<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Development and Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC</td>
<td>Data Visualisation</td>
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<tr>
<td>TSC Description</td>
<td>Implement contemporary techniques, dynamic visual displays with illustrative and interactive graphics to present patterns, trends, analytical insights from data or new concepts in a strategic manner for the intended audience</td>
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<tr>
<td>TSC Proficiency Description</td>
<td>Level 1</td>
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<td>ICT-DIT-3006-1.1</td>
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<tr>
<td>Level 1</td>
<td>Select appropriate visualisation techniques and develop dashboards to reflect data trends and findings</td>
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<tr>
<td>Level 2</td>
<td>Design data displays to present trends and finding, incorporating new and advanced visualisation techniques and analytics capabilities</td>
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<tr>
<td>Level 3</td>
<td>Establish an effective data visualisation architecture and design intelligent and adaptable displays employing optimal delivery modes, mechanisms and timings</td>
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| Knowledge         | • Interpretation of data analysis and findings  
|                   | • Types of information displays  
|                   | • Suitability of different data representations and visual displays for different contexts  
|                   | • Data visualisation tools and techniques  
|                   | • Elements of data dashboards  
|                   | • New data visualisation tools and techniques  
|                   | • Range of methods to portray data patterns, trends and correlations  
|                   | • Dashboard development process and techniques  
|                   | • Features of data displays  
|                   | • Strategic visualisation and mapping techniques  
|                   | • Emerging trends and developments in data visualisation  
|                   | • Strategic elements and considerations in a data presentation architecture  
|                   | • Modes and mechanisms for data delivery  
|                   | • Intelligent data dashboard design methodologies and techniques |
### Abilities

- Select appropriate visualisation techniques and information displays to convey data and findings
- Organise the presentation of data to reflect trends and correlations in a visually compelling way
- Incorporate appropriate elements to create informative and dynamic data displays
- Develop basic dashboards and scorecards to display internal as well as external benchmark data
- Incorporate interactive graphics, visuals and technical features into the data presentation
- Communicate limitations of data and interpretations of findings
- Introduce new or emerging visualisation tools and techniques that are fit for purpose
- Exercise judgement on the presentation of data to ensure that critical trends and findings are presented in the optimal way
- Develop dashboards and scorecards incorporating advanced visualisation techniques and embedding analytics capabilities
- Review tables, graphs, and dynamic data displays, to ensure key questions from key stakeholders are addressed
- Design features of data displays including navigation, layout, user interface and user experience of interactive graphics
- Align interpretation and presentation of data analytics findings with subject matter experts
- Establish an effective data presentation architecture to address critical business questions
- Integrate latest developments in data visualisation tools, techniques and methodologies
- Determine suitable data presentation delivery modes and mechanisms, tailored to key stakeholders’ needs
- Make decision on the optimal timing for presentation and updates of data and trends on dashboards and systems
- Design intelligent data dashboards and customisable visual displays
- Lead efforts to interpret and present explanations for counterintuitive patterns or findings

### Range of Application

Data visualisation tools may include, but are not limited to:
- Tableau
- HTML/CSS
- SAS Visual Analytics
- R

Data visualisation techniques may include, but are not limited to:
- Line charts
- Network diagram
- Map frequency chart