Agilent Technologies

Supplier Performance Expectations

Technology

Quality

Responsiveness

Delivery

Cost

Environment

Agilent Restricted

2000

TABLE OF CONTENTS

DISTRIBUTED BY

Agilent Procurement

INTRODUCTION

The results Agilent Technologies seeks will not occur from random sourcing or from selecting suppliers solely based on competitive quotations. It will result from making the correct selection of suppliers, and then working closely with them in specific areas to improve quality and productivity.

The basic strategy for establishing these "working relationships" is through the establishment of mutual performance expectations and measures, feeding back the results, initiating corrective actions to ensure continuous performance improvements, and over time, rewarding the best with the opportunity for more business through new R&D products and product transfers.

By setting supplier expectations we hope to: maximize customer satisfaction; maximize profitability for all contributors in the system; maximize responsiveness to change; and provide a framework for effective communications. To accomplish these objectives we will need to: establish and maintain long-term commitments (between supplier/customer); promote effective communications; obtain mutual agreement on expectations and goals; treat a supplier's process as an extension of Agilent's processes; and utilize a team approach to achieve performance improvements (proactive/cooperative).

The success of this program is rightfully shared with our suppliers who specifically contribute to our commitment to excellence. Successful supplier performance in the areas of TQRDC-E will always have rewards of repeat business, increased sales and profitable growth.

COMMON PROCUREMENT OBJECTIVE

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.

TECHNOLOGY

OBJECTIVE:

Agilent Technologies 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 Agilent's products' life cycles to enable timely introductions and continuous quality and cost improvements.

New Technology:

Agilent Technologies plans to establish long-term working relationships with suppliers. As a strategic supplier, Agilent expects you to take the initiative by providing leading edge technology to Agilent so that the technical, high-quality and low-cost demands of Agilent 's marketplace can be met in a timely fashion.

Provide Leading Edge Technology - The long term Agilent supplier must be innovative and pushing the state of the art either in the products that are provided or in the processes that are used.

Timely New Product Introduction - Not only is it important for suppliers to introduce new products or processes, but they must be in the forefront of the marketplace, and they must meet their announced introduction schedules. Time to market is extremely critical.

Mutual Engineering:

Our suppliers must be willing to participate in mutual engineering and technological teamwork on a worldwide basis. Agilent suppliers are participating at earlier stages of a product's life cycle. A supplier's ability to offer assistance regarding design and application issues is a requirement. As an Agilent supplier you should participate in redesign and cost reduction efforts after product release to enable continuous cost reduction and process application improvement.

Concurrent Engineering and Technical Teamwork - Suppliers must be willing to participate in mutual engineering activity exchanges as the needs arise.

Design and Application Assistance - We expect our suppliers to work closely with Agilent Engineering to provide design and application assistance. This applies not only to newly released products, but to existing products as well.

Strong Commitment to R&D:

Since technical innovation is a primary ingredient of improvement, a supplier's management should demonstrate a strong commitment to their R&D funding program.

SUPPLIER EXPECTATIONS:

Even before R&D funds are available, products must be sold. To sell effectively today requires more than just competitive prices; it requires a commitment to continuous improvements in product quality and reliability, improved service to customers, and an accelerated product development time from our strategic suppliers. In return, we offer those suppliers the opportunity and techniques to develop and effectively manage these areas based on the experience gained through a working relationship with Agilent.

There can be an infinite number of products to choose from to satisfy customer needs that are competitively priced and are manufactured with the highest regard for quality and reliability. Therefore, suppliers need to form alliances with customers to increase their share of business. The foundation of these alliances is mutual engineering. This process solidifies a commitment by Agilent and our suppliers to define and set specifications, resolve technical problems, and collaborate on technological advances to the benefit of both companies.

MEASUREMENT:

- ❑ TQRDC-E Supplier Performance Survey
- ❑ Manufacturing Technology Audit
- ❑ Investment in R&D

QUALITY

OBJECTIVE:

Agilent has set a quality goal of zero defective products for electrical, mechanical, cosmetic and administrative reasons. Agilent'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 cosmetically acceptable.

