

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AUTOMOTIVE INDUSTRY

What are Occupational Standards (OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualification Pack-Prototyping Manager

SECTOR: AUTOMOTIVE

SUB-SECTOR: RESEARCH & DEVELOPMENT

OCCUPATION: PROTOTYPING

JOB ROLE: PROTOTYPING MANAGER

REFERENCE ID: ASC/Q8302

ALIGNED TO : NCO-2004/Nil

Prototype Manager: The manager is responsible for delivery of projects and work to priorities required to meet dates in action plans for request and projects that are in accordance with the objectives and strategic plans of the company. He needs to ensure to improve prototyping methods where possible in pursuit of corporate speed to market objectives. He also needs to work with the Managers of Engineering and Testing to evaluate and recommend improvements to the product development process.

Brief Job Description: Prototype Manager needs to stay abreast of technology advancements in CAD/CAM/CAE hardware and software, constantly striving to apply technology which will help to reduce development lead times. He also needs to work with the Managers of Engineering and Testing to evaluate and recommend improvements to the product development process in accordance with corporate speed to market .

Personal Attributes: The individual should have ability to visual the product creatively and innovatively design the same. The individual should further have analytical skills, out of box thinking, problem solving, judgement, decision making, team management skills etc. and awareness about global and latest trends in the automotive design area with knowledge of material used in the prototype.

Qualifications Pack For Prototyping Manager

Job Details	Qualifications Pack Code	ASC/Q8302		
	Job Role	Prototyping Manager		
	Credits(NSQF)	TBD	Version number	1.0
	Industry	Automotive	Drafted on	26/12/2013
	Sub-sector	R&D	Last reviewed on	20/1/2014
	Occupation	Prototyping	Next review date	Under revision expected date of revised version 31-Dec-15
	NSQC Clearance on	05/08/15		

Job Role	Prototyping Manager
Role Description	Responsible for prototyping operation, constantly striving to apply technology which will help to reduce development lead times and also needs to work with the Managers of Engineering to evaluate and recommend improvements to the product development process in accordance with corporate speed to market
NSQF level	7
Minimum Educational Qualifications	B.E/ B. Tech (Preferably automobile/ mechanical)
Maximum Educational Qualifications	M.E/ M. Tech (Preferably automobile/ mechanical)
Training (Suggested but not mandatory)	<ul style="list-style-type: none"> • CAD/ CAE System Application • FMEA (Failure Mode Effect Analysis) • Latest trends in the automotive industry • Training on ergonomics • Problem solving • Team Management • R&D latest processes
Minimum Job Entry Age	<p>1 ASDC recommends that candidates should seek full employment not before attaining an age of 18 years.</p> <p>2 However, as per Factories Act 1948:</p> <ul style="list-style-type: none"> - No one can be provided full employment before attaining the age of 15 - A person between the age of 15 – 18 (both inclusive) could be employed only with employers who follow safety And security systems & processes and also that the employee in this bracket will be working under supervision. <p>3 Please note that under the Factories Act 1948 different States may have slightly varying provision which need to be adhered to.</p>
Experience	8-10 years in Research and Development
Occupational Standards (OS)	<ol style="list-style-type: none"> 1. ASC/N8304: Managing the operations to achieve leadership in prototype development 2. ASC/N0019: Manage the project delivery as a team lead

Qualifications Pack For Prototyping Manager

	<p>within the cross functional team</p> <p>3. ASC/N0020: Manage the team on a day to day basis</p> <p>4. ASC/N0006: Maintain a safe and healthy working environment</p> <p>5. ASC/N0022: Ensure implementation of 5S activities at the shop floor and the office area</p> <p>Optional: N.A.</p>
Performance Criteria	As described in the relevant NOS units

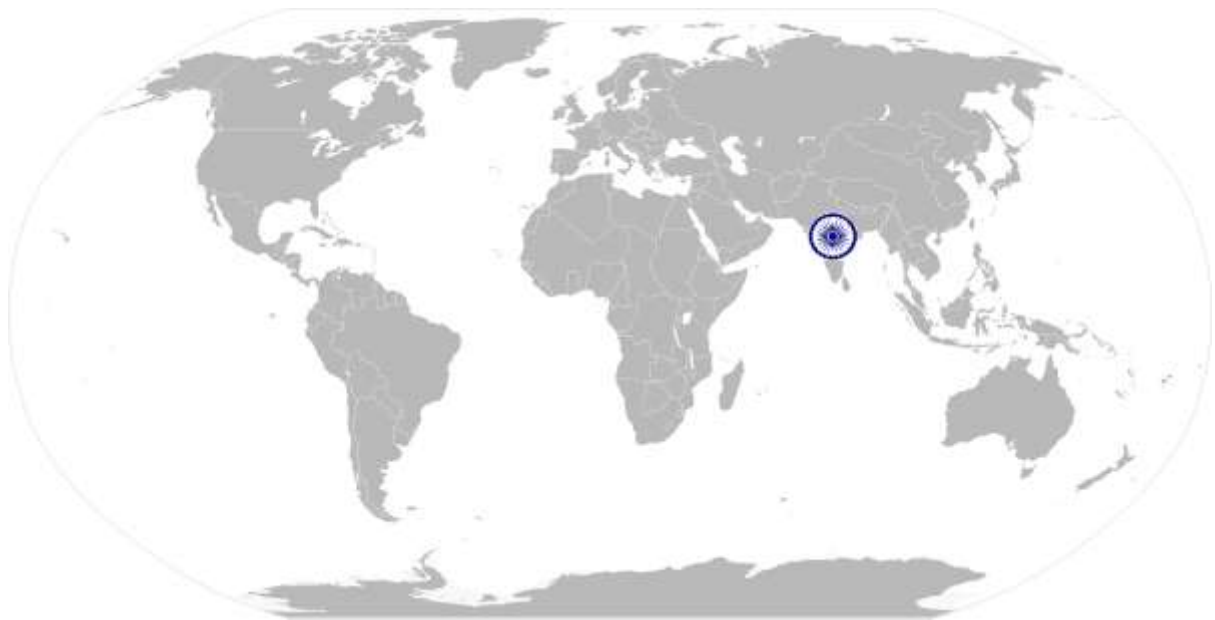
Definitions

Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Scope	Scope is the 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 the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.

Qualifications Pack For Prototyping Manager

Sub-Sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Unit Code	Unit Code is a unique identifier for a NOS unit, which can be denoted with an 'N'
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Keywords /Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack
CAD/CAE	Computer Added Design/ Engineering
APQP	Advance Product Quality Planning
DFMEA/ PFMEA	Design/ Process Failure Modes and Effects Analysis
SOP	Standard Operating Procedure

National Occupational Standard



Overview

This unit is about managing Product Proto Development process and ensure that the timelines and cost parameters allocated for prototyping are adhered to release the prototype for testing

ASC/N 8304

Manage the operations to achieve leadership in prototype development

National Occupational Standard

Unit Code	ASC /N8304
Unit Title (Task)	Manage the operations to achieve leadership in prototype development
Description	Prototype Manager needs to stay abreast of technology advancements in CAD/CAM/CAE hardware and software, constantly striving to apply technology which will help to reduce development lead times. He also needs to work with the Managers of Engineering and Testing to evaluate and recommend improvements to the product development process in accordance with corporate speed to market
Scope	<p>The person is responsible for ensuring</p> <ul style="list-style-type: none"> • Process understanding and equipment requirement • Machine, apparatus preparation • Prototyping <p>The role has internal interfaces with Tool Room, Production, Quality, Materials, R&D, Purchase, Safety, HR</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Ensure process understanding and equipment requirement for prototyping	PC1. Ensure that the prototyping team has the proper understanding of the machining & assembling requirements, equipment and parameters to be set for the process
Ensure machine ,auxiliary apparatus and metal work pieces preparation	<p>PC2. Ensure arrangement for working ,manual or computer controlled, equipment's for machining , PPE's and other material as per the requirement of the machining process</p> <p>PC3. Oversee timely fulfilment and setup of production related equipment and machines before the actual execution of the operations</p>
Manage the Prototyping Operation	<p>PC4. Ensure timely receiving of drawings at each phase from the design team to the prototyping team</p> <p>PC5. Ensure the engineer studies the drawings/ sketches to understand the operations to be performed by the operator/ machinist and plan sequences of operations for fabricating products at each Prototyping phase</p> <p>PC6. Ensure proper coordination of the engineer with the vendors(in house & outside) for timely and accurate material for NPD</p> <p>PC7. Ensure adherence to timelines for completion of the Prototype</p> <p>PC8. Ensure that all the safety compliances are met in the prototype</p> <p>PC9. Ensure that the prototype is proof of all preliminary tests in all Phases 1, 2 and 3.</p> <p>PC10. Oversee that the complete concept of new product /new technology is evaluated and a proper feedback is given to the deign team</p> <p>PC11. Oversee that the engineer supervises conformance to the specifications mentioned in the Work Instructions/ SOPs using precision measurement tools</p> <p>PC12. Ensure achievement of desired functional & performance specifications and</p>

