

Plan of e-Business

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PREFACE

The proceeding plan is a fundamental overview of an e-business model, envisioned by its founder, believed to have enormous earning potential in an untapped market within an industry on the brink of compulsory change. The business plan has been in the developmental stage for a very few months; the concept has been evolving for several years. The founder of QSNetwork believes now is the time to pursue both a strategic manufacturing partner and independent investment capital.

QSNetwork has recently aligned itself with a leading application developer and systems integrator possessing in-depth knowledge of the B2B industry. Building the consummate relationship between QSNetwork, its e-business systems developer, one or more contract manufacturing partners, and independent investment firm(s), is the next principal activity for the founder, and it must be executed concurrently with the continued development of the business plan.

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Note to Contract Manufacturers (CM)

The contract manufacturer is the key element to the success of the following e-Business model. The CM that partners with QSNetwork will create a true competitive advantage over other CMs by providing its customers real-time visibility to product and process yields, approved supplier performance, product labor standards, test, defect, debug, and failure analysis, process documentation, corrective actions, and engineering changes.

In fact, the CM's customer will have better visibility to all aspects of the manufacturing process than the company had previous to outsourcing. The CM will also be able to offer cost savings to the OEM by reducing internal costs created by rework, scrap, returned material, and salaries paid to Data Analyst and Documentation Clerks. Other cost savings will be realized by utilizing the on-line manufacturing process technology which will increase throughput, repeatability, and overall quality output, while decreasing labor standards.

A CM's customer will be able to access QSNetwork's Quality Information System and enter quality data directly from their location, whether at their receiving dock or in-process inspection workstation. Discrepant material or RMA information will be instantly fed back to the CM, allowing the CM to take immediate corrective action. As a bonus, the system not only complies with, but exceeds the ISO9000:2000 requirements for Section 8 - Measurement, Analysis, and Improvement.

Having a real advantage over competing contract manufacturers is essential in today's outsourcing environment. Now that a large percentage of manufacturing has already been outsourced, further cutting costs is the OEM's primary objective. Partnering with QSNetwork will not only give a CM the competitive advantage needed to succeed, but additional revenue will be made possible in the event QSNetwork is successful in marketing its revolutionary B2B application.

1. Executive Summary

1.1 Introduction

QSNetwork will be the first Application Service Provider (ASP) to offer a web-centric quality information system to contract manufacturing companies worldwide. Unlike the multitude of ERP systems available today, QSNetwork's services will allow companies to capture and manage quality control data for products at every stage of the manufacturing process, including supplier management and customer satisfaction measurement.

Using the recent popularity and power of the Internet as the medium for deployment, QSNetwork will reach companies which previously were not targeted as potential users of costly manufacturing software systems. At little or no initial investment, companies will have access to data collection and reporting software designed to drastically improve incoming and outgoing quality, while concurrently reducing overhead structure and operating costs.

1.2 The Concept

The contract manufacturing (CM) industry, which reached \$100 billion in 2000, is expected to grow to \$178 billion by year-end 2001 (Technology Forecasters, Inc.). Companies outsourcing are imposing greater pressure on their suppliers to improve quality output and simultaneously reduce costs. Collecting and managing quality data has always been a mandatory but time consuming and burdensome task for manufacturing companies.

Incompatible software platforms and inconsistent data collection and reporting methods have made it difficult, if not impossible, for original equipment manufacturers (OEMs) to get accurate information regarding a CM's incoming quality, internal process yields, labor standards, rework costs, scrap rates, returned material costs, and other costs associated with poor quality.

QSNetwork will standardize and globalize the way OEMs and their CMs capture, organize, analyze, and disseminate their quality control data. Information will be captured and reported real-time, accurately and cost effectively, by and between satellite facilities or with suppliers and/or customers without having to invest in new or expensive software.

1.3 Proof of Concept

The founder of QSNetwork was part owner of a recently dissolved manufacturing company (CSI, Inc.) which developed and deployed an alpha version of a real-time data collection and reporting system via the Internet. The technology was presented to OEMs in the US, Mexico, and Canada with overwhelming response by top-level management at companies such as Hitachi, Invensys, ASTEC,

Nortel, Square D, Ericsson, Bell & Howell, Celestica, Cooper Tools, Alcatel, Newbridge Technologies, Pliant Systems, and others.

Because of the tremendous reaction to the application by the various leaders within these well-known organizations, the founder of QSNetwork is convinced that a state-of-the-art data collection and reporting system, via the Internet, will be widely accepted by companies, large and small, across all industries domestically and internationally.

The alpha application previously developed, although rudimentary in nature, was actually deployed and proven cost effective and was a key element in successfully passing the supplier qualification process used by the following CSI, Inc. customers:

- Hitachi Telecom – Atlanta, GA
- Cooper Tools – Columbia, SC
- Ericsson – Lynchburg, VA
- Square D – Nashville, TN
- ASTEC – Monterey, Mexico
- Bell & Howell – RTP, NC
- Nortel Networks, RTP, NC

1.4 The Company

QSNetwork, working collaboratively with its integral partners, will establish and maintain a complex infrastructure of networks that will facilitate the movement of electronic quality information systems to the Internet. Delivered via the ASP model, QSNetwork's software application will provide real-time data collection, quality control reporting, supplier management, and cost-of-quality modules aimed at improving overall quality and operating efficiencies, while reducing overhead costs. As a by-product, companies seeking to attain or maintain certification to the new ISO9000:2000 standards will easily comply, if not exceed, the requirements for data analysis, customer satisfaction measurement, and process approach to manufacturing.

Initially the company will place emphasis on supplier management data collection and reporting tools, but once launched, the application will encompass a broader array of data collection apps:

- In-Process Inspection
- Final Inspection and Test
- Customer Satisfaction Measurement
- Labor Standards
- Cost of Quality
- On-line Work Instructions

When fully developed, QSNetwork will allow a company to put its entire quality system on-line. A company's corporate headquarters will be able to monitor the performance of remote facilities located anywhere in the world. An OEM will be able to see precisely what products are being manufactured at its CM's facility, the internal process yields associated with those products, and the corrective action taken to prevent the costly recurrence of rework and scrap regarding their precious commodity.

In addition to leasing quality management software, the company will offer quality-consulting services aimed at improving a company's manufacturing operations using the data collected by QSNetwork's quality information system. This will allow companies to not only capture critical data, but also use the results to maximize manufacturing efficiencies and increase profitability.

1.5 The Market

1.5.1 Trend and Drivers

The contract manufacturing industry is growing at an extraordinary rate due to the continuing push for outsourcing by large OEMs and high tech start-ups. The companies responsible for the increase in outsourcing are making unprecedented demands on CMs to reduce costs, and concurrently, improve quality.

Most small to medium sized CMs are currently implementing some type of quality data collection and reporting system, although the vast majority are manual and paper-based systems. No real-time access to information is available to most organizations. The value added knowledge gained from accurate and instant information is critical to the decision-making process when evaluating suppliers, processes, personnel, and company goals and objectives.

QSNetwork will cost effectively satisfy a company's need for an electronic quality management system, thus allowing manufacturers to analyze their overall organizational performance in major areas and evaluate their progress relative to their plans, goals, and worldwide company objectives.

With over 500,000 companies projected to be ISO9000 certified by 2001, the need to run manufacturing operations more efficiently is not the only factor driving change. The new standard will require companies to place greater emphasis on data collection and analysis. With paper-based methods data is not always accurate, reliable, or readily accessible. There is a trend to more real-time, electronic methods of collaborating quality data, although a web-based solution is not yet available, especially via the ASP model.

1.5.2 Target Market

QSNetwork will market its supplier management data collection and reporting module first and will target contract manufacturing companies as its initial users of the system. The contract manufacturing industry is projected to be a \$178 billion industry by year-end 2001. This accounts for only 25% of the total electronics industry worldwide. Because CMs typically have multiple OEM customers, penetrating the CM market will propagate QSNetwork's product/service to original equipment manufacturers around the globe.

QSNetwork's primary strategy will be to gain market access through strong alliances formed with well-known and established contract manufacturers. The CMs will initially be looked to as strategic partners and possible beta sites. As the software application begins to reach the early stages of maturity, CMs, as well as OEMs, will be sought out as users of the application. A list of potential customers will be generated. Companies on the initial list will be divided into two groups, those with whom QSNetwork already has established business relationships, and those who are discernible companies but with no pre-existing relationships. All companies will have to meet the following criteria:

- Comply, to some degree, with the ISO9000 Standards
- Customer base consisting of at least 10 OEMs or –
Supplier base consisting of at least one CM
- Conducting some form of quality data collection and reporting
- Currently implementing, or has short term plans to implement, e-business strategies into their operations
- Suitably located for DSL, ISDN, or other high-speed Internet connection (no dial-up connections)

1.5.3 Size of Market

The rise of the ASP is considered one of the most important trends in business. According to the research firm Dataquest, the ASP market is expected to boom to \$23 billion by 2003, a market estimated at only \$300 million today. Forrester Research estimates that ASP spending will reach 6.4 billion by year-end 2001.

It is estimated that 500,000 companies will be registered with ISO9000 by year-end 2001. There will be many more companies that comply with the requirements of ISO9000, but are not registered or certified. The contract manufacturing industry has adopted the ISO standards as the paradigm for quality management systems.

Quality assurance software is now a common tool used in manufacturing facilities, but until now, software packages are primarily aimed at

documentation control, calibration management, and SPC (process control charts). The application developed by QSNetwork will provide the \$178 billion electronic CM industry with a quality information system (QIS) tool that will far exceed any tool available today. The \$500 billion electronic OEM industry will be the beneficiary.

1.5.4 Marketing Strategy

QSNetwork will position itself as a pure-breed application service provider, deploying a software application built for the Net, not one adapted to the Net. It will set itself apart from the Independent Software Vendors (ISVs) moving their complex and elaborate packaged software applications to the web. Its system will be the practical system of choice for users requiring a global view of an organization's quality information.

It will market itself as a software vendor much different than the norm; it will be known as a supplier that offers the benefits of useful software at an affordable price with a painless implementation process – a simple basic application that will change the life of everyone that uses it.

QSNetwork will penetrate its target market using existing alliances WCMG, Inc. and CISYS, Inc. In addition, several companies have been targeted as manufacturing partners, and initial presentations have been favorably received by GE-Harris in Melbourne, FL, Pliant Systems in RTP, NC, and ABB in Wilson, NC. Another possible manufacturing partner is Hi-Tech Fabrication, a multi-million dollar sheet metal fabricator and electronic systems integrator, which previously held a seat on the board of directors of CSI (see Section 1.3). All of these companies have shown interest and have indicated they may provide partial funding for Phase I software development. An arrangement with any of these manufacturers will give QSNetwork additional intellectual resources, a beta site for the initial application, and a possible channel for distribution. In exchange, the partner would receive an equity position and a board seat.

In addition, QSNetwork will create alliances with ISPs and ASP Enablers. Internet Service Providers will provide a quick and effective means to penetrate the B2B market by targeting the ISP's existing customer base. QSNetwork will benefit from using ISPs to market its services by taking advantage of pre-existing relationships already established between the ISP and its customers. The larger ISPs have literally thousands of well-established customers which are already doing business on the web. By offering those customers a state-of-the-art QIS package through familiar channels, the probability of acceptance will be high.

