

Incorporating Lean Six Sigma into the Internal Audit Process

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Agenda

- Background
- Learning Objectives
- Six Sigma vs Lean Overview
- Tools of the Trade
- Audit Management Process Review
- Conclusion and Questions

Introduction – Why should I listen?

- Not your typical internal auditor
 - General Electric – IMLP & Corporate Audit Staff
 - Ceridian Corporation – Enterprise Risk Management
 - The Mosaic Company – Risk Advisory & Assurance
 - Grant Thornton – Business Advisory Services
 - Workiva – Product Marketing
- Professional Certifications
 - Certified Internal Auditor (CIA)
 - Six Sigma Black Belt
 - Executive MBA

Learning Objectives

- Gain an understanding of the fundamental differences between Six Sigma and Lean principles
- Provide an overview of “Lean Thinking” and the most commonly used Lean Six Sigma tools
- Identify opportunities to integrate Lean Six Sigma principles within the Audit Management process

Why do companies fail?

Why Do Companies Fail?

"If your firm does not have the ability to learn and improve, it will soon be out of business."

- Professor Arthur Hill, Carlson School of Management

Motivation

1. All “work” is a process.
2. All processes can be improved.
3. All processes can be improved by making them faster, better, stronger, and cheaper.
4. Faster, better, stronger, and cheaper processes add more value to the world.

A grayscale photograph of a group of business professionals in a meeting. A woman on the right is smiling and gesturing with her hands. The image is overlaid with a semi-transparent dark gray filter. The text 'Six Sigma vs Lean Overview' is centered in the middle of the image. The word 'Overview' is highlighted in a bright green color, and it is surrounded by a decorative graphic of six green lines radiating from a central point, resembling a starburst or a stylized 'X' shape.

Six Sigma vs Lean Overview

Six Sigma vs. Lean Six Sigma

	Six Sigma	Lean
Origin	Motorola Quality Function	Toyota Factory Floor

Six Sigma vs. Lean Six Sigma

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Philosophy	<ul style="list-style-type: none">• Data-driven decision making• Leadership development	<ul style="list-style-type: none">• Simple, error-proof, standardized• Involve “GEMBA” in process

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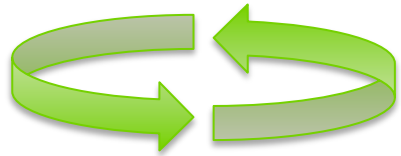
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Criticisms	<ul style="list-style-type: none"> • Too much “Greek” • Projects take too long 	<ul style="list-style-type: none"> • Too much “Japanese” • Projects too focused

Best of Both Worlds – Principles



+

6σ

=



LEAN

Reduce waste by
reorganizing a process

SIX SIGMA

Reduce defects by
solving problems

LEAN SIX SIGMA

Reduce waste and solve
problems to become faster
and more efficient

Lean Six Sigma & the IPPF Standards

According to the Institute of Internal Auditors (IIA):

“...an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.”

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GOAL: To become a trusted business advisor that adds value

- How do we add value?
- Why is it so difficult to achieve?

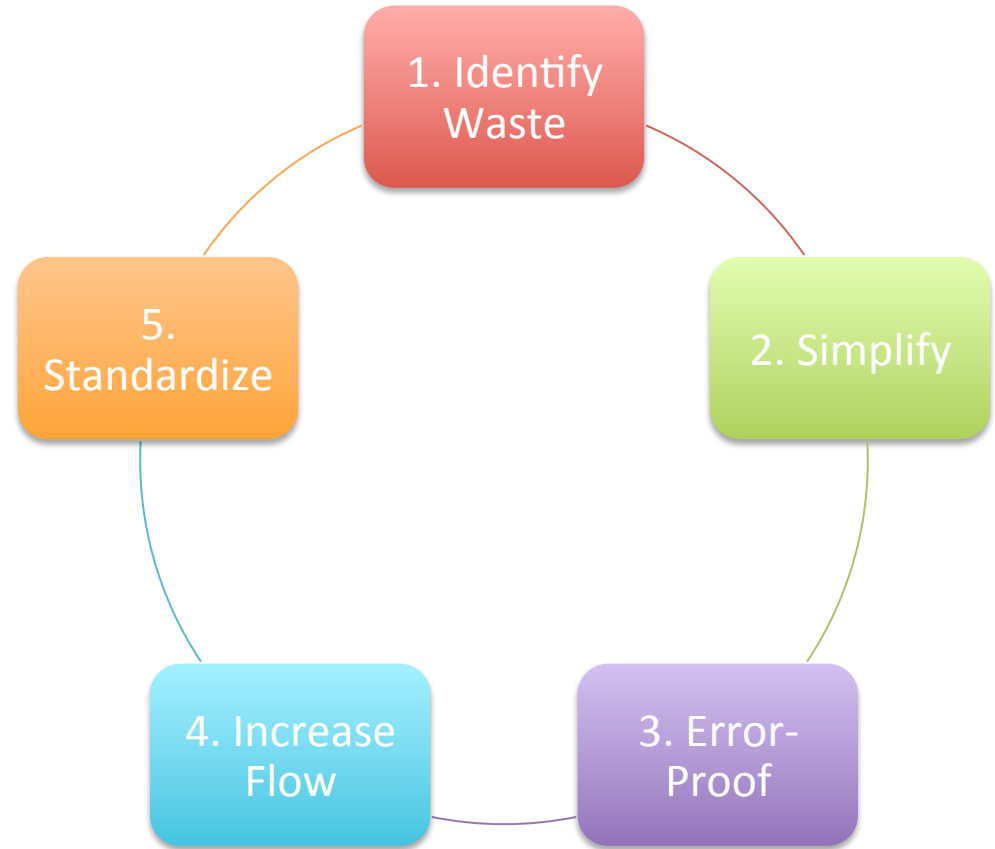
A grayscale photograph of a group of people in a meeting or workshop. A woman on the right is smiling and holding a smartphone. The text 'Lean Thinking' is overlaid in the center, with 'Thinking' in green and 'Lean' in white. The background is a blurred group of people.