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Manage the operations to achieve leadership in prototype development

	<p>technical targets</p> <p>PC13. Ensure achievement of vehicle durability and reliability and compliance to Emission norms</p> <p>PC14. Ensure adherence to PFMEA process by the engineer for vehicle manufacturing</p> <p>PC15. Ensure timely feedback to the design team</p> <p>PC16. Ensure prototype handover to test centre for various durability and performance testing</p>
<p>Knowledge and Understanding (K)</p>	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards and procedures followed in the company</p> <p>KA2. different types of products manufactured by the company</p> <p>KA3. quality management practices of the organization</p> <p>KA4. HR practices and procedures for Purchase/Finance/Operations</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>PC1. good understanding of prototyping and testing process</p> <p>PC2. understanding on homologation and validation process</p> <p>PC3. knowledge in tools like CAD, CAM,CAE,PRO-E etc</p> <p>PC4. Information systems like SAP, ERP etc.</p> <p>PC5. knowledge of simulation software, DFMEA, APQP basic preparation process of machine and machine settings</p> <p>PC6. operations for various machining related tools</p> <p>PC7. the manufacturing processes</p> <p>PC8. the costing and financial budgeting process</p> <p>PC9. the various safety and quality aspects as well as the tools like 7 QC and brainstorming</p> <p>PC10. the method of reading and interpreting the various drawings (2D, 3D and line sketches)</p> <p>PC11. how to visualize the final product output and conduct quality verification tests</p>
<p>Skills (S) [Optional]</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing and reading skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Document information from the manuals, discussion notes, process charts etc.</p> <p>SA2. create small notes/ work documents/ diagrams for team members to help them understand the process</p> <p>SA3. Use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.</p> <p>SA4. read internal information memos send by internal customers (other</p>

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Manage the operations to achieve leadership in prototype development

	<p>functions within the organization) and articulate the thoughts in one’s mind into the written format and communicate with the team members</p>
	<p>Oral Communication (Listening and Speaking skills)</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. discuss task lists, schedules, and work-loads with the operative team members</p> <p>SA6. answer the queries raised by team as well as intercompany departments</p> <p>SA7. articulate the thoughts in one’s mind into the written format and communicate with the team members</p> <p>SA8. Effectively communicate with the team members and make them aware of work expectations, targets, policies, processes etc.</p> <p>SA9. attentively listen with full attention the queries and grievances raised by the team and comprehend the information given by the speaker</p>
B. Professional Skills	<p>People Development</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. identify the strengths and weaknesses of the subordinate team members</p> <p>SB2. provide constructive and genuine feedback</p> <p>SB3. motivate the team to take independently responsibilities in their work areas</p> <p>SB4. provide training to team members for technical and behavioural areas</p> <p>SB5. create a culture of innovation and out of box thinking/ risk taken</p>
	<p>Team Leadership</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. communicate effectively to the team members</p> <p>SB7. identify conflicts in the team and try to resolve them at the earliest</p> <p>SB8. interact and engage with the team members on a day to day basis</p> <p>SB9. counsel and coach the team members and help them resolve issues</p> <p>SB10. timely highlight to the management about any good work/ achievement by the team members</p> <p>SB11. display empathy for the problems faced by the team and act on the concerns</p>
	<p>Analytical Thinking and Problem Solving</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB12. break the problem into smaller issues and tasks to arrive at a solution</p> <p>SB13. understand inter process relationship and establish relationship between various parts of the problem</p> <p>SB14. leverage experience to find effective solutions to problems</p> <p>SB15. use basic analytical tools to arrive at solutions</p> <p>SB16. develop alternate solutions and resolves problems in early stages</p> <p>SB17. work tireless in spite of repeat activities in a diligent manner to resolve problems on a day to day basis</p> <p>SB18. collaborate with cross functional teams to resolve problems</p>
	<p>Judgment and Critical Thinking</p>

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Manage the operations to achieve leadership in prototype development

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB19. use common sense and make judgments during day to day basis</p> <p>SB20. use reasoning skills to identify and resolve problems</p> <p>SB21. use intuition to detect any potential problems which could arise during operations</p> <p>SB22. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation gather information skilfully from multiple sources</p> <p>SB23. analyse information in depth and identifies the problem in a timely manner</p>
	<p>Ownership</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB24. accept additional responsibility for self and the team</p> <p>SB25. encourage self and other to take greater responsibilities</p> <p>SB26. ensure that the work allocated to the team is completed as per timelines and quality norms</p> <p>SB27. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles</p> <p>Team Work</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB28. motivate and provide support for the team on the shop floor</p> <p>SB29. encourage collaboration between team members</p> <p>SB30. resolve team issues and grievances to manage conflicts within the team</p> <p>SB31. create an environment of approachability, trust and openness within the team</p> <p>SB32. ensure role clarity for all operators and helpers on the line/ shift</p> <p>SB33. escalate any team related issues to the concerned person at the right time</p> <p>Decision making</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB34. use previous experience in resolving problems and taking decisions</p> <p>SB35. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization</p> <p>Collaboration</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB36. exhibit objectivity & openness to others' views</p> <p>SB37. collaborate with stakeholders to achieve the desired state of final result</p> <p>Out of Box thinking</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB38. familiarise with leading practices available in the market</p> <p>SB39. think independently on new approaches to manufacturing process, material management, data management and team management</p> <p>SB40. represent any new ideas/ approaches on process improvement and</p>