Other channels of distribution will be through more conventional means such as trade shows, direct sales, and Internet and trade publications. The Internet itself is a powerful advertising and marketing tool. That, in

conjunction with trade magazine advertising will expose QSNetwork's ASP offerings to an even broader range of potential subscribers. Internet sites and trade publications aimed at contract manufacturers, and electronic manufacturers in general will be particular points of interest.

1.6 The Management Team

James R. Phillips – Director of Business Development

Most recently Mr. Phillips served as the Director of Operations for Contract Systems Integration, Inc. (CSI, a contract manufacturer of electronic systems servicing the telecommunications industry) since its conception in October of 1997. Mr. Phillips was responsible for heading up all the engineering functions of the business, including Manufacturing, Quality Assurance, and Information Technology.

Prior to his most recent position, Mr. Phillips served as Quality and Engineering Manager for the Sanmina Corporation, the seventh largest contract manufacturer in the world. There, he was part of a four-man team commissioned to take the Research Triangle Park division from start-up to \$100 million in annual sales within the first 36 months of operation. While at Sanmina, he was responsible for all quality and engineering functions including ISO 9002 registration, supplier development and management, and the development and deployment of plant level operational procedures.

Because Mr. Phillips has played a key role in the start-up of four business units in the past ten years (Chatham Technologies, Nomaco CIP, Sanmina RTP, and CSI), he possesses the intellect and entrepreneurial spirit required to build a world-class organization from the ground up.

Adrian Arbelaez – Director of Strategic Development

As Founder and President of the World Class Manufacturing Group (www.wcmg.com), Mr. Arbelaez and his firm have been providing consulting services to manufacturing organizations in North America since 1990. The birth of WCMG was at North Carolina State University under the direction of the dean of engineering as well as other faculty professors in the industrial engineering department. For many years, WCMG, formerly known as World Class Manufacturing Research Team (WCMRT) has helped North Carolina industry gain a competitive advantage by implementing world class manufacturing concepts. WCMG has implemented its manufacturing technology and lean manufacturing concepts at more than 100 companies in the US and Mexico. Mr. Arbelaez is well respected by many of the top OEMs and CMs in the country and will be a valued asset in structuring the right strategic alliances with QSNetwork's manufacturing partners.

James C. Saunders – Director of Information Systems

With a proven computer science base, Mr. Saunders brings outstanding software development and project management skills and experiences. As Founder and Chief Executive Officer of CISYS (www.cisys.com), Mr. Saunders possesses the entrepreneurial spirit, technical expertise and business acumen needed in his role as Director of Information Systems. He successfully developed a specialist software development company that focuses on e-commerce, web related application development and consulting. CISYS currently employs 20 full-time programming professionals. Cutting edge web projects include key successful initiatives for Nortel, Ericsson, SciQuest.Com and Paradigm Genetics, Inc. as well as other prominent high-tech industry leaders located in the Research Triangle Park.

1.7 Financial Plan

1.7.1 Pricing Model

QSNetwork will price its offerings using contractual monthly fees. Pricing will vary depending on the number of modules utilized, the level of customization, the number of users, and the length of the contract. The license cost and ongoing maintenance and connectivity costs will be part of the monthly fee. The number of users within an organization will determine the price per seat, and it is estimated that the average monthly price per seat will be \$50 to \$75. This is a significant competitive advantage over other ERP systems leased over the Internet, e.g., SAP - \$14,000 per month for 3 seats (including \$125K implementation costs amortized over 3 years), Relevant Business Systems - \$625 per month per seat (plus implementation costs – approximately \$30K).

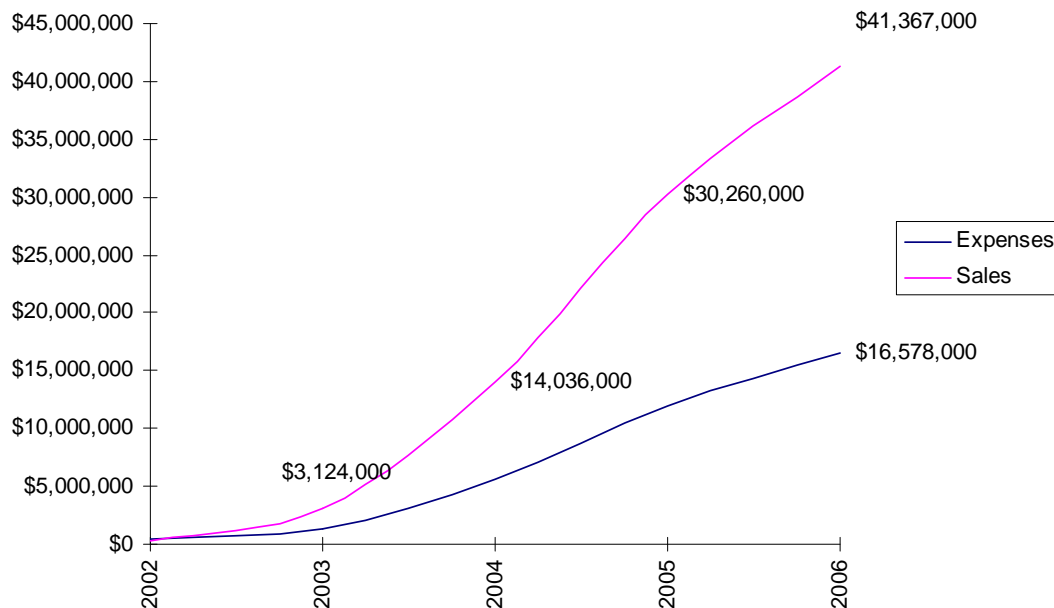
1.7.2 Projected Sales

Projected sales for the first full calendar year are a conservative 20 companies. Revenue generation from those sales will be less than expenses. There will be a large national sales campaign launched in 2002 using proceeds from investment capital. Emphasis during this period will also be on product development and beta testing. The second fiscal year is when the real dynamic growth will take place. QSNetwork will become profitable by 2003. Growth will continue at an exponential rate until 2006 and beyond.

Sales projections are realistic and can be achieved, if not exceeded, based on the following constituents:

- Size of Target Market
- Growth in the ASP Market
- New ISO9000:2000 Requirements
- Power of Product Offering
- Affordable Pricing Structure
- Global Utilization of Product

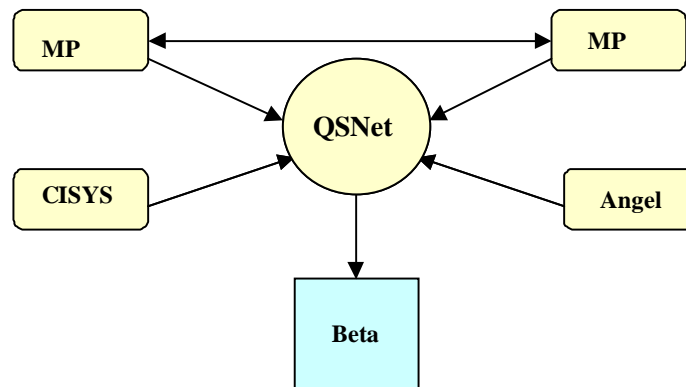
Sales Projections Through 2006



1.7.3 Initial Alliances

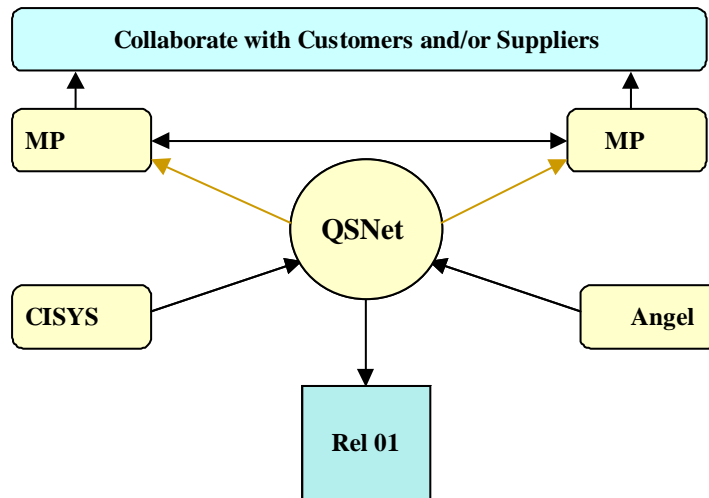
Initial alliance will consist of the founders of QSNetwork, its e-business systems integrator CISYS, a manufacturing consulting firm World Class Manufacturing Group, a well-connected corporate legal firm, and one or more manufacturing partners (MP). QSNetwork will seek financial resources from angel investors who will round out the initial alliance strategy.

Such an alliance will provide the intellect necessary to successfully develop and deploy the QIS enterprise solution proposed by QSNetwork. The initial deliverable will be a beta version of a real-time data collection and reporting module used to track quality performance of suppliers, internal processes, and customer satisfaction measurement. The manufacturing partner's facilities will be the initial beta sites for this enterprise application. This initial arrangement will allow the MPs to have instrumental contribution into the development of a customized system that will blend seamlessly with their current operational processes.



CISYS will be a vital member of the initial alliance, providing application development services, technical consulting, strategic assistance in raising capital, and identification of market segments and additional revenue opportunities. CISYS will also host the beta application during the early stages of development. Once the system is up and running, the hosting will be moved to Utenzi, Inc. (formerly Interlan Technologies), a national ISP/ASP Enabler providing high speed 24/7 Internet connections, redundant backup, and system security and monitoring services. Utenzi will also serve as a sales conduit to additional business opportunities by reaching already established users of their ISP/ASP services.

Six months after product development has begun, the beta application will have been assessed, validated, deployed, reassessed, and revalidated many times. Once the data collection system is fully functional, the product will be released as Version 1.0, and the MPs will then have a product that can be implemented into their ISO9000 and TL9000 systems. The MP's customers and suppliers can then be brought on-line.



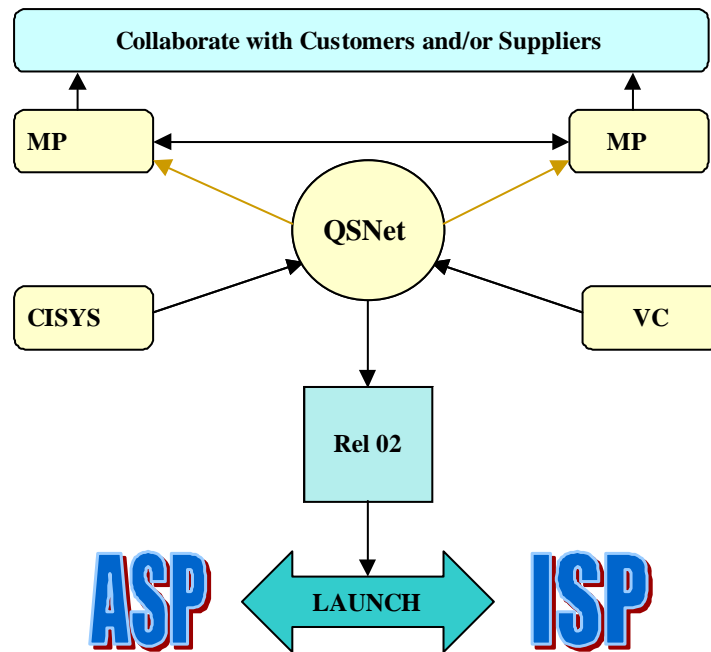
QSNetwork will have already initiated other business activities vital to the successful launch of future releases of the enterprise-wide data collection and reporting module. Business development initiatives including market strategy, e-organization strategy, venture capital opportunities, and prototype development of additional QIS modules will be major focus areas operating concurrently with the development and deployment of the beta and first release versions of the system.

