Accelerating Audit Fieldwork Using Visual Constructs

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Professional Techniques – T33

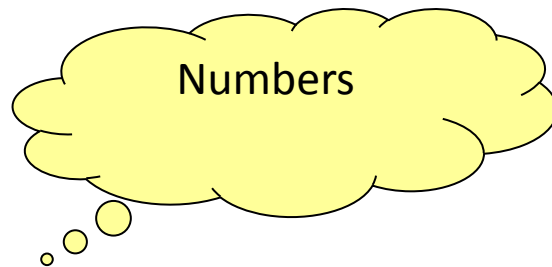# ACCELERATING AUDIT FIELDWORK USING VISUAL CONSTRUCTS

Key Points

- Introduction: Numbers and Visuals
- Using Visuals to identify controls gaps
- Cross-functional Diagramming to identify issues
- Cause and effect diagramming to identify the root cause
- Leveraging visuals for audit findings
- Summary

Key Points

- Thought Process: Numeric and Visual

Numbers

Visuals

Numbers are precise	Visuals are expressive
Provide numerical **strength** to an argument	Provide common grounds of understanding and credibility with auditees
Auditors are trained to think in numbers	Provide an opportunity to visually **focus** on control weaknesses/issues

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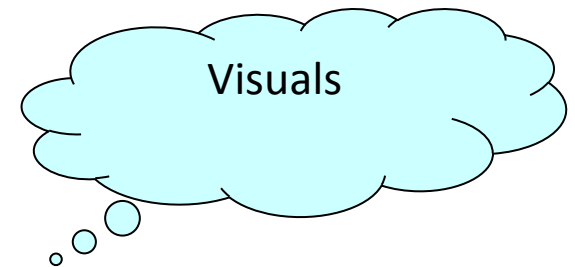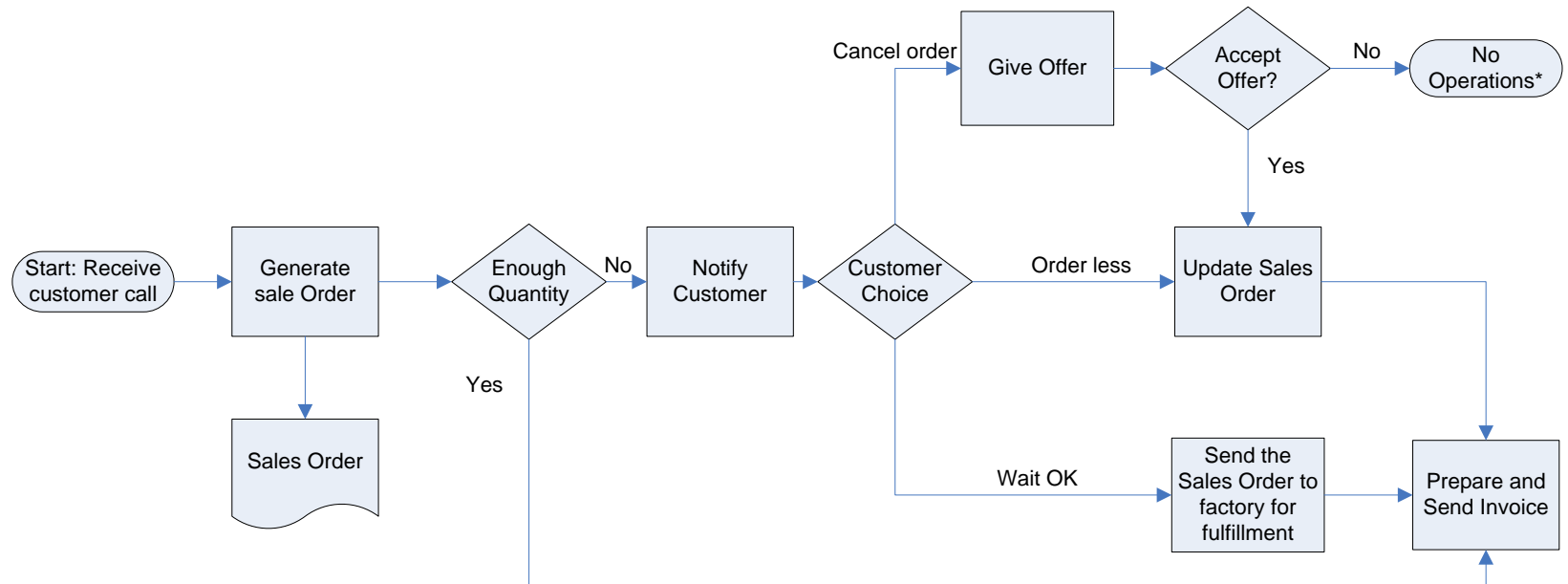- Leveraging visuals for audit findings
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Visuals to identify control gaps