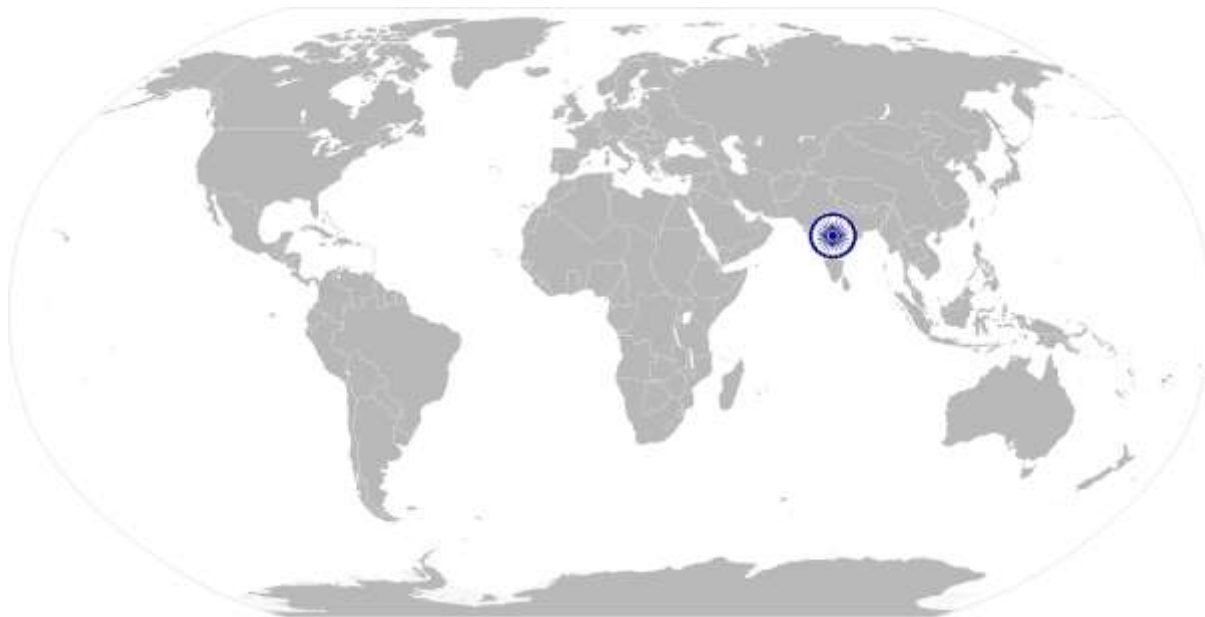
ASC/N 8304

Manage the operations to achieve leadership in prototype development

	productivity improvement to the seniors in the team
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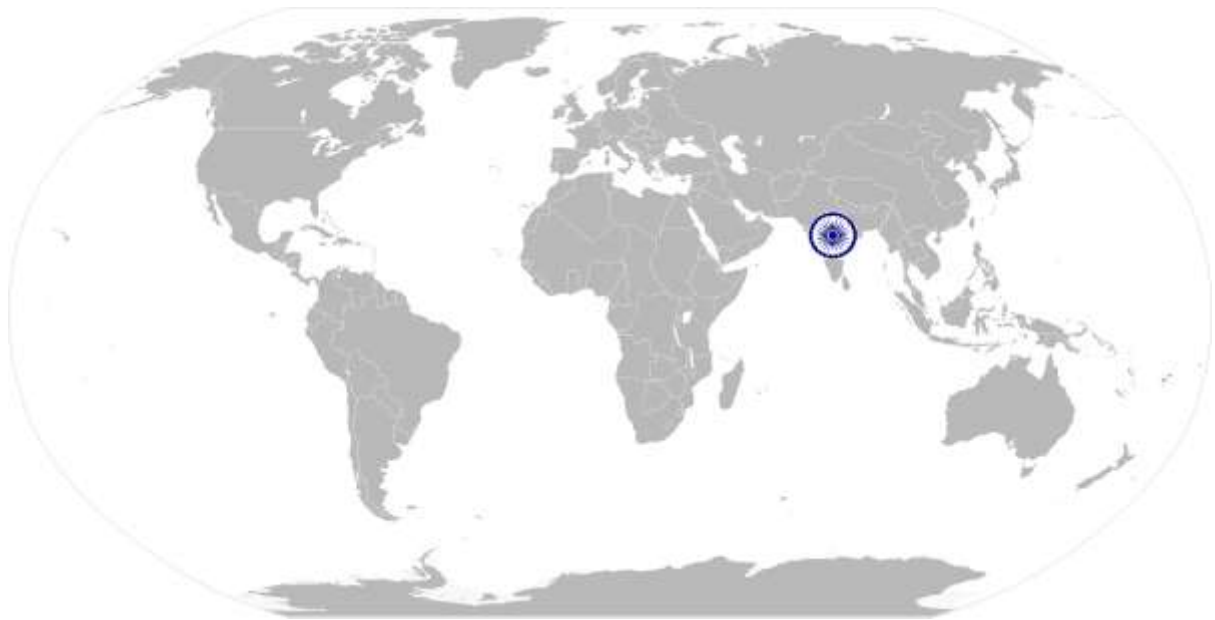
NOS Code	ASC/N8304		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	26/12/2013
Industry Sub-sector	Research & Development	Last reviewed on	20/1/2014
Occupation	Prototyping	Next review date	Under revision expected date of revised version 31-Dec-15



ASC/N0019

Manage the project delivery as a team lead within the cross functional team

National Occupational Standard



Overview

This unit is about effective management of the project delivery within the cross functional team created for completion of the New Product Development

ASC/N0019

Manage the project delivery as a team lead within the cross functional team

National Occupational Standard

Unit Code	ASC /N0019
Unit Title (Task)	Manage the project delivery as a team lead within the cross functional team
Description	This NOS is about handling the project management and project delivery activities within the R&D team such as managing team budgets and costs, institutionalizing process improvement, process excellence and quality management within the team and manage project timelines, project quality, team resourcing and management of stakeholders related to the Product Development project
Scope	The role holder will be responsible for: <ul style="list-style-type: none"> managing end to end project delivery activities within an R&D vertical including budgeting and costing for the team deploy procedures and processes to support the NPD delivery team managing the R&D team and motivate and engage them to increase the overall productivity of the team
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Manage Costs and Budgets for the team	<p>PC1. Ensure timely creation of item wise/ head wise budget for the team on a year on year basis</p> <p>PC2. Ensure that all major and minor cost elements related to equipment, tools, raw material, manpower, consumables and marketing activities are considered during finalization of the budgets for the given financial period/ project delivery period</p> <p>PC3. Conduct effective negotiations along with the commercial team with suppliers and vendors during procurement of equipment, tools and raw material required for delivery of the new product</p> <p>PC4. Support the process wise R&D lead/ head in conducting periodic tracking of Planned Vs. Actual expenditure (Variance Analysis) for the team</p> <p>PC5. Act upon the outcomes of the variance analysis and keep the overall process/ product cost within the specified ranges</p> <p>PC6. Escalate any budgetary exigencies to process wise R&D Lead/ head in a timely manner so that the project delivery does not suffer because of budgetary reasons</p>

ASC/N0019

Manage the project delivery as a team lead within the cross functional team

<p>Process Excellence and Process Improvement</p>	<p>PC7. Ensure detailed self-understanding of all the requisite processes to be adopted for completing the development job</p> <p>PC8. Ensure drafting and finalizing of process manuals, Work Instructions, Control Plans, process flow charts to enable the team to easily understand and implement the process</p> <p>PC9. Ensure that Work Instructions/ Process steps are displayed in key areas like test labs, CA/CAD centres etc.</p> <p>PC10. Ensuring recording and reporting procedures and systems are in place and shared with the team members</p> <p>PC11. Ensure 5S implementation in the R&D function especially in data management and data storage (Knowledge Management)</p> <p>PC12. Identify areas of improvement in the existing processes/systems and take measures to adhere to the identified Kaizen/ process improvement initiatives</p> <p>PC13. Ensure team has understanding of basic analytical tools like Why analysis, brainstorming, 7 QC tools, TQM principles to analyse various problems and design process improvement activities</p> <p>PC14. Ensure that the development team regularly engages with the analytical tools during the various product development team</p> <p>PC15. Implement various business excellence techniques like Kaizen, 5S initiatives and safety interventions to enhance productivity of the team</p>
<p>Project Delivery Management</p>	<p>PC16. Support the process wise R&D lead/ head in creating the project plan for the individual product development team and ensure linkage with the overall NPD plan of the organization</p> <p>PC17. Identify critical areas/ activities which need detailed monitoring and effective implementation to prevent any negative impact on the project process</p> <p>PC18. Ensure tracking of key activities and milestones given in the individual project plan</p> <p>PC19. Support the process wise R&D lead/ head in monitoring of individual project timelines, work quality, development & delivery costs, team contribution and knowledge management activities</p> <p>PC20. Support the process wise R&D lead/ head in creating time bound mitigation plan to deal with project plan variances</p> <p>PC21. Ensure timely setup of design centres, laboratories, testing beds as required by the NPD delivery process mentioned in the overall project plan</p> <p>PC22. In case new equipment/ procedures are required, ensure that the responsible team is contacted well before the execution time in order to prevent delays in the development process</p> <p>PC23. Create required project status reports and share the same the relevant stakeholders in the format finalized by the Cross Functional Project Team</p> <p>PC24. Manage stakeholder relationship and ensure closure of open items needing feedback or approvals from the relevant stakeholders</p>

ASC/N0019

Manage the project delivery as a team lead within the cross functional team

	<p>PC25. Ensure effective collaboration and information sharing with other members of the cross functional NPD delivery team</p> <p>PC26. Escalate any pertinent issues to the process wise R&D head which need immediate attention</p>
<p>Human Resource Management</p>	<p>PC27. Finalize along with the individual process head in the CFT, the manpower planning and manpower deployment for the delivery team</p> <p>PC28. Identify the competencies required for the project delivery team</p> <p>PC29. Ensure identification and deployment of right skilled people at the right places on the delivery process</p> <p>PC30. Track the performance of the team during the various stages of the project and provide timely feedback for course correction</p> <p>PC31. Share knowledge of processes, inputs and outputs with the team members to enhance their skill levels</p> <p>PC32. Other than technical trainings, support the team by delivering trainings related to quality and safety for the operators and helpers</p> <p>PC33. Drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts</p>
<p>Knowledge and Understanding (K)</p>	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. different types of products manufactured by the company</p> <p>KA2. overall R&D strategy for the organization</p> <p>KA3. knowledge of functional processes like Procurement, Store management, inventory management, quality management, HR and key contact points for query resolution</p> <p>KA4. 5S and Safety norms practiced in the organization</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. project management techniques and usage of different project Management tools like primavera, MS Office etc.</p> <p>KB2. various problems solving tools like 7QC, Why Analysis, Brain Storming etc.</p> <p>KB3. fundamental of financial and budgeting process</p> <p>KB4. different type of tools, processes and infrastructure required for the development process</p> <p>KB5. different types of communication channels practiced by the organization</p> <p>KB6. the method of noting observations, maintaining records and sharing them with the concerned in the required format how to share feedback with team members</p> <p>KB7. various data entry tools and formats used in the organization</p> <p>KB8. ability to visualize the final product output and hence decide on the key steps and parameters to be followed</p> <p>KB9. usage of various business correspondence tools like Email, MS Office tools (Word, Excel, Power Point), ERP tools etc.</p> <p>KB10. about the various hazards related to various chemicals, load, power,</p>

ASC/N0019

Manage the project delivery as a team lead within the cross functional team

	<p>heat sources/ tools as used in the processes, the hazards involved in the process operations and usage of PPEs</p>
<p>Skills (s) [optional]</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing and reading skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. document information from the manuals, discussion notes, process charts etc.</p> <p>SA2. create small notes/ work documents/ diagrams for team members to help them understand the process</p> <p>SA3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.</p> <p>SA4. read internal information memos send by internal customers (other functions within the organization)</p> <p>SA5. articulate the thoughts in one’s mind into the written format and communicate with the team members</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. discuss task lists, schedules, and work-loads with the operative team members</p> <p>SA7. answer the queries raised by team as well as intercompany departments</p> <p>SA8. articulate the thoughts in one’s mind into the written format and communicate with the team members</p> <p>SA9. effectively communicate with the team members and make them aware of work expectations, targets, policies, processes etc.</p> <p>SA10. attentively listen with full attention the queries and grievances raised by the team and comprehend the information given by the speaker</p>
<p>B. Professional Skills</p>	<p>People Development</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. identify the strengths and weaknesses of the subordinate team members</p> <p>SB2. provide constructive and genuine feedback</p> <p>SB3. motivate the team to take independently responsibilities in their work areas</p> <p>SB4. provide training to team members for technical and behavioural areas</p> <p>SB5. create a culture of innovation and out of box thinking/ risk taken</p> <p>Team Leadership</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. communicate effectively to the team members</p> <p>SB7. identify conflicts in the team and try to resolve them at the earliest</p> <p>SB8. interact and engage with the team members on a day to day basis</p> <p>SB9. counsel and coach the team members and help them resolve issues</p>

