



Details of IDD Essential Use Cases

IDD Essential Use Cases	Definitions	Digital Deliverables	Digital Means	Applicability vis-à-vis Building Lifecycle
1. Digital Carbon Management	Use digital platform or technology to compute, manage and analyse embodied and operational carbon emissions associated with the building works	<ul style="list-style-type: none"> Digital calculations of carbon emission Records of embodied carbon Simulation of operational carbon Visualisation of carbon emission data 	<ul style="list-style-type: none"> Common Data Environment (CDE) Building Information Modelling (BIM) Authoring Tool Digital Carbon Calculator 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction ✓ Asset Management
2. Visualisation and Design Checks	Utilise BIM, digital 3-dimensional model or immersive technology to visualise, seek feedback and validate the design of the building works	<ul style="list-style-type: none"> BIM or other digital 3D models Rendered models 	<ul style="list-style-type: none"> Common Data Environment (CDE) BIM Authoring Tool Immersive & Visualisation Tool 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction
3. BIM-based Documentation	Use digital technology to prepare documents relating to the building works based on information primarily generated/derived from a BIM model	<ul style="list-style-type: none"> BIM Drawings derived from BIM 	<ul style="list-style-type: none"> Common Data Environment (CDE) BIM Authoring Tool 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction
4. Integrated Concurrent Engineering (ICE) Meetings	Conduct an integrated concurrent engineering meeting in relation to the building works using digital platform and BIM	<ul style="list-style-type: none"> Digital records of decisions, actions to be taken and party responsible 	<ul style="list-style-type: none"> Common Data Environment (CDE) BIM 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction
5. Digital Submission and Approval	Use digital platform to submit and obtain approval relating to the design and construction or any variation of the building works for regulatory compliance and project management	<ul style="list-style-type: none"> Tracking of design issues, comments, submission, and revision records Decision records 	<ul style="list-style-type: none"> Common Data Environment (CDE) CORENET X 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction

IDD Essential Use Cases	Definitions	Digital Deliverables	Digital Means	Applicability vis-à-vis Building Lifecycle
6. Digital Request for Information (RFI)	Use digital platform to request for information to facilitate communication, tracking and resolution of issues arising from the building works	<ul style="list-style-type: none"> • Issues and resolution dashboards • Digital notes of discussion • Updates to BIM model 	<ul style="list-style-type: none"> • Common Data Environment (CDE) • BIM Authoring Tool 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction
7. BIM-based Cost Estimation	Use digital models to estimate quantity and costs at various stages of the building works	<ul style="list-style-type: none"> • Costing models • Costing and quantity take-off documentation 	<ul style="list-style-type: none"> • BIM • Digital Quantity Surveying and Valuation Tool 	<ul style="list-style-type: none"> ✓ Design ✓ Fabrication ✓ Construction
8. Digital Contract Management	Use digital platform to manage contracts, claims, verification of building works and payments	<ul style="list-style-type: none"> • Digital procurement orders • Digital payment claims • Digital records of completion 	<ul style="list-style-type: none"> • Common Data Environment (CDE) • Digital Contract Management System 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
9. Digital Construction Scheduling and Sequencing	Use digital models to simulate sequencing and scheduling of the construction activities of the building works	<ul style="list-style-type: none"> • Construction schedules and sequencing models 	<ul style="list-style-type: none"> • Common Data Environment (CDE) • BIM • Digital Planning Tool 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
10. Digital Logistics	Use digital platform to plan production schedule of prefabricated components for the building works, and digitally track and monitor the production, delivery and installation of the components	<ul style="list-style-type: none"> • Production schedules • Digital logistics delivery records 	<ul style="list-style-type: none"> • Common Data Environment (CDE) • BIM • QR Code/ RFID 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
11. Digital Safety Planning and Management	Use digital model for safety planning and digital platform to record and manage safety compliances, incidents, and observations	<ul style="list-style-type: none"> • Design for safety reports • Permit-to-work records • Records for safety incidents & observations • CCTV surveillance records 	<ul style="list-style-type: none"> • Common Data Environment (CDE) • Site Management Platform (SMP) • Video Analytics 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction

IDD Essential Use Cases	Definitions	Digital Deliverables	Digital Means	Applicability vis-à-vis Building Lifecycle
12. Digital Site Management	Use digital platform to coordinate and monitor the various activities, manpower, resources and processes involved in managing a construction site	<ul style="list-style-type: none"> Structured site management data 	<ul style="list-style-type: none"> Common Data Environment (CDE) Site Management Platform (SMP) 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
13. Digital Progress Monitoring	Use digital solutions to track and monitor the progress of the building works	<ul style="list-style-type: none"> Records of site progress photos or scanned models Progress reports (actual vs planned) 	<ul style="list-style-type: none"> Common Data Environment (CDE) Site Management Platform (SMP) BIM Reality Capture Laser Scanning Drones 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
14. Digital Inspections	Use digital platform to record the observations from site inspections of the building works and track the necessary follow-up actions taken	<ul style="list-style-type: none"> Records of site inspections Audit trails of resolutions/ approvals 	<ul style="list-style-type: none"> Common Data Environment (CDE) Site Management Platform (SMP) Reality Capture 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
15. Data-driven Project Performance Monitoring	Use digital platform to consolidate site data across multiple systems and leverage data analytics for project performance monitoring of the building works via a dashboard	<ul style="list-style-type: none"> Project performance metrics 	<ul style="list-style-type: none"> Common Data Environment (CDE) Dashboard 	<ul style="list-style-type: none"> ✓ Fabrication ✓ Construction
16. Digital Defects Management	Use digital platform to manage and track the defects of the building works and their rectification	<ul style="list-style-type: none"> Defects reports Defects rectification reports 	<ul style="list-style-type: none"> Common Data Environment (CDE) Site Management Platform (SMP) Digital Defects Management Platform 	<ul style="list-style-type: none"> ✓ Construction ✓ Asset Management

IDD Essential Use Cases	Definitions	Digital Deliverables	Digital Means	Applicability vis-à-vis Building Lifecycle
17. Digital Handover	Use digital platform to generate and digitally handover: <ul style="list-style-type: none"> (i) digital model of a physical asset that is built as part of the building works; and (ii) any other documents relating to the physical asset 	<ul style="list-style-type: none"> • Digital asset models • Any other documents relating to the physical asset, including but not limited to the following: <ul style="list-style-type: none"> - As-built records - Manufacturer’s specifications and warranties - Operation and maintenance manuals 	<ul style="list-style-type: none"> • Common Data Environment (CDE) 	<ul style="list-style-type: none"> ✓ Construction ✓ Asset Management
18. Real-time monitoring of assets performance	Set up a digital platform to monitor the real-time performance based on key operating parameters of a physical asset that is built as part of the building works	<ul style="list-style-type: none"> • Digital platform for building performance tracking 	<ul style="list-style-type: none"> • Building Management System (BMS) • Asset Performance Dashboard • 	<ul style="list-style-type: none"> ✓ Asset Management
19. Digital operations and maintenance	Set up a digital platform to integrate other technologies to perform the operations or maintenance of a physical asset that is built as part of the building works	<ul style="list-style-type: none"> • Digital platform for operations and maintenance 	<ul style="list-style-type: none"> • Operational Dashboard 	<ul style="list-style-type: none"> ✓ Asset Management