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C33: Accelerating System Development: IT Audit Fieldwork Using Visual Constructs

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San Francisco Chapter

Accelerating Audit Fieldwork Using Visual Constructs

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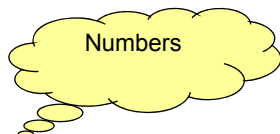FOCUS 102010 ISACA San Francisco Chapter

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Key Points

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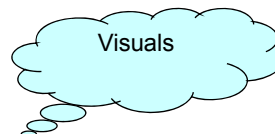o Leveraging visuals for audit findings
o Summary

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Introduction

o **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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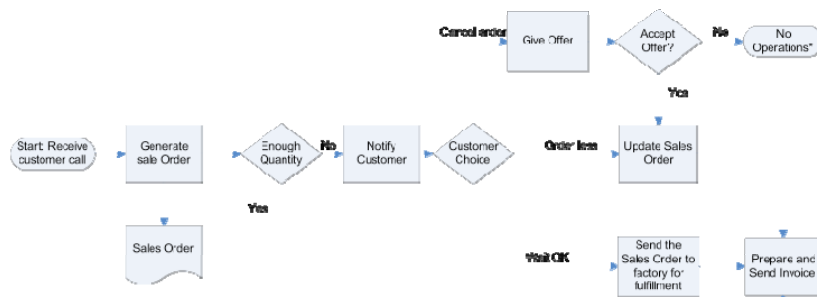ISACA
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Visuals to identify control gaps

- 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

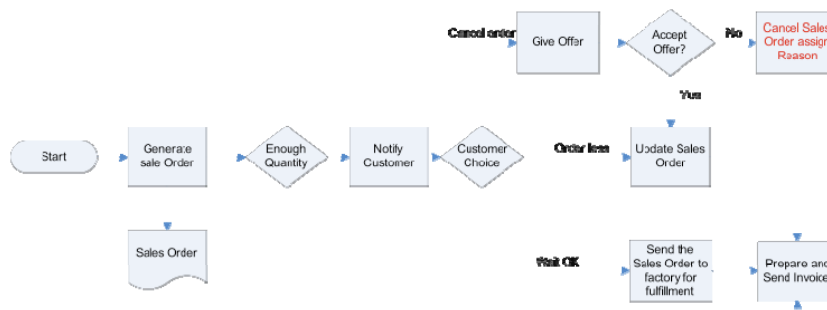- The emphasis is to identify controls or lack of controls in the process

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Visuals to identify controls gaps: Example

Sales Order Processing

Visuals to identify controls gaps

* Control Gap: Reconciliation of actual production and consumption against ordered values?

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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.

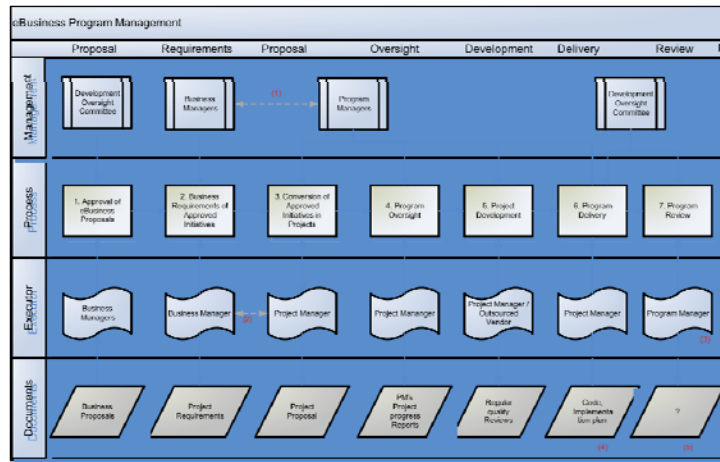- Lanes are labeled to show how the chart is organized.

