









Product Manager - Web & Mobile

QP Code: SSC/Q8401

Version: 2.0

NSQF Level: 6

IT-ITeS Sector Skill Council | NASSCOM Plot No - 7, 8, 9 & 10, 3rd Floor, Sector 126 Noida Uttar Pradesh - 201303









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SSC/Q8401: Product Manager - Web & Mobile

Brief Job Description

Individuals at this job are responsible for owning all stages of development of the Web or Mobile based solution. They must assist in developing use cases and have a strong understanding of business requirements, customers, go-to-market strategy and customer engagement and retention strategies for the Web or Mobile based solution.

Personal Attributes

Individuals in this role must manage and collaborate with various stakeholders involved in the development of Web or Mobile based solutions. They must lead team members and manage team performance to achieve project success.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. <u>SSC/N8401</u>: Define a strategy for the product/solution and own different stages of the development lifecycle
- 2. SSC/N8127: Collect and define business requirements by interacting with clients
- 3. <u>SSC/N8402</u>: Finalize the MVP (Minimum Viable Product) based on the defined business requirements
- 4. <u>SSC/N8403</u>: Define KPIs to measure and monitor the software product/solution for performance, adoption, usability and conversion
- 5. SSC/N8404: Define a go-to-market strategy for the product/solution
- 6. SSC/N8405: Define a customer engagement and retention strategy
- 7. SSC/N8406: Create and execute a project charter and monitor the project KPIs
- 8. SSC/N9006: Build and Maintain relationships in a Workplace
- 9. SSC/N9011: Manage team performance to achieve project goals
- 10. SSC/N9012: Manage and collaborate with stakeholders for project success

Qualification Pack (QP) Parameters









Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development
Country	India
NSQF Level	6
Credits	19
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2512.0301
Minimum Educational Qualification & Experience	Pursuing first year of 2-year PG program after completing 3 year UG degree OR Completed 4 year UG program (in case of 4-year UG with honours/ honours with research) OR Previous relevant Qualification of NSQF Level (NSQF Level 5) with 3 Years of experience relevant experience in relevant field
Minimum Level of Education for Training in School	12th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	24 Years
Last Reviewed On	NA
Next Review Date	25/06/2025
NSQC Approval Date	25/06/2020
Version	2.0
Reference code on NQR	QG-06-IT-00510-2023-V1.1-NASSCOM
NQR Version	2









SSC/N8401: Define a strategy for the product/solution and own different stages of the development lifecycle

Description

This unit is about creating a product/solution strategy for developing applications for web-based or mobile-based platforms

Scope

The scope covers the following:

- Product/Solution research
- Product/solution strategy

Elements and Performance Criteria

Product/Solution research

To be competent, the user/individual on the job must be able to:

- **PC1.** Analyse the customer experience journey to understand the end-to-end interaction of the customer
- **PC2.** Research the competitive landscape, products and offerings
- PC3. Define solutions with cross-functional teams to address the needs of the customer
- **PC4.** Describe a product differentiation & market positioning strategy
- **PC5.** Decide the target platforms, regions and languages for the application/solution

Product/Solution Strategy

To be competent, the user/individual on the job must be able to:

- **PC6.** Determine the type of application/solution to be developed (such as web application, native application, hybrid application, cross-platform application etc.)
- **PC7.** Define a development roadmap for the application/solution
- **PC8.** Delineate the resources and budget required for development of the mobile application/solution
- **PC9.** Assess the need for a/b testing of the product/features
- **PC10.** Conduct impact analysis of new products and features to be launched in the market
- **PC11.** Leverage existing competencies of the team and build new competencies to develop the desired solutions
- **PC12.** Formulate the app-store strategy for the application/solution
- PC13. Elucidate ways to generate revenue/ realize business value from the proposed solution
- **PC14.** Test the feasibility of the proposed application/solution
- **PC15.** Communicate the conceptualized solution with relevant stakeholders and other cross-functional teams

Knowledge and Understanding (KU)









The individual on the job needs to know and understand:

- **KU1.** Organizational policies, procedures and guidelines which relate to developing roadmaps for products/services
- **KU2.** Different data sources and how to access documents and information from data sources
- **KU3.** Organizational policies and procedures while documenting roadmaps and collecting business requirements
- **KU4.** whom to involve while collecting business requirements and bringing concepts into production
- **KU5.** The range of standard templates and tools available and how to use them
- **KU6.** How to analyse and benchmark products and offerings of competitors
- **KU7.** How to define and evaluate business requirements
- **KU8.** How to analyse impact of new products and features
- **KU9.** How to develop product roadmaps
- KU10. How to identify and establish product metrics/KPIs
- **KU11.** How to analyse product metrics and trends
- **KU12.** How to monitor product development activities

