

Paper Title: Hewlett-Packard's Packaging Supplier Evaluation Process and Criteria

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Abstract:

In today's highly competitive climate, "World Class" packaging suppliers are critical to HP's business success. It is crucial that our suppliers are not only the best, but that they are also integrated into our overall business processes. To do this, HP has developed a supplier management philosophy and process based on long-term, mutually beneficial relationships with its suppliers in order to leverage the expertise of their products and services to meet or exceed our requirements. By developing strong relationships with our suppliers, HP has been able to build the needed linkages to work on next generation technology and long-term process improvements. This paper will describe this process which is called TQRDCEB. That stands for Technology, Quality, Responsiveness, Delivery, Cost, Environment, and Business. TQRDCEB is a set of performance expectations and measurement criteria for use in qualifying new suppliers, and managing the ongoing long-term business relationship with existing suppliers.

Other companies or suppliers can leverage from this framework to establish their own long-term customer/supplier relationship criteria and processes. The TQRDCEB criteria can provide consistent terminology and metrics for establishing new supplier relationships, and evaluating current supplier performance.

1.0 Overview

1.1 Setting the stage

In today's highly competitive climate, "World Class" packaging suppliers are critical to HP's business success. It is crucial that our suppliers are not only the best, but that they are also integrated into our overall business processes. To do this, HP has developed a supplier management philosophy based on long-term, mutually beneficial relationships with fewer but better suppliers.

HP has evolved from an adversarial practice with our suppliers to one based on integrity, mutual trust, and cooperation. The benefits derived from this supportive relationship help stimulate continuous quality improvements and a reduction in cost for HP.

1.2 Principles and Philosophy

HP endeavors to establish long-term mutually beneficial relationships with its suppliers in order to leverage the expertise of their products and services to meet or exceed HP's requirements.

The result HP seeks does not occur from random sourcing or selecting suppliers solely on competitive quotations. It comes from making the correct selection of suppliers, and then working closely with them to improve quality and productivity. By developing strong relationships with our suppliers, HP is able to build the needed linkages to work on next generation technology and long-term process improvements.

1.3 Purpose

The TQRDCEB criteria were developed in order to provide a framework for establishing the long-term supplier relationship that is beneficial to both HP and the supplier. The TQRDCEB criteria provide consistent terminology and metrics for establishing new supplier relationships, and evaluating current supplier performance.

2.0 INTRODUCTION TO TQRDCEB

2.1 What is TQRDCEB?

TQRDCEB is a set of performance expectations and measurement criteria for use in qualifying new suppliers, and managing the ongoing long-term business relationship with existing suppliers.

The initials TQRDCEB stand for:

Technology,
Quality,
Responsiveness,
Delivery,
Cost,
Environment, and
Business

By setting supplier expectations HP hopes to:

- maximize customer satisfaction ;
- maximize profitability for all contributors to the system;
- maximize responsiveness to change; and
- provide a framework for effective communications.

HP accomplishes these objectives by:

- establishing and maintaining long-term commitments;
- promoting effective communications;
- obtaining mutual agreement on expectations and goals;
- treating a supplier's process as an extension of HP's processes;
- and utilizing a team approach to achieve performance improvements (proactive/cooperative).

The success of supplier performance is rightfully shared with our suppliers who specifically contribute to our commitment to excellence. Successful supplier performance in the areas of TQRDCEB will increase the opportunity for repeat business, increased sales, and profitable growth.

A primary objective for procurement engineering is: To maintain a competitive advantage by providing materials of the highest quality and lowest cost, with the best delivery, responsiveness, and technology available, by selecting fewer but better suppliers. In order to accomplish this objective, the TQRDCEB criteria were developed.

2.2 TQRDCEB Category Description

2.2.1 Technology

Hewlett-Packard must compete in the world market on the basis of manufacturing technology, as well as design technology. We expect our suppliers to be technological leaders in their respective fields of design and manufacturing. Suppliers are expected to participate in mutual engineering throughout HP's products' life cycle to enable timely introductions and continuous quality and cost improvements.