Once the system is used in the real world to track data on suppliers, internal processes, and quality performance at customer locations, additional enhancements will be made to Version 01. Before launching a national marketing campaign additional releases will be developed. QSNetwork will ensure that once it delivers an e-business alternative to the conventional quality information systems available today, it will be a fully functional system, and the system of choice by all CMs and OEMs alike.

After the first release of the enterprise data collection and reporting system has been successfully integrated by the participating manufacturing partners and their key customers / suppliers, QSNetwork will be poised for its first major round of funding. Financial resources may come from one

or more venture capital firms, or may be secured by the formation of additional strategic partnerships, or some combination of both.

Once the necessary investments are secured, QSNetwork will continue the development of its revolutionary ASP offerings. Building such a comprehensive Internet application will require a multitude of highly skilled technology professionals. In addition to technical human resources, the finest talent of marketing, sales, finance, and general management personnel must all be brought together. Venture capital, in one form or another will be used to put the proper infrastructure in place to ensure a successful launch of QSNetwork's totally Internet based quality information system.



As the company begins to emerge as an up and coming high-tech startup, and the product evolves to later and superior versions, the initial manufacturing partners will reap the benefit of getting newer and more comprehensive QIS modules with little to no additional investment. As QSNetwork becomes profitable, the MP's initial investment is reimbursed via its equity position within the company.

When the product is ready to be launched nationally, it will be done so by two methods. The product will be provided as a service, where companies will lease the application over the Internet - the ASP model, or sold as licensed copies to Internet Service Providers – the ISP model.

1.7.4 Funding

QSNetwork will seek investment capital at various stages of start-up. Initially, funds will be needed primarily for software development. Preliminary estimates for development have already been obtained and typically range from \$250K to \$1M. These estimates are founded on the review of the business plan and a rudimentary HTML demo that has been developed to illustrate the core functionality of a supplier data collection and reporting module (www.qsnetwork.com/pass143). Estimates have been verbal and are based on industry standard rates for application development. Because of the alliance already established with QSNetwork's software developer and systems integrator CISYS, software development costs will be a fraction of the industry standard. This is important because it will allow QSNetwork to bring a quality information system to fruition for much less than the estimated costs.

Funding will come from manufacturing corporate partners and angel investors. Initially there will be 250,000 shares made available for issue at a \$5 par value providing QSNetwork with \$1.25 million in seed money. Shares will be sold in blocks of 5000.

In addition to software development costs, funds will be required to attract and retain a sales and marketing professional, one that is well versed and well respected in the manufacturing industry. Once a tangible product is realized, QSNetwork will embark on a national sales campaign and begin focusing efforts on national tradeshows, trade magazines, and Internet advertising. A small operational facility and associated overhead costs will also have to be accounted for in the early stages of start-up activities.

1.7.5 Exit Strategy

Firms investing in QSNetwork will experience large capital gains due to exponential growth over the first five years of operation. As QSNetwork becomes a major player in the pure-breed ASP arena, it will be targeted as a potential acquisition by the leading vendors in the ERP/MRP industry as well as various other large independent software vendors (ISVs) moving into the ASP market.

Investors may also realize a high return on investment in the event QSNetwork goes public. By the year 2003 and beyond, the company becomes profitable. Proper timing of an IPO will generate millions of dollars in exchange for stock certificates held by initial investors.

2. The Product

2.1 Real-Time Data Collection

Instant access to real-time inspection data will give companies the competitive advantage they need to succeed in the 21st century. Collecting and manipulating quality data has always been a monumental task using old, paper based technology. The following scenario is typical of a paper based data collection model:

- 1) Print, copy and distribute blank data collection forms to the appropriate manufacturing work cell / receiving inspection cell.
- 2) Using the blank data collection forms, manually fill in the following information:

Final Inspection/Test

- Serial Number of Product
- Current Date
- Inspector ID
- Operator(s) ID
- Labor Time
- Inspection Results (Pass or Fail)
- Reason for Failure
- Tester's ID
- Test Time
- Final Disposition

Receiving Inspection/Test

- Lot Number
- Current Date
- Inspector ID
- Supplier
- Inspection / Test Results (Pass or Fail)
- Reason for Failure
- Final Disposition

- 3) Turn in data collection sheet to data analyst / Quality Engineer (QA) engineer on a daily, weekly, or monthly basis.

- 4) The data analyst / QA engineer must then:
- Sort data collection sheets by date, product number, serial number, supplier, lot number, etc.
 - Manually enter data into a database or software package which may or may not be compatible with the software used by other plants and/or customers/suppliers.
 - Analyze raw data and create charts/graphs showing quality performance and trends pertaining to yields, top recurring defects, PPM, consecutive accepted lots, etc.
 - Print, copy, and distribute, or e-mail reports to management, customers, and/or suppliers.
 - Notify work cell supervisor if acceptable quality level has been exceeded.
 - Notify receiving inspection supervisor if a supplier's incoming quality shows negative trends, which may warrant corrective action.
 - Complete and mail out supplier report cards showing incoming yields, top defects, and on-time deliveries.
 - Calculate labor standards and associate calculated standards with various operators and manufacturing equipment.
 - Present results to management in useful reports showing actual labor requirements vs. previously estimated labor standards.
 - File and save reports in secured area for later retrieval.

QSNetwork's answer to a cumbersome paper based data collection system is an Internet service that will allow companies to collect and analyze real-time data without having to invest in new or expensive software. The only requirements for the user will be a PC and an Internet connection, both of which are pre-existing components of most manufacturing facilities.

The time consuming tasks previously outlined will be reduced to simply keying a few bits of information into a personalized data collection screen by an authorized inspector. Information such as the date and operator ID will be collected automatically using the user log-on and the web server time clock and calendar. Other information, such as complex serial numbers and product numbers, can be scanned using bar code scanners, minimizing the risk of keying errors and reducing the time required for such entries.

That's IT (Information Technology!). Once the data is collected, QSNetwork instantly makes the information available to all authorized users anywhere in the world via the World Wide Web. Meaningful charts and tables can then be produced on demand, for any product, or for any supplier, for any time period desired. No more data analysts; no more down rev or non-compatible software packages. Companies will no longer have to wait thirty to forty-five days after

the fact to find out there is a quality problem with a supplier or a manufacturing line operator. Labor standards can be tracked instantly and tied to specific operators and equipment with the stroke of a key from any PC in the world, at home or at the office.

In addition, the burden of backing up and securing quality data will be shifted from the company's on-staff IT manager to the IT services of QSNetwork. Redundant backups using various media storage devices can be deployed as frequently as the customer requires.

To summarize, QSNetwork's innovative data collection and reporting technology will revolutionize the way businesses manage information. Data will be captured more efficiently and accurately, and in most cases, without the addition of any new hardware or software. Concurrently, real-time information will be made available globally to customers and suppliers alike, as well as to multiple facilities within a single organization.

2.2 Global System Access (GSA)

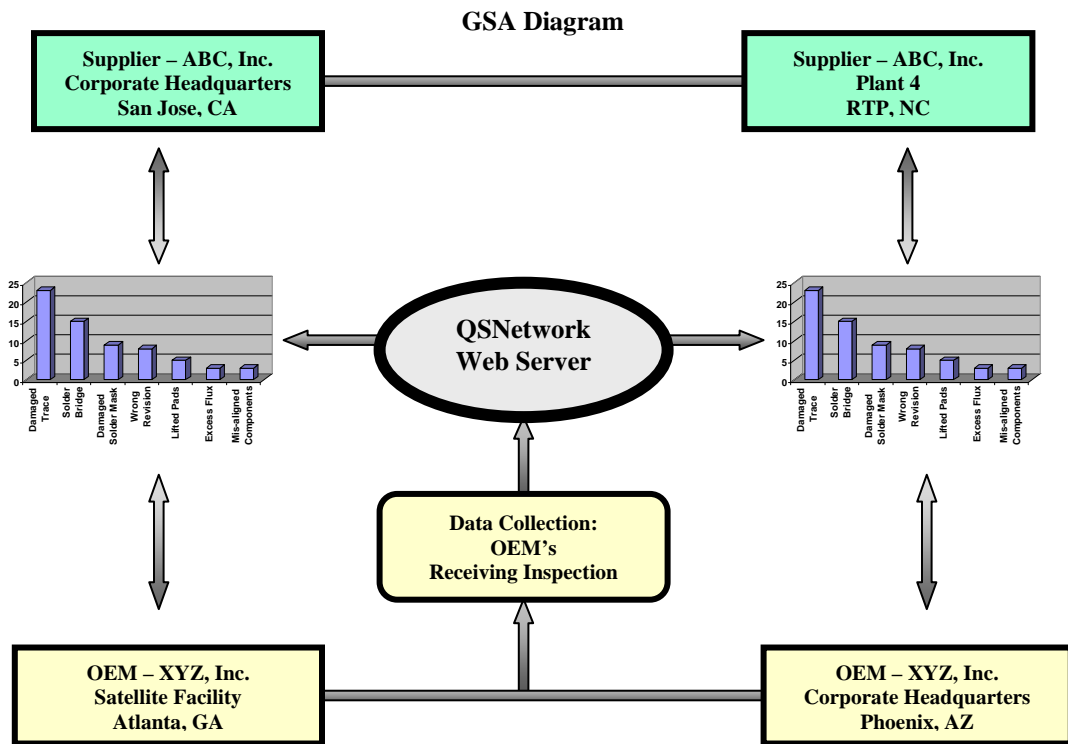
At first glimpse, the thought of allowing your customer to access your company's web server and input data may seem a bit unorthodox. However, after further investigation into the benefits of such a system, most will agree that this new IT tool is, in itself, the classic illustration of Information Technology (IT), sharing information among multiple entities, efficiently, accurately, and cost effectively.

Envision an OEM logging on to a secured web server, operated and paid for by one of its suppliers, and entering receiving inspection or in-process inspection results into a real-time data collection screen. Once entered, information is now available to all authorized users within the OEM's organization, including remote plants located around the world. Information such as yields by product number or product type, pareto charts of top recurring defects, analysis of on-time deliveries, corrective action requests, returned material logs, and much more.

That is precisely what QSNetwork's GSA will offer subscribers. At no cost to the OEM, anyone authorized within the organization will have real-time access to a supplier's incoming quality performance. In addition, and more importantly, anyone authorized within the supplier's organization will have access to the same information, providing instant feedback from its customers on the quality of the product they provide.

This instant feedback from customers will drastically improve a company's reaction time to quality problems, allowing for quick identification and isolation of deficiencies in manufacturing processes, equipment, assembly operations, and/or supplied sub-components. Continuous flow of defective product can be eliminated by real-time access to a customer's receiving inspection or in-process inspection results.

