

7.2.1 Job Dashboards

Architect

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
VR/AR	5G, IoT & Smart Buildings	Modular Construction	

Impact Assessment

M

MEDIUM

degree of change in tasks

Today

This job role is responsible for the pre-design and design phases of the project such as design development, documentation and compliance review. Job holders contribute to the construction and completion phases and develop the overall project schedules.

In the Future

This job role may leverage technology to **accelerate design development and documentation**, and allow for **greater oversight and visibility on construction and completion phases**. Job holders will need familiarity with technology to **complement activities occurring across the value chain, such as project reviews and handover**. Job holders may be expected to have a continued focus on compliance with relevant regulatory requirements and stakeholder management, as well as a growing focus in **incorporation of best practices as per evolving trends and technologies** (e.g., environmental sustainability).

Job Tasks Today	Impact at Task-level / Future view of Job Tasks		Time Horizon
Manage feasibility and design phase	M	<ul style="list-style-type: none">Job holders will continue to conduct pre-design work and feasibility studies, and may be expected to effectively utilize digital tools and platforms (e.g., BIM Technology) to augment the design process, increasing the efficiency of design and delivery.Job holders may use digital tools (e.g., RPA, AI) to perform design development compliance checks in adherence to government and client's requirements and standards. Job holders will need to perform interventions for non-compliance in the design phase.	Short-term
Conduct documentation and tendering	L	<ul style="list-style-type: none">Job holders may need to understand smart contracting technologies (e.g., Blockchain) to advise on appropriate procurement methods and selection of building contracts, administration of any smart contract, and management of data associated.	Long-term

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Job Tasks Today	Impact at Task-level / Future view of Job Tasks		Time Horizon
Facilitate meetings and handover for construction and completion	M	<ul style="list-style-type: none"> Job holders may need capabilities to leverage technology (e.g., AI and RPA) to accelerate the compliance process by identifying non-compliance of designs and construction with authorities' requirements. Job holders will need to review the accuracy of generated findings, and keep abreast of regulatory requirements to address non-compliance. 	Medium-term
	M	<ul style="list-style-type: none"> Job holders may need to develop capabilities to leverage digital tools and platforms (e.g., BIM Technology) in collaboration and communication with architectural professionals and builders for design documentation and management, to effectively conduct meetings and facilitate construction with builders, and manage handover of projects. 	Short-term
Manage people and organisational functions	L	<ul style="list-style-type: none"> Job holders will continue to perform people management tasks (i.e., on-the-job coaching, lead teams), and may see greater emphasis on managing compliance of project delivery outcomes and maintenance of ethical business practices with changing regulatory requirements. 	Short-term
Propose continuous improvement initiatives	M	<ul style="list-style-type: none"> Job holders will need to keep updated on the latest industry developments so as to propose opportunities for use and improvements to architectural services. 	Short-term
Develop drawings*	L	<ul style="list-style-type: none"> Job holders will still be required to develop shop drawings, while Artificial Intelligence and RPA can accelerate the development by reducing time to consolidate and/or gather required foundational information. 	Medium-term
	L	<ul style="list-style-type: none"> Job holders will still need to develop as-built drawings, while RPA can accelerate the development of as-built drawings by consolidating changes occurred across the entire construction process for documentation. 	Medium-term

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

In-demand Technical Skills and Competencies		
Building Information Modelling Application	Critical Thinking	Data Collection and Analysis
Design for Maintainability	Design for Manufacturing and Assembly	Integrated Digital Delivery Application
People Management	Project Risk Management	Regulatory Submission and Clearance
Stakeholder Management	Technology Application	
Emerging Technical Skills and Competencies		
Design Sustainability and Ethics Management	Programming and Coding	

* Only applicable to Project Architects in Contractor firms