

## 1 - Sales, Master scheduling and Sequencing

Definition: Balancing and forecasting Medium-Long term customer demand with operational & financial capabilities by optimizing sequence of operations, schedule and resources.

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>Process not defined</p> <p>Short term planning only, not taking into account customer medium and long term demand</p> <p>No forecast and planning based on effective orders only</p>	<p>Unidirectional process, top down limited, no feedback loop from operations to sales</p> <p>Actual orders and forecasts shared between functions with no systematic relevant actions</p> <p>Medium term planning of load vs. capacity on random basis only and reactive mode</p>	<p>Regular joint review of sales and master schedules between all relevant functions (sales, procurement, manufacturing...) with feedback loop from operations to sales in order to check that all constraints are satisfied and sales planning can be fulfilled</p> <p>Periodicity of medium long term planning revision based on updated forecast of customer demand and business constraints (e.g. longest lead time)</p>	<p>3+ Integrated process between all functions including feedback loop from operations to sales</p> <p>Unified planning process, continually monitored and updated</p> <p>Supply, demand, financial requirements integrated and analysed to set priorities based on risk assessment &amp; opportunity</p>	<p>4+ Business development and strategic planning optimized with key suppliers / partners and customers involvement</p> <p>Forecast models based on documented company strategy and rules and continual demand management (anticipation, event capable and results oriented)</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities defined in each main functions (Sales, Planning, Product Management, Manufacturing, Purchasing, Finance &amp; Human resources) or units as required, but no harmonized approach</p> <p>Communication between various functions or units on a random basis</p>	<p>Accountabilities defined across various functions (Sales, Planning, Product Management, Manufacturing, Purchasing, Finance &amp; Human resources)</p> <p>Structured and regular coordination meetings between functions for effective decisions</p>	<p>Skilled cross functional team working effectively (producing and validating aligned and synchronized master planning). Effective joint decision making across all functions</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast)</p>	<p>4+ Evidence of continual improvement culture (team permanently willing to identify gaps between planned and actual results to launch appropriate improvements, or identifying and correcting productivity factors variability)</p> <p>Supplier / partner and customers involvement</p> <p>Skills &amp; competencies and business targets used to optimize Resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tools or local tools (e.g. spreadsheets only)</p> <p>No data or short term data only (sales, capacity, resources...)</p> <p>No or poor data sharing between functions</p>	<p>Basic planning tool</p> <p>Data from different sources (static), shared but not integrated between functions and/or covering medium term only</p>	<p>Existence of planning tool using data from different sources shared and integrated between all relevant functions, and covering medium term</p>	<p>Advanced Planning System (A.P.S), integrated between relevant functions, internally &amp; externally.</p> <p>Scenario and constraints based planning (past events - ramp up/down turns, technical, commercial, resources issues, etc - with possible impact on capacity taken into account)</p> <p>Regularly (e.g. Weekly or daily) updated data available</p> <p>Use of forecast trend models</p> <p>Medium and long term resources aligned with requirements plans (People, Finance, Investment, tooling, manufacturing facilities...)</p>	<p>4+ Event capable A.P.S. (anticipation of production rates changes and unplanned events, focussing on company results and objectives...) collaborative with customer &amp; key suppliers/partners systems</p> <p>Continual improvement and automation (Real time data.) + on demand synchronisation + impact analysis, closed loop</p> <p>Advanced statistical forecast models</p> <p>Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Basic metrics (orders vs expected sales, short and medium term planning variations, ...) available but not systematically used to drive operation</p> <p>Actual performance metrics (scrap &amp; rework rates, stock turns, machine utilization rates...) locally available, but results not shared between functions and not regularly used in planning of resources and needs</p>	<p>Metrics (orders vs expected sales, capacity margins (used vs needs), medium term planning variations, ...) available to drive customer needs vs operation</p> <p>Actual performance metrics (scrap &amp; rework rates, productivity, stock turns, machine utilization rates...) shared between functions, and results regularly used in medium term planning of resources and needs</p> <p>The metrics results show that the targets are achieved</p>	<p>3+ Top level metrics and associated targets (Customer Demand, On-time on Quality delivery, factory utilization, days of supply...) used in long term planning of resources and needs</p> <p>Medium and long term forecast performance results integrated and periodically accuracy measured and reviewed</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+ Metrics efficiency and effectiveness reviewed and optimized to support continual improvement, (profitability, inventory optimization and delivery performance)</p> <p>Benchmarking activities show best in class results</p>

## 2 - Contract requirements flow down (Customer related process )

Definition : Managing Review and flow down of contract requirements from the customers, through all functions internally & to suppliers

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No process defined to capture and manage customer requirements or no clear links between contract requirements and operational management</p> <p>Contract requirements are not analysed and not flowed down to internal functions and suppliers as required</p>	<p>Contract requirements are reviewed on an individual function basis and cascaded in the organization (internal/external) but through disconnected processes and documents</p> <p>No or partial feed back loop with customers acknowledging requirements</p> <p>Contractual requirements changes (product, delivery dates and rates, quality, etc...) are managed at random basis or for major changes only</p>	<p>Contract review and requirements flow down (internally and to suppliers) is managed program by program</p> <p>Compliance verified , deviations agreed and recorded locally (per function) with customers and suppliers where applicable, related risks &amp; opportunities identified and significant risks mitigated</p> <p>Clear process to manage all contractual requirement changes and ensure flow down to all concerned functions internally and externally</p>	<p>Contract review and requirements flow down (internally and to suppliers) is managed on an integrated basis</p> <p>Compliance demonstrated , deviations agreed, formalized (e.g. compliance matrix, quality plans ...) and accessible to all functions, involving customers and suppliers where applicable. All related risks identified, mitigated, managed</p> <p>Clear process to manage all contractual requirement changes and ensure flow down and feed-back loop to all concerned functions internally and externally</p>	<p>4+ Integrated process company wide to manage and flow contractual requirements down</p> <p>Previous contractual process failures analysed and continual improvement action plans implemented (lessons learnt process) if required</p> <p>Customer and suppliers integrated in the decision making and improvement process</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities defined in each main functions or units but no harmonized approach</p> <p>Contract requirement flow-down activity mainly driven by sales / contract functions, and other functions (Engineering, Manufacturing, Purchasing, Logistic and Quality) involved at random basis only</p> <p>Communication between various functions or units on a random basis</p>	<p>Accountabilities defined across various functions (Sales, Planning, Product Management, Manufacturing, Purchasing, Finance &amp; Human resources) for coordinated decision making</p> <p>Structured and regular communication between various units or functions</p>	<p>Skilled cross functional team working effectively, aligned and synchronized plans across organizations for effective decisions</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast)</p>	<p>4+ Evidence of continual improvement culture</p> <p>Clear evidence of collaborative working with customer and suppliers</p> <p>Skills &amp; competencies and business targets used to optimize Resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tool or basic tool to capture and distribute contractual requirements (spreadsheets, fax, drawings, e-mails, ...)</p> <p>No or poor data sharing between functions</p>	<p>Simple database exists, including main/top contractual documents</p> <p>Some local tools exist to cascade requirements (specific to each or limited to some functions) and no link between various tools</p>	<p>Single register exists, including or linking with all contractual documents</p> <p>Shared tools exist to cascade requirements (specific to each or limited to some functions) or relevant links between various tools are implemented</p>	<p>Integrated database and tool to manage and flow down requirements to all functions.</p> <p>Compliance recorded in an integrated tool (compliance matrix, quality and management plan...) and made available at point of views</p>	<p>4+ Company wide management tool or project specific and shared from customer to supply chain</p> <p>Data and tools analyzed and optimized focussing on customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Compliance to contract and customer requirements flowed down - internally and externally - measured (e.g. quantity, dates of flow down and acknowledgment,etc) during initial establishment phase only but no regular follow-up</p>	<p>Compliance to contract and customer requirements flowed down - internally and externally - measured (e.g. quantity, dates of flow down and acknowledgment, etc) and regularly reviewed to incorporate requirements changes. Results shared as appropriate between relevant functions</p> <p>The metrics results show that the targets are achieved</p>	<p>Periodic tracking and measurement of the contract requirement compliance (including number, frequency and scope of contractual changes, number and nature of deviations, ... ) systematically shared with all relevant functions</p> <p>Metrics efficiency and effectiveness measured and reviewed with customers and suppliers to support improvement plans</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+ On demand real time metrics with full customers and suppliers involvement to support continual improvement</p> <p>Benchmarking activities show best in class results</p>

