to manage outsourced transport.
APPENDIX
Performance results - Tete

Results of 6-month implementation. Baseline study conducted in October 2015. Impact study conducted in July 2016.

- Health facility visits: 69%
- Stock outs incidents: 37%
- Distribution data usage: 95%
- Not damaged stock during transportation: 99%

More regular deliveries to health facilities
Increase in the availability of medicines and vaccines at HF level. Data monitored monthly through VAN meetings. Strong performance for safe and secure handling and transport.

Performance results - Zambezia

Conducted in September 2020. Results of full-year implementation. No baseline data available.

- Delivery notes quantities matching received quantities: 95%
- Deliveries between 25 to 35 days considered on time: 74%
- Health facilities receiving medicines according to plan: 95%
- Percentage of facilities receiving medicines together with vaccines (integration of supply chains): 72%
# The benefits of outsourcing to drones provider – DRC case study

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
<th>Baseline Apr – Sep 2020</th>
<th>Target</th>
<th>Endline Jan – Jun 2022</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard-to-reach health facilities (drone landing sites)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaccine availability (last 3 months)</td>
<td>65%</td>
<td>80%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>% facilities with stockouts. (last 3 months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Pentavalent</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>• Measles</td>
<td>12%</td>
<td>0%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>• Yellow fever</td>
<td>18%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>% facilities taking 2+ days to get vaccines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% facilities stocked according to plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% AFP (polio) samples received at provincial EPI within 2 days (Drones and ground transport)</td>
<td>35%</td>
<td>80%</td>
<td>69%</td>
<td></td>
</tr>
</tbody>
</table>
Evidence shows outsourced drone logistics transforms health supply chains

<table>
<thead>
<tr>
<th>Country</th>
<th>Transport Time</th>
<th>Stock Out Days</th>
<th>Wastage Rates</th>
<th>Turn Around Time</th>
<th>Time to Treatment</th>
<th>Waiting Time for Referral</th>
<th>Availability</th>
<th>Sample Timeliness</th>
<th>Misused Opportunities for Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td></td>
<td>60% (vaccines)</td>
<td>67% (blood product expirations)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41% (due to vaccine stock out)</td>
</tr>
<tr>
<td>DRC</td>
<td>from 2 days to &lt;2 hr. for &gt;50% of HF (EPI products)</td>
<td>3-6% (medical products)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rwanda</td>
<td>41% (blood products)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>Stock Out Days</td>
<td></td>
<td></td>
<td>Turn Around Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mozambique</td>
<td>Sample Quality</td>
<td>100% agreement between TB samples transported by road vs. drone (lab samples)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Endline Report: Zipline Evaluation in Ghana
Evaluation of the performance of drones for the transport of vaccines and other health products to remote health facilities Equateur Province
Effect of UAV drone delivery on blood product delivery time and wastage in Rwanda: a retrospective, cross-sectional study and time series analysis
Malawi Process Evaluation Midline Results
Quality Analysis of Tuberculosis Specimens Transported by Drones versus Ground Transportation
Lessons Learned from Last 7 Years

- Cargo drone complements rather than replaces other means of transportation
- Agility and resiliency are critical for public health supply chains now and in the future
- Drone transport systems must be designed around roundtrip capacity
- Workforce development needs to be part of the sustainability plan
Today Only a Handful of Players have succeeded

In 2023, seven drone transport services at scale in LMICs

- **Rwanda**: Zipline 2016
- **Ghana**: Zipline 2019
- **Nigeria**: Zipline 2022
- **Madagascar**: Aerial Metric 2019
- **Malawi**: Swoop Aero & Wingcopter 2020
- **DRC**: Swoop Aero 2020
- **Mozambique**: Swoop Aero 2022

With technical assistance from VillageReach

Source: Medical Drone Delivery Database (MD3) at www.UPDWG.org
# Risks, challenges and mitigations of outsourced drone logistics

## Technology
- Still at a nascent stage
- R&D vs. commercially available
- Over promises by providers

## Authorizations
- Civil aviation, air traffic control, customs
- Health authorities

## Acceptability
- Scared of the unknown
- Misinformation, association with military use or voodoo believers
- Privacy concerns

## Sustainability
- Not financially sustainable for public health markets
- Price competitive only at scale

---

### Technology
- Global request (tender) for service offering
- Extensive drone technology evaluation
- Preliminary flights in local context

### Authorizations
- Co-development of regulations, SOPs, etc.
- Learning visits to other countries
- National and/or sub-national drones commission & Working Group

### Acceptability
- Perception study
- Community sensitization outreach
- Public communications campaign

### Sustainability
- Multi-sectorial market
- Need to reach geographical and scope scale