Lean Thinking

“Lean Thinking”

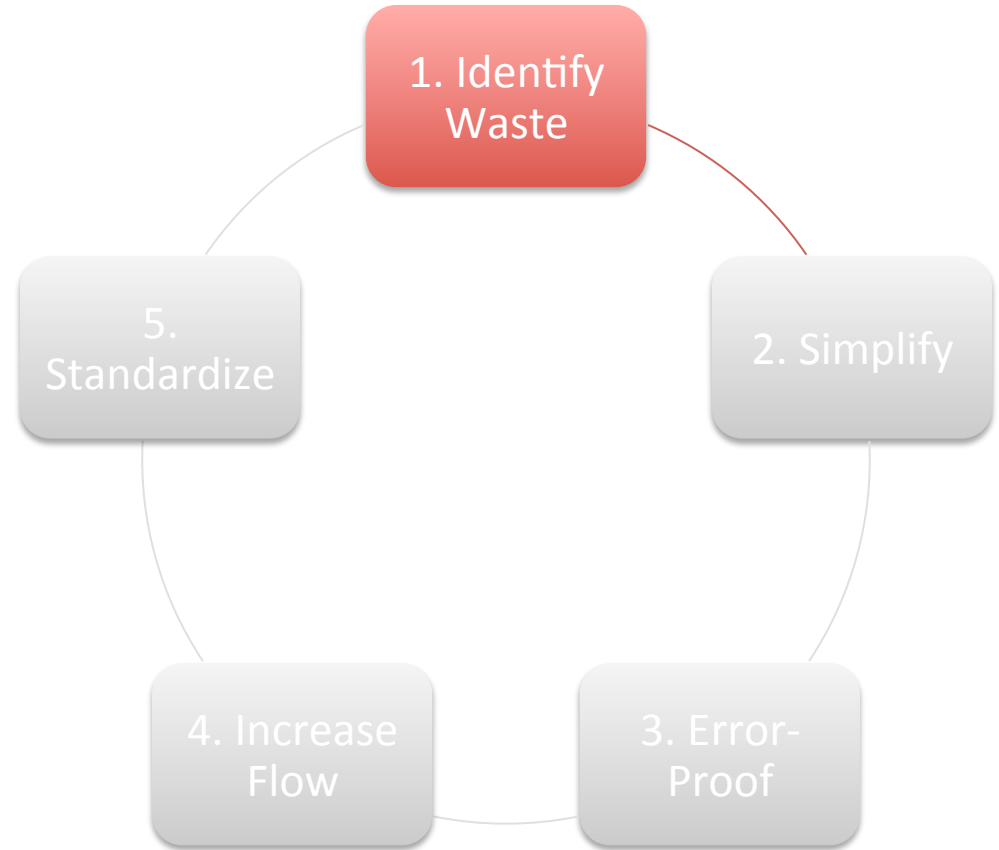
Values:

- Simplicity
- Visibility
- Error-Proof
- Waste-less
- Standard



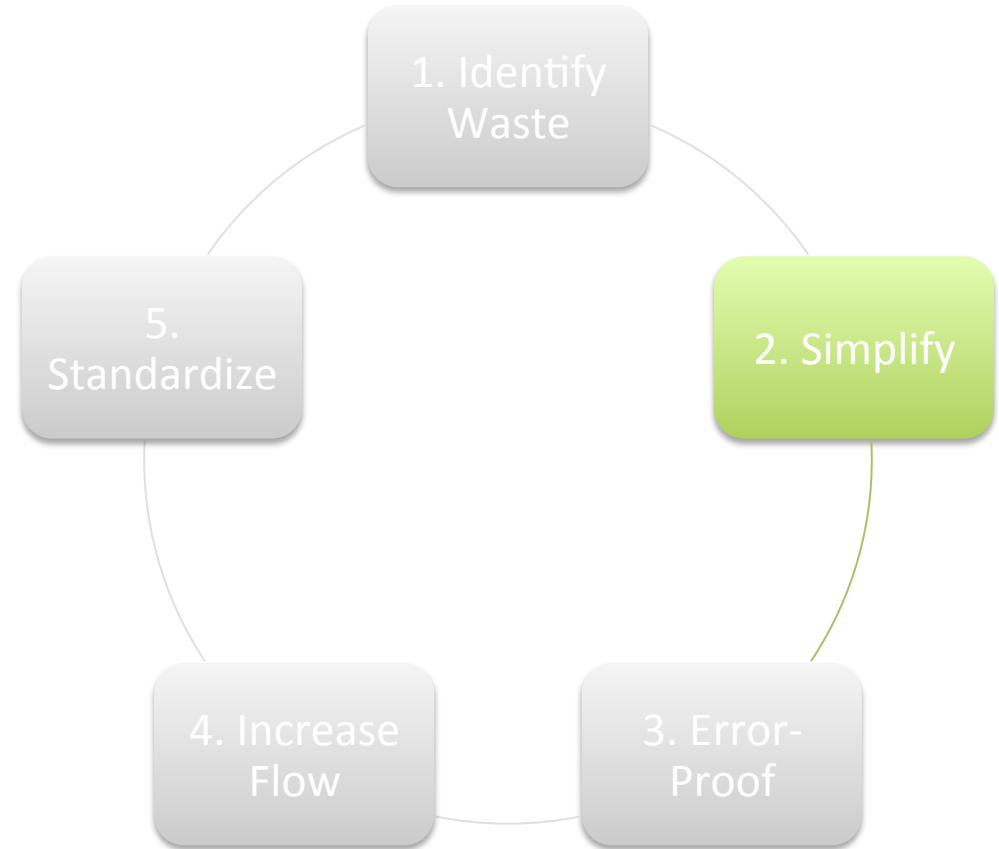
Find the 8 Types of Waste

- **Downtime**
- **Overproduction**
- **Waiting**
- **Non-Utilized Talent**
- **Transportation**
- **Inventory**
- **Motion**
- **Extra Processing**



