

Continuous Monitoring: Getting Results Today!

Gerard (Rod) Brennan, PhD , CFE

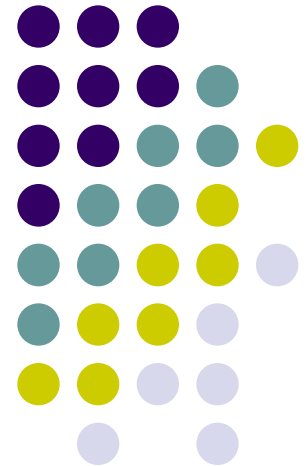
Risk & Internal Control Officer – NA, Siemens Corporation

Jason A. Gross, CPA, CIA, CFE, CISA, ACDA

Vice President, Controls Management, Siemens Financial Services, Inc.

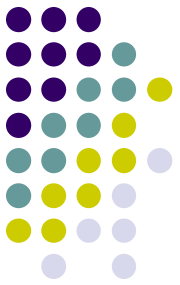
Emigdio Zambada, CIA, ACDA

Data Analytics Manager, Controls Management, Siemens Financial Services, Inc.



Agenda

- Overview / Importance of CCM
- CCM Methodology Principles
- CCM Demo





Overview / Importance of CCM



ACFE Fraud Report to the Nations

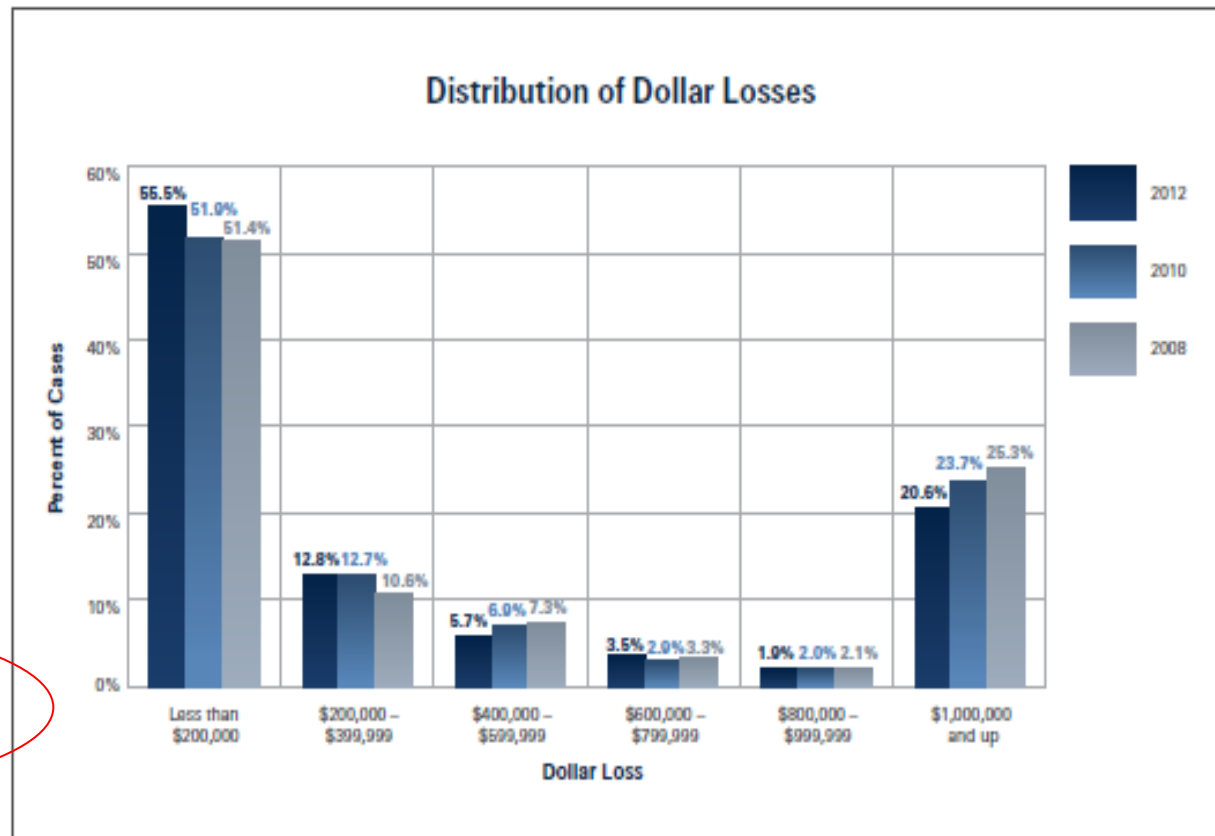
Fraud, by its very nature, does not lend itself to being scientifically observed or measured in an accurate manner. One of the primary characteristics of fraud is that it is clandestine, or hidden; almost all fraud involves the attempted concealment of the crime.



The typical organization loses 5% of its annual revenues to occupational fraud.

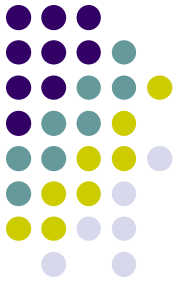
Distribution of Losses

Of the 1,388 individual fraud cases reported to us, 1,379 included information about the total dollar amount lost to the fraud.² The median loss for all of these cases was \$140,000, and more than one-fifth of the cases involved losses of at least \$1 million. The overall distribution of losses was notably similar to those observed in our 2010 and 2008 studies.

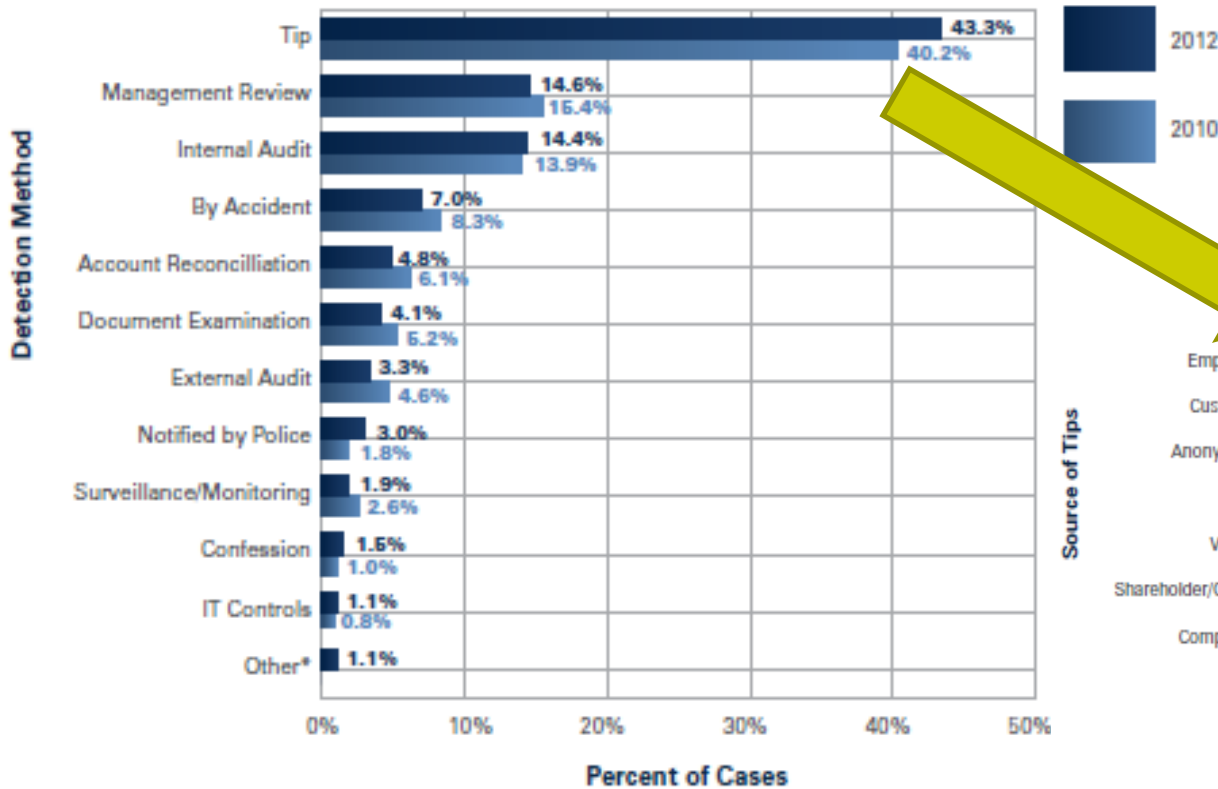


²United States Central Intelligence Agency, The World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/geow/sx.html>)