ASC/N0019

Manage the project delivery as a team lead within the cross functional team

	<p>SB10. timely highlight to the management about any good work/ achievement by the team members</p> <p>SB11. display empathy for the problems faced by the team and act on the concerns</p>
	<p>Analytical Thinking and Problem Solving</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB12. break the problem into smaller issues and tasks to arrive at a solution</p> <p>SB13. understand inter process relationship and establish relationship between various parts of the problem</p> <p>SB14. leverage experience to find effective solutions to problems</p> <p>SB15. use basic analytical tools to arrive at solutions</p> <p>SB16. develop alternate solutions and resolves problems in early stages</p> <p>SB17. work tireless in spite of repeat activities in a diligent manner to resolve problems on a day to day basis</p> <p>SB18. collaborate with cross functional teams to resolve problems</p>
	<p>Judgment and Critical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB19. use common sense and make judgments during day to day basis</p> <p>SB20. use reasoning skills to identify and resolve problems</p> <p>SB21. use intuition to detect any potential problems which could arise during operations</p> <p>SB22. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation gather information skilfully from multiple sources</p> <p>SB23. analyse information in depth and identifies the problem in a timely manner</p>
	<p>Ownership</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB24. accept additional responsibility for self and the team</p> <p>SB25. encourage self and other to take greater responsibilities</p> <p>SB26. ensure that the work allocated to the team is completed as per timelines and quality norms</p> <p>SB27. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles</p>
	<p>Team Work</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB28. motivate and provide support for the team on the shop floor</p> <p>SB29. encourage collaboration between team members</p> <p>SB30. resolve team issues and grievances to manage conflicts within the team</p> <p>SB31. create an environment of approachability, trust and openness within the team</p> <p>SB32. ensure role clarity for all operators and helpers on the line/ shift</p> <p>SB33. escalate any team related issues to the concerned person at the right time</p>

ASC/N0019

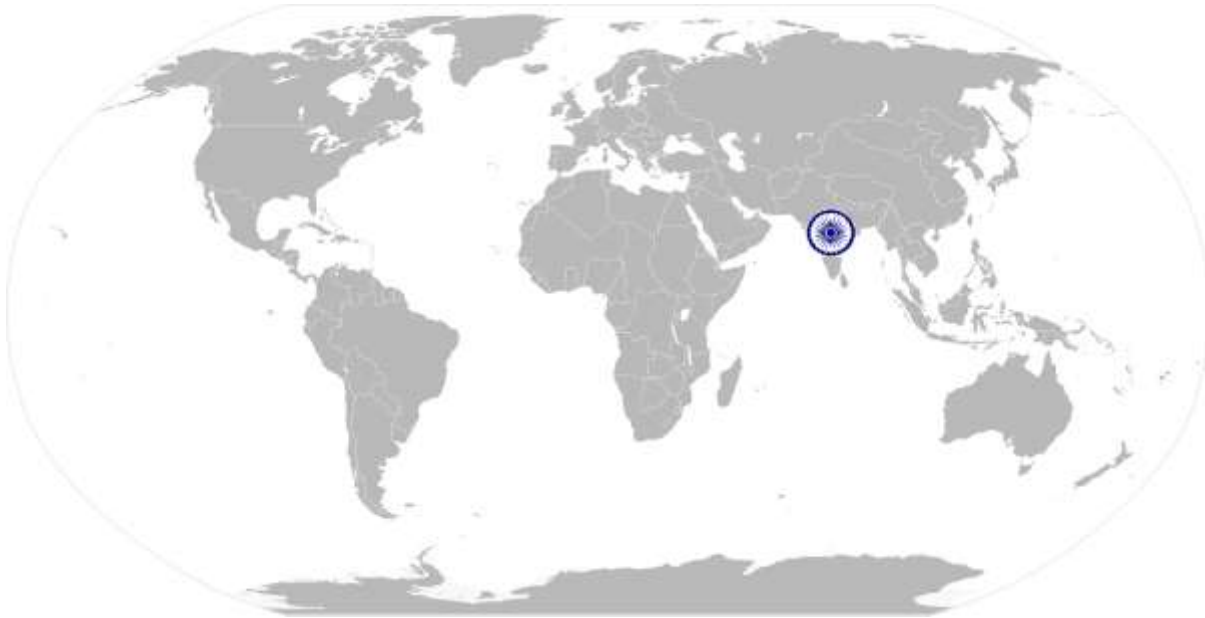
Manage the project delivery as a team lead within the cross functional team

	Decision making
	The user/individual on the job needs to know and understand how to: SB34. use previous experience in resolving problems and taking decisions SB35. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization
	Collaboration
	The user/ individual on the job needs to know and understand how to: SB36. exhibit objectivity & openness to others' views SB37. collaborate with stakeholders to achieve the desired state of final result
	Out of Box thinking
	The user/ individual on the job needs to know and understand how to: SB38. familiarise with leading practices available in the market SB39. think independently on new approaches to manufacturing process, material management, data management and team management SB40. represent any new ideas/ approaches on process improvement and productivity improvement to the seniors in the team

NOS Version Control

NOS Code	ASC/N0019		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	26/12/2013
Industry Sub-sector	R&D	Last reviewed on	20/1/2014
Occupation	Prototyping	Next review date	Under revision expected date of revised version 31-Dec-15

National Occupational Standard



Overview

Managing the team on a day to day basis and ensuring employee productivity by engaging them, providing them the right feedback, resolving their grievances and ensuring their development

ASC/N0020

Manage the team on a day to day basis

National Occupational Standard

Unit Code	ASC /N0020
Unit Title (Task)	Manage the team on a day to day basis
Description	This NOS is about managing the team of on day to day basis, ensuring their deployment, motivating them by involving them in various engagement initiatives helping them improve the skills levels and managing their grievances in the best possible manner in order to maximize the people productivity
Scope	The person is responsible for ensuring <ul style="list-style-type: none"> Engaging the team through employee communication and employee engagement Finalizing manpower deployment Employee Performance Measurement and Employee Development Ensuring the proper culture and facilities for R&D
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Engaging the team through employee communication and employee engagement	<p>PC1. Ensure engineer and team are aware of the job expectations on a monthly/weekly/daily basis</p> <p>PC2. Involve engineer and team for the daily work meeting/brain storming sessions / staff meetings to communicate information intended for them</p> <p>PC3. Ensure communication to team on any changes in policies/ processes by the organization through required verbal/ written mechanisms</p> <p>PC4. Ensure participation of employees in various engagement initiatives organized at the engineering centre and other place by the organization</p> <p>PC5. Involve engineer and team in TQM & Kaizen meets, Brainstorming sessions, safety drills etc. to increase their involvement in R&D operations</p> <p>PC6. Escalate issues to concerned staff in case of any issue related to team management and engagement</p>
Finalizing manpower deployment	<p>PC7. Finalize along with the engineer the shift planning and manpower deployment for the month/week as per the proposed prototype development plan</p> <p>PC8. Ensure that the engineer maintains the information on leaves share the information with the concerned as and when required</p> <p>PC9. Ensure that the engineer identifies the skilled manpower for the process and ensure periodic up - dation of Skill Matrix/ Skill Chart</p> <p>PC10. Ensure identification and deployment of right skilled people at the right places on the prototype shop</p>
Employee Performance Measurement and Employee	<p>PC11. Ensure that the engineer tracks the daily performance of the team and note the achievement levels in an online IT enabled system</p> <p>PC12. Provide feedback to engineer pertaining to performance appraisals of team</p> <p>PC13. Ensure that the team is trained and are aware of the processes which need</p>