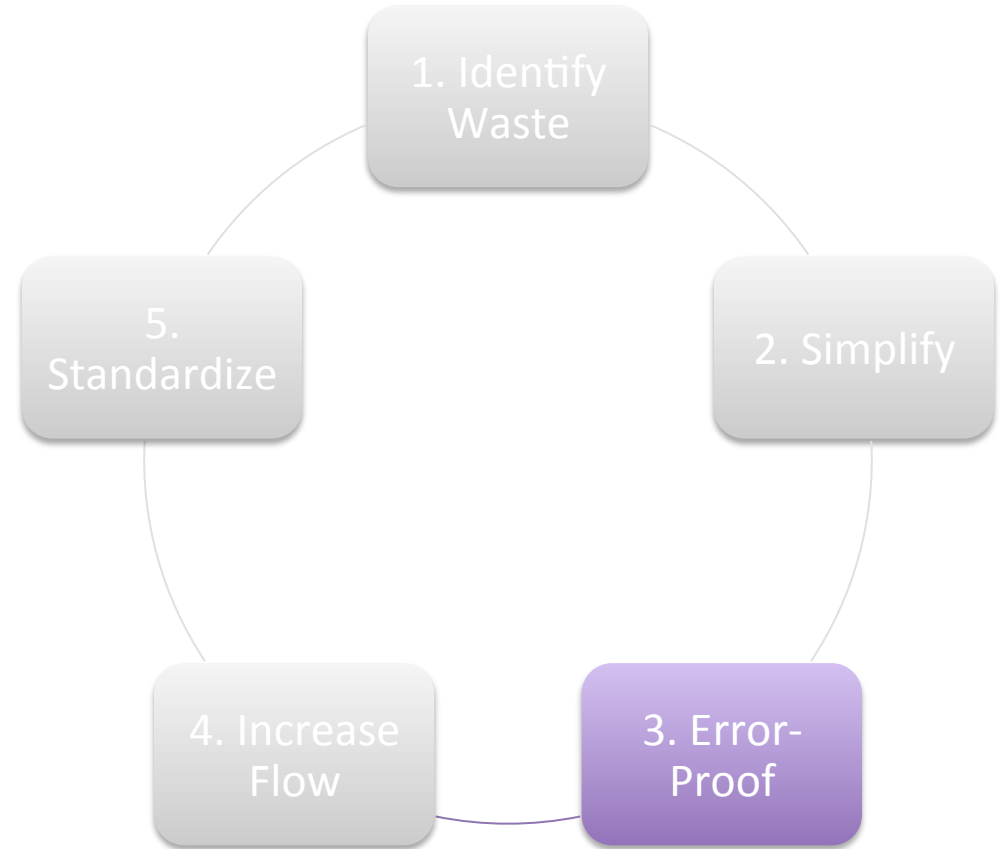
The 5S Program

- Sort
- Set in Order
- Shine
- Standardize
- Sustain



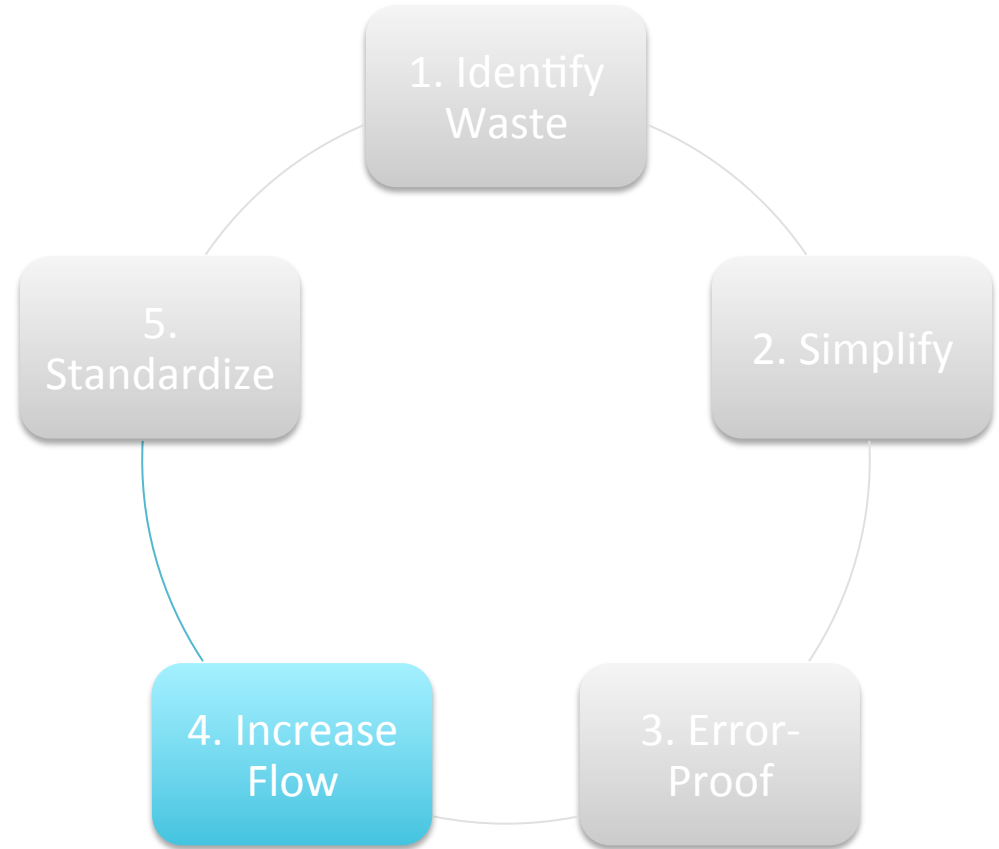
Implement Products & Processes

- Automatic Controls
- Automatic Shutdown
- Automatic Warnings
- Human Factors
- Selection, Training, Discipline



