

<h1>Net Shaped Solutions Supplier Assessment</h1>	Net Shaped Solutions Participants:	
	Date:	
	Supplier/Location:	

Topic: **Program Management**

Definition

Ability to support Net Shaped Solutions Launch & Production process with a reliable, single-point-of-contact who will coordinate meeting all program milestones, APQP requirements, and commercial activities from the supplier's perspective

Key Capabilities

Program Management infrastructure to support Net Shaped Solutions
Experience w/prime contractor and/or DoD program management

Questions	Low	X	Med	X	High	X	Points	Comments
1 Is your program management located in your manufacturing facility?	No. Greater than 5 hours travel.		No, between 2- 5 hours travel.		Yes		0	
2** Is there a dedicated program manager to Net Shaped Solutions? What is the level of experience of this individual?	No		Yes - 0 to 10 years of automotive or defense experience		Yes > 10 years of automotive or defense experience		0	
3 Do you have formalized change control process?	No		Manual and / or does not include process to handle obsolescence		Electronic change control system that also captures obsolescence		0	
4 Have you served as a Tier 1 or Tier 2 supplier, where by you needed to manage 3 or more secondary supply sources?	No - never		Yes on 9 or fewer programs		Yes on 10 or more programs		0	
5 How many automotive or defense programs has your company managed from design to launch as a subcontract supplier?	0-5		6-10		10+		0	
6* Is there evidence the supplier uses Advanced Product Quality Planning (APQP) techniques in the program planning process, per the current AIAG APQP Manual?	No		Some APQP processes are utilized		All products utilize complete APQP process		0	
7 What is the most number of components you have managed in an assembly (not including fasteners)?	Up to 25 components within an assembly		26 to 100 components		over 100 components		0	
Total Program Mgmt							0%	

Topic: **Engineering**

Definition

Ability to support engineering, drawing release, analysis, and validation through program development and design reviews

Key Capabilities

Support CAD data systems (Solidworks, Pro-E, Catia)
 Analytical (FEA, Mold Flow, etc)
 In-house engineering staff
 Data transfer capability (autoweb, FTP, etc.)
 Design review ability

Questions		Low	X	Med	X	High	X	Points	Comments
1	How do you support CAD data systems?	Send only IGES files, or translate to supplier's primary data system		Uses one primary system that has seamless transfer capability to any system		Multiple primary systems, seamless transfer to meet Net Shaped Solutions' needs		0	
2	What tools are utilized as part of engineering analysis (mold flow, CAE, FEA, etc.)	No apparent capability		One tool in-house, others are outsourced		At least two tools in house		0	
3	Do you have engineers on staff?	Rely on Net Shaped Solutions to do all engineering		Utilize outside engineering services		Degreed / experienced engineering staff in-house		0	
4	How do you transfer CAD data electronically?	CD's, disks, etc.		FTP, e-mail,		Autoweb		0	
5	Are you able to support design reviews?	Via conference call or e-mail only		Ability to support occasionally in-person		100% ability to support in-person.		0	
6	Do you maintain up-to-date specifications?	No apparent method or library		Hardcopies in binder in common area		Subscribes to real time access to MIL/AERO/SAE specifications		0	
7*	Do you maintain up-to-date drawings?	Releases client drawings as is (hard copy)		Manual electronic or paper system - distributes blueprints (uncontrolled)		Electronic drawing control process with auto archive		0	
8	Is there a system in place to assure invalid or obsolete drawings will <u>not</u> be used?	Manual paper or electronic copies distributed; no closed loop		Closed loop system; not PC based		PC based system with drawing viewer		0	

9	What is your CAD data security protocol between multiple customers?	No apparent process or protocol	Supplier has 1 of the following: firewalls between directories and / or restricted access to program data, isolated engineering department / area	Supplier has >1 of the following: firewalls between directories and / or restricted access to program data, isolated engineering department / area		0	
10	For design-responsible suppliers, do you utilize risk management tools (DFMEA)?	No	Yes, inconsistent use and/or use outside source for creation and maintenance	Yes, used 100%; created and maintained in-house		0	
11	How do you conduct component testing and or DVP&R process?	We rely on the client for all testing	Send to an outside testing source	In-house testing capability (>80% of tests called out) with engineering staff to support		0	
Total Engineering						0%	

Topic: **Supplier Management**

Definition

Ability to analyze sub-supplier capabilities with measurable results, including cost, quality, and timing

Key Capabilities

APQP management for sub-suppliers
 Cost Management of Tier 2+
 Formal supplier selection and evaluation process

