
Quality Compliance Educational Materials

~For Maintenance and Improvement of Quality~

1st distribution

Suppliers Quality Management Dept.

Quality Management Functional Div.

Astemo, Ltd.

2025/11/21

What is most crucial for a company is trust.

Building trust requires time and effort, yet it can easily be shattered by a single case of misconduct.

Especially as in recent times, there has been a series of quality-related incidents, and companies causing such problems are faced with harsh public scrutiny.

Needless to say, it is required with the utmost importance to continuously prioritize, maintain, and improve quality.

These materials, designed for the purpose of maintaining and improving quality, consist of 4 basic items.

We request that you utilize the materials as basis for your company's educational activities.

1st distribution (2025.12)

Main1: Risk factors for quality compliance violations

Main2: Organizational structure to ensure compliance

2nd distribution (Planned 2026.03)

Main3: Pursuit of uncompromised quality

Main4: Preparing for compliance violation response

What is compliance?

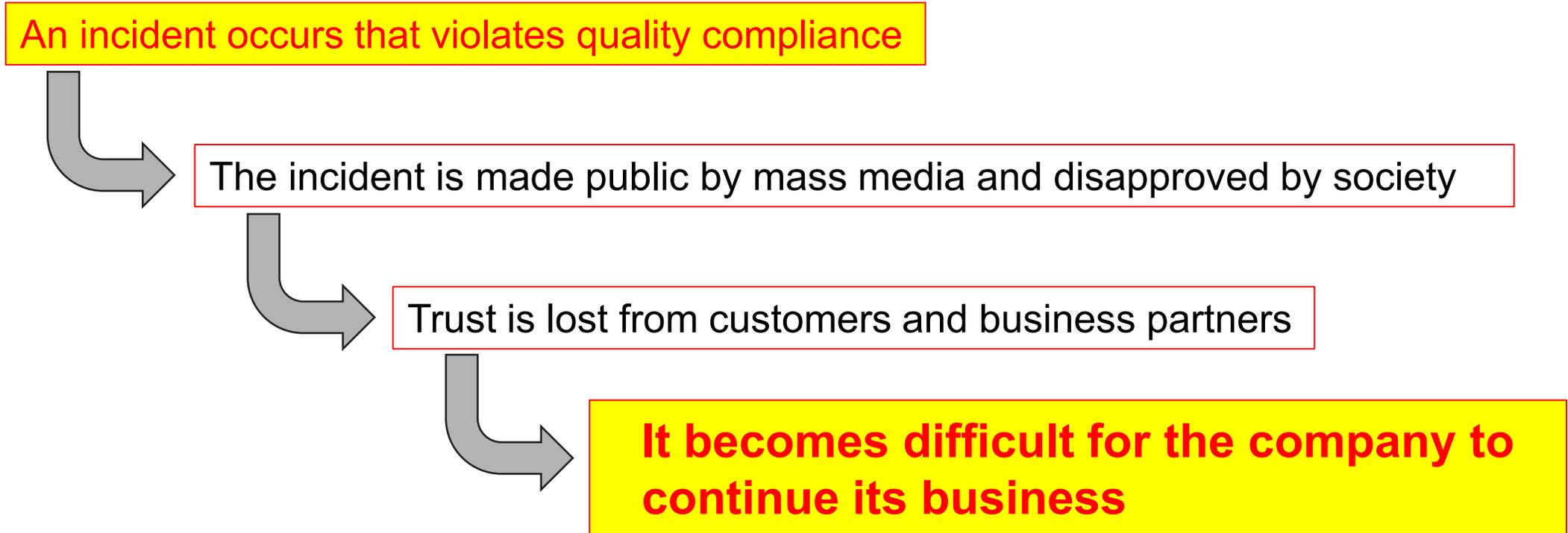
Compliance refers to the adherence of laws, regulations, and social rules by companies and individuals. This includes not only laws, ordinances, and regulations set by the government and administrative organizations, but also social and corporate ethics.

What is quality compliance?

Quality compliance refers to ensuring quality by conducting business in a fair and impartial manner that does not violate social norms. Specifications and requirements of the customer are adhered to, and required duties are performed.