2.2.2 Quality

Hewlett Packard set a quality goal of zero defective products for electrical, mechanical, cosmetic, and administrative reasons. HP's quality expectation is defect-free materials. Quality and reliability are expected to be achieved through superior design, process control and continuous process improvements. All material is to be fit for use, and to be cosmetically acceptable.

2.2.3 Responsiveness

Hewlett-Packard expects suppliers to be responsive to swings in demand, with short cycle times, and appropriate inventory management, while maintaining flexible capacity capabilities to successfully resolve problems and improve worldwide service.

2.2.4 Delivery

Hewlett-Packard expects deliveries to be 100% on time all the time within a window of -3/+0 (three days early and no days late). To achieve this expectation there must be continuous improvement in overall delivery performance and our suppliers must be prepared to meet commitments worldwide. Lead times must be short by industry standards, reliable and decreasing over time.

2.2.5 Cost

Hewlett-Packard expects to minimize costs and obtain the lowest average price worldwide.

2.2.6 Environment

Hewlett-Packard recognizes its obligations to be a good citizen in each nation and community in which it operates. HP must conduct its operations in such a manner that protects the environmental quality of these countries and communities. Our suppliers are an integral part of this effort; therefore, HP suppliers are expected to conduct their operations in an environmentally responsible manner.

2.2.7 Business

Hewlett-Packard expects to develop long-term business relationships with its suppliers and needs to verify their financial position in order to ensure their ability to grow financially, as well as technically, to meet our future needs. Our suppliers should be willing to furnish the appropriate financial data such as 10K reports, annual reports, financial statements, etc. Hewlett-Packard keeps this information confidential and uses it only for the purpose of evaluation.

3.0 Terms and Definitions of Supplier Types

Backward Integrated Manufacturer - A supplier that produces their own raw materials. For example, a backward integrated corrugated manufacturer owns the forests, paper mills and corrugator, as well as trucking fleets and warehousing. In this example, they also own corrugators, sheet plants and sometimes foam converters/fabricators. In the rest of this section, the backward integrated manufacturer is referred to as "manufacturer".

Broker - This supplier never physically touches the product you are ordering. They will place the order via telephone/FAX with the manufacturer, converter or even distributor, but the product will be drop-shipped to you via the manufacturer or converter.

Converter - This supplier obtains product from the manufacturer and "converts" it into the form you request (e.g., bags, foam). The finished product will either be shipped to HP directly or a distributor.

Corrugator - A supplier that purchases paper from a mill and forms it into corrugated sheets. These sheets are either made into cartons (e.g., shipping, bulk) by the corrugator or sold to sheet plants for converting. Delivery is from the corrugator or sheet plant to either HP or a distributor.

Distributor - A supplier that purchases products from the manufacturer, converter, corrugator, or sheet plant for stocking in their warehouse, completing value-added services, and/or having items drop-shipped to HP.

Manufacturer's Representative - A person lending technical support to a manufacturer or converter. Typically, they do not place orders for products, and the cost of their service is added to the final product price.

Sheet Plant - A supplier that purchases corrugated sheets from a corrugator or manufacturer, forms it into cartons, prints it, and delivers finished product to HP or a distributor.

Value-added Services or Value-Added Reseller (VAR) - Adding something of value to the product (foam inserts, warehousing, etc.).

4.0 Expectations for Suppliers

4.1 Technology

- Maintain familiarity with HP "Product Protection Test Requirements for Suppliers and Original Equipment Manufacturers", and apply when necessary.
- Utilize and recommend improvements to existing and developing packaging design and data management tools.
- Maintain familiarity with HP "Packaging Standard Requirements for HP Support Parts", and apply when necessary.

4.1.1 Technological Equipment

- Leading in Manufacturing & Test technologies and HP-product suitable processes related to:
 - Age, scope and performance of equipment.
 - Manufacturing depth.
 - Process control.