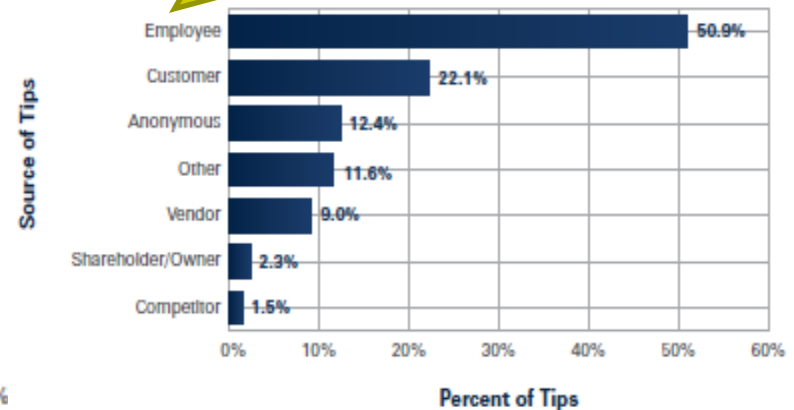
ACFE Fraud Report to the Nations



Initial Detection of Occupational Frauds



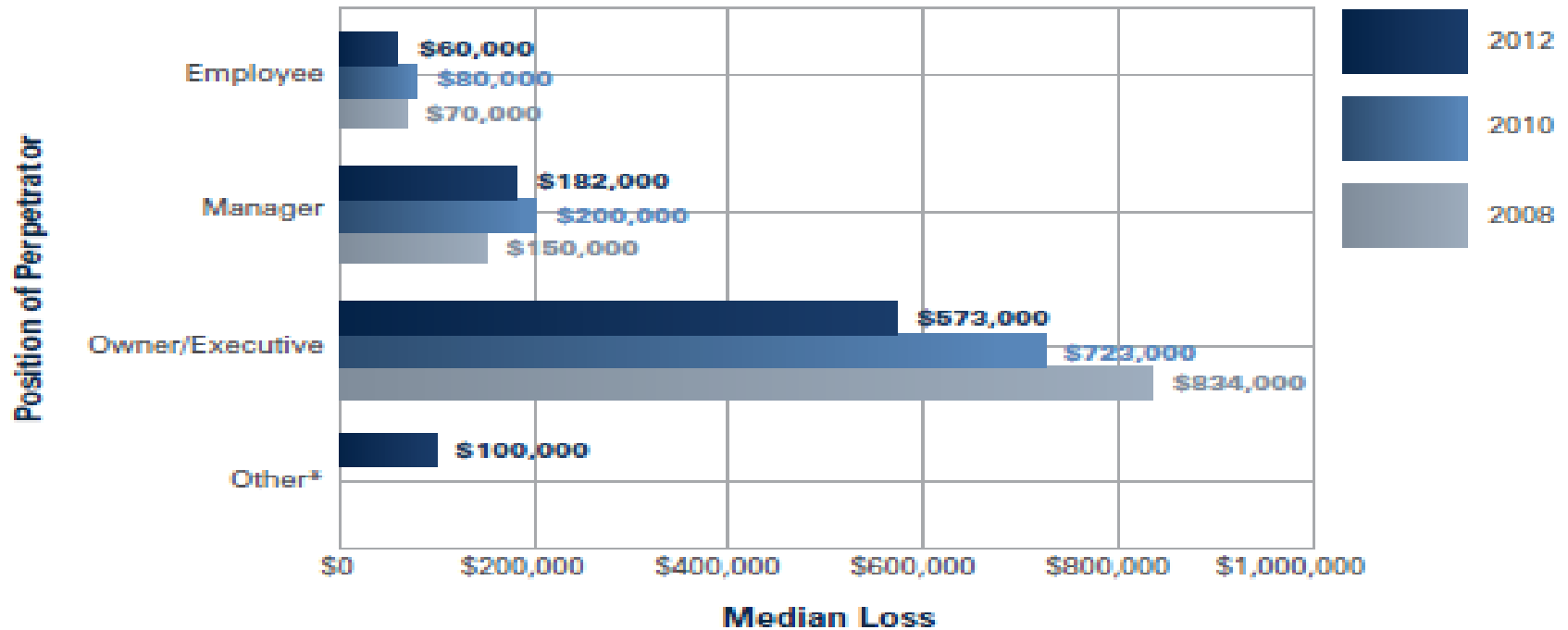
Source of Tips



ACFE Fraud Report to the Nations



Position of Perpetrator — Median Loss



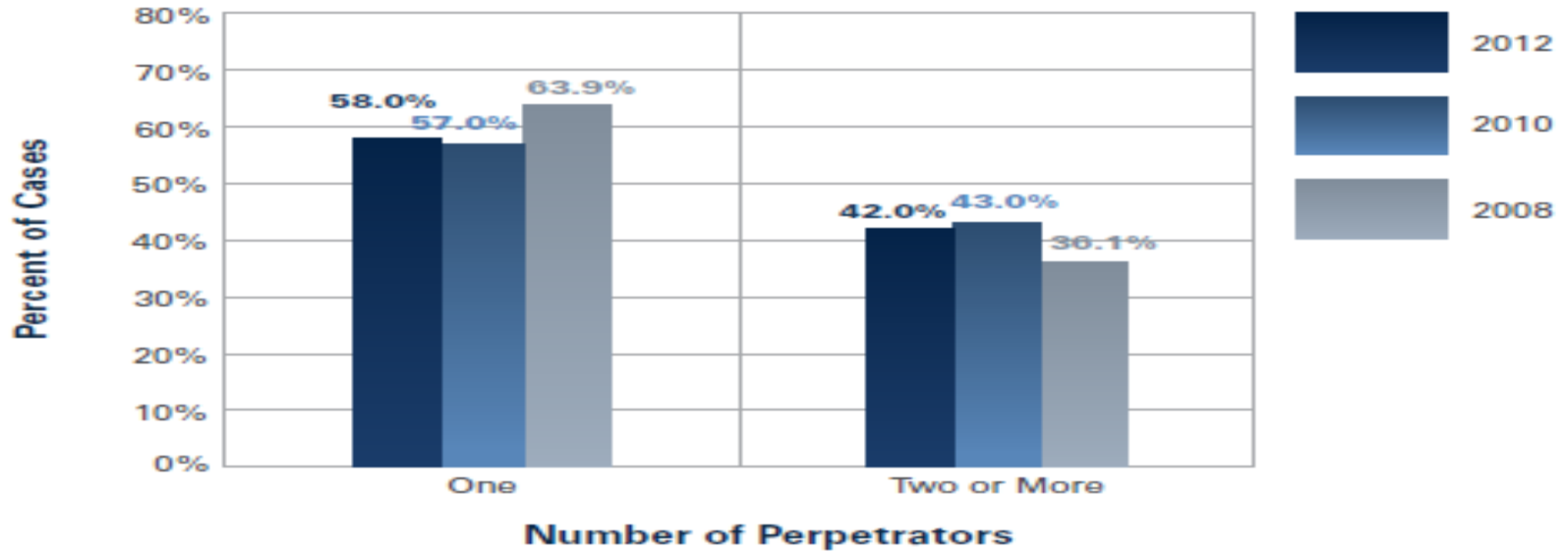
Duration of Fraud Based on Position

Position	Median Months to Detect
Employee	12
Manager	24
Owner/Executive	24
Other	10

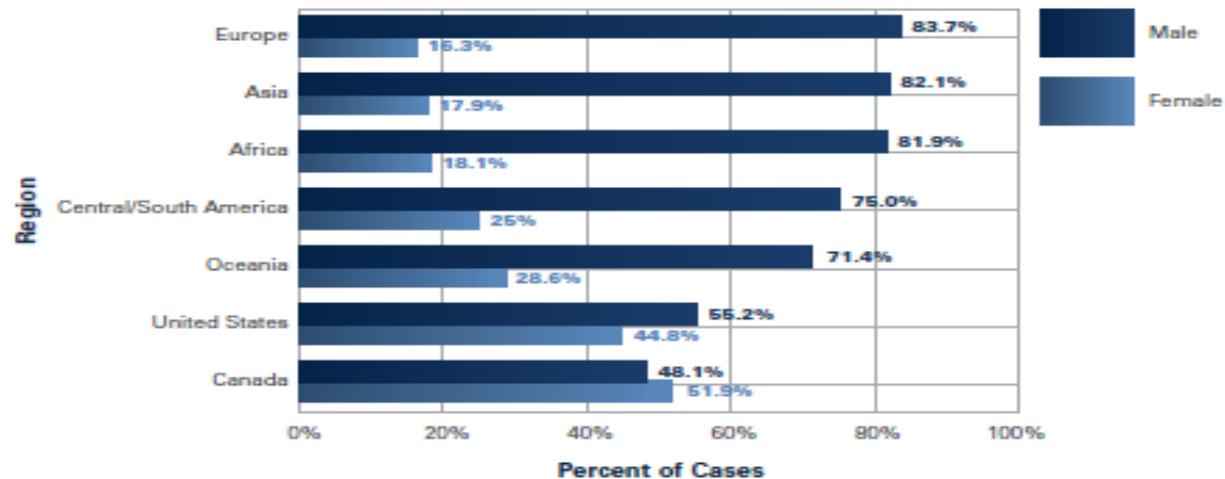
ACFE Fraud Report to the Nations



Number of Perpetrators — Frequency

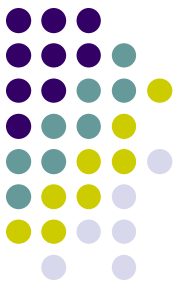


Gender of Perpetrator Based on Region





CCM Methodology Principles



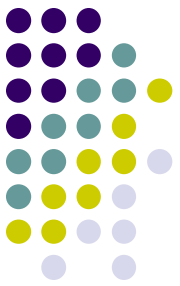
Challenge Statement:

Implement a CCM program for the Organization that offers flexibility in the definition of analytics that can be custom tailored to fit the needs and changing parameters of our business which includes a workflow system such that owners can update the status of exceptions via a web-based interface that provides real-time statistics and transparency across the Organization of open and closed items of which is readily auditable and can be relied upon by internal/external auditors.