Quality compliance violations are not acceptable

The reason for this is



Note) Quality compliance incidents include not only violation of the law, but also violations of customer contracts and corporate morale.

Key to quality compliance

Understanding “**under what circumstances does a quality compliance violation occur**”

The Fraud Triangle

The three elements that increase the risk of fraud – “Pressure,” “Opportunity,” and “Rationalization”

【Pressure】

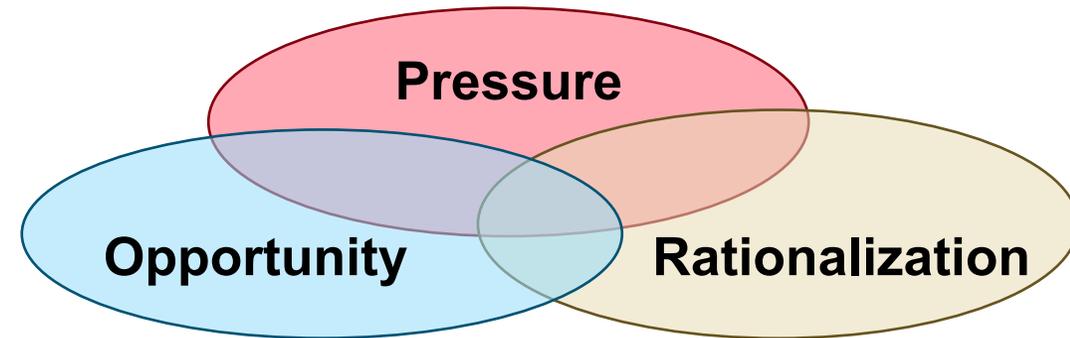
The psychological motivation and the need to commit fraud
Example) Pressure from superiors, demand to meet deadlines

【Opportunity】

Environment where fraud is possible, inadequacies in the QMS system
Example) Environment that enables data falsification

【Rationalization】

Reasoning to ignore one’s conscience and eliminating feelings of guilt
Example) “It’s okay because others have done it, too.”



The Fraud Triangle

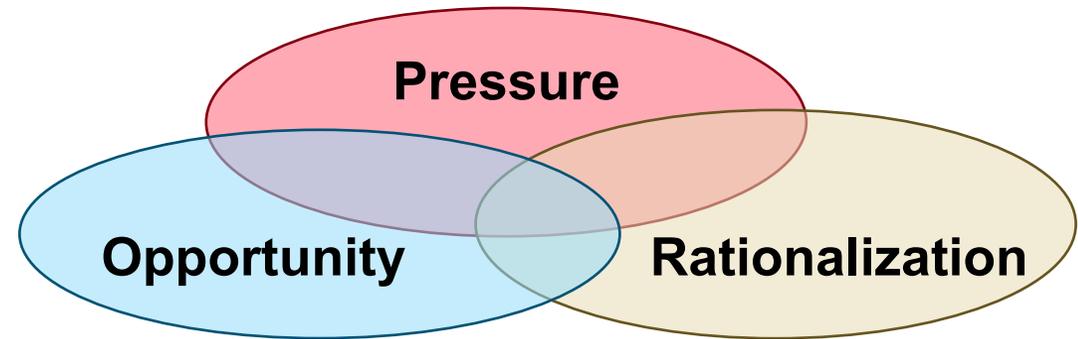
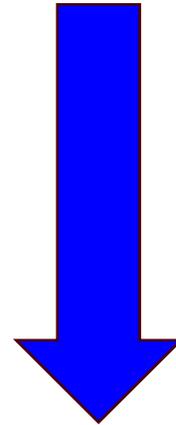
A theory published by the American criminologist Donald Cressey, that analyzes the mechanism on how personnel in an organization cause fraud.

Key to quality compliance

Understanding “**under what circumstances does a quality compliance violation occur**”

The Fraud Triangle

The risk of fraud increases when all three elements, “Pressure,” “Opportunity,” and “Rationalization,” are present.



Therefore,

eliminating the three elements greatly lowers the risk of quality compliance violation

Main1: Risk factors for quality compliance violations

Typical incident that occurred at Astemo's supplier – Case 1: **Falsification of inspection data values**

Summary: Because the process inspection results marginally met the judgment criteria, the values were falsified so that they were near the center of the standard and submitted to the customer.