4.1.2 Other Technological Requirements

- Leading in manufacturing technologies, which are suitable for actual and potential future HP products.
- Leading in technological development.
- Always meets HP time requests and technical commitments.
- Sufficient equipment and applications for sample builds.
- Sufficient equipment and application within the lab and material test.

4.1.3 Mutual Engineering / Design Support

- Understands the overall product requirements and provides pro-active proposals for valuable and environmental friendly solutions.
- Shows interest in the product application and optimizes the solutions proposed by HP.
- Meets HP requirements and accepts special & standard changes.

4.2 Quality

- Take ownership of packaging problems and improvements within respective subcontractor repair and distribution operations:
 - Resolve operational packaging related part quality issues directly with the packaging engineer, buyer, packaging suppliers, subcontractor processes, and customers;
 - Resolve operational packaging quality issues directly with the packaging engineer, buyer, packaging suppliers, subcontractor processes, and customers;

- Communicate with HP buyers and engineers when necessary in resolving subcontractor packaging related quality issues;
- Inform HP Packaging Engineering on corrective action plans and reports in the quality resolution process.

4.2.1 Demonstrated Product Quality - Reliability

- No quality/reliability problems (Supplier has proactive Q/R verification programs which are effective).

4.2.2 Practical Execution of Quality

- Causes no qualitative barrier by transport stocking and handling.
- Analyzes and solves Q-problems effectively and immediately.
- Reacts to Q-problems or defect deliveries immediately with minimum efforts for HP.

4.2.3 Quality Systems

- Has a statistical process for continuous Q-improvement in place.
- Processes are clearly defined.
- Clearly defined and documented Q-and Production data.
- Independent QA organization.
- Executes systematic raw material inspections.
- Provides detailed measurement reports and specifications on request.

4.3 Responsiveness

- Communicate proactively with the packaging engineer or buyer and other subcontractor packaging engineers or coordinators when necessary. Inform HP Packaging Engineering of potential packaging changes.
- Assure timely closure to all packaging quality issues. Notify all affected individuals or groups of closure: what, where, when, who, etc.
- Communicate in a timely manner with HP buyers and engineers when necessary to address packaging related part issues.

4.3.1 Timely Response

- Timely information on process changes and/or potential problems.
- Order acknowledgment within 2 working days (EDI, FAX).
- Timely execution of RFQ's (Request For Quote).
- Timely response to alerts.
- Timely response to standard requests (dates, availability).
- Timely availability of samples.

4.3.2 Service and Support

- Clear definitions and announcement of responsibilities and contacts.
- Competence and product knowledge of contacts.
- Easily reachable contacts and competent backups always ensured.

- Conformance of Non Disclosure Agreements.

4.3.3 Long Term Product Support

- Committed to long term supply.
- Extends product availability to meet special HP requirements.

4.3.4 Flexibility to Changes (Accepts and completes reasonable requests for Purchase Order changes and additions).

- Covers swings in demand of +/- 50% with reasonable up-front notification.
- No increase of agreed/regular lead-time at increased qty up to 50%.
- Short-term realization of specification changes.

4.4 Delivery

- Communicate with the packaging buyers and engineers on all materials or process issues and changes which could affect delivery of the packaging to HP or it's subcontractors.

4.4.1 On Time Delivery, based on delivered quantities: three days early and no date later; with JIT at given date.

- 95% on-time or 24 hour delivery

4.4.2 Leadtime

- Meets lead-time requirements.
- Stable reliable lead-times.
- Competitive lead-times within commodity.
- Reduction of lead-times by shorter turn around times.
- Provides minimum lead-time in alert situations.

4.4.3 Packaging/Shipping

- Meets shipping guidelines-papers and delivery standards.
- Meets consistently with transport packaging specifications/performance.
- Provides proposals for loading security.
- Delivers requested quantities; partial shipment only with up-front agreement.
- Offers JIT delivery process (delivery time window, TAT).

4.4.4 Strategy for Alternative Deliveries

- Keeps safety stock according to HP requests (short-term).
- Offers opportunities for ensured delivery at long-term increasing demand.
- Alternative source and contingency plan in place (e.g. delivery via partner company etc.).

