Sparta Systems

Four Best Practices To Improve Quality In The Supply Chain

Lower your supply chain risks and cost of quality

1 Introduction

2 Quality Risks in the Supply Chain

3 The Big Challenge

4 Best Practices to improve quality in the supply chain

5 Conclusion

Introduction

Markets and manufacturing practices have evolved and companies now work with an increasing number of global manufacturing and supply partners. As companies have pursued this broadened supply chain strategy, the ability to manage quality risk has become more challenging. When working with external suppliers, companies lack the same quality management capabilities found internally and therefore are often faced with manual and ad hoc communication that can lead to miscommunication, delays and ultimately product issues in the market. At the same time, pressures in regulated industries and overall customer expectations have increased scrutiny of quality and accountability in the supply chain. All of this can lead to a high risk of brand devaluation, a loss of reputation when something does go wrong, and high overhead cost of managing the quality process.

In this new paradigm, quality management does not end at traditional corporate boundaries. Leading companies are able to better manage risk and gain competitive advantage by investing in extending the quality enterprise to include suppliers and contract manufacturers.



Quality Risks in the Supply Chain

Companies are becoming highly dependent on suppliers and must assess and manage quality in the supply chain to reduce business risks and prevent revenue losses.

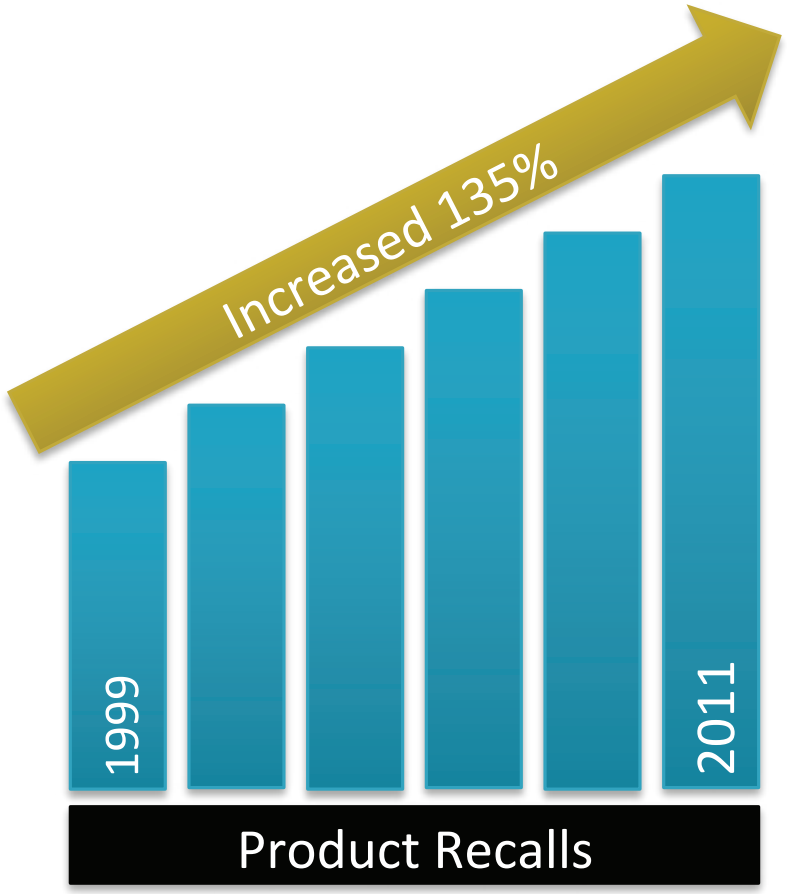
It is estimated that manufacturers spend an average 50-80%[1] of the total product cost on raw materials and parts procured from multiple suppliers across different parts of the globe.

To continually manage costs and improve performance, a company must be able to not only select the right supply chain partner but more importantly monitor and proactively manage quality in the supply chain. Yet, the majority of companies only establish quality performance and measurement programs with less than 1/3 [2] of the total supply base. By failing to establish more comprehensive supply chain quality programs, companies are exposing themselves to large scale quality issues, service deficiencies, and increased costs that can impact profits and damage brand reputation.