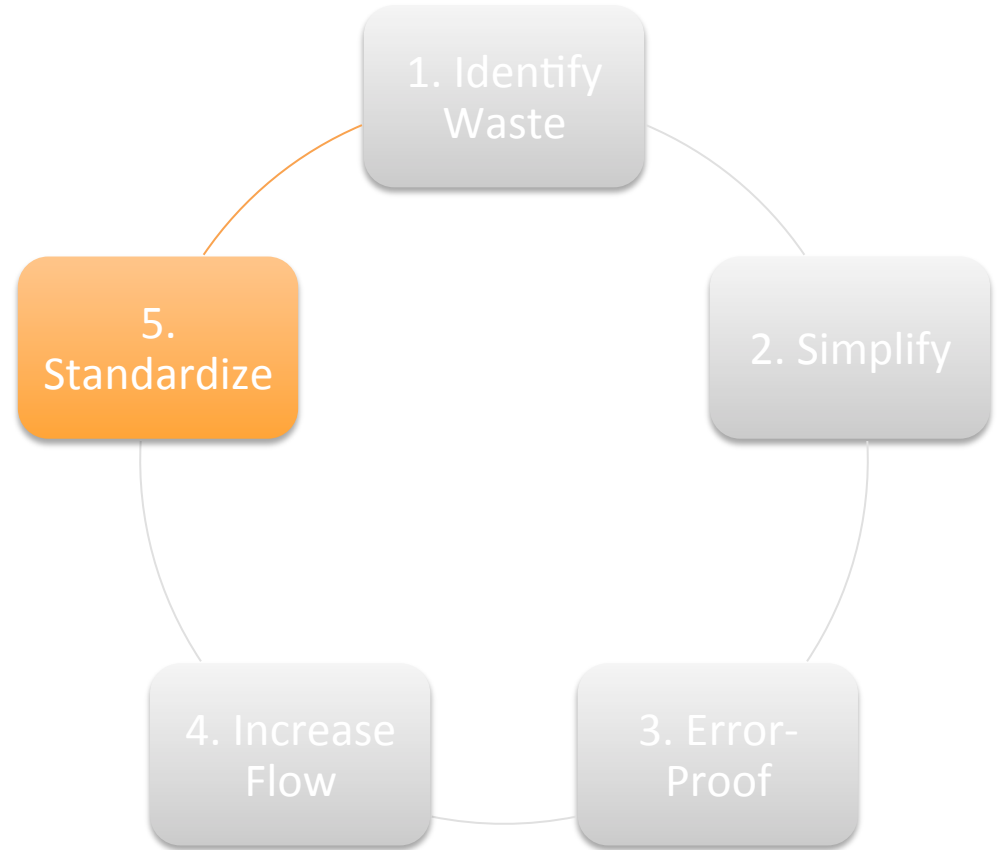
Focus on Time

- Reduce setup cost
- Reduce lot size
- Level the schedule
- Lean the supply chain



Strive for Perfection

- Work instructions
- Respect for people
- Measure metrics



A grayscale photograph of a group of people in a meeting. A woman on the right is smiling and holding a smartphone. The text 'Lean Six Sigma Tools' is overlaid in the center. The word 'Tools' is highlighted in green and surrounded by a green dashed square.

Lean Six Sigma Tools

RACI – Contract Example

R = Responsible

A = Accountable

C = Consulted

I = Informed

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Component / Section							
Statement of Work	Preamble						
	Scope & Pricing						
	Billing						
Terms and Conditions	Legal Terms						
	Business Terms						
	Addendum						

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Statement of Work	Preamble	I	R				
	Scope & Pricing	R	I	I	A	C	I
	Billing	I		R	I	A	
Terms and Conditions	Legal Terms	I	R				I
	Business Terms	R	I	C			A
	Addendum	A			R	A	

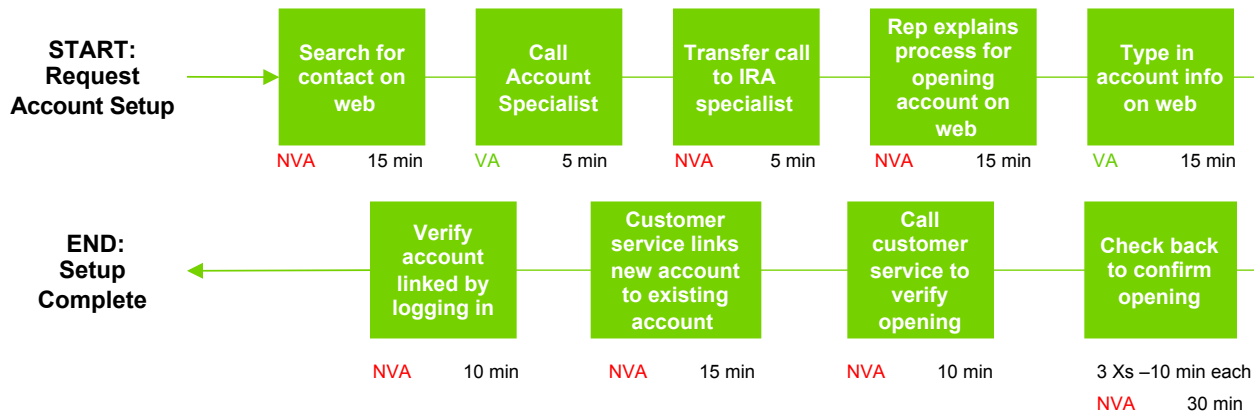
SIPOC Example – Risk Assessment

Suppliers	Inputs	Process	Outputs	Customers
<ul style="list-style-type: none">▪ Audit Committee▪ Management▪ Regulators▪ External auditors▪ Prior audits	<ul style="list-style-type: none">▪ Surveys▪ Interviews▪ Research▪ New regulations▪ Open audit findings	<ul style="list-style-type: none">▪ See Below	<ul style="list-style-type: none">▪ Risk assessment▪ Annual audit plan▪ Reports	<ul style="list-style-type: none">▪ Audit committee▪ Executive management▪ Regulators▪ Business process owners