4.5 Cost

- Communicate with the packaging buyers and engineers on all materials or process issues and changes which could affect the cost of the packaging involved.
- Monitor reports from the packaging buyers and engineers on standard costs for packaging being used in each respective subcontractor's repair and distribution operations.
 - Understand cause and effects of process packaging usage on cost.
 - Correct out of control packaging cost issues related to respective subcontractors' processes when necessary.

4.5.1 Worldwide Most Competitive Source

- Always lowest price/cost.

4.5.2 Cost Reduction Programs

- Leads HP designers towards standard parts and processes.
- Forwards savings on to HP.
- Implements continuous process improvements to minimize TAT (Turn Around Time).
- Communicates price changes in writing and discusses planned price increases with a fair share.
- Proactive in identifying cost reduction opportunities.
- Provides open cost calculation on request.

4.6 Environment

- Assure that packaging materials and processes used are in compliance with HP environmental guidelines.

4.6.1 Environmental Strategy

- Supplier has a top management endorsed environmental improvement policy.

4.6.2 Implementation

- Supplier has an improvement implementation plan with metrics, which is directly tied to their environmental improvement policy.

4.6.3 Process

- Supplier eliminated the usage of heavy metals and ozone depleting substances.

4.7 Business

- D&B Credit Rating above 6
- HP is 40% or less of total sales
- Participates in Zero Based pricing
- Year 2000 Compliant

5.0 Metrics

The TQRDCEB practice is utilized throughout HP's worldwide operations. However, the actual metrics used varies between business units and disciplines being examined. The metrics is based of the needs of that business unit or discipline. Below is an example the more commonly used metrics for evaluating packaging suppliers for a high volume product line.

5.1 Time Frame

- First supplier TQRDCEB evaluation should be conducted within 9 months to a year.
- Follow-up reviews are based on business needs and criticality of supplier services.
- Auditor's accumulation of information and evaluation period normally takes about 4 to 5 weeks.
- Packaging suppliers are given the same evaluation criteria so they can conduct a self-audit during the evaluation period.
- Detailed review of the results with supplier normally takes about 4 hours.

5.2 Ranking and Points

5.2.1 Weighted strength towards ranking:

Technology	10%
Quality	25%
Responsiveness	15%
Delivery	15%
Cost	15%
Environment	5%
<u>Business</u>	<u>15%</u>
Total	100%

5.2.2 Definition of performance:

- Fails - Evidence indicates the element does not exist or is insufficient to fulfill the intended purpose or is inconsistent in performance.
- Meets - Evidence indicates the element is sufficient or adequate to fulfill the intended purpose or functions consistently.
- Exceeds - Evidence indicates the element surpasses and is pro-active in the intended purpose or function.

5.2.3 Scoring

In evaluating new suppliers, a color system is used to indicate problem area. A total score is not determined but a subjective opinion is developed and used in the selection process. When evaluating current suppliers, a point system is use to identify problem areas, measure improvement, and reward pro-activity. Points given in each specific performance area:

Fails (red) =	0 points
Meets (yellow) =	1 point
Exceeds (green) =	2 points

Partial points can be awarded if the auditor feels improvements have been made over previous audits but still does not meet the next level of expectation criteria.