Analysis from the Fraud Triangle perspective and preventive measures		
Item	Cause/reason	Preventive measure
① Pressure (Psychological motivation)	Despite being within the acceptable range, the results were marginal, to which there had been claims from the customer in the past.	<ul style="list-style-type: none"> • Cause analysis of marginal results and implementation of measures • Revision of standards that reflect manufacturing inconsistencies
② Opportunity (Environment that enables fraud)	The inspection results could be falsely rewritten to values near the center of the criteria range instead of writing the actual values.	<ul style="list-style-type: none"> • Establish a system that does not enable rewriting of inspection data Example) Paste result output sheets from the inspection equipment, photograph the inspection result screen
③ Rationalization (Reasoning to ignore one's conscience)	The results were marginal but still within the acceptable range; it would not be a problem to make small changes in the values.	<ul style="list-style-type: none"> • Foster awareness by issuing top management messages and conducting employee education that falsification of inspection data is a fraud

※ Fraud would have been prevented if measures for the three elements were taken in advance.

Main1: Risk factors for quality compliance violations

Typical incident that occurred at Astemo's supplier – Case 2: **Falsification of production method of samples**

Summary: In the production of samples for the certification renewal process by an external registrar, the production method was tampered with to facilitate approval.

Analysis from the Fraud Triangle perspective and preventive measures

Item	Cause/reason	Preventive measure
① Pressure (Psychological motivation)	Failure to attain approval for certification in one attempt will require the samples to be repeatedly produced and certified	Provide a quality margin that takes into account manufacturing inconsistencies from the time of product designing
② Opportunity (Environment that enables fraud)	When creating the certification samples, the method was able to be changed from the regular production. Example) Material ratios, molding conditions, etc.	Create a system in which the method of making certification samples cannot be changed from that of the product manufacturing method Example) Exclude opportunities by changing the responsible department Sample production method → Manufacturing technology dept. Sample production execution → QA dept.
③ Rationalization (Reasoning to ignore one's conscience)	Because typical values were already obtained, we wanted to avoid rejection due to inconsistencies in sample production. Also, there had never been any problems before with this method.	Foster awareness by issuing top management messages and conducting employee education that falsification of inspection data is a fraud

※ Fraud would have been prevented if measures for the three elements were taken in advance.

To ensure compliance

Main1 of previous distribution = **Approach from contributing factors**

→ Elimination of “pressure,” “opportunity,” and “rationalization,” based on the three elements of the **Fraud Triangle** theory.

Main2 of this distribution = **Approach from the organizational structure**

→ Establishment of a structure with focus on risk management based on the **Three Lines of Defense**.

What is the “Three Lines of Defense”?

- The concept of grouping departments of an organization into **three divisions**, to which **roles (defense lines) are given and managed**

※Supplement: The Three Lines of Defense model is described in the Internal Control – Integrated Framework of COSO*1

(*1 COSO: Committee of Sponsoring Organizations of the Treadway Commission)

Organizational structure based on the three defense lines

- The concept of grouping departments of an organization into **three divisions**, to which **roles (defense lines) are given and managed**

What are the three divisions and their roles?

First line

Business division
(Sites/subsidiaries)

Performs appropriate risk control as the operational manager

Second line

Management division
(Head office functions)

Performs monitoring and constraint over risk control in the first line

Third line

Internal audit division
(Internal audit)

Provides assurance that the internal control system is functioning effectively

- ⌘ Key point 1: No one department or specific personnel should serve roles concurrently in multiple lines.

Main2: Organizational structure to ensure compliance

Organizational structure based on the three defense lines

- The concept of grouping departments of an organization into **three divisions**, to which **roles (defense lines) are given and managed**

What is the relationship between the three lines of defense?