Not only does such a system give global visibility to the quality performance of a supplier and its products, but also it greatly reduces the cost of overhead required to manage an OEM's supply chain. The number of Supplier Quality Engineers needed will be greatly reduced by using an IT tool with the power of GSA. No more compiling and manipulating supplier data is required. A simple key stroke by a purchasing agent or materials manager will provide more information in more meaningful formats than any dedicated, full-time quality engineer can possibly produce.



The beauty of such a system is the cost to the OEM – there is none. The data collection program resides on QSNetwork's web server paid for by the supplier; a cost gladly incurred due to the overwhelming benefits achieved. A commodity supplier utilizing GSA will have a real competitive advantage over other suppliers producing the same commodity. The money saved by reducing scrap and rework alone will justify the cost of implementing GSA. In addition, costly time spent generating meaningful reports for management showing quality performance at the customer's dock will be reduced significantly.

To be discussed later in this plan, Global System Access is a major element to the marketing strategy of QSNetwork. A service that is free to the customer and extremely beneficial to both the customer and supplier is virtually fail-proof. Once the OEM is logging on to the data collection system provided by QSNetwork, an entire host of other innovative services then become available to them...

2.3 Cost of Quality

There are a small percentage of companies that know their actual costs to manufacture a product. Material, overhead, and labor are the most obvious elements when calculating the cost of a product, but one major element – the cost of quality – is omitted by most companies. All reputable companies realize that exceptional quality is necessary to compete, but few realize just how expensive quality control, or the lack of it, can be. Knowing the costs associated with inspection, quality engineering, rework, scrap, returned material, debug, and re-engineering is essential in accurately pricing a company's products to ensure the desired profit margins are achieved.

QSNetwork's Cost of Quality module will track product history starting at final inspection and test. If a product fails inspection, all subsequent actions are tracked using the serial number of the defective part. Re-testing, debugging, rework, or idle time spent in MRB are monitored and recorded real-time. Defective product making it to the customer is recorded once it is returned and is tracked all the way through the RMA process. Using this information, a company can accurately determine the amount of time (money) is being spent due to quality issues and can then allocate these costs to all products to determine price per unit.

The information can also be used for benchmarking among facilities. Cost of quality goals should be set for the corporation, and all plants should be continuously striving to lower the bar.

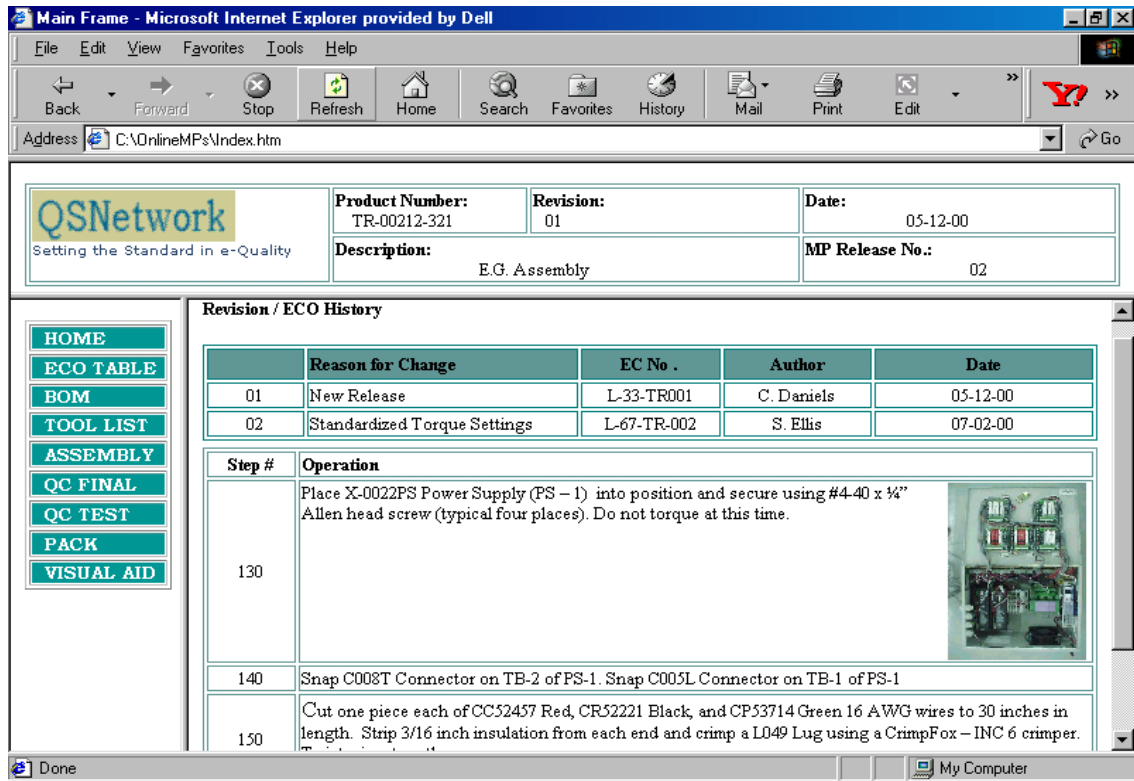
2.4 On-Line Manufacturing Processes

Accurate and efficient methods of deploying work instructions are critical to a manufacturing operation. Quality Control must be built-in to each and every step of the process, from the design-for-manufacturability phase all the way through to pack and ship.

Electrical schematics, routings, or CAD drawings will no longer suffice as work instructions for companies demanding excellence from its production force. More resourceful means are required to achieve and maintain the highest quality levels and most efficient labor standards attainable. Information pertinent to the manufacture and assembly of a company's precious commodity must be delivered accurately, timely, effectively, and consistently.

QSNetwork has the solution to the redlined bill-of-material or uncontrolled CAD document so frequently being used as manufacturing work instructions. On-line documents are completely view-only and centrally located on the company's server or a web server maintained by QSNetwork. Only authorized engineers have access to edit the content. Documents contain digital photographs of the critical components and routings assuring repeatability of the process, regardless of the operator performing the operation.

Hyperlinks are used to navigate through the document making it extremely efficient and user friendly. One document can supply multiple facilities, allowing for complete control of all manufacturing processes. CAD files and ERP data, such as bill-of-materials, can be directly linked to the document, making the ECN process tightly controlled and ISO9000 compliant.



On-Line HTML-Based Work Instruction Benefits

- High costs of printing, copying, distributing, collecting, and redistributing hard copy instructions are eliminated.
- Documentation control is achieved more accurately and efficiently with on-line procedures centrally located on a secured server.
- Tighter control over engineering changes is achieved by eliminating paper-based instructions.
- On-line documents are completely read-only and cannot be modified by the end-users of the documents.
- Quality control is built-in and repeatability of a process is improved with detailed on-line documents containing navigational hyperlinks, digital photos, and CAD drawings.
- Labor standards are improved and rework and scrap are reduced. HTML work instructions can be deployed at multiple facilities but centrally stored and maintained on one secured server.

2.5 Request for Quotations (RFQs)

In the manufacturing industry, especially in the high tech sector, entire departments are now completely devoted to submitting and/or responding to “Request for Quotations”. Getting complete and accurate documentation to all the appropriate suppliers for quoting purposes has become a monumental task in today’s global economy. Ensuring that each bidder is provided with an identical package of information requires an extraordinary amount of time and human resources, numerous checks and balances, as well as an exorbitant amount of copy paper, toner, and postage - not to mention dependency on the US Mail.

QSNetwork’s solution to the old fashioned RFQ is to broadcast RFQs globally using the Internet. By posting an RFQ on a company’s secured web site, identical packages are made available to multiple bidders. The complete set of instructions and supporting documentation for quoting can be viewed, downloaded, and/or printed from any PC anywhere in the world by an authorized user.

An entire RFQ can be posted on the Internet to include downloadable files containing Bills of Material, Assembly Drawings, Approved Vendor Lists, Test Specs, etc. An RFQ can even provide links to web sites of suppliers on the RFQ’s Approved Vendor List, web sites containing pricing and contact information for quoting sub-components and sub-assemblies.

The increased efficiencies of using such a system are substantial. The time it takes to get a new product to market is critical; companies can lose a large share of the market due to valuable time spent costing out a new product. OEMs that are outsourcing products to contract manufacturers need a system that can quickly and efficiently return a turnkey proposal with all bidders using an identical set of documentation, thereby assessing all quotations equally and fairly.

On-line Request for Quotations via the Internet is an e-business application that will be used by virtually all companies across all industries within the next few years. There will be companies founded based solely on this technology alone. QSNetwork will set the standard for such a service and provide it as merely one small facet of a multi-faceted ASP offering.

2.6 Engineering Change Notices (ECNs)

Complete control over a product and the processes which define it is a basic requirement of the ISO9000 standard. Once a process to a product has been clearly defined, any changes to it must be scrutinized by various departments within an organization, and sometimes from departments outside the organization. Companies struggle to implement changes to products accurately and efficiently due to the enormous amount of supporting documentation associated with engineering changes. The cumbersome task of circulating the documentation package to the various departments for sign-off requires a tremendous amount of time and resources, especially when departments are located in satellite facilities located in various parts of the world. Not only is the accuracy of the changes compromised with a conventional paper based ECN system, but also the time-to-market for the revised product is delayed.

QSNetwork will provide a means for companies to implement and track ECNs via the Internet. A company will be able to post an ECN on their secured web site including all supporting documentation such as revised assembly drawings, wiring diagrams, Bill of Materials, etc. Authorized personnel can electronically sign-off various tasks associated with the ECN as they are completed. The ECN implementation can be tracked globally by the initiating department or by the corporate headquarters if desired. If suppliers are affected by the ECN, they too can access the change notice by logging on to the OEM's secured web site and inputting and/or extracting information as required.

Record retention is another requirement of the ISO9000 standard. Using an electronic ECN system via the Internet provides a simple solution to the burdensome task of maintaining accurate records of ECNs. By simply clicking on an ECN number from the on-line engineering change log, all information regarding the implementation history for any given ECN is instantly made available to the authorized inquirer. This and other on-line services provided by QSNetwork will make complying with the elements of the ISO9000 standard virtually automatic.

2.7 Corrective and Preventive Action

Internal corrective actions (CARs) as well as supplier corrective actions (SCARs) are an intricate part of any manufacturing operation's quality system. The ISO9000 standard requires companies to implement corrective and preventive action programs to eliminate the causes of actual or potential nonconformances to a product. Minimizing lag time between the discovery of a nonconformance and the identification of its root cause is critical to the quality of a product or process. Conventional corrective action systems require an inordinate amount of resources to execute, and the process is often lost in the ominous paper shuffle associated with implementing an ISO9000 quality system.

By putting corrective and preventive action systems on-line, a company reaps the benefits of shorter cycle time from discovery to resolution for product and process nonconformances. In addition, visibility to process deficiencies and remedial responses is made available globally, to remote facilities within an organization, or shared between a company's suppliers and/or customers. Record retention is made easy with an on-line system via the Internet by virtue of storing all SCARs, CARs, and their associated logs in one central location on the company's secured web server.

2.8 The Total QC Solution

The founder of QSNetwork firmly believes that putting a company's entire quality system on-line via the Internet is not only a creditable alternative to today's conventional paper based methods, but such a system is completely inevitable; the only question is – who will do it first, and who will be the most successful at it.