Value Stream Map Example

**What is the
Customer
Willing to Pay
For?**

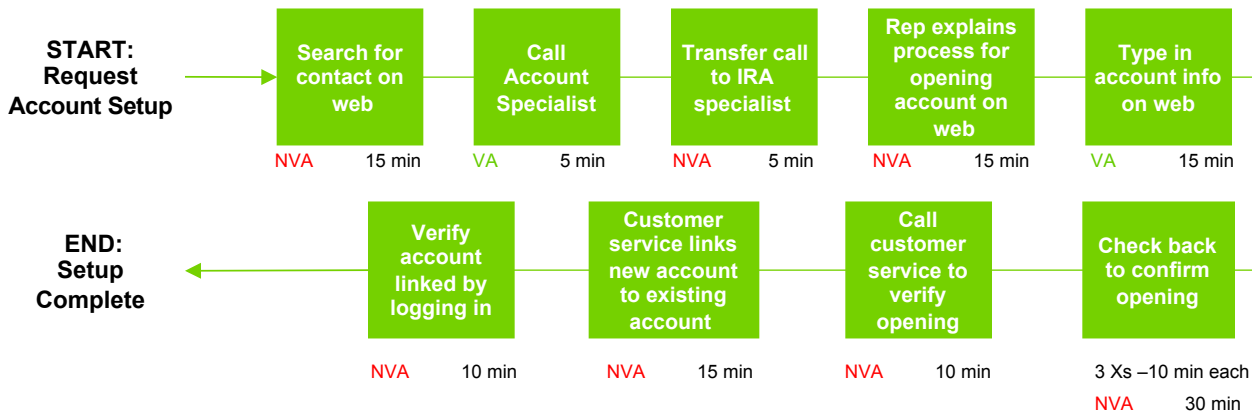


Process Statistics

Total Cycle Time	
Non-Value Added (NVA)	
Value Added (VA)	

Value Stream Map Example

What is the Customer Willing to Pay For?

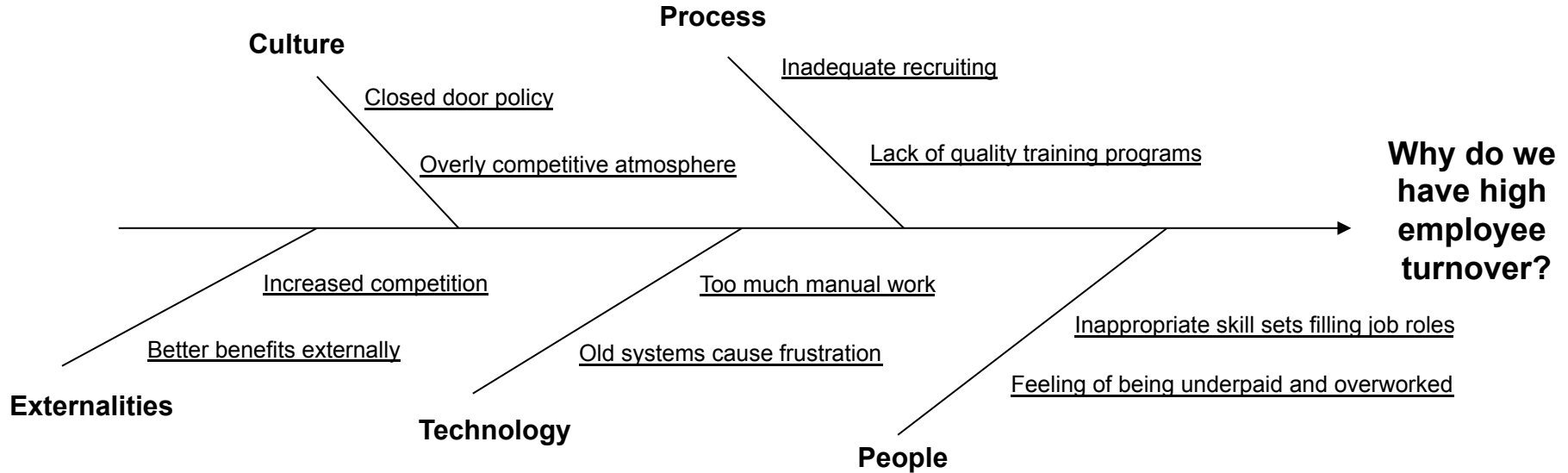


Process Statistics

Total Cycle Time	~1 week
Non-Value Added (NVA)	100 mins
Value Added (VA)	20 mins

- Start and end with the Customer in mind
- Evaluate from the customer's point of view
- Focus on cycle and wait time

Cause & Effect – Fishbone Diagram



A grayscale photograph of a group of business professionals in a meeting. A woman on the right is smiling and gesturing with her hands. The text 'The Audit Management Process' is overlaid in the center, with 'Process' in green and a green starburst graphic to its right.

