

Overview

This unit is about directing project information processes and about ensuring that building information protocols are managed. You will need to ensure that processes and procedures for managing project information are agreed with project stakeholders. You will need to ensure that records of project information development and delivery are maintained. You will also need to monitor and review the effectiveness of the information exchange processes. Finally, you will also need to recommend and implement any agreed improvements to the Project Information Plan.

Performance criteria

You must be able to:

Approve project information and document requirements

- 1 approve the controlling requirements for the project information and document programme which are suitable for the project stages and the resources available
- 2 approve the purpose and scope of information and documents and the controlling requirements they need to meet and who will produce the documents
- 3 approve the production programme, which meets agreed controlling requirements, to produce all the required information and documents in a feasible sequence of production
- 4 approve the resources and realistic individual targets to complete the information and document production programme
- 5 approve the registers, records and systems for monitoring and controlling the production of information and documents which are capable of maintaining programme compliance
- 6 approve the individual and collective production instructions which are accurate, clear and complete
- 7 approve the criteria for the evaluation of the project information and documents, agree the criteria with decision makers and circulate the criteria to the production team
- 8 approve the systems for checking, approving and integrating information and documents
- 9 approve the procedures, which are appropriate to the requirements of the project and the contract conditions, for dealing with discrepancies and inconsistencies in information and documents, and delays and revisions to project information and documents
- 10 approve the arrangements and contingency plans for reporting progress in meeting the programme requirements and to manage information and document production problems

Evaluate, integrate and control project information and documents

- 11 confirm with the client the information required for decision making throughout the project stages
- 12 ensure that processes are in place to manage data protection
- 13 identify and confirm protocols, data formats and standards for information exchange between all relevant project stakeholders
- 14 obtain information about design parameters which may contribute to the

- development of design and preparation of project information and documents
- 15 evaluate the information on design parameters to see whether it is adequate to meet the requirements of the stakeholders and requirements for controlling information and document production
- 16 assess the status of the information on design parameters and pass it on to people who need it for project information and document production, indicate any special considerations and limitations on its use including protection of intellectual property
- 17 maintain accurate and complete registers and records which can be used for quality auditing
- 18 assess information and documents when they have been produced and evaluate them against the agreed criteria
- 19 advise people who are producing information and documents when they do not understand the instructions and refer outstanding queries to the people who produced the original information
- 20 identify any discrepancies and inconsistencies in the information and documents and refer any problems back to the originators for clarification and resolution
- 21 recommend changes to the brief, design, specification and contract when any discrepancies are identified and suggest any modifications that are needed
- 22 approve revisions, requirements and additions to the information and documents, distribute them promptly and brief the stakeholders and the people responsible for producing information and documents
- 23 approve alternative methods for producing information and documents if it is not possible to produce them in house
- 24 agree necessary checks and approvals when they are needed
- 25 assess and approve information on progress and circulate it to the people who need the information

Direct the management of project information processes

- 26 ensure that the parties accountable for information management throughout the project and at each project stage are confirmed with the client and project stakeholders
- 27 advise the client on information requirements and ensure that processes and procedures are agreed between the client and project stakeholders in order to manage project information
- 28 discuss and agree with the client and project stakeholders the structure and the content of the project information and how the information is to be used
- 29 initiate, agree and implement the Project Information Plan with project

stakeholders and ensure that it meets the client's requirements and is achievable

30 liaise with project stakeholders to verify that agreed information management systems are functioning properly

31 monitor information systems operation to ensure that there is reliable project information exchange between project stakeholders

32 ensure that project information is configured to deliver required outputs

33 maintain records of project information development and delivery in order to provide an information audit

34 monitor and review the effectiveness of the Project Information Plan and information exchange processes and recommend and implement any agreed improvements

Knowledge and understanding

You need to know and understand:

Approve project information and document requirements

- 1 how and why to approve the controlling requirements for the project information and document programme (evaluation)
- 2 how and why to approve the purpose and scope of information and documents and the controlling requirements they need to meet and who will produce them (evaluation)
- 3 how and why to approve a production programme which meets agreed controlling requirements (evaluation)
- 4 how and why to approve the resources and realistic individual targets to complete the information and document production programme (evaluation)
- 5 how and why to approve the registers, records and systems for monitoring and controlling the production of information and documents (evaluation)
- 6 how and why to approve the individual and collective production instructions which are accurate, clear and complete (evaluation)
- 7 how and why to approve the criteria for the evaluation of the project information and documents with decision makers (evaluation)
- 8 how and why to agree the criteria for the evaluation of the project information and documents with decision makers (evaluation)
- 9 how to circulate the criteria for the evaluation of the project information and documents to the production team (application)
- 10 how and why to approve the systems for checking, approving and integrating information and documents (evaluation)
- 11 how and why to approve the procedures for dealing with discrepancies and inconsistencies in information and documents, and delays and revisions to project information and documents (evaluation)
- 12 how and why to approve the arrangements and contingency plans for reporting progress in meeting the programme requirements and to manage information and document production problems (evaluation)