Consider Microsoft's mission statement for e-business: "Making the Internet indispensable and relevant to every person and every business, every day."

Judging by the following extract from a recent survey, it is apparent that numerous other companies around the globe share this same vision of the future:

Aligning IT and corporate goals are the chief technology concern for North American, Western European, and Asia-Pacific companies. In Western Europe, for example, respondents to the survey said their top IT concern is electronically connecting to customers, suppliers, and/or partners.

Cutting IT costs ranked first in two segments of the population surveyed: chemical/oil/energy and mining/metals. Among consumer goods companies, "organizing and utilizing data" ranked first. For manufacturing companies, it was "connecting to customers, suppliers, and/or partners electronically."

Looking ahead, the executives surveyed were asked to name the most critical technologies for adoption in the next five years. Eighty-one percent of North American IT executives chose the Internet and the Web.

There is some irony in the choice of the Internet as the most critical technology. Eighty-six percent of the North American respondents reported that their companies have a Web site. But 65 percent of them do not believe that their company has an effective strategy for using the Web to reach their business objectives. The fact is, only 12 percent of North American companies with a Web site have achieved any kind of optimal utilization.

QSNetwork has an answer to those companies seeking to utilize the Internet to meet real business objectives. Its services will allow companies with multiple facilities to perform Internal ISO audits from remote locations using the Internet as a means to examine quality records and daily quality activities, reducing travel expenses and costly time requirements. Labor standards can be shared among multiple plants. Quality meetings can be held globally with every attendee viewing the same real-time data from various locations around the world.

The founder of QSNetwork not only believes that the Organization for Standardization (ISO) will endorse such an on-line quality system, but one day in the not too distant future, they will require IT.

3. The Management Team

3.1 Management Philosophy

Out of the multitude of companies that will be founded in the next several years, a few world-class companies will emerge. Those companies that will achieve this distinction will depend in small part on the market niche that was selected for launching the company and in large part on the management team.

To take a business rapidly beyond a few million dollars in sales, an outstanding team is required. Identification and attraction of the exceptional individuals that such growth demands is a major challenge for any start-up. Excellence in engineering, marketing, sales, finance, and general management must all be brought together. A single weak link can be debilitating or fatal.

QSNetwork's founder believes that great companies develop a unique image in the eyes of their customers, suppliers, competitors, and their employees. That is, successful companies believe they are unique in their products, quality, internal culture, people and personality. In most cases, a distinct personality develops gradually over the first few years of a company's life.

QSNetwork's management team will identify its distinctiveness early on, reinforce it and convey its progressive and professional image effectively, to its investors, employees, its customers, and to the financial community. The management team will be truly committed to excellence, and they will quickly emerge as major players in the powerful B2B arena.

QSNetwork will create a workplace environment to be envied by its competitors. It will take recruiting very seriously and screen prospective employees thoroughly to ensure all members share similar philosophies as that of the management team. QSNetwork will seek friendly, professional, goal oriented individuals with a desire to make real contributions to the growth and success of QSNetwork. QSNetwork will be committed to the success and promotion of its employees.

3.2 The Vision

The managing directors of QSNetwork have a combined thirty-five years of experience in electronic manufacturing and in the development and deployment of Information Systems that support core manufacturing operations. Mr. Phillips has spent the last ten years with major players within the contract manufacturing (CM) industry. Because the CM industry caters to the large OEMs of the world, Mr. Phillips has been exposed to the various infrastructures of a multitude of manufacturing operations internationally.

Over the years, all three managing directors have identified major deficiencies within most organizations regarding their quality data collection and reporting systems, as well as various engineering, manufacturing, and procurement functions. With these discoveries and the recent introduction of the power of the Internet, QSNetwork's founding board members have developed an e-business model that will completely change the way businesses implement their operational procedures.

Mr. Phillips, while at Contract Systems Integration, Inc., deployed a scaled down version of a real-time data collection and reporting system via the Internet. The technology has been presented to OEMs around the world with overwhelming response by top level management at companies such as Hitachi, Siemens, Alcatel, Hughes, and many others.

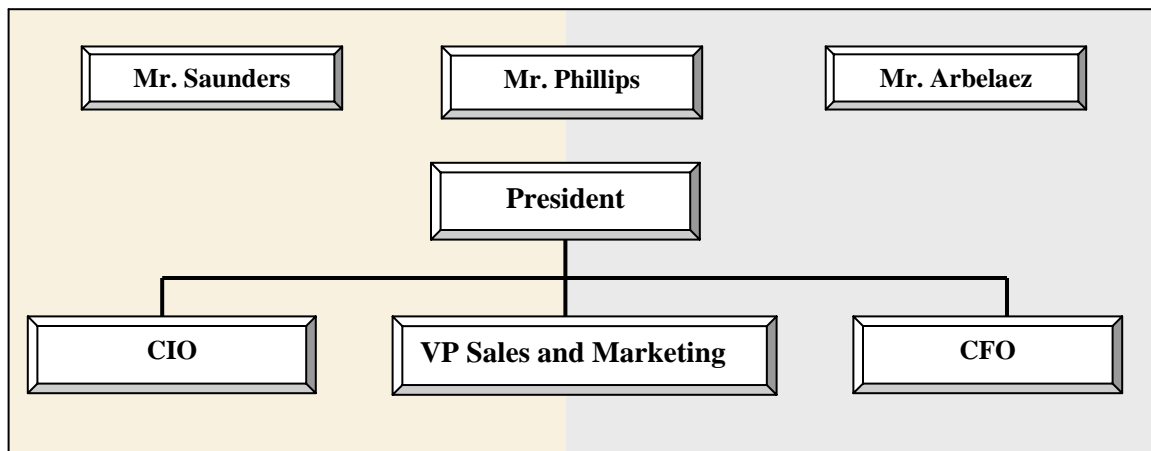
Because of the tremendous reaction to Mr. Phillips' data collection system by the various leaders within prominent organizations, the founders of QSNetwork are convinced that a state-of-the-art data collection and reporting system, via the Internet, will be widely accepted by companies, large and small, across all industries around the globe.

The vision doesn't stop with quality data collection systems. As an extension of numerous OEM manufacturing operations for several years, the founders have observed deficiencies in other systems such as the implementation of engineering changes, return material authorizations, quality audits, approved vendor listings, corrective actions, and more. The founders of QSNetwork truly believe by developing an ASP model that allows companies to put these systems on-line will completely revamp the way business leaders prepare and implement their quality systems.

3.3 The Key Positions

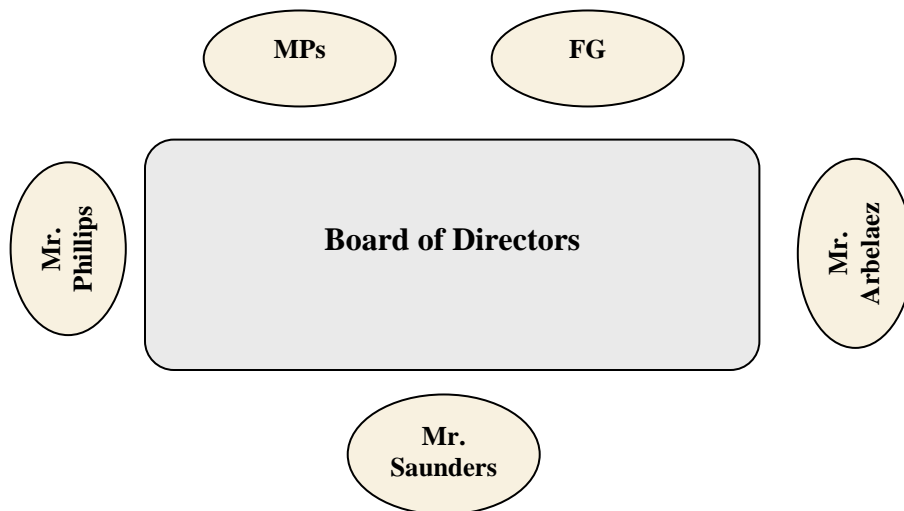
QSNetwork will initially seek a president to head up the management team. This individual will possess enormous energy and enthusiasm, high moral standards, and an old fashioned work ethic. This individual will have the ability to lead people, adapt to an ever-changing market, and share similar philosophy and vision as the owners who employ him. The following chart shows the initial structure of the senior management team of QSNetwork and the critical positions overseen by the board.

Org Chart



3.4 The Board

A board of directors must be established early on. The board will be comprised of Mr. Phillips, Mr. Arbelaez, Mr. Saunders, representative(s) from independent funding groups (FG), and representatives from one or more manufacturing partners (MPs).



3.4.1 E-business Systems Integrator

QSNetwork has partnered with an Internet integration services company to develop and deploy its leading edge business-to-business quality control application. CISYS, Inc. will not only provide application development services, but will be instrumental in creating and directing an e-business system that will dominate its marketplace.

CISYS has agreed to provide its services at a discounted rate in return for a seat on the board of directors and an equity position with the company.

3.4.2 Manufacturing Partner

QSNetwork will partner with a manufacturer in need of a service similar to the one outlined in this plan. This manufacturer's Quality and IS departments will work cooperatively with QSNetwork and CISYS to create an e-business model specific to the needs of the manufacturing partner and generic to other manufacturer's operational needs.

By partnering with QSNetwork the manufacturing partner will get a state-of-the-art e-business system at a much discounted rate because QSNetwork's developer will provide services at less than the standard cost. In addition, QSNetwork will seek angel funding to help subsidize the developmental effort, further reducing the investment required by the manufacturing partner.

Also, in return for the product development investment, the manufacturing partner will earn an equity position with QSNetwork and a seat on the board of directors. This equity stake will allow the manufacturer to recoup any initial investment and potentially earn a substantial amount of supplementary income.

3.4.3 Investors

QSNetwork will seek investors to contribute to the application and e-business system development efforts. Funds will not only be used to develop the core product, but will aid in further development of the business plan to include financial and marketing strategies. Together, with the manufacturing and software development partners, initial investors will help secure the additional venture capital needed to position QSNetwork for a rapid time-to-market and a dominating presence in the business-to-business marketplace.

4. Market Research and Analysis

4.1 The Size of the Market

QSNetwork will need seed money to thoroughly research the full market potential of the e-business model outlined in this plan. However, the founder presents the following conservative scenario as a preliminary assessment.

Projections are that there will be 500,000 ISO9000 registered companies by the year 2001. Based on observations over the last ten years, the founder has concluded that for every ISO registered company, there is at least one more company either ISO9000 compliant or using the ISO9000 standard as a guideline for implementing their quality management system. That makes a conservative total number of 1 million companies that use the ISO9000 standard, and therefore potential users of QSNetwork's services.

QSNetwork would allow companies to reduce their human resource requirements by putting data collection and other quality system tools on-line. If a company could reduce the human resources required to manage their quality system by just one quality engineer and one documentation clerk, it would save on average approximately \$100,000 per year. It is feasible to conclude that companies would readily spend \$10K per year to save \$100K. Using this figure as an average expenditure, the total available market would be in excess of \$10 billion.

