<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Business Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC Description</td>
<td>Implement data analytics within the organisation to generate business insights and intelligence through the use of statistical and computational techniques and tools, algorithms, predictive data modelling and data visualisation</td>
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<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>
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<tbody>
<tr>
<td></td>
<td>STP-BDV-2001-1.1</td>
<td>STP-BDV-3001-1.1</td>
<td>STP-BDV-4001-1.1</td>
<td>STP-BDV-5001-1.1</td>
<td>Manage and enhance organisational data science capability by refining financial and other business performance criteria and design data studies</td>
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<tr>
<th>Knowledge</th>
<th>Level 1</th>
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<th>Level 3</th>
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- Identify underlying trends and patterns in business data using statistical and computational techniques and tools
- Organisational domain(s) and key business processes
- Methods to use analytics to tell the story of the data
- Methods to use exploratory visual analysis and predictive modelling
- Methods to identify and prioritise the problems to be solved
- Methods to develop prototype algorithms
- Methods to build a data model
- Methods to use data mining to discover new business insights
- Methods to interpret patterns in data and their relevance to business issues
- Range of established and novel tools and techniques used in data science

- Organisational benefits of business insights
- Methods to evaluate data science solutions in contributing to efficiency, growth and return on investment
- Methods to identify and interpret the implications of data patterns
- Methods to prioritise proposed data science projects
- Methods to approach a business problem and come up with a solution that leverages the available data
- Methods to run complex data mining models
- Methods to explore a data set visually and analytically
- Methods to manage the capacity to perform data science projects
- Organisational context for data and the opportunities that data analytics can provide
- Business processes that use and manipulate data
- Methods to develop and maintain controls for data quality
- Methods to define and manage policies and programs for data stewardship
- Impact that data analysis has on business service offerings
- Horizon scanning methods

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<tr>
<th>Abilities</th>
<th>Technical Skills and Competencies (TSC) Reference Document</th>
</tr>
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<tbody>
<tr>
<td>• Use data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data</td>
<td>• Application of statistics, data mining and data modelling and the application of relevant tools and techniques</td>
</tr>
<tr>
<td>• Assist with data transformation, quality checking and cleansing into digestible data sets</td>
<td>• Methods to measure the capability of the data science team</td>
</tr>
<tr>
<td>• Perform database queries across multiple tables/tables to extract relevant data</td>
<td>• Method to apply complex software tools to analyse data</td>
</tr>
<tr>
<td>• Perform appropriate data analysis on distinct data sets</td>
<td>• Use of statistical techniques, experimental techniques and hypothesis testing</td>
</tr>
<tr>
<td>• Produce performance dashboards and insight reports</td>
<td>• Application of statistics, data mining and data modelling and the application of relevant tools and techniques</td>
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<tr>
<td>• Assist in the production of a range of business insight reports</td>
<td>• Methods to measure the capability of the data science team</td>
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<tr>
<td>• Summarise and present business insights developed from data studies</td>
<td>• Application of statistics, data mining and data modelling and the application of relevant tools and techniques</td>
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**Developing new business insights**
- Methods to apply complex software tools to analyse data
- Use of statistical techniques, experimental techniques and hypothesis testing

**Abilities**
- Use data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data
- Assist with data transformation, quality checking and cleansing into digestible data sets
- Perform database queries across multiple tables/tables to extract relevant data
- Perform appropriate data analysis on distinct data sets
- Produce performance dashboards and insight reports
- Assist in the production of a range of business insight reports
- Summarise and present business insights developed from data studies
- Apply predictive data modelling techniques to identify underlying trends and patterns in data using statistical computing tools, methods and procedures
- Identify patterns across multiple data sets to derive insights
- Develop prototype algorithms and proof of concept demonstrations
- Make decisions about which patterns are meaningful, and which to further analyse
- Assemble data aggregations to build data models to help test problem hypotheses
- Use machine learning techniques to gain new insights from data
- Mine data to find relevant insights to develop ongoing improvements
- Assess the business insights presented to determine impact of insights on organisation
- Interpret implications of data patterns on business problem scenarios
- Exploit business data to extract insights
- Manage data science projects
- Configure and customise data models to investigate organisational business hypotheses
- Manage organisational capacity for performing data science projects
- Run complex data mining models to provide business insights in line with organisational procedures
- Communicate the results of data science projects
- Make recommendations to guide organisational decision-making
- Formulate the organisation’s data science capability to inform business decision-making
- Lead the implementation of the data science strategy, policies, procedures and metrics to support organisational requirements
- Oversee the design, collection, retrieval and analysis of forecasting and performance data
- Produce ad hoc analyses and management reports for senior management
- Develop and maintain controls on data quality, inter-operability and sources to manage risk effectively
- Define and manage policies and programs for data stewardship and custodianship in line with legal, information security corporate risk and compliance requirements
- Conduct horizon scans to identify, evaluate and
### Skills Framework for Sea Transport

#### Technical Skills and Competencies (TSC) Reference Document

<table>
<thead>
<tr>
<th>Technical Competencies</th>
<th>Example 1</th>
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<tbody>
<tr>
<td>Manage the creation of interactive visualisations of data and data study outcomes.</td>
<td></td>
</tr>
<tr>
<td>Use industry standard tools and techniques for data visualisation in line with organisational procedures.</td>
<td></td>
</tr>
<tr>
<td>Implement new technologies and techniques which may contribute to the success of the organisation's data analysis capability.</td>
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