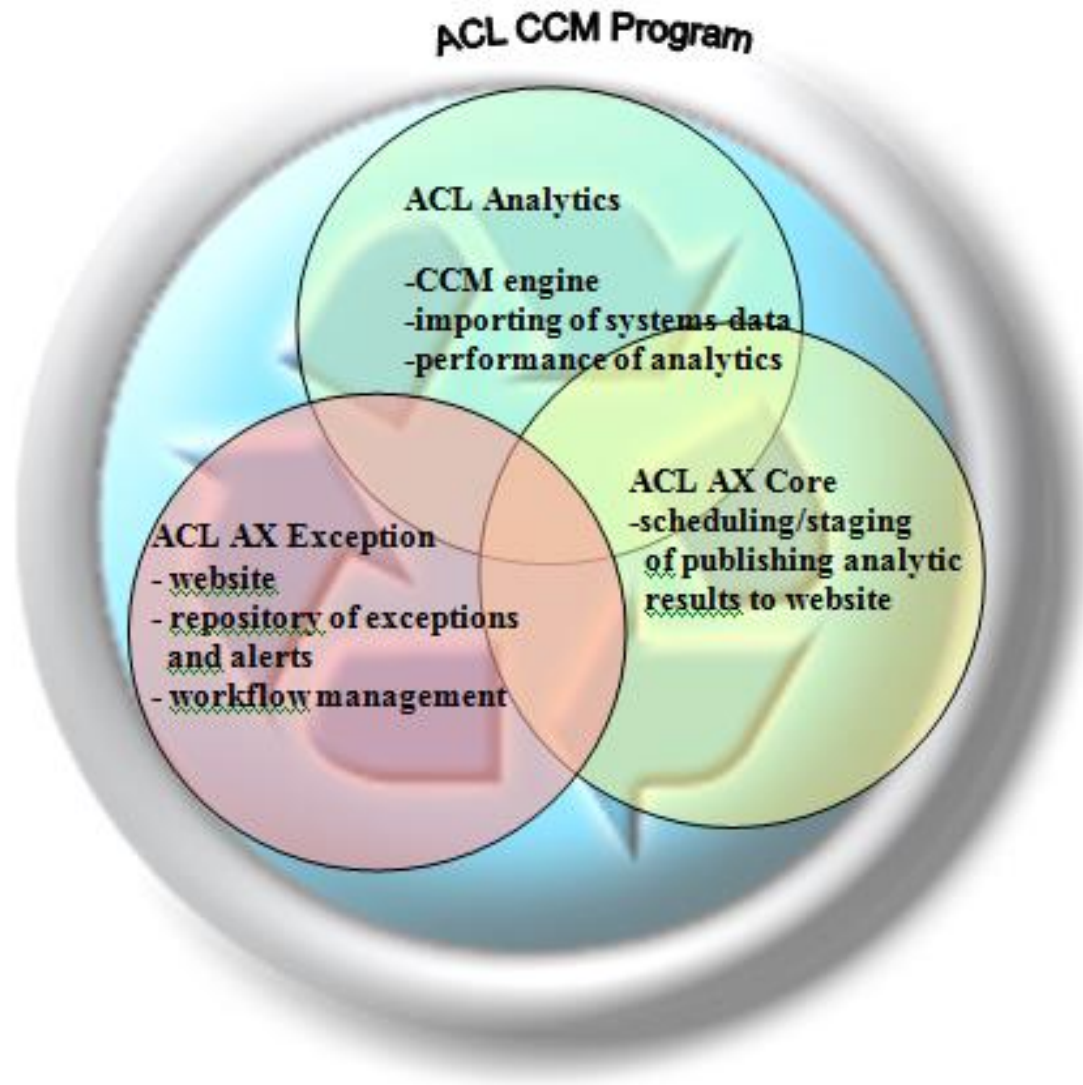


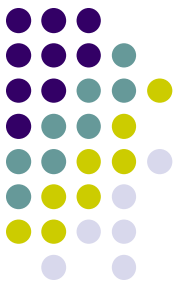
Overall Themes

- Simple
- Value
- Assurance
- Portable
- Accredited
- Closed loop validation
- Escalate
- New perspective of test vs control



CCM Model Diagram





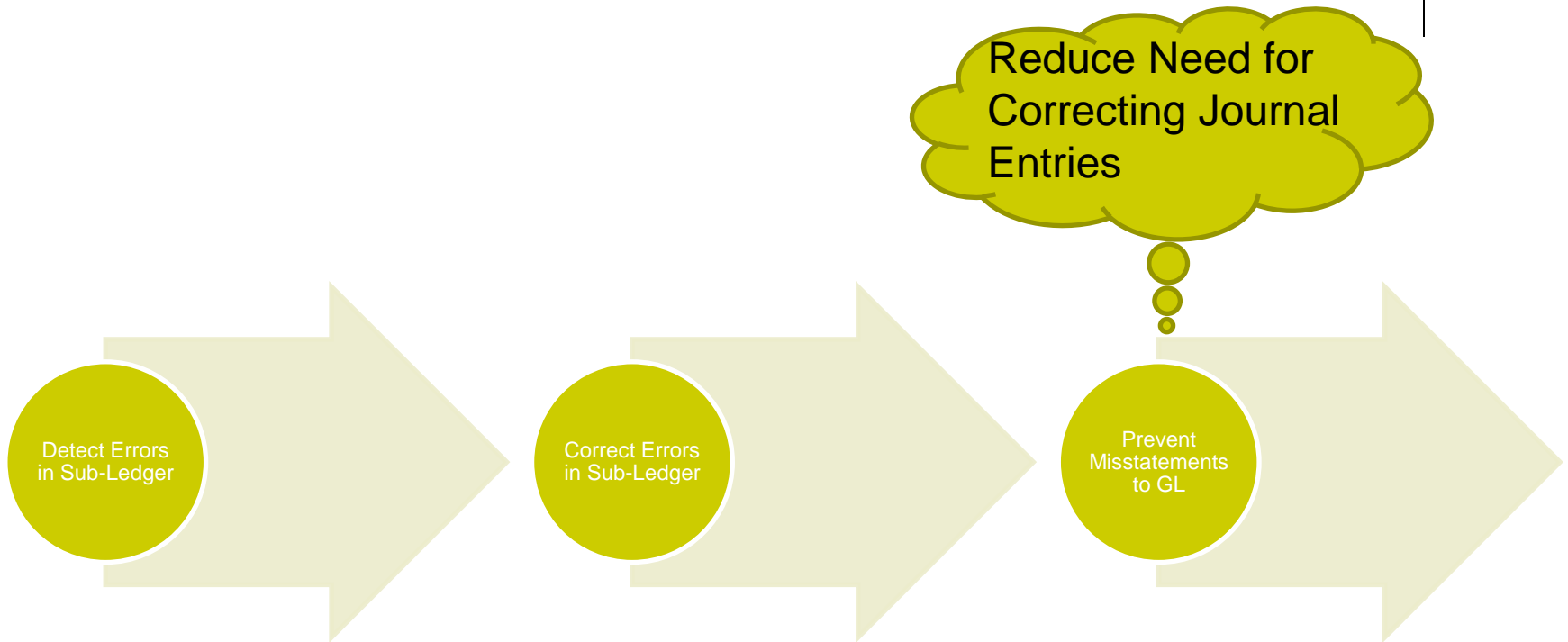
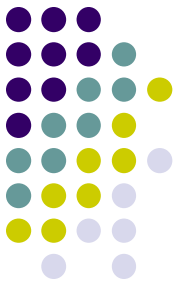
Which of the Following Is Continuous Monitoring ??

