|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – INFRASTRUCTURE ARCHITECT** | | | | | | |
| **Sector** | Infocomm Technology | | | | | |
| **Track** | Infrastructure | | | | | |
| **Sub-track** | Plan and Design | | | | | |
| **Occupation** | Enterprise Architect | | | | | |
| **Job Role** | **Infrastructure Architect** | | | | | |
| **Job Role Description** | The Infrastructure Architect translates the overall business strategy into an infrastructure architecture strategy. He/She defines future state infrastructure architecture design considerations based on current and future business requirements. He engages business leaders and synthesises critical infrastructure gaps, current technology environment, and anticipated business and user challenges to inform architecture design. He determines design specifications of the future state infrastructure architecture, and develops the infrastructure architecture blueprint, roadmap for implementation, as well as plans for the integration of new systems architecture into existing infrastructure. He oversees the implementation of infrastructure architecture and ensures transition of current business practices and processes to enable delivery of appropriate solutions for the business. He also evaluates infrastructure performance against changing business and user requirements to inform architecture design changes.  He is familiar with enterprise architecture methodologies and frameworks, and architecture modelling tools. He is knowledgeable of various cloud, network, storage and security technologies, as well as cloud computing models and services.  The Infrastructure Architect adopts an analytical and strategic thinking approach to developing innovative infrastructure design that meets business requirements. He possesses strong communication and interpersonal skills, and is able to influence key stakeholders and build strategic relationships with partners and vendors. | | | | | |
| **Critical Work Functions and Key Tasks** | **Critical Work Functions** | **Key Tasks** | | | | |
| **Formulate the organisation’s architecture strategy, governance, roadmap, standards, policies and procedures** | Lead and coordinate the domain technical and business discussions | | | | |
| Participate in ecosystem strategy development, environment analysis and opportunity identification | | | | |
| Analyse, design and develop roadmaps and implementation plans based on a current versus future state | | | | |
| Design standard configurations and patterns | | | | |
| Lead and facilitate the infrastructure architecture governance process based on the enterprise architecture governance structure | | | | |
| Manage exceptions to architectural standards at an infrastructure level | | | | |
| Review and approve recommendations to infrastructure architectural standards | | | | |
| **Develop architecture requirements and maintain oversight** | Analyse and develop infrastructure architectural requirements | | | | |
| Align architectural requirements with IT strategy | | | | |
| Assess near-term needs to establish business priorities | | | | |
| Ensure compatibility with existing solutions, infrastructure, services and strategic requirements | | | | |
| Coordinate architecture implementation and modification activities | | | | |
| Assist in post-implementation and continuous improvement efforts to enhance performance and provide increased functionality | | | | |
| Ensure conceptual completeness of the technical solution | | | | |
| **Manage quality and continuous improvement of architecture** | Analyse the current architecture to identify weaknesses and develop opportunities for improvement | | | | |
| Identify and propose variances to the architecture to accommodate project needs | | | | |
| Perform ongoing architecture quality review activities | | | | |
| **Research emerging technologies** | Consults with clients and IT teams on infrastructure architecture solutions | | | | |
| Analyses cost versus benefits, risks, impact and technology priorities | | | | |
| Provide recommendations on emerging technology to senior management | | | | |
| Develop a communication plan for infrastructure architecture | | | | |
| Lead the research and evaluation of emerging technology, industry and market trends to assist in project development | | | | |
| Identify organisational requirements for resources | | | | |
| **Design infrastructure architecture** | Oversee the development of infrastructure architecture based on business requirements and IT strategies | | | | |
| Approve and modify infrastructure designs and architecture | | | | |
| Manage the assessment of capacity and resource utilisation of organisational infrastructure | | | | |
| Define the principles that guide infrastructure decisions for the organisation | | | | |
| Oversee and facilitate the evaluation and selection of infrastructure technology and the design of configuration standards | | | | |
| **Skills and Competencies** | **Technical Skills and Competencies** | | | **Generic Skills and Competencies** | | |
| Business Continuity | | Level 4 | Communication | | Intermediate |
| Business Environment Analysis | | Level 4 | Transdisciplinary Thinking | | Advanced |
| Business Innovation | | Level 5 | Decision Making | | Intermediate |
| Business Needs Analysis | | Level 5 | Sense Making | | Intermediate |
| Business Requirements Mapping | | Level 4 | Creative Thinking | | Advanced |
| Business Risk Management | | Level 4 |  | | |
| Change Management | | Level 4 |
| Disaster Recovery Management | | Level 5 |
| Emerging Technology Synthesis | | Level 5 |
| Enterprise Architecture | | Level 4 |
| Infrastructure Design | | Level 5 |
| Infrastructure Strategy | | Level 5 |
| Network Administration and Maintenance | | Level 4 |
| Network Configuration | | Level 4 |
| Networking | | Level 4 |
| Product Management | | Level 5 |
| Project Management | | Level 5 |
| Quality Standards | | Level 5 |
| Security Architecture | | Level 4 |
| Software Design | | Level 5 |
| Solution Architecture | | Level 4 |
| Stakeholder Management | | Level 5 |
| System Integration | | Level 5 |
| Sustainability Management | | Level 4 |
| **Programme Listing** | For a list of Training Programmes available for the ICT sector, please visit: www.skillsfuture.sg/skills-framework/ict | | | | | |
|  |  |  | |  |  | |
| The information contained in this document serves as a guide. | | | | | | |