- During the information gathering/ interview sessions with the auditees, use simple flow-charting to describe the audited process

- Use process flow-chart to have a common understanding of the process

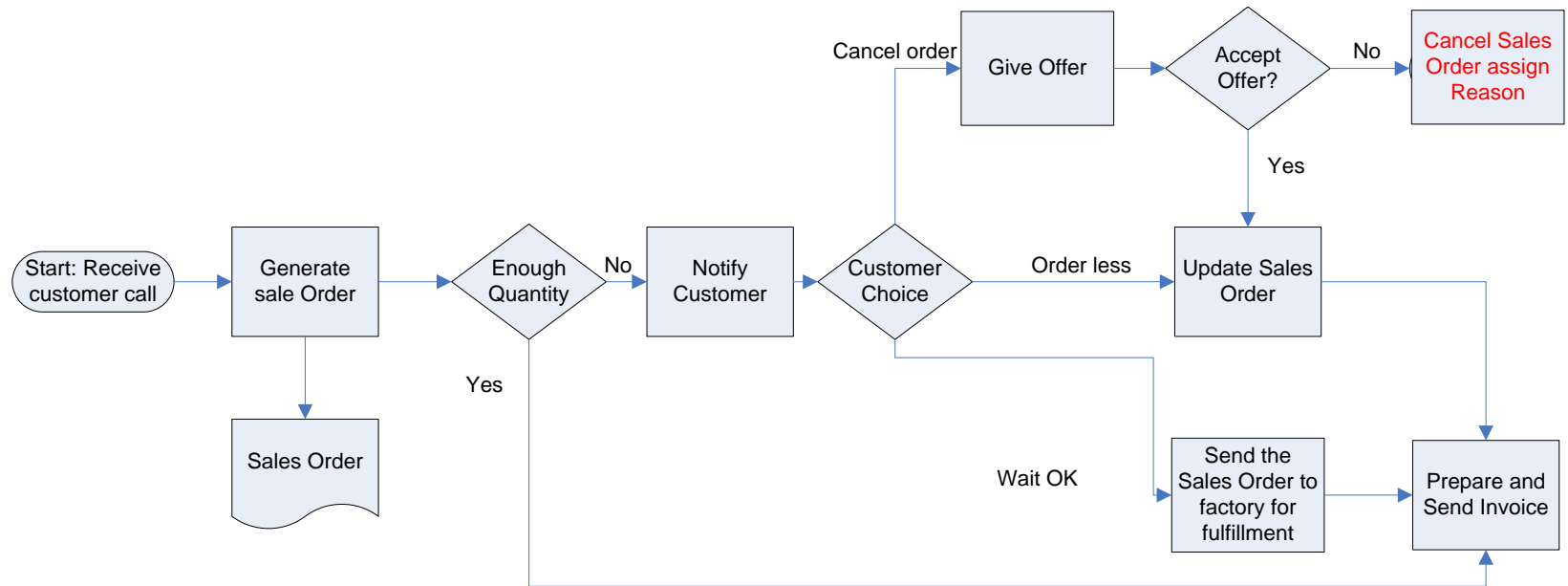- The emphasis is to identify controls or lack of controls in the process

Visuals to identify controls gaps: Example

Sales Order Processing

Visuals to identify controls gaps: Example

Sales Order Processing

Flowchart:

Start: Receive customer call → Generate sale Order → Enough Quantity?

- Generate sale Order → Sales Order
- Enough Quantity? → Yes (down)
- Enough Quantity? → No → Notify Customer → Customer Choice
  - Customer Choice → Cancel order → Give Offer → Accept Offer?
    - Accept Offer? → No → **Cancel Sales Order assign Reason**
    - Accept Offer? → Yes → Update Sales Order
  - Customer Choice → Order less → Update Sales Order
  - Customer Choice → Wait OK → Send the Sales Order to factory for fulfillment → Prepare and Send Invoice
- Update Sales Order → Prepare and Send Invoice

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Cross-functional Diagramming

- Also known as Swim-Lane Diagramming

- The cross-functional flowchart differs from other flowcharts: processes and decisions are grouped visually by placing them in lanes.

- Parallel lines divide the chart into lanes, with one lane for each person, group or sub-process.

- Lanes are labeled to show how the chart is organized

Cross-functional Diagramming

Scenario: eBusiness Program Management

- Auditing a cross-departmental program to develop eBusiness applications.

- Use Cross-functional Diagramming to identify weaknesses and gaps in controls, and a possibility of fraud or misrepresentation.

