

# How to Avoid Material Weaknesses: Steps for creating a robust ICFR program



# Speakers



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Greenlight Technologies



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Greenlight Technologies



# CFOs Under More Scrutiny for ICFR

*“SEC enforcers have been investigating and prosecuting a broader range of Internal Controls Financial Reporting (ICFR) violations than ever before.”*

Howard Scheck, former chief accountant of the SEC  
CFO Magazine

Lockheed warns of material weakness in Sikorsky financial statements



BUSINESS NEWS |

## EBay finds 'material weakness' in controls over accounting for tax

### **HMS Holdings to delay filing annual report due to possible material weakness; shares slump 9% premarket**

About: HMS Holdings Corp (HMSY) | By: Douglas W. House, SA News Editor 

*“Demonstrating a commitment to financial reporting integrity — before an incident occurs and during the handling of an incident — positions subjects to be viewed in the most favorable light by SEC staff, thus increasing the odds of a favorable outcome.”*



# Agenda

1. A Deeper Dive into the FERF / Greenlight ICFR Tracker
2. A Deeper Dive into Internal Controls over Financial Reporting (ICFR)
3. “Material Weakness” vs. “Significant Deficiency”
4. Technology & Automation – Potential Risks vs. Actual Violations
5. Business & Financial Impact
6. Customer Use Cases Examples

# About Greenlight



## Company

- ✓ Founded 2007; Headquarters Flemington NJ

## Partnerships

- ✓ SAP Solution Extension 
- ✓ Oracle Platinum Partner 
- ✓ FEI Strategic Partner 

## Awards & Recognition

- ✓ Best Big Data Solution using SAP HANA 
- ✓ Highest Possible Rating in Gartner Marketscope 

Greenlight enables businesses to assess, manage and reduce risk for Financial Controls, Regulatory Compliance, and Application Security



# FERF / Greenlight ICFR Tracker

As part of the Financial Education & Research Foundation and Greenlight Technologies' ongoing research into ICFR, we have created a program to automatically review all quarterly public filings and highlight those companies that have reported a material weakness.

After each quarter, we will provide you with this analysis as we look for trends over time, key issues that companies face and best practices to help with your reporting efforts.

**Key takeaway: An effective system of ICFR can significantly reduce the risk of misstatements and inaccuracies in your company's financial statements.**

*Greenlight consolidates information from publicly available authoritative data sources reasonably believed by Greenlight to be reliable and accurate at the time of providing the information.*

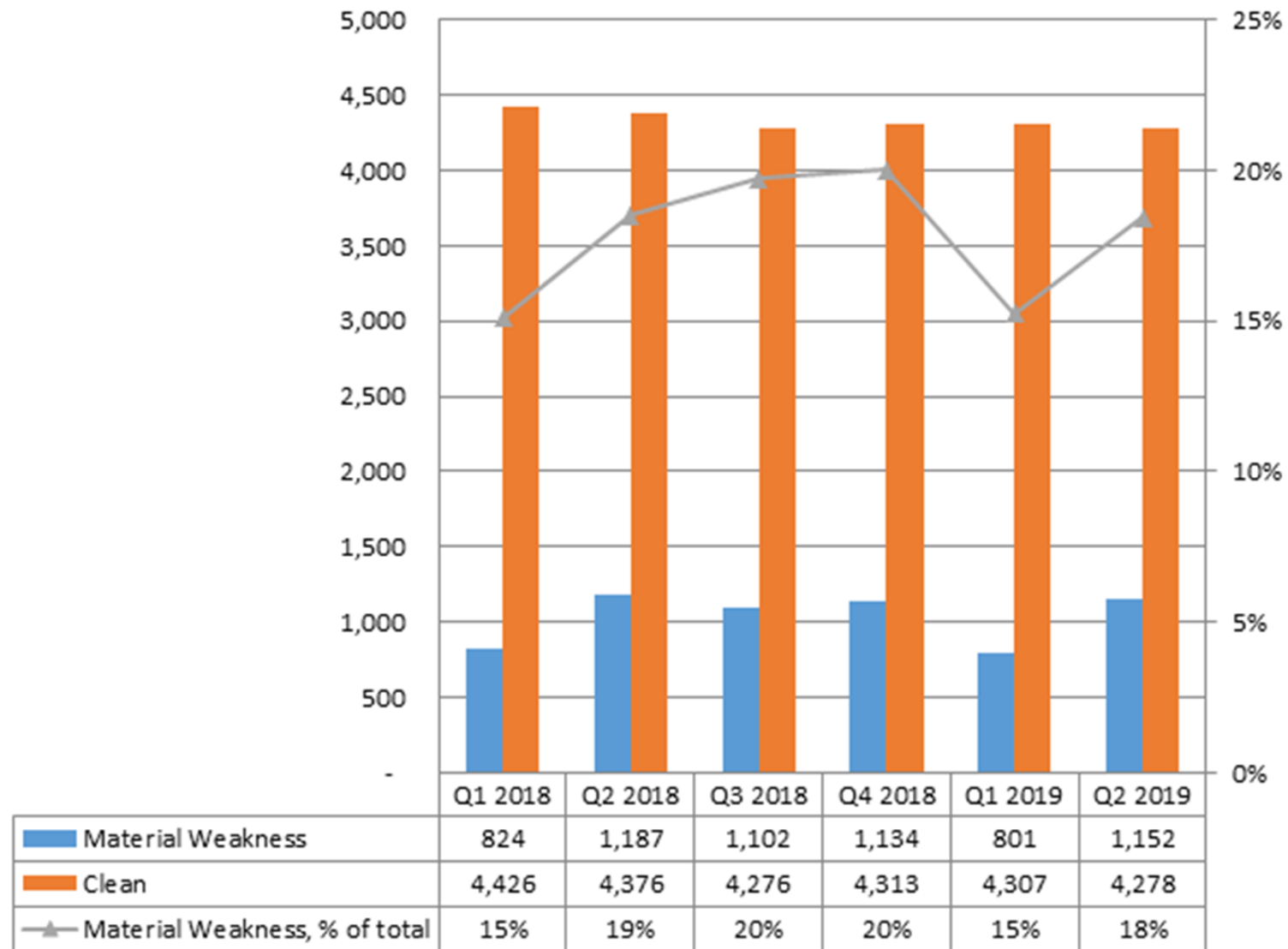




# ICFR Tracker Overview

- All SEC filings in EDGAR were analyzed for terms related to ‘Material Weakness’, ‘Remediation’, ‘Significant Deficiency’, etc. in relevant sections of 10-K and 10-Q filings
- Selected filings indicates high probability of Material Weakness (>95% confidence)
- Some Companies filed more than once during the quarter – e.g. 10-K then 10-KA; 10-K then 10-Q. These ‘Duplicate’ names are tracked to see number of unique Companies filing each quarter.
- Revenue values were correlated when available to stratify the filings to focus on large companies
- Companies are tracked to see, new filings, how long the disclosure continues, type of weakness (RevRec, Leases, Taxes, IT Controls, SOX/SOD, etc.)

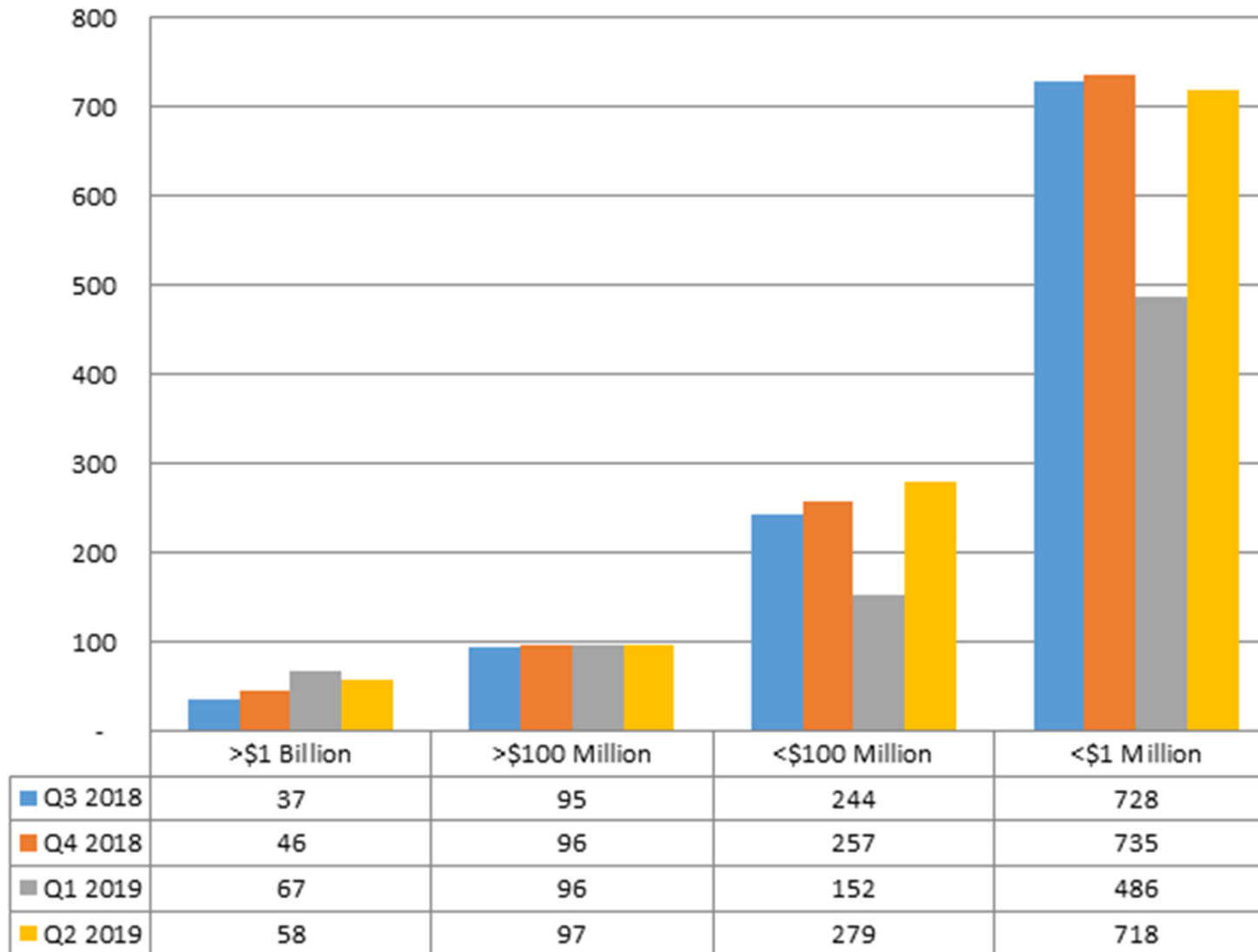
# Disclosures of Material Weakness to SEC



Source: SEC EDGAR filings – Q1 2018 – Q2 2019



# Disclosures by Company Revenue



Source: SEC EDGAR filings – Q3 2018 – Q2 2019

# Example – Top 20 by Revenue

Disclosure Text	Type	Date	Link	Estimated Revenue	Company Name
Item 4—Controls	10-Q	6/6/2019	<a href="https://www.sec.gov/Archives/edgar/data/909832/0000909832-19-000003-index.htm">https://www.sec.gov/Archives/edgar/data/909832/0000909832-19-000003-index.htm</a>	\$ 141,576,000,000	COSTCO WHOLESALE CORP /NEW
Item 9A Controls	10-K	6/11/2019	<a href="https://www.sec.gov/Archives/edgar/data/1702015/0001599916-19-000090-index.htm">https://www.sec.gov/Archives/edgar/data/1702015/0001599916-19-000090-index.htm</a>	\$ 33,930,000,000	AIS Holdings Group, Inc.
ITEM 4. CONTRO	10-Q	4/3/2019	<a href="https://www.sec.gov/Archives/edgar/data/823277/0000823277-19-000011-index.htm">https://www.sec.gov/Archives/edgar/data/823277/0000823277-19-000011-index.htm</a>	\$ 32,683,347,000	CHS INC
Item 9A. Controls	10-K	6/7/2019	<a href="https://www.sec.gov/Archives/edgar/data/1637459/0001637459-19-000049-index.htm">https://www.sec.gov/Archives/edgar/data/1637459/0001637459-19-000049-index.htm</a>	\$ 26,270,000,000	Kraft Heinz Co
ITEM 4. CONTRO	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/18926/0000018926-19-000012-index.htm">https://www.sec.gov/Archives/edgar/data/18926/0000018926-19-000012-index.htm</a>	\$ 23,440,000,000	CENTURYLINK, INC
Item 4. Controls	10-Q	4/19/2019	<a href="https://www.sec.gov/Archives/edgar/data/40987/0000040987-19-000023-index.htm">https://www.sec.gov/Archives/edgar/data/40987/0000040987-19-000023-index.htm</a>	\$ 18,740,000,000	GENUINE PARTS CO
Item 4. Controls	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/1355096/0001558370-19-004827-index.htm">https://www.sec.gov/Archives/edgar/data/1355096/0001558370-19-004827-index.htm</a>	\$ 14,070,000,000	Qurate Retail, Inc.
Item 4. Controls	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/1254699/0001254699-19-000007-index.htm">https://www.sec.gov/Archives/edgar/data/1254699/0001254699-19-000007-index.htm</a>	\$ 14,070,000,000	QVC INC
Item 4. CONTROL	10-Q	5/14/2019	<a href="https://www.sec.gov/Archives/edgar/data/727920/0000727920-19-000011-index.htm">https://www.sec.gov/Archives/edgar/data/727920/0000727920-19-000011-index.htm</a>	\$ 12,420,000,000	AXA EQUITABLE LIFE INSURANCE CO
Item 4.CONTROL	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/1333986/0001333986-19-000019-index.htm">https://www.sec.gov/Archives/edgar/data/1333986/0001333986-19-000019-index.htm</a>	\$ 12,360,000,000	AXA Equitable Holdings, Inc.
ITEM 4.CONTROL	10-Q	6/11/2019	<a href="https://www.sec.gov/Archives/edgar/data/1326380/0001326380-19-000102-index.htm">https://www.sec.gov/Archives/edgar/data/1326380/0001326380-19-000102-index.htm</a>	\$ 8,285,300,000	GameStop Corp.
Item 4.Controls a	10-Q	5/1/2019	<a href="https://www.sec.gov/Archives/edgar/data/1580608/0001580608-19-000053-index.htm">https://www.sec.gov/Archives/edgar/data/1580608/0001580608-19-000053-index.htm</a>	\$ 7,590,000,000	Santander Consumer USA Holdings Inc.
Item 4. Controls	10-Q	5/2/2019	<a href="https://www.sec.gov/Archives/edgar/data/897723/0000897723-19-000022-index.htm">https://www.sec.gov/Archives/edgar/data/897723/0000897723-19-000022-index.htm</a>	\$ 7,110,000,000	SANMINA CORP
ITEM 4. CONTRO	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/1610092/0001104659-19-028608-index.htm">https://www.sec.gov/Archives/edgar/data/1610092/0001104659-19-028608-index.htm</a>	\$ 5,490,000,000	Diplomat Pharmacy, Inc.
Item 9A. CONTRC	10-K	5/30/2019	<a href="https://www.sec.gov/Archives/edgar/data/827054/0000827054-19-000143-index.htm">https://www.sec.gov/Archives/edgar/data/827054/0000827054-19-000143-index.htm</a>	\$ 5,350,000,000	MICROCHIP TECHNOLOGY INC
Item 4. Controls	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/1048286/0001628280-19-006493-index.htm">https://www.sec.gov/Archives/edgar/data/1048286/0001628280-19-006493-index.htm</a>	\$ 5,215,000,000	MARRIOTT INTERNATIONAL INC /MD/
Item 4. Controls	10-Q	5/10/2019	<a href="https://www.sec.gov/Archives/edgar/data/1669779/0001558370-19-004851-index.htm">https://www.sec.gov/Archives/edgar/data/1669779/0001558370-19-004851-index.htm</a>	\$ 4,790,000,000	Camping World Holdings, Inc.
Item 4: Controls	10-Q	4/30/2019	<a href="https://www.sec.gov/Archives/edgar/data/28823/0000028823-19-000121-index.htm">https://www.sec.gov/Archives/edgar/data/28823/0000028823-19-000121-index.htm</a>	\$ 4,578,600,000	DIEBOLD NIXDORF, Inc
Item 4. Controls	10-Q	5/9/2019	<a href="https://www.sec.gov/Archives/edgar/data/1610950/0001610950-19-000023-index.htm">https://www.sec.gov/Archives/edgar/data/1610950/0001610950-19-000023-index.htm</a>	\$ 4,390,116,000	Syneos Health, Inc.
Item 4.CONTROL	10-Q	5/7/2019	<a href="https://www.sec.gov/Archives/edgar/data/1712184/0001712184-19-000150-index.htm">https://www.sec.gov/Archives/edgar/data/1712184/0001712184-19-000150-index.htm</a>	\$ 3,705,700,000	Liberty Latin America Ltd.

Source: SEC EDGAR filings – Q2 2019; other sources for revenue estimates

# Internal Controls over Financial Reporting

“**Internal controls**” refer to those procedures within a company that are designed to reasonably ensure compliance with the company’s policies.

Under the framework developed by the Committee on Sponsoring Organizations (COSO), there are three types of internal controls:

- Those that affect a company’s operations (e.g. effectiveness and efficiency)
- Those that affect a company’s compliance (e.g. laws and regulations)
- Those that affect a company’s **financial reporting** (e.g. reliability)

# Polling Question #1

Who owns the ICFR process in your organization?

- A. CEO
- B. CFO
- C. Controller
- D. Compliance Officer
- E. Head of Internal Audit
- F. Other/ N/A

# Internal Control Framework Review

The COSO model defines internal control as “a process, effected by an entity’s board of directors, management and other personnel, designed to provide reasonable assurance of the achievement of objectives”.

There are five interrelated “components” of an effective internal control system. These are derived from the way the company is managed on a day-to-day basis.

1. Control Environment
2. Risk Assessment
3. Control Activities
4. Information & Communication
5. Monitoring Activities



# What is a “material weakness” in ICFR?

A material weakness exists if there is a flaw within the company’s overall control system such that it is at least reasonably possible that a material misstatement in the company’s financial statements will not be prevented or corrected.

## Examples:

- SOX 404 segregation of duties
  - Person that creates a vendor also pays the same vendor
  - Person that receives goods can also adjust inventory
- Business Processes
  - General Ledger reconciliation
  - Inventory changes, moves and transfers
- IT General Controls
  - Privileged users, Change Management, etc.



# What is a “deficiency” in ICFR?

A “**deficiency in design**” exists when:

- a control necessary to meet the control objective is missing
- an existing control is not properly designed so that, even if the control operates as designed, the control objective would not be met

A “**deficiency in operation**” exists when

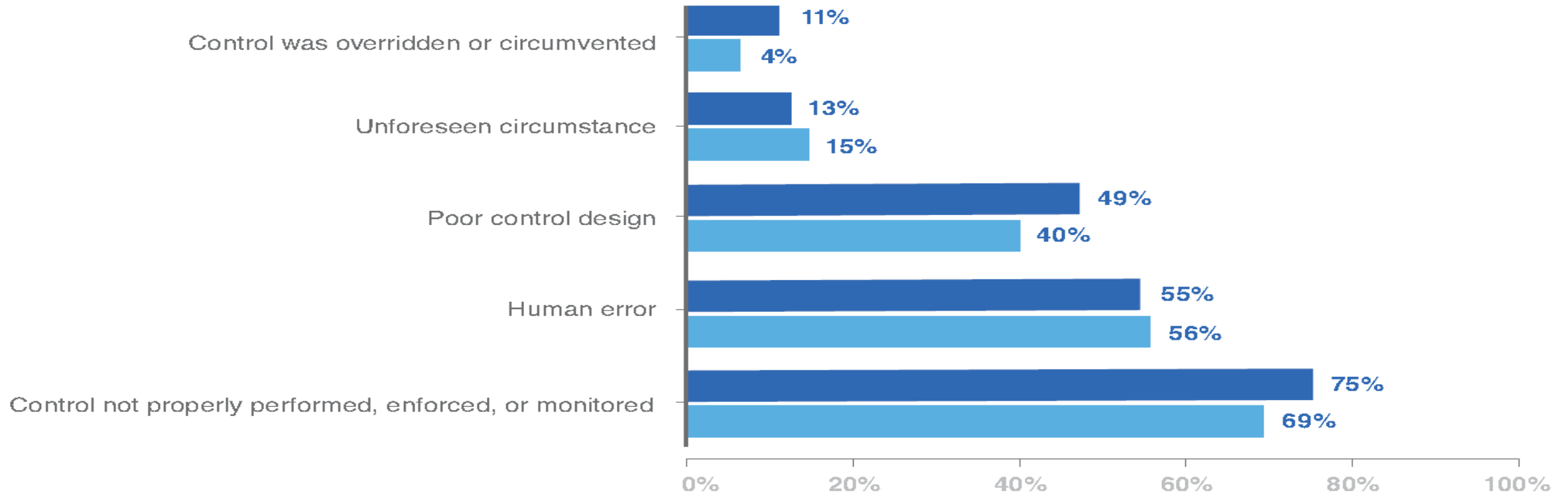
- a properly designed control does not operate as designed
- when the person performing the control does not possess the necessary authority or qualifications to perform the control effectively

A “**significant deficiency**” is a deficiency that is less severe than a material weakness yet important enough to merit attention by those responsible for oversight of the company's financial reporting

# Internal Control Failures on the Rise

Per the **State of the SOX/Internal Controls Market Survey**, there was a 9% increase in the number of respondents that reported internal control failures compared to the previous year.

The most cited cause was **“Control not properly performed, enforced, or monitored”** (increased by 6%)



Source: SOX & Internal Controls Professionals Group, Moss Adams LLP, and Workiva



# Polling Question #2

Is your organization subject to SOX?

- A. Yes, large accelerated filer
- B. Yes, accelerated filer
- C. Yes, non-accelerated filer
- D. No, privately held company
- E. No, Other

# Recent Example

## Costco Warns of Material Weakness in Controls

The warning related to IT systems that "support the company's financial reporting processes" drove Costco's stock down 2.4%.

October 5, 2018 | CFO.com

“The weakness relates to **general information technology controls** in the areas of user access and program change-management over certain information technology systems that support the company's financial reporting processes,” Costco said. “The access issues relate to the extent of **privileges afforded users authorized to access company systems.**”

Remediation efforts have begun, according to Costco, but the material weakness will **not be considered remediated** until “management has concluded, **through testing**, that [the applicable] controls are operating effectively.”

# Internal Control Challenges

## **After 17 years, SOX and Segregation of Duties (SoD) is Still an Issue**

- Focus typically based on highest number of violations vs. impact to the business
- Not all SoD's will be removed due to business requirements
- “Can do” analysis is no longer enough, “did do” analysis is now the norm

## **Controls require manual effort to investigate and to manage audit reporting**

- Mostly manual control testing that takes employees away from value-add business activities
- No ability to manage by exception and identify fraud
- Lack of visibility to true financial exposure

## **Business processes increasingly moving outside of ERP**

- Non-ERP applications such as Business Planning & Consolidation, Master Data Management, etc.
- Cloud based applications such as Ariba, Salesforce, Workday, etc.
- Legacy, custom, homegrown and industry specific applications

# What's Changing?

**Auditors are now digging deeper into internal controls and identifying inadequate controls and incomplete procedures**

- GRC solutions only find the potential issues
- When issues remain in the business, a control must be identified

## **External Audit Findings:**

- No controls are defined – companies stop at the point of which users have risky access
- ‘Dummy’ controls are in place to mask risks from being reported as uncontrolled
- A business process control is identified and assigned that does not adequately monitor user risk
- Controls are defined, haphazardly being performed, or not at all





# Customer Example #1

## Customer Example:

- Fortune 500 company
  - >15,000 employees worldwide
  - ERP Instance: SAP ECC
- Reported Material Weaknesses in 10-K
- Audit Issue: Not able to identify SoD conflicts for mitigation and document where conflicts originated and how they were resolved.



Mark Kissman

CFO, Greenlight Technologies  
*(Former CFO of multiple public & private technology companies)*

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# Customer Example #2

## Customer Example:

- Fortune Global 100 company
  - >50,000 employees worldwide
  - ERP Instances: SAP (5) and JDE (28)
- Project Objectives include moving from SAP/JDE to SAP S4 in the Cloud
  - Also includes moving Procurement from SAP/JDE to SAP Ariba in the Cloud
- Audit Issue: How to monitor and test internal controls across SAP/JDE/Ariba processes

# Control Automation Project (CAP) Opportunity

- There is an opportunity to simplify the process used to validate activity. The current process, while not broken, is inefficient with a lot of manual control reporting.
- The project will evaluate control monitoring and reporting software.
  - This software extends the capability of the SAP GRC Access Control currently used today for SAP and JDE User Access Reviews and SOD Conflict reporting.
  - Through control automation, it can reduce the need for organizations to manually run compensating control reports for individuals with SOD conflicts and may provide additional fraud protection.

# CAP Fit with Overall System Transformation Initiative

CAP will allow process simplification now and provide uninterrupted transition to S4

## Opportunity statement:

Develop an Information Technology strategy, determine the target architecture framework, and define the company's digital core to position Company to fully leverage technology advances and guide the replacement of soon-to-be obsolete systems.

## Success vision:

- No business interruption from obsolescence of current systems or during transition to new systems
- Create competitive advantage through quick and easy access to critical information via improved systems of record. This will enable more informed business decisions and streamlined processes to meet changing business information needs.
- Serve as a foundation for Company to capitalize on the fourth industrial revolution; leverage rapidly transforming technologies like cloud, mobile, analytics and artificial intelligence (e.g., machine learning).

# Transformation Initiatives Guiding Principles

CAP will allow end to end processes across Compliance, Procurement and ERP

Simplify now to drive global compliance and financial risk processes

Quantifying Value of Risk has 12 month or less payback

## Use a business-driven, enterprise approach

- Company's business strategy will drive the strategy.
- Focus first on complete value streams / end-to end-processes (vs. focusing on opcos or functions).
- Govern the program as an enterprise initiative.

## Eliminate, simplify, standardize and automate

- Emphasize elimination and simplification before standardization. Standardize to drive efficiency and compliance with the digital core. Functions will own global processes and drive standardization for core business processes and data.
- Validate localization to address legal, fiscal or regulatory requirements and allow localization where necessary. Understand the risk and exposure to make informed decisions.

## Plan for the long-term

- Leverage internal employees both for program leadership and for opportunities to build organizational capability. Use third-party consulting for key advisory roles and program continuity.
- Build solution to be scalable and to allow for agility & innovation.
- Maintain control of our destiny (i.e., not dictated by software providers).
- Protect our business interest by implementing a value-driven solution.

# Transformation Initiative Benefits

Listed below are the current items in scope and the expected program benefits.

## In-scope value streams:

<ul style="list-style-type: none"><li>• Asset lifecycle</li><li>• Commodity to market</li><li>• Product lifecycle</li></ul>	<ul style="list-style-type: none"><li>• Customer lifecycle</li><li>• Liquidity and risk management</li><li>• Financial booking to reporting</li></ul>	<ul style="list-style-type: none"><li>• Source to Pay</li><li>• Recruitment to retirement</li><li>• Integrated business planning</li></ul>
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## Expected program benefits:

- Greater agility and flexibility – respond rapidly to internal and external needs to maximize value for the organization
- Powerful analytics – make timely decisions and develop insights to enjoy first-move advantage
- Process simplification and data foundation – streamlined enterprise processes and common systems of record
- New and improved capabilities for financial information

Financial Value will enable more accurate risk profile



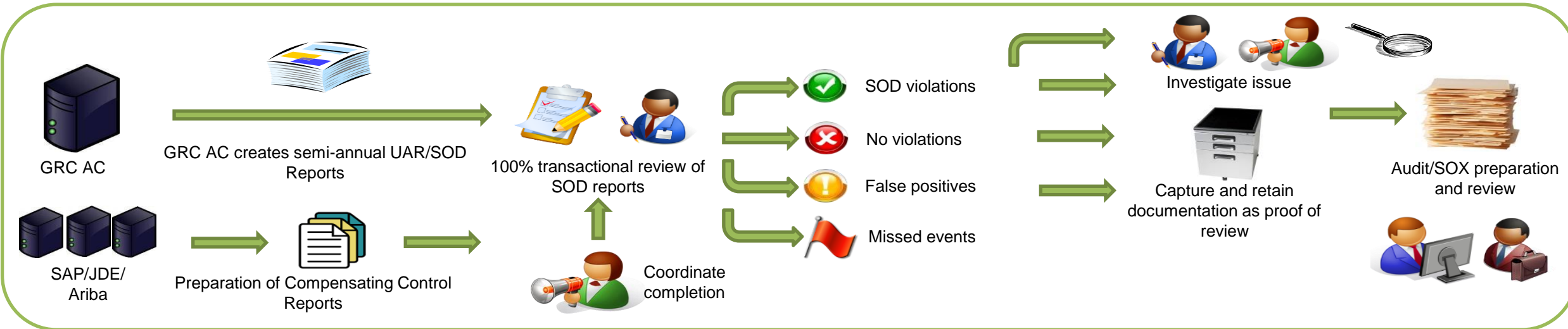
# Current Internal Control Process

## Manual Mitigating Controls – Defining

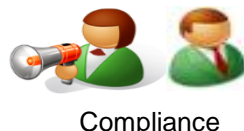


## Repeated manual process

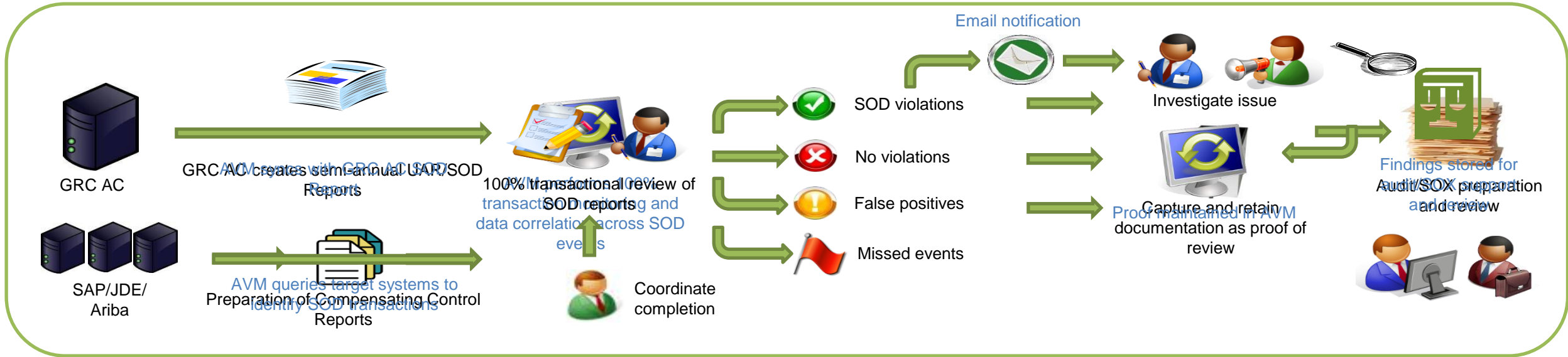
## Manual Mitigating Controls – Monitoring



### Legend:

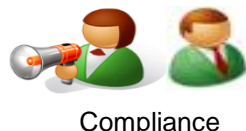


# Moving to Greenlight: What Changes?



<b>Goes away</b>	<i>Manual preparation of SOD reports</i>	<i>False positives or missed events</i>	<i>Retain proof of review</i>	<i>Compliance oversight</i>	<i>Audit preparation effort</i>
<b>Replace with AVM</b>	AVM syncs w/ GRC Access Control Automated controls check for exceptions by Risk	AVM controls are configured to review all transactions and capture only actual violations	Record of control execution is maintained online in AVM	Real-time notifications delivered to Supervisor to initiate review	Evidence of review (e.g., comments, attachments) available online

Legend:



# Project results: key takeaways

## AVM Process: Supervisor SOD Review UAT

### → *Standardize and gain visibility to the SOD Review process*

- SOD review process in AVM requires the same or less effort than the current process, and allows for a more thorough review process, while reducing the number of tools used.
- Estimated total of 46-57 hours spent per year performing current SOD reviews (15 supervisors / 5 in-scope risks). Estimated time savings using AVM between 30%-50%.



Reviewer

## Current Process: Preparing System Reports for Compensating Controls:

### → *Automate and centralize SOD risk exception reporting*

- Estimated total of 18 hours/year preparing reports for the five in-scope risk IDs across in-scope BUs Americas/Downstream, Brazil/Upstream, and FSS (4 report preparers).

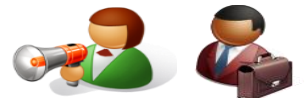


Report Creation

## Current Process: Internal Controls Activities

### → *Reduce Internal Controls time commitment to SOD activities*

- Internal Controls SOD SME committed ~80% of their time supporting X control processes and acting as liaison between PWC during the annual audit. With AVM, time spent managing the external audit of control could be reduced from estimated 3.5 months to 1 month.
- PWC estimates approximately 187 hours auditing control X per year today. With AVM, PWC expects less ongoing audit hours. However, there would be initial cost in auditing the setup of AVM.



Compliance / Audit



# Scope of Deployment

- 51 ERP Systems
  - 5 SAP
  - 28 JDE
  - 14 Ariba-JDE cross-over
  - 4 Ariba-SAP crossover

- 47 SoD Risk Conflicts
  - 34 SAP
  - 8 JDE
  - 3 Ariba-JDE cross-over
  - 2 Ariba-SAP crossover

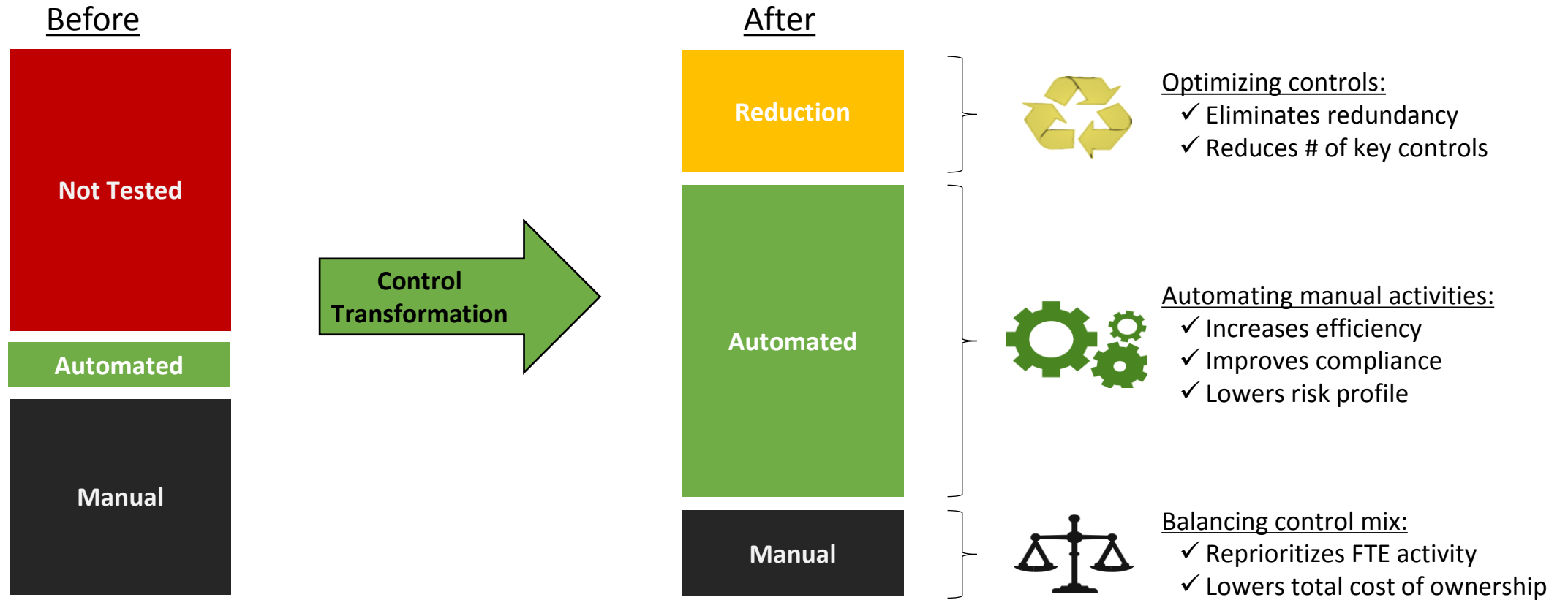
RISKID	RISKID description	ERP
FI01	Adjust owner interest calculation and Create/change PRA manual journal entries	SAP
FI02	Create/change PRA manual journal entries and Approve PRA manual journal entries	SAP
FI03	Generate manual royalty check and Create/change PRA manual journal entries	SAP
OC01	Maintain customer master data and Maintain customer credit master data	SAP
OC02	Maintain customer master data and Process sales order	SAP
OC03	Maintain customer master data and Asset posting to a vendor/customer account	SAP
OC04	Maintain customer master data and Post customer cash call	SAP
OC05	Maintain customer master data and Process customer invoice/credit	SAP
OC06	Maintain customer master data and Post customer down-payment	SAP
OC07	Maintain customer master data and Clear customer down-payment	SAP
OC08	Maintain customer master data and Process incoming payments	SAP
OC09	Maintain sales deal and Process sales order	SAP
OC10	Maintain SD pricing condition records and Process sales order	SAP
PP01	Maintain vendor master data and Release requisition	SAP
PP02	Maintain vendor master data and Release PO	SAP
PP03	Maintain vendor master data and Process PO no release (DT)	SAP
PP04	Maintain vendor master data and Process PO no release (DT/POrg)	SAP
PP05	Maintain vendor master data and Asset posting to a vendor/customer account	SAP
PP06	Maintain vendor master data and Process vendor invoice/credit	SAP
PP07	Maintain vendor master data and Create vendor down-payment request	SAP
PP08	Maintain vendor master data and Create vendor cash call advance request	SAP
PP09	Maintain vendor master data and Post vendor down-payment	SAP
PP10	Maintain vendor master data and Clear vendor down-payment	SAP
PP11	Release requisition and Process goods/service receipt	SAP

RISKID	RISKID description	ERP
PP11	Release requisition and Process goods/service receipt	SAP
PP12	Release PO and Process goods/service receipt	SAP
PP13	Process PO no release (DT) and Process goods/service receipt	SAP
PP14	Process PO no release (DT/POrg) and Process goods/service receipt	SAP
PP15	Process a PM External Order and Requisition and Process goods/service receipt	SAP
PP16	Release requisition and Process vendor invoice/credit	SAP
PP17	Release PO and Process vendor invoice/credit	SAP
PP18	Process PO no release (DT) and Process vendor invoice/credit	SAP
PP19	Process PO no release (DT/POrg) and Process vendor invoice/credit	SAP
PP20	Process a PM External Order and Requisition and Process vendor invoice/credit	SAP
PP21	Maintain customer master data, Maintain vendor master data and Post JV/FI documents	SAP
X001	Maintain vendor master data and Release requisition	SAP/Ariba
X002	Release requisition and Process goods/service receipt	SAP/Ariba
JR01	Maintain vendor master data and Approve Expenditure	JDE
JR02	Maintain vendor master data and Process vendor invoice/credit	JDE
JR03	Approve Expenditure and Process vendor invoice/credit	JDE
JR04	Approve Expenditure and Acknowledge receipt of goods/services	JDE
JR05	Approve Expenditure and Maintain approvals	JDE
JR07	Maintain customer master data and Process sales order	JDE
JR08	Maintain customer master data and Process customer invoice/credit	JDE
JR09	Maintain sales deal/pricing and Process sales order	JDE
JX01	Maintain vendor master data (JMVD) and Release requisition (ARIBA)	JDE/Ariba
JX02	Acknowledge receipt of goods/services (JPGR) and Release requisition (ARIBA)	JDE/Ariba
JX03	Process vendor invoice/credit (JPVI) and Release requisition (ARIBA)	JDE/Ariba



# Continuous Control Monitoring

Incorporating continuous control monitoring helps companies increase audit coverage and standardize review process while reducing compliance and operational cost.



# Customer Case Study

“We were able to reduce the time it took to review our segregation of duties by 94%. Our cycle could run every day if we wanted it to.”  
- Head of Information Security, Multinational Oil & Gas Company

## Company

Multinational Oil & Gas Company

## Headquarters (Region)

EMEA

## Industry

Oil & Gas

## Products & Services

Petroleum, natural gas, motor fuels, aviation fuels, and petrochemicals

## Number of Employees

50,000+

## Objectives

- Eliminate manual processes required to facilitate monthly reporting across 14 countries
- Improve efficiency that jeopardized financial systems' performance and consumed a lot of labor resources
- Eliminate audit issues proving to external auditors that risk and compliance reporting was under control

## Solution

- Automate legacy processes
- Eliminate highly manual mitigating controls

## Benefits

- Reduced business involvement in compliance
- More coverage and visibility of historical data
- Labor savings and reduced auditor fees

# 1-2 days

New monthly audit cycle time (down 94% from 4-6 weeks)

# \$1.8M

3-year adjusted cost savings

# 90%

More coverage in historical data and transactional activity

# 96%

ROI in first year (12.9 month payback)

A Forrester Total Economic Impact Study™ – May 2017





# The Total Economic Impact™ Of Greenlight's Access Violation Management (AVM) Solution

FORRESTER®

Through in-depth customer interviews and data aggregation, Forrester concluded that Greenlight AVM has the following three-year financial impact.

## SUMMARY OF BENEFITS

3-year risk adjusted

**\$1M**



Labor savings  
- managing  
data, reporting,  
disposition

**\$507K**



Labor savings  
- compliance  
and audit

**\$264K**



Savings in  
external  
auditors' fees

**96%**  
ROI

**\$875K**  
NET  
PRESENT  
VALUE

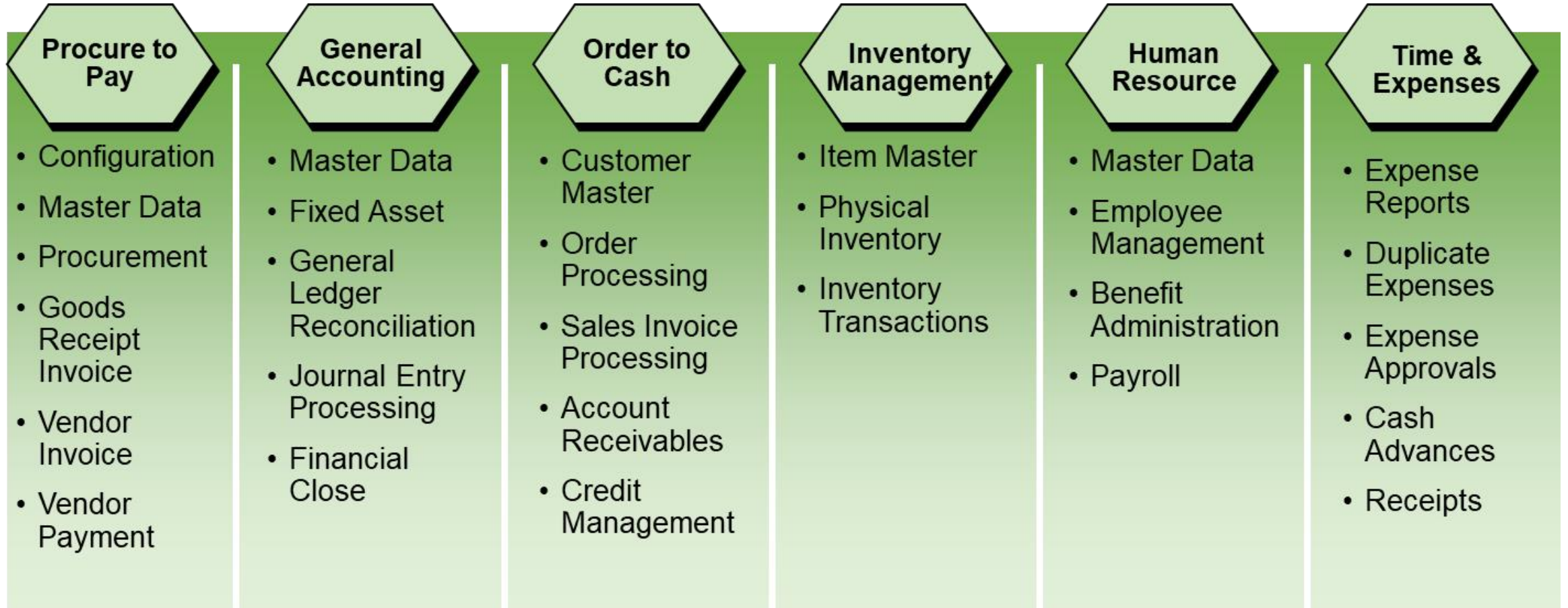
**12.9**  
month  
PAYBACK

# Polling Question #3

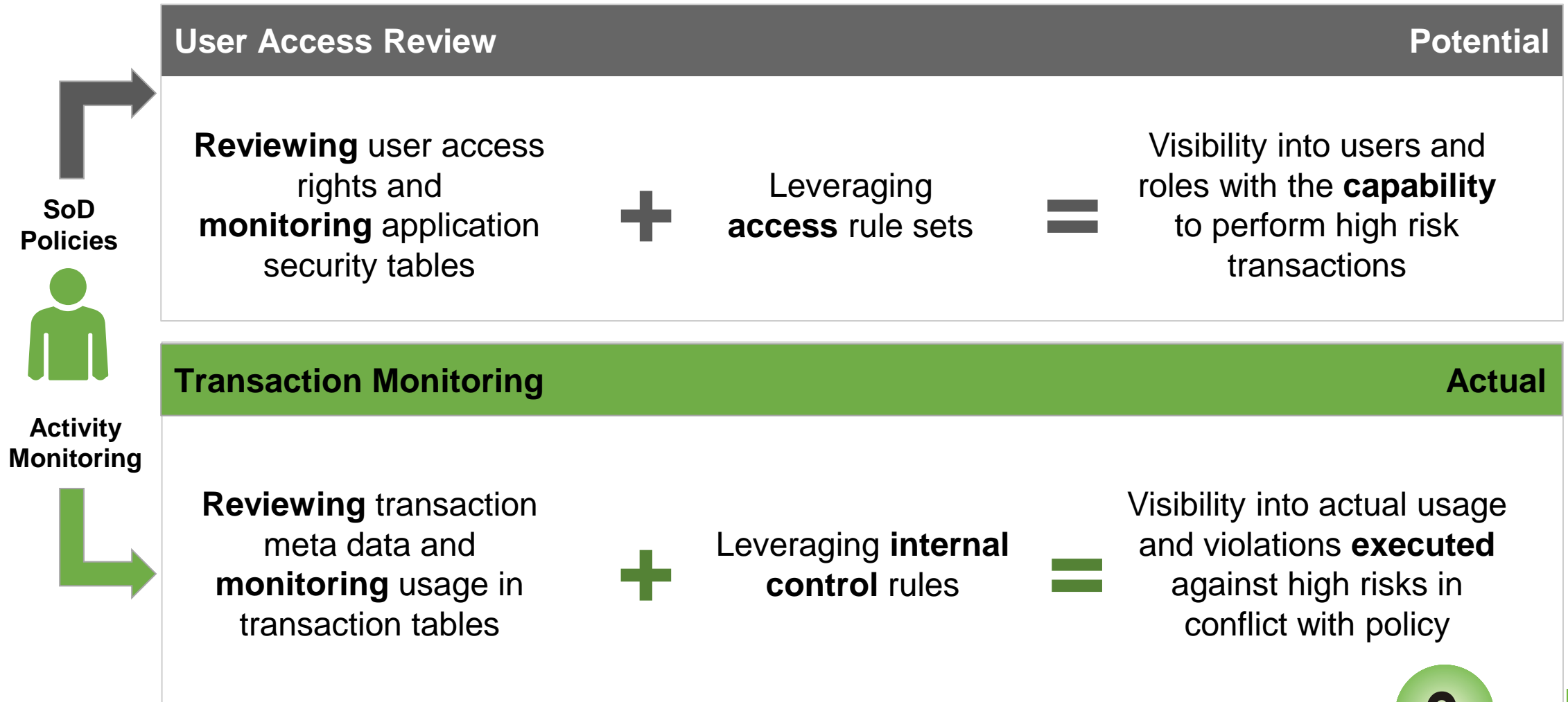
What are your plans to automate your internal controls testing?

- A. Already automated
- B. Significant plans
- C. Moderate plans
- D. No plans

# Example Business Process Monitoring



# Potential risk vs. Actual violations

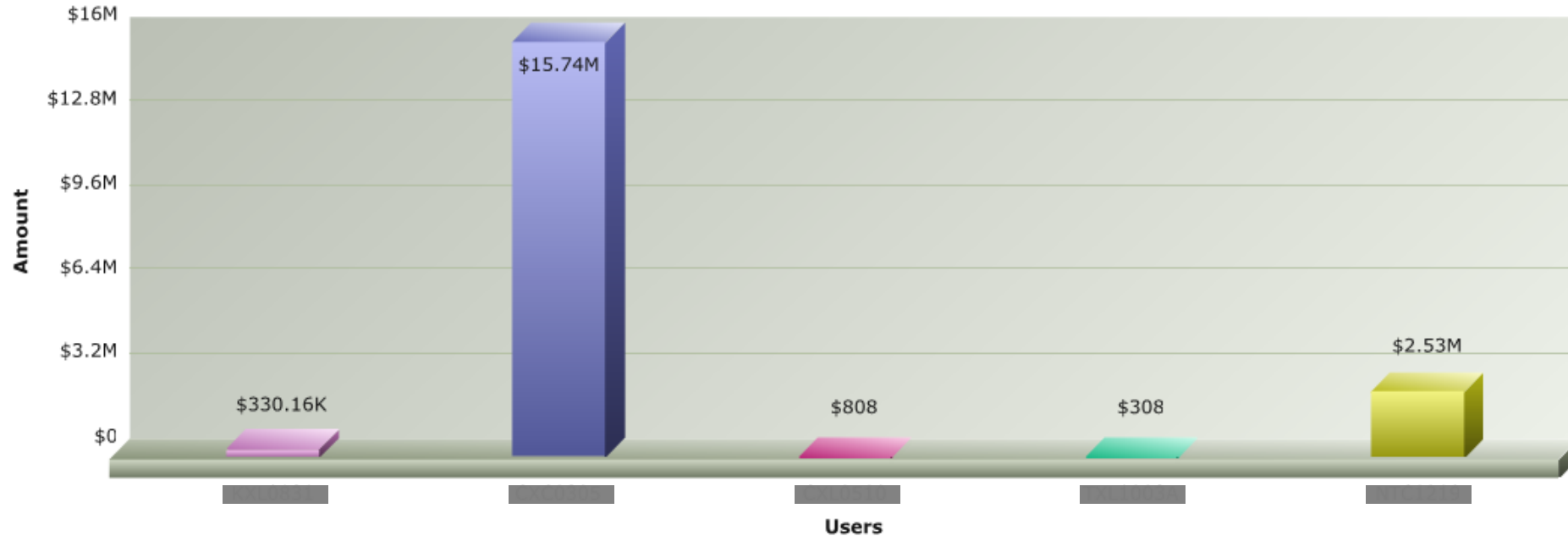


# Customer Example: Financial Impact of Risk

Risk	Risk Description	Business Process	Potential Risk				
			Conflicts reported from User Access		Violations reported from Quantification Analysis		
			# Users	# Violations	# Users	Total # Transaction Occurrences	Total \$ Value (US \$)
F001	Create a fictitious GL account and generate Journal activity or hide activity via posting entries	General Ledger	24	2,916	0	0	\$0
P001	Maintain a fictitious vendor and enter a vendor invoice for automatic payment	Purchasing and Payables	31	3,383	4	9	\$493,108

**Material Internal Control Issue**

# Customer Example: Invoicing & Processing Payments



**140 users** are reported by a GRC solution to have the authorizations to perform the risk

**5 users** are flagged after 100% transaction monitoring by Greenlight

Find where the risk is materializing, have controls that are built into the business process and ensure transparency to the actual bottom-line business value (\$) exposure allows senior management, compliance or audit to identify fraud much quicker than with typical manual monitoring

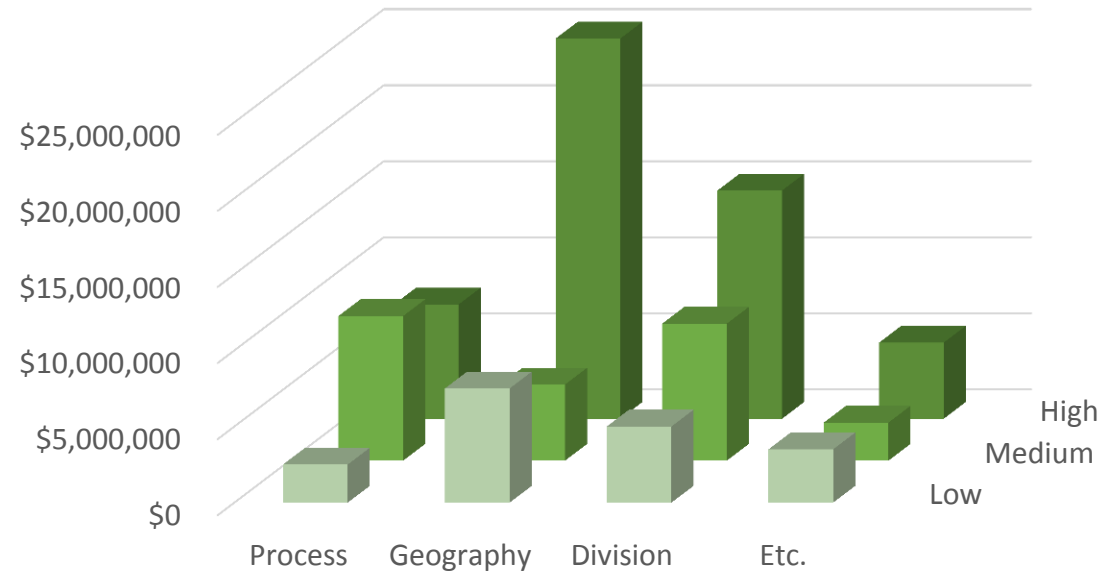


# Drive Financially Based Business Decisions that Ensure Significant Return on Investment

Would you rather review spreadsheets of transactions...

User ID	System	Risk ID	Risk Desc.
abc123	ERP	F001	Fictitious GL acct
xyz098	ERP	F004	Journal Entry post
def456	WMS	M006	Inventory adjusting
uvw765	WMS	M014	Hide IM adjustment
ghi789	ERP	P002	Pay fictitious vendor
rst432	SCM	P053	Pay fictitious PO
jkl012	CRM	S003	Clear customer bal
opq109	ERP	S007	Create generate bill
mno345	HCM	H001	Modify process pay
lmn876	T&E	H005	Modify T&E pay
pqr678	ERP	D009	Fictitious BP
ijk543	ERP	D019	Fraud POs

Or review the impact actual material exceptions are having on your business?



## Greenlight's Financial Impact of Risk let's you:

- Focus on the highest risk areas by process, geography, division, etc.
- Report on business issues not compliance failures
- Reduce risk exposure while ensuring audit readiness
- Embed risk and compliance into your business process



# Analyze Users, Processes, Transactions and Risks

Analyze **all user activity** within your end-to-end business process with a solution designed to meet your **current (ERP)** and **future technology (cloud, SaaS, etc.)** roadmap

- Make more informed decisions by assessing your financial exposure
- Analyze access risk across organizational elements and business processes

## With automation you can:

- Identify and resolve actual risks in your processes based on business and transactional activity
- Monitor direct access to and suspicious activity around PII, financial, and other critical master data
- Correlate administrator and power user activities over time to identify trends and suspicious activity
- Provide visibility and value quantification for financial risks based on user activities



# Polling Question #4

What percentage of ICFR relevant business process applications are in the cloud?

- A. 100%
- B. 75%-99%
- C. 50%-74%
- D. 25%-49%
- E. 1%-24%
- F. 0%

# Ensure Comprehensive Internal Controls

- Monitor all financially relevant applications
- Eliminate manual processes which are resource intensive and difficult to monitor or enforce
- Ensure end to end control process for risk mitigation and audit readiness
  - Business process controls are not effective in managing user access risks
  - Business owners should be monitoring business transactions that are risky based on company policy
- Finance Transformation → Controls & Compliance Transformation
- Focus on value added activities vs. manual internal control manual testing
- If using manual controls, introduce automation to transform the process



# Greenlight Technologies

## Data Analytics & Risk Quantification

Audit Analytics, Bottom-Line Business Exposure, Financial Exposure of Risk

## Governance, Risk & Compliance

SOD Analysis, Access Reviews, Super Users, Provisioning

## Activity & Transaction Monitoring

Automated Internal Controls, Exception-Based Notifications

## Real-Time Enterprise Integrations

Discovery, Aggregation, Correlation and Normalization



# How Greenlight Improves Your Internal Controls



## Standardize

Enable user access governance processes across all enterprise systems

- Reduce your total cost of ownership for GRC



## Automate

Monitor 100% of business activity & user transactions to uncover materialized risk

- Automate your audit, compliance and reporting processes



## Prioritize

Quantify the financial impact of risk to find the bottom-line business exposure

- Reduce your financial risk exposure

# Greenlight Monitors Millions of Users & Billions of Transactions