ASC/N0020

Manage the team on a day to day basis

Development	<p>to be followed on the shop floor during the prototype process</p> <p>PC14. Other than technical trainings, support the team by delivering trainings related to quality and safety for them</p> <p>PC15. Drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts</p>
Ensuring the proper culture and facilities for R&D	<p>PC16. Ensure that the engineer maintains a cordial and open culture in the team so that maximum new ideas are generated</p> <p>PC17. Ensure a culture of intelligent market benchmarking for different types of design, prototypes and testing methodologies in the company</p> <p>PC18. Ensure development of effective design and test centres where different types of prototype models could be build and tested to have maximum conversion of new ideas to product in a cost effective manner</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards and procedures followed in the company</p> <p>KA2. different types of products manufactured by the company</p> <p>KA3. quality management practices of the organization</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KA4. different types of R&D processes</p> <p>KA5. various grievance management tools available in the organization</p> <p>KA6. various problems solving tools like 7QC, Why Analysis, Brain storming</p> <p>KA7. different types of communication channels practiced by the organization</p> <p>KA8. the method of noting observations, maintaining records and sharing them with the concerned in the required format</p> <p>KA9. knowledge of shift roster norms and guidelines</p> <p>KA10. how and when to measure performance of the operators</p> <p>KA11. how to share feedback with team members</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Writing and reading skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. document information from the manuals, discussion notes, process charts etc.</p> <p>SA2. create small notes/ work documents/ diagrams for operators and helpers to help them understand the process</p> <p>SA3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc</p> <p>SA4. read internal information memos send by internal customers (other functions within the organization)</p>
	Oral Communication (Listening and Speaking skills)

ASC/N0020

Manage the team on a day to day basis

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SA5. discuss task lists, schedules, and work-loads with the operative team members SA6. answer the queries raised by the operative team as well as intercompany departments SA7. effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc. SA8. attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker
<p>B. Professional Skills</p>	<p>People Development</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB1. identify the strengths and weaknesses of the subordinate team members (operators and helpers) SB2. provide constructive and genuine feedback SB3. motivate the team to take independently responsibilities in their work areas SB4. provide training to the operators and helpers for technical and behavioural areas
	<p>Team Leadership</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB5. communicate effectively to the team members SB6. identify conflicts in the team and try to resolve them at the earliest SB7. interact and engage with the team members on a day to day basis SB8. counsel and coach the operators and help them resolve issues SB9. timely highlight to the management about any good work/ achievement by the operators and helpers SB10. display empathy for the problems faced by the team and act on the concerns
	<p>Analytical Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB11. break the problem into smaller issues and tasks to arrive at a solution SB12. understand inter process relationship and establish relationship between various parts of the problem SB13. leverage experience to find effective solutions to problems SB14. use basic analytical tools to arrive at solutions SB15. collaborate with cross functional teams to resolve problems
<p>Judgment and Critical Thinking</p>	
<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB16. use common sense and make judgments during day to day basis SB17. use reasoning skills to identify and resolve problems SB18. use intuition to detect any potential problems which could arise during operations SB19. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation 	
	<p>Ownership</p>

ASC/N0020

Manage the team on a day to day basis

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB20. accept additional responsibility for self and the team SB21. encourage self and other to take greater responsibilities SB22. ensure that the work allocated to the team is completed as per timelines and quality norms SB23. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles
	<p>Team Work</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB24. motivate and provide support for the team on the shop floor SB25. encourage collaboration between team members SB26. resolve team issues and grievances to manage conflicts within the team SB27. create an environment of approachability, trust and openness within the team SB28. ensure role clarity for all operators and helpers on the line/ shift SB29. escalate any team related issues to the concerned person at the right time
	<p>Decision making</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB30. use previous experience in resolving problems and taking decisions SB31. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization

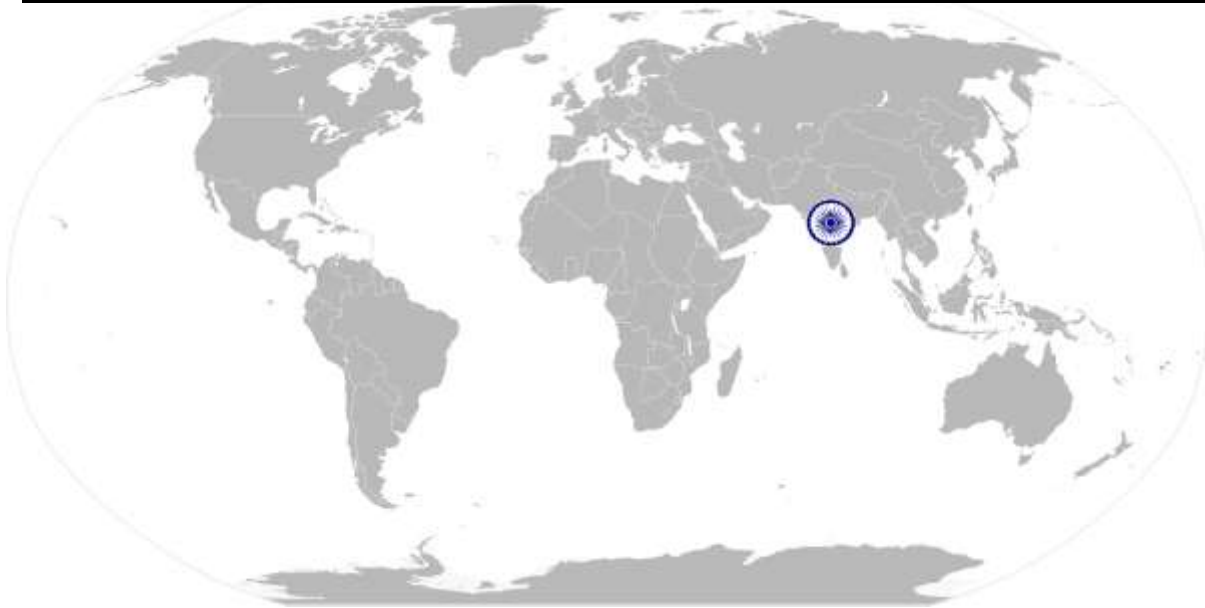


ASC/N0020

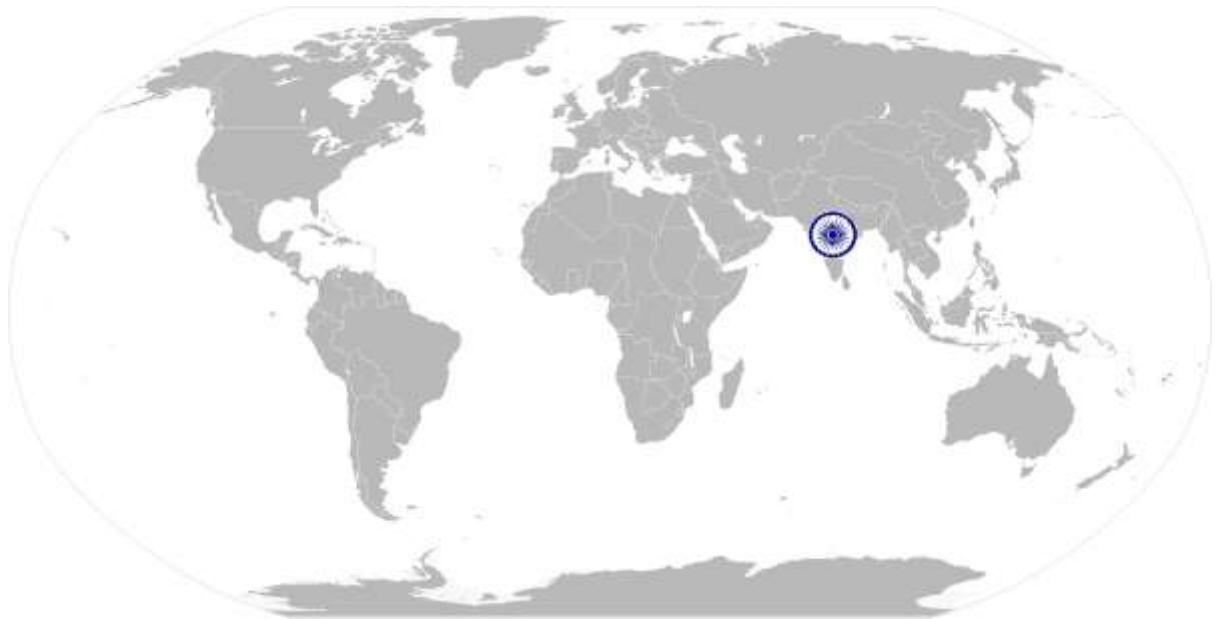
Manage the team on a day to day basis

NOS Version Control

NOS Code	ASC/N0020		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	26/12/2013
Industry Sub-sector	Research & Development	Last reviewed on	20/1/2014
Occupation	Prototyping	Next review date	Under revision expected date of revised version 31-Dec-15