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** Undertake architecture related decisions on business and organization
- **GS2.** Analyse business impact and disseminate relevant information to others
- **GS3.** Analyse data and understand its implications on business
- **GS4.** Conduct impact analysis of the various actions performed and disseminating relevant information to others
- **GS5.** Apply good attention to detail
- **GS6.** Apply problem-solving approaches in different situations
- **GS7.** Plan and organize the work to achieve targets and deadlines
- **GS8.** Work independently and collaboratively









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Product/Solution research	10	22	-	-
PC1. Analyse the customer experience journey to understand the end-to-end interaction of the customer	2	4	-	-
PC2. Research the competitive landscape, products and offerings	2	4	-	-
PC3. Define solutions with cross-functional teams to address the needs of the customer	2	6	-	-
PC4. Describe a product differentiation & market positioning strategy	2	4	-	-
PC5. Decide the target platforms, regions and languages for the application/solution	2	4	-	-
Product/Solution Strategy	20	48	-	-
PC6. Determine the type of application/solution to be developed (such as web application, native application, hybrid application, cross-platform application etc.)	2	6	-	-
PC7. Define a development roadmap for the application/solution	2	6	-	-
PC8. Delineate the resources and budget required for development of the mobile application/solution	2	4	-	-
PC9. Assess the need for a/b testing of the product/features	2	4	-	-
PC10. Conduct impact analysis of new products and features to be launched in the market	2	4	-	-
PC11. Leverage existing competencies of the team and build new competencies to develop the desired solutions	2	4	-	-
PC12. Formulate the app-store strategy for the application/solution	2	4	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. Elucidate ways to generate revenue/ realize business value from the proposed solution	2	4	-	-
PC14. Test the feasibility of the proposed application/solution	2	6	-	-
PC15. Communicate the conceptualized solution with relevant stakeholders and other crossfunctional teams	2	6	-	-
NOS Total	30	70	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8401
NOS Name	Define a strategy for the product/solution and own different stages of the development lifecycle
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development,
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N8127: Collect and define business requirements by interacting with clients

Description

This unit is about identifying the requirements of internal and external clients.

Elements and Performance Criteria

Collect requirements

To be competent, the user/individual on the job must be able to:

- **PC1.** assess the current business of the client
- PC2. assess technical capabilities of the client
- PC3. conduct business contextual discussions with the client

Define requirements

To be competent, the user/individual on the job must be able to:

- **PC4.** evaluate and define the requirements of the client
- **PC5.** map the requirements to the capabilities of the team or organization responsible for delivering on them
- **PC6.** create documentation on the requirements
- **PC7.** validate requirements with appropriate stakeholders, both internal and external to the organization

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** organizational policies, procedures and guidelines which relate to collecting and defining business requirements
- **KU2.** different data sources and how to access documents and information from data sources
- **KU3.** organizational policies and procedures for sharing data
- **KU4.** organizational policies and procedures for documenting requirements
- **KU5.** who to involve when defining requirements
- **KU6.** the range of standard templates and tools available and how to use them
- **KU7.** different business and technological trends
- **KU8.** how to conduct business contextual discussions
- **KU9.** different types of requirements could be related to a product, business, technology etc.
- **KU10.** how to evaluate and define requirements

Generic Skills (GS)

User/individual on the job needs to know how to:









- **GS1.** ask for clarification and advice from appropriate people
- **GS2.** listen effectively and orally communicate information accurately
- **GS3.** work effectively in a customer facing environment
- **GS4.** build and maintain positive and effective relationships with clients









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Collect requirements	15	35	-	-
PC1. assess the current business of the client	5	10	-	-
PC2. assess technical capabilities of the client	5	10	-	-
PC3. conduct business contextual discussions with the client	5	15	-	-
Define requirements	10	40	-	-
PC4. evaluate and define the requirements of the client	5	15	-	-
PC5. map the requirements to the capabilities of the team or organization responsible for delivering on them	-	15	-	-
PC6. create documentation on the requirements	-	5	-	-
PC7. validate requirements with appropriate stakeholders, both internal and external to the organization	5	5	-	-
NOS Total	25	75	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8127
NOS Name	Collect and define business requirements by interacting with clients
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Artificial Intelligence & Big Data Analytics
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N8402: Finalize the MVP (Minimum Viable Product) based on the defined business requirements

Description

This unit is about developing Minimum Viable Product (MVP) for different types of business requirements

Scope

The scope covers the following:

- MVP research
- MVP strategy
- Development Strategy
- Feedback on MVP

Elements and Performance Criteria

MVP Research

To be competent, the user/individual on the job must be able to:

- **PC1.** Conduct research and surveys to identify the major problems faced by the customers
- **PC2.** Specify ways to solve problems faced by the customer
- **PC3.** Gather feedback from customers on the proposed ways to solve the problem

MVP Strategy

To be competent, the user/individual on the job must be able to:

- **PC4.** Describe the design process and user flow to develop the MVP
- **PC5.** Identify all the essential features to be included in the MVP

Development Strategy

To be competent, the user/individual on the job must be able to:

- **PC6.** Develop a project plan outlining responsibilities and major milestones to be achieved for developing the MVP
- **PC7.** Define the budget and resources required to develop the MVP
- PC8. Collaborate with cross-functional teams to develop the MVP

Feedback on MVP

To be competent, the user/individual on the job must be able to:

- **PC9.** Release the MVP among early users to gather early feedback on the product
- PC10. Ensure feedback from early users is implemented into the MVP

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Organizational policies, procedures and guidelines which relate to developing roadmaps for products/services









- **KU2.** Different data sources and how to access documents and information from data sources
- **KU3.** Organizational policies and procedures while collecting business requirements and developing Minimum Viable Products (MVP)
- **KU4.** Whom to involve while collecting business requirements and bringing concepts into production
- **KU5.** The range of standard tools and frameworks available and how to use them to develop a Minimum Viable Product (MVP)
- **KU6.** How to analyze and benchmark products and offerings of competitors
- **KU7.** How to define and evaluate business requirements
- **KU8.** How to analyze impact of new products and features
- **KU9.** How to develop product roadmaps
- KU10. How to identify and establish product metrics/KPIs
- **KU11.** How to analyze product metrics and trends
- **KU12.** How to monitor product development activities

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** Architecture related decisions on business and organization
- **GS2.** Business impact and disseminate relevant information to others
- **GS3.** Analyse data and understand its implications on business
- **GS4.** Impact analysis of the various actions performed and disseminating relevant information to others
- **GS5.** Apply good attention to detail
- **GS6.** Apply problem-solving approaches in different situations
- **GS7.** Plan and organize your own work to achieve targets and deadlines
- **GS8.** Work independently and collaboratively









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MVP Research	8	18	-	-
PC1. Conduct research and surveys to identify the major problems faced by the customers	3	6	-	-
PC2. Specify ways to solve problems faced by the customer	2	5	-	-
PC3. Gather feedback from customers on the proposed ways to solve the problem	3	7	-	-
MVP Strategy	7	15	-	-
PC4. Describe the design process and user flow to develop the MVP	4	8	-	-
PC5. Identify all the essential features to be included in the MVP	3	7	-	-
Development Strategy	10	22	-	-
PC6. Develop a project plan outlining responsibilities and major milestones to be achieved for developing the MVP	3	7	-	-
PC7. Define the budget and resources required to develop the MVP	4	8	-	-
PC8. Collaborate with cross-functional teams to develop the MVP	3	7	-	-
Feedback on MVP	6	14	-	-
PC9. Release the MVP among early users to gather early feedback on the product	3	7	-	-
PC10. Ensure feedback from early users is implemented into the MVP	3	7	-	-
NOS Total	31	69	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8402
NOS Name	Finalize the MVP (Minimum Viable Product) based on the defined business requirements
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N8403: Define KPIs to measure and monitor the software product/solution for performance, adoption, usability and conversion

Description

This unit is about developing KPIs too monitor the performance, adoption , usability and conversion of the software product/solution

Scope

The scope covers the following:

- Business goals
- Definition and Monitoring of KPIs
- Reporting
- Feedback

Elements and Performance Criteria

Business goals

To be competent, the user/individual on the job must be able to:

PC1. Establish the business goals to be achieved from the product/solution

Definition and Monitoring of KPIs

To be competent, the user/individual on the job must be able to:

PC2. Gather and define KPIs to monitor performance of the product/solution

Reporting

To be competent, the user/individual on the job must be able to:

- **PC3.** Create a structure for reporting product usage and performance data to relevant stakeholders
- **PC4.** Share regular reports on product usage and performance with relevant stakeholders

Feedback

To be competent, the user/individual on the job must be able to:

PC5. Develop a feedback loop to continuously collect, implement and report feedback on product performance, adoption, usability and conversion

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** Organizational policies, procedures and guidelines which relate utilization of software products and solutions
- KU2. Organizational policies and procedures for sharing of data
- **KU3.** Organizational policies and procedures for documenting processes for monitoring utilization of software products and solutions
- **KU4.** Whom to involve while defining metrics to monitor software performance and resource utilization









- **KU5.** The range of standard templates and tools available and how to use them
- **KU6.** Different schemas for deploying software products and solutions
- KU7. How software products and solutions are utilized
- KU8. How to define KPIs to monitor performance of software products and solutions
- **KU9.** Different types of standard tools to monitor utilization and performance of software products and solutions
- KU10. How to report usage and performance of software products and solutions

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** Follow instructions, guidelines, procedures, rules and service level agreements
- **GS2.** Work effectively in a team environment
- **GS3.** Complete accurate well written work with attention to detail
- **GS4.** Business impact and disseminate relevant information to others
- **GS5.** Analyse data and understand its implications on business
- **GS6.** Pass on relevant information to others
- **GS7.** Check the work is complete and free from errors
- **GS8.** Apply balanced judgments to different situations
- **GS9.** Provide opinions on work in a detailed and constructive way
- **GS10.** Check that own and/or peers work meets customer requirements
- **GS11.** Deliver consistent and reliable service to customers
- **GS12.** Follow rule-based decision-making processes
- **GS13.** Make decisions on suitable courses
- **GS14.** Plan and organize work to achieve targets and deadlines









