TrackWise®
by Sparta Systems

Visibility Into Processes Across the Business Ecosystem

Using Supplier Quality Management

Before We Begin

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- Please use the question option to send questions at any time during the event.
- All attendees will receive a copy of today's webinar.

Today's Presenters

Joe Humm
Vice President, Global Sales Operations for Sparta Systems

Dirk Dusharme
Editor in Chief of Quality Digest

Why Is Quality Important to Your Business Ecosystem?

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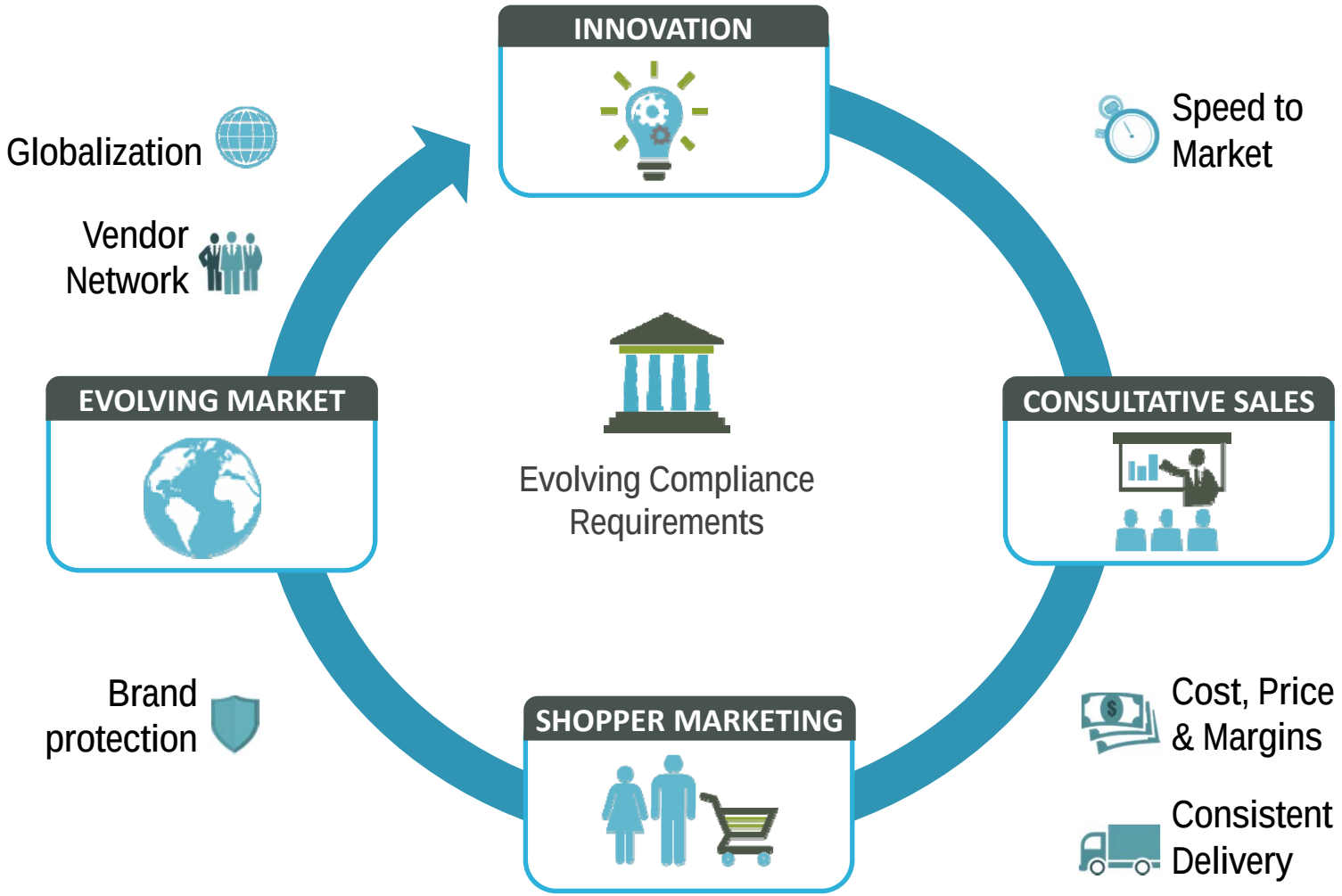