Process Control:

As our supplier you understand and willingly accept the goal of supplying Agilent with 100% quality materials. It is expected that you will, as a minimum, qualify your process to the Agilent quality and reliability specifications and will maintain and improve the quality through Statistical Quality Control (SQC). SQC methods help assure the manufacture of 100% quality parts. Quality should be the result of the supplier's internal process control, not external quality control. This includes the use of statistical process control and reliability testing. In addition to process control, process capability should be demonstrated by doing process capability indices of critical parameters. Outgoing quality verification should be supplied in the form of histograms and distribution data.

Agilent expects suppliers to have documented process improvement strategies and processes in place to remain cost competitive. Agilent also expects a supplier to utilize process control techniques and have the appropriate documentation supporting such activities. Regardless of the improvements made, the goal will always be to do better.

Meet or Exceed Agilent Specifications Requirements - Basically we are asking our suppliers to meet or exceed the Agilent specifications requirements EVERY TIME.

Continuous Q/R Improvements through SPC & TQC Techniques - Lot-to-lot variations are unacceptable. Our suppliers must have their processes under control and experience has shown that this can be achieved through active Statistical Process Control (SPC) programs. This, along with active Total Quality Control (TQC) programs, which makes quality improvement a part of every employee's responsibility, are the major ingredients for meeting this goal.

Outgoing Quality Verification (Supplier Ownership) - It is expected that our suppliers will assume responsibility for the quality of their products making incoming inspection on our part unnecessary. Furthermore, the supplier should be able to provide, on request, outgoing quality verification in the forms of histograms and distribution data.

Demonstrated Product Reliability by Test/when Requested:

Suppliers are expected to provide reliability data to Agilent upon request.

Documentation:

We recognize that it is the manufacturing processes that determine product quality. Suppliers should be willing to document their manufacturing processes, including tooling. This may include certifying operators for particular operations. As our supplier you agree not to make changes to this documented process without consulting with Agilent. You have the right to expect Agilent supplied documentation to be accurate and to properly represent Agilent's specifications.

Advance Notice of Major Process & Product Changes - There are two key points to be made here. First, it is recognized by Agilent that it is the manufacturing processes that determine product quality, therefore, it is imperative that the supplier understand his processes and have them adequately documented. This may include operator certification for particular operations. Second, the supplier must agree not to make any changes to their documented processes or to the product without providing Agilent with sufficient advance notice to determine the impact of the change on its product.

Responsive to Alerts and Corrective Action Requests:

Agilent expects our suppliers to work quickly and effectively with Agilent to resolve reported quality problems.

SUPPLIER EXPECTATIONS:

Component failures are the major cause of warranty problems. Therefore, if component failures can be reduced and eventually eliminated, profit margins will be increased. The basic strategy for accomplishing these improvements is setting mutually agreed upon aggressive expectations, providing feedback on the results, and correlating tests between Agilent and our suppliers. Not only will manufacturing costs be lowered, but also field repairs and overall warranty problems should be greatly reduced.

Agilent will work with our suppliers to provide them with accurate specifications. If defects exist because specifications are incorrect, they will be changed.

If you, as one of Agilent's suppliers, demonstrate sustained improvement relative to your competitors, you will be awarded larger shares of Agilent's business.

MEASUREMENT:

- ❑ TQRDC-E Supplier Performance Survey
- ❑ Parts per million defects (DDT as measured in our production failure tracking systems)
- ❑ Process Quality Index (CPK)
- ❑ Quality Systems Audit Scores or ISO 9000 certification
- ❑ Process Control Audit Scores
- ❑ Alerts

RESPONSIVENESS

OBJECTIVE:

Agilent 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.

High Level Management Commitment to Agilent:

As one of our suppliers, your management must understand Agilent's TQRDC-E expectations and develop strategic and tactical plans to address those expectations. Your management should achieve quick desired solutions to resolve Agilent problems and ensure responsiveness throughout your organization. Changes initiated by Agilent or your organization should be closely communicated and effected in order to achieve on-time delivery.

Responsive to Changing Needs - As indicated, we are in a very dynamically changing environment. Agilent's suppliers must recognize the need to respond quickly and positively to changes.

Initiate Communication on Potential Problems - It is important that suppliers notify Agilent of potential problems as they are discovered, rather than at some later point. Often times, if notified soon enough, contingency or work around plans can be developed, thereby minimizing the impact on both companies.

Timely Response and Resolution to Inquiries - It is essential that a supplier's management understands Agilent 's supplier expectations and develops plans to respond accordingly. Further, they need to see that this high level of responsiveness is instilled throughout their organization.