5.3 Evaluation

TECHNOLOGY				
DIMENSION	METRIC	Performance	Ratings	N/A
MUSTS:				
Provides proactive improvement for new and current products				
	Utilizing Latest In Proven Technology (DFM)	Green (2)		<input type="checkbox"/>
	Utilizing Current Technology	Yellow (1)		
	Utilizing Obsolete Technology	Red (0)		
Support Proactive Mutual Engineering for New and Current Products				
	Proactive and Effective - Have design capability - Have testing capability	Green (2)		<input type="checkbox"/>
	Effective	Yellow (1)		
	Non-supportive	Red (0)		
Exhibit Documented Process Controls				
	Closed Loop Controls	Green (2)		<input type="checkbox"/>
	Open Loop Controls	Yellow (1)		
	No Controls	Red (0)		
WANTS:				
Offer CAD/CAM Capability for Product Manufacturing				
	CAD/CAM System Compatible w/ ME10 (IGES or DXF Files)	Green (2)		<input type="checkbox"/>
	No CAD/CAM Capability	Yellow (1)		
Offer EDX Capability for Design/Drawing Transfer				
	Experienced in Network Drawing Transfer	Green (2)		<input type="checkbox"/>
	New to Network Drawing Transfer	Yellow (1)		
	No Experience	Red (0)		
Offer Electronic Data Interchange (EDI) Capability for Purchasing				
	Experienced in EDI	Green (2)		<input type="checkbox"/>
	New to EDI / Systems are Capable of Supporting	Yellow (1)		
	No Experience	Red (0)		
Effectively Utilizing State-of-the-Art Machine Technology				
	State-of-the-Art	Green (2)		<input type="checkbox"/>
	Current	Yellow (1)		
	Obsolete	Red (0)		
In House Tooling and Maintenance				
	Tooling created and maintained in house	Green (2)		<input type="checkbox"/>
	Tool Shop in house for repairs only	Yellow (1)		
Facility, Environmental Controls and Safety				
Expectations: - Facility is clean, well laid out, well lit and environmentally controlled as appropriate. - Adequate safety procedures exist to protect property and personnel from hazards and emergencies. - Hazardous materials or processes are adequately managed.				
	Meets ALL Expectations	Green (2)		<input type="checkbox"/>
	Meets MOST Expectations	Yellow (1)		
	Does NOT Meet Expectations	Red (0)		
Additional Comments:				

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

QUALITY				
DIMENSION	METRIC	Performance	Ratings	N/A
MUSTS:				
Discrepancy / Non-Conform Rate (% Discrepant or Non-Conforming)				
	< 1000 P.P.M.	Green (2)		<input type="checkbox"/>
	1001 - 10000 P.P.M.	Yellow (1)		
	> 10000 P.P.M.	Red (0)		
Documented SPC/SQC Program				
	Evidence of an active and effective program in practice	Green (2)		<input type="checkbox"/>
	Active program	Yellow (1)		
	None	Red (0)		
Continuous Process Improvement Programs-TQC				
TQC Program expectations: - employee training - corrective action program - clear ownership for quality - nonconforming material is segregated - published goals/trends - preventative maintenance program - incoming materials audits				
	Meets ALL Expectations	Green (2)		<input type="checkbox"/>
	Meets MOST Expectations	Yellow (1)		
	Does NOT Meet Expectations	Red (0)		
Material Certification Program (e.g. heavy metals, ESD, hazardous materials)				
	Certification Routinely Available	Green (2)		<input type="checkbox"/>
	Available on Request	Yellow (1)		
	Not Available	Red (0)		
Documentation/ Specifications Department				
	Mature, organized, responsible ownership of doc / change control.	Green (2)		<input type="checkbox"/>
	Early stages of spec. controls.	Yellow (1)		
	Little or no specification controls.	Red (0)		
On going employee training exists for entire organization				
	Active and effective	Green (2)		<input type="checkbox"/>
	Active	Yellow (1)		
	No program	Red (0)		
Corrective action program to receive/implement upon customer inputs				
	Active and effective	Green (2)		<input type="checkbox"/>
	Active	Yellow (1)		
	No program	Red (0)		
Adequate control of tooling; storage, maintenance, tooling, drawings...				
	Active and effective	Green (2)		<input type="checkbox"/>
	Active	Yellow (1)		
	No program	Red (0)		
WANTS:				
Documented Quality Program (i.e. ISO 9000)				
	Documented Program	Green (2)		<input type="checkbox"/>
	No Program	Yellow (1)		
Additional Comments:				