It is also important to note that QSNetwork will be targeting contract manufacturers as primary users of its service. The electronic contract manufacturing industry is currently a \$110 billion industry. This figure equates to roughly 20% of the worldwide electronic manufacturing market (ref. Technology Forecasters, Inc.). The electronics industry is only one of many manufacturing segments which adheres to the ISO9000 standard.

Although the numbers just stated are obviously subjective, based on the recent growth trend of business-to-business applications and web based ASP models (see Market Trend and Drivers, Sec. 4.2), combined with the enormous market targeted, it is clear that the potential revenue opportunities for QSNetwork will be vast. A full ASP market analysis is discussed in Appendix A – ASP: The Net's Next Killer App.

4.2 Market Trend and Drivers

4.2.1 Quality Assurance Software

There are several factors driving the demand for a web based quality information system. Quality assurance software is now a common tool used in manufacturing facilities throughout the world. Until now, most software packages are primarily aimed at documentation control, written to comply with the ISO9000:1994 requirements. The packages currently available offer various levels of functionality and user options; some even include modules for tracking corrective actions and root cause analysis activities. While some packages claim to possess a real-time data collection module, research has provided no real evidence that a worthwhile data collection option exists. Especially one that is completely web based and is seamlessly integrated with other ISO9000 system requirements such as ECNs, RFQs, Internal Audits, Training, etc.

Nonetheless, manufacturers of all sizes are making a move toward on-line procedures, processes, and documentation control, i.e., Johnson & Johnson, ABB, Brady Corp, and Mitsubishi, to name a few. These companies, and thousands like them, are all too familiar with the cumbersome tasks associated with implementing and maintaining a quality management system. As companies continue to look for ways to cut overhead cost and increase efficiencies, a greater push towards on-line documentation and quality system software will be observed. With the increased acceptance of quality assurance software, coupled with the power and popularity of the Internet, a totally web based quality information system, delivered via the ASP model, is a model that will be favorably received by companies large and small.

4.2.2 Application Service Providers (ASPs)

The rise of ASPs is considered one of the most important trends in business. According to the research firm Dataquest, the ASP market is expected to boom to \$23 billion by 2003, a market estimated at only \$500 million today. Forrester Research estimates that ASP spending will reach 6.4 billion by year-end 2001.

Companies not usually associated with software development are jumping into the ASP arena. Nortel Networks, a \$20 billion telephone switch manufacturer, has recently announced that they are aggressively entering the ASP business, a business they claim to be the hottest in the web market today. Nortel, with new partners Hewlett-Packard and three other industry leaders, will be offering an ASP package targeting the messaging, travel, expense management, and human resource sector. Nortel's rivals Cisco Systems and Lucent Technologies both have ASP operations as well.

These telecom giants know first hand how powerful the Internet has become; they all have undergone tremendous growth in recent years due to increased hardware sales in support of augmented Internet traffic. A recent statement from a spokesman for Nortel indicated that “telephone design and manufacturing is no longer core to our strategic direction... We see what’s coming down the pike and there’s an enormous explosion in e-business, and we see ourselves taking a position as a leader in that market.”

Every new ASP will be filling a particular niche within the broad scope of software leasing opportunities. The market is large enough to support several players within each market niche. Research has indicated that an ASP offering a turnkey quality information system is not yet available. However, it’s simply a matter of time before companies such as Oracle, PeopleSoft, and SAP begin to offer such services in addition to their traditional ERP/MRP platforms, which are now available via the ASP model.

It is important to note that QSNetwork will be a ‘pure-breed’ ASP (see Appendix A – Section 11). A pure-breed, or ‘pure-play’ as it’s often referred to, is a vendor which deploys software developed explicitly for the Web. Some pure-play ASPs getting national attention are Agillion and eALITY. Agillion deploys a software package allowing small to mid-sized companies to manage their sales force and associated sales activities. eALITY offers subscribers access to expense reports, purchase orders, and other office forms. Although both of these pure-plays are competing with a vast array of existing software packages available off-the-shelf, it is believed that their services will be widely accepted and very successful due to the web-centric ASP model they have created.

4.2.3 ISO9000:2000 Standards

The new ISO9000 standard will require companies to place greater emphasis on data collection and analysis. The following extracts from the new standard support this claim:

8.2.3 Measuring and Monitoring of the Process

The organization shall apply suitable methods for measuring and monitoring of those realization processes necessary to meet customer requirements...

8.2.4 Measuring and Monitoring of Product

The organization shall measure and monitor the characteristics of the product to verify that requirements for the product are met. This shall be carried out at appropriate stages of the product realization process.

Evidence of conformity with the acceptance criteria shall be documented.

8.4 Analysis of Data

The organization shall collect and analyze appropriate data to determine the suitability and effectiveness of the quality management system and to identify improvements that can be made. This includes data generated by measuring and monitoring activities and other relevant sources.

The organization shall analyze this data to provide information on:

- a) customer satisfaction and/or dissatisfaction;
- b) conformance to customer requirements;
- c) characteristics of processes, product and their trends;
- d) suppliers.

The new standard also requires organizations to take a process approach, or a factual approach, to decision making. Applying the principle of factual approach to decision making leads to the following actions:

- taking measurements and collecting data and information relevant to the objective,
- ensuring the data and information are sufficiently accurate, reliable, and accessible,
- analyzing the data and information using valid methods,
- understanding the value of appropriate statistical techniques, and
- making decisions and taking action based on the results of logical analysis of accurate and timely data.

Most manufacturing companies today are already collecting data as it relates to product conformity. However, the methods used are still predominately paper based and do not always yield data that is accurate, reliable and readily accessible. Although there is a trend to more real-time, electronic methods, a complete web based e-solution is not yet available, especially via the ASP model.

4.2.4 TL9000 Requirements

The new TL9000 requirements are a set of quality system requirements developed for the telecommunications industry. It is based on ISO9000 and includes all of its requirements for hardware, software, and services. The key difference between TL9000 and quality standards such as ISO9000 is the required quality metrics that measures reliability and quality performance of products and services rendered. TL9000 will be applicable to an estimated 10,000 telecommunications suppliers worldwide.

Requiring companies to electronically collect and report quality data points within a manufacturer's facility is revolutionary. The QuEST Forum, the organization responsible for the new requirements, is putting these additional demands on suppliers to improve visibility of quality performance across all organizations. Data accumulated from all TL9000 registered companies will be compiled and broadcasted publicly via the Internet. By exposing the quality performance of all telecom suppliers, industry-wide benchmarks can be set with the ultimate goal of raising overall quality performance.

In order for a company to comply with the new requirements, some means of electronic data collection will be required. Manufacturers have already begun looking at available options; QSNetwork intends to be the method of choice for telecom suppliers in need of a real-time, web-centric data collection and reporting system.

5. Marketing Plan

5.1 Marketing Mission

QSNetwork will build a world-class ASP+ business-to-business enterprise which will dominate in a huge market by revolutionizing the way businesses implement and manage their ISO9000 / TL9000 Quality Information Systems.

5.2 Marketing Goals

Once manufacturing/corporate partners are obtained and the right alliances are structured, QSNetwork will have a product that can be introduced commercially to the CM and OEM markets. The initial partners will serve as a beta testing grounds and provide avenues to instant market penetration through their customers and suppliers. In addition to the self-perpetuating nature of the product, QSNetwork will conduct the following marketing activities:

- Expand promotional activities through trade shows, trade publication advertising, and direct sales efforts
- Identify high probability opportunities (50 contract manufacturing companies with well established customer base, to be pursued in the first 12 months after initial product release)
- Create alliances with at least two manufacturers, with at least one being a CM
- Advertisement via search engines and strategic web site promotions

5.3 Target Market

QSNetwork will market its data collection and GSA technology portion of its service offering first and will target contract manufacturing companies as its initial users of the system. Because CMs have multiple OEM customers, penetrating the CM market will expose QSNetwork's product/service to manufacturers worldwide.

Most contract manufacturers understand the costs associated with the data collection and data reporting processes. At the same time, the CM realizes that unless innovative new ways of cutting costs are created within their overhead structure, they will no longer be an asset to the OEM that contracts their manufacturing services. The founder of QSNetwork believes that the contract manufacturing arena is the easiest market to penetrate and will focus initial sales efforts in that area.

Once the CM is using the data collection portion of the system, their customers will be exposed to the power of QSNetwork's services, because the OEM will have real-time access to the CM's internal quality data and supplier management information. To gain access, all the OEM will need is a web browser and a connection to the Internet. Once the CM provides a user name and password, any

authorized user within the OEM's organization will have limited access. If the CM desires, it can make GSA technology available to their customers, allowing them to capture receiving inspection data, real-time, at the customer's receiving dock, creating even more publicity for QSNetwork's interactive services.

5.4 Marketing Strategy

5.4.1 Initial Targets

The right sales personnel will be obtained to perform the appropriate research necessary to accurately identify the top 500 targets. Once targeted, appropriate surveillance techniques will be applied to narrow the list to the 50 candidates most likely to be initial users of QSNetwork's ASP services. A high-profile sales and marketing professional will be sought to head up this effort. This individual will need to be well known and respected in the electronics manufacturing industry. They may come from either the OEM or CM business sector, however, they must have comprehensive experience with both industries.

QSNetwork's primary strategy will be to gain market access through strong alliances formed with well-known and established contract manufacturers (CMs). The CMs will initially be looked to as strategic partners and possible beta sites. As the product begins to reach the early stages of maturity, CMs, as well as OEMs, will be sought out as users of the ASP modules. A list of potential customers will be generated. Companies on the initial list will be divided into two groups, those with whom QSNetwork already has established business relationships, and those who are discernible companies but with no pre-established relationships. All companies will have to meet the following criteria:

- Comply, to some degree, with the ISO9000 Standards
- Customer base consisting of at least 10 OEMs
- Conducting some form of quality data collection and reporting
- Currently implementing, or has short term plans to implement, e-business strategies into their operations
- Suitably located for DSL or other high-speed Internet connection

5.4.2 Self-Perpetuation

As discussed in Section 5.3 "Target Markets", once the system is introduced to a handful of CMs, multiple customers and suppliers immediately become indirect and unsolicited users of the service. This is due to the global nature of the software – once one organization subscribes, all authorized suppliers, customers, and remote facilities are accessing real-time and pertinent quality information. This passive, but highly effective, marketing strategy is inherent to the QIS application being developed by QSNetwork. In fact, it may prove to be advantageous to give the service away in the initial phases of start-up. Offering the service for free may mean quicker market penetration and exposure, thereby accelerating breakeven and profitability.

5.4.3 Internet Service Provider Network

QSNetwork will market its software services through established ISPs / ASP Enablers (see Appendix A – Section 11). ISPs will provide a quick and effective means to penetrate the B2B market by targeting the ISP's existing customer base. QSNetwork will benefit from using ISPs to market its services by taking advantage of pre-existing relationships already established between the ISP and its customers. The larger ISPs have literally thousands of well-established customers which are already doing business on the web. By offering those customers a state-of-the-art QIS package through familiar channels, the probability of acceptance will be high.

5.4.4 Trade Shows

QSNetwork will blitz the trade show circuits in efforts to provide maximum exposure to its innovative products and services. As an exhibitor, QSNetwork will demo its innovative web based quality management system to various groups including quality assurance professionals, IT managers, ISP vendors, and electronic manufacturing executives. Promotional activities may include discounted rates for initial subscribers, and as mentioned previously, free service for those companies with attractive customer/supplier bases.