Support of Sole Sourced Parts - Agilent's expectations of a supplier do not change for sole-sourced parts; Agilent's reliance on the supplier to meet them does change significantly. Of particular concern are getting adequate notice of process changes and/or product discontinuances, assurance of supply, particularly in terms of long term product support, and a fair pricing strategy. Suppliers of sole-sourced parts have the added responsibility of insuring that these concerns are not realized.

Effective Worldwide Factory and Field Support for All Agilent Entities:

As our supplier you should understand the requirements in doing international business with Agilent, so as to meet Agilent 's expectation for equality and consistency of service and support worldwide. Agilent expects to utilize the same processes, systems and procedures when dealing with different entities or subsidiaries of a supplier, regardless of location.

Long Term Product Support:

As one of our suppliers you should be committed to support parts through discontinuance of Agilent products and their support life, usually for a period of five to ten years after our last production run. This should include engineering support, quality, parts, reasonable lead times, on-time deliveries, and value verified pricing.

Flexibility to Changes:

In order for Agilent to be responsive to its customers, we require that our suppliers be responsive to our changing needs. We believe the key for success in this area is to effectively communicate our needs in a timely manner to our suppliers. Agilent forecasts are to be utilized for planning purposes. The intention is for your manufacturing systems to be driven by Agilent's material requirements data (forecasts) with the use of purchase orders as a confirmation to ship product to Agilent. Agilent commits to support our suppliers by minimizing operational problems that may arise because of changes in requirements.

EDI Fully Implemented and Integrated:

Electronic Data Interchange (EDI), commonly described as the computer-to-computer exchange of business information in a standard format, has become an electronics industry business fundamental and requirement. At Agilent Technologies, our goal is to utilize suppliers worldwide who provide goods and services by fully integrating EDI into their business processes. EDI, when fully integrated, can reduce the manual handling of data, thereby improving productivity and business controls, reduce costs, shorten transaction-processing cycles and enhance data accuracy.

Agilent 's implementation of the EDI standards is fully compliant with electronics industry guidelines. Agilent expects its suppliers to be fully compliant. Suppliers may use either ANSI ASC X12 or UN/EDIFACT, the dominant EDI standards worldwide.

Specifically, Agilent expects its suppliers to be able to send or receive the following minimum set of EDI documents:

Purchase Orders - Suppliers must be able to receive purchase orders (ANSI ASC X12 850 or UN/EDIFACT ORDERS).

Purchase Order Acknowledgments - Suppliers must be able to send purchase order acknowledgments (ANSI ASC X12 855 or UN/EDIFACT ORDRSP).

Invoices - Suppliers must be able to send invoices (ANSI ASC X12 810 or UN/EDIFACT INVOIC).

In addition, some Agilent entities may utilize additional EDI documents by mutual agreement between those Agilent entities and their suppliers.

SUPPLIER EXPECTATIONS:

Forecasts will be accurate, and minimum and maximum levels of order activity will be mutually agreed upon.

MEASUREMENT:

- ❑ TQRDC-E Supplier Performance Survey
- ❑ Consistent Worldwide Service
- ❑ Process Change Notifications
- ❑ Product Discontinuance Notifications
- ❑ Business Audit (Business Plan, Order Processing/Production Control, Capacity)

DELIVERY

OBJECTIVE:

Agilent 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.

On-Time Delivery:

As our supplier you must be capable of achieving 100% on-time delivery. This may include daily shipments. You have the right to expect forecasts from Agilent that fall within the delivery assurance agreement terms. You also can expect assistance from Agilent with freight clusters where appropriate. In all cases, purchase order dates will be receipt dates.

Lead Time:

Agilent expects lead times to be short, actively managed and stable over an agreed upon period of time. Based on Agilent 's ability to deliver timely, relatively stable forecasts to our suppliers, it is expected that suppliers will utilize this information to further support lead time reductions. Suppliers should reduce lead time based on a real reduction in manufacturing time or order processing time, such as reducing set-up times, smaller quantity runs, rearranging of manufacturing areas, and other continuous process flow methods. Agilent expects lead times to decrease over time, and relies on lead times to remain stable regardless of business conditions.