Cross-functional Diagramming

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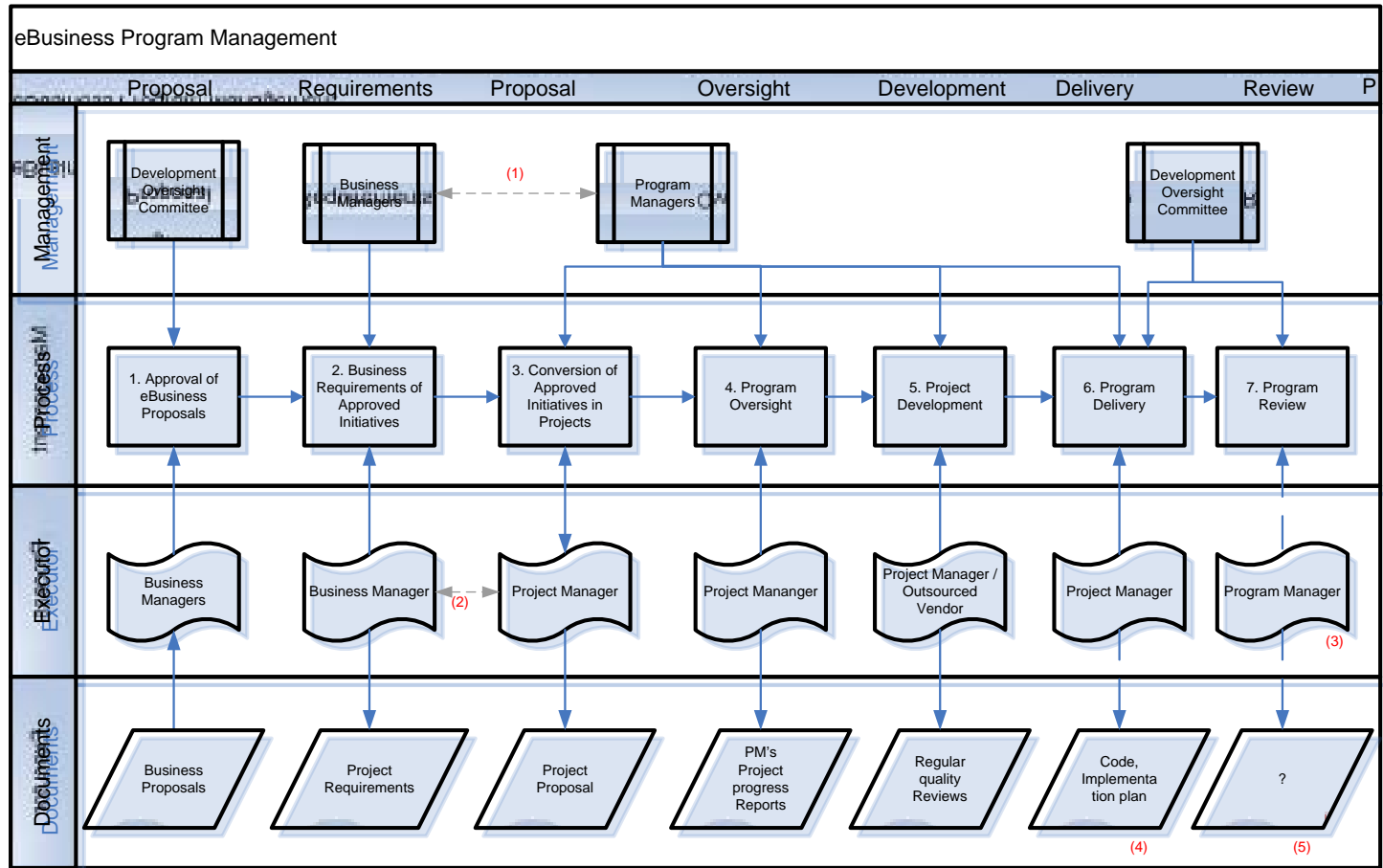
Cross-functional Diagramming

- When used for a business process spanning multiple departments or functions, Cross-functional Diagramming is useful in identifying the following:
  - Process steps in a lane and who is responsible for each of them
  - Control points or gaps
  - Issues: where are delays, errors or frauds most likely to occur

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Cause and Effect Diagram

- Cause and effect diagrams were invented in Japan in 1943 by Kaoru Ishikawa

- An aid to visually sort out different related factors in a complex process

- Often referred to as fishbone diagrams because of their shape

Cause and Effect Diagram for Audit/ Forensic Investigation

Scenario: Data Breech at a retailer

- Intruders may have accessed the RTS [retail transaction switch] servers and Personally Identifiable Information (PII) due to a weak or inadequate encryption Wireless standard (WEP)