Questions		Low	X	Med	X	High	X	Points	Comments
1	Does the supplier have a process for evaluation of their suppliers?	No documented process		Documented criteria managed by individual		Suppliers evaluated using objective, cross-functional criteria and process		0	
2**	Does the supplier have a process to monitor materials from their suppliers?	No		Yes. Material certifications of approval for incoming material.		Yes, to include material sampling plan & results		0	
3	Does the supplier track quality metrics from their Tier 2's?	No		Yes, informal tracking		Yes, up to date supplier scorecards available		0	
4	What APQP activities are Tier 2 suppliers required to perform?	No APQP required		Tier 2 APQP required for high impact suppliers only		Tier 2 APQP required for all suppliers		0	
5	What systems and tools are used to evaluate and manage Tier 2 costs?	Pass through quote to Net Shaped Solutions		Ask for cost breakdowns but not rigorously validated/monitored		Detailed cost breakdown models		0	
6*	How are material requirements communicated to Tier 2's?	Ad-hoc method for ordering		Manual system for communication		Standard Electronic Releases		0	
Total Supplier Mgmt								0%	

Topic: **Manufacturing Processes**

Definition

Ability to manufacture product with measurable, positive results with evidence of process controls

Key Capabilities

Error Proofing
 In-process verification
 Visual Management System
 Metric Based Business Operating System (APQP)
 Medium/High Volume Production Experience

Questions		Low	X	Med	X	High	X	Points	Comments
1	What error-proofing methods does the supplier use?	None practiced or manual (paint marks, check sheets)		Operator Controlled Error Proofing: Operator alerted audibly or visually but can continue or reset equipment without mgt.		Equipment Controlled Error Proofing: Process is stopped and the operator cannot continue without mgt intervention.		0	
2	If error-proofing is utilized, how is it verified?	No formal schedule for documented verifications		Verify mechanical or electrical add-ons with PM only		"Rabbit Test" with known bad parts performed on regular schedule and documented		0	
3	What characteristics does the supplier error-proof?	As directed by the customer (KPC, SCs)		Defined by supplier and customer (Critical items only, KPC's, SC's)		Identified through PFMEA RPN's and/or past experience.		0	
4	What inspection methods are used to assure key characteristics are consistently met?	100% inspection at end of process		In-process product verifications and attribute checks		Variable data documented and evidence of regular monitoring		0	
5*	Are work instructions up to date & available, to include control plan inspection points at each station?	No work instructions present		Work Instructions posted at work station, but are outdated or are located in central office		Up-to-date work instructions with photos, available at work station and signed off by mgt.		0	
6*	Is there a well organized flow of material from receipt of raw goods to final product shipment?	Parts not labeled, next operation step not clear		Parts labeled, no routing identified (next operation / process)		Operation number, part ID, and status labeled at each process and for all WIP material		0	
7	Does the supplier follow the practice of First In First Out (FIFO) with a documented procedure	No evidence or multiple nonconformance		FIFO followed with no documented procedure / process		FIFO followed with documented procedure or defined process.		0	

8*	What method of traceability is used in the supplier's manufacturing process?	No evidence	Raw goods and WIP material identified by lot or run date, material log sheets used	Individual parts identified by sequence number and run date traceable back to raw or incoming material	0	
9*	Does the supplier have shop floor controls i.e. traveler?	No traveler used.	Has manual traveler system with evidence of proper document retention for 100% components shipped	Has electronic traveler system (barcode) for 100% components shipped	0	
10*	Are scrap / rework bins clearly labeled and easily located?	Parts out of normal process not labeled nor segregated	Bins are clearly labeled, parts located in bins	Parts individually labeled (who, what, when, why) and in labeled bins	0	
11	How clearly are processes labeled?	None or departments identified only	Work cells identified	Stations identified, operator instructions posted	0	
12	If applicable, are changeover procedures on manufacturing line and are they followed?	No	Informal procedure or verification not required.	Procedures are established and followed with sign off.	0	
13	How are performance metrics communicated to the plant floor?	Not tracked or posted in front office / manager's office	Metrics up to date and posted in central area on manufacturing floor	Metrics up to date and posted in each work cell	0	
14	What performance metrics are measured?	None, or tracked informally or inconsistently	Scrap and Delivery performance only	FTC, Scrap, Throughput, Downtime, On Time Delivery, Labor vs. Budget, Cost of Quality,	0	
15	What % (by volume) of current production is Medium to High volume (consider medium volume to be 50,000 to 500,000 units/year; High volume greater than 500,000 units/year)	<15%	15% < x > 50%	>50%	0	
16	Does the supplier use Lean Manufacturing techniques?	No evidence	Yes, some elements such as single piece flow, pull system	Yes, including Value Stream Maps by product and customer, 6S, Kan Bans, single piece flow	0	
17*	Does the supplier utilize continuous improvement techniques?	No evidence	Yes, salaried staff only. Monthly reviews or less	Yes, cross-functional team (salaried & hourly) with weekly reviews	0	