Stable Lead Times/Decreasing over Time - In light of the fact that Agilent can supply forecasts, it expects its suppliers to manage their lead times. This is to say that the lead times will not fluctuate as a function of market conditions, but will remain stable and get shorter over time.

Progressively Shorter Manufacturing Cycle Times - When we discuss reducing lead times, many suppliers conclude that in order to do this they must carry finished inventory. While this may be acceptable in the short term, in the long term it becomes expensive, and if there is a quality problem, it may take the full manufacturing cycle time to replace bad parts. Ideally, we would like our suppliers to be continuously examining their manufacturing processes and finding ways to reduce them. This is a solution that is far less expensive than "extra finished inventory" and provides faster response time if there are problems.

Progressively Shorter Order Processing Times - Basically the same idea as with manufacturing cycle times. The point that we want to make is that reviews should not be limited to just the manufacturing time, but look at the order processing time as well. There could be as many as two or three weeks lost before the order reaches the manufacturing area, so this could be a prime target of opportunity.

Assurance of Material in Market Upturns - Agilent has committed to providing visibility of its requirements through the transfer of its forecast and through maintaining a close working relationship with its suppliers. In exchange, it expects to be assured of getting sufficient material to meet its requirements during market upturns.

Packaging:

As our supplier you must be able to package parts to meet our requirements. This includes well-labeled boxes and exact part counts. This may also include process compatible packaging and kitting requirements, if appropriate. Bar Agilent may require coded receiving labels.

Dock-to-WIP:

As our supplier you should be capable of supplying parts directly from your plant to Agilent 's work-in-process. This means parts are properly packaged for the assembly line and need not pass through incoming audit.

Backup Shipment Strategy:

As our supplier you should have a mutually agreed upon backup shipment plan in place that can be exercised in the event of unforeseen problems threatening delivery interruption. This plan should be documented with Agilent. Rolling finished goods inventory at your facility should be minimized as much as feasible and at the quantity agreed to by Agilent.

SUPPLIER EXPECTATIONS:

Agilent realizes that the objective of 100% on-time all the time will not happen overnight; therefore, Agilent and its suppliers will be establishing a graduated set of goals to improve delivery performance until the ultimate goal is met.

Agilent's commitment in the area of shorter lead-time is to allow agreed upon lead-time prior to requested delivery of material, in addition to providing our suppliers with forecasts. Forecasts are being shared to provide you with visibility of real demand and give the buyer assurance of supply, to promote advanced capacity planning and material procurement, to reduce manufacturing cycle times and inventory levels, and to stabilize order lead times.

MEASUREMENT:

- ❑ TQRDC-E Supplier Performance Survey
- ❑ Supplier On-Time delivery performance
- ❑ Supplier Lead Times
- ❑ Evaluation of performance to other delivery expectations
- ❑ Supplier On-Time shipment performance

COST

OBJECTIVE:

Agilent expects to minimize costs and obtain the lowest average price worldwide.

Worldwide Price Leadership:

To remain competitive worldwide, Agilent must have low-cost, high-quality products. We recognize that different regions of the world may have different competitive prices. Therefore, our objective is to obtain the lowest average worldwide price, not necessarily a single worldwide price.

Cost Reductions:

Since material is the major component of Agilent's manufacturing cost, Agilent must be able to see high value for all dollars expended on parts. Therefore, as our supplier you must be willing to enter into cost analysis discussions with us. These discussions have the purpose of establishing the most mutually beneficial price for you and Agilent. In addition, cost reduction programs must be implemented, and increases must be justified, mutually agreed upon and substantiated in writing. As a general rule, increases are not acceptable without sufficient justification. You should be willing to enter into letters of intent or contracts if deemed appropriate by Agilent.

Another important consideration for low costs is value engineering, commonly referred to as Designing For Manufacturability (DFM). Suppliers will be expected to perform strategic analysis of new design and submit recommendations for designs that will simplify Agilent product design and support standardization efforts.

Continuous Price Reductions through Process Improvements - We do not expect our suppliers to provide these prices by selling products below their cost, but by having active cost reduction programs in place which allow them to be the lowest cost supplier, while balancing all five elements of TQRDC-E**.**

Two-Way Feedback on Opportunities for Improvement - We expect our strategic suppliers to provide us with ideas for cost reduction opportunities, and likewise, we look for suppliers who are willing to consider our ideas.

