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Supply Chain Chronicles from the Middle East
Samer Al Madhoun | Grant Swanepoel
1. Rationale and Overview of GHMM
2. Executive Summary
3. Project Approach and Objectives
4. Findings
5. Use of the SCOR model for Initiatives/Solutions
6. Next Steps
The set of governmental activities to prevent disease, promoting physical health and efficiency through organized effort, the sanitation of the environment, the control of community infection, the early diagnosis and preventive treatment of disease, healthcare public awareness and ensuring every individual in the community a standard of living adequate for the maintenance of health.
Background

- Post Covid, Healthcare systems got exposed. Building resilient health care supply chains has taken on a new urgency post the pandemic.

- Faced a critical need to embrace a different way to strengthen capacity and resilience of its supply chain.

- Severe fluctuations in the supply and demand of medical commodities, equipment, and essential medicines.

- Providing instant care and capacity became key determinants in the adoption or loosening of public health measures.
FIGURE 2
Supply chain leaders navigated diverse challenges during the COVID-19 pandemic
Supply chain leaders identify vulnerabilities exposed during the pandemic

Data issues: 67%
Labor challenges: 64%
Alternate supply sources: 58%
Raw materials and inventory shortages: 56%
Visibility issues: 54%
Cost increases: 46%
Government intervention and regulations: 42%
Demand forecasting: 42%

Source: Deloitte analysis.
As a public healthcare beneficiary, rate your overall satisfaction with your country's healthcare services

- Bad
- Unsatisfactory
- Fair
- Good
- Excellent
The tool is designed to guide supply chain actors, including governments, donors, and implementing partners and/or procurement agents. Helps in planning and strategizing around future investments, to enhance the functionality and sustainability of the healthcare system operations. Within the tool, maturity levels are defined to facilitate phased incremental implementation of capabilities.
The Theory of Constraints highlights the most problematic constraint or “weakest link” to achieving supply chain goals.

Supply Chain Performance

The Maturity Model helps increase performance by:

1. Focusing efforts on improving weakest-link constraints.
2. Helping teams stay on top of the dynamically shifting weakest link, which changes as a supply chain matures.
3. Highlighting areas where maturity impacts the supply chain's ability to function in a given market environment.
Assessment Pillars

- Warehouse Visibility
- Inventory Management
- Order Management
- Warehouse Operations
- Transportation
- Expiry Management
- Procurement Timing
- Infrastructure and Assets
- Performance Management
- Analysis and Evaluation
- Demand Planning
- Supply Planning
- Fund Management
- Financial Management
- Governance

- Staff Training/Development
- Patient-Focused Performance
For each category, the assessment identifies constraints that prevent improvement of the supply chain category.

<table>
<thead>
<tr>
<th>Constraints identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling technologies</td>
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<tr>
<td>Human resources</td>
</tr>
<tr>
<td>Public Private Partnership</td>
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<tr>
<td>National guidelines</td>
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<tr>
<td>Government support</td>
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<tr>
<td>Infrastructure</td>
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<tr>
<td>Funding</td>
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<tr>
<td>Improvement-process knowledge</td>
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</tbody>
</table>
## GHMM Overview – Ratings and Levels