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

RESPONSIVENESS				
DIMENSION	METRIC	Performance	Ratings	N/A
MUSTS:				
Effective Service and Support				
Expectations: 1) 24 hour acknowledgement of orders 2) < 3 day response to routine inquires 3) 24 hour resolution of problem reports 4) Same day response to emergency inquiries				
	Meets ALL Expectations	Green (2)		<input type="checkbox"/>
	Meets MOST Expectations	Yellow (1)		
	Does NOT Meet Expectations	Red (0)		
Support of Sole Sourced Parts (If Applicable)				
Expectations: 1) Maintain adequate inventory levels 2) Provide timely notification of potential shortages 3) Has contingency plans in place for shortage or quality problems.				
	Meets ALL Expectations	Green (2)		<input type="checkbox"/>
	Meets MOST Expectations	Yellow (1)		
	Does NOT Meet Expectations	Red (0)		
Prototype Lead Time				
	Always meets commitments	Green (2)		<input type="checkbox"/>
	Usually meets commitments	Yellow (1)		
	Occasionally meets commitments	Red (0)		
Standard Quoting Lead Time				
	<= 3 days	Green (2)		<input type="checkbox"/>
	> 3 days	Red (0)		
Order Tracking and Flexibility				
Expectations: - Order tracking method exists to provide time status of orders quickly. - Order due date and qty changes efficiently communicated to mfg process. - Flexible to order qty and date changes. - Customer is automatically notified of any conditions that affect delivery or qty schedules.				
	Meets ALL Expectations	Green (2)		<input type="checkbox"/>
	Meets MOST Expectations	Yellow (1)		
	Does NOT Meet Expectations	Red (0)		
WANTS:				
Adequate invoicing process exists				
	Active and effective	Green (2)		<input type="checkbox"/>
	Active	Yellow (1)		
	No Program	Red (0)		
Order processing & scheduling system allow changes (due date, quantity, revision) to be communicated, controlled & implemented at factory				
	Active and effective	Green (2)		<input type="checkbox"/>
	Active	Yellow (1)		
	No Program	Red (0)		
Account manager (single contact) accessible to handle all requests				
	Contact handled requests effectively	Green (2)		<input type="checkbox"/>
	Handles most requests effectively	Yellow (1)		
	Occasionally meets most requests	Red (0)		
Manufacturing capacity reserved for short term responsiveness / flexibility in production requirements				
	Mfg handles all responses	Green (2)		<input type="checkbox"/>
	Handles most requests effectively	Yellow (1)		
	Occasionally meets most requests	Red (0)		
Account manager / personnel available for "What If" requests quickly / accurately				
	Always meets "What If" commitment	Green (2)		<input type="checkbox"/>
	Usually meets commitment	Yellow (1)		
	Occasionally meets commitment	Red (0)		
Adequate material requirement / MRP cycles at acceptable frequencies				
	Program active / effective	Green (2)		<input type="checkbox"/>
	Active program	Yellow (1)		
	No program	Red (0)		