Evaluate, integrate and control project information and documents

- 13 how to confirm with the client the information required for decision making throughout the project stages (application)
- 14 how to ensure that processes are in place to manage data protection (application)
- 15 what to identify as protocols, data formats and standards for information

- exchange between all relevant project stakeholders (understanding)
- 16 how to confirm protocols, data formats and standards for information exchange between all relevant project stakeholders (applications)
- 17 how to obtain information about design parameters which may contribute to the development of design and preparation of project information and documents (application)
- 18 how and why to evaluate the information on design parameters to see whether it is adequate to meet the requirements of the stakeholders and requirements for controlling information and document production (evaluation)
- 19 how and why to assess the status of the information on design parameters (analysis)
- 20 how to pass on information about design parameters to people who need it for information and document production (application)
- 21 how to indicate any special considerations and limitations on the use of information including protection of intellectual property (application)
- 22 how to maintain accurate and complete registers and records which can be used for quality auditing (application)
- 23 how and why to assess information and documents when they have been produced (analysis)
- 24 how and why to evaluate information and documents against the agreed criteria (evaluation)
- 25 how and why to advise people who are producing information and documents when they do not understand the instructions (synthesis)
- 26 how to refer outstanding queries to the people who produced the original information (application)
- 27 what to identify as any discrepancies and inconsistencies in the information and documents (understanding)
- 28 how to refer any problems back to the originators for clarification and resolution (application)
- 29 how and why to recommend changes to the brief, design, specification and contract when any discrepancies are identified (synthesis)
- 30 how and why to suggest any modifications needed (synthesis)
- 31 how and why to approve revisions, requirements and additions to the information and documents (evaluation)
- 32 how to distribute revisions, requirements and additions to the information and documents promptly (application)
- 33 how to brief the stakeholders and the people responsible for producing information and documents (application)
- 34 how and why to approve alternative methods for producing information and documents if it is not possible to produce them in house (evaluation)

35 how and why to agree necessary checks and approvals when they are needed (evaluation)

36 how and why to assess the information on progress (analysis)

37 how and why to approve the information on progress (evaluation)

38 how to circulate information on progress to the people who need the information (application)

Direct the management of project information processes

39 how to ensure that the parties accountable for information management throughout the project and at each project stage are confirmed with the client and project stakeholders (application)

40 how and why to advise the client on information requirements (synthesis)

41 how to ensure that processes and procedures are agreed between the client and project stakeholders in order to manage project information (application)

42 how and why to discuss with the client and project stakeholders the structure and the content of the project information and how the information is to be used (synthesis)

43 how and why to agree with the client and project stakeholders the structure and the content of the project information and how the information is to be used (evaluation)

44 how and why to initiate the Project Information Plan with project stakeholders (synthesis)

45 how and why to agree the Project Information Plan with project stakeholders (evaluation)

46 how to implement the Project Information Plan with project stakeholders (application)

47 how to ensure that the Project Information Plan with project stakeholders meets the client's requirements and is achievable

48 how to liaise with project stakeholders to verify that agreed information management systems are functioning properly (application)

49 how and why to monitor information systems operation to ensure that there is reliable project information exchange between project stakeholders (assessment)

50 how to ensure that project information is configured to deliver required outputs (application)

51 how to maintain records of project information development and delivery in order to provide an information audit (application)

52 how and why to monitor the effectiveness of the Project Information Plan and information exchange processes

-
- 53 how and why to review the effectiveness of the Project Information Plan and information exchange processes (analysis)
 - 54 how and why to recommend any agreed actions to the Project Information Plan and information exchange processes (evaluation)
 - 55 how to implement any agreed actions to the Project Information Plan and information exchange processes (synthesis)