5.4.5 Internet and Trade Publications

The Internet itself is a powerful advertising and marketing tool. That, in conjunction with trade magazine advertising will expose QSNetwork's ASP offerings to an even broader range of potential subscribers. Internet sites and trade publications aimed at contract manufactures, and electronic manufacturers in general, will be particular points of interest.

6.0 The Financial Plan

6.1 Pricing Model

QSNetwork will target small to medium size businesses as its primary users. The number of users within an organization will determine the price per user, therefore the larger the company the greater the volume pricing discount. Users will be classified as either primary users or secondary users. Primary users will be personnel employed by the company which subscribes to QSNetwork's services. Secondary users will be those users which are granted access to a QIS network, but are not employed by the subscriber, typically a supplier or customer of the subscriber.

Organizations will be categorized by number of users. The following table shows four different categories and the cost per user for each:

Category	No. of Users	Monthly Fees	
		Primary User	Secondary User
CAT-1	10 or Less	\$75.00	\$45.00
CAT-2	11 to 49	\$55.00	\$40.00
CAT-3	50 to 99	\$45.00	\$35.00
CAT-4	100 or More	\$40.00	\$25.00

The minimum service package available will be a CAT-1 customer with one (1) primary user and nine (9) secondary users. Companies not utilizing all ten seats will be required to pay for the minimum package. Pricing for the minimum package will be calculated as follows:

(1) Primary at \$75 plus (9) Secondary at \$45 = \$480.00 / month.

A more typical CAT-1 customer will resemble the following:

(4) Primary at \$75 plus (6) Secondary at \$45 = \$570.00 / month.

Using similar ratios for all four categories, pricing for *typical* subscribers is reflected in the following table:

Category	Primary Users	Secondary Users	Monthly Price	Annual Price
CAT-1	4	6	\$570	\$6,840
CAT-2	10	30	\$1,750	\$21,000
CAT-3	20	60	\$3,000	\$36,000
CAT-4	75	200	\$8,000	\$96,000

As suggested later in the Projected Sales portion of this plan, categories 2 and 3 will be QSNetwork’s primary targets. A quick calculation reveals the average cost per seat for this class is around \$50 per month, a mere fraction of the cost associated with other ERP applications leased via the Internet.

6.2 Deployment Costs

The product developed by QSNetwork will be designed to integrate with most quality systems with very little “tweaking”. For small companies with no ERP system, the product will be a stand alone, self-sufficient system with virtually no deployment or implementation procedure. Users will simply be assigned a secured database server and system access code(s). Once the minimum setup is accomplished, the company is ready to begin entering part numbers and their parameters into the secured server. No integration and very little training is required. The product’s on-line help will be sufficient training in most of these cases.

Companies requiring integration with existing legacy systems and MRP will also require a minimal implementation period. QSNetwork’s software will be developed to interface with the most common MRP and ATE systems with little additional customization needed. In cases where requirements are much more complex than the normal configuration, system integration will be outsourced to CISYS, Inc. at a predetermined hourly rate.

As stated earlier, QSNetwork’s initial ASP offering will be the quality data collection and reporting module. This initial module will require very little, if any, assessment of the customer’s quality management system. As modules are added to the total available offering, more time will be required to assess a company’s management system to identify which modules should be implemented and in what sequence. The following deployment phases will have to be performed to implement the complete solution for small to medium sized companies seeking a turnkey on-line quality information system. It is important to note that these steps will only be required when implementing the full QIS package, not one or two stand alone modules.

Phase 1 - ASSESS

<i>Assess the Following Parameters:</i>	<i>Personnel Type Required</i>
Company Goals and Objectives	Applications Engineer
Services Being Contemplated	Applications Engineer
Size of Organization	Applications Engineer
Potential Number of Users	Applications Engineer
Current Quality System	Quality Engineer
Product Portfolio	Applications Engineer
Customer Base	Applications Engineer
Supplier Base	Applications Engineer
IT Infrastructure (Personnel)	Applications Engineer
IT Infrastructure (Hardware/Software)	Applications Engineer

Phase 2 - STRATEGIZE

<i>Strategize the Following:</i>	<i>Personnel Type Required</i>
Review of Assessment	AE / QE
Initial Module Recommendation	Applications Engineer
Module Implementation Sequence	Applications Engineer
IT Hardware Implementation Sequence	Applications Engineer
User Workshop / Training Strategy	AE / QE

Phase 3 - IMPLEMENT

<i>Implement the Following:</i>	<i>Personnel Type Required</i>
Database Setup	Programming Engineer
Security Setup	Programming Engineer
IT Infrastructure	Applications Engineer
Customize Modules	Programming Engineer
Training	Applications Engineer
Testing	AE / PE

6.3 Overhead

During the initial launch of the company, it will be important to keep overhead low. Until an adequate amount of seed money is raised, QSNetwork will be run from the offices of CISYS, Inc. and WCMG, Inc., QSNetwork’s managing partners. Expenses will mainly consist of product development costs, which will be substantially lower than the industry average. Miscellaneous operational expenses will be incurred such as phone, entertainment, travel, etc. Initial costs for these miscellaneous expenses should be minimal. Additional salary and miscellaneous expenses will increase pending the addition of a sales executive to the management team.

Not until QSNetwork has secured initial seed money and one or more corporate partners will it look for professional office space from which to operate the business. Keeping overhead low will allow QSNetwork to reach breakeven quickly, with very few initial customers. It will also allow the maximum amount of investment capital to be allocated to product development and sales and marketing efforts, both key elements of the start-up activities.

6.4 Company Infrastructure

Before assessing sales forecast and breakeven analysis, a brief description of the company's initial infrastructure needs to be defined. The company's core infrastructure will consist of the following:

Product Development

Write programming code

System Integration

Install hardware at customer's location and at co-location provider (ISP); coordinate DSL/ISDN/T1; collaborate system with existing software (ERP); maintain network architecture.

Hosting

Maintain servers; maintain redundant Internet connections; system backups; 24/7 monitoring.

Customer Service / Technical Support

Train users; field technical calls relating to hardware problems and software issues; repair/upgrade servers; issue new user seats (in blocks).

TQM Consulting Services

Provide quality management consulting based on data captured and data reported using QSNetwork products.

Sales and Marketing

Promote products; raise capital; structure partnerships.

The following tables show how these core functions are managed during the startup phases of the company. Initially most of these functions will be outsourced, but as the company matures everything other than the hosting services will be a function of QSNetwork.

The blue shaded (light) areas are primarily outsourced; the gray shaded (dark) areas are partially outsourced.

Phase I – Product development and beta testing; 1-3 customers

Product Development	CISYS
Integration	CISYS
Hosting	CISYS
Customer Service / Tech Support	QSNet; CISYS
TQM Services	None Provided
Sales / Marketing	QSNet; CISYS; WCMG

Phase II – Data Collection / Reporting modules complete and company launched

Product Development	CISYS; QSNet Programmers
Integration	CISYS; QSNet Programmers
Hosting	Utenzi
Customer Service / Tech Support	QSNet; CISYS
TQM Services	None Provided
Sales / Marketing	QSNet; CISYS; WCMG

Phase III – 25 or more customers (not including Secondary Users)

Product Development	QSNet Programmers
Integration	QSNet Programmers
Hosting	Utenzi
Customer Service / Tech Support	QSNet
TQM Services	QSNet; WCMG
Sales / Marketing	QSNet

6.5 Projected Sales

Projected sales for the first full calendar year 2002 is a conservative 20 companies, 10 CAT-1 and 10 CAT-2 companies. Revenue generation from those sales will be less than expenses. There will be a large national sales campaign launched in the early part of 2002 using proceeds from investment capital. Emphasis during this period will also be on product development and beta testing. The second calendar year is when the real dynamic growth will take place. QSNetwork will become profitable by Q1 2003. Growth will continue at an exponential rate until 2006 and beyond.

The following tables show sales projections for the first five years of operation, the number of clients subscribing each year, by category, and the revenue generated by each category.

Year Ending 2002 (Annual Run-rate by Dec-2002)

Category	Number of Clients	Revenue (Annual)
CAT-1	10	\$68,400
CAT-2	10	\$210,000
CAT-3	0	\$0
CAT-4	0	\$0
Totals:	20	\$278,400.00

Year Ending 2003 (Annual Run-rate by Dec-2003)

Category	Number of Clients	Revenue (Annual)
CAT-1	75	\$513,000
CAT-2	125	\$2,625,000
CAT-3	65	\$2,340,000
CAT-4	5	\$480,000
Totals:	270	\$5,958,000.00

Year Ending 2004 (Annual Run-rate by Dec-2004)

Category	Number of Clients	Revenue (Annual)
CAT-1	250	\$1,710,000
CAT-2	350	\$7,350,000
CAT-3	400	\$14,400,000
CAT-4	15	\$1,440,000
Totals:	1015	\$24,900,000.00

Year Ending 2005 (Annual Run-rate by Dec-2005)

Category	Number of Clients	Revenue (Annual)
CAT-1	500	\$3,420,000
CAT-2	550	\$11,550,000
CAT-3	600	\$21,600,000
CAT-4	30	\$2,880,000
Totals:	1680	\$39,450,000.00

Year Ending 2006 (Annual Run-rate by Dec-2006)

Category	Number of Clients	Revenue (Annual)
CAT-1	700	\$4,788,000
CAT-2	800	\$16,800,000
CAT-3	800	\$28,800,000
CAT-4	45	\$4,320,000
Totals:	2345	\$54,708,000.00

By year ending 2006, sales forecasts are in excess of a \$50M annual run rate. This represents less than .0025 or 1/4 of 1 percent of the total ASP market as it is projected for the year 2003. The 2,300 companies making up the projected \$50M in revenue account for less than .005 or 1/2 of 1 percent of the 500,000 companies projected to be ISO9000 registered by 2001.

Sales projections are realistic and can be achieved, if not exceeded, based on the following constituents:

- Size of Target Market
- Growth in the ASP Market
- New ISO9000:2000 Requirements
- Power of Product Offering
- Affordable Pricing Structure
- Global Utilization of Product

6.6 Breakeven Analysis

Before projecting the point at which revenue from sales meets, then ultimately exceeds, operating costs, a clear understanding of the operating costs must be achieved. Operating costs will primarily consist of three elements:

- Technical / Hardware resources
- Sales / Administration / Engineering (SAE)
- Facility

Software development is considered a developmental element and is not factored into operating costs. This expenditure will be considered as start-up costs and covered entirely with investment capital. Facility costs are also considered start-up costs but will be included in operating costs since expenditures will be on-going and indirectly related to product development. Deployment costs will be billed as required and outsourced to QSNetwork's systems integration partner CISYS, Inc. at an agreed upon rate prior to execution. These costs will have some level of profit built in but will not be accounted for in the following breakeven analysis.

The initial ramp up of SAE and facility expenditures will be directly proportionate to the amount of funding secured from outside investors or corporate partners. If funding is slow in obtaining, the addition of sales personnel and administrative and technical support will be gradual. Until adequate funding is secured, a conventional office environment will not be established, thereby reducing start-up expenditures and accelerating breakeven. Hardware expenditures will be minimal and will be added as a direct derivative of sales revenue.