### 3 - Design and development

Definition : New product introduction activities impacting supply chain performances including product and process essential characteristics management, changes and obsolescence management

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<b>Process</b>	<p>No process defined to manage New Product Introduction (N.P.I) and product change activity</p> <p>No interaction with suppliers</p>	<p>N.P.I. and product change management is primarily an engineering activity</p> <p>No process or random process to identify and manage Critical items including product and process key characteristics</p> <p>Unstructured feed back loop between Design office and other functions</p> <p>Obsolescence defined and managed in reactive mode only</p>	<p>Clear process to define product and process requirements from customer needs including Life Cycle/Change Management</p> <p>Obsolescence risks analysis and mitigation mainly driven by experience</p> <p>Periodic reviews between design office and other function (e.g. manufacturing, purchasing, Quality) to check adequacy between design and manufacturability</p> <p>Critical Items including product and process key characteristics identified &amp; managed</p>	<p>3+ Concurrent engineering in place, involving internal relevant functions</p> <p>Obsolescence is systematically and proactively managed with suppliers based on structured risk analysis process</p> <p>Design best practices implemented based on previous products experiences (lessons learned)</p> <p>Formal collaboration closed loop with regular reviews between design office and other functions (e.g. manufacturing, purchasing, Quality) to ensure adequacy between design and manufacturability</p> <p>Key suppliers are integrated early into the product design and development process as relevant</p>	<p>4+ Product Design and development process regularly assessed and optimised, involving internal and external stake holders</p> <p>Concurrent engineering in place, involving customer and suppliers as applicable, optimized for cost, testability, manufacturability, reliability and product performance</p> <p>Key suppliers are active partners in product design and development decisions and planning</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities defined in each main function (design, sales, programme, manufacturing, purchasing, customer support, Quality) or unit but no harmonized approach</p> <p>Skilled resources insufficiently allocated</p> <p>New product introduction and change management are mainly engineering driven activities</p> <p>Some links between design and other functions (sales, programme, manufacturing, purchasing, customer support, Quality) but no integrated approach (communication between various functions or units on a random basis)</p>	<p>Organization and accountabilities are defined with appropriate skilled resources</p> <p>Skills matrix exist and training plan adapted</p> <p>All functions involved and overall coordination is made by one dedicated function (Engineering, Product Development Team, etc)</p> <p>Structured and regular communication between various units or functions</p>	<p>Integrated skilled cross functional team working effectively (sales, programme manufacturing, purchasing, customer support, Quality) to manage New Product Introduction and product change activities</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast)</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p>	<p>4+ Integration of customers and suppliers in cross functional teams, evidence of continual improvement culture</p> <p>Skills &amp; competencies and business targets used to optimize Resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tool or basic tools or data not directly transferable from/to customer and/or supplier</p> <p>No or poor data sharing between relevant functions</p>	<p>Basic design tools (e.g. CAD/CAM) exist and resulting data are compatible with manufacturing, suppliers and customer tools as required</p> <p>Transfer of data is not systematic and/or reliable between relevant functions</p>	<p>Basic design tools (e.g. CAD/CAM) used and resulting data are connected with manufacturing, suppliers and customer tools as required</p> <p>Formal design reviews (e.g. Preliminary Design review, Critical Design Review, Production Readiness Review...) are regularly conducted</p> <p>Tools and database shared by relevant functions</p>	<p>3+ Tools exist to manage requirements, design, configuration, changes, obsolescence, design and development plannings, task allocations and associated resources needs</p> <p>Transfer of data is automated or full access between relevant functions</p> <p>Use of best practices and lessons learnt data base</p>	<p>4+ Improving product design and development through the use of market and service experience and data</p> <p>Interactive Transfer of data, automated between relevant functions including customers and suppliers as relevant</p> <p>Use of advanced design and development continual improvement tools (e.g. Design for Six Sigma)</p> <p>Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Engineering schedule performance measured</p> <p>Some basic metrics (e.g. classification of changes, number of changes/months or year, number of request for design changes, etc) in place</p>	<p>Metrics exist at each stage to measure and record design and development performance vs target (schedule adherence, number of changes, Time to Get a Fix, design and development costs, gated review results...) and are used to launch improvement actions</p> <p>The metrics results show that the targets are achieved</p>	<p>3+ Metrics efficiency and effectiveness reviewed to support continual design and development process improvement, (Product performance and reliability, ...)</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+ Metrics efficiency and effectiveness optimized to support continual design and development process performance (Total cost of Acquisition known, ...)</p> <p>Benchmarking activities show best in class results</p>

## 4 - Supplier sourcing selection & approval (Purchasing Process)

Definition : Make or buy process and mapping of the supply chain responsibilities, including partners, suppliers..., Sourcing, Negotiating, & Contracting in line with Make or Buy strategy and Approving suppliers