National Occupational Standard



Overview

This unit is about maintaining a Safe and Healthy working environment

National Occupational Standard	Unit Code	ASC/N0006
	Unit Title (Task)	Maintain a safe and healthy working environment
	Description	This NOS unit is about creating a Safe and Healthy work place, adhering to the safety guidelines in the working area, following practices which are not impacting the environment in a negative manner and training team members on health and safety related issues
	Scope	<p>The role holder will be responsible for:</p> <ul style="list-style-type: none"> identifying and reporting risks creating and sustaining a safe, clean and environmental friendly work place <p>This NOS will be applicable to all Automotive sector manufacturing job roles</p>
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Display awareness to the potential safety risks	<p>PC1. Display understanding of the activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise</p> <p>PC2. Be aware of the areas in the plant/ lab/ R&D facility which are potentially hazardous/ unhygienic in nature</p> <p>PC3. Understand all risk involving hazardous areas near the work place that are marked/ tagged in order to caution the users of the work area/ machinery</p> <p>PC4. Attend awareness drives held amongst other on sharing information on the identified risks</p> <p>PC5. Attend periodic awareness sessions that are conducted</p>
	Display awareness towards maintaining a Safe, clean and environment friendly work place	<p>PC6. Wear the recommended Personal Protective Equipment (PPE) and also ensure self-usage of the required PPEs when entering the plant/ lab/ R&D test lab premises</p> <p>PC7. Display awareness of the instructions given on the equipment manual describing the operating process of the equipment to prevent any hazard</p> <p>PC8. Be aware of the first aid safety kit at the work place/ shop floor/ lab location and the requisite items to respond to minor injuries</p> <p>PC9. Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques and ensure that the team participate in all the required safety and fire drills</p> <p>PC10. Participate in all safety related initiatives like Safety Committee participations, Safety Day Celebrations etc.</p> <p>PC11. Maintain high standards of personal hygiene at the work place</p>

ASC/N0006

Maintain a safe and healthy working environment

	PC12. Inform the medical officer/ HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others
Knowledge and Understanding (K)w.r.t. the scope	
Element	Knowledge and Understanding
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant standards, procedures and policies related to Health, Safety and Environment followed in the company KA2. emergency handling procedures & hierarchy for escalation
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. basic knowledge of Safety procedures(fire fighting, first aid) within the organization KB2. knowledge of various types of PPEs and their usage KB3. basic knowledge of risks/hazards associated with each occupation in the organization KB4. how to safely operate various tools and machines and risks associated with the tools/ equipment KB5. knowledge of personal hygiene and how an individual can contribute towards creating a highly safe and clean working environment
Skills (S)w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. write basic level notes and observations SA2. note down observations (if any) related to the process SA3. write information documents to internal departments/ internal teams
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA4. read safety instructions put up across the plant premises SA5. read safety precautions mentioned in equipment manuals and panels to understand the potential risks associated
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA6. effectively communicate information to team members SA7. inform employees in the plant and concerned functions about SA8. events, incidents & potential risks observed related to Safety, Health and Environment. SA9. question the process head/ safety team in order to understand the safety related issues

ASC/N0006

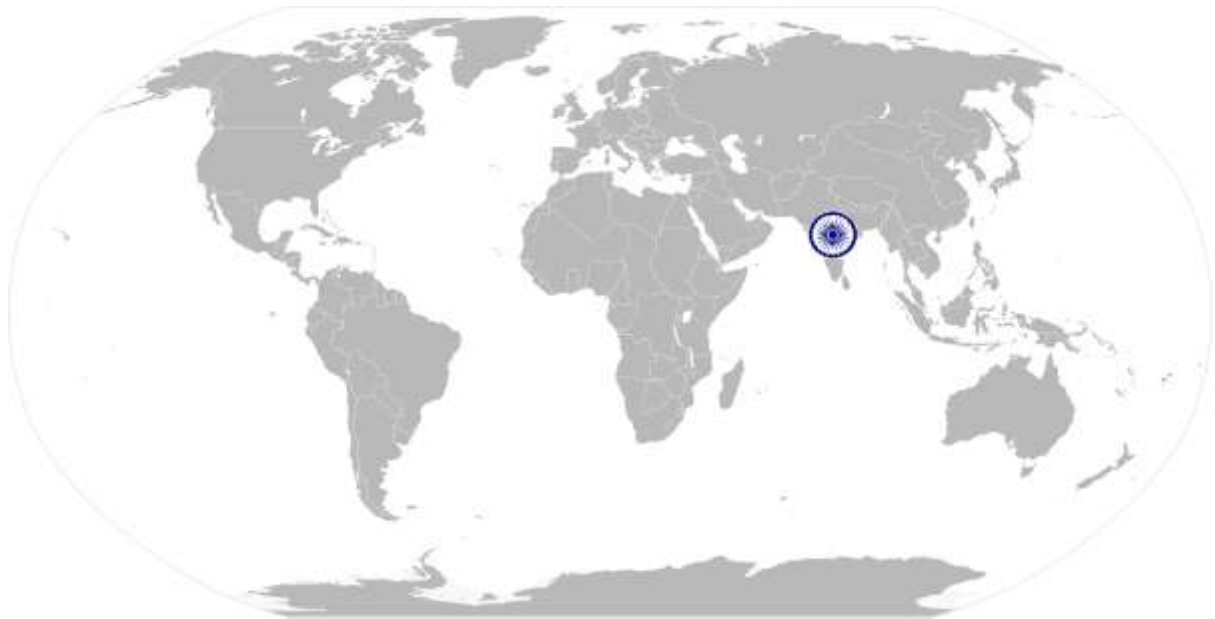
Maintain a safe and healthy working environment

	SA10. attentively listen with full attention and comprehend the SA11. information given by the speaker during safety drills and training programs
B. Professional Skills	Judgmental Thinking
	The user/individual on the job needs to know and understand how to: SB1. use common sense and make judgments during day to day basis SB2. use reasoning skills to identify and resolve basic problems
	Persuasion skills
	The user/ individual on the jobs needs to know and understand how to: SB3. persuade team members to wear Personal Protective Equipment as per requirement SB4. ensure that the team understands the importance of using various machines and equipment without creating any risk to human/ machine SB5. train team members on various risks identified
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB6. break the problem into smaller issues and tasks to arrive at a solution SB7. understand inter process relationship and establish relationship between various parts of the problem SB8. leverage experience to find effective solutions to problems SB9. use basic analytical tools to arrive at solutions

NOS Version Control

NOS Code	ASC/N0006		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	26/12/2013
Industry Sub-sector	R&D	Last reviewed on	20/1/2014
Occupation	Prototyping	Next review date	Under revision expected date of revised version 31-Dec-15

National Occupational Standard



Overview

This unit is about the implementing the various principles of 5S and ensure that the given guidelines are followed to ensure a clean and efficient working environment in the organization

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

National Occupational Standard

Unit Code	ASC/N0022
Unit Title (Task)	Ensure implementation of 5S activities at the shop floor & the office area
Description	This NOS is about overseeing the implementation of all 5 S activities both at the shop floor and the office area by the team members and training the team in implementation of the 5S principles
Scope	The individual needs to <ul style="list-style-type: none"> Ensure sorting, streamlining/ organizing, storage and documentation, systematic cleaning, standardization and sustenance across the plant and office premises of the organization as given in the organization guidelines
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Ensure proper sorting of items at the work place	<p>PC1. Ensure all recyclable materials are put in designated containers</p> <p>PC2. Ensure no Tools, fixtures & jigs are lying on workstations unless in use and no un-necessary items is lying on workbenches or work surfaces unless in use</p> <p>PC3. Ensure that the operators and other team members are segregating the waste in hazardous/ Non Hazardous waste as per the sorting work instructions</p> <p>PC4. Ensure that all the operators are following the technique of waste disposal and waste storage in the designated bins</p> <p>PC5. Segregate the items which are labeled at red tag items for the process area and keep them in the correct places</p> <p>PC6. Ensure that all the tools/ equipment/ fasteners/ spare parts are arranged as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</p> <p>PC7. Check for return of any type of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC8. Oversee removal of unnecessary equipment, storage, furniture, unneeded inventory, supplies, parts and material</p> <p>PC9. Ensure that areas of material storage areas are not overflowing</p> <p>PC10. Ensure proper stacking and storage of the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p>
Ensure proper documentation and storage	PC11. Ensure that the team follows the given instructions and checks for labeling of fluids, oils, lubricants, solvents, chemicals etc. and

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

<p>– streamlining & organizing the workplace</p>	<p>proper storage of the same to avoid spillage, leakage, fire etc. PC12. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions PC13. Ensure that organizing the workplace takes place with due considerations to the principles of wasted motions, ergonomics, work & method study .</p>
<p>Ensure cleaning of self and the work place</p>	<p>PC14. Ensure that the area has floors swept, machinery clean and is generally neat and tidy. In case of cleaning, ensure that correct displays are maintained on the floor which indicate potential safety hazards PC15. Ensure workbenches and work surfaces are clean and in good condition PC16. Ensure adherence to the cleaning schedule for the lighting system to ensure proper illumination PC17. Ensure self-cleanliness - clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene</p>
<p>Ensure standardization</p>	<p>PC18. Ensure that daily cleaning standards and schedules to create a clean working environment are followed across the plant PC19. Oversee that various cleaning and organizing tasks have been developed and assigned for the work area PC20. Ensure logical and user friendly documentation and file management for all activities across the plant and create guidelines around standardization of processes PC21. Ensure timely creation and sharing of the 5S checklists PC22. Ensure that the 5S manual are available as per the timelines</p>
<p>Ensure sustenance</p>	<p>PC23. Ensure team cooperation during the audit of 5 S activities PC24. Ensure that workmen are periodically trained to address challenges related to 5S PC25. Participate actively in employee work groups on 5S and encourage team members for active participation PC26. Oversee that the staff/operators are trained and fully understand 5s procedures PC27. Ensure that all the guidelines for What to do and What not to do to build sustainability in 5S are mentioned in the 5S check lists/ work instructions and are easily searchable PC28. Ensure continuous training of the team members on 5S in order to increase their awareness and support implementation PC29. Ensure that all visual controls, notice boards, symbols etc. at the manufacturing place are created, working and are put up as per the requirement</p>
<p>Knowledge and Understanding (K) w.r.t. the scope</p>	
<p>Element</p>	<p>Knowledge and Understanding</p>