Scope/range

Approve project information and document requirements

- 1 Controlling requirements:
 - 1.1 Project Information Plan
 - 1.2 Model Delivery Plan
 - 1.3 information management accountabilities
 - 1.4 type of measurement
 - 1.5 cost
 - 1.6 time
 - 1.7 quality
 - 1.8 methods of production
 - 1.9 methods of coordination
 - 1.10 liaison requirements
 - 1.11 model templates, documents and standards
 - 1.12 integration of data
 - 1.13 Building Information Modelling
 - 1.14 status
 - 1.15 electronic data exchange
 - 1.16 revision management
 - 1.17 scheduling of work
 - 1.18 methods of interdisciplinary working
 - 1.19 information protocols & standards & execution plan
 - 1.20 impact statement

- 2 Information and document:
 - 2.1 forms of contract
 - 2.2 specifications
 - 2.3 drawings
 - 2.4 bills of quantities
 - 2.5 schedules
 - 2.6 health and safety plans
 - 2.7 Building Information Model
 - 2.8 spreadsheets
 - 2.9 calculations
 - 2.10 images
 - 2.11 graphical and non-graphical data files
 - 2.12 proprietary file formats
 - 2.13 accounts
 - 2.14 claims
 - 2.15 email

3 Project stages:

- 3.1 Stage 0 (Strategy)
- 3.2 Stage 1 (Brief)
- 3.3 Stage 2 (Concept)
- 3.4 Stage 3 (Definition)
- 3.5 Stage 4 (Design)
- 3.6 Stage 5 (Build and Commission)
- 3.7 Stage 6 (Handover and Closeout)
- 3.8 Stage 7 (Operation and End of Use)

4 Purpose:

- 4.1 to obtain consents
- 4.2 procurement
- 4.3 contract
- 4.4 production
- 4.5 operation and use

5 Scope:

- 5.1 number
- 5.2 type
- 5.3 format
- 5.4 size

6 Registers and records:

- 6.1 incoming and outgoing drawing and document registers
- 6.2 records of document approval and revision

7 Criteria and discrepancies:

- 7.1 format
- 7.2 presentation
- 7.3 accuracy
- 7.4 technical content
- 7.5 completeness
- 7.6 referencing
- 7.7 cross referencing and correlation with associated information and documents
- 7.8 conflict and clash detection
- 7.9 status
- 7.10 spelling, grammar and punctuation

8 Decision makers:

- 8.1 the client
- 8.2 CDM co-ordinator (or responsible body under CDM regulations)
- 8.3 financial advisers
- 8.4 consultants
- 8.5 potential contractors
- 8.6 potential sub-contractors and suppliers
- 8.7 facilities/asset maintenance managers
- 8.9 users

Evaluate, integrate and control project information and documents

9 Information required for decision making:

- 9.1 design brief
- 9.2 design information from earlier stages and current stage
- 9.3 surveys
- 9.4 reports
- 9.5 statutory approvals and requirements
- 9.6 cost estimates
- 9.7 standards and codes of practice
- 9.8 technical literature
- 9.9 environmental assessment objectives

10 Project stages:

- 10.1 Stage 0 (Strategy)
- 10.2 Stage 1 (Brief)
- 10.3 Stage 2 (Concept)
- 10.4 Stage 3 (Definition)
- 10.5 Stage 4 (Design)
- 10.6 Stage 5 (Build and Commission)
- 10.7 Stage 6 (Handover and Closeout)

11 Protocols:

- 11.1 Project Information Plan
- 11.2 Model Delivery Plan
- 11.3 information management accountabilities
- 11.4 incoming and outgoing drawing and documents registers
- 11.5 records of document approval and revision
- 11.6 revision management

- 11.7 methods of coordination (e.g. common arrangement)
- 11.8 electronic data exchange
- 11.9 integration of inter disciplinary data
- 11.10 technical query resolution

- 12 Design parameters:
 - 12.1 client, user and community requirements, expectations, options and preferences
 - 12.2 project type/purpose/use
 - 12.3 site, location and surrounding environment
 - 12.4 geology (seismology, ground movements and soil type)
 - 12.5 transport and infrastructure
 - 12.6 planning & social integration
 - 12.7 landscape
 - 12.8 design form (architectural, structural, civil, services)
 - 12.9 design quality (character/scale/aesthetics)
 - 12.10 function/spatial planning (occupancy/room information/access and egress incl. DDA, security)
 - 12.11 programme budget
 - 12.12 cost (including whole life)
 - 12.13 development timetable
 - 12.14 risk assessment and mitigation
 - 12.15 cost planning (including life cycle cost) and value management
 - 12.16 procurement
 - 12.17 in-use performance
 - 12.18 environmental quality and sustainability
 - 12.19 environmental assessment/certification schemes
 - 12.20 protection of archaeological, architectural, cultural and historically valuable resources (significance/status)
 - 12.21 regulatory and legal constraints
 - 12.22 codes of practice
 - 12.23 health, safety and welfare
 - 12.24 form, function, materials, components and systems
 - 12.25 loose fit design - for flexibility/adaptability/deconstruction/disassembly
 - 12.26 buildability
 - 12.27 operation and maintenance