Quality Challenges within an Organization

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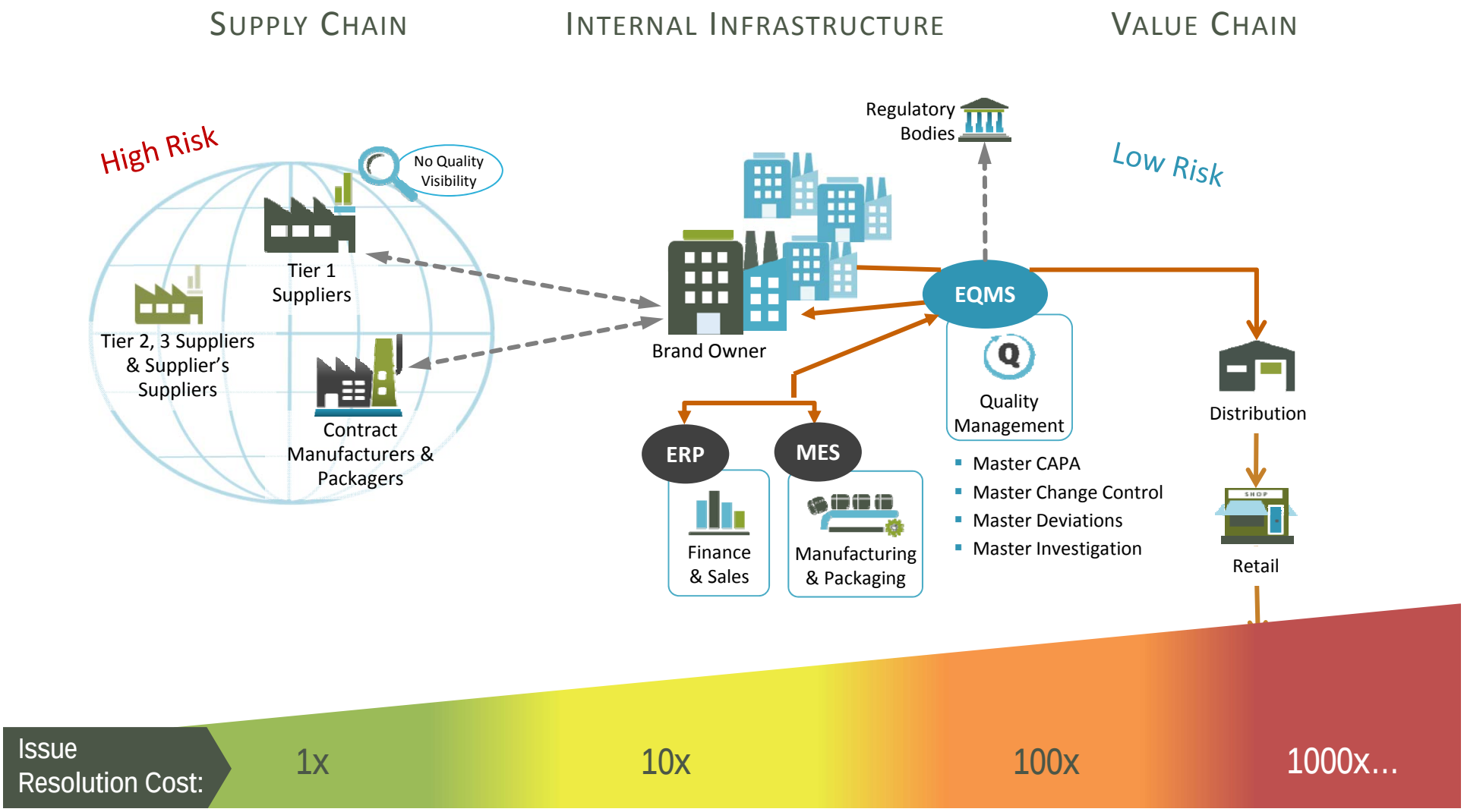
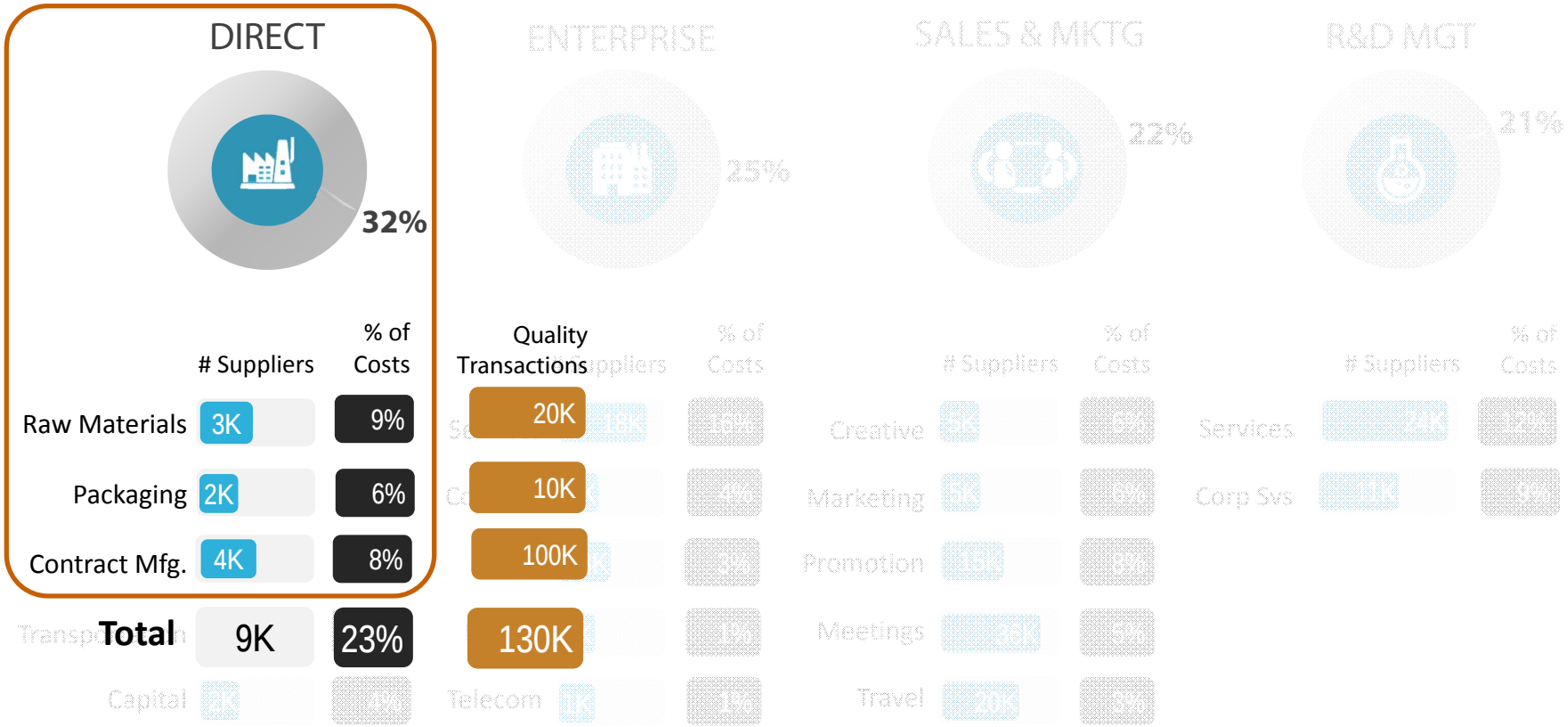
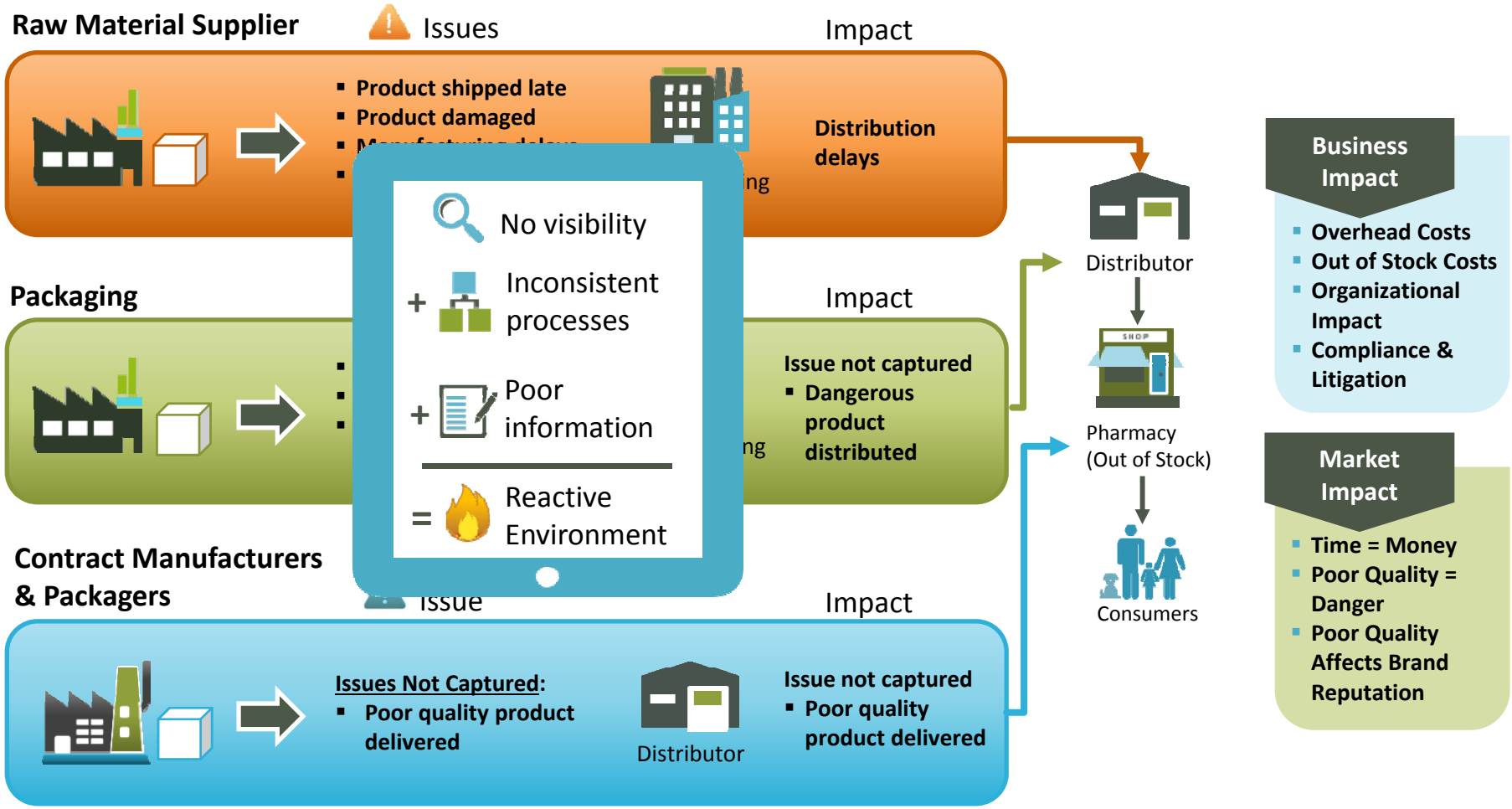