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Business goals	7	15	-	-
PC1. Establish the business goals to be achieved from the product/solution	7	15	-	-
Definition and Monitoring of KPIs	8	20	-	-
PC2. Gather and define KPIs to monitor performance of the product/solution	8	20	-	-
Reporting	10	23	-	-
PC3. Create a structure for reporting product usage and performance data to relevant stakeholders	7	15	-	-
PC4. Share regular reports on product usage and performance with relevant stakeholders	3	8	-	-
Feedback	5	12	-	-
PC5. Develop a feedback loop to continuously collect, implement and report feedback on product performance, adoption, usability and conversion	5	12	-	-
NOS Total	30	70	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8403
NOS Name	Define KPIs to measure and monitor the software product/solution for performance, adoption, usability and conversion
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development
NSQF Level	6
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N8404: Define a go-to-market strategy for the product/solution

Description

This unit is about formulating a go-to-market strategy for any software product/solution

Scope

The scope covers the following:

- Competitive analysis
- Demand analysis
- Product strategy

Elements and Performance Criteria

Competitive analysis

To be competent, the user/individual on the job must be able to:

- **PC1.** Identify and assess other competitors and providers of similar products/solution in the market
- **PC2.** Determine new opportunities by highlighting specific areas in the market that are upcoming or underserved

Demand analysis

To be competent, the user/individual on the job must be able to:

- **PC3.** Determine the demand for similar product/solution in the market
- **PC4.** Leverage analytics to analyze customer data to identify buying trends in for similar products/services

Product strategy

To be competent, the user/individual on the job must be able to:

- **PC5.** Determine a suitable solution/product offering for the customer
- **PC6.** Define the margins for profit
- PC7. Create and implement plans to identify potential customers
- **PC8.** Use benchmarks and KPIs to create forecasts for future opportunities in the market

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** Organizational policies, procedures and guidelines which relate to developing client, customer and go-to market strategies
- **KU2.** Different data sources and how to access documents and information from data sources
- **KU3.** Organizational policies and procedures while documenting client roadmaps, customer acquisition strategies, pricing analysis and marketing plans
- **KU4.** Whom to involve while developing GTM strategies, conducting pricing analysis, identifying target markets and evaluating business revenue streams









- **KU5.** The range of standard templates and tools available and how to use them
- **KU6.** How to develop go-to-market strategy
- **KU7.** How to forecast demand for products and services
- **KU8.** How to define KPIs and establish benchmarks to measure success
- **KU9.** How to gather competitive intelligence
- **KU10.** How to develop pricing analysis
- **KU11.** How to identify and establish business metrics/Key Performance Indicators (KPIs)
- **KU12.** How to leverage analytics to analyse customer data

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** Business impact and disseminate relevant information to others
- GS2. Analyse data and understand its implications on business
- **GS3.** Pass on relevant information to others
- **GS4.** Complete accurate well written work with attention to detail
- **GS5.** Contribute to the quality of team working
- **GS6.** Deliver consistent and reliable service to customers
- **GS7.** Make decisions on suitable courses









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Competitive analysis	5	11	-	-
PC1. Identify and assess other competitors and providers of similar products/solution in the market	3	7	-	-
PC2. Determine new opportunities by highlighting specific areas in the market that are upcoming or underserved	2	4	-	-
Demand analysis	7	16	-	-
PC3. Determine the demand for similar product/solution in the market	3	7	-	-
PC4. Leverage analytics to analyze customer data to identify buying trends in for similar products/services	4	9	-	-
Product strategy	19	42	-	-
PC5. Determine a suitable solution/product offering for the customer	5	11	-	-
PC6. Define the margins for profit	5	11	-	-
PC7. Create and implement plans to identify potential customers	5	11	-	-
PC8. Use benchmarks and KPIs to create forecasts for future opportunities in the market	4	9	-	-
NOS Total	31	69	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8404
NOS Name	Define a go-to-market strategy for the product/solution
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N8405: Define a customer engagement and retention strategy

Description

This unit is about formulating a strategy to engage and retain customers of the software product/solution

Scope

The scope covers the following:

- Customer engagement & retention strategy
- Customer insights

Elements and Performance Criteria

Customer engagement & retention strategy

To be competent, the user/individual on the job must be able to:

- **PC1.** Define customer engagement goals and objectives
- **PC2.** Identify customer segment and experiment different versions of the product/solution to identify the optimum solution
- **PC3.** Describe a strategy for smoother customer on-boarding and user training to increase customer engagement
- **PC4.** Develop a strategy to evangelize and promote usage of products/solutions among the customers
- **PC5.** Create a customer maturity model to understand customer engagement pattern and measure life-time value of the customer
- **PC6.** Formalize an account tracking strategy to measure growth patterns in key customer account
- **PC7.** Evaluate customer support services for satisfactory customer engagement
- **PC8.** Specify metrics and KPIs to measure satisfactory customer engagement
- **PC9.** Communicate regularly with clients to maintain customer engagement
- **PC10.** Monitor and execute operations around customer engagement and retention