18	What cleanliness or 6S techniques are used by the organization or facility (Safety, Sort, Set, Shine, Standardize, Sustain)?	Dark and/or Dirty	6S is not institutionalized but facility is clean and well lit	Evidence of active 6S system	0	
				Total Manufacturing Process	0%	

Topic: **Quality**

Definition

A robust system to ensure defect free products throughout manufacturing process utilizing APQP, PPAP and International Quality standards.

Key Capabilities

Cross-functional team involved in APQP activities

Certified, documented quality system

Documented Corrective Action process and problem solving ability to prevent defects

Ability to support PPAP requirements to AIAG 4th edition

Questions		Low	X	Med	X	High	X	Points	Comments
1*	Is there an organizational chart which indicates the quality control function reporting relationships?	No		Organizational chart showing titles only, or reports to Operations.		Documented, up to date, organizational chart with names, reporting to the highest level of the company.		0	
2**	Does the supplier have a documented quality system? (I.e. manual, procedures, practices)	No		Non-ISO certified but documented plans to become		AS/ISO/TS Certified		0	
3*	Does the supplier have a documented procedure for records & record retention?	No		Supplier has procedure but no evidence of retained documents		Yes. Record retention defined with evidence		0	
4*	Does the supplier conduct Layered Process Audits (LPA)	No		LPAs are conducted by operators and middle management		Yes. LPA is conducted at all levels from operators to top management with corrective actions		0	
5*	Does the supplier have adequate root cause analysis and corrective action practices?	Supplier concludes root cause or corrective measures as training, operator error, inspection		Corrective action reports complete but no analysis tools used.		Root cause analysis tools used such as fishbone diagram, 3 X 5, 5 why, problem analysis worksheet		0	
6*	Are corrective actions reviewed for similar processes?	No		Read-Across not practiced for all corrective actions.		Yes. Evidence that ALL similar processes have been reviewed for improvement, containment, & corrective measures		0	
7*	Does the supplier have a documented corrective action tracking system?	No		Manual system for tracking past non-conformances		Electronic system tracking all past non-conformances		0	

8*	Is there evidence of repeat nonconformance's?	Yes	Internal repeats but defective product does not make it to customer.	No		0	
9*	Does the supplier have periodic management reviews of key performance metrics & improvements efforts?	No	Has management review schedule and minutes to support the schedule.	Has management review schedule. Minutes to support the schedule. Evidence of improvement actions / metrics from meetings		0	
10	Are non-conformances understood by the plant floor operators?	Operators knows relative amounts of non-conformances	Operators know details of most non-conformances	Operators know all non-conformances, root causes, and corrective actions		0	
11	Does the supplier have documented training and development programs for its personnel?	No	Training records kept in Human Resources files	Documented and posted training schedule, with records, and flexibility charts		0	
12**	Does the supplier have the capability to understand and submit PPAP?	No	Yes, customer directed non-level 3 packages	Yes, completely understand and has submitted Level 3 PPAP in past		0	
13*	Does the supplier understand the requirements for pre-launch inspection?	No	Supplier performs 100% in-process inspection	Supplier inspects 100% per pre-launch Control Plan, and inspection containment activity.		0	
14	Does the supplier use statistical techniques to control the manufacturing process?	No	Yes, SPC charts maintained but no evidence of improvements	Yes, up to date SPC charts posted in manufacturing areas, evidence of improvement activities to support data		0	
15	For appearance standards, are boundary samples present and easily located?	No	Present, but criteria not clearly defined or not signed off by customer.	Yes, clear criteria and signed boundary samples by customer		0	