Detective Control

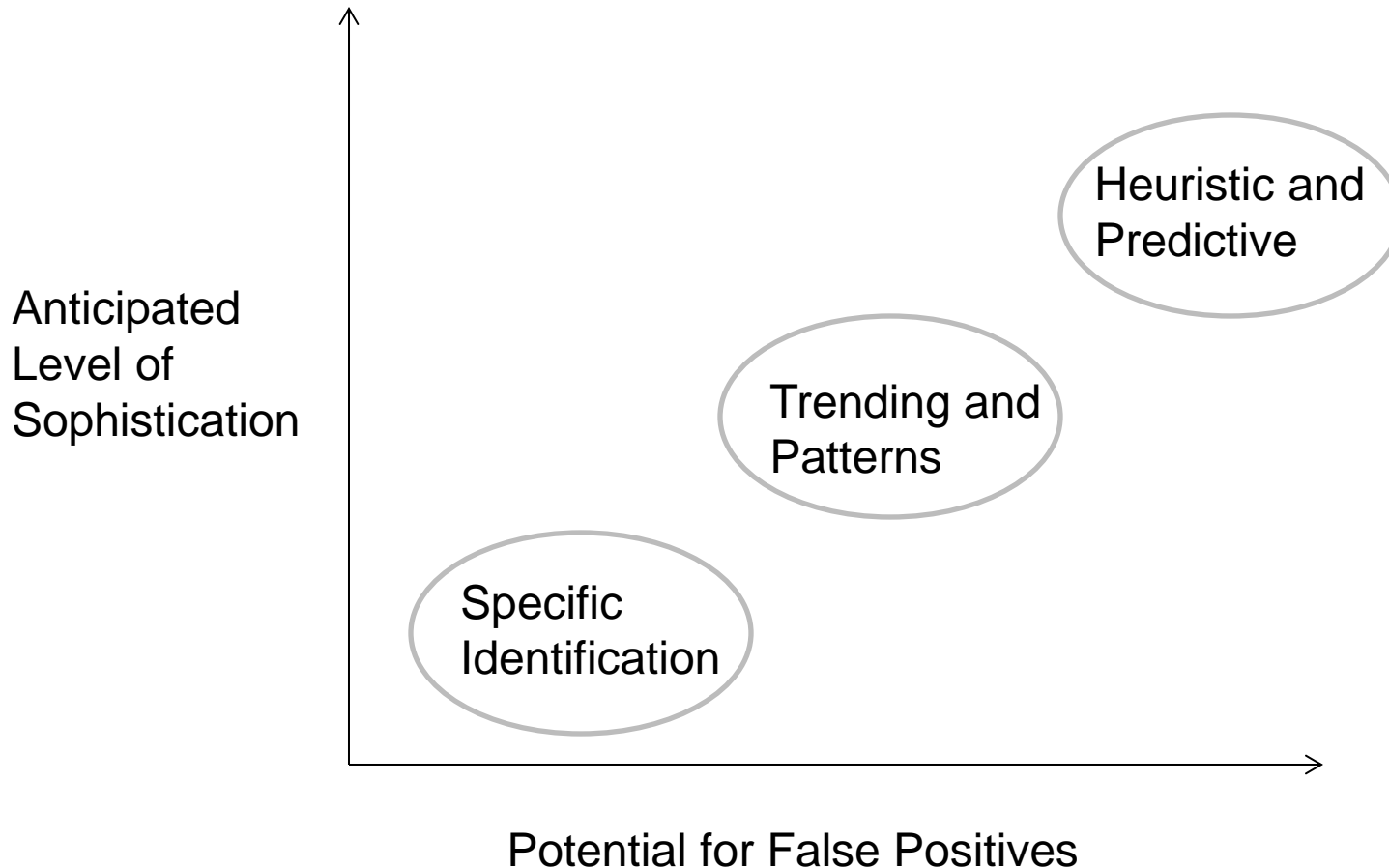
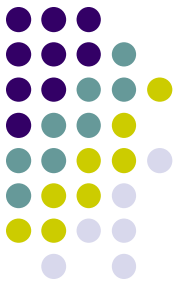
Corrective Control

Preventative Control

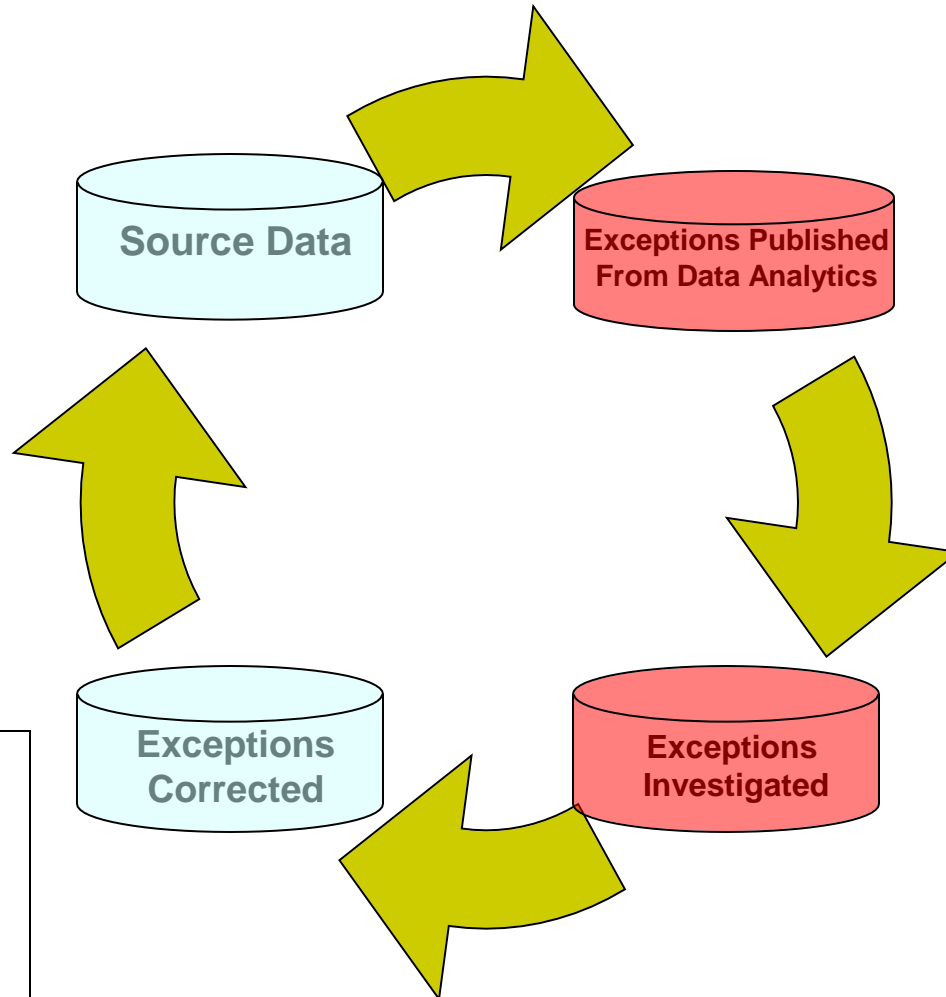
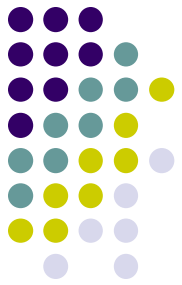
CCM Improves the Closing Process:



3 Key Techniques of Continuous Monitoring

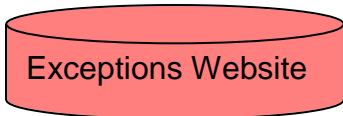
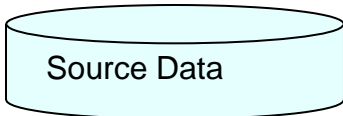


Closed Loop Exceptions Validation Mechanism:



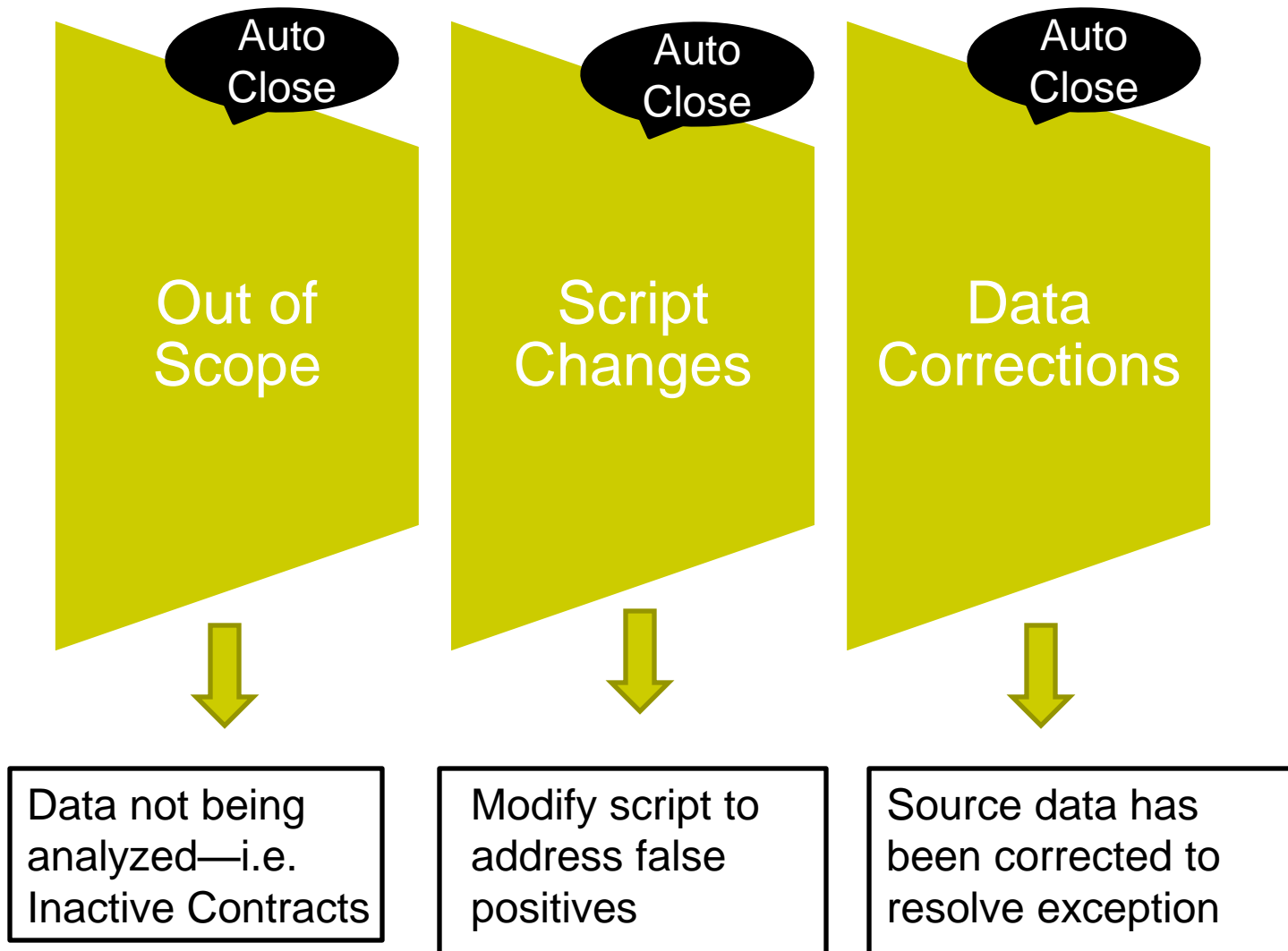
CCM Program automatically Re-Publishes Exceptions to website if items closed on website but source data not corrected, all without manual intervention !!

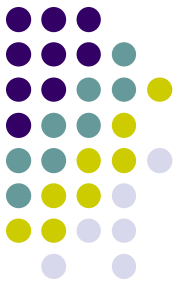
Legend:





Resolution of Exceptions:

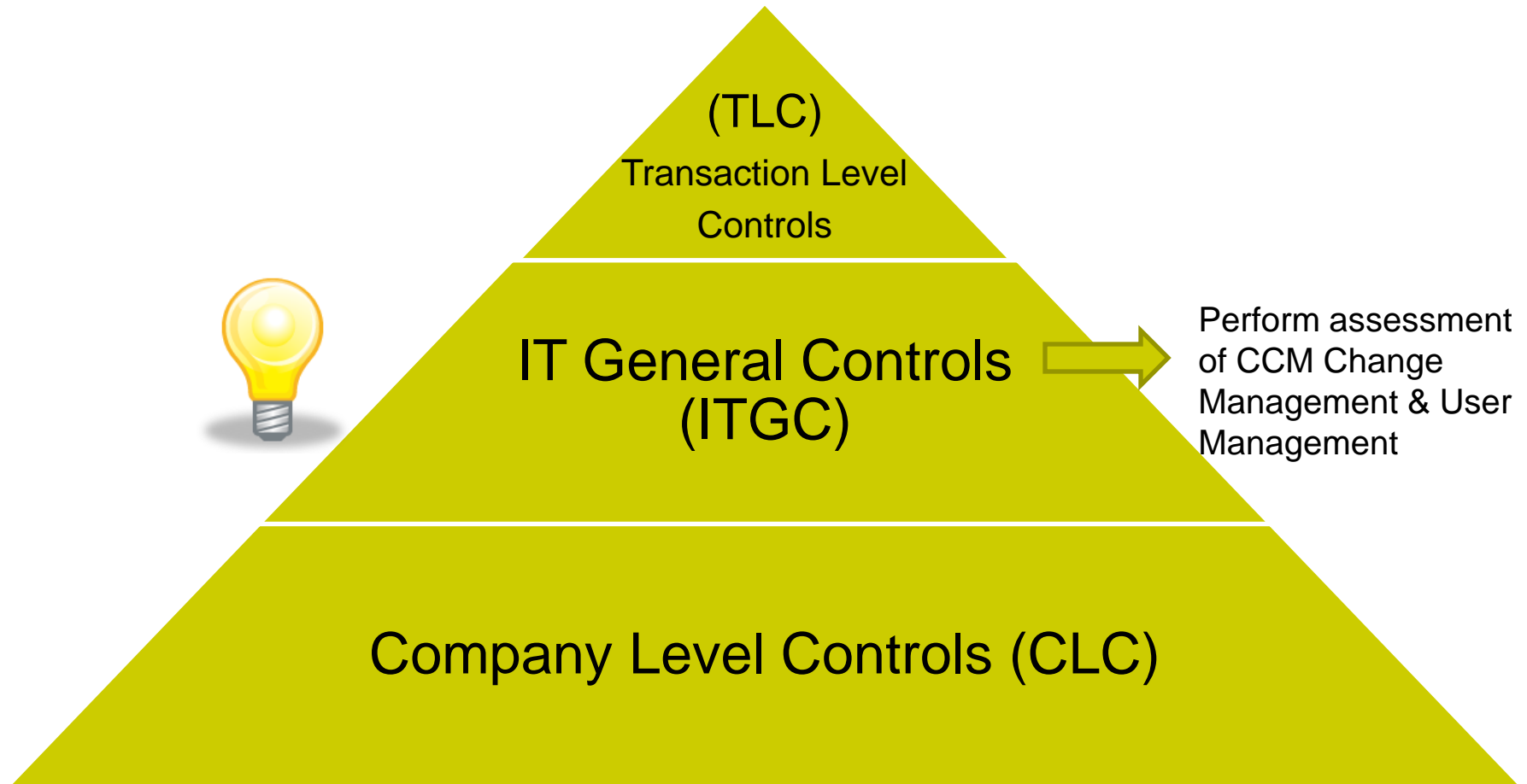




Uses and Application of CCM

- Financial Reporting Controls / SOX Controls
- Operational Controls
- IT Controls
- Process Efficiency (pre-validation of data before job runs)
- SOX testing (ITAC, scoping, sample selection, reliance)
- Rapid Remediation Solutions
- Eliminate manual controls

Harmonization of CCM into SOX Methodology:

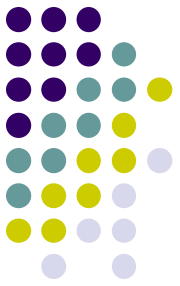




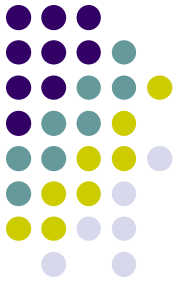
CCM DEMO

CCM DEMO

- Import validation / Import Hash total validation
- Analytic Routine / Duplicates / Completeness check
- User Notifications – New Items
- Publish Reconciliation
- Re-publish (Closed loop validation) – improper closure
- Script change management / Script Sync
- No Longer Exception/Auto Close



IMPORT DATA ROUTINE / IMPORT HASH TOTAL RECON



From: ACL.sfs@siemens.com Sent: Tue 11/5/2013 2:51 PM
 To: Zambada Senties, Emigdio
 Cc:
 Subject: ACL CCM Alert: 105 IMPORT Routine Success

The import routines for today have completed successfully.