Example:
Contract Spending Grouping and Rations

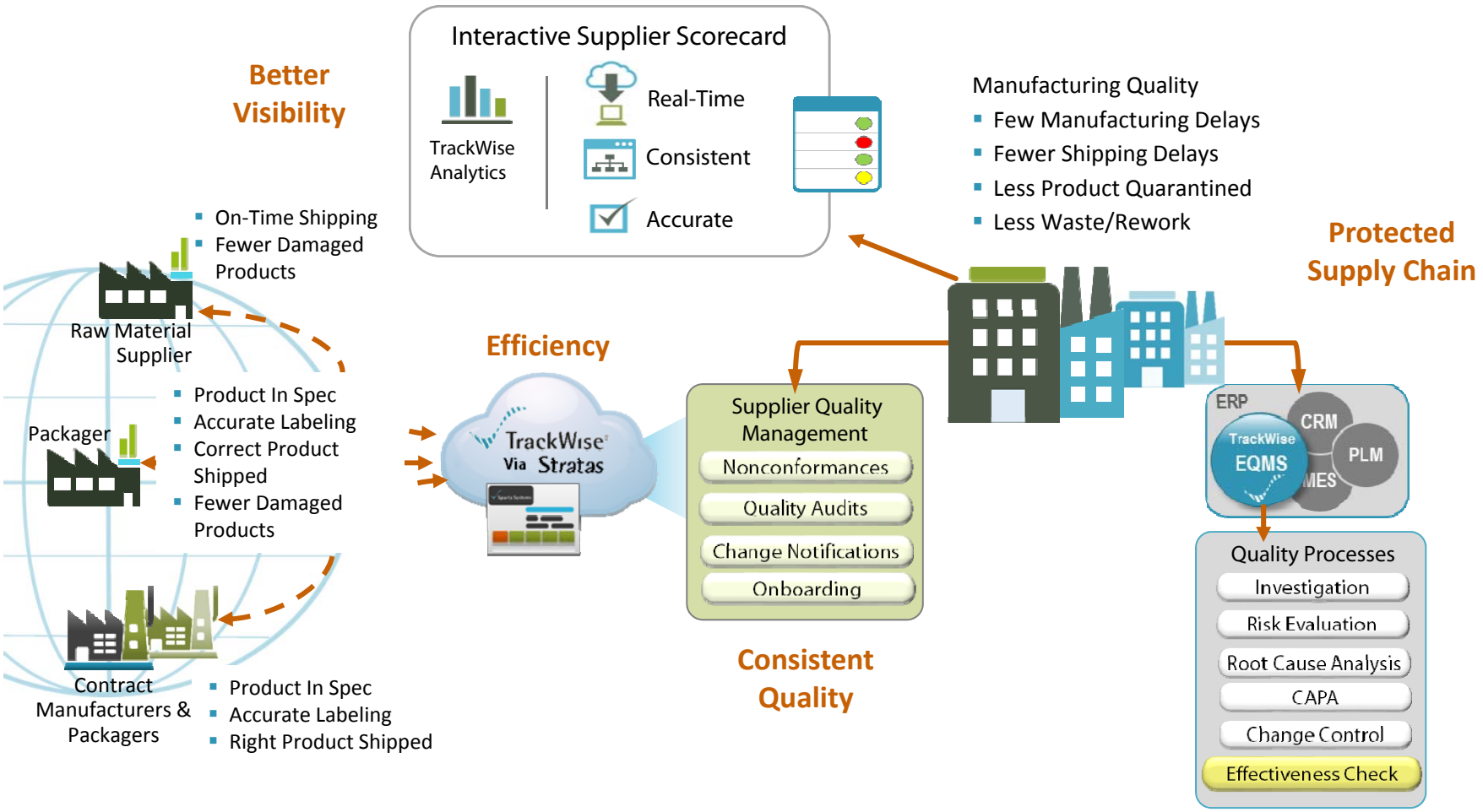


3 categories are under scrutiny by Regulatory Agencies
– Must be fully audited

The Challenge



Addressing the Challenge



Stratas – Supplier Scorecard

Accurate Data When you need it

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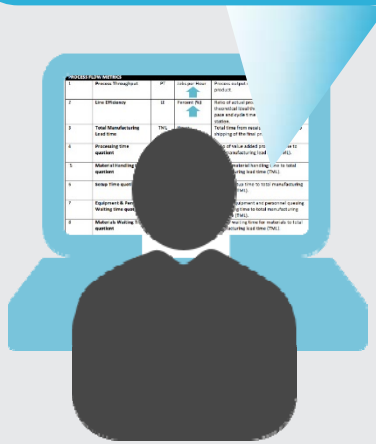
VP Procurement | VP Manufacturing | VP of QA

Supplier Scorecard (Material x Supplier x Manufacturer)

SKPI	Supplier's Score	Supplier Quality Management Impact
Cost Reduction	0	▬
Payment Terms	0	▬
Lead Time Days or Consignment Inventory	0	▬
On-Time Delivery	0	☑
Supplier Business Planning & Innovation	0	▬
Rejection in PPM	0	☑
Quality Systems	1	☑
# of CAR's generated	1	☑
CAR closure time	0	☑
End User Satisfaction Voice of the Plant	3	☑
On Time Delivery	3	☑

Manufacturing Metrics

PROCESS FLOW METRICS				
8	Materials Waiting Time Quotient	MWTQ	Percent (%) ↓	Ratio of waiting time for materials to total manufacturing lead time (TML)
9	Line Efficiency	LE	Percent (%) ↑	Ratio of actual process throughput to the theoretical idea throughput based on the pace and cycle time at the bottleneck station.
QUALITY METRICS				
10	Scrap Rates	SR	Percent (%) ↓	Percentage of units starting as raw material that are lost as scrap from all steps in the process.
11	Rework Rates	RR	Percent (%) ↓	Percentage of units starting as raw material that have to be reworked at least once in the process.
FINANCIAL METRICS				
12	Cost per Part	CPP	$/unit ↓	Total cost per unit for raw materials, processing and indirect overhead.