- Use of Cause and effect diagram provides structure for an audit investigation
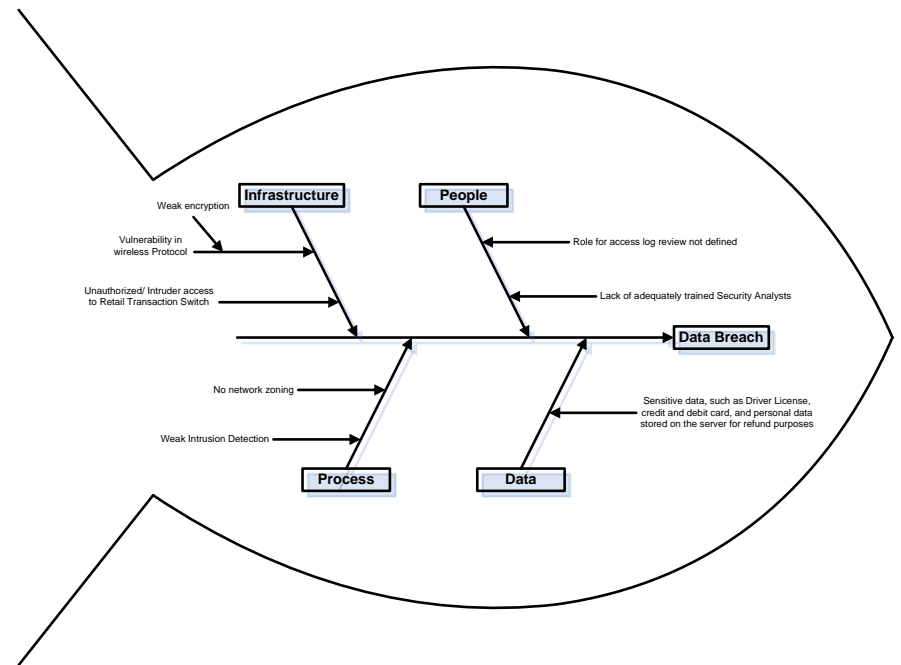
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Cause and Effect Diagram for Audit/ Forensic Investigation

- First, identify major categories of investigation, for example:
  - People
  - Infrastructure
  - Process
  - Data

- There could be additional categories

Infrastructure People

Data Breach

Process Data
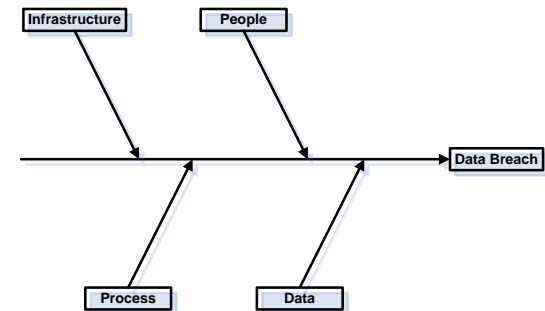
Cause and Effect Diagramming

- Then analyze the causes that affected the categories for a data breech.

- When data is arranged in this fashion, it facilitates investigation of each factor to determine:
  - if it is in control
  - down stream impact

Infrastructure

Weak encryption

Vulnerability in wireless Protocol

Unauthorized/ Intruder access to Retail Transaction Switch

People

Role for access log review not defined

Lack of adequately trained Security Analysts

Data Breach

No network zoning

Weak Intrusion Detection

Sensitive data, such as Driver License, credit and debit card, and personal data stored on the server for refund purposes

Process

Data

Cause and Effect Diagramming

Infrastructure

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Weak Intrusion Detection

Process

Data

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Cause and Effect Diagramming

- Conclusion was that retailer did not have reasonable security arrangements in place at the time of the breach.

- Too much sensitive information was retained, and safeguards in place had inherent weaknesses.

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Leveraging visuals for audit findings

- The IIA's Practice Advisory 2410, Communication Criteria, emphasizes audit findings should be based on the following attributes:

    - **Criteria**: What should exist.

    - **Condition**: What does exist.

    - **Cause**: Why the difference exists.

    - **Effect**: The impact of the difference.

    - **Recommendation**: How to bring the condition and the criteria into agreement.

Leveraging visuals for audit findings

- Using visuals to do the following:
    - Identify control gaps (conditions)
    - Differentiate between:

        "clean up the spider webs" – fix only the current issue

        and

        "kill the spider" - address the root cause to mitigate future occurrences

    - Bring the condition and criteria into agreement

Leveraging visuals for audit findings

Advantages	Cautions
Demands an understanding of the operations being reviewed	Can be detailed if the operations are complex
Provides a "pop out" of operational controls/ gaps	May allow unnecessary discussions of complex operations
Easy to create a baseline reference and subsequent upgrades	May require learning of a flow-charting tool, such as Microsoft Visio, Flow Charting 6 for Windows, etc.
It is easier to comprehend, provides a map, since "a picture is worth a thousand words"	Both auditors and auditees must have a common understanding of symbols and flow-chart standards.

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Summary

- There are powerful visual constructs available for audit

- If used carefully the visuals can:
  - provide a map of the information flow in an audit domain
  - highlight the controls and control gaps

- Visual representations also help to articulate audit findings and provide excellent means of documentation

Q & A