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

<p>C. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA3. relevant standards, procedures and policies related to 5S followed in the company</p>
<p>D. Technical Knowledge</p>	<p>The user/individual on the job needs to :</p> <p>KB6. have basic knowledge of 5S procedures</p> <p>KB7. know various types 5s practices followed in various areas</p> <p>KB8. understand the 5S checklists provided in the department/ team</p> <p>KB9. have skills to identify useful & non useful items</p> <p>KB10. have knowledge of labels , signs & colours used as indicators</p> <p>KB11. Have knowledge on how to sort and store various types of tools, equipment, material etc.</p> <p>KB12. know , how to identify various types of waste products</p> <p>KB13. understand the impact of waste/ dirt/ dust/unwanted substances on the process/ environment/ machinery/ human body</p> <p>KB14. have knowledge of best and environment protective ways of cleaning & waste disposal</p> <p>KB15. understand the importance of standardization in processes</p> <p>KB16. understand the importance of sustainability in 5S</p> <p>KB17. have knowledge of TQM process</p> <p>KB18. have knowledge of various materials and storage norms</p> <p>KB19. understand visual controls, symbols, graphs etc.</p>
<p>Skills (S)w.r.t. the scope</p>	
<p>Element</p>	<p>Skills</p>
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA12. write basic level notes and observations</p> <p>SA13. note down observations (if any) related to the process</p> <p>SA14. write information documents to internal departments/ internal teams</p> <p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA15. read 5S instructions put up across the plant premises</p> <p>Oral Communication (Listening and Speaking skills)</p>

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA16. effectively communicate information to team members inform employees in the plant and concerned functions about 5S</p> <p>SA17. question the process head in order to understand the 5S related issues</p> <p>SA18. attentively listen with full attention and comprehend the information given by the speaker during 5S training programs</p>
<p>B. Professional Skills</p>	<p>Judgmental Thinking</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB10. use common sense and make judgments during day to day basis</p> <p>SB11. use reasoning skills to identify and resolve basic problems using 5S</p>
	<p>Persuasion</p>
	<p>The user/ individual on the jobs needs to know and understand how to:</p> <p>SB12. persuade team members to follow 5 S</p> <p>SB13. ensure that the team members understand the importance of using 5 S tool</p>
	<p>Creativity</p>
	<p>The user/individual on the job needs to know and understand how to :</p> <p>SB14. use innovative skills to perform and manage 5 S activities at the work desk and the shop floor</p> <p>SB15. exhibit inquisitive behaviour to seek feedback and question on the existing set patterns of work emerge, techniques in CA/CI around 5 S work practices</p>
<p>Self -Discipline</p>	
<p>The user/individual on the job needs to know and understand how to:</p> <p>SB16. do what is right, not what is a popular practice</p> <p>SB17. follow shop floor rules& regulations and avoid deviations</p> <p>SB18. lead by example in the plant premises while performing activities related to 5S</p> <p>SB19. ensure self-cleanliness on a daily basis</p> <p>SB20. demonstrate the will to keep the work area in a clean and orderly manner</p>	
	<p>Ownership</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB21. accept additional responsibility for self and the team</p> <p>SB22. encourage self and other to take greater responsibilities for managing 5S</p> <p>SB23. identify obstacles and bottlenecks in the process and find basic level solutions for removing these obstacles</p>
	<p>Decision making</p>

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB24. use previous experience in resolving problems and taking decisions</p> <p>SB25. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization</p>
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NOS Version Control

NOS Code	ASC/N0022		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	1/03/2014
Industry Sub-sector	Manufacturing/ R&D	Last reviewed on	15/03/2014
Occupation	Prototyping	Next review date	Under revision expected date of revised version 31-Dec-15



Criteria for assessment of Trainees

JOB ROLE	Prototyping Manager
Qualification Pack	ASC/Q 8302
No. Of NOS	1 Role specific ,4 generic

Assessable Outcomes	Assessment criteria	Marks Allocation		
		Theory	Viva	Practical
ASC /N8304	Manage the operations to achieve leadership in prototype development			
Ensure process understanding and equipment requirement for prototyping	PC17. Ensure that the prototyping team has the proper understanding of the machining & assembling requirements, equipment and parameters to be set for the process		25	25
Ensure machine ,auxiliary apparatus and metal work pieces preparation	PC18. Ensure arrangement for working ,manual or computer controlled, equipment's for machining , PPE's and other material as per the requirement of the machining process PC19. Oversee timely fulfilment and setup of production related equipment and machines before the actual execution of the operations		25	25
Manage the Prototyping Operation	PC20. Ensure timely receiving of drawings at each phase from the design team to the prototyping team PC21. Ensure the engineer studies the drawings/ sketches to understand the operations to be performed by the operator/ machinist and plan sequences of		25	25

	<p>operations for fabricating products at each Prototyping phase</p> <p>PC22. Ensure proper coordination of the engineer with the vendors(in house & outside) for timely and accurate material for NPD</p> <p>PC23. Ensure adherence to timelines for completion of the Prototype</p> <p>PC24. Ensure that all the safety compliances are met in the prototype</p> <p>PC25. Ensure that the prototype is proof of all preliminary tests in all Phases 1, 2 and 3.</p> <p>PC26. Oversee that the complete concept of new product /new technology is evaluated and a proper feedback is given to the design team</p> <p>PC27. Oversee that the engineer supervises conformance to the specifications mentioned in the Work Instructions/ SOPs using precision measurement tools</p> <p>PC28. Ensure achievement of desired functional & performance specifications and technical targets</p> <p>PC29. Ensure achievement of vehicle durability and reliability and compliance to Emission norms</p> <p>PC30. Ensure adherence to PFMEA process by the engineer for vehicle manufacturing</p> <p>PC31. Ensure timely feedback to the design team</p> <p>PC32. Ensure prototype handover to test centre for various</p>			
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	durability and performance testing			
	Subtotal	100	75	75
ASC /N0019	Manage the project delivery as a team lead within the cross functional team	Theory	Viva	Practical
Manage Costs and Budgets for the team	<p>PC34. Ensure timely creation of item wise/ head wise budget for the team on a year on year basis</p> <p>PC35. Ensure that all major and minor cost elements related to equipment, tools, raw material, manpower, consumables and marketing activities are considered during finalization of the budgets for the given financial period/ project delivery period</p> <p>PC36. Conduct effective negotiations along with the commercial team with suppliers and vendors during procurement of equipment, tools and raw material required for delivery of the new product</p> <p>PC37. Support the process wise R&D lead/ head in conducting periodic tracking of Planned Vs. Actual expenditure (Variance Analysis) for the team</p> <p>PC38. Act upon the outcomes of the variance analysis and keep the overall process/ product cost within the specified ranges</p> <p>PC39. Escalate any budgetary exigencies to process wise</p>		20	20

	<p>R&D Lead/ head in a timely manner so that the project delivery does not suffer because of budgetary reasons</p>			
<p>Process Excellence and Process Improvement</p>	<p>PC40. Ensure detailed self-understanding of all the requisite processes to be adopted for completing the development job</p> <p>PC41. Ensure drafting and finalizing of process manuals, Work Instructions, Control Plans, process flow charts to enable the team to easily understand and implement the process</p> <p>PC42. Ensure that Work Instructions/ Process steps are displayed in key areas like test labs, CA/CAD centres etc.</p> <p>PC43. Ensuring recording and reporting procedures and systems are in place and shared with the team members</p> <p>PC44. Ensure 5S implementation in the R&D function especially in data management and data storage (Knowledge Management)</p> <p>PC45. Identify areas of improvement in the existing processes/systems and take measures to adhere to the identified Kaizen/ process improvement initiatives</p> <p>PC46. Ensure team has understanding of basic analytical tools like Why analysis, brainstorming, 7</p>			<p>20</p> <p>20</p>

