

7.2.1 Job Dashboards

Quality Assurance Manager/Quality Control Manager/Quality Assurance Engineer/Quality Control Engineer/Planner

Megatrends impacting the Job Role in Short to Medium-Term

COVID-19	Multi-Skilling	Sustainable Construction/Buildings	Value Chain Aggregation & Integration	Workforce Challenges
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Technology Trends impacting the Job Role in Short to Medium-Term

BIM Technology	Data Analytics & AI	Digital Twin	Remote Monitoring
RPA	Robots & Automation	VR/AR	5G, IoT & Smart Buildings
Innovative Building Materials	Modular Construction	3D Printing	

Impact Assessment

M

MEDIUM

degree of change in tasks

Today

This job role is responsible for conducting quality inspections and analysing data to identify non-conformances with relevant standards and requirements. Job holders are familiar with the organisation’s production processes and the relevant quality assurance requirements and regulatory guidelines, and are responsible to coordinate production, supply lines and occasionally implement quality assurance and quality control plans.

In the Future

This job role may see technology (e.g., Remote Monitoring, IoT) leveraged to enhance the ease and efficiency of conducting inspections and identifying non-conformance with relevant standards and requirements. Job holders may need an understanding of technology and apply it to coordination and planning of production/supply lines. Job holders may see continued focus on verifying adherence to quality assurance requirements and manage communications across stakeholders in various disciplines and production teams.

Job Tasks Today.	Impact at Task-level / Future view of Job Tasks		Time Horizon
Conduct production planning and logistics	H	▶ Digital tools (e.g., RPA) can consolidate specifications and job orders and plan for production lines.	Short-term
	M	▶ Job holders may be expected to see closer collaboration with relevant stakeholders to meet expected production schedules in lieu of the sector’s shift towards aggregation and integration. ▶ Digital tools (e.g., Data Analytics & AI, IoT) can enable increased availability and access to production data. Job holders will need to be equipped with capabilities to leverage data and draw insights so as to develop optimised production plans.	Short-term
Prepare for factory production	M	▶ Digital communication tools may be used to update relevant stakeholders in an increasingly timely manner, with updates potentially able to be automated (e.g., use of IoT, RPA).	Short-term

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Job Tasks Today	Impact at Task-level / Future view of Job Tasks		Time Horizon
Prepare quality assurance and quality control plan	M	<ul style="list-style-type: none"> Job holders may be expected to play a role in adoption of new technologies and/or processes, requiring technical expertise in new developments to solution and recommend improvement areas for production quality. Job holders may also need to provide alternative methods to enhance efficiency of quality assurance and quality control procedures execution. Digital tools (e.g., Data Analytics & AI) can be applied upon gathered historical data to enhance inspection planning across project phases. 	Short-term
Propose continuous improvement initiatives	L	<ul style="list-style-type: none"> Job holders will continue to conduct research on latest techniques available, be aware of latest related developments (e.g., alternative materials) so as to integrate the impact into organisation's quality management system. 	Short-term
Conduct and analyse quality assurance processes	M	<ul style="list-style-type: none"> Job holders may need operational capability in utilising digital tools and platforms to draft inspection checklists. Job holders may also need to leverage digital communication tools to communicate across disciplines and production teams, and may need to facilitate cross-disciplinary collaboration for quality standards. 	Short-term
	H	<ul style="list-style-type: none"> Digital tools (e.g., AI, RPA) can automate the analysis of personnel data, and suppliers and subcontractors information for compliance. 	Short-term
Conduct quality control procedures	M	<ul style="list-style-type: none"> Job holders will need operational competency in digital tools that may conduct virtual site surveillance (e.g., Remote Monitoring) to continue assisting in these tasks. 	Medium-term
	M	<ul style="list-style-type: none"> Digital tools (e.g., Data Analytics & AI) can be leveraged to enhance the efficiency of quality performance data analysis. Job holders must be equipped with data analytics and interpretation skills to analyse and interpret the data, and leverage insights derived to perform quality control issues and risks identification. 	Short-term

The following TSCs/CCSs have been identified as in-demand/emerging for the job role going forward:

In-demand Technical Skills and Competencies		
Common Data Environment Management	Design for Manufacturing and Assembly	Process Optimisation
Technology Scanning		
Emerging Technical Skills and Competencies		
Critical Thinking	Stakeholder Management	Technology Application
Emerging Critical Core Skills		
Digital Fluency	Transdisciplinary Thinking	