

**Functional Area: Network Infrastructure & Operation (Planning & Design)**

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| 1. Title      | Perform design that can be integrated or connected with local operator's network   |  |
| 2. Code       | ITCSNO516A   |  |
| 3. Range      | One of the most challenging tasks of network designers is to design networks that can be seamlessly integrated with other operator's network equipment or functions such as: mobile terminals, access routers, access network nodes and service provisioning platforms, billings, etc. This UoC concerns designing network coverage that can be integrated or connected with local operator's network (inter-network). Network in this context could be data and/or voice (VOIP), wireline or mobile network   |  |
| 4. Level      | 5  |  |
| 5. Credit     | 4  |  |
| 6. Competency | <p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Possess the knowledge in the subject area</p> <ul style="list-style-type: none"> <li>• Extensively knowledgeable of the organisation's business plan, interoperating challenges, services requirements and legal matters</li> <li>• Possess extensive knowledge of various standard network technologies for wired-line and mobile network such as ATM, GSM, LTE, NGN, etc.</li> <li>• Extensively knowledgeable of and can exploit the advantages of open platform standards and virtualisation</li> <li>• Possess extensive experience in IP and MPLS network infrastructure planning, deployment, integration, etc.</li> <li>• Possess extensive knowledge of network design methodologies and objectives such as "dynamic network growth from market based driven", network virtualisation provisioning, inter domain/operator resource management</li> <li>• Possess extensive experience with various inter-operator's architecture functionalities such as seamless mobile users, roaming, terminals, and services between administrative domains, etc.</li> <li>• Possess extensive experience in project management and network deployment</li> </ul> <p>6.2 Perform design that can be integrated or connected with local operator's network</p> <p>Be able to:</p> <ul style="list-style-type: none"> <li>• Lead a team or work with colleagues to identify inter-operating functional parameters such as billings, roaming, network access, performance, etc.</li> <li>• Work with other operators to study technical and administrative setup of inter-connecting networks and identify differences in OSS interconnections, network interfaces, protocols, event notifications, etc.</li> <li>• Design inter-operating network interface and align functions of the interconnected networks</li> <li>• Use NDP (Network Design Platform) tools to simulate the interconnected network to understand connectivity or services issues</li> <li>• Ensure the documentation of the network interface enabling the intra-network to interconnect with other operators which specifies appropriate setting or configurations on OSS to allow automated charging and inter-services. The documents should include possible risks associated with the interconnection which may affect operation of the network or business services</li> <li>• Present with suitable recommendations and seek approval from stakeholders on the proposed design for deployment</li> </ul> <p>6.3 Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Produce network designs that conform to the organisation standards and meet regulatory requirements</li> <li>• Always take into consideration and strike a proper balance among all related technological, political, social, environmental and legal factors</li> </ul> |  |

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| 7. Assessment Criteria | The integrated outcome requirements of this UoC are the abilities to:<br>i. work with colleagues to determine the inter-network requirements<br>ii. work with fellow operators to determine network interface and administrative needs<br>iii. use simulation tools to understand interconnection or services issues to reduce any risks<br>iv. formulate suitable designs to interconnect with other operators networks and functions that fit the business needs of the interconnected networks<br>v. Present the design to stakeholders effectively with recommendation and seek approval |
| Remark                 |  |