Customer insights

To be competent, the user/individual on the job must be able to:

- PC11. Leverage analytics to obtain actionable insights from customer engagement data
- **PC12.** Conduct regular surveys and gather feedback from customers on the products and services that they are using
- **PC13.** Provide feedback to engineering team to improve product features and solutions for better customer engagement and experience

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. Organizational policies, procedures and guidelines which relate to developing customer engagement and retention strategy









- KU2. Different data sources and how to access documents and information from data sources
- **KU3.** Organizational policies and procedures for documenting activities in customer accounts
- **KU4.** Whom to involve while evaluating customer engagement and account feedbacks
- KU5. The range of standard templates and tools available and how to use them
- **KU6.** How to create customer on-boarding strategy
- **KU7.** How to create user training manual
- **KU8.** How to create customer maturity model to understand customer life-cycle
- **KU9.** How to establish Key Performance Indicators (KPIs) to monitor customer satisfaction and engagement

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** Business impact and disseminate relevant information to others
- **GS2.** Analyse data and understand its implications on business
- **GS3.** Impact analysis of the various actions performed and disseminating relevant information to others
- **GS4.** Pass on relevant information to others
- **GS5.** Apply problem-solving approaches in different situations
- **GS6.** Build and maintain positive and effective relationships with customers
- **GS7.** Check that own and/or peers work meets customer requirements
- **GS8.** Deliver consistent and reliable service to customers
- **GS9.** Work effectively in a customer facing environment
- **GS10.** Work effectively in a team environment









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Customer engagement & retention strategy	23	57	-	-
PC1. Define customer engagement goals and objectives	2	6	-	-
PC2. Identify customer segment and experiment different versions of the product/solution to identify the optimum solution	2	6	-	-
PC3. Describe a strategy for smoother customer on-boarding and user training to increase customer engagement	3	7	-	-
PC4. Develop a strategy to evangelize and promote usage of products/solutions among the customers	3	7	-	-
PC5. Create a customer maturity model to understand customer engagement pattern and measure life-time value of the customer	2	6	-	-
PC6. Formalize an account tracking strategy to measure growth patterns in key customer account	3	7	-	-
PC7. Evaluate customer support services for satisfactory customer engagement	2	4	-	-
PC8. Specify metrics and KPIs to measure satisfactory customer engagement	2	6	-	-
PC9. Communicate regularly with clients to maintain customer engagement	2	4	-	-
PC10. Monitor and execute operations around customer engagement and retention	2	4	-	-
Customer insights	6	14	-	-
PC11. Leverage analytics to obtain actionable insights from customer engagement data	2	6	-	-
PC12. Conduct regular surveys and gather feedback from customers on the products and services that they are using	2	4	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. Provide feedback to engineering team to improve product features and solutions for better customer engagement and experience	2	4	-	-
NOS Total	29	71	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8405
NOS Name	Define a customer engagement and retention strategy
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N8406: Create and execute a project charter and monitor the project KPIs

Description

This unit is about creating and executing a project charter and defining KPIs for monitoring the implementation of the project charter

Scope

The scope covers the following:

- Project Scope & Objectives
- Stakeholder mapping
- Roles and Responsibilities
- Project Planning
- Risk analysis & mitigation
- Project monitoring
- Validation

Elements and Performance Criteria

Project Scope & Objectives

To be competent, the user/individual on the job must be able to:

- **PC1.** Establish the objectives to be achieved at the end of the project
- **PC2.** Detail the scope of the project in terms of project goals and deliverables

Stakeholder mapping

To be competent, the user/individual on the job must be able to:

PC3. Identify the relevant stakeholders of the project, both internal and external to the organization

Roles and responsibilities

To be competent, the user/individual on the job must be able to:

- **PC4.** Designate key roles and responsibilities involved in delivering the project
- **PC5.** Map the requirements to the capabilities of the team or organization responsible for delivering them
- **PC6.** Create a project organization chart to define a reporting structure for a successful implementation of product/solution
- **PC7.** Elucidate an overall project governance strategy

Project planning

To be competent, the user/individual on the job must be able to:

- **PC8.** Specify milestones to be achieved as part of the project
- **PC9.** List key dependencies and their criticality to the project
- **PC10.** Create a plan for resources required to undertake the project









PC11. Describe the project development methodology (such as agile, waterfall etc.) for the product/solution

Risk analysis and mitigation

To be competent, the user/individual on the job must be able to:

PC12. Ascertain risks and constraints associated with the project and draw mitigations against each of them

Project monitoring

To be competent, the user/individual on the job must be able to:

PC13. Define KPIs/ metrics for monitoring and measuring the implementation of the plan *Validation*

To be competent, the user/individual on the job must be able to:

PC14. Validate the project plan with relevant stakeholders before implementation

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** Organisational policies, procedures and guidelines which relate to developing project charter and gathering intelligence
- **KU2.** Different data sources and how to access documents and information from data sources
- **KU3.** Organisational policies, procedures and guidelines which relate to developing project charter and gathering intelligence
- **KU4.** Whom to involve while defining and validating project charter
- **KU5.** The range of standard templates and tools available and how to use them
- **KU6.** How to conduct business contextual discussions
- **KU7.** How to develop project implementation plans
- **KU8.** How to implement organization wide processes
- **KU9.** How to create resource plans
- **KU10.** How to establish Key Performance Indicators (KPIs)
- **KU11.** How to manage and allocate budgets

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** Ask for clarification and advice from appropriate people
- **GS2.** Listen effectively and orally communicate information accurately
- **GS3.** Follow rule-based decision-making processes
- **GS4.** Make decisions on suitable courses
- **GS5.** Plan and organize the work to achieve targets and deadlines
- **GS6.** Apply problem-solving approaches in different situations
- **GS7.** Configure data and disseminate relevant information to others
- GS8. Apply balanced judgments to different situations









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Project Scope & Objectives	4	10	-	-
PC1. Establish the objectives to be achieved at the end of the project	2	6	-	-
PC2. Detail the scope of the project in terms of project goals and deliverables	2	4	-	-
Stakeholder mapping	2	4	-	-
PC3. Identify the relevant stakeholders of the project, both internal and external to the organization	2	4	-	-
Roles and responsibilities	8	20	-	-
PC4. Designate key roles and responsibilities involved in delivering the project	1	3	-	_
PC5. Map the requirements to the capabilities of the team or organization responsible for delivering them	2	4	-	-
PC6. Create a project organization chart to define a reporting structure for a successful implementation of product/solution	2	6	-	-
PC7. Elucidate an overall project governance strategy	3	7	-	-
Project planning	8	24	-	-
PC8. Specify milestones to be achieved as part of the project	2	6	-	_
PC9. List key dependencies and their criticality to the project	2	6	-	-
PC10. Create a plan for resources required to undertake the project	2	6	-	-
PC11. Describe the project development methodology (such as agile, waterfall etc.) for the product/solution	2	6	-	-
Risk analysis and mitigation	2	6	-	









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. Ascertain risks and constraints associated with the project and draw mitigations against each of them	2	6	-	-
Project monitoring	2	6	-	-
PC13. Define KPIs/ metrics for monitoring and measuring the implementation of the plan	2	6	-	-
Validation	1	3	-	-
PC14. Validate the project plan with relevant stakeholders before implementation	1	3	-	-
NOS Total	27	73	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N8406
NOS Name	Create and execute a project charter and monitor the project KPIs
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Web & Mobile Development
NSQF Level	7
Credits	TBD
Version	1.0
Last Reviewed Date	16/12/2019
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N9006: Build and maintain relationships in a workplace

Description

This unit is about building and maintaining constructive relationships at the workplace.

Scope

The scope covers the following:

- Build relationships
- Maintain relationships

Elements and Performance Criteria

Build relationships

To be competent, the user/individual on the job must be able to:

- **PC1.** build rapport with appropriate people at the workplace
- **PC2.** develop new professional relationships
- **PC3.** build alliances to establish mutually beneficial working arrangements
- **PC4.** foster an environment where others feel respected
- **PC5.** identify and engage a diverse range of influential contacts

Maintain relationships

To be competent, the user/individual on the job must be able to:

- **PC6.** obtain guidance from appropriate people, where necessary
- PC7. attentively listen to ideas and give constructive feedback
- **PC8.** promptly resolve conflicts between team members
- **PC9.** work with colleagues to deliver shared goals
- **PC10.** recognize the contributions made by your colleagues

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** organizational policies and procedures for building relationships and their role and responsibilities in relation to this
- **KU2.** different training programs to enable the development of relevant behavioural competencies
- **KU3.** the importance of creating an environment of trust and mutual respect in the organisation
- **KU4.** the importance of effective communication in developing productive working relationships with colleagues
- **KU5.** different types of information that colleagues might need and the importance of providing this information when it is required

Generic Skills (GS)









User/individual on the job needs to know how to:

- **GS1.** ask for clarification and advice from line managers
- **GS2.** work effectively in a team environment