13 Information and documents:

- 13.1 forms of contract
- 13.2 specifications
- 13.3 drawings
- 13.4 bills of quantities
- 13.5 schedules
- 13.6 health, safety and welfare plans
- 13.7 Building Information Model
- 13.8 spreadsheets
- 13.9 calculations
- 13.10 images
- 13.11 graphical and non-graphical data files
- 13.12 proprietary file formats
- 13.13 accounts
- 13.14 claims
- 13.15 correspondence
- 13.16 minutes of meetings

14 Requirements of the stakeholders:

- 14.1 to obtain consents
- 14.2 procurement
- 14.3 contract
- 14.4 production

15 Requirements for controlling information and document production:

- 15.1 type of measurement
- 15.2 cost
- 15.3 time
- 15.4 quality
- 15.5 methods of production
- 15.6 methods of coordination (e.g. Common Arrangement)
- 15.7 liaison arrangements
- 15.8 model templates, documents and standards
- 15.9 integration of data
- 15.10 Building Information Modelling
- 15.11 model validation
- 15.12 electronic data transfers
- 15.13 scheduling of work
- 15.14 revision management

- 15.15 methods of interdisciplinary working
- 15.16 information protocols, standards & execution plan
- 15.17 impact statement

16 Registers and records:

- 16.1 incoming and outgoing information and document registers
- 16.2 records of information and document approval and revision

17 Criteria and discrepancies:

- 17.1 format
- 17.2 presentation
- 17.3 accuracy
- 17.4 technical content
- 17.5 completeness
- 17.6 referencing
- 17.7 cross referencing and correlation with associated documents
- 17.8 conflict and clash detection
- 17.9 status

Direct the management of project information processes

18 Project stages:

- 18.1 Stage 0 (Strategy)
- 18.2 Stage 1 (Brief)
- 18.3 Stage 2 (Concept)
- 18.4 Stage 3 (Definition)
- 18.5 Stage 4 (Design)
- 18.6 Stage 5 (Build and Commission)
- 18.7 Stage 6 (Handover and Closeout)

19 Project stakeholders:

- 19.1 the client
- 19.2 statutory authorities
- 19.3 CDM co-ordinator (or responsible body under CDM regulations)
- 19.4 financial advisers
- 19.5 consultants
- 19.6 potential contractors
- 19.7 potential sub-contractors and suppliers
- 19.8 facilities/asset maintenance managers
- 19.9 user

20 Processes and procedures:

20.1 employer's obligations

20.2 project team member obligations (including production and delivery of information)

20.3 electronic data exchange

20.4 Model Delivery Table (including required models, model originators, definition of required levels of detail at project stages, model use/purpose at each project stage)

20.5 Project Information Plan

21 Project Information Plan:

21.1 how models are to be developed at project stages

21.2 project procedures/protocols (e.g. clash detection, model review)

21.3 software requirements

21.4 model/information structure across roles

21.5 information status structure

21.6 information transfer structure

21.7 information change management

21.8 capture process for as-constructed information

21.9 capture process for testing & validation information

21.10 capture process for commissioning information

21.11 reconfiguration of information for As Constructed information

21.12 reconfiguration of information for In-Use stage

21.13 access rights

22 Required outputs:

22.1 Project development/design

22.2 Project construction

22.3 Project use/operation

22.4 Statutory requirements (e.g. approvals, Health & Safety file, Building Log book)

22.5 procurement

22.6 employer information exchanges

22.7 stakeholder information exchanges

Developed by	Construction Skills
Version Number	1
Date Approved	December 2014
Indicative Review Date	November 2019
Validity	Current
Status	Original
Originating Organisation	Construction Skills
Original URN	COSBEDPO15
Relevant Occupations	Architectural Technologists; Architecture; Civil engineers; Construction Project Manager and Related Professions; Associate professionals and technical oc; Surveyor; Production Managers and Directors in Construction; Managers in construction
Suite	Built Environment Design and Consultancy Practice
Keywords	project information processes; building information protocols; information exchange processes