Refer to the link(s) below for further information:
\\isew515a.ww400.siemens.net\ServerScripts\SIEMENS_CCM_TEST_D\CCM_RUN_SEQ_105\

ACL CCM Alert: 104 Import Hash Total Reconciliation Success

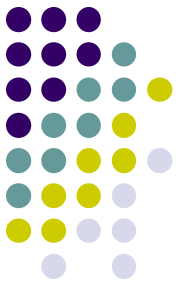
ACL.sfs@siemens.com
 Sent: Tue 11/5/2013 2:24 PM
 To: Zambada Senties, Emigdio
 Attachments: IMPORT_HASH_RECON_OVERALL_104.XLSX (7 KB)

The Import Hash Total Reconciliation has been performed with 0 discrepancies. The attached spreadsheet is included for reference purposes.

Refer to the link(s) below for further information:
\\isew515a.ww400.siemens.net\ServerScripts\SIEMENS_CANADA\CCM_TEST_D\CCM_RUN_SEQ_104\IMPORT_HASH_RECON_OVERALL_104.XLSX

A	B	C	D	E	F	G	H	I	J
System_Name	Hash_Date	Hash_Table_Name	Hash_Record_Count	IMPORT_Record_Count	Hash_Value_Field	Hash_Value_Total	IMPORT_Value_Total	Records_Variance	Value_Total_Variance
SAP	11/5/2013	HR.xlsx	2,856	2,856	payroll payments	19,438,573.00	19,438,573.00	0	0
SAP	11/5/2013	Invoices.xlsx	3,958	3,958	invoice amount	43,832,901.21	43,832,901.21	0	0

Analytics Routine



From: ACL.sfs@siemens.com Sent: Tue 11/5/2013 4:00
 To: Zambada Senties, Emigdio
 Cc:
 Subject: ACL CCM Alert: 106 Data Analytic Routine Success

The Data Analytic routines for today have completed successfully and denotes successful completion of MASTER_STARTUP_SCRIPT2.

Refer to the link(s) below for further information:

<\\isew515a.wv400.siemens.net\\ServerScripts\\SIEMENS CANADA\\CCM TEST D\\CCM RUN SEQ 106\\TESTING COMPLETENESS VALIDATION CK 106.XLSX>

<\\isew515a.wv400.siemens.net\\ServerScripts\\SIEMENS CANADA\\CCM TEST D\\CCM RUN SEQ 106\\>



	A	B	C	D	G	H	M	N	O	P	Q
1	ANALYTIC	ANALYTIC_TITLE	ACL_RUN_	DATE	ENTITY	PRIMARY_OWNER	RX_RA_COUNT	RC_COUNT	TOTAL_COUNT	TESTING_TABLE_COUNT	VARIANCE
2	AC-0004	Shipping Cutoff Check-SAP	106	11/5/2013	TEST	emigdio.zambada_si	451	3629	4080	4080	0
3	HR-0002	Inactive Employee Receiving Payroll-SAP	106	11/5/2013	TEST	emigdio.zambada_si	0	216	216	216	0
4	HR-0003	Invalid_Pay_Calculation-SAP	106	11/5/2013	TEST	emigdio.zambada_si	1	215	216	216	0
5	IT-0001	Unauthorized_Users_Access-SAP	106	11/5/2013	TEST	emigdio.zambada_si	0	6172	6172	6172	0

From: ACL.sfs@siemens.com
 To: Zambada Senties, Emigdio
 Cc:
 Subject: ACL CCM Alert: 104 Daily Summary of New Items Published to AX Exception Website Notification
 Attachments: DAILY_PUBLISH_SUMMARY_104.XLSX (8 KB)

Sent:



New items have been published to the ACL AX Exception Website located at <https://devaclax.sfs.siemens.com:8443/exceptionmgmt>

Find attached spreadsheet summarizing the new items for each Analytic and Owner relating to today's 11/05/2013 analysis of ACL RUN SEQ#104.

There are 4 Analytics with new items for today aggregating to 482 items in total.

ANALYTIC NUMBER	ANALYTIC TITLE	EXCEPTION TYPE	ENTITY	# NEW ITEMS PUBLISHED
AC-0004	Shipping Cutoff Check-SAP	RX	TEST	474
HR-0002	Inactive Employee Receiving Payroll-SAP	RX	TEST	1
HR-0003	Invalid_Pay_Calculation-SAP	RX	TEST	3
IT-0001	Unauthorized_Users_Access-SAP	RX	TEST	4

EX ACL Exception Overview My Exceptions Exception Details Help Log Out

Entity: TEST Analytic: All

From: 1964-07-26 To: 2013-11-05 State: --- Open States ---

Clear Filters Apply

5 items found, displaying all items.1

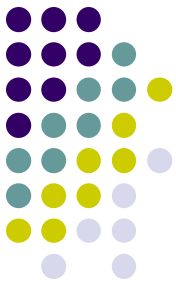
Analytic	Analytic Name	Total Sum	Open - Assigned to Owner	Open - Correction in Progress	Open - Exception Waived	Open - Improvements Identified	Open - Improvements In Progress	Open - Improvements Pending Approval	Open - Pending False Positive	Open - Under Review
AXEMAA-0001	AA-0001	0	0	0	0	0	0	0	0	0
AXEMAC-0004	AC-0004	474	474	0	0	0	0	0	0	0
AXEMHR-0002	HR-0002	1	1	0	0	0	0	0	0	0
AXEMHR-0003	HR-0003	3	3	0	0	0	0	0	0	0
AXEMIT-0001	IT-0001	4	4	0	0	0	0	0	0	0

NEW ITEMS PUBLISHED

474 items found, displaying all items.1

	State	ID	Analysis Date	Priority	Analytic Number	Analytic Title	ACL RUN SEQ_NUM	Exception Type	INVOICE_NUM	Sales Order Number	CU
<input type="checkbox"/>	Open - Assigned to Owner		2013-11-05 14:04:49		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640036861	000008175946	
<input type="checkbox"/>	Open - Assigned to Owner		2013-11-05 14:04:49		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640036865	000008175950	
<input type="checkbox"/>	Open - Assigned to Owner		2013-11-05 14:04:49		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640036868	000008175953	
<input type="checkbox"/>	Open - Assigned to Owner		2013-11-05 14:04:49		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640036992	000008176077	

NEW ITEMS PUBLISHED RECONCILIATION



From: ACL.sfs@siemens.com Sent: Tue 11/5/2013 4:00
 To: Zambada Senties, Emigdio
 Cc:
 Subject: ACL CCM Alert: 106 New Items Published Reconciliation FAILURE
 Attachments: DAILY_PUB_SUMMARY_RECONCILE_106.XLSX (8 KB)

The reconciliation has been performed to verify the completeness of new items published to the ACL AX Exception Website.

The reconciliation reflected -8 variances arising from 1 Analytics as detailed in the attached spreadsheet.

Refer to the link(s) below for further information:

<\\isew515a.wv400.siemens.net\ServerScripts\SIEMENS CANADA\CCM TEST D\CCM RUN SEQ 106\DAILY PUB SUMMARY RECONCILE 106.XLSX>

<\\isew515a.wv400.siemens.net\ServerScripts\SIEMENS CANADA\CCM TEST D\CCM RUN SEQ 106\DAILY PUBLISH LISTING 106.XLSX>

From: ACL.sfs@siemens.com Sent: Tue 11/5/2013 3:01
 To: Zambada Senties, Emigdio
 Cc:
 Subject: ACL CCM Alert: 105 Cumulative Reconciliation Success

The Cumulative Reconciliation has been performed to ensure that all current Exceptions/Alerts as determined by today's ACL data analytic routines are properly reflected in the AX Exception database as open items (or Closed-Condition Accepted; or Closed-Acknowledged for RA items).

The reconciliation was successful; 0 unreconciled items exist.

Refer to the link(s) below for further information:

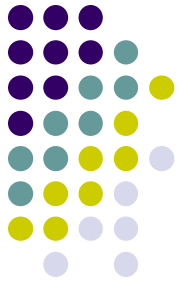
<\\isew515a.wv400.siemens.net\ServerScripts\SIEMENS CANADA\CCM TEST D\CCM RUN SEQ 105\CUMULATIVE RECONCILE 105.XLSX>

	A	B	C	D	K	Q	R
1	Analytic_Number	Analytic_Title	ACL_RUN_SEQ_NUM	Analysis_Date	ACL_Number_of_Items	AXEM_Number_of_Items	PUBLISH_VARIANCE
2	AC-0004	Shipping Cutoff Check-SAP	106	11/5/2013	8	0	-8
3							

Custom workflow



Adobe Acrobat Document



Selected Entity: **AXEMAC-0004** - Identify sales invoices that were dated and journalized prior to the shipping taking place, thus failing the

Exceptions

	State ID	Date	Analytic ID	Analytic Name	Priority	Analytic Number	Analytic Title	ACL RUN SEQ NUM	Exception Type	INVOICE NUM	Sales
	Open - Assigned to Owner	2013-11-05 14:04:49	AXEMAC-0004	AC-0004		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640036992	
	Open - Assigned to Owner	2013-11-05 14:04:49	AXEMAC-0004	AC-0004		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640037006	
	Open - Assigned to Owner	2013-11-05 14:04:49	AXEMAC-0004	AC-0004		AC-0004	Shipping Cutoff Check-SAP	104	RX	173640037012	

Action:

Priority:

Comment:

- Under Review
- Correction in Progress
- Improvements Identified
- Improvements In Progress
- Improvements Pending Approval
- Exception Waived
- Closed - Acknowledged
- Closed - Exception Corrected

Attached File(s):

From: ACL.sfs@siemens.com
 To: Zambada Senties, Emigdio
 Cc:
 Subject: ACL CCM Alert: 105 Script Change Management ALERT
 Attachments: Daily_Script_Change_Log_105.XLSX (8 KB); Daily_Script_List_105.XLSX (15 KB)

Script change management routines have been executed.