- ⌘ Key point 2: Particularly for the third line, when a specialized department cannot be assigned, appoint a person with access to the **relevant functions (responsibility and authority) and independent of the first line.**

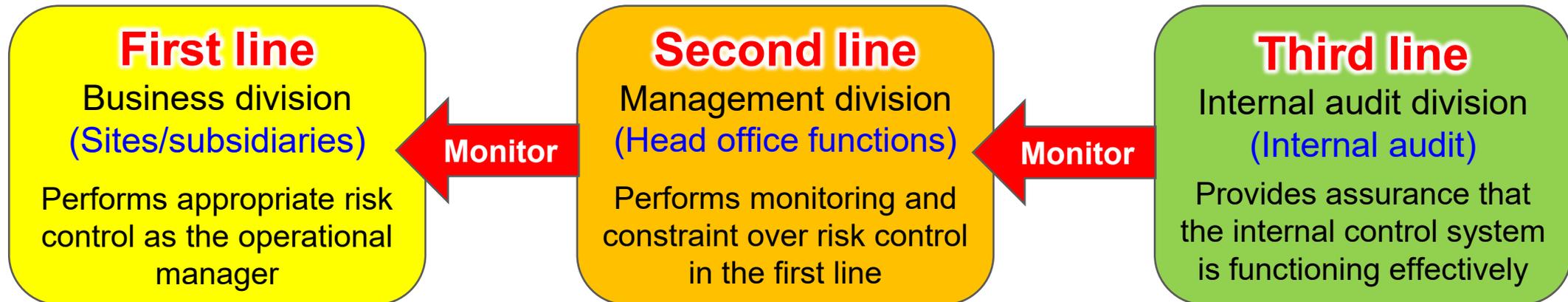
Main2: Organizational structure to ensure compliance

Organizational structure based on the three defense lines

- The concept of grouping departments of an organization into **three divisions**, to which **roles (defense lines) are given and managed**

Examples of defense line composition

Defense line		Composition example 1	Composition example 2
1st line	Business div.	Sites and subsidiaries	Manufacturing, procurement, sales depts.
2nd line	Management div.	Head office	Finance, legal, risk management depts.
3rd line	Internal audit div.	Head office internal audit div.	Internal audit office, independent directors



Case study 1: The collapse of Lehman Brothers

- The event that initiated the introduction of the Three Lines of Defense

At the time of the its collapse,

the first line (investment bank sales division, traders) was taking extreme actions.

- 1) During the housing bubble period, subprime mortgages with lenient screening were sold in large quantities to low-income borrowers.
- 2) The housing bubble burst, causing a subprime mortgage crisis.
- 3) As a result, Lehman Brothers was forced to file for bankruptcy.

Why were extreme actions being taken?

Subprime mortgage risk management and compliance were being neglected in order for individual traders to achieve their sales targets.

Lesson learned

- The second line which stringently monitors the duties of the first line, and the third line which provides assurance from an independent standpoint are both vital and indispensable.

Case study 2: False reporting and changes without notification to the customer

Violation details

- Shipping was continued while appropriate tests agreed with the customer were not being performed, and false reports were made to the customer.
- Design changes were made without the necessary approval of the customer.

Why did the violation occur?

Direct cause: During sales activities, **agreement was made for tests and product specifications that were not capable on site.**

Organizational issue: Internal audits were being performed, but **quality violations could not be identified.**

Corrective measures from the Three Lines of Defense perspective

- First line measure: Strengthening risk control through **self-inspection and audits at each site plant and cross-audits with other site plants**
- Second line measure: Strengthening audit functions by **newly establishing the Quality Audit Section** within the head office Quality Management Functional Division

Case study 3: Production using outsourced contractors without customer approval

Violation details

- Outsourced contractors were used without customer approval.

Why did the violation occur?

Direct cause: Orders exceeding the plant's production capacity were received, causing an urgent need to expand production capacity to avoid delivery delays.

Organizational issue: • Sales and manufacturing departments set separate goals without sharing information. Furthermore, the order system allowed sales to accept orders and set delivery dates regardless of the plant's actual production capacity.