The Audit Management **Process**

Audit Management Lifecycle



Cyclical nature of process

- Driven by organizational risks
- Key challenges & pain points
- Continuous improvement

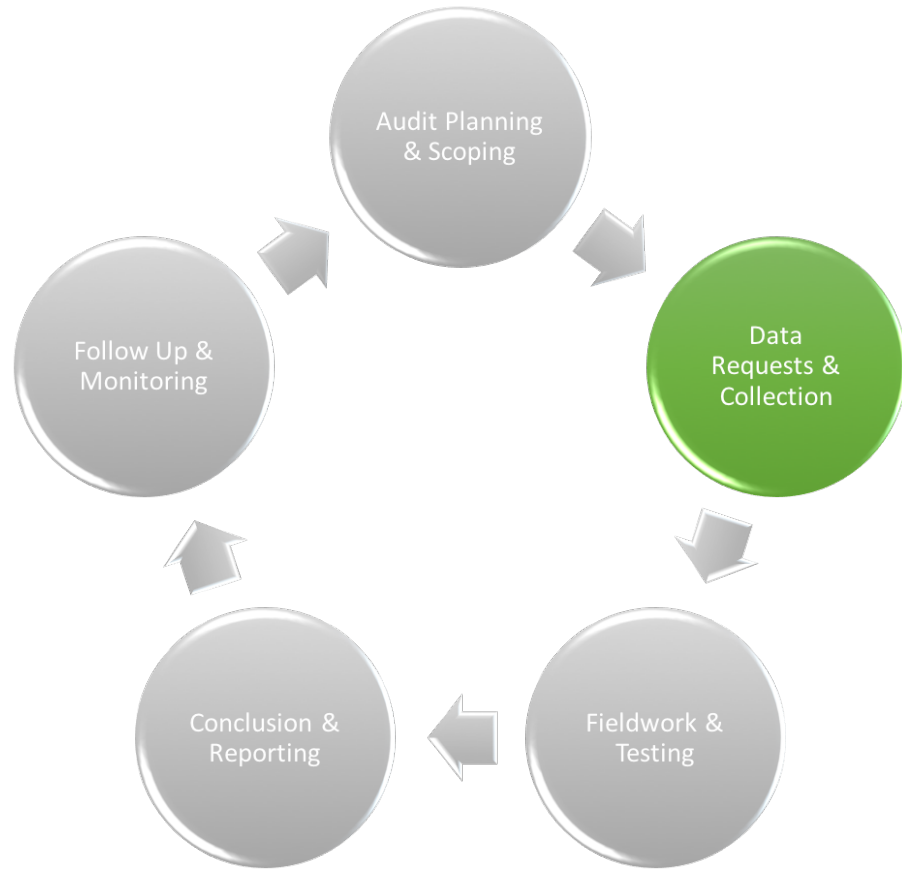
Audit Planning and Scoping



Building the Audit Plan

- Risk assessments
- Planning memos
- Project plans
- Resource assignments
- Audit budget
- Audit kick-off presentations

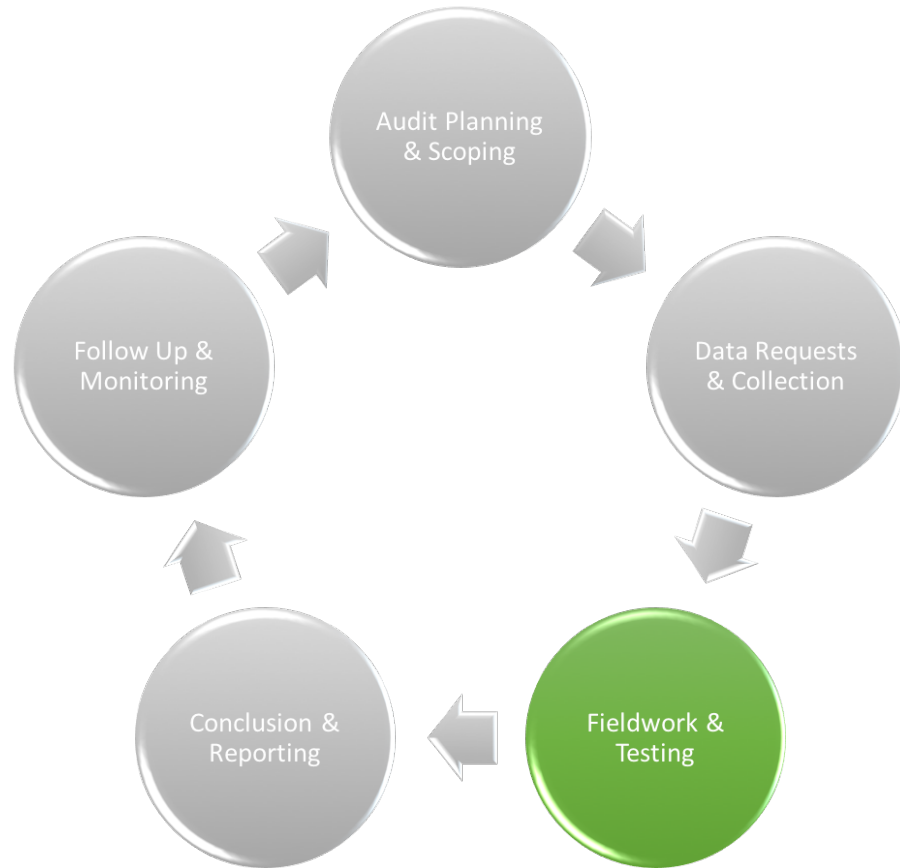
Data Requests and Collection



Managing the Documentation

- Review/request documents
 - Process flow charts
 - Process narratives
 - Risk and control matrix
- Process walk-throughs
- Audit program guide
- Test plans