Cross-functional Diagramming

Scenario: eBusiness Program Management

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

- Use Cross-functional Diagramming to identify eakness and gaps in controls, and opportunity of fraud/ misrepresentation

Cross-Functional Diagramming

Cross Function Diagramming

- o **When used for a business process spanning multiple departments or functions, Cross Function 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 delays, errors or frauds are most likely to occur

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Cause and Effect Diagram

- Cause-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

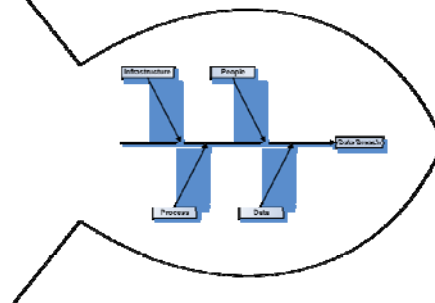# Cause and Effect Diagram for Audit Investigation

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)
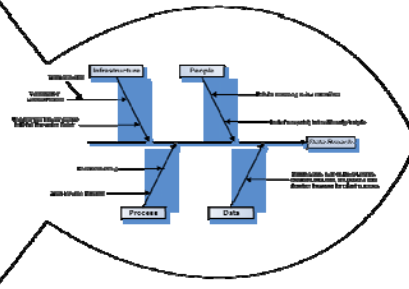- Use of Cause-Effect Diagram for audit investigation

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Cause and Effect Diagram for Audit Investigation

- First, identify major categories of investigation, for example:
  - **People**
  - **Infrastructure**
  - **Process**
  - **Data**
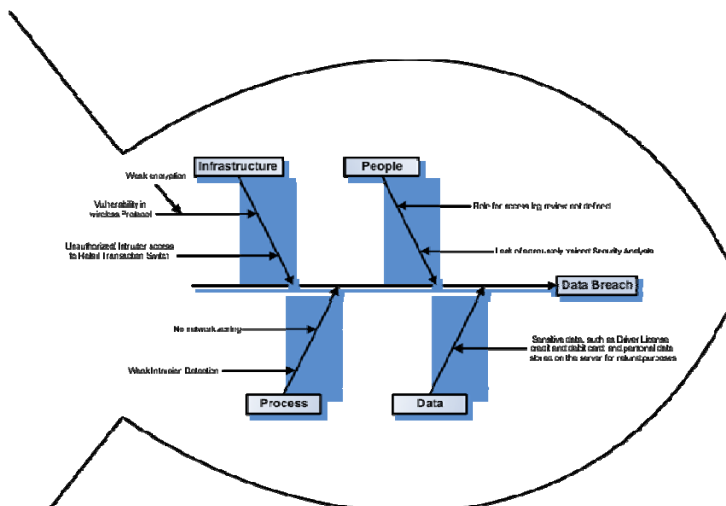- There could be additional categories

Cause-Effect Diagramming

- Now let us analyze the causes that affected the categories for a data breech. When we have arranged the data in this fashion, we can investigate each factor and determine if it is in control.

Cause-Effect Diagramming for Audit

Cause-Effect Diagramming

o We conclude the retailer did not have reasonable security arrangements in place at the time of the breach.

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

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Leveraging visual logic for audit findings

o 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 criteria into agreement

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Leveraging visual logic for audit findings

o **Using Visuals to identify:**
 – Control gaps (conditions)
 – Cause and effect
  o **Differentiate between "cleaning up the spider webs" (simply fixing the current problem) and "killing the spider" (addressing the root cause to mitigate future occurrences)**
 – Bring the condition and criteria into agreement

Visual Construct for Audit

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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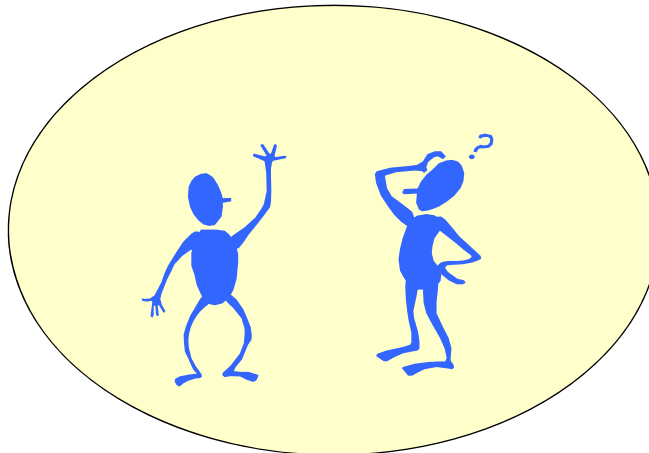- o **Summary**

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Summary

o There are powerful visual constructs available for audit

o If used carefully, the visuals may provide an optimal map of the flow of information in an audit domain, and highlight the controls, and control gaps

o The visual representations also provide aid to articulate the audit findings and an excellent means of documentation

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Q&A