Net Effects

- ✓ Greater Transparency
- ✓ Better Accountability
- ✓ More Efficiencies

Stratas

Protecting the Supply Chain from Supplier Issues

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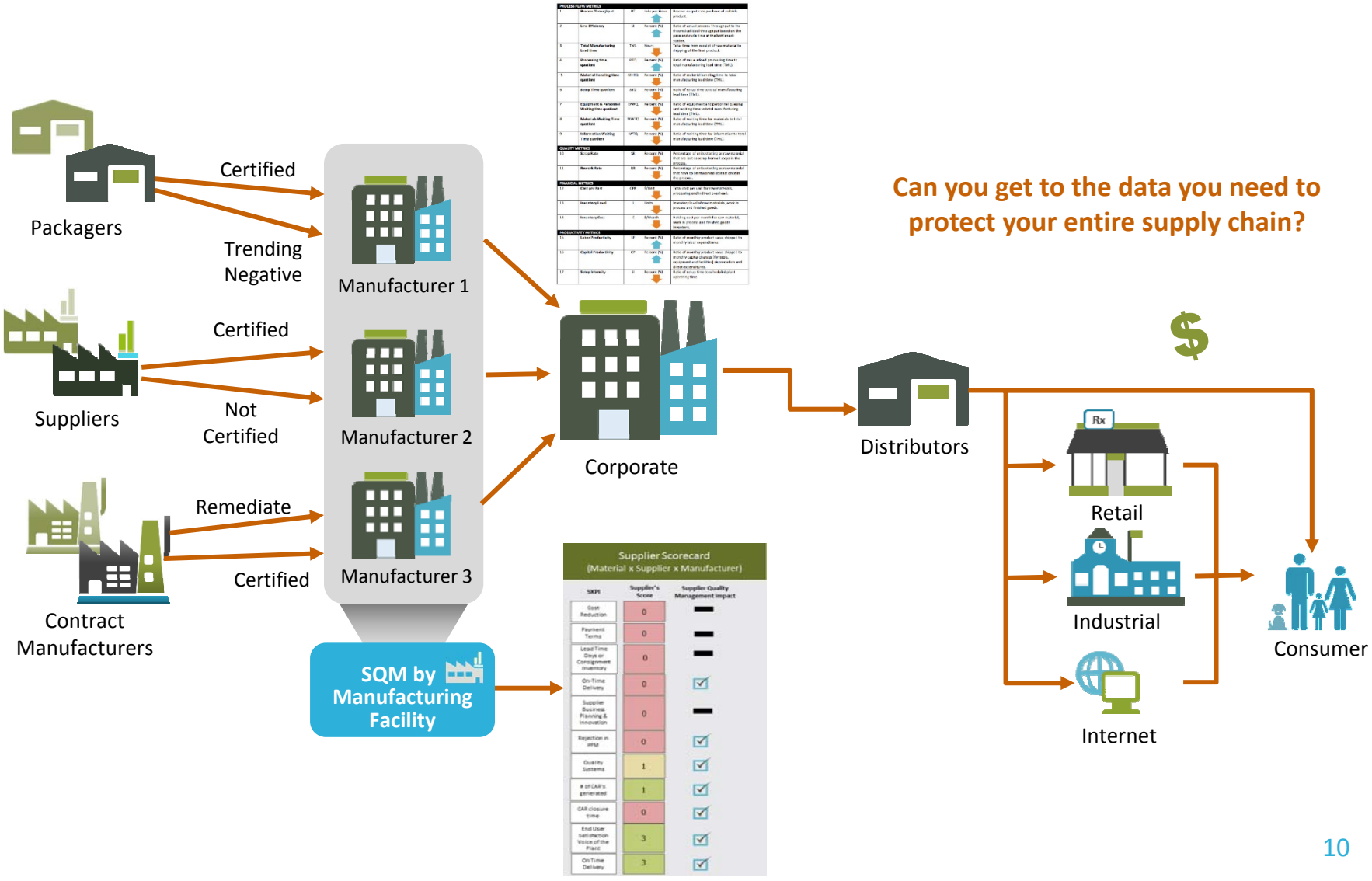

Meeting the Needs of the Organization

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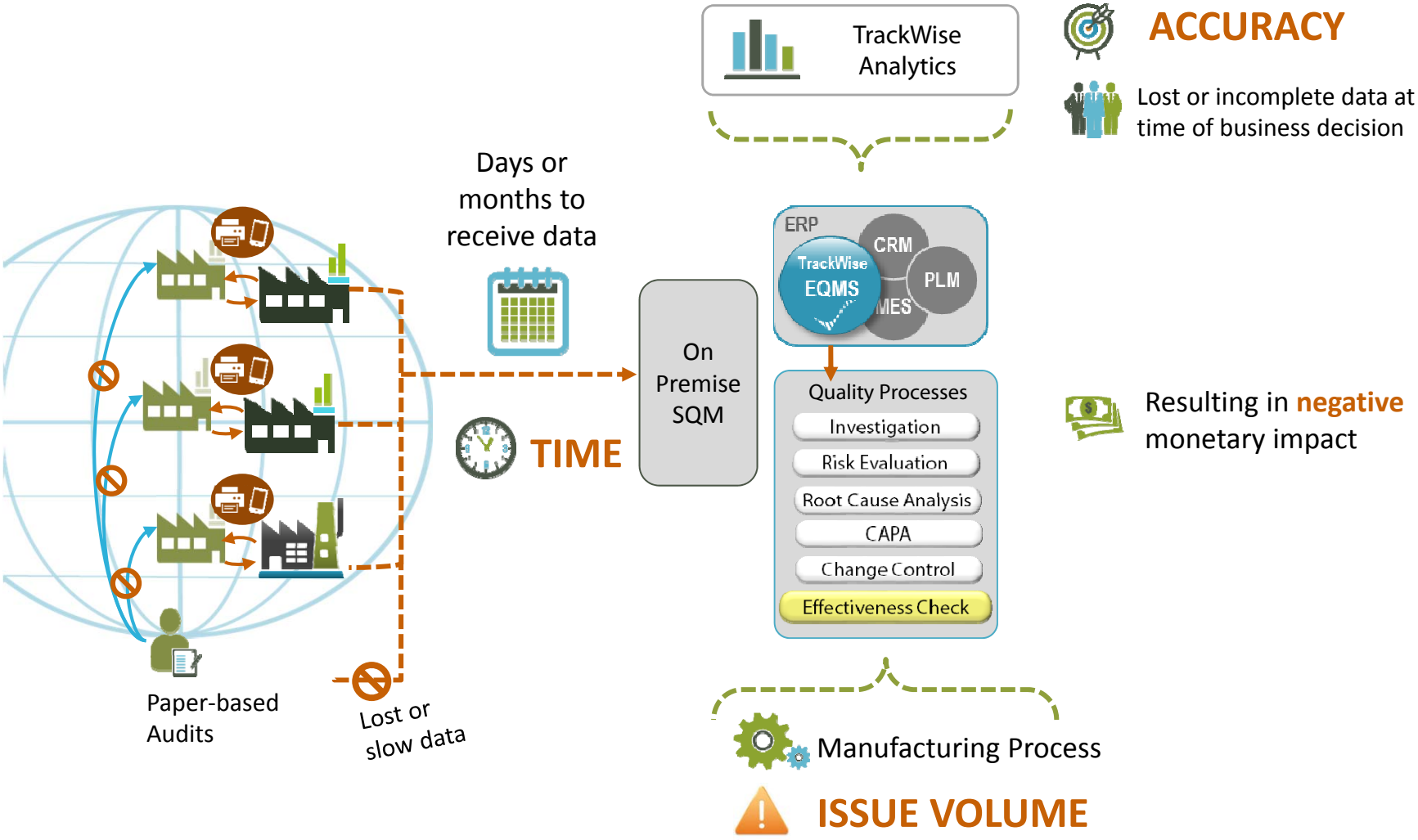
Internal Teams Need to Increase Visibility