Quality Risks in the Supply Chain

Recalls Are on The Rise

At the same time companies have expanded the supply chain network, product recalls have also trended upwards. Product recalls have increased 135%[3] from 1999-2011. Product recalls have a severe negative impact on a company's profit and brand reputation. According to a Deloitte Consulting research report, 52%[4] of recalls result from supplier and contract manufacturing issues. That said, 58%[5] of executives manage recall risk through supplier indemnification. However, relying solely on supplier indemnification is not a long term solution that addresses the real issues.



Quality Risks in the Supply Chain

Recalls Have a Far Reaching Financial Impact

Not holding external suppliers and contract manufacturers to the same level of accountability as internal operations and not proactively managing quality in the supply chain has severe financial consequences.

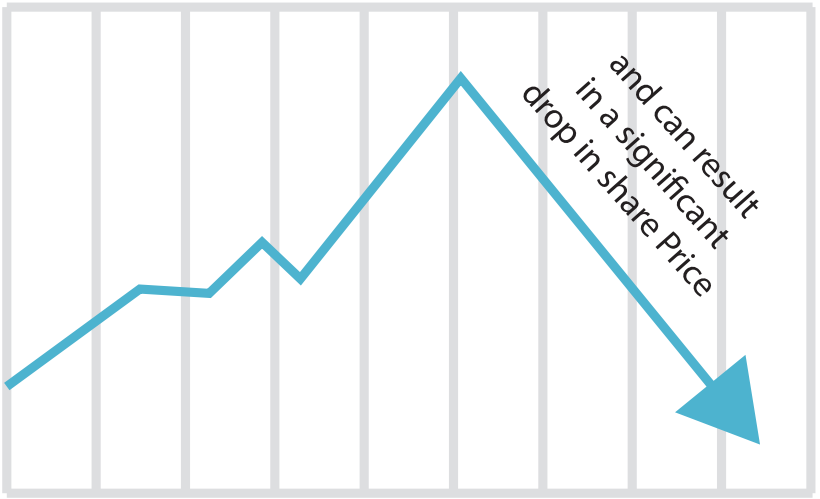
A Product Recall
Can cost a company
between



$10M[6]



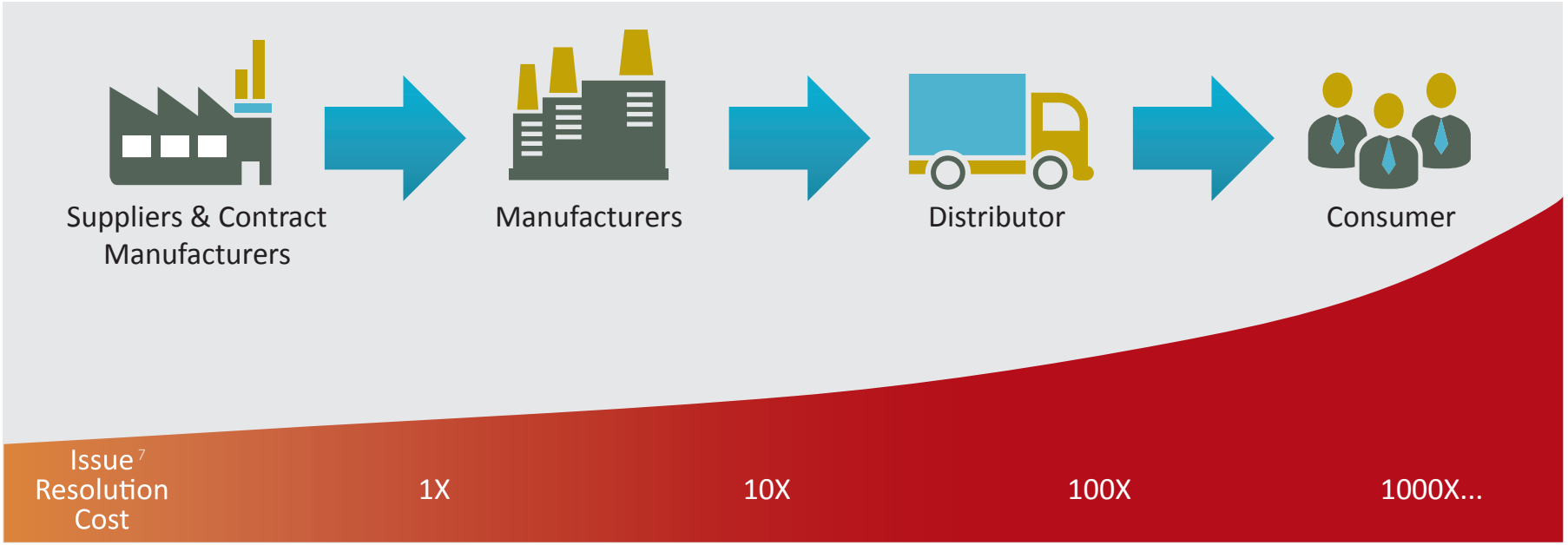
$90M[6]