	<p>QC tools, TQM principles to analyse various problems and design process improvement activities</p> <p>PC47. Ensure that the development team regularly engages with the analytical tools during the various product development team</p> <p>PC48. Implement various business excellence techniques like Kaizen, 5S initiatives and safety interventions to enhance productivity of the team</p>			
<p>Project Delivery Management</p>	<p>PC49. Support the process wise R&D lead/ head in creating the project plan for the individual product development team and ensure linkage with the overall NPD plan of the organization</p> <p>PC50. Identify critical areas/ activities which need detailed monitoring and effective implementation to prevent any negative impact on the project process</p> <p>PC51. Ensure tracking of key activities and milestones given in the individual project plan</p> <p>PC52. Support the process wise R&D lead/ head in monitoring of individual project timelines, work quality, development & delivery costs, team contribution and knowledge management activities</p> <p>PC53. Support the process wise</p>		<p>20</p>	<p>20</p>

	<p>R&D lead/ head in creating time bound mitigation plan to deal with project plan variances</p> <p>PC54. Ensure timely setup of design centres, laboratories, testing beds as required by the NPD delivery process mentioned in the overall project plan</p> <p>PC55. In case new equipment/ procedures are required, ensure that the responsible team is contacted well before the execution time in order to prevent delays in the development process</p> <p>PC56. Create required project status reports and share the same the relevant stakeholders in the format finalized by the Cross Functional Project Team</p> <p>PC57. Manage stakeholder relationship and ensure closure of open items needing feedback or approvals from the relevant stakeholders</p> <p>PC58. Ensure effective collaboration and information sharing with other members of the cross functional NPD delivery team</p> <p>PC59. Escalate any pertinent issues to the process wise R&D head which need immediate attention</p>			
<p>Human Resource Management</p>	<p>PC60. Finalize along with the individual process head in the CFT, the manpower planning and manpower</p>		<p>15</p>	<p>15</p>

	<p>deployment for the delivery team</p> <p>PC61. Identify the competencies required for the project delivery team</p> <p>PC62. Ensure identification and deployment of right skilled people at the right places on the delivery process</p> <p>PC63. Track the performance of the team during the various stages of the project and provide timely feedback for course correction</p> <p>PC64. Share knowledge of processes, inputs and outputs with the team members to enhance their skill levels</p> <p>PC65. Other than technical trainings, support the team by delivering trainings related to quality and safety for the operators and helpers</p> <p>PC66. Drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts</p>			
	Subtotal	100	75	75
ASC /N0020	Manage the team on a day to day basis	Theory	Viva	Practical
Engaging the team through employee communication and employee engagement	<p>PC19. Ensure engineer and team are aware of the job expectations on a monthly/weekly/daily basis</p> <p>PC20. Involve engineer and team for the daily work meeting/brain storming sessions / staff meetings to communicate information</p>		20	20

	<p>intended for them</p> <p>PC21. Ensure communication to team on any changes in policies/ processes by the organization through required verbal/ written mechanisms</p> <p>PC22. Ensure participation of employees in various engagement initiatives organized at the engineering centre and other place by the organization</p> <p>PC23. Involve engineer and team in TQM & Kaizen meets, Brainstorming sessions, safety drills etc. to increase their involvement in R&D operations</p> <p>PC24. Escalate issues to concerned staff in case of any issue related to team management and engagement</p>			
<p>Finalizing manpower deployment</p>	<p>PC25. Finalize along with the engineer the shift planning and manpower deployment for the month/week as per the proposed prototype development plan</p> <p>PC26. Ensure that the engineer maintains the information on leaves share the information with the concerned as and when required</p> <p>PC27. Ensure that the engineer identifies the skilled manpower for the process and ensure periodic up - dation of Skill Matrix/ Skill Chart</p> <p>PC28. Ensure identification and</p>		<p>20</p>	<p>20</p>

	deployment of right skilled people at the right places on the prototype shop			
Employee Performance Measurement and Employee Development	PC29. Ensure that the engineer tracks the daily performance of the team and note the achievement levels in an online IT enabled system			
	PC30. Provide feedback to engineer pertaining to performance appraisals of team			
	PC31. Ensure that the team is trained and are aware of the processes which need to be followed on the shop floor during the prototype process			
	PC32. Other than technical trainings, support the team by delivering trainings related to quality and safety for them			
	PC33. Drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts			20
	Subtotal	80	60	60
ASC/N0006	Maintain a safe and healthy working environment	Theory	Viva	Practical
Display awareness to the potential safety risks	PC13. Display understanding of the activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise			
	PC14. Be aware of the areas in the		10	10

	<p>plant/ lab/ R&D facility which are potentially hazardous/ unhygienic in nature</p> <p>PC15. Understand all risk involving hazardous areas near the work place that are marked/ tagged in order to caution the users of the work area/ machinery</p> <p>PC16. Attend awareness drives held amongst other on sharing information on the identified risks</p> <p>PC17. Attend periodic awareness sessions that are conducted</p>			
<p>Display awareness towards maintaining a Safe, clean and environment friendly work place</p>	<p>PC18. Wear the recommended Personal Protective Equipment (PPE) and also ensure self-usage of the required PPEs when entering the plant/ lab/ R&D test lab premises</p> <p>PC19. Display awareness of the instructions given on the equipment manual describing the operating process of the equipment to prevent any hazard</p> <p>PC20. Be aware of the first aid safety kit at the work place/ shop floor/ lab location and the requisite items to respond to minor injuries</p> <p>PC21. Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques and ensure that the team participate in all the required safety and fire drills</p> <p>PC22. Participate in all safety related initiatives like Safety</p>		<p>5</p>	<p>5</p>

	<p>Committee participations, Safety Day Celebrations etc.</p> <p>PC23. Maintain high standards of personal hygiene at the work place</p> <p>PC24. Inform the medical officer/ HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others</p>			
	Subtotal	20	15	15
ASC/N0022	Ensure implementation of 5S activities at the shop floor & the office area			
Ensure proper sorting of items at the work place	<p>PC30. Ensure all recyclable materials are put in designated containers</p> <p>PC31. Ensure no Tools, fixtures & jigs are lying on workstations unless in use and no unnecessary items is lying on workbenches or work surfaces unless in use</p> <p>PC32. Ensure that the operators and other team members are segregating the waste in hazardous/ Non Hazardous waste as per the sorting work instructions</p> <p>PC33. Ensure that all the operators are following the technique of waste disposal and waste storage in the designated bins</p> <p>PC34. Segregate the items which are labeled at red tag items for the process area and keep them in the correct places</p> <p>PC35. Ensure that all the tools/ equipment/ fasteners/ spare parts are arranged as per specifications/ utility into proper trays, cabinets, lockers</p>			

	<p>as mentioned in the 5S guidelines/ work instructions</p> <p>PC36. Check for return of any type of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC37. Oversee removal of unnecessary equipment, storage, furniture, unneeded inventory, supplies, parts and material</p> <p>PC38. Ensure that areas of material storage areas are not overflowing</p> <p>PC39. Ensure proper stacking and storage of the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p>			
<p>Ensure proper documentation and storage – streamlining & organizing the workplace</p>	<p>PC40. Ensure that the team follows the given instructions and checks for labeling of fluids, oils. Lubricants, solvents, chemicals etc. And proper storage of the same to avoid spillage, leakage, fire etc.</p> <p>PC41. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions</p> <p>PC42. Ensure that organizing the workplace takes place with due considerations to the principles of wasted motions, ergonomics, work & method study.</p>			
<p>Ensure cleaning of self and the work place</p>	<p>PC43. Ensure that the area has floors swept, machinery clean and is generally neat and tidy. In case of cleaning, ensure that</p>			

	<p>correct displays are maintained on the floor which indicate potential safety hazards</p> <p>PC44. Ensure workbenches and work surfaces are clean and in good condition</p> <p>PC45. Ensure adherence to the cleaning schedule for the lighting system to ensure proper illumination</p> <p>PC46. Ensure self-cleanliness - clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene</p>			
Ensure standardization	<p>PC47. Ensure that daily cleaning standards and schedules to create a clean working environment are followed across the plant</p> <p>PC48. Oversee that various cleaning and organizing tasks have been developed and assigned for the work area</p> <p>PC49. Ensure logical and user friendly documentation and file management for all activities across the plant and create guidelines around standardization of processes</p> <p>PC50. Ensure timely creation and sharing of the 5S checklists</p> <p>PC51. Ensure that the 5S manual are available as per the timelines</p>			
Ensure sustenance	<p>PC52. Ensure team cooperation during the audit of 5 S activities</p> <p>PC53. Ensure that workmen are periodically trained to address challenges related to 5S</p> <p>PC54. Participate actively in employee work groups on 5S and encourage team members for active participation</p> <p>PC55. Oversee that the</p>			
			15	15

	<p>staff/operators are trained and fully understand 5s procedures</p> <p>PC56. Ensure that all the guidelines for What to do and What not to do to build sustainability in 5S are mentioned in the 5S check lists/ work instructions and are easily searchable</p> <p>PC57. Ensure continuous training of the team members on 5S in order to increase their awareness and support implementation</p> <p>PC58. Ensure that all visual controls, notice boards, symbols etc. at the manufacturing place are created, working and are put up as per the requirement</p>			
	Subtotal	20	15	15
	Total marks	320	240	240