To create the proceeding tables, ratios have been established for the various elements of operating costs. These ratios will be essential in the calculation of breakeven and profitability.

6.6.1 Hardware

Initial hardware requirements will consist of a single server with dual Pentium III processors with ample RAM and storage capacity. Due to the type of data transfer and queries associated with QSNetwork's product offering, a single server can support multiple clients. A high performance server coupled with Utenzi's redundant T-3 connections to the Internet will assure that multiple clients will never experience degeneration in connectivity speed or processor performance.

Hardware Costs and Ratios

Dual Processor Pentium III Server:	\$5000.00
Colocation Fees per Server:	\$ 500.00/mo. (Utenzi.)
Hosting Service Fees:	\$ 100.00/mo. (Utenzi.)

User Capacity:	250
CAT-2 Clients per Server:	5

Based on the figures just stated, each time a sever is added a \$5,000 expenditure will be incurred, however, as many as 5 CAT-2 clients, or 25 CAT-1 clients can be accommodated by a single server. On-going monthly fees to maintain the server and Internet connections will run \$600 / month. Assuming sever upgrades every 24 months, the cost to locate a server at Utenzi will be approximately \$800 / month. Five CAT-2 clients will generate approximately \$5,000 / month putting the maximum potential cost ratio for 'revenue-to-hardware' at 6:1.

6.6.2 Sales / Administration / Engineering (SAE)

To calculate the 'revenue-to-sae' ratio, three various disciplines will be assessed, Sales, Administrative, and Engineering. Once a ratio for each discipline is derived, a total ratio for revenue-to-hr can be then be calculated and used to determine breakeven and profitability.

Sales

To calculate the ratio for 'revenue-to-sales personnel' an average salary of \$60K plus a 2% commission will be used. The ASP market is still too emergent to accurately forecast the typical account size per sales representative, but for calculation purposes a conservative \$1.25M will be used. This would bring the average salary, including commissions, per sales rep to \$85K. This produces a revenue-to-sales personnel ratio of approximately 14:1.

Engineering

To calculate the ratio for ‘revenue-to-engineering’ an average salary of \$60K will be used. It is also assumed that it will require one technical support personnel for every 50 CAT-2 clients, or \$600K of revenue. This puts the revenue-to-engineering ratio at 10:1.

Administrative

The administrative costs will be considerably lower than the previous two disciplines. Administrative support will primarily consist of clerical type personnel and an average salary of \$30K. Because much of the administration duties will be outsourced initially, a ratio of 30:1 ‘revenue-to-admin’ will be used for breakeven.

Combining the ratios from the three disciplines brings the cost-of-sales for SAE expenditures to \$200K per \$1M in revenue, or a 5:1 ratio. This combined with the Hardware and Facility ratios will be used to calculate breakeven and profitability.

6.6.3 Facility

A somewhat arbitrary number will be used for the ‘revenue-to-facility’ costs. This number is projected to be less significant than the other expenditures because QSNetwork intends to outsource the hosting, servicing, and integration operations. These costs are factored in to the Hardware ratios previously outlined. The facility costs include physical assets as well as the salaries of the management team, including chief executives. This ratio has been set at 50:1 for breakeven and profitability purposes.

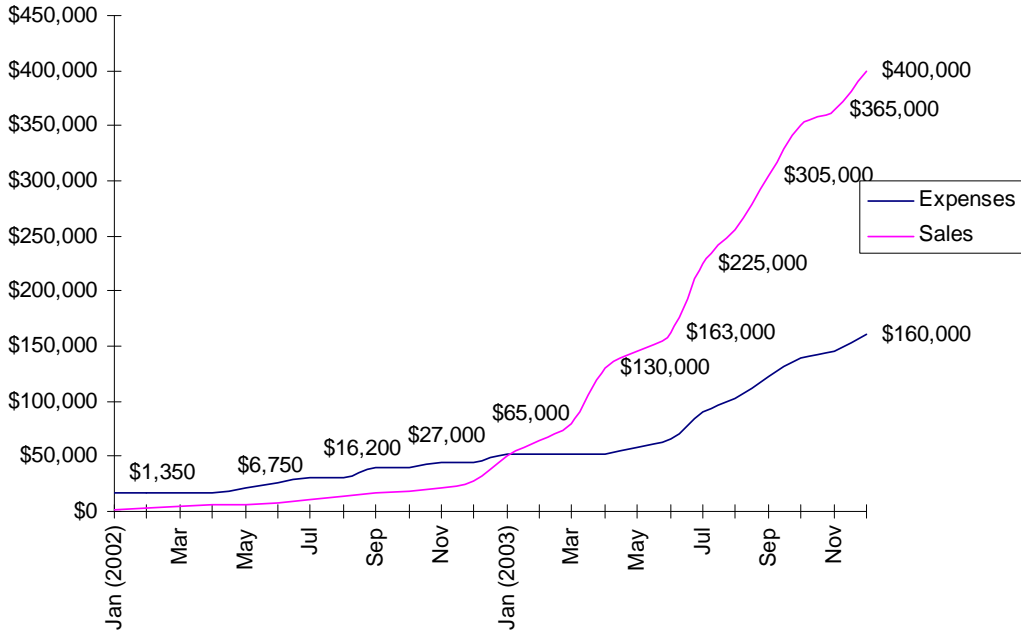
6.6.4 Breakeven and Profitability Calculation

Combining the ratios from the previous sections concludes a total cost-of-sales ratio of \$400K in expenditures for every \$1M in revenue, or a 5:2 ratio. This equates to a 60% gross margin in revenue generation. The ASP market is still too emergent to accurately project a reasonable gross margin, however, it should be comparable to the packaged software industry, which generally averages 80% gross margins. Therefore, while the 60% margins derived using the previous ratios are merely an estimate, they would appear to be somewhat conservative.

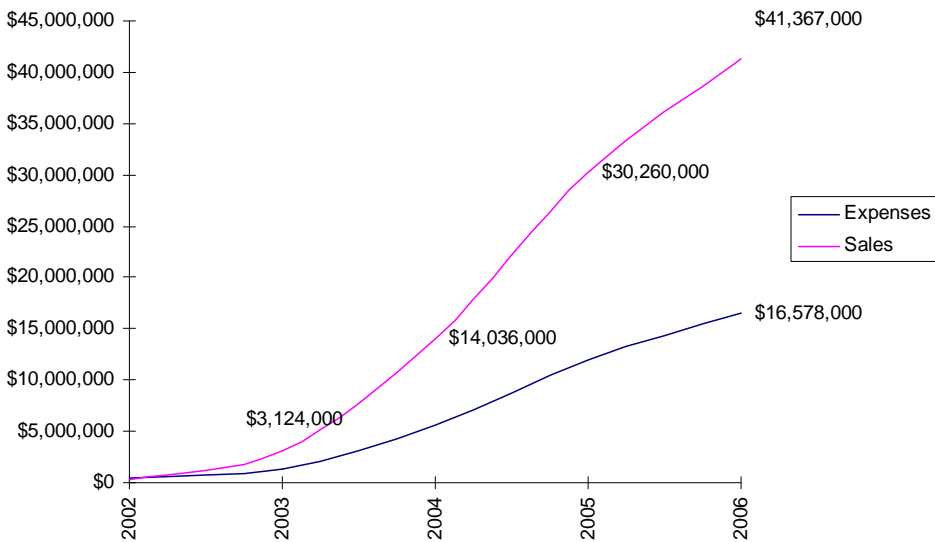
The proceeding graphs project sales and expenses for the first 24 months of operation and for the first five years of operation.

6.6.5 Breakeven, Profitability and Income

Breakeven Analysis
Sales and Expenses Through 2003



Sales Projections Through 2006



Income Statement (Projected)

	2002	2003	2004	2005	2006
Revenue	\$117,160	\$3,124,557	\$14,036,124	\$30,260,790	\$41,367,866
Cost of Sales	\$298,334	1,342,176	\$5,613,740	\$12,109,886	\$16,541,160
Gross Margins	(\$181,174)	\$1,782,381	\$8,422,384	\$18,150,904	\$24,826,706
Income Taxes	-	623,833	2,947,834	6,352,816	8,689,347
Net Income	(\$210,850)	\$1,158,548	\$5,474,550	\$11,798,088	\$16,137,359
Gross Margins %	-	57.04%	60.01%	59.98%	60.01%
Net Income %	-	37.08%	39.00%	38.99%	39.01%

As reflected in the preceding table, expenses will exceed revenue through the year 2002, the first full calendar year of aggressive sales activity. This is primarily due to the fact that the ratio for revenue-to-human resource requirements will be inverted during this period. Initially, sales and administrative personnel will have to be added with little or no return on investment. Other ratios will also be inverted, but the associated costs will not be significant.

Breakeven occurs in the first quarter of 2003. It is estimated that a monthly income of \$50K or greater will put the company in the black. It is important to note that this does not take into account software development cost, since these expenditures are not considered operating costs and will be covered by capital raised by independent investment groups or corporate partners. Because net income in 2004 is well into the seven-figure range, a quick return on investment will be realized by any individual or group investing in QSNetwork.

6.7 Funding

QSNetwork will seek investment capital at various stages of start-up. Initially, funds will be needed primarily for software development. Ballpark estimates for development have already been obtained and typically range from the high six-figures to the low seven-figures. These estimates are founded on the review of this business plan and a “painted-screen” demo that has been developed to illustrate the functionality of a supplier data collection module. Estimates have been verbal and are based on standard rates.

Because of the alliance already established with QSNetwork’s software developer and systems integrator CISYS, software development costs will be a fraction of the industry standard. This is important because it will allow QSNetwork to bring a quality information system to fruition with minimal initial investment. Ideally funding will come, in part, from a manufacturing corporate partner or partners,

and some other independent resource(s), thereby reducing all individual monetary outlays.

In addition to software development costs, funds will be required to attract and retain a sales and marketing professional, one that is well versed and well respected in the manufacturing industry. Once a tangible product is realized, QSNetwork will embark on a national sales campaign and begin focusing efforts on national tradeshows, trade magazines, and Internet advertising. An operational facility and associated overhead costs will also have to be accounted for in the early stages of start-up activities.

As shown in the previous section, it is projected that QSNetwork will experience a net loss in excess of \$200,000 in its first full calendar year of operation. This loss will also have to be covered by initial investment capital.

The total amount of seed money needed to successfully launch the business is still somewhat unclear, however, minimal requirements in the mid six-figure range is a reasonable assumption. As stated earlier, the corporate structure will allow for 250,000 shares to be sold at a \$5 par value, providing \$1.25M for seed capital. As the company begins to evolve and mature, additional rounds of funding will be required to fully develop the product and the company infrastructure.

6.8 Exit Strategy

Firms investing in QSNetwork will experience large capital gains due to exponential growth over the first five years of operation. As QSNetwork becomes a major player in the pure-breed ASP arena, it will be targeted as a potential acquisition by the leading vendors in the ERP/MRP industry as well as various other large independent software vendors (ISVs) moving into the ASP market.

Investors may also realize a high return on investment in the event QSNetwork goes public. By the year 2003 and beyond, the company becomes profitable. Proper timing of an IPO will generate millions of dollars in exchange for stock certificates held by initial investors.