The Big Challenge

Identifying Quality Issues Early In The Supply Chain

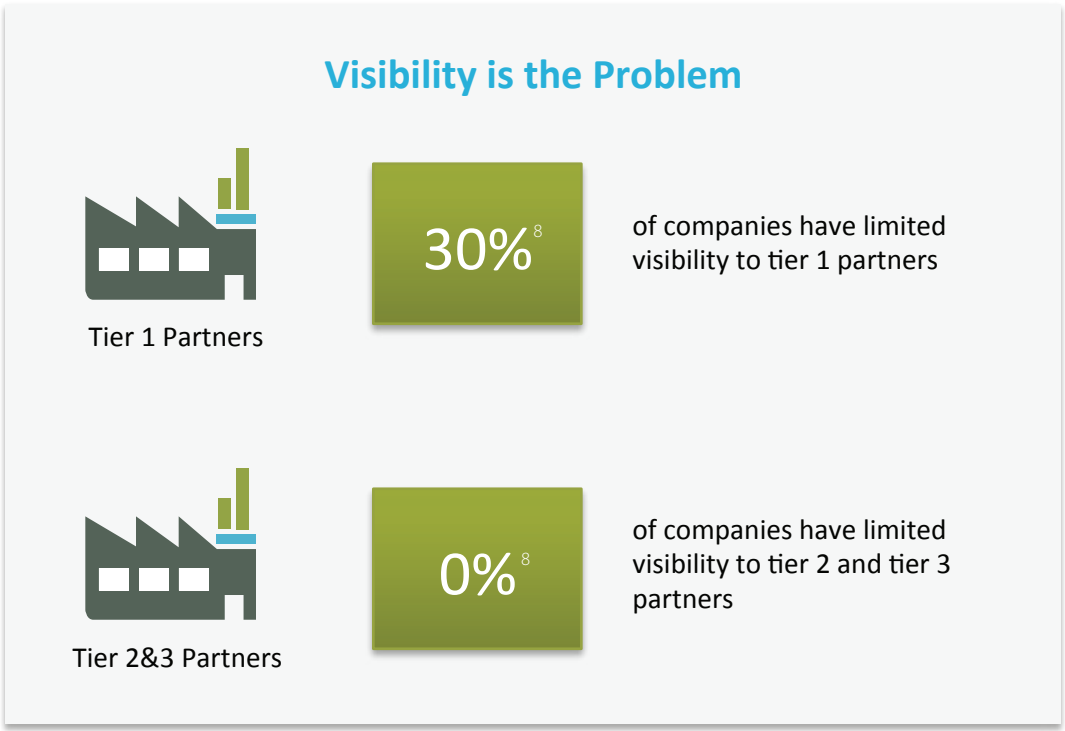
Quality issues can surface at any point in the supply chain and production process. It is imperative to catch quality issues as early as possible in the supply chain. The costs of unresolved supplier quality issues can be devastating if they are discovered after a product has been introduced to the market. Therefore, it is critical to identify quality issues early in the supply chain to manage quality related costs and risk.