16	Is there a documented process for controlling incoming material?	No	Yes, but instances of non-conformity are present	Yes		0	
17	Does the supplier have a segregated and secured area to hold non-conforming material?	No	Yes, but instances of non-conformity are present	Yes		0	
18	Is the supplier following a documented corrective action procedure for non-conforming material?	No	Yes, procedure is documented, but instances of non-conformity are present	Yes		0	
19	Does the supplier have laboratory facilities to test the types of commodities for which they are being considered?	No	Yes, but not an accredited (ISO, A2, etc.) lab.	Yes, Accredited (i.e. ISO, A2LA, RAB, TS17025, etc..)		0	
20	What dimensional data can the supplier provide in-house?	Can't provide variable data or manual	Has CMM with electronic data transfer capability and operator with limited experience / capability.	Has CMM with electronic data transfer capability and have certified operator that can measure any feature or surface of parts		0	
21	Does the supplier have a documented system for controlling calibration of measuring and testing equipment?	No	Manual or open-loop system for certification, and/or some certifications are not current	Yes, have a electronic or closed loop system for controlling calibration and all certifications are current		0	
22	Does the supplier conduct customer surveys?	No	surveys conducted \leq once a year	surveys conducted on a quarterly basis or less		0	
23	Is there a procedure in place for customer and warranty returns?	No	Yes, but no evidence that these returns are being used for improvement	Yes, and there is evidence that data is being used for improvement		0	
Total Quality						0%	

Topic: **Tool Management**

Definition

Demonstrated ability to effectively design, label, monitor, and repair tooling

Key Capabilities

Clear labeling of all tooling with critical information
 Clear process for tracking location of tooling throughout maintenance, storage, and production
 Ability to quickly and effectively conduct minor repairs on tooling
 Ability to perform effective tooling design

Questions		Low	X	Med	X	High	X	Points	Comments
1*	Is all production tooling properly labeled?	No		Only contains internal supplier or reference number.		Yes, includes property of, part number, is clearly visible on outside of tool, and Rev level		0	
2*	Does the supplier have a method for monitoring location of tools?	No		Yes, but some tools are not located where they are indicated		Yes, all tools can be quickly located		0	
3	Where are tools maintained?	Not maintained or maintained in non-local location		Local tool room		In-house tool room		0	
4	When are tools inspected?	Inspection conducted when production issues arise		Tooling review frequency and process defined but not followed consistently		Last production part attached to tool after every run, and tool dimensionally checked by tool room using standard process		0	
5*	How is tooling / equipment maintained (PM Preventative Maintenance) ?	Reactive, fix as needed		Manual Documented system, but schedule is not defined or followed. Records Incomplete or Out of date		Manually / Electronic Documented, regularly scheduled and followed process. No PMs out of date.		0	

6	Where are minor modifications (hole changes, trim line changes, etc.) to tooling conducted?	Non-local outsource	Local outsource	In-house		0	
7	How are tool builds and major modifications (form changes) to tooling monitored?	Tool source manages without periodic progress reports	Tool shop visited periodically for progress report.	Detailed project timeline, reviewed with tool source at least weekly		0	
8	Is there a contingency / recovery plan for equipment breakdown.	No written plan. Not all major equipment has back up.	Has back up tooling for all major equipment.	Has contingency plan and spare parts for all major equipment. Back up tooling in house. Back up power supply.		0	
9	What are the supplier's tooling design capabilities?	None, completely outsourced	Limited. Work with short list of tooling suppliers	In-house design capability		0	
10	Where are tools stored?	Outdoors, not protected from elements	Somewhere inside	Inside, in a dedicated, protected area		0	
11	What method of part traceability is used in the supplier's tool?	Supplier does not utilize ID methods.	Identify parts to manufacture date	ID can identify date, sequence, operator number		0	
Total Tool Management						0%	

Topic: **Logistics**

Definition

Demonstrated ability to effectively monitor and manage inbound and outbound supplies & products.

Key Capabilities

Seamless electronic communications with suppliers & customers
 Continual monitoring of key logistic metrics
 Bar-coding capabilities and usage

Questions		Low	X	Med	X	High	X	Points	Comments
1	What key logistic measurements are tracked and how are they communicated?	Supplier does not track on time delivery OR no evidence of corrective measures for delivery nonconformance		On time delivery is tracked & reported to top management.		Premium freight, Inventory turns, On time delivery to customer & from supplier. Results are reported to top management.		0	
2	How is premium freight managed?	Premium freight is not documented		Premium freight is tracked & communicated to top management.		All premium freight is tracked, there is evidence of corrective measures for supplier / customer nonconformance, and reported to top management		0	
3	Does the supplier utilize EDI to receive releases?	No		Has EDI, but it isn't utilized		Yes		0	
4	Does the supplier utilize ASNs for outgoing shipments?	No		Has capability, but it isn't utilized		Yes		0	
5	Does the supplier barcode outgoing shipments?	No		Yes, but utilize third party to print barcodes		Yes, in-house capability to barcode (linear, 2D)		0	
6	Does the supplier have a system in place for inventory control.	No		Yes. Documented manual system for receipt of material		Yes Electronic System. All incoming material is bar-coded.		0	
Total Logistics								0%	