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<b>Process</b>	<p>No Make or Buy process and/or no process to determine work allocation</p> <p>Inconsistent selection of suppliers</p> <p>No formal supplier approval</p>	<p>Defined process including Make or Buy used to determine work allocation but process not systematically applied (e.g. major work packages only)</p> <p>Supplier selection and approval/disapproval process defined (scope of approval specified) but some business domains not assessed (logistic, manufacturing, Design...)</p>	<p>Defined process, including Make or Buy, used to determine work allocation, systematically applied</p> <p>General and specific requirements specified at selection process</p> <p>Decision to select, approve and disapprove suppliers effectively based on inputs from all functions and previous performances and/or risk &amp; opportunity analysis</p> <p>Sub-tier Supplier selection process takes into account customer requirements</p> <p>Major changes (make to buy, work transfer between supplier or sub-tiers) noticed in advance</p>	<p>Make or buy process fully implemented</p> <p>Evaluation performed for all domains + risk analysis review for all new suppliers/product before selection</p> <p>Common assessment and selection activities performed by cross functional teams as relevant for the purchased product/Service</p> <p>Risk based action plan defined and followed in case weaknesses have been detected during selection process (e.g. Supplier Development action) and supplier is selected</p>	<p>4+</p> <p>Supply chain continual optimization based on Total Cost of Acquisition, lead time, delivery and Quality improvements (including lessons learnt process)</p> <p>Evidence of supplier selection &amp; approval processes improvement (lessons learned from previous supplier selection)</p> <p>Partnerships and strategic alliances have been created with key suppliers to leverage performance improvement throughout the supplier network</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities defined in each main functions or units but no harmonized approach</p> <p>Competencies locally managed</p> <p>Supplier selection mainly purchasing department driven activities.</p> <p>Communication between various functions or units on a random basis</p>	<p>Accountabilities defined and harmonized between relevant functions (Programmes, Purchasing, Manufacturing, Design, Quality, Customer Support ...)</p> <p>Structured and regular communication between various units or functions</p> <p>All functions involved in supplier selection process through overall Procurement coordination</p> <p>Skills and competencies identified, and training plan provided</p>	<p>Skilled cross functional team working effectively (selecting, assessing approving suppliers). Effective joint decision making across all functions (aligned objectives and incentives - "Manage By Objective" process)</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast)</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p>	<p>4+</p> <p>Evidence of continual improvement culture</p> <p>Cross functional team select and approve suppliers together with shared objectives</p> <p>Coordination between main suppliers and cross functional team during selection of lower tiers supplier</p> <p>Skills &amp; competencies and business target used to optimize resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tool, no shared access to purchasing &amp; approval data</p> <p>No or poor data sharing between relevant functions</p>	<p>Assessment questionnaire exist but not systematically used and/or some domains not covered</p> <p>Purchasing &amp; Approval database listing approved suppliers and products with their main selection and approval data (scopes, approval dates, reports...)</p> <p>Supplier requirements formalized in selection dossier</p>	<p>Assessment questionnaires systematically used</p> <p>Tool preventing ordering to non approved suppliers</p> <p>Data base includes requirements and all records concerning selection, approval and contracting results (e.g. audit reports, performance data, deviations justifications, compliance matrix etc.)</p> <p>List of supplier tiers available and regularly updated</p> <p>Tools and database shared by relevant functions</p>	<p>Make or buy policy and supplier selection supported by a risk &amp; opportunity assessment tool</p> <p>Assessment questionnaire systematically used and covering all domains using maturity concept (e.g. IAQG model)</p> <p>Tool preventing ordering to non approved supplier and triggering suppliers surveillance activities</p> <p>Data base shared between all internal functions, includes requirements and all records concerning selection, approval and contracting results (audit reports, performance data, deviations justifications..)</p>	<p>4+</p> <p>Data base shared with suppliers and main supplier tiers allowing all contractual documents (requirements) and data exchange, including information flow during all selection/approval phases</p> <p>Fully integrated tools and data base helping decision making, including total cost of acquisition, lead time, delivery and Quality monitoring</p> <p>Data base recording all events, deviations, lessons learnt from passed experience used to optimize supplier selection and approval</p> <p>Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement of Supplier selection and Supplier/approval processes efficiency, or reactive basic measurement</p>	<p>Basic Metrics Measuring supplier assessment results during selection and approval process (e.g: supplier rating, etc...) but not integrated across all functions or not covering all criteria</p>	<p>Metrics measuring supplier assessment results during selection and approval process (e.g: supplier rating, etc...) integrated across all functions and covering all function criteria</p> <p>Approved supplier lists regularly refreshed based on assessment results</p> <p>The metrics results show that the targets are achieved</p>	<p>Supplier selection and Supplier approval processes efficiency and outputs measured (e.g. number and duration of assessments, number of people involved in supplier selection, selection costs, time between call for tender and supplier selection, etc) and results shared across the organization</p> <p>Approved suppliers lists periodically updated based on performance results (including supplier risk rating) and taken into account for new selection for new programmes or new work packages</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+</p> <p>Regular review and optimization of metrics to support continual improvement and target achievement</p> <p>Benchmarking activities show best in class results</p>

## 5 - Planning of product realisation (Plant, material, skills, capacity planning and scheduling)

Definition : Plan & optimize the use of resources and means to meet operations planning at plant level

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No process defined</p> <p>Planning of activities locally oriented (disconnected to other manufacturing areas and other functions)</p> <p>Planning of resources, plant and investment performed on random basis and reactive mode only</p>	<p>Planning locally established, based on short term forecast / orders</p> <p>Top down sequential material &amp; capacity plans but disconnected from higher level planning</p> <p>Resources constraints (staff, skills, toolings, buildings...) are identified but not always taken into account</p>	<p>All plannings established from Master Scheduling to local area plannings and shared between all functions</p> <p>Policy exists for capacity contingency and bottleneck avoidance</p> <p>Material planning policy integrated from master scheduling</p> <p>Resources constraints (staff, skills, toolings, buildings...) are included in short &amp; medium term planning</p>	<p>Integrated planning from Master Scheduling to all relevant functions and units</p> <p>Planning updates based on events, real time plan adjustment as required, predictive material management</p> <p>Predictive capacity contingency and bottleneck avoidance (lean approach)</p> <p>Systematic medium and long term forecast and adjustment to resources constraints (capacity, staff, skills, toolings, buildings...)</p>	<p>4+</p> <p>Scheduling integrated from the customer to the suppliers (real time updating)</p> <p>Evidence of permanent lean manufacturing deployment, continual improvement (including lessons learnt process) across all business</p> <p>Resources (plant, material, skills, capacity) permanently optimized to drive long term business efficiency</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities defined in each main functions or units (Planning, Product Management, Manufacturing, Human Resources...) but no harmonized approach</p> <p>Communication between various functions or units on a random basis</p> <p>Competencies locally managed</p>	<p>Accountabilities defined and shared between relevant functions (Programmes, Purchasing, Manufacturing, Design, Quality, Customer Support ...)</p> <p>Structured and regular communication between manufacturing units and other organisations/functions, and between different manufacturing units</p> <p>Skills and competencies identified, and training plan provided</p>	<p>Skilled cross functional team working effectively (planning material, resource, building and tools). Effective joint decision making across all functions (aligned objectives and incentives - "Manage By Objective" process)</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast)</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p>	<p>4+</p> <p>Evidence of continual improvement culture</p> <p>Skills &amp; competencies and business targets used to optimize Resources allocation</p> <p>Organisation permanently optimized taking into account process needs and constraints</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tools or local tools (e.g. spreadsheets only)</p> <p>No or poor data sharing between relevant functions</p> <p>Facility and tools maintenance in reactive mode only</p>	<p>Basic planning tool</p> <p>Data from different sources (static), shared but not integrated between functions and other manufacturing area, and/or covering short term only</p> <p>Facility and tools maintenance based on experience</p>	<p>Enterprise Resource Planning systems used</p> <p>Data from different sources integrated between functions and other manufacturing area, and covering short and medium term</p> <p>Evidence of facilities and tools management in place : maintenance, cleanliness...</p>	<p>3+</p> <p>Advanced Planning System, (automatic and with modern - state of the art functionalities), integrated and available at each point of use</p> <p>Scenario and constraint based planning (Past planning difficulties and technical issues with possible impact on plannings taken into account)</p> <p>Some evidence of facility and tool management e.g. 5S, Total Preventive Maintenance, 7 waste, physical flow diagramme, Value Stream Mapping, ...</p> <p>Regularly (e.g. weekly or daily) updated data available</p>	<p>4+</p> <p>Event capable Advanced Planning System integrated between all functions and extended to suppliers/customers as applicable</p> <p>Wide deployment of facility and tool management</p> <p>Relevant data are available and managed throughout the whole supply chain from strategic planning to realization (web based tools...)</p> <p>Real time data</p> <p>Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Basic (limited) performance metrics (scrap &amp; rework rates,...) locally issued, not regularly updated and shared, and results randomly used in short &amp; medium term planning of resources and needs</p>	<p>Standard performance metrics (scrap &amp; rework rates, productivity, stock turns, machine utilization rates...) regularly updated and shared, and results used in short &amp; medium term planning of resources and needs</p> <p>The metrics results show that the targets are achieved</p>	<p>Process efficiency and outputs measured</p> <p>Top level metrics and associated targets (Customer Demand, On-time on Quality delivery, factory and machine utilization, machine breakdown rates, days of supply, ...) issued, up-dated and available at point of use, to establish short to long term planning of resources and needs</p> <p>Forecast performance results integrated and accuracy measured and reviewed</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+</p> <p>Metrics efficiency and effectiveness reviewed and optimized to support continual improvement and targets achievement</p> <p>Benchmarking activities show best in class results</p>

6 - Order Management & Logistic (internal & external)

Definition : Issuing orders, resolving unplanned events & following up till completion including receipt. Collaborative Management of material, services & information to & from the supplier; Optimizing material flow, stock and inventory through the supply chain., up to final customer delivery. Customer property included.