The Big Challenge

Visibility Into The Supply Chain Is A Problem

Companies have 100s to 1000s of vendors in the supply chain network



45% of executives agree the leading challenges to supply chain efficiency include supplier performance and quality management

- KPMG Global Manufacturing Outlook 2013

The Big Challenge

How Are You Communicating With Suppliers on Quality

Despite investments in enterprise quality management systems , many companies continue to communicate with suppliers using manual and disconnected methods of communication. These methods result in limited ability to trace, manage and report on supply chain related quality issues. As a result, true collaboration on quality is not possible.



The Big Challenge

How Do You Prevent Quality Issues in The Supply Chain?

With a more diverse supply chain, comes greater risk. Reducing this risk means increasing the number, frequency and length of supplier evaluations and audits. The growth and pace of supplier diversification is outpacing current structure and resources leading companies to seek ways to scale beyond current supplier quality and audit programs.



Best Practices For Managing Quality In The Supply Chain

1. Broaden supplier assessments
2. Define clear measurement program
3. Invest in infrastructure that supports visibility into the supply chain
4. Close the quality loop with suppliers

Best Practices For Managing Quality In The Supply Chain

1. Broaden the Scope of Supplier Assessments

Most companies restrict supplier performance measurement and monitoring to less that 1/3[9] of the total supply base. Organizations typically focus supplier measurement and monitoring on:

- Suppliers that comprise the largest portion of spend
- Suppliers that have a strategic relationship with regard to a key product
- Suppliers that have a strategic relationship with the client company

Failing to measure the majority of the supplier base means companies lack visibility on the level of quality in the supply chain. As a result, companies are more exposed to potential quality incidents and cost increases that can negatively impact profit and brand reputation. Companies need to invest in infrastructure that enables broader visibility into the supplier base.



Best Practices For Managing Quality In The Supply Chain

2. Establish Clear Measurement Programs

The majority of companies measure supply chain partner performance in specific areas:

- Quality
- On-time delivery
- Service
- Price
- Total cost
- Contract compliance
- Responsiveness

Challenges for measurement

- Large number of suppliers
- Disparate data sources
- Inconsistent goals and metrics
- Limited systems and analytical tools

According to a study conducted by Aberdeen, just over half of enterprises leverage automation tools to support measurement and monitoring of suppliers.

Best Practices For Managing Quality In The Supply Chain

3. Invest in Infrastructure

According to findings from LNS Research's 2013 Quality Management Survey, companies that deployed a supplier quality management solution reported an average success rate of 94% for New Product Introductions (NPI) vs 70% success for those companies that have not deployed such a solution.

A key challenge of ensuring quality in the supply chain is communication. Many companies maintain decentralized supplier quality functions to be responsive to needs. While this approach can ensure responsiveness to issues, it often also is characterized by limited information sharing and limited best practice sharing that could provide better economies of scale. Furthermore, many companies still maintain processes that are supported with email and fax and maintain data in isolated and siloed repositories. In short, the tools and techniques for managing quality in the supply chain have not kept pace with the evolution of the supply chain itself.

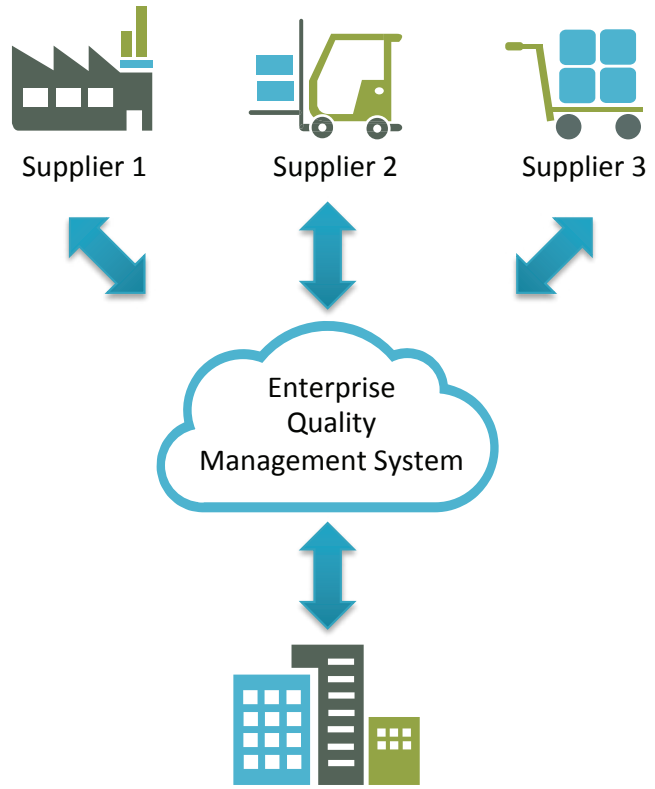
Leading companies are investing in infrastructure that more tightly connects their supplier ecosystem and automates what were manual or disconnected processes. Enabling process based communications such as escalations and approvals and automating quality workflows such as Supplier Corrective Actions delivers improved visibility and control. This in turn translates into a lower cost of quality from reduced detection costs and avoided recalls. This fact is further supported by research done in the Fall of 2013 by the Aberdeen Group. In this cost of quality study focused on the positive impact of streamlined communication with suppliers, the top 33% of respondents consistently outperformed their peers in supplier performance benchmarks.