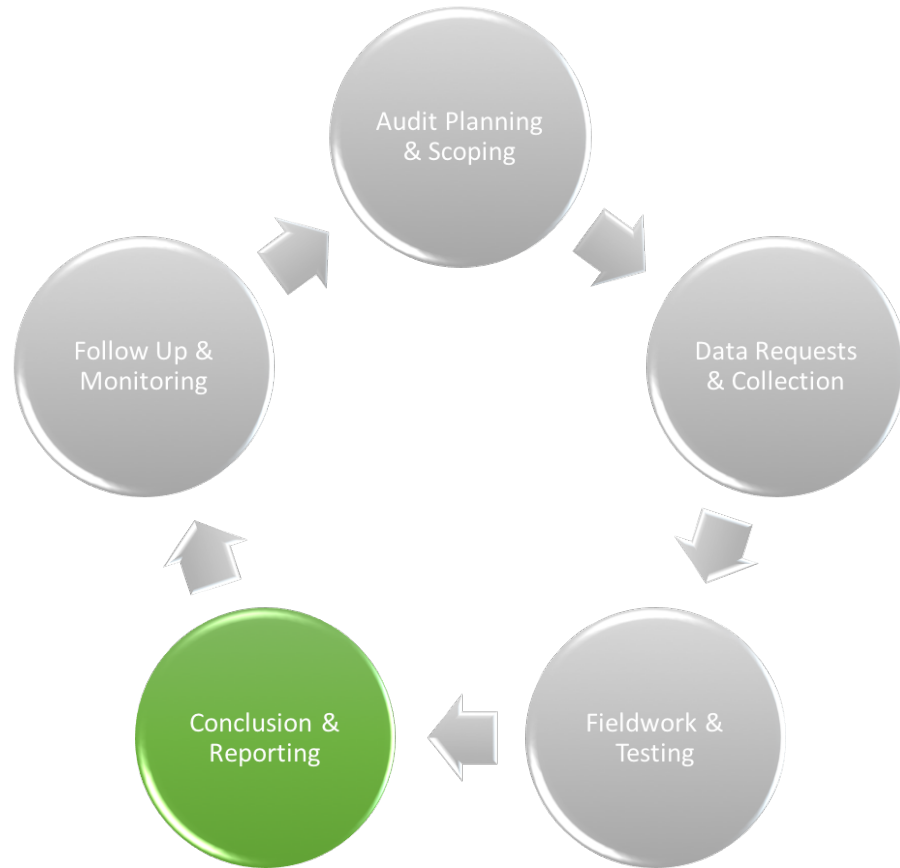
Fieldwork and Testing



Conducting the Audit Work

- Workpapers and review
- Supporting evidence
- Test of design
- Test of effectiveness
- Observations
- Status update meetings

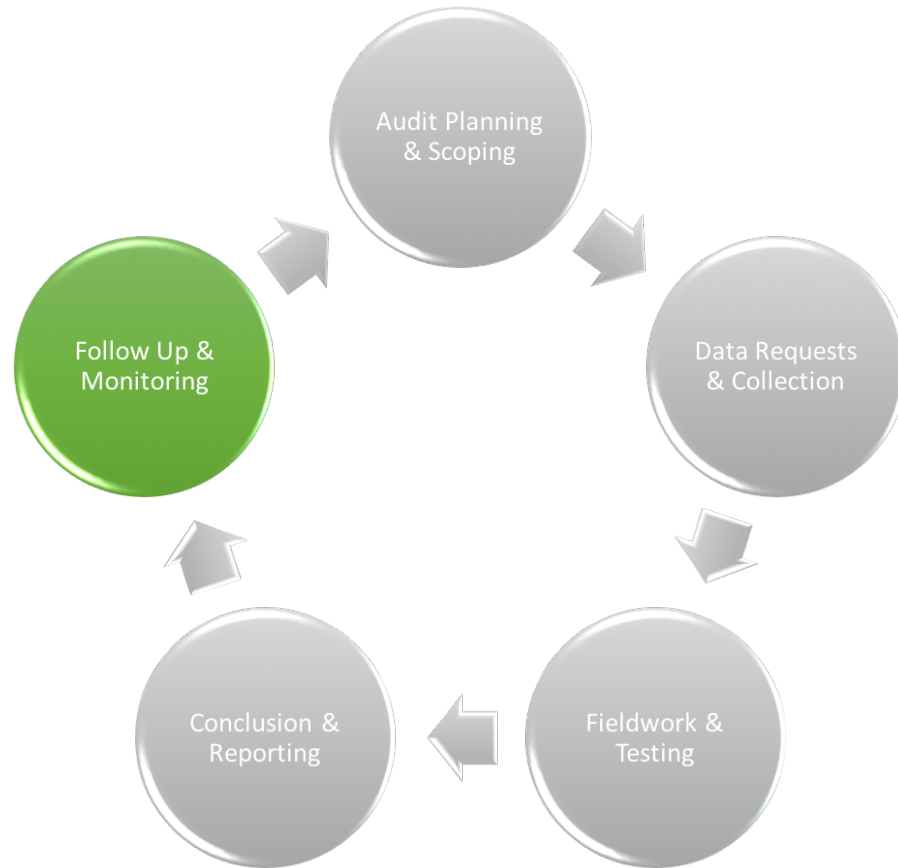
Conclusion and Reporting



Closing the Audit

- Issues/findings log
- Management responses
- Final report
- Closing meeting
- Budget to actuals
- Summary memo
- Audit surveys

Follow Up and Monitoring



Continuing Engagement

- Issues/findings management
- Balanced scorecards
- External audit reports
- Audit committee materials
- Regulatory reports

What are your challenges?

Universal Audit Process Challenges

PLANNING

STRUCTURED

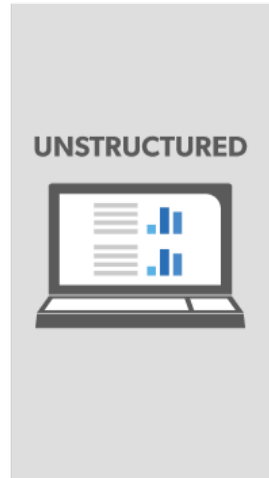
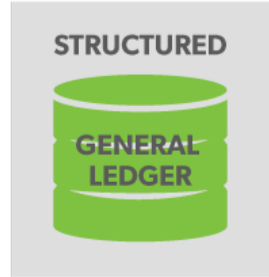


UNSTRUCTURED

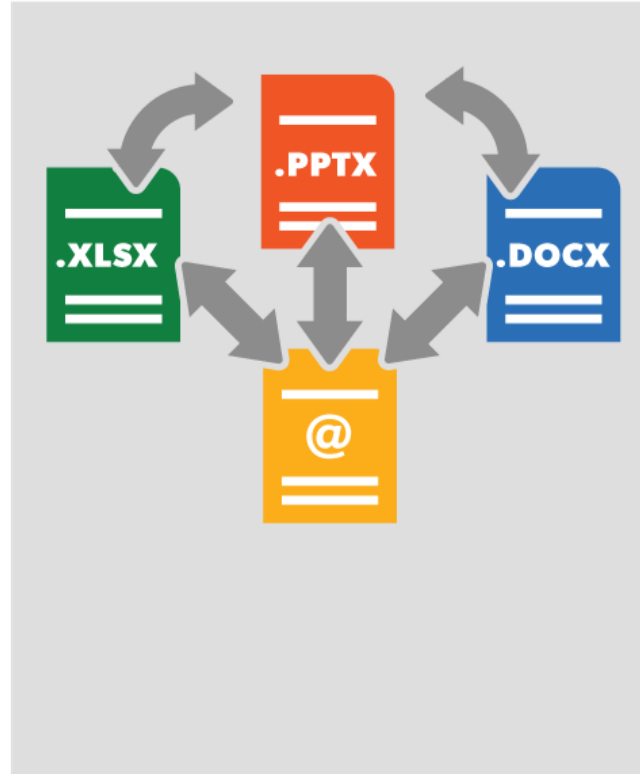


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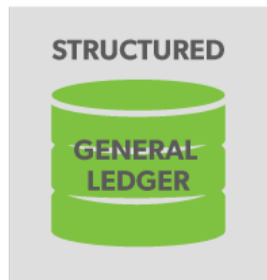


FIELDWORK

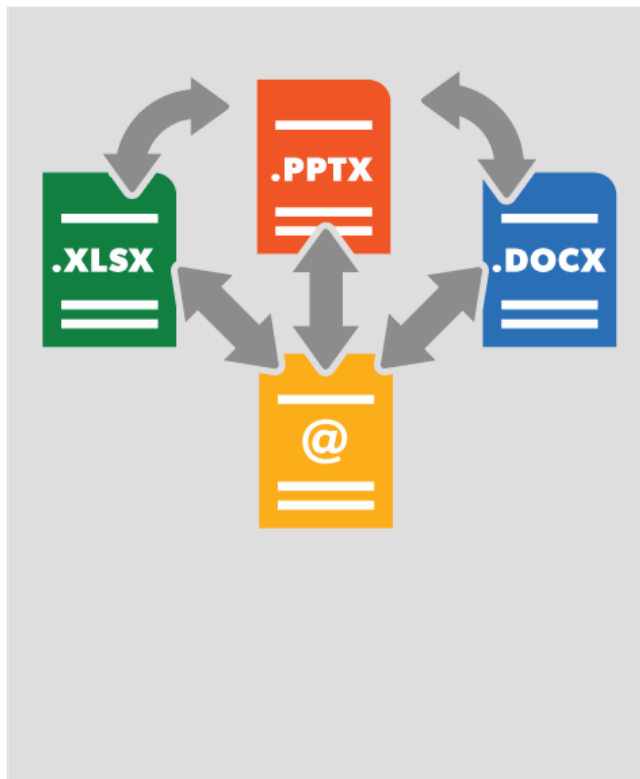


Universal Audit Process Challenges

PLANNING



FIELDWORK



REPORTING



Universal Audit Process Challenges

- Manual effort (comments, notes, roll forward, copy, paste, updates, format, reformat, tick and tie, foot and cross-foot totals, etc.)
- Unintended or missed changes
- Consistency within and across documents
- Babysitting data
- Tracking deliverables and status
- Version control
- Review and approval
- Audit trail (who changed what, when, where, and why)

The entire process is extrapolated by the number of audits!

Solving Challenges with Technology

- Value vs. non-value time (analysis, more audits, process improvement)
- Reduce risk (inaccurate findings, delayed timing, turnover)
- Repeatable, sustainable, documented process
- Improve overall quality, reliability, consistency
- Effective control management/audit trail
- Increase overall productivity
- Work-life balance (less stress, less overtime)
- Fulfilling job responsibilities

***Ensure the solution
supports your process;
not the other way
around!***

A grayscale photograph of a group of people in a meeting or conference setting. They are gathered around a table, looking at a smartphone held by one of the men. The scene is dimly lit, with a soft glow from the phone. Overlaid on the center of the image is the word "Conclusion" in a bright green, sans-serif font. The word is framed by a decorative graphic consisting of eight short, light green lines radiating from a central point, forming a starburst or asterisk shape.

Conclusion

Learning Objectives

- Gain an understanding of the fundamental differences between Six Sigma and Lean principles – *Eliminate waste from the customer's perspective to provide value add*
- Provide an overview of “Lean Thinking” and the most commonly used Lean Six Sigma tools – *Embrace the mentality and leverage tools where applicable*
- Identify opportunities to integrate Lean Six Sigma principles within Audit Management process – *Opportunities exist with people, processes, and technology*