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	No process defined or Ordering & Logistics process definition and implementation based on experience only or performed on a random basis (No safety stock planning, no visibility into multiple locations, no shelf life cycle data considered ...)	Ordering and Logistics Process including shipment and transportation, locally defined and implemented (e.g.: identification, location, storage condition, shelf life, lead time, ...) without coordination across the organization  Rules defined and corrective action process in place (reactive mode only)  Minimum stock levels known, shortages driven in a reactive mode and local shop floor oriented  Specific delivery process to final customer established on request (when no specific customer request, just sent by standard mail/logistic provider)	Ordering & logistics process and rules including shipment and transportation, defined and implemented with evidence of coordination across the organization  Lead Time measured and controlled for main/specific products and main manufacturing steps (critical path)  Inventory management in place  Back orders (Arrears) managed and information flows to internal/external customers in case of delay  Root cause analysis performed for main ordering and Logistics problems  Structured delivery process to final customer for all products	Ordering & logistics process and rules including shipment and transportation integrated across the organization  Effective Lead Time, work in process, stock and inventory management for all products and along process chain (including key suppliers)  Proactive management of potential delays (Arrears) allowing Back Orders to be tracked and mitigated at earliest stage  Proactive information to internal/ external customers in case of delay with associated mitigation plan visibility  Systematic and structured Root cause analysis and problem solving process applied to ordering and logistics issues	4+ All principles of material management (e.g. location/ quantity/ replenishment/withdrawal controls) are applied everywhere  Results are measured, displayed and audited with variances to plan and relevant countermeasures identified (including lessons learnt process)  Dynamic safety stock levels based on criticality and target service level  Vendor Managed Inventory (Consignment stock) and Just in Time (synchronous) flow in place
<b>People and organisation</b>	Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only	Accountabilities defined in each main functions or units (Planning, Purchasing/Ordering, Manufacturing, Transportation, Goods receiving Inspection ...) but no harmonized approach  Communication between various functions or units on a random basis  Competencies locally managed	Accountabilities defined between all relevant functions (Procurement, Production, Design, Quality, Customer Support ...)  Structured and regular communication between various units or functions  Skills and competencies identified, and training plan provided	Skilled cross functional team working effectively (planning, ordering, managing deliveries, stocks and possible delays, shipping and delivering). Effective joint decision making across all functions (aligned objectives and incentives - "Manage By Objective" process)  Suppliers and internal resources aligned when logistic/ final inspection collaboration exists with the suppliers  Skills matrices exist, training plan adapted and human resources managed (future needs forecast).  People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)	4+ Evidence of continual improvement culture  Skills & competencies and business targets used to optimize Resources allocation  Supplier integrated in cross functional team for main decisions and problem solving activities (e.g. concept of extended Enterprise)  Communication plan addresses customers and suppliers related information as relevant
<b>Tools and data</b>	No tools or local tools (e.g. spreadsheets only)  No or poor data sharing between relevant functions  No stock data	Basic ordering and scheduling tool: Data from different sources (static) shared (internal & external orders and inventories) but not integrated between functions and other manufacturing area  Inventory levels set in Manufacturing Planning but limited to replenishment orders to Min/Max policy	Effective ordering and scheduling tool  Data from different sources integrated between functions and other manufacturing area  Root cause analysis structured process applied for main ordering and Logistics problems	Advanced ordering and scheduling System functionally integrated and available at each point of use  Scenario and constraint based planning: different ordering scenarii are envisaged and their effect is analysed and compared, depending on different existing constraints - costs, impact on inventory reduction, required flexibility, transportation, etc)  Real time data. Targets set and regularly recalculated  Lean Manufacturing tools (e.g. MRP2, Value Stream Mapping, KANBAN, FIFO, Kaizen...) used  Capability of Direct Delivery Flow, Vendor Managed Inventory and transportation to point of use  Root cause analysis structured process applied systematically for ordering and Logistics problems and associated data base exist	4+ A full suite of data is available and managed throughout the whole supply chain from operational planning to implementation  Event capable systems, collaborative based on dynamic Planning and inventory targets  Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results
<b>Performance metrics</b>	No measurement or reactive basic measurement	Basic (limited) metrics (e.g. On time delivery, inventory level) exist but not consistently used to drive activity	Standard metrics (On-time delivery rate, rework and scrap rates, shortages, Internal & External Transportation and lead time, etc.) regularly used to drive activity  The metrics results show that the targets are achieved	Process efficiency and outputs measured  Top level metrics and associated targets (On-time on Quality delivery, shortages, arrears, duration delay, Internal & External Transportation and lead time, days of supply, inventory and stocks, etc.) established, up-dated and available at point of use (e.g. visual management , score card), used to forecast operation and manage Inventory vs. customer demand  Predictability on future orders (ramp-up and ramp-down anticipation)  Existence of predictive KPIs  The metrics results are over the targets	4+ Metrics efficiency and effectiveness reviewed and optimized to support continual improvement and targets achievement  Benchmarking activities show best in class results

## 7 - Manufacturing & inspection (Production and service provision)

Definition : Manufacturing and product assembly / integration processes, including inspection.