Best Practices For Managing Quality In The Supply Chain

Leveraging the Cloud

From a technology perspective, cloud computing - and particularly the software-as-as-service (SaaS) model - provides an ideal medium for collaboration on quality. In the SaaS model, suppliers essentially log in to a manufacturer's existing EQMS system and enter data via the same screens and in accordance with the same business rules as those that prevail internally (with strict access and privilege restrictions). Communications related to specific quality processes like NCMRs and CAPAs take place within the same environment so they can be appropriately routed and tracked.

Cloud computing can turn the concept of fully integrated quality management for supply chains into a reality.



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Best Practices For Managing Quality In The Supply Chain

4. Closing the Loop

Managing supplier related non-conformances and corrective actions is a key challenge for manufacturers. Many companies attempt to manage these critical interactions with old communication methods (for example email) or systems (for example ERP, PLM) that are not built to manage quality issues .

Leading companies are leveraging technology to connect and integrate suppliers into quality management processes. These companies are extending the features and benefits of internal quality management systems to suppliers with the aim of streamlining communication and facilitating faster resolutions.

Integrating the supply chain participants into the quality management ecosystem delivers several benefits:

- Suppliers and manufacturers would abandon their adversarial stances in favor of a collaborative approach to quality.
- Suppliers would input quality-related data directly into a common database. It would serve as a single point of truth for both suppliers and manufacturers, and a trusted source from which manufacturers could easily extract data for purposes of supplier evaluation and management, as well as regulatory compliance.
- Workflows and processes to support quality would be standardized for all the members of a supply chain, so that it would be easy for everyone concerned with an NMRS or CAPA to understand where things stood.
- Communications would be centralized. Those related to moving a process forward (e.g. reminders or approvals) would also be automated.

Conclusion

Benefits from extending quality management practices into the supply chain

1. **Visibility** - Identify issues early before they become costly quality incidents

2. **Traceability** - Understand the root cause and source of quality issues in your supply chain