<table>
<thead>
<tr>
<th>Level</th>
<th>Performance Indicators</th>
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<tbody>
<tr>
<td>CANVAS</td>
<td>• Focus on product availability at service delivery points</td>
</tr>
<tr>
<td></td>
<td>• &lt;60% product availability</td>
</tr>
<tr>
<td></td>
<td>• Limited visibility</td>
</tr>
<tr>
<td>BRONZE</td>
<td>• 60-85% product availability</td>
</tr>
<tr>
<td></td>
<td>• Basic visibility</td>
</tr>
<tr>
<td>SILVER</td>
<td>• 85-95% product availability</td>
</tr>
<tr>
<td></td>
<td>• Full visibility</td>
</tr>
<tr>
<td></td>
<td>• Some efficiency – e.g., less inventory needed</td>
</tr>
<tr>
<td>GOLD</td>
<td>• &gt;95% product availability</td>
</tr>
<tr>
<td></td>
<td>• Efficiency – e.g., fewer touches, higher turns</td>
</tr>
<tr>
<td>ACCREDITED</td>
<td>• Very lean; low process variability</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level</th>
<th>Looks like</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANVAS</td>
<td>• <strong>Very basic</strong></td>
</tr>
<tr>
<td></td>
<td>• Basics need to be stronger</td>
</tr>
<tr>
<td>BRONZE</td>
<td>• <strong>Basic</strong> processes working</td>
</tr>
<tr>
<td></td>
<td>• Manual and people-dependent</td>
</tr>
<tr>
<td></td>
<td>• No process controls</td>
</tr>
<tr>
<td>SILVER</td>
<td>• <strong>Functioning</strong> supply chain</td>
</tr>
<tr>
<td></td>
<td>• Visibility available</td>
</tr>
<tr>
<td>GOLD</td>
<td>• Consistently <strong>performing</strong> supply chain</td>
</tr>
<tr>
<td></td>
<td>• Accountability structures</td>
</tr>
<tr>
<td>ACCREDITED</td>
<td>• ** Accredited**</td>
</tr>
<tr>
<td></td>
<td>• Capabilities are consistently displayed</td>
</tr>
<tr>
<td></td>
<td>• Independent from technical and financial assistance from external donors</td>
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**The LEADING EVENT IN AFRICA FOR SUPPLY CHAIN PROFESSIONALS**
GHMM Overview – Practical Steps for Improvement cycle

Supply chain team completes Maturity Model assessment

Dashboard Summary identifies improvement project opportunities

Team plans and carries out improvement projects

Supply chain performance improves
Build a healthcare supply chain system that’s Fit for Purpose
Embrace a better path forward leveraging supply chain
Following a supply chain transformation approach

<table>
<thead>
<tr>
<th>AS-IS</th>
<th>GAP ANALYSIS</th>
<th>TO BE STAGE</th>
<th>IMPLEMENTATION ASSISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyse the current state of the public healthcare Supply Chain</td>
<td>Determine the supply chain needs including gaps &amp; challenges</td>
<td>Provide key recommendations &amp; roadmap for improvement</td>
<td>Provide implementation support to close the gaps</td>
</tr>
</tbody>
</table>
Assessors received three days training

Project Setup
Stakeholder meetings

Data Collection
Sites Visits “44 Sites”

Improvement Program RoadMap
Program, Projects roadmap and implementation

Data Verification
Revising reports and meeting with assessors

Analysis & Reporting
Reporting on findings, gaps & Roots cause analysis

4 Months Project

1. Assessors Training
   25 Assessors received three days training

2. Project Setup
   Stakeholder meetings

3. Data Collection
   Sites Visits “44 Sites”

4. Analysis & Reporting
   Reporting on findings, gaps & Roots cause analysis

5. Improvement Program RoadMap
   Program, Projects roadmap and implementation

6. Data Verification
   Revising reports and meeting with assessors
Data Collection
Sites Visits “44 Sites”

Assessment Scope

Healthcare Directorates: 10
Healthcare Centres: 11
Hospitals: 14
Central & Regional Warehouses: 10
Findings and Outcomes – Maturity Levels at all sites

Site Ranking by Facility Type

- Healthcare Centre
- Warehouse
- Hospital

Final Ranking

“44 Sites”

With results ranging from 19% to 47%, All Sites fall in the first two maturity stages, Canvas & Bronze.
Findings and Outcomes – Constraints at all sites

Total Observations Count

- Public Private Collaboration: 120
- Government Support: 201
- Infrastructure: 590
- Funding: 99
- National Guidelines: 229
- Leadership: 490
- Enabling Technology: 587
- Process Knowledge: 472
- Human Resources: 401
Executive Summary – Key Assessment Findings

- Fragmented Supply Chain functions.