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No process defined or process definition and implementation based on experience only</p> <p>Manufacturing and Inspection activities performed on a random basis</p>	<p>Manufacturing, assembly and inspection processes including technical package defined but without interface with other business processes (design office, manufacturing engineering, purchasing)</p> <p>Rules defined and corrective process in place in reactive mode only</p> <p>First article inspection performed only on a random basis or when required by customer</p>	<p>Manufacturing, assembly and inspection Processes planned and carried out under controlled conditions (e.g. work instructions, equipments, criteria for workmanship, evidence that all production and inspections operations have been completed, manufacturing process changes managed...)</p> <p>Measurement requirements (quality inspection report) for product acceptance are documented to include criteria for acceptance and/or rejection, sequence of operations, records of results, specific instructions and tools</p> <p>Manufacturing, assembly and inspection processes defined with clear interface with other business processes (design office, manufacturing engineering, purchasing, logistic, packaging and transportation)</p> <p>Problem solving process in place to prevent scrap, reworks and delays for main issues</p> <p>First Article Inspection performed systematically according to internal rules</p> <p>Critical items (including key characteristics) identified and managed</p>	<p>Integrated process and rules defined and applied across all relevant functions and down to operational level</p> <p>Systematic and structured Problem solving process in place to prevent scrap, reworks and delays</p> <p>First Article Inspection process performed systematically in line with internationally recognized standard or guideline (e.g. 9102)</p> <p>Critical items (including key characteristics) identified and managed in line with internationally recognized standard or guideline (e.g. 9103 for key characteristics)</p>	<p>4+</p> <p>Production and inspection management rules are continually monitored and adapted to drive continual business improvement (including lessons learnt process)</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p> <p>Locally managed manufacturing units (no links with other units and other functions)</p>	<p>Accountabilities defined at production level (manufacturing, assembling, inspection), in each main functions or units (Planning, design office, manufacturing engineering, ...) but no harmonized approach</p> <p>Communication between various functions or units on a random basis</p> <p>Communication management meetings sometimes organized with operators at shop floors level to share local difficulties, achievements, etc. of concerned manufacturing line or specific function</p> <p>Competencies locally managed</p>	<p>Accountabilities defined at production level and between various manufacturing units and other functions (Planning, design office, manufacturing engineering...)</p> <p>Structured and regular communication between various units or functions.</p> <p>Structured and Regular Communication Management meetings organized with operators at shop floors level to share results and objectives of concerned manufacturing unit, assembly line or specific function and review impact with other operational units</p> <p>Skills and competencies identified, and training plan provided</p>	<p>Cross functional team working effectively (including design office, manufacturing engineering, planning...)</p> <p>Manufacturing, assembly and inspections related activities managed through effective decisions and performance reviews (aligned objectives and incentives - "Manage By Objective" process)</p> <p>Integrated management of all manufacturing units based on common processes and rules</p> <p>Skills matrices exist, training plan adapted and human resources managed (flexibility and future needs forecast)</p> <p>Structured and regular Management meetings organized with operators at shop floors level to share results and set objectives of concerned manufacturing unit, assembly line or specific function in coordination with other operational units. People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p>	<p>4+</p> <p>Evidence of continual improvement culture</p> <p>Skills &amp; competencies and business targets used to optimize resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tools or local tools (e.g. spreadsheets only)</p> <p>No or poor data sharing between relevant functions</p> <p>Production means capability is unknown</p> <p>No Maintenance / Calibration plan for production (manufacturing and inspection) means</p> <p>No documented manufacturing engineering planning</p>	<p>Shop floor organized and clean</p> <p>Data shared but not integrated between functions and other manufacturing area</p> <p>Production (manufacturing and inspection) means are generally controlled (locally maintained and calibrated) but no structured calibration and Maintenance Plan</p> <p>Production means technical characteristics are known, but adaptation to product requirements in reactive mode only</p> <p>Special processes controlled in accordance to customer requirements</p> <p>Traceability and Identification on products/batches when requested by customer</p> <p>FAI (First Article Inspection) reports including actions recorded (when done)</p>	<p>Policy in place for preservation of product : cleaning, FOD, ESD, handling, packaging, safety marking, storage</p> <p>Production means are systematically controlled across all manufacturing units (calibration, maintenance plan, storage conditions, ...)</p> <p>Records of measurements results</p> <p>All manufacturing/assembly means validated and controlled. Capabilities monitored. Special processes related means qualified</p> <p>Existence of tools to manage Traceability and Identification on products/batches to meet business requirements (e.g. use of data base)</p> <p>Data base recording FAI / Critical items (including Key Characteristics) results and tracking corrective actions</p> <p>Tools and database shared by relevant functions</p>	<p>Evidence of implementation of manufacturing control and risk &amp; opportunity management methodologies (SPC, FMECA,...)</p> <p>Production means are systematically controlled across all manufacturing / assembly units and validated before use, with corresponding actions traced. Unexpected events are taken into account to update the calibration and Maintenance Plan (analysis of calibration records variation and impacts on products)</p> <p>Production means capabilities studies are performed</p> <p>Special Processes Accreditation (e.g. Nadcap) when required</p> <p>Advanced tools to facilitate traceability and Identification management to meet business requirements (e.g. use of Bar code, 2D marking, RFID)</p> <p>Advanced tool to manage, record FAI / Variation of critical items (including Key Characteristics)/manufacturing results and track actions</p>	<p>4+</p> <p>Use of advanced manufacturing technologies and process excellence tools</p> <p>Data base shared with all functions and suppliers on site</p> <p>Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement.</p>	<p>Basic (limited) performance metrics available (lead time, scrap and return rates) but not consistently used to drive activity</p>	<p>Standard performance metrics available (lead time, scrap and return rates, yield, machine utilization rates, etc.) regularly used to drive activity</p> <p>The metrics results show that the targets are achieved</p>	<p>Process efficiency and outputs measured</p> <p>Top level Metrics and associated targets (lead time, scrap, rework/customer rejection, factory and machines utilization rates, machine breakdown rates, etc), up-dated regularly at each manufacturing unit and company level and available at point of use (Visual management) used to forecast activity</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+</p> <p>Metrics efficiency and effectiveness are reviewed and optimized to support targets achievement</p> <p>On demand real time measurement</p> <p>Benchmarking activities show best in class results</p>

## 8 - Supplier operational management and product validation (Purchasing process)

Definition : Operational monitoring and surveillance of suppliers to ensure purchased products and services meet customer requirements (includes initial product validation). Working with suppliers to measure and continually raise their performance levels (Supplier Development activities when required)

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No process defined or process definition and implementation based on experience only or performed on a random basis</p> <p>Supplier monitoring limited to incoming inspection and firefighting mode only</p> <p>Not documented receiving inspection rules, performances far from satisfactory, no root cause analysis and problem solving</p>	<p>Process in place to monitor Quality and delivery and check that basic contractual requirements are fulfilled</p> <p>Basic Supplier management rules and order management in place (e.g. Order acknowledgement, document updating and flowdown)</p> <p>Basic documented receiving inspection rules fulfilled including segregation of defective product and basic sampling rules</p> <p>Reactive Supplier Development occasionally performed</p> <p>First Article Inspection process and Special Process qualification performed during new product validation as applicable (customer request) prior to use</p>	<p>Planned supplier monitoring and on site surveillance activities (Incoming / Receiving Inspection, sampling rules and audits...) continually based on product criticality assessment, supplier risk &amp; opportunity assessment and performance results (On time/On Quality), customer requirements and International standards</p> <p>Supplier commitment acceptance of orders verified and managed</p> <p>Management of delinquent suppliers</p> <p>Verification of alignment of customer demand with supplier capacity: Process in place to demonstrate that supplier is permanently capable of fulfilling customer requirements including demonstration of Product and Process capability (existence of Product Improvement Plan when required)</p> <p>First Article Inspection (ref 9102) systematically applied at first product validation and all changes as applicable</p> <p>Customer Critical items (including Key Characteristics requirements and data) flowed down and managed at supplier and sub-tier suppliers in accordance with contract</p>	<p>3+ Performance targets agreed with suppliers and monitored</p> <p>Integrated products/suppliers risk based management process including regular suppliers management reviews and surveillance of sub tier suppliers performance, involving all relevant functions</p> <p>Management of Customer demand variation/ forecast with supplier capacity (possible ramp-up/ramp down are anticipated and taken into account when forecasting medium/long term supplier capacity needs)</p> <p>Process to manage delinquent suppliers in place including escalation process to customer with defined escalation criteria</p> <p>Product and processes capability checked and improvement plans in place when required</p> <p>Critical items (including key Characteristics) specified by the customer and /or defined by the supplier are managed including at sub-tier level when applicable)</p> <p>Supplier's generated suggestions are implemented to drive improvement</p> <p>Process exists to trigger and conduct Supplier Development activities</p>	<p>4+ Significant number of "self managed suppliers" (all performances are per expectation and supplier self development in place)</p> <p>Supplier management rules are dynamic and adapted or improved as necessary involving the supplier (including lessons learnt process in place)</p> <p>Integrated risks &amp; opportunities based suppliers' management process involving all stake holders working in collaboration, including suppliers</p> <p>Joint customer and supplier actions to optimize supply base performance, cooperative and proactive Supplier Development with shared targets and action plans</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities defined in each main functions or units (Purchasing, Quality, Engineering, ordering, logistic, manufacturing, customer support...) but no harmonized approach</p> <p>Communication between various functions or units on a random basis</p> <p>Supplier monitoring is mainly driven by buyers and procurement/product quality</p> <p>Competencies locally managed</p>	<p>Accountabilities defined between relevant functions (Procurement, Programmes Engineering, Production, Transports, etc.)</p> <p>Structured and regular communication between various units or functions</p> <p>Skills and competencies identified and training plan provided</p>	<p>Cross functional team managing suppliers effectively, effective joint decision making across all functions (aligned objectives and incentives - "Manage By Objective" process)</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast), Specifically purchasers, logisticians, auditors, Incoming inspectors, Supplier Development teams, etc.</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p>	<p>4+ Clear evidence of collaborative working with suppliers to improve performances</p> <p>Subject experts available to support Supplier development professionals (multidiscipline) where and when required</p> <p>Skills &amp; competencies and business targets used to optimize resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tools or local tools (e.g. spreadsheets only)</p> <p>No or poor data sharing between relevant functions</p>	<p>Basic tools and database locally managed :</p> <ul style="list-style-type: none"> <li>- Issuing requirements and distributing documents to suppliers</li> <li>- Providing basic quality and delivery data (rejections and arrears)</li> <li>- Managing orders and goods receipts</li> <li>- Recording basic Product Qualification data (First Article Inspection Reports for some components)</li> </ul> <p>Basic incoming inspection instructions, including some sampling rules</p> <p>Basic checklists / questionnaires used during supplier surveillance desktop reviews and on site surveillance audits</p>	<p>Tools and database shared by relevant functions:</p> <ul style="list-style-type: none"> <li>- Managing Requirements / documentation update and distribution to suppliers (including supplier acknowledgement)</li> <li>- Providing Quality and delivery data</li> <li>- Managing purchase orders and acknowledgement, goods receipts</li> <li>- Recording Product Qualification data (First Article Inspection Reports (ref 9102), Critical items including Key Characteristics (ref 9103), list of special processes and data such as scopes, approval dates, reports...)</li> </ul> <p>Questionnaires and forms systematically used when performing desktop and on site reviews</p> <p>Root cause analysis methods used for main suppliers on time/on quality issues</p> <p>Existence of tools / methods enabling definition and planning of inspections / samplings and on site surveillance</p>	<p>Integrated supplier related data base between all internal functions (e.g. supplier unique repository) and main data are provided to (or accessible by) the suppliers.</p> <p>Requirements/documentation and procurement plan update and distribution to suppliers (including acknowledgement) managed via IT system</p> <p>Score card developed and shared between functions and suppliers</p> <p>Supplier maturity evaluation process regularly used (product validation, change management, trigger development plan) and covering all domains</p> <p>Tool exists and applied to assess risks &amp; opportunities related to supplier processes and ensure necessary action plans are implemented</p> <p>Dynamic sampling rules and on site review frequency adaptations</p> <p>Regular use of continuous improvement tools (e.g. Root Cause Analysis Process, Statistical Process Control, Value Stream Mapping, etc...) to manage suppliers improvement</p> <p>Lean practices, tools and methods are deployed throughout the supplier base</p>	<p>4+ Fully Integrated IT system (Internal &amp; external collaboration Supplier/customer portal) including the management of Corrective Action and continual improvement</p> <p>Data and tools analyzed and optimized focussing on Customer and key supplier satisfaction survey results</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Basic supplier performance metrics available (Rejection and scrap rate, delays or arrears)</p>	<p>Standard Metrics and targets (On-time on Quality delivery, scrap, rework, arrears), regularly up-dated and communicated to the suppliers to trigger corrective actions</p> <p>Metrics related to Product Qualification (First Article Inspection Reports (ref 9102), critical items including Key Characteristics, Special processes) exist and used</p> <p>Metrics exist to measure level of supplier's commitment to fulfill orders</p> <p>The metrics results show that the targets are achieved</p>	<p>Metrics and associated targets (On-time on Quality delivery, scrap/rework/ incoming/manufacturing and customer rejections rates, supplier leadtimes, audits results, corrective action management plan effectiveness), regularly up-dated and available at point of use (e.g Visual management, ...) shared with or established in conjunction with the suppliers to monitor and predict the performance.</p> <p>Product related metrics recorded and maintained (e.g. Product Qualification, critical items including Key Characteristics...).</p> <p>Metrics content, efficiency and effectiveness are reviewed to support continual improvement (predicting results for main parameters)</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+ Metrics efficiency and effectiveness are measured and optimized with all stake holders to support targets achievement.</p> <p>Metrics predicting performance in all supplier business area and covering the entire supply chain.</p> <p>Benchmarking activities show best in class results</p>