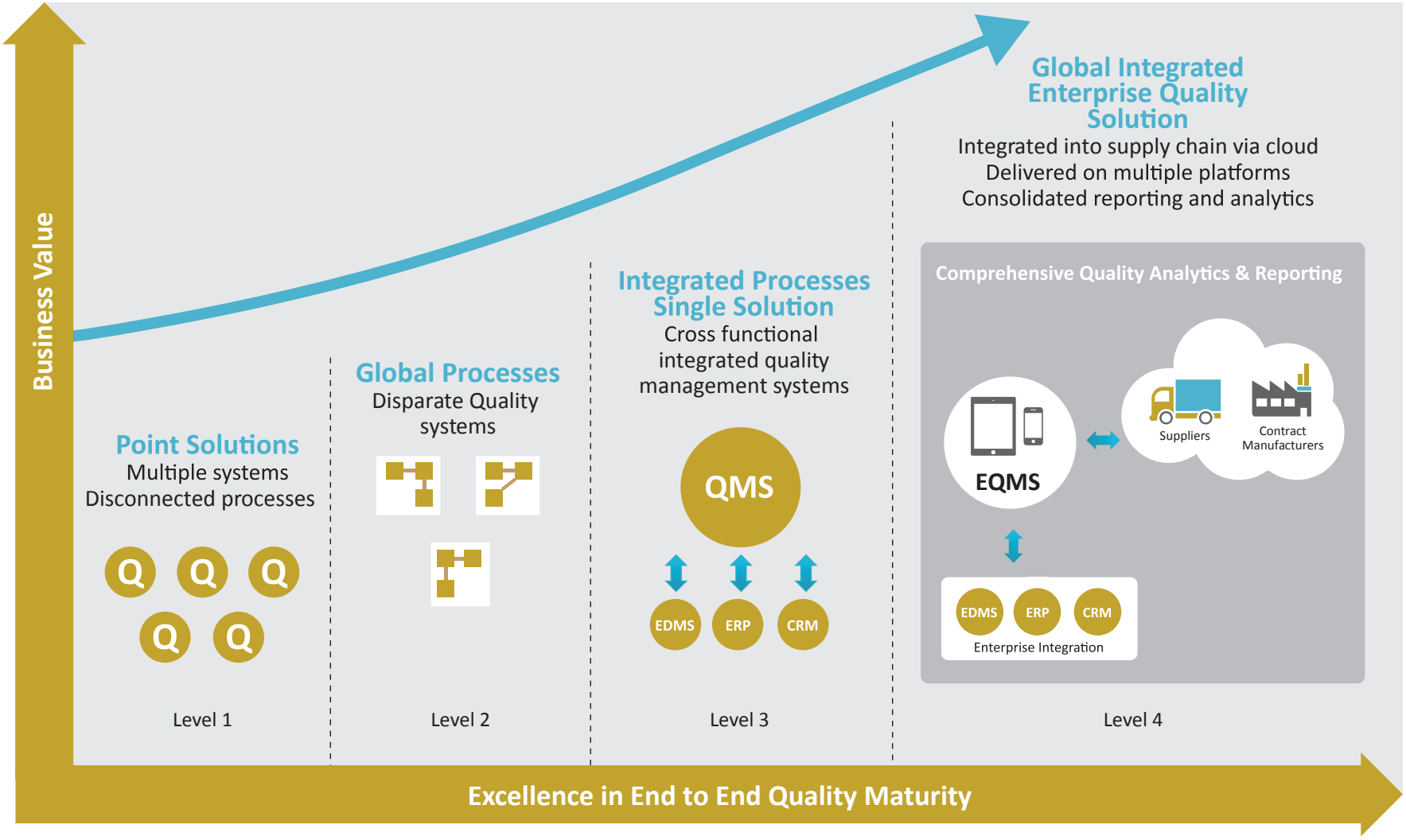
3. **Accountability** - Ensure supply chain partners understand issues and resolution requirements in a timely manner

4. **Profitability** - Mitigate quality related financial risk and improve supply chain efficiency

Conclusion

The Quality Maturity Curve

Companies who have adopted an integrated enterprise approach to quality management (Level 4) are able to gain competitive advantage.



Citations

1. The Supplier Performance Measurement Benchmarking Report, *Aberdreen Group, 2002*

2. The Supplier Performance Measurement Benchmarking Report, *Aberdreen Group, 2002*

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4. Recall Execution Effectiveness Report. *Deloitte, GMA, FMI and GS1. May 2010*

5. Rapid Alert System for Food and Feed. *RASFF. 2012*

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7. W. Edward Deming research and model on cost of poor quality

8. Rapid Alert System for Food and Feed. *RASFF. 2012*

9. The Supplier Performance Measurement Benchmarking Report, *Aberdreen Group, 2002*

Sparta Systems, an industry pioneer and global leading provider of enterprise quality management software (EQMS) solutions, enables businesses to safely and efficiently deliver their products to market. Its TrackWise® EQMS, a trusted standard among highly regulated industries, is used by quality, manufacturing and regulatory affairs professionals to manage compliance, reduce risk and improve safety across the global enterprise. Headquartered in New Jersey and with locations across Europe and Asia, Sparta Systems maintains an extensive install base in the pharmaceutical and biotechnology, medical device, electronics manufacturing and consumer products markets.

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