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

DELIVERY					
DIMENSION	METRIC		Performance	Ratings	N/A
MUSTS:					
On-Time Delivery (Six Month Average)					
	=> 95 % on-time or 24 hr. delivery		Green (2)		<input type="checkbox"/>
	90 to 94 % on-time or 2 day delivery		Yellow (1)		
	< 90% on-time or >48 hr. delivery		Red (0)		
Lead Time for Initial Production P.O.'s (after First Article Approval or Press Proof)					
	<= 10 days		Green (2)		<input type="checkbox"/>
	11 - 20 days		Yellow (1)		
	> 20 days		Red (0)		
Packaging Conformance (Labeling, Documentation, Packing Slips, P.O.'s, Etc.)					
Expectations: 1) Packing slips and invoices to have correct PO and Part Numbers 2) One PO per packing slip or invoice 3) Barcoded PO and Part Numbers 4) Containers labeled with Part Number and Quantity.					
	Meets ALL Expectations		Green (2)		<input type="checkbox"/>
	Meets MOST Expectations		Yellow (1)		
	Does NOT Meet Expectations		Red (0)		
Supporting JIT Programs					
	World Class JIT Program (Make On Demand or Active JIT Program)		Green (2)		<input type="checkbox"/>
	No JIT Program		Yellow (1)		
	Unwilling to support JIT Program		Red (0)		
Delivery and Material Release Systems					
Expectations: 1) Multiple deliveries per day 2) Deliveries via own truck or JIT Loop truck 3) Accept Phone, FAX, EK or tote release of material 4) Manage maintenance of totes and carts					
	Meets ALL Expectations		Green (2)		<input type="checkbox"/>
	Meets Expectations #1 – 3		Yellow (1)		
	Meets < 3 expectations		Red (0)		
System / personnel in place to pre-alert customer that may effect order delivery or quantity					
	Active and effective program		Green (2)		<input type="checkbox"/>
	Active program		Yellow (1)		
	No program		Red (0)		
Disaster Contingency Plans					
Expectations: - Documented disaster recovery plan exists. - High Degree of flexibility in transferring operations to other locations or areas.					
	Meets ALL expectations		Green (2)		<input type="checkbox"/>
	Does not meet expectations		Red (0)		
On time delivery / performance to customer measured					
	Active and effective program		Green (2)		<input type="checkbox"/>
	Active program		Yellow (1)		
	No program		Red (0)		
System to pre-alert buyers of material availability issues					
	Active and effective program		Green (2)		<input type="checkbox"/>
	Active program		Yellow (1)		
	No program		Red (0)		
Additional Comments:					

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

COST				
DIMENSION	METRIC		Performance	Ratings
MUSTS:				
Price Competitiveness				
% Difference from Average Quote				
	> 10 % below average		Green (2)	<input type="checkbox"/>
	0 to 10 % below average		MidPoint(1.5)	
	0 to 10 % above average		Yellow (1)	
	> 10 % above average		Red (0)	
OR				
Most Competitive Price Level				
	Generally a Price Leader		Green (2)	<input type="checkbox"/>
	Average		Yellow (1)	
	Generally Non-Competitive		Red (0)	
WANTS:				
Price Controls Evident				
Expectations: 1) Suggest process improvements and value engineering to avoid price increases and reduce current costs. 2) Track and evaluate price variations over time. 3) Track and evaluate raw materials market variations over time.				
	Meets ALL expectations		Green (2)	<input type="checkbox"/>
	Meets MOST expectations		Yellow (1)	
	Does not meet expectations		Red (0)	
Available Model of Cost Drivers				
	Available and Appropriate Model		Green (2)	<input type="checkbox"/>
	Available Model		Yellow (1)	
	No Model		Red (0)	
Adequate system exists to provide cost breakdowns (overhead, material, etc.)				
	Active and effective program		Green (2)	<input type="checkbox"/>
	Active program		Yellow (1)	
	No program		Red (0)	
Cost increase / decreases are communicated / documented / justified to customer				
	Active and effective program		Green (2)	<input type="checkbox"/>
	Active program		Yellow (1)	
	No program		Red (0)	
System exists to continuously assess cost reductions				
	Active and effective program		Green (2)	<input type="checkbox"/>
	Active program		Yellow (1)	
	No program		Red (0)	
Additional Comments:				

