## SKILLS FRAMEWORK FOR LOGISTICS
### TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT

<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Process Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC</td>
<td>Logistics Operations Research and Planning</td>
</tr>
<tr>
<td>TSC Description</td>
<td>Adopt advanced quantitative methods to analyse, design, plan and control logistics systems in order to support business requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC</td>
<td></td>
<td></td>
<td>LOG-PIM-3001-1.1</td>
<td>LOG-PIM-4001-1.1</td>
<td>LOG-PIM-5001-1.1</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
<td>Analyse current logistics operating model with respect to current and future business needs</td>
<td>Stimulate new models to optimise logistics operating models based on conclusions drawn from analysis</td>
<td>Evaluate models to optimise logistics operations to ensure alignment to business objectives</td>
<td></td>
</tr>
</tbody>
</table>

### Knowledge

- Physical logistics operations
- Industry best practices for logistics operations
- Network analysis using methods such as Dijkstra’s Algorithm and Ford-Fulkerson’s Algorithm
- Future business needs and trends projection techniques such as time series methods, linear regression, Holt’s method, and decomposition method
- Logistics operations management approaches
- Process improvement approaches
- Network optimisation methods
- Modelling techniques and methodologies such as transhipment and flow capacity modelling
- Techniques of capacity planning
- Logistics operations optimisation strategies
- Emerging trends in logistics industry research such as autonomous fleet, big data and blockchain technology
- Process improvement framework
- Strategies of capacity planning

### Abilities

- Project future demand for logistics services
- Analyse future logistics operations trends such as process structure, customer involvement, resource flexibility and capital intensity
- Analyse gaps of current logistics operating model with respect to key performance indicators, current industry best practices and future demand
- Develop appropriate performance indicators for logistics operations management
- Design optimisation plans for logistics operating models to close identified gaps
- Develop optimisation plans for logistics operations with models
- Formulate priorities in measuring key performance of logistics operations management
- Formulate logistics operations strategies to meet customer needs
- Lead evaluation of proposed logistics operating models by measuring business impact, ensure marketing competitiveness and meet future customer needs
- Drive implementation of logistics operations optimisation models

©SkillsFuture Singapore  
Effective date: September 2017, Version 1.1