Leadership toward Standard Parts and Processes - Agilent's intention is to purchase industry standard materials at the lowest reasonable price from qualified suppliers. Agilent relies upon your expertise in creating and developing the specifications to support the highest possible level of quality and the avoidance of unnecessary features at the lowest possible costs.

SUPPLIER EXPECTATIONS:

Agilent enters price negotiations with the intention of reaching a fair agreement, which benefits both you and Agilent.

MEASUREMENT:

- ❑ TQRDC-E Supplier Performance Survey
- ❑ Full supplier participation in cost analysis of targeted parts
- ❑ Unsolicited cost reductions submitted to Agilent
- ❑ Quotes with best worldwide price or best price in each region of the world

ENVIRONMENT

OBJECTIVE:

Agilent recognizes its obligation to be a good citizen in each nation and community in which it operates. Our goal is to provide products and services that are environmentally sound throughout their life cycle and to conduct our operations worldwide in an environmentally responsible manner. Our suppliers are an integral part of this effort; therefore, Agilent suppliers are fully expected to support and cooperate with our efforts.

Environmental Improvement Policy:

Agilent suppliers should have a policy, endorsed and promoted by their top management, which commits their company to environmental improvement. The actual content of this policy is the responsibility of the supplier. Agilent's main requirement is for each supplier to have an environmental improvement policy, which states that the company will work towards improving the environment in the supplier's specific location and country. Suppliers are expected to comply with all applicable local environmental rules and regulations.

Environmental Improvement Implementation Plan with Metrics:

Agilent suppliers should have an implementation plan with metrics, which is tied to their environmental improvement policy. Agilent suppliers should strive to improve the environment by instituting programs with progressive and measurable improvements. Progress on these metrics should be reported within their company and reviewed with Agilent periodically. Which environmental improvement factors the supplier chooses to measure (e.g. reduced air or water emissions, eliminated use of toxic materials, packaging, recycling, etc.) and the vigorousness of these goals and objectives are the responsibility of the supplier.

Environmental Regulations Compliance Management:

Agilent suppliers are required to comply with local environmental laws and regulations. Agilent suppliers should have a management representative assigned responsibility for facilitating compliance with local environmental regulations.

Environmental Laws and Regulations Tracking, Communication and Training:

Agilent suppliers are required to comply with environmental laws and regulations. Agilent suppliers should have a system to track the developments of environmental laws and regulations that apply to the operations of their facility. In addition, Agilent suppliers should have a system to communicate and to train the appropriate personnel to stay in compliance.

Environmental Compliance Self Audits:

Agilent suppliers are required to comply with environmental laws and regulations. Agilent suppliers should conduct periodic environmental compliance self-audits of their facilities operations. Environmental compliance audits should be a routine supplier activity.

Elimination of Ozone Depleting Substances:

Agilent fully supports the Montreal Protocol, the U.S. Clean Air Act and international efforts to protect the earth's ozone layer through conservation and an orderly phase out of ozone depleting substances. Agilent has eliminated ODS use in its worldwide manufacturing processes. Agilent suppliers should support this goal by eliminating their ODS use in the manufacturing of parts and materials used in Agilent products.

Environmental Laws, Regulations and Specifications Compliance:

Agilent suppliers must comply with applicable environmental laws, regulations and Agilent General Specification for Environment, Drawing No. A-5951-1745-1.

SUPPLIER EXPECTATIONS:

Agilent does not intend to dictate specifically how suppliers should comply or meet environmental requirements. However, along with Agilent 's other supplier metrics (TQRDC-E), Agilent will consider favoring environmentally progressive suppliers when new business is awarded.

MEASUREMENT:

- CIQC Standard 0014: Supplier Environmental Performance Review Questionnaire. For details,
- please refer to TQRDC-E Supplier Performance Survey
- Compliance to Agilent General Specification for Environment, Agilent Drawing A-5951-1745-1

FINANCIAL STABILITY

OBJECTIVE:

Agilent expects to develop long-term business relationships with 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. You should be willing to furnish the appropriate financial data such as 10K reports, annual reports, financial statements, etc. Agilent will keep this information confidential and use it only for the purpose of evaluation.

MEASUREMENTS:

- D&B Credit Ratings
- Financial Questionnaires
- Output from Financial Stability Models

NOTES