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

ENVIRONMENTAL					
DIMENSION	METRIC		Performance	Ratings	N/A
MUSTS:					
Environmentally Responsible					
Expectations: 1) Compliant with local environmental regulations and has a system to track them. 2) Is proactive in suggesting materials, which will meet current and future international environmental regulations 3) Marks packaging materials for recycling as required by U.S. and International regulations and ensures all environmental labeling or statements placed on the packaging materials are truthful and accurate. 4) Is proactive in obtaining and utilizing materials with post-consumer waste content of the highest usable levels.					
	Meets ALL Expectations		Green (2)		<input type="checkbox"/>
	Meets 3 of the 4 Expectations, including #1		Yellow (1)		
	Does NOT Meet Expectation #1		Red (0)		
Ozone Depleting Substances (ODS) have been eliminated from the manufacturing process					
	Zero Usage		Green (2)		<input type="checkbox"/>
	Uses / contains ODS		Red (0)		
Heavy Metal Usage (cadmium, lead, mercury, and hexavalent chromium)					
	Zero Usage		Green (2)		
	Uses Heavy Metals		Red (0)		
Environmental Management System					
Expectations: - Has a written environmental improvement policy endorsed by top management. - Representative responsible for implementation of environmental policy and plans. - System in place for tracking and monitoring compliance to applicable environmental laws.					
	Meets ALL Expectations		Green (2)		<input type="checkbox"/>
	Meets at least two expectations		Yellow (1)		
	Does NOT Meet Expectations		Red (0)		
WANTS:					
Proactive Reduction of Industrial Toxins					
	Plan in place, evidence (metrics) of progress		Green (2)		<input type="checkbox"/>
	Plan in place		Yellow (1)		
	No plan in place		Red (0)		
Environmental Improvement Implementation Plan					
	Plan in place, evidence (metrics) of progress		Green (2)		<input type="checkbox"/>
	Plan in place		Yellow (1)		
	No plan in place		Red (0)		
Proactive program in ways to promote more environmentally responsible packaging to customer (Reduce, Reuse, Recycle, and improve ultimate disposal).					
	Active and effective program		Green (2)		<input type="checkbox"/>
	Active program		Yellow (1)		
	No program		Red (0)		
Environmental Awareness					
Expectations: - Has a process to track, monitor or review existing or proposed legislation that would affect its operations and / or packaging material and their usage. - Informs HP about potential packaging additive bans and offers alternative solutions. - Participates in industry organizations and is abreast of worldwide legislative trends affecting the manufacturing and use of packaging materials. - New packaging developments reflect existing and emerging worldwide environmental, recycling, health and safety requirements.					
	Meets ALL Expectations		Green (2)		<input type="checkbox"/>
	Meets at least two expectations		Yellow (1)		
	Does NOT Meet Expectations		Red (0)		
Additional Comments:					

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

BUSINESS				
DIMENSION	METRIC	Performance	Ratings	N/A
MUSTS				
HP as a Percent of Total Sales				
	<= 40 %	Green (2)		<input type="checkbox"/>
	>40% but <60%	Yellow (1)		
	>60%	Red (0)		
WANTS:				
Dun & Bradstreet Risk Rating				
	> 6	Green (2)		<input type="checkbox"/>
	<= 6	Yellow (1)		
Participates in Zero Based pricing				
	Active in program	Green (2)		<input type="checkbox"/>
	Does not participate	Yellow (1)		
Year 2000 Compliant				
	Fully Compliant	Green (2)		<input type="checkbox"/>
	Plan in place, evidence (metrics) of progress	Yellow (1)		
	No plan in place	Red (0)		
Additional Comments:				

Total Score: _____ / Number of Applicable Questions: _____ = Ranking _____

5.4 Performance Classification

Dimension	Ranking	x Weight	= Final Value
TECHNOLOGY		10%	
QUALITY		25%	
RESPONSIVENESS		15%	
DELIVERY		15%	
COST		15%	
ENVIRONMENTAL		5%	
BUSINESS		15%	
Total:		100%	

6.0 Conclusion

There are many methods that have been developed for measuring the performance of suppliers. Many are very good techniques and some are considered “best practices.” The TQRDCEB framework offers a combination of these features but has been blended in a way to achieve its original purpose. That is to have a supplier management philosophy and process which is based on long-term, mutually beneficial relationship in order to leverage the expertise of their products and services to meet or exceed HP's requirements. By developing strong relationships with suppliers, HP has been able to build the needed linkages to work on next generation technology and long-term process improvements. In addition, many suppliers have commented that the process and framework have allowed them to identify problem areas or opportunities that they were not aware of, thus allowing them to become more competitive. Hence, it is the expectation of this paper that other companies or suppliers can leverage from this framework and establish their own long-term customer/supplier relationship criteria and processes. In a global business

environment where competitors are also your suppliers or original equipment manufacturers (OEM), it only makes sense that we strive for common criteria, consistent terminology, and metrics for establishing new supplier relationships or evaluating current supplier performance.