IT	QA Processes	Risk/ Compliance
▪ Accuracy ▪ Speed	▪ Supplier Nonconformance ▪ Supplier Audits ▪ Supplier Onboarding	▪ Warning Letters/Decrees (483s) ▪ Recalls

The Challenge
Technology Driving Efficiency & Accuracy



Addressing the Challenge
Technology Driving Efficiency & Accuracy

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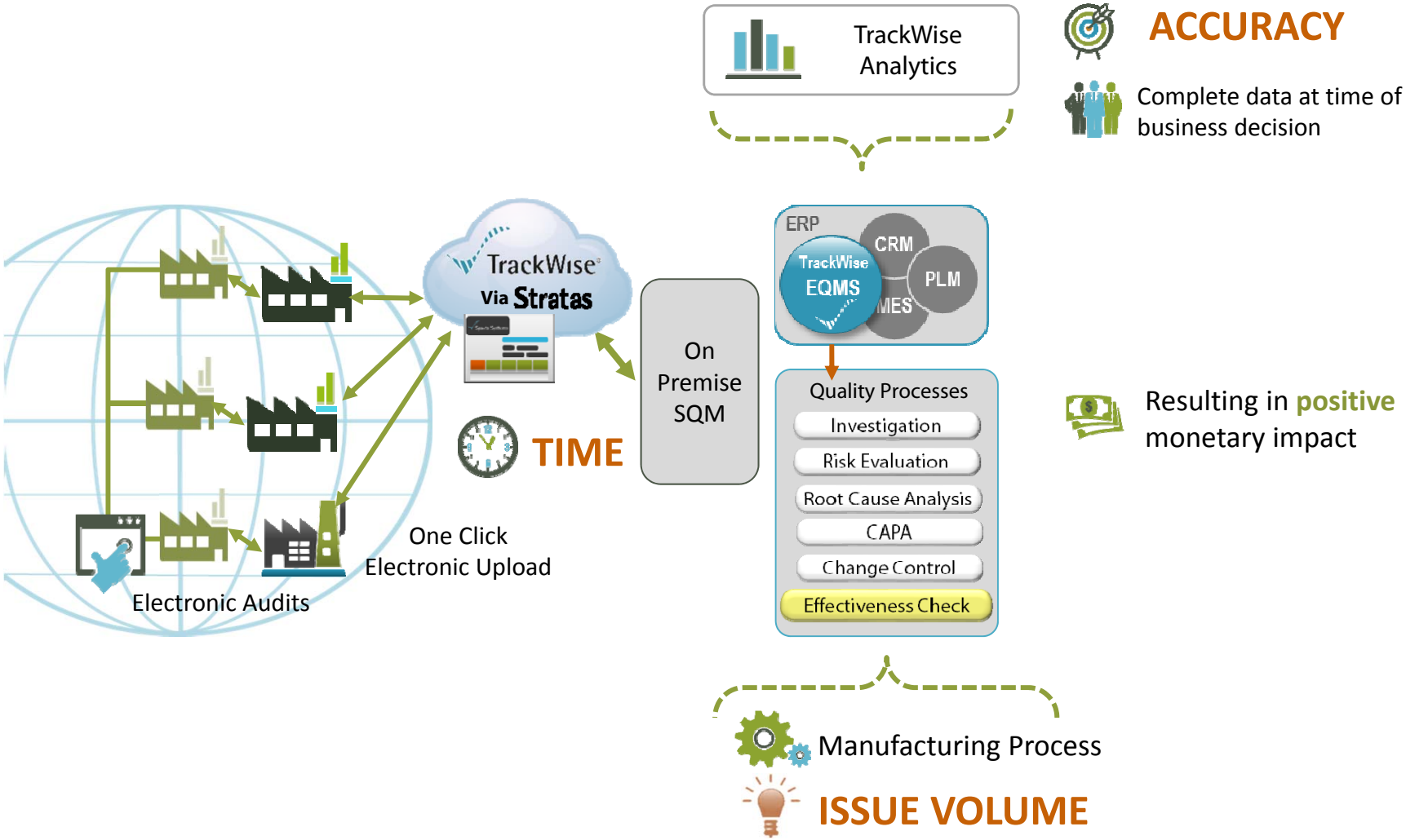
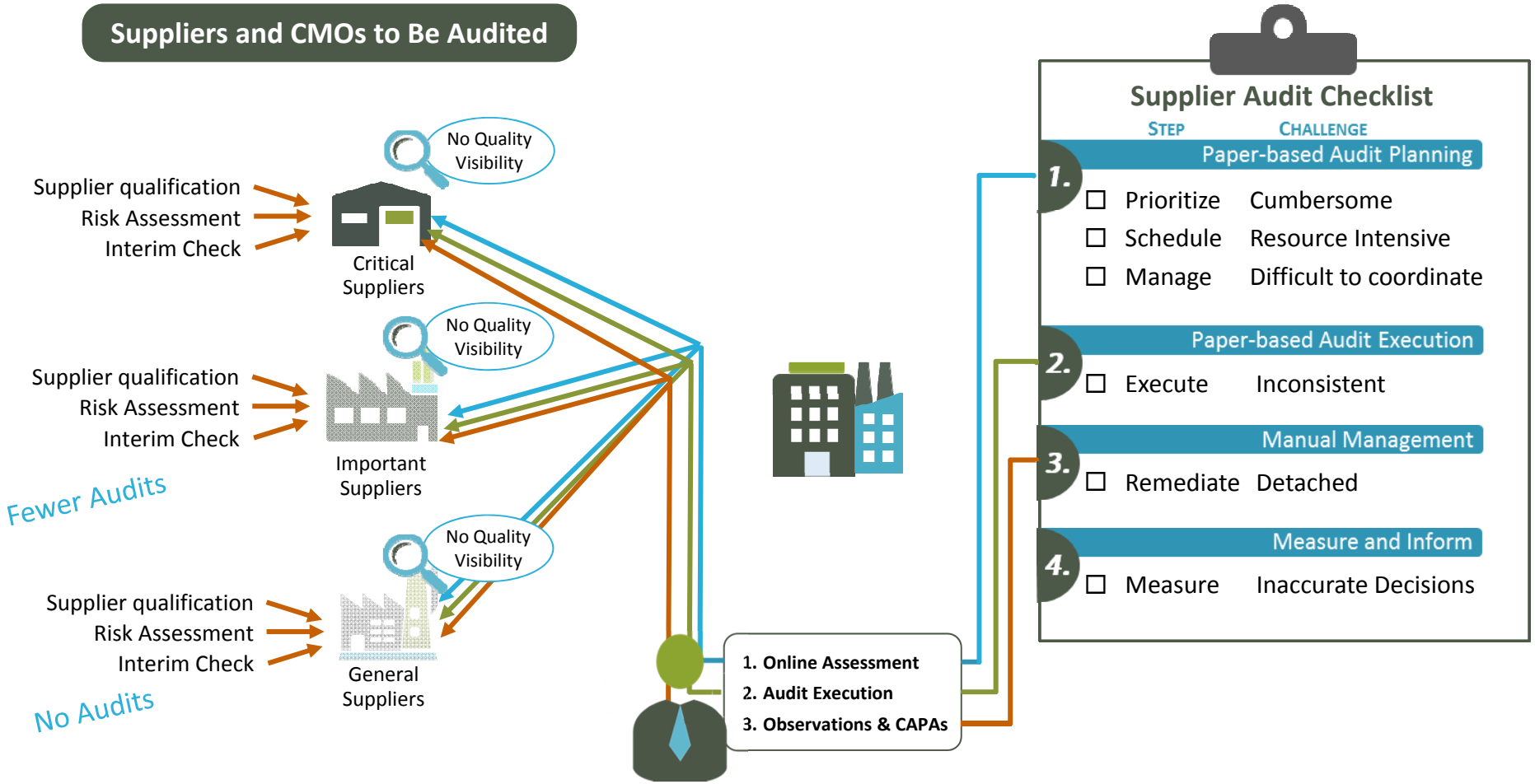