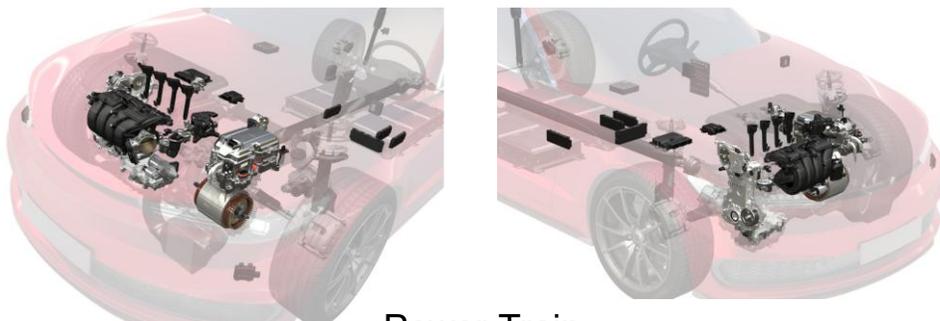
- Unapproved 4M changes were routinely conducted as a means to avoid delivery delays, etc.

Corrective measures from the Three Lines of Defense perspective

- First line measure: Establish a new Order Management Headquarters to centrally manage production capacity and volume of orders and to quantitatively track progress of delivery schedules
- Second line measure: Revise 4M change management regulations and establish a company-wide system to share change details and progress
- Third line measure: Allocate sufficient human resources to the Internal Audit Office to change the audit system into one that is effective and functioning

Supplement: Looking at what lies ahead for products/components manufactured by suppliers

Products and components from suppliers are assembled at Astemo and delivered to automakers. The automakers then assemble the parts into the final products, which are delivered out into the world and into the hands of individual customers. Please always be conscientious about being part of this process.



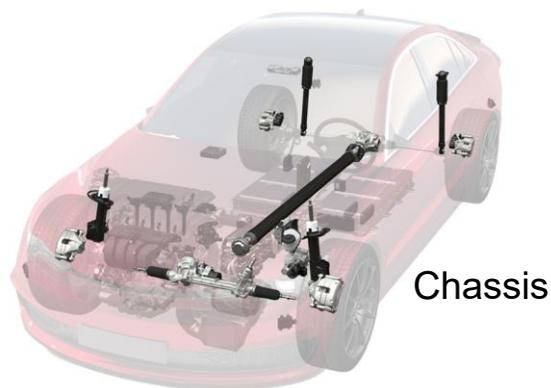
Power Train

Provides a clean engine management system that contributes to reducing environmental impact and an electrical powertrain system that delivers both high environmental performance and driving performance

	<p>Motor</p>	<p>Highly efficient motors for electric vehicles, including hybrids, which are indispensable for promoting environmental protection</p>
	<p>High-Pressure Fuel Pump</p>	<p>Compresses fuel to high pressure (up to 50 MPa) and supplies it to the injectors as commanded by the electronic control unit</p>
	<p>Air Flow Sensor</p>	<p>Detects the amount of air intake into the engine and is installed to control the fuel injection system</p>
	<p>Electronic Control Throttle Body</p>	<p>Controls the amount of air intake supplied to the engine by regulating the degree of valve opening</p>
	<p>Injector for Direct Injection</p>	<p>Injects fuel from the fuel pump as commanded by the electronic control unit directly into the cylinder at high pressure</p>
	<p>Inverter</p>	<p>Composed of a module with built-in power semiconductors, control board, capacitor, current sensor, etc.; and converts energy stored in the battery into AC power to drive the motor</p>

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Chassis

Astemo provides brakes, steering, suspension, and drivetrains that pursue greater safety and comfort by enhancing performance through digitalization and electrification.

	<p>Suspension Strut</p>	<p>Contributes to vehicle performance by not only improving ride comfort but also controlling vehicle posture and driving stability</p>
	<p>Power Steering Pump</p>	<p>Variable displacement pumps offer lower torque compared to fixed displacement types, improving fuel efficiency and enabling application from passenger cars to large trucks</p>

	<p>Automated Parking Brake</p>	<p>Incorporates innovative technology enabling automatic parking for drum brakes, also suitable for compact vehicles</p>		<p>Differential Carrier Assembly</p>	<p>Enables smooth cornering by transmitting the engine's driving force through various gear types and absorbing the rotational difference between the left and right wheels</p>
	<p>Electric Servo Brake</p>	<p>Astemo's e-Actuation solution. Provides the functionality required for electric vehicles when combined with ESC.</p>		<p>Propeller Shaft</p>	<p>Equipped with the function to absorb vehicle impact in the event of a collision, reducing risk of damage to passengers</p>

Astemo

Mobility Beyond