

7.2.1 Job Dashboards

Quantity Surveyor/Contracts Manager/Cost Manager

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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Impact Assessment

M

MEDIUM

degree of change in tasks

Technology Trends impacting the Job Role in Short to Medium-Term			
BIM Technology	Data Analytics & AI	Digital Twin	Remote Monitoring
RPA	5G, IoT & Smart Buildings	Modular Construction	

Today

This job role is responsible for taking measurements and drafting tender documentation. Job holders prepare cost estimates and costing details for further analyses, complete cost management, and contract administration of the project, including preparing of claims and final account settlement.

In the Future

This job role may **leverage technology in automating** manual tasks such as measurements taking and claims preparations. Job holders will need an **understanding and familiarity of the technology application** to perform their tasks in an effective and efficient manner, and **leverage data insights to conduct cost management and contract administration**, such as preparing data driven cost estimates and costing details. Job holders may also need to **keep abreast of evolving trends and technologies so as to advise** upon industry, construction materials, procurement methods and regulations **as per digitalisation and sustainability trends**.

Job Tasks Today	Impact at Task-level / Future view of Job Tasks	Time Horizon
Prepare measurements and tender documentation	<div>M</div> <ul style="list-style-type: none"><li>Technology (e.g., Robots &amp; Automation, Remote Monitoring enabled by 5G) may automate the process of measurements, admeasurements and re-measurements taking. Job holders may see a <b>shift in focus to interpreting the outcomes</b> from measurements takings and <b>leveraging technology to accelerate the processing of measurements</b> into various forms of contract bills.</li><li>Technology may also automate preparation of information (i.e., schedule of rates). Job holders will need to be equipped to use <b>digital tools and platforms to enhance the efficiency of drafting preliminaries and trade preambles</b>.</li><li>Job holders will continue to use BIM or any relevant software in the course of their work, and <b>may see adoption of more digital tools and platforms across the value chain and various stakeholders they work with</b> (i.e., for review of technical specifications). Job holders will need to be equipped with the capabilities to utilise various digital tools and platforms.</li></ul>	Short-term

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Prepare and conduct cost planning and control	M	<ul style="list-style-type: none"> <li>Job holders will continue to conduct cost analyses. Job holders may see a <b>shift in focus to delivering enhanced cost planning and control outcomes</b>, and may be expected to <b>develop capabilities in leveraging technology</b> (i.e., Data Analytics &amp; AI, RPA) <b>in augmenting and accelerating the preparation</b> of cost planning and control components (i.e., cost estimates, cost plans).</li> <li>Job holders may be expected to <b>manage and interpret various data sources</b> in the course of preparing cost planning and control, and will need to be <b>equipped with capabilities in interpreting and leveraging data</b> to perform their tasks, and in conducting accurate cost checking during design development.</li> <li>Job holders will continue to prepare plans and projections, and may need to <b>be aware of alternative design or method of construction trends</b> so as to accurately conduct cost evaluation.</li> </ul>	Short-term
Prepare and analyse tenders	M	<ul style="list-style-type: none"> <li>Job holders may need an <b>understanding of smart contracting technology</b> (e.g., Blockchain) to <b>prepare tender documents and assist with pre-qualifications on alternative platforms</b>.</li> </ul>	Short-term
Conduct post-contract administration	M	<ul style="list-style-type: none"> <li>Job holders will continue to conduct post-contract administration, and may leverage technology to augment valuations preparations, <b>applying data insights and analysis to prepare data-driven recommendations</b> for payment.</li> <li>Job holders will also continue to be <b>responsible for communication of payment regime across relevant stakeholders</b>, and may need to <b>leverage digital communication tools</b> for effective implementation.</li> <li>Valuation and claims variations may be generated with the support of technology (e.g., data analytics, AI models). Job holders must be equipped with the capabilities to <b>effectively utilise this technology in generating outcomes in support of tasks</b>.</li> </ul>	Short-term
	H	<ul style="list-style-type: none"> <li>Claims preparations can be potentially automated by the use of technology (e.g., RPA).</li> </ul>	Short-term
Conduct tendering and estimation*	M	<ul style="list-style-type: none"> <li>Job holders may leverage technology (e.g., AI, RPA) to build up prices for resources, and will <b>need to understand programming parameters for such technology applications</b>.</li> </ul>	Short-term

\* Only applicable to Contracting Quantity Surveyor

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Job Tasks Today	Impact at Task-level / Future view of Job Tasks		Time Horizon
Conduct construction cost and resource procurement*	M	<ul style="list-style-type: none"> <li>Job holders will continue to conduct cash flow forecasting and monitoring, and may be expected to leverage technology (e.g., Data Analytics &amp; AI) to <b>enhance the robustness of the forecasting outcomes</b>. Job holders will therefore <b>need data interpretation and application skills to adjust forecasting and monitoring</b> as required and to draw insights for profitability report drafting.</li> <li>Job holders will need to be <b>aware of latest trends for alternative design or method of construction</b> (e.g., innovative building materials, modular construction) to inform the order placement with subcontractors and suppliers.</li> </ul>	Short-term
	H	<ul style="list-style-type: none"> <li>Technology (e.g., RPA) may augment rote tasks such as order placement with subcontractors and suppliers.</li> </ul>	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		
Construction Technology	Contract Administration and Management	Critical Thinking
Data Collection and Analysis	Life Cycle Costing and Analysis	Procurement Coordination and Policy Development
Stakeholder Management	Technology Application	Value Engineering
Emerging Technical Skills and Competencies		
Artificial Intelligence Application	Green Building Strategy Implementation	Programming and Coding
Regulatory and Submission Clearance		
Emerging Critical Core Skills		
Digital Fluency	Transdisciplinary Thinking	

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