The Challenge
Supplier Audits



Addressing the Challenge
Supplier Audits

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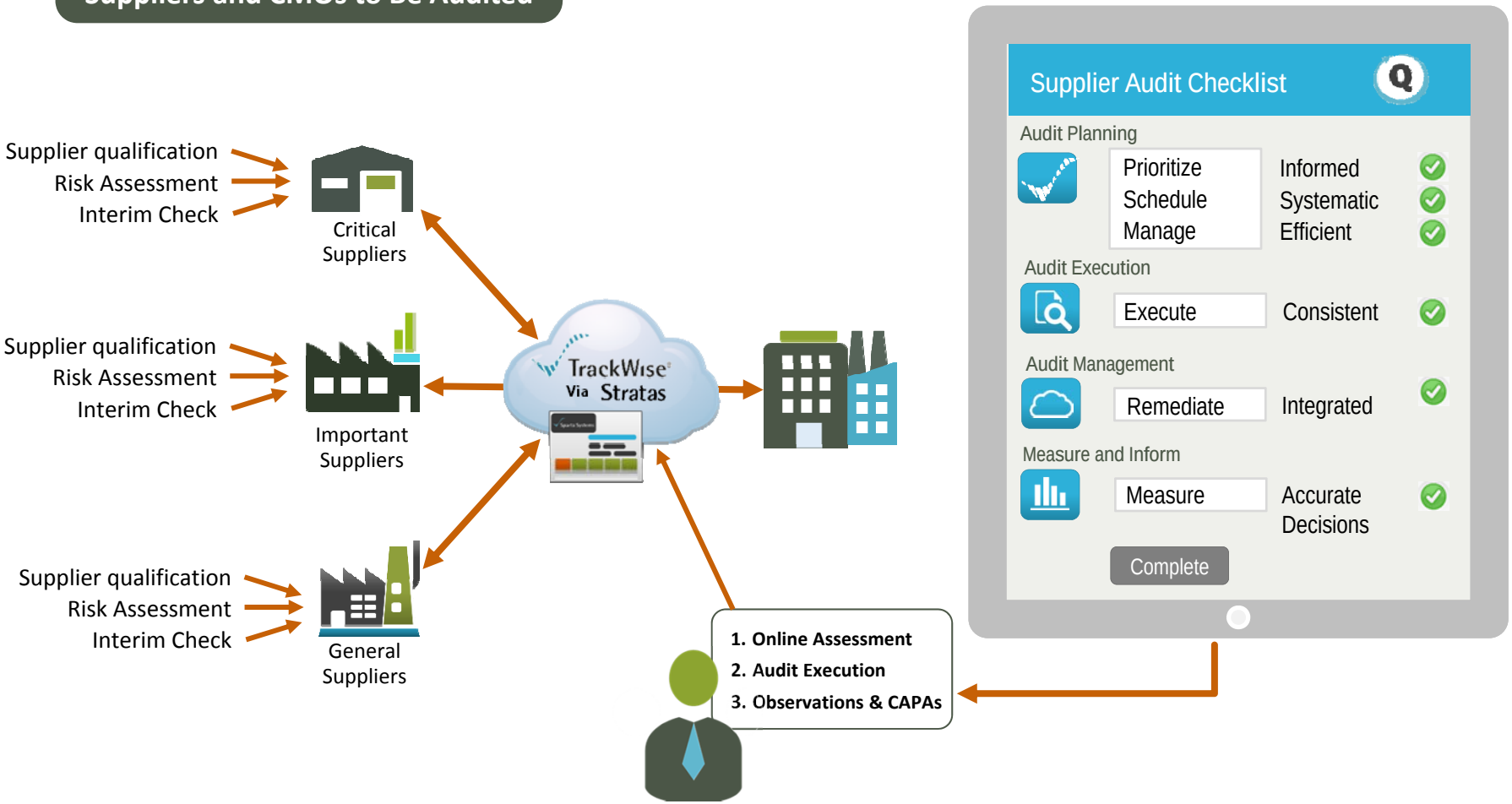
Suppliers and CMOs to Be Audited