## 9 - Control of non conformities, corrective & preventive actions (on time, on quality)

Definition : Non conformance management and root cause analysis process for all business domains. Raising, notifying, deciding and acting to manage and prevent non conformities (product, processes, documentation, delays, etc...).

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No process defined to collect or manage non conformities (based on experience only or performed on a random basis, reactive - Fire fighting - mode or Customer request)</p> <p>Control of non conforming product limited to part correction only</p> <p>No root cause analysis</p> <p>No systematic segregation and identification of non conforming product</p>	<p>Process defined for product non conformities only (MRB organization in place) and implemented but not integrated across the organization</p> <p>Process exists to collect non conformities in some domains only</p> <p>Rules defined (e.g. Identification, segregation and quarantine, customer notification) but randomly applied</p> <p>Analysis of failures and launch of corrective action process limited to recovery plan for product quality issues and delays, for major issues or when requested by the customer only</p>	<p>Process and rules defined and implemented across the organization, covering product/process non conformities and delays</p> <p>Process exists to collect and analyse/validate non conformities (internal and external source) in all domains</p> <p>Structured Root Cause analysis and Problem Solving process in place (including containment, preventive action implementation and verification of corrective action effectiveness), systematically applied for product/process quality issues and for main on time delivery issues</p> <p>Customer notification process in place for occurred (delivered) issues</p>	<p>Process and rules defined, implemented and integrated across the organization</p> <p>Systematic and structured Root Cause analysis and problem solving process in place internally and with the concerned suppliers including containment, preventive action implementation and verification, standardised across other business units and processes, for product/process quality and On time delivery issues</p> <p>Customer notification process fully defined and applied, with clear criteria established to determine which levels of non-conformities/issues needs to be reported and when</p>	<p>4+ Evidence of continual improvement</p> <p>Mature process for root cause &amp; preventive actions &amp; lessons learnt to prevent recurrence and sharing good practices, with collaborative approach across the supplier network</p> <p>Non conformance management and effective root cause analysis process including containment, preventive action implementation and verification applied for all business processes (Quality, On Time Delivery, Documentation, Organization, Human Resources, etc...)</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p> <p>Fire-fighters</p>	<p>Accountabilities defined in each main function or unit but no harmonized approach</p> <p>Communication between various functions or units on a random and reactive mode</p>	<p>Accountabilities defined between manufacturing units and relevant functions (Planning, Engineering...)</p> <p>Skills and competencies identified and training plan provided</p> <p>Structured and immediate communication between various units or functions in case of failure or issue</p>	<p>Skilled cross functional team managing non conformities and corrective actions, with effective joint decision making process</p> <p>Skills matrices exist, training plan adapted and human resources managed (future needs forecast)</p> <p>Experts in root cause analysis exist and support other functions as required</p> <p>Highly skilled staff and performing continual improvement(e.g. 6 Sigma Black Belt)</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p>	<p>4+ Strong management commitment to continual improvement</p> <p>Skills &amp; competencies and business targets used to optimize resources allocation</p> <p>6 Sigma culture (or equivalent) widespread through the company</p> <p>Supplier / partner and customers involvement</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>Manual : Spreadsheets, fax, e-mail</p> <p>No problem solving tools</p> <p>Inconsistent data</p> <p>No data sharing between functions</p>	<p>Multiple Data base recording non conformities</p> <p>Limited use of basic quality tools (e.g.; Pareto, histograms, check sheets, etc...)</p>	<p>Root cause analysis and preventive actions tools available (e.g. 9S, Defect codes, Pareto analysis, 5 Whys, Ishikawa, FMEA, control charts, etc) and consistently used</p> <p>Tools and data base shared between relevant functions</p> <p>Local Score Card usage</p>	<p>Integrated database, clear workflows, internal collaboration</p> <p>Advanced quality tools supporting root cause analysis and process improvement management</p> <p>Visual management tool, including flag system for due dates</p> <p>Generic / systematic Score Card system, shared with internal and external stakeholders</p>	<p>4+ Fully Integrated IT system allowing collaboration with internal and external (suppliers/customers) stake holders</p> <p>On demand real time workflows</p> <p>Effective use of Lean 6 Sigma or equivalent...in all business processes</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Basic metrics (e.g. Number, type, recurrence of non conformances, On Time On Quality Rates...) not consistently used to drive activity</p>	<p>Standard metrics (e.g. Number, type, recurrence of non conformances, On Time On Quality Rates, escapes, corrective action follow up, adherence to corrective action plans, audit results, etc...) regularly used to drive activity</p> <p>The metrics results show that the targets are achieved</p>	<p>Top level metrics and associated targets (e.g. Number, type, recurrence of non conformance, On Time On Quality rates, corrective action closure rates, times to get a fix, effectiveness of corrective actions...) used to drive improvement actions and set future targets</p> <p>Process efficiency and outputs measured</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+ Metrics efficiency and effectiveness are measured and optimized to support targets achievement (generalized to all processes)</p> <p>On demand real time measurement workflows (automatic and immediate updates of metrics and associated calculated results) allowing to forecast performances</p> <p>Benchmarking activities show best in class results</p>