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Build relationships	17	33	-	-
PC1. build rapport with appropriate people at the workplace	3	7	-	-
PC2. develop new professional relationships	3	7	-	-
PC3. build alliances to establish mutually beneficial working arrangements	3	7	-	-
PC4. foster an environment where others feel respected	4	6	-	-
PC5. identify and engage a diverse range of influential contacts	4	6	-	-
Maintain relationships	13	37	-	-
PC6. obtain guidance from appropriate people, where necessary	3	7	-	-
PC7. attentively listen to ideas and give constructive feedback	3	7	-	-
PC8. promptly resolve conflicts between team members	2	8	-	-
PC9. work with colleagues to deliver shared goals	2	8	-	-
PC10. recognize the contributions made by your colleagues	3	7	-	-
NOS Total	30	70	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9006
NOS Name	Build and maintain relationships in a workplace
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Artificial Intelligence & Big Data Analytics
NSQF Level	6
Credits	TBD
Version	4.0
Last Reviewed Date	31/03/2022
Next Review Date	28/04/2025
NSQC Clearance Date	28/04/2022









SSC/N9011: Manage team performance to achieve project goals

Description

This unit is about organizing tasks within the team to effectively meet project goals.

Scope

The scope covers the following:

- Project Planning
- Resource Allocation
- · Quality assurance
- Training

Elements and Performance Criteria

Project Planning

To be competent, the user/individual on the job must be able to:

- **PC1.** create realistic schedules for projects and direct your efforts in implementing it as per the plan
- **PC2.** identify the sequence of tasks and the resources needed to achieve a goal, and prioritize key action steps
- **PC3.** ensure evaluation processes are in place to measure project benefits
- **PC4.** constantly monitor the progress and delivery of the project
- **PC5.** plan your own work to meet the deadlines
- **PC6.** prioritise work in line with key team or project deliverables
- **PC7.** identify and consult the stakeholders in planning work
- PC8. inform relevant stakeholders in case of inability to meet the deadlines
- **PC9.** use appropriate project management tools and give access to relevant stakeholders
- **PC10.** regularly update/communicate the team and stakeholder about the project progress

Resource Allocation

To be competent, the user/individual on the job must be able to:

- **PC11.** efficiently allocate resources to meet needs of the project or the organisation
- **PC12.** optimize the use of resources to provide for unforseen changes in priorities, schedules and client expectations
- **PC13.** check for errors in work in order and ensure delivery of high quality of work
- **PC14.** use quality assurance processes across the team as a feedback mechanism to improve performance

Training

To be competent, the user/individual on the job must be able to:

- **PC15.** ensure that all the team members/new employees in the project are trained on relevant modules of the project
- **PC16.** create training or reference documents so that the team can refer when in need









PC17. organise training sessions regularly and when necessary on-board a subject matter expert to help train the team as per the requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** organizational policies and procedures for empowering the team and their role and responsibilities in relation to this
- **KU2.** different types of information that team members might need and the importance of providing this information when it is required
- **KU3.** the importance of understanding problems from your teams perspective and how to provide support, where necessary, to resolve these
- **KU4.** different mechanisms to incorporate and develop ideas that are put forward by the team

Generic Skills (GS)

User/individual on the job needs to know how to:

- **GS1.** apply balanced judgments to different situations
- **GS2.** ask for clarification and advice from appropriate people
- **GS3.** listen effectively and orally communicate information accurately
- **GS4.** follow rule-based decision-making processes
- **GS5.** make decisions on suitable courses
- **GS6.** Apply problem solving approaches in different situations
- **GS7.** Communicate effectively with team or others in writing
- **GS8.** Plan and organize your own work to achieve targets and deadlines
- **GS9.** Work effectively in a team environment
- **GS10.** Work effectively with colleagues and other teams
- **GS11.** Treat other cultures with respect









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Project Planning	19	46	-	-
PC1. create realistic schedules for projects and direct your efforts in implementing it as per the plan	3	7	-	-
PC2. identify the sequence of tasks and the resources needed to achieve a goal, and prioritize key action steps	1	4	-	-
PC3. ensure evaluation processes are in place to measure project benefits	1	4	-	-
PC4. constantly monitor the progress and delivery of the project	2	3	-	-
PC5. plan your own work to meet the deadlines	2	3	-	-
PC6. prioritise work in line with key team or project deliverables	1	4	-	-
PC7. identify and consult the stakeholders in planning work	3	7	-	-
PC8. inform relevant stakeholders in case of inability to meet the deadlines	3	7	-	-
PC9. use appropriate project management tools and give access to relevant stakeholders	1	4	-	-
PC10. regularly update/communicate the team and stakeholder about the project progress	2	3	-	-
Resource Allocation	6	14	-	-
PC11. efficiently allocate resources to meet needs of the project or the organisation	2	3	-	-
PC12. optimize the use of resources to provide for unforseen changes in priorities, schedules and client expectations	1	4	-	-
PC13. check for errors in work in order and ensure delivery of high quality of work	1	4	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. use quality assurance processes across the team as a feedback mechanism to improve performance	2	3	-	-
Training	4	11	-	-
PC15. ensure that all the team members/new employees in the project are trained on relevant modules of the project	2	3	-	-
PC16. create training or reference documents so that the team can refer when in need	1	4	-	-
PC17. organise training sessions regularly and when necessary on-board a subject matter expert to help train the team as per the requirement	1	4	-	-
NOS Total	29	71	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9011
NOS Name	Manage team performance to achieve project goals
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Internet of Things
NSQF Level	8
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023









SSC/N9012: Manage and collaborate with stakeholders for project success

Description

This unit is about managing and communicating effectively with stakeholders to ensure that project requirements are met.