There have been 2 changes in the scripts between today versus prior day as reflected in the attached spreadsheet and summarized as follows:

- NEW scripts: 0
- DELETED scripts: 0
- MODIFIED scripts: 2

Script_Name	RUN_SEQ_NUM	STATUS	LOG_DATE	MODIFIED_BY
s004_MASTER_STARTUP_SCRIPT2	105	MODIFIED	11/5/2013	robert.pergola@siem
s204DL_Shipping_Cutoff_0004	105	MODIFIED	11/5/2013	emigdio.zambada_se

The current scripts can be found at:

```

COMMENT ***This is the launch of Data Loader (DL) script which pre-loads data before Analytic Routine begins.
SET SAFETY OFF

OPEN Invoices_&v_System_Suffix&_&v_RUN_SEQ_T&
OPEN Shipments_&v_System_Suffix&_&v_RUN_SEQ_T& SECONDARY
JOIN KEY Sales_Order_Number FIELDS Invoice_Number Sales_Order_Number Customer_Number Invoice_Date Invoice_Amount Payment_Status Payment_Date
Payment_Amount Created_By Created_On Approved_By Approved_On SKEY Sales_Order_Number WITH Shipping_Number Shipping_Date Items_Shipped TO *
v_fullpath&t_0004_ShippingCutoff_&v_System_Suffix&_&v_RUN_SEQ_T& OPEN PRESORT SECORT
CLOSE SECONDARY

COMMENT **Set key field to length of 50
DELETE FIELD INVOICE_NUM OK
DEFINE FIELD INVOICE_NUM COMPUTED SUBSTR( Invoice_Number, 1, 50)

COMMENT **BELOW FOR SCRIPT CORRECTION EXAMPLE*****
COM >>>>> "NO" IF invoice_date < shipping_date AND invoice_month <> shipping_month

COMMENT *** Uses CMOY(), requires AN10.0 or higher
DELETE FIELD invoice_month OK
DEFINE FIELD invoice_month COMPUTED CMOY( invoice_date , 12 )

DELETE FIELD shipping_month OK
DEFINE FIELD shipping_month COMPUTED CMOY( shipping_date , 12 )

COMMENT **Identify shipping cutoff violation (Invoice dates before shipping has occurred)
DELETE FIELD SHIPPING_INVOICING_VALID OK
DEFINE FIELD SHIPPING_INVOICING_VALID COMPUTED

| "NO" IF invoice_date < shipping_date AND invoice_month <> shipping_month
"YES"

COMMENT **...**END OF SCRIPT
  
```

Name	Date modified
Daily_Script_Change_Log_105.XLSX	11/5/2013 3:21 PM
Daily_Script_List_105.XLSX	11/5/2013 3:20 PM
Master_Script_Change_Log.XLSX	11/5/2013 3:20 PM
MODIFIED_SCRIPT_s004_MASTER_105.del	11/5/2013 3:04 PM
MODIFIED_SCRIPT_s204DL_Ship_105.del	11/5/2013 3:04 PM
s004_MASTER_STARTUP_SCRIPT2.doc	11/5/2013 3:19 PM
s204DL_Shipping_Cutoff_0004.doc	11/5/2013 3:19 PM

```

COMMENT **Identify shipping cutoff violation (Invoice dates before shipping has occurred)
DELETE FIELD SHIPPING_INVOICING_VALID OK
DEFINE FIELD SHIPPING_INVOICING_VALID COMPUTED

| "NO" IF invoice_date < shipping_date AND invoice_month <> shipping_month
"YES"
  
```

SCRIPT CHANGE MANAGEMENT

	A	B	C	D	E	J	K	L	M
1	ACL_RUN	RESOLVED_RUN	RESOLVED_DATE	Analytic_Number	ANALYTIC_TITLE	OUT_OF_SCOPE	ANALYTIC_SCRIPT_CHANGED	SOURCE_DATA_CHANGED	CHG_LOG_EXIST
2	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
3	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
4	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
5	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
6	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
7	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
8	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
9	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
10	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
11	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
12	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
13	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
14	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
15	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
16	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
17	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
18	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
19	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
20	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
21	105	105	11/5/2013	AC_0004	Shipping Cutoff Check-SAP	NO	YES	YES	OPEN_CHG_LOG_AC_0004_105
						YES	YES	YES	OPEN_CHG_LOG_AC_0004_105
						YES	YES	YES	OPEN_CHG_LOG_AC_0004_105
						NO	OUT OF SCOPE	NO	
						NO	YES	YES	OPEN_CHG_LOG_HR_0003_105
						NO	OUT OF SCOPE	NO	
						NO	OUT OF SCOPE	NO	
						NO	OUT OF SCOPE	NO	
						NO	OUT OF SCOPE	NO	
						NO	OUT OF SCOPE	NO	

User System User
GID System User
Time Tuesday, November 5, 2013 3:08:04 PM

State:	Priority	Esc_Level
Closed - Exception Corrected		-1

Comment Auto Closed - Data Changed (Exception Corrected)/Analytic Script Changed. Resolved RUN#105, Resolved Date: 11/05/2013. Refer to Change Log, OPEN_CHG_LOG_AC_0004_105

User System User
GID System User
Time Tuesday, November 5, 2013 3:08:22 PM

State:	Priority	Esc_Level
Closed - Exception Corrected		-1

Comment Auto Closed - Data Changed (Exception Corrected). Resolved RUN#105, Resolved Date: 11/05/2013. Refer to Change Log, OPEN_CHG_LOG_HR_0003_105

User System User
GID System User
Time Tuesday, November 5, 2013 3:07:57 PM

State:	Priority	Esc_Level
Closed - Exception Corrected		-1

Comment Auto Closed - Out of Scope. Resolved RUN#105, Resolved Date: 11/05/2013.

C	AI	AJ	AK
EMPLOYEE_PAY_PERIOD	GROSS_PAY2	Gross_Pay	GROSS_PAY_CHG
0000127561_4671	1500	993.75	YES

No Longer Exception / Auto Close



Continuous Assurance Attributes

Authorization	Data Completeness	Table Maintenance	Edit Checks	Calculation Verification	Data Integrity
Change Management					
Trending & Analysis					

Questions and Discussion...



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Tel# 732-476-3481

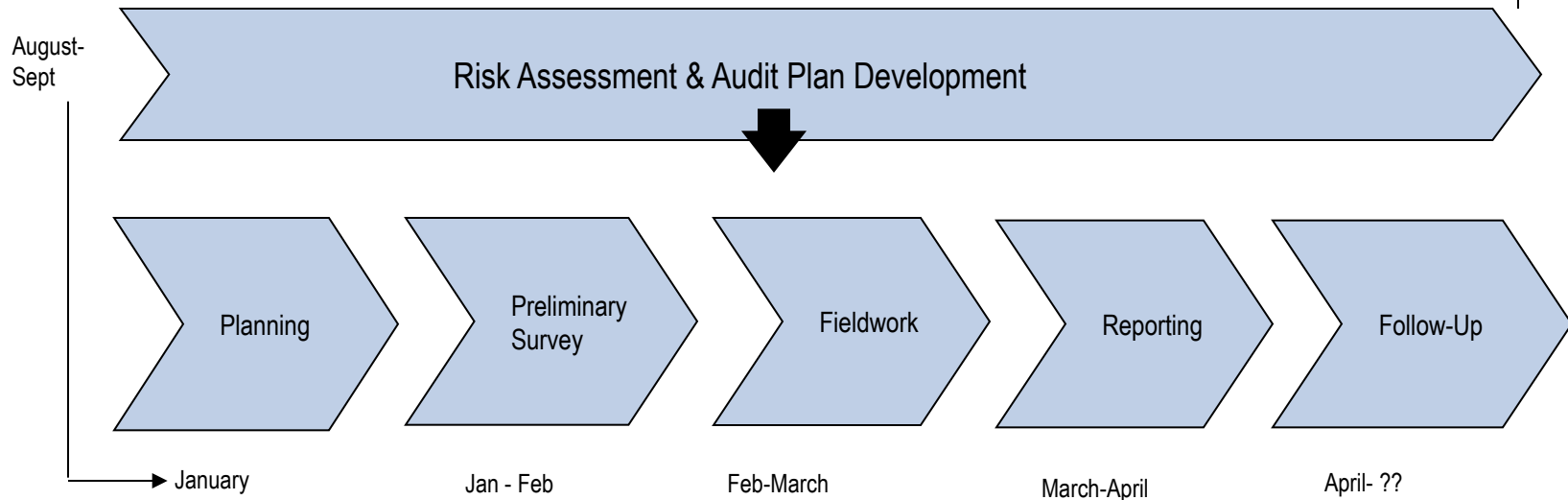
Email: emigdio.zambada_senties@siemens.com