## 10 - End customer Support (Control of service operations)

Definition : Supporting the customer to ensure end user satisfaction during "in service" phase (Maintenance & Repair, Spares, Material Supply, Technical Assistance, Training and Documentation, Product Life Cycle Monitoring including Operating Data feedback and analysis). This includes when applicable, a supplier (or sub-tier at any level of the supply chain) supporting its customer during the product integration activities, up to delivery to the end user (E.I.S. - Entry Into Service).

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No processes to address customer support</p> <p>No customer data feedback process</p>	<p>Processes addressing customer support (during product integration when applicable and/or after E.I.S.) defined but not systematically applied (e.g. No consignment stock)</p> <p>Customer data feedback process on random basis only</p> <p>On site customer support is organised in reactive/fire-fighting mode</p> <p>Production and Maintenance/Repair processes segregated where required (including tooling and documentation management)</p>	<p>Processes and rules defined, implemented and applied</p> <p>Deliverables (spares, technical documentation, resources, ...) clearly defined in overall processes and planning</p> <p>Spares needs are regularly evaluated in short and medium planning</p> <p>Customer needs and operating data feedback in place and analyzed and corrective actions implemented</p> <p>Process in place to ensure repair schemes are approved and controlled in accordance with design authority</p>	<p>3+ Customer support, maintenance and repair processes analysed and improved to reduce Turn Around Time, Time of immobilization, and cost</p> <p>Predictive spares capacity contingencies plan in place</p>	<p>4+ Proactive customer support activities managed in partnership with supply base and customer teams (immediate and/or anticipated as required)</p> <p>Customer needs and operating data feedback in place and systematically analyzed with all actors (from sub tiers to the customer)</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p>	<p>Accountabilities locally defined and coordinated with some other functions only</p> <p>Communication between various functions or units on a random basis</p> <p>Skills and competencies locally managed</p> <p>Off-site support team nominated in reaction mode only</p>	<p>Accountabilities defined and coordinated between support organization and all other related functions (Ordering, Planning, Engineering...)</p> <p>Skills and competencies identified and training plan provided</p> <p>Structured and regular communication between various units or functions</p> <p>Maintenance/Repair approvals as applicable (e.g. FAR/EASA PART 145, PART 66...)</p> <p>Dedicated off-site support teams working in controlled manner and training plans adapted to customer requirements and local regulations</p> <p>Aircraft On Ground (AOG) on line support in place when required by contract (people reachable by phone)</p>	<p>Cross functional team Including customer interface, working effectively, aligned and synchronized plans, activities and incentives across organizations for effective decisions and performance</p> <p>Skills matrix exist and training plan adapted (internally and at end user sites)</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p> <p>Identified team on stand-by for on site customer support (or permanently on site / field service when contractually required) to support customers, during product integration and in operation, in particular in case of AOG situation</p>	<p>4+ Clear evidence of collaborative working with sub tiers and customers to improve Customer support performances</p> <p>Evidence of continual improvement culture</p> <p>Skills &amp; competencies and business target used to optimize Resources allocation</p> <p>Communication plan addresses customers and suppliers related information as relevant</p>
<b>Tools and data</b>	<p>No tools or local tools, (e.g. spreadsheets,...) only</p> <p>Basic hand tools (standards mechanics tools that can be purchased everywhere) only</p> <p>Maintenance tools not adequately calibrated and maintained</p> <p>No or poor data sharing between concerned functions</p> <p>No customer support plan until or after E.I.S</p> <p>No customer data feedback</p>	<p>Some data shared between organization and customer sites but do not cover all relevant functions</p> <p>Tools for maintenance and repair activities available but not dedicated</p> <p>Maintenance tools (hardware, software &amp; associated documentation), gathered only when need identified (reactive mode)</p>	<p>All data shared between organization and customer sites to cover all relevant functions (e.g. Engineering, Quality, Logistic, Purchasing...)</p> <p>Maintenance tools (hardware, software &amp; associated documentation), defined and available</p> <p>Dedicated tools for maintenance and repair activities available calibrated and maintained</p> <p>Customer support (staff and data) available during working hours through standard communication tools</p>	<p>Data integrated through organization and customer sites covering all relevant functions (e.g. Engineering, Quality, Logistics, Purchasing...)</p> <p>Maintenance tools (hardware, software &amp; associated documentation) ready to ship (logistic transportation means in place) or already at customer site as required</p> <p>Maintenance documentation and spare data available on web site (e.g. electronic catalogue) and accurate/up to date when relevant</p> <p>Dedicated customer online support available 24/7 when relevant</p>	<p>4+ Fully integrated communication and support infrastructure from sub-tiers to customer sites (e.g. On line real time monitoring &amp; diagnostic as applicable)</p> <p>Support and Maintenance tools (hardware &amp; software) and documentation analyzed and optimized focused on customer satisfaction feedback (in particular systematic lessons learnt process in place)</p>
<b>Performance metrics</b>	<p>No measurement or reactive basic measurement</p>	<p>Basic metrics available and used to drive support activity (e.g. number of removals, spares availability...)</p>	<p>Standard metrics and associated targets up-dated and available internally (e.g. Operational Reliability, Direct Maintenance Costs, Responsiveness/Time to Get A Fix, Repair Turn Around Time, warranty claims, Mean Time Between Failure, spares on time delivery, maintenance staff availability, Time of Immobilization, Down Time etc...)</p> <p>Results analysed and appropriate actions defined to close gaps versus targets</p> <p>The metrics results show that the targets are achieved</p>	<p>3 + Metrics available internally and externally at point of use, future performance targets shared and regularly reviewed/ adapted with customers</p> <p>Process efficiency and outputs measured</p> <p>Existence of predictive KPIs</p> <p>The metrics results are over the targets</p>	<p>4+ Metrics efficiency and effectiveness reviewed and optimized with customer to support continual improvement and targets achievement</p> <p>Benchmarking activities show best in class results</p>

## 11- Business Processes Performance Management and Customer Satisfaction Monitoring

Definition : Survey, Consolidation and continual improvement of Supply Chain performance (Internal/External), changes, risks and opportunities management, overall process management to meet customer satisfaction and business objectives throughout Life cycle.