- Distribution Requirements Planning Poorly Executed

- **Deteriorating Infrastructure, Very poor Storage Practices** *(Further unpacking of this later)*

- Ad hock planning “Demand Planning & Supply Planning”. **Forecast accuracy at 56%**

- Lack of automation at the entire function and its nodes. **How many “Paracetamols” were dispensed today?**

- Human Resources Knowledge/Capacity in Supply Chain. **What is supply chain?**

- Absence of Supply Chain leadership over the entire network
Findings and Outcomes – Current State

Fragmented Supply Chain functions

- Physical supply
  - Physical distribution
  - Logistics
  - Supply chain management

- Demand management: forecasting
- Purchasing
- Material requirements planning
- Production planning
- Manufacturing inventory
- Warehousing
- Materials handling
- Industrial packaging
- Finished goods inventory
- Distribution requirements planning
- Order processing
- Transportation
- Customer service management
- Strategic planning
- Externally integrated information systems
- Demand management: marketing and sales
- Supplier relationship management and customer relationship management
Findings and Outcomes – Current State

Centralized Planning Model Poorly Executed
SCOR Overview – Chosen Framework to use for supply chain improvements

Process Reference Framework

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability (RL)</td>
<td>The ability to perform tasks as required. Reliability focuses on the predictability of the outcome of a process.</td>
</tr>
<tr>
<td>Responsiveness (RS)</td>
<td>The speed at which tasks are performed. Responsiveness addresses the repeated speed of doing business.</td>
</tr>
<tr>
<td>Agility (AG)</td>
<td>The ability to respond to external influences</td>
</tr>
<tr>
<td>Cost (CO)</td>
<td>The cost associated with managing and operating the supply chain</td>
</tr>
<tr>
<td>Profit (PR)</td>
<td>The financial benefit realized when revenue generated from a business activity exceeds the expenses, costs, and taxes involved in sustaining the activity.</td>
</tr>
<tr>
<td>Asset Management (AM)</td>
<td>The ability to efficiently utilize supply chain assets</td>
</tr>
<tr>
<td>Environmental (EV)</td>
<td>The ability to operate the supply chain with minimal environmental impact</td>
</tr>
<tr>
<td>Social (SC)</td>
<td>The ability to operate the supply chain aligned with the organization's social values.</td>
</tr>
</tbody>
</table>
In a public healthcare supply chain - Which of the following attributes do you believe would be most important? (RANK FROM HIGHEST TO LEAST IMPORTANT)

- Reliability
- Responsiveness
- Agility
- Cost
- Environmental
Healthcare priorities for the stakeholders

1. Right, Everything
2. Ability To Ramp Up
3. Time To Deliver
4. Reliability

Responsiveness

39%
Creating sustained outcomes for the future

RL.2.1 Percentage of orders delivered in full to the customer: 41%

RL.2.2 Delivery performance to original customer commit date: 76%

RL.2.3 Customer order documentation accuracy: 81%

RL.2.4 Customer order perfect condition: 39%
Creating sustained outcomes for the future

Harvesting data visibility, analytics & Advancing the SC digital agenda

Creating health human resources capacity

Renewing existing physical infrastructure and building a new warehouse

From logistics, procurement silos to business process excellence. Evolve to supply chain management

Framework, National Guidelines, Organisation Hierarchy

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**Program Portfolio**
Looking into the overall program projects

- **Projects Priority**
  - **High Impact - High Efforts**
    - New centralised warehouse
    - Demand & Inventory Planning Solutions
  - **High Impact - Low Efforts**
    - Track & Trace Technologies
  - **Low Impact - High Efforts**
    - Regulations Changes For Transportation
  - **Low Impact - Low Efforts**
    - Recruiting Process

- **Quick Wins**
- **Nice To Have**
- **Consider Carefully**
- **Sponsor Issue**

- **10 Projects**
- **4M$ Budget**
Solutions – Project Focus - Good Distribution Practices project for central warehouses

**Good Distribution Practices Roadmap**

1. Installation of Climate Control (AC)
2. Building & commissioning of racking systems at all warehouses
3. Maintenance & installation of fire fighting systems
4. Track & Trace technology
5. Procuring backup generators
6. Building cold storage rooms
Rethinking Healthcare System in relation to supply chain management practices through a 4 year project roadmap

Creating patient-centric supply chains

Improving patient experience, and public health through supply chain
Thank You