Scope

The scope covers the following:

- Define stakeholder requirements
- Collaborate with stakeholders
- Ensure stakeholder satisfaction

Elements and Performance Criteria

Define stakeholder requirements

To be competent, the user/individual on the job must be able to:

- **PC1.** identify the larger business and organizational context behind the requirements of the stakeholder
- PC2. manage fluctuating stakeholder priorities and expectations
- **PC3.** consult stakeholders early in critical organisation-wide decisions

Collaborate with stakeholders

To be competent, the user/individual on the job must be able to:

- **PC4.** use formal communication methods to collaborate with stakeholders (such as meetings, conference calls, emails etc.)
- **PC5.** keep stakeholders updated on changes in project requirements
- **PC6.** define the frequency of communication with all the stakeholders
- **PC7.** use suitable tools to represent numbers and pictures to present details

Ensure stakeholder satisfaction

To be competent, the user/individual on the job must be able to:

- **PC8.** respond to requests in a timely and accurate manner
- **PC9.** take feedbacks from stakeholders regularly
- PC10. continuously improve work deliverables/service based on stakeholder feedback
- PC11. plan deliverables based on stakeholder needs

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. organizational policies and procedures for working with stakeholders and their role and responsibilities in relation to this.









- **KU2.** the importance of effective communication and establishing good working relationships with relevant stakeholders
- **KU3.** different methods of communication and the circumstances in which it is appropriate to use these
- **KU4.** .different types of information that stakeholders might need and the importance of providing this information when it is required

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. communicate effectively with stakeholders in writing
- **GS2.** follow instructions, guidelines, procedures, rules and service level agreements
- **GS3.** check that your own and/or your peers work meets customer requirements
- **GS4.** deliver consistent and reliable service to customers
- GS5. apply balanced judgments to different situations









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Define stakeholder requirements	7	18	-	-
PC1. identify the larger business and organizational context behind the requirements of the stakeholder	3	7	-	-
PC2. manage fluctuating stakeholder priorities and expectations	1	4	-	-
PC3. consult stakeholders early in critical organisation-wide decisions	3	7	-	-
Collaborate with stakeholders	11	24	-	-
PC4. use formal communication methods to collaborate with stakeholders (such as meetings, conference calls, emails etc.)	2	3	-	-
PC5. keep stakeholders updated on changes in project requirements	3	7	-	-
PC6. define the frequency of communication with all the stakeholders	3	7	-	-
PC7. use suitable tools to represent numbers and pictures to present details	3	7	-	-
Ensure stakeholder satisfaction	12	28	-	-
PC8. respond to requests in a timely and accurate manner	3	7	-	-
PC9. take feedbacks from stakeholders regularly	1	4	-	-
PC10. continuously improve work deliverables/service based on stakeholder feedback	5	10	-	-
PC11. plan deliverables based on stakeholder needs	3	7	_	-
NOS Total	30	70	-	-









National Occupational Standards (NOS) Parameters

NOS Code	SSC/N9012
NOS Name	Manage and collaborate with stakeholders for project success
Sector	IT-ITeS
Sub-Sector	Future Skills
Occupation	Internet of Things
NSQF Level	6
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	28/04/2027
NSQC Clearance Date	28/04/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

- 1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down the proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.
- 3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
- 4. Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training center (as per the assessment criteria below).
- 5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
- 6. To pass a QP, a trainee should score an average of 70% across generic NOS' and a minimum of 70% for each technical NOS









7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level: 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
SSC/N8401.Define a strategy for the product/solution and own different stages of the development lifecycle	30	70	-	-	100	12
SSC/N8127.Collect and define business requirements by interacting with clients	25	75	-	-	100	7
SSC/N8402.Finalize the MVP (Minimum Viable Product) based on the defined business requirements	31	69	-	-	100	12
SSC/N8403.Define KPIs to measure and monitor the software product/solution for performance, adoption, usability and conversion	30	70	-	-	100	12
SSC/N8404.Define a go-to- market strategy for the product/solution	31	69	-	-	100	12
SSC/N8405.Define a customer engagement and retention strategy	29	71	-	-	100	12
SSC/N8406.Create and execute a project charter and monitor the project KPIs	27	73	-	-	100	12









National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
SSC/N9006.Build and Maintain relationships in a Workplace	30	70	-	-	100	7
SSC/N9011.Manage team performance to achieve project goals	29	71	-	-	100	7
SSC/N9012.Manage and collaborate with stakeholders for project success	30	70	-	-	100	7
Total	292	708	-	-	1000	100









Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training









Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.









Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.