	1 - Undefined and not capable	2 - Defined and applied, but not 100% effective or not applied everywhere in the company	3 - Defined, applied and effective: repeated satisfactory performance capable	4 - Predictable: performance of proactive improvements towards planned targets, but not systematically on all processes /areas /products	5 - Optimised: best in class, continual improvement fully deployed, involving all stake holders as part of company culture
<b>Process</b>	<p>No structured internal/external processes management</p> <p>Decisions made from perception and/or based on experience and in reactive mode only</p> <p>No analysis of requirements, means, objectives and results before decision making</p> <p>No process to address changes, risks and opportunities management</p> <p>No analysis of failures and occurrences</p>	<p>Business management processes exist, regular communication between various units and functions but no integrated process</p> <p>Main decisions based on facts and figures, but no systematic reviews of their impacts on other business units and functions</p> <p>Management reviews performed addressing business objectives and performance in some areas only</p> <p>Customer satisfaction not the key driver</p> <p>Changes operated, without structured process</p> <p>Risks and opportunities management partially applied (some areas or some key decisions only) or ineffective deployment</p> <p>Corrective / Improvement plans launched and results assessed for major cases or when requested by the customer</p>	<p>Business management processes exist, regular communication between various units and functions. Business plans exists and outcomes known by senior management</p> <p>Main decisions based on facts and figures, with regular reviews of their impacts on other business units and functions</p> <p>Management reviews planned to address main business areas and objectives</p> <p>Customer satisfaction and performances (quality, on time delivery, adherence to technical specifications, customer support, costs, etc.) are the key drivers</p> <p>Changes, risks and opportunities management plans launched and monitored to cover main business areas and processes</p> <p>Results of action plans are regularly assessed to confirm that the desired event is achieved, looking at possible adverse effects</p>	<p>Integrated business management process involving all units and relevant functions. Business plans exist and deployment plans exist in each business area</p> <p>All decisions based on facts and figures, with systematic reviews of their impacts on other business units and functions</p> <p>Systematic management reviews between relevant functions and with customers, addressing business objectives and Customer satisfaction</p> <p>Customer informed of planned or unplanned changes according to agreed risk levels and contractual requirements</p> <p>Results of action plans are systematically assessed to confirm that the desired event is achieved without adverse effects</p> <p>Changes management, risks and opportunities management, structured root cause analysis, corrective and preventive actions and lessons learned processes applied in all areas of business</p>	<p>4+ Business plans fully deployed and monitored in each business area with dynamic feedback based on performance targets and results</p> <p>Continual improvement, changes, risks and opportunities management jointly developed with all stakeholders, driving overall business and customer satisfaction; lessons learnt systematically applied</p> <p>Regular benchmark organised with other aerospace and defence companies and/or other industries (e.g. automotive, medical, etc.)</p> <p>Cost effective improvement action plans in place taking into account Total Cost of product / service</p> <p>Go-No Go decision gates used during all programme phases, in particular for change management, with permanent focus on risk analysis</p> <p>Coordinated management reviews with all functions and stakeholders, addressing business objectives and Customer satisfaction</p> <p>Top-Down and Bottom-Up management reviews at all levels and functions</p>
<b>People and organisation</b>	<p>Accountabilities (organization, roles, responsibilities, and authorities), skills and competencies not defined or randomly defined based on experience only</p> <p>Locally managed business units and functions. Authority based on individuals rather than on organisation</p> <p>Lack of accountability for either preparing or reviewing performance data and objectives</p>	<p>Accountabilities defined in each main functions (e.g. Sales, Engineering, Purchasing, Quality, Manufacturing, Human Resources, Logistics, Support) or units but no harmonized approach</p> <p>Communication between various functions or units on a random basis</p> <p>Resource levels not understood and based on experience rather than on process</p> <p>Skills and competencies locally managed</p> <p>Changes, risks and opportunities management concepts understood by some key players and associated responsibilities locally defined and assigned to individuals</p>	<p>Top level management commitment of performance monitoring is evident (e.g. Personal Development Review, Management By Objectives, Annual Interviews...)</p> <p>Accountabilities defined between various business units and functions (e.g. Sales, Engineering, Purchasing, Quality, Manufacturing, Human Resources, Logistics, Support)</p> <p>Structured and regular communication between various units or functions</p> <p>Skills and competencies identified and training plan adapted and managed for all functions</p> <p>Changes, risks and opportunities management culture exists within all the organisation (basic knowledge about why and how changes risks and opportunities need to be proactively managed) and associated responsibilities defined and assigned at company level</p>	<p>Top level management commitment of improvement and performance monitoring is evident at all level</p> <p>Regular review of performance vs. objective at all individual levels (e.g. Personal Development Review, Management By Objectives, Annual Interviews...)</p> <p>Multi-functional skilled and integrated team working effectively including customer communication, aligned and synchronized plans, activities and incentives across organizations for effective decisions and performance improvement</p> <p>Skills matrices exist and training plan focussed for teams and individual needs, managed and coordinated between all functions. Development plans exist</p> <p>People leading process and/or organization changes ensure that these changes are well communicated (structured communication plan)</p> <p>Experts in changes, risks and opportunities management and root cause analysis exist and support all functions as required</p> <p>Changes, risks and opportunities Management authority clearly defined and respected</p>	<p>4+ Demonstration of Top level management involvement on daily basis in particular in continual performance improvement activities</p> <p>Evidence of applied continual improvement culture</p> <p>Skills &amp; competencies and business target used to optimize Resources allocation</p> <p>Clear evidence of collaborative working with stakeholders (in particular customer and suppliers) to improve performance, changes, risks and opportunities management process</p> <p>Experts in changes, risks and opportunities management and root cause analysis exist in all functions</p> <p>Communication plan addresses customers and suppliers as relevant</p>
<b>Tools and data</b>	<p>No tools or local tools to track events and record decisions and results (e.g. spreadsheets only, fax, e-mail)</p> <p>No shared access to decisions and results data</p> <p>No or poor data sharing between relevant functions</p>	<p>Limited shared access to multiple data base/spreadsheets with main decisions and results</p> <p>Decisions Support, change management Tools exist but adapted to some functions only (Sales, Engineering, Sourcing...)</p>	<p>Decision Support, changes, risks and opportunities management tools (e.g. 9134 for procurement risk management) exist and adapted to all relevant functions (Sales, Engineering, sourcing...)</p> <p>Product Data Management (PDM) Tool exist to identify and manage all products and documentation impacted by changes</p> <p>Visual management deployed</p> <p>Use of customer satisfaction dashboards</p>	<p>3+ Integrated management databases including documentation system, clear workflow, internal and external collaboration, communication with customer, overall performances and satisfaction monitoring</p> <p>Integrated tools exist to track and monitor performance and actions (Enterprise Resource Planning, Value Stream Mapping, changes, risks and opportunities)</p> <p>Visual management widespread throughout organisation</p> <p>Use of customer satisfactions scorecards</p>	<p>4 + Fully integrated management information system including changes, risks and opportunities management tools involving all stakeholders in particular customers</p> <p>Real time workflow and data base providing results and actions</p> <p>Existence of regular internal and external satisfaction surveys with appropriate flow-down of results and feedback</p> <p>Data and tools analyzed and optimized focussing on customers and key suppliers satisfaction survey results</p>
<b>Performance metrics</b>	<p>Performance not measured or no reliable data or reactive basic measurement only</p>	<p>Basic company business performance metrics (finance, costs, warranty claims, On Time, On Quality...) available but no or partial correlation with customer satisfaction and business targets and/or used in reactive mode only</p>	<p>Business performance metrics covering main processes of the company are implemented and associated targets are identified</p> <p>Metrics are regularly updated, reviewed and available at point of use</p> <p>Results of customer satisfaction drive action plans to improve the business, manage changes, risks and opportunities</p> <p>The metrics results show that the targets are achieved</p>	<p>Existence of predictive KPIs</p> <p>Business performance metrics covering all processes of the company are defined, associated short and medium term targets are set in cooperation between each process owner and his/her internal/external stake holders (including suppliers and customers)</p> <p>Metrics and associated improvement targets are up-dated, available at point of use (e.g. visual management, Score card), and shared with key stakeholders</p> <p>Results of performance measures drive action plans to improve the business, manage changes, risks and opportunities</p> <p>The metrics results are over the targets</p>	<p>4+ Metrics efficiency and effectiveness reviewed and optimized to support continual improvement, all customer satisfaction and business targets achievement</p> <p>Benchmarking activities show best in class results</p>