The Challenge
Product Non-Conformance

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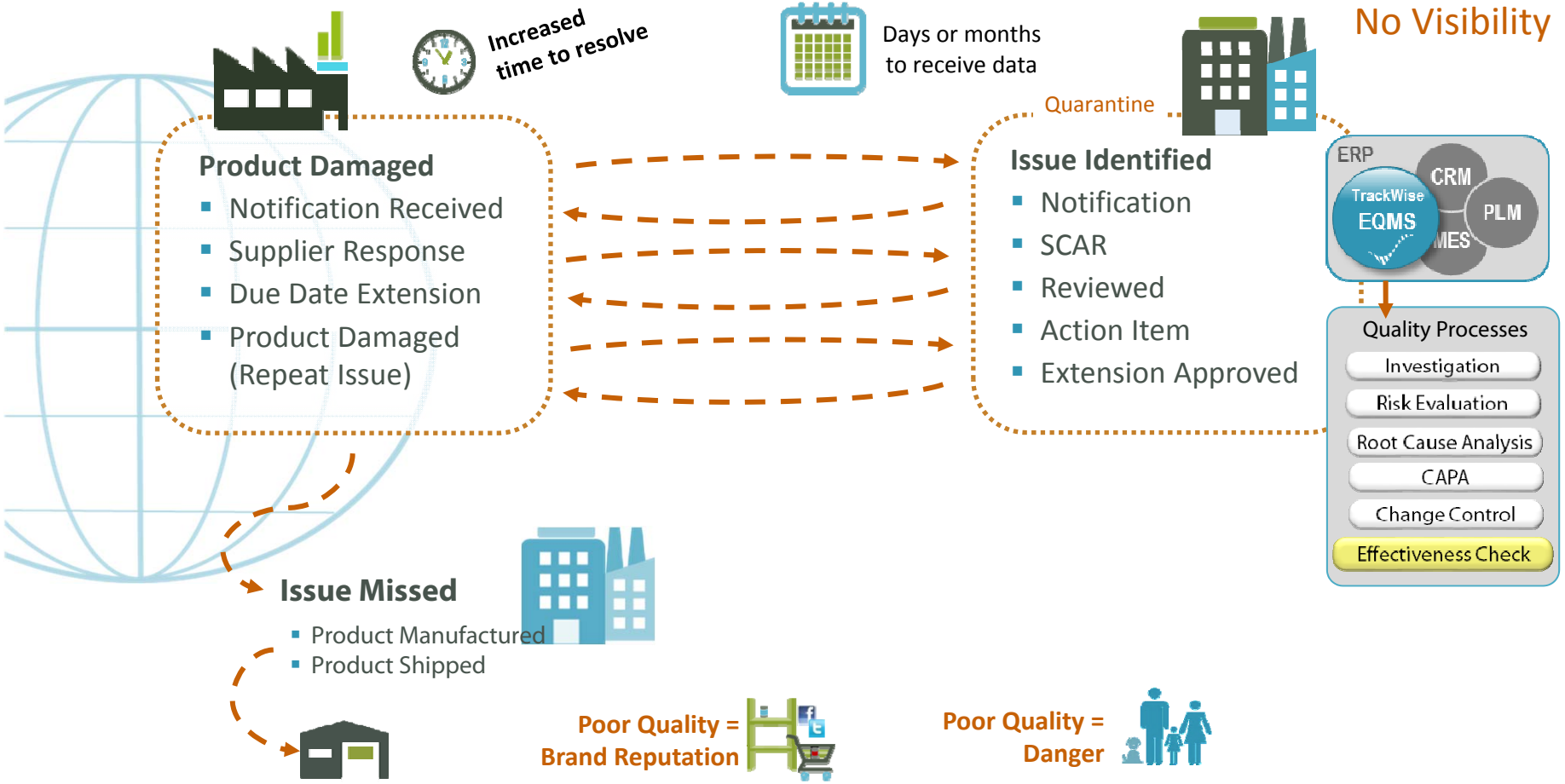
Paper based Management

Slow Response

Detached



The Solution
Product Non-Conformance

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Electronic Record Management

Efficient Response

Connected

TrackWise Analytics

Visibility

Efficient Response
Electronic Record
Management

Product Damaged
- Notification Received
- Supplier Identification
- Root Cause
- CAPA Plan
- Effectiveness Check

TrackWise Via Stratas

Quarantine

Issue Identified
- Notification
- SCAR
- Reviewed
- CAPA Approved
- Action Item
- Reminders

ERP
TrackWise EQMS
CRM
PLM
MES

Quality Processes
- Investigation
- Risk Evaluation
- Root Cause Analysis
- CAPA
- Change Control
- Effectiveness Check

- Product Manufactured
- Product Shipped

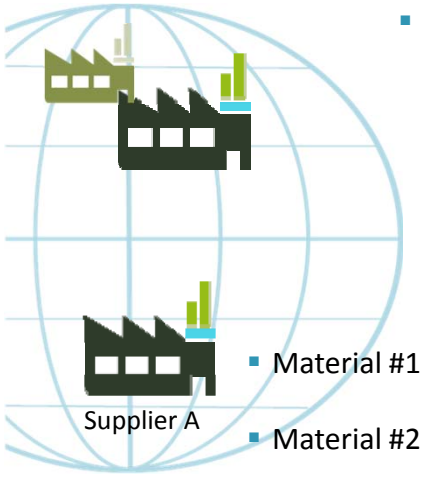
On time

Quality

Safe

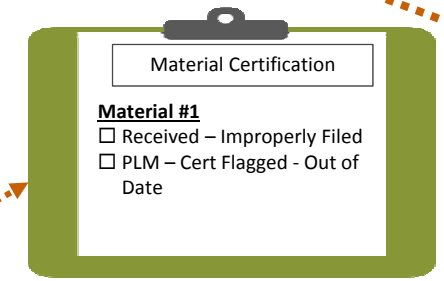
The Challenge
Supplier Onboarding

Poor Onboarding and subsequent management leading to:



Supplier A

- **Onboarding x Supplier x Material**
  - Raw Material x 1,000's
- Material #1 Cert
- Material #2 Cert



- Inconsistent Processes
- Inefficient Management
- Poor Recordkeeping

Manufacturing Facility 2

Less Compliance

More Risk

Higher Costs

Product Manufactured

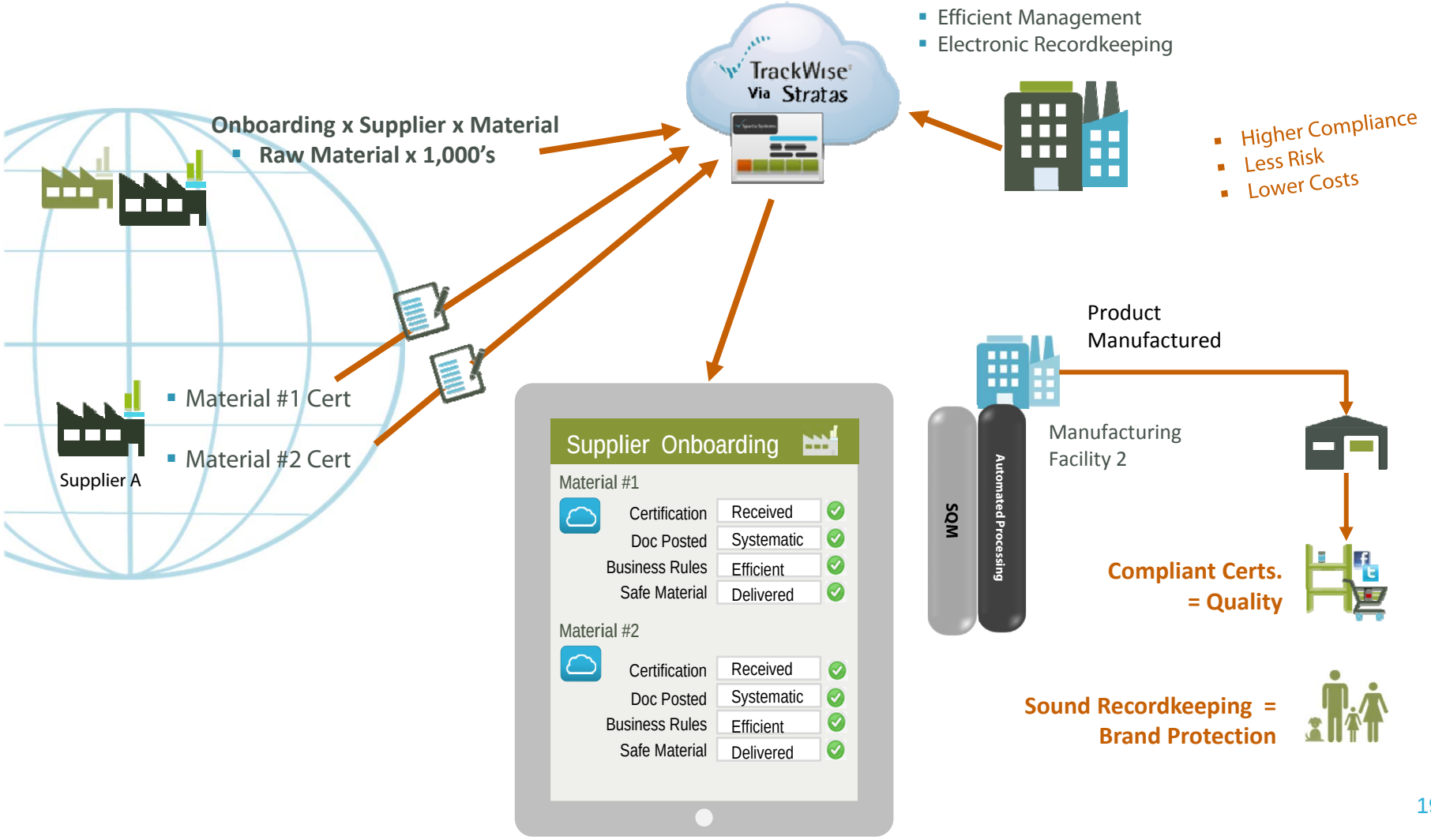
Non-Compliant Certs. = Danger

Poor Recordkeeping = Brand Risk

The Solution
Supplier Onboarding

Automated onboarding and subsequent management leading to:

- Consistent Processes
- Efficient Management
- Electronic Recordkeeping



- Higher Compliance
- Less Risk
- Lower Costs

In Conclusion

Fast and efficient management of information so you are working with complete and accurate data sets

Single integrated quality and analytics platform to narrow in on your most important supplier related issues

Reduction of risk by virtue of better supplier quality management (i.e., protect your downstream interests)

Margin and profit protection as a result of improved operations and a quality consumer experience

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Building a Culture of Quality

Quality's Defining Moment

1950

Deming Prediction after Lecture

Within 5 years, if Japanese manufacturers faithfully follow the principles I've shared, Japan will be ***economically competitive*** and ***consumers worldwide will clamor*** for Japan's products

---

Actual Outcome

18 Months: Quality of Goods ⬆ Productivity ⬆

5 Year Prediction: Beat by 1 year

What Did A Statistician Teach the Japanese about Quality, Management and Business?

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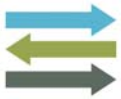
Suggested Fallacy



Results to Cause

- Profits should not drive actions
- Actions should drive profits

Independent Goals

- All businesses are an ecosystem
- Sales are a result of quality, usefulness, inter-departmental cooperation

Best Efforts

- Working harder, or giving more doesn't work
- People need decisions, direction, knowledge and training

Suggested Assertion

A Better Way

- Quality in everything the organization does must be the #1 priority

Old Attitude vs. New

- Organizations must always stay committed to the continuous improvement journey

Quality Impact on Profits

- Quality must be viewed as a driver of profits and not an inhibitor

No Defects

- Product defects must be prevented as they are expensive to manage and fix

Case Study #1: RCA – "Pennywise, Pound Foolish"

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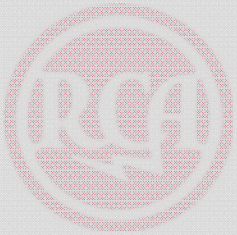
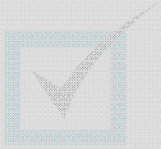


Context

- Mid-80's Worldwide Leader Electronics
- Organization was focused on innovation and thought leadership
- Chairman of RCA maintained an apartment near the R&D facility

Recommendation: Don't work backwards from profits and margins. Focus on research, innovation, quality, consumer needs and execution. The profits will follow

Deming Philosophy: Look Forward, Not Backwards…..



Outcome

- Sharp increase in the # of televisions failing during the warranty period
- Warranty costs (paperwork, personnel, process management) escalated (~25% or more of manufacturing costs)
- Fixing the televisions became prohibitively expensive. The cost of repairs equated to the original manufacturing costs
- Televisions accumulated in warehouses and all had to be written off
- How many RCA customers were lost in the process? How many customers were gained by Sony as they rose in the 80s as the electronics leader?

Case Study #2: ITT

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Context

- In 1961 ITT had sales of $756.6M and earnings of $29M when the new CEO took over
- In 1977 when the CEO stepped down, sales were $16.7B and earnings were $562M
- In the 16 years of business, ITT bought, sold and merged more than 350 businesses

Recommendation: Build a sustainable business with repeatable, and scalable processes that focus on quality and continuous improvement

Deming Philosophy: Arbitrary goals sales goals don't work, arbitrary shipment goals will fail and morale will suffer. *Shortcuts* to reach business goals will mount, snowball and impact margins in the long run

Outcome

- Shareholder value is lost
- ITT's brand is eroded
- Competitors gain market share

Case Study #3: 1980's Ford vs. GM vs. Toyota

<u>Recommendation:</u> Real profits are generated by loyal customers not just satisfied customers. Satisfied customers will try or change brands based on price. Loyal customers brag about the goods and services they are receiving

<u>Deming Philosophy:</u> Deming's philosophy calls for organizations to produce products and services that help people live better. Providing those goods and services is the raison d'etre of an organization. By providing ever improving services and products, an organization develops loyal customers

So what is quality?

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Quality is NOT:

- Preference
- Technology or Features
- Backup Systems or Overdesign

Quality is:

- Understanding the CoPQ
  - Recognizing the cost of the lack of quality
  - Understanding the consequences of better quality in the marketplace
- Uniformity
  - Clear specifications
  - Consistent manufactured output
- Pride of Workmanship
  - Happy employees means more productivity and better quality