Backup Information



Traditional Internal Audit Process



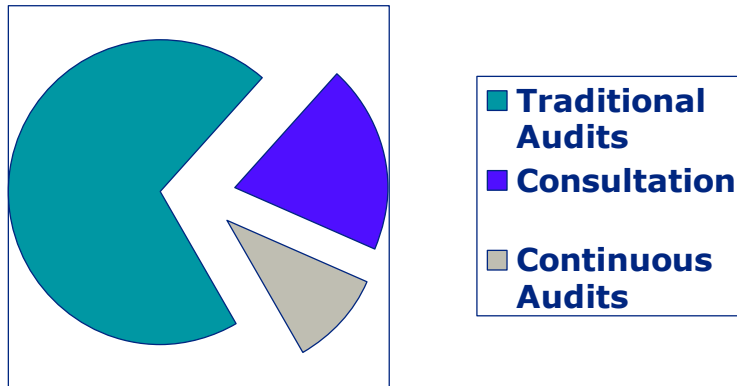
Continuous Auditing Needs to Be Added to the Mix to:

- Reduce time interval between recurring audits
- Reduce audit cycle times
- Achieve timely impact of corrective action implementation

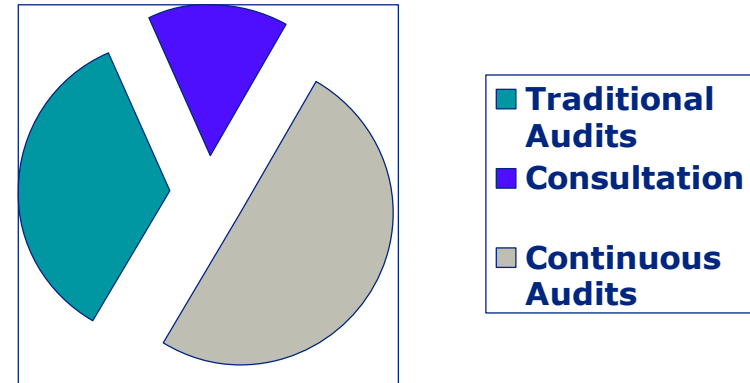
Leveraging Continuous Auditing to Promote Best Practices in Internal Audit



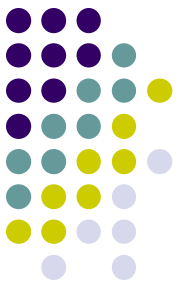
Audit Plan - Today



Audit Plan - Tomorrow

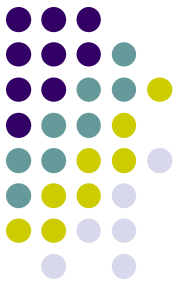


Audit Plan should define optimal mix of traditional audits, consultations, and Continuous Auditing topics for the Organization; with Audit Committee approval. As methodology matures over time, Continuous Audits should comprise a greater portion of the Audit Plan.



Benefits of Data Analytics

- Analysis is more objective, less subjective
- Examine populations of transactions, not samples
- Analyze data from disparate systems
- Unlimited transaction sizes
- Less risk of data integrity issues
- Examine transactions, with greater confidence
- Auditor independence across data analysis workflow:
 - Greater control & independence over testing/analysis
 - Greater assurance
- Maintain audit logs of testing performed



Key Drivers for Successful Implementation

- Define Continuous Auditing/Monitoring objectives
- Obtain support & commitment from Audit Committee and Management
- Continuous Auditing should complement the Audit Plan
- Identify key audit/monitoring topics
- Start small; build from success
- Automate/leverage from well-defined periodic audits



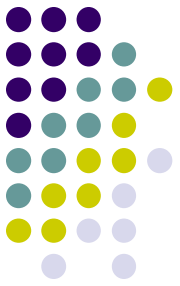
Key Drivers for Successful Implementation

- Migrate from testing of samples to testing of universe
- Timely evaluation of activity
- Define responsibility between continuous monitoring and continuous auditing
- Gain reliance by external auditors and add value
- Formalize continuous audit approaches and methodology



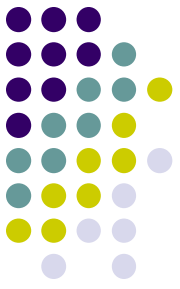
Technology Tools -- Vital for Success

- Embrace and invest in technology tools and solutions
- Data analytics is at the heart of 'Continuous'
- 'Continuous Assurance' is still possible with technology products even without 'Continuous' in the name!
- Optimize current data analytic scripts and schedule routines on a 'continual' basis






Continuous Monitoring

- Real-time identification of control breakdowns
- Valuable mechanism for testing controls
- Test transactional data against expected limits and parameters
- Automated exceptions and reporting; less manual intervention
- Proactive; less reactive
- Sustainable as a program
- Improves risk management practices



Evolution to a Continuous Methodology

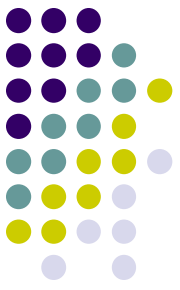
Isolated Detection  Prevention  Corrective Detection

Event Driven  Continuous Monitoring

Reactive  Proactive

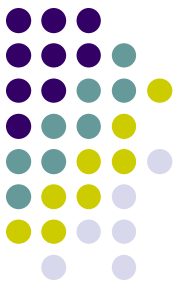
Manual intensive  Automated & Sustainable

Ad hoc  Repetitive  Continuous



CCM Implementation:

- Integrated CCM program design....'engine' calls analytics
- Open framework...custom defined 'engine' and analytics
- Cumulative versus Differential analytics
- Exception versus Alert analytics...dual purpose for CCM!
- Personalized Email notifications of new exceptions to owners
- Script change management logging and email notifications
- Master table change management and email notifications
- Entire data analytic process is mechanized; no manual intervention
- CCM routine publishes only new or changed exception items

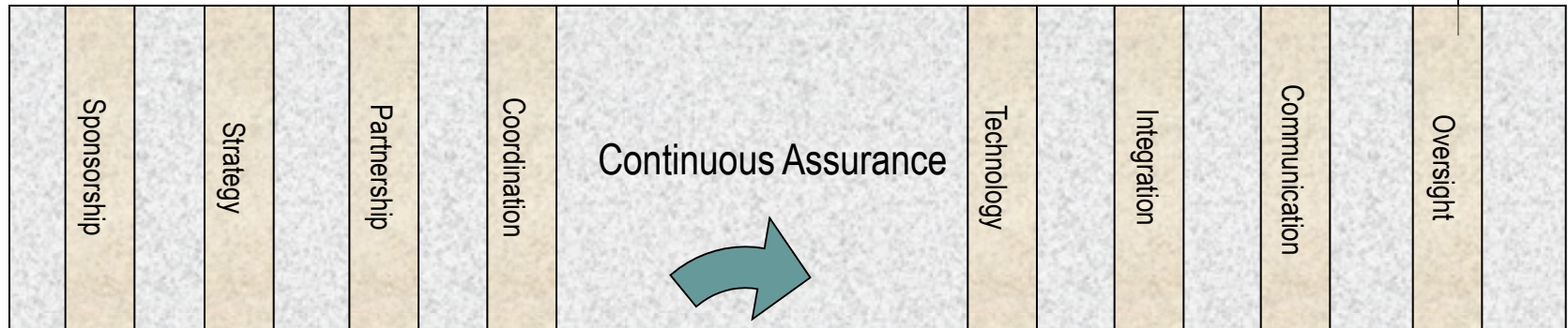


CCM Implementation:

- Self validation of corrected exceptions & false positives
- Web-based customized Workflow process to handle exceptions...un-validated items require 4-eye approval
- Daily and Cumulative Reconciliations (analytic vs. website)
- Rollforward Summary (open + new items – closed items = outstanding items)
- Status Update reminders and tracking email notifications
- ‘CCM engine’ portability to other parts of the Organization
- Fully logged and auditable



Build the Bridge to Continuous Assurance



Continuous Monitoring

- Owned by Management
- Is a Management activity
- May be preventive, detective and corrective in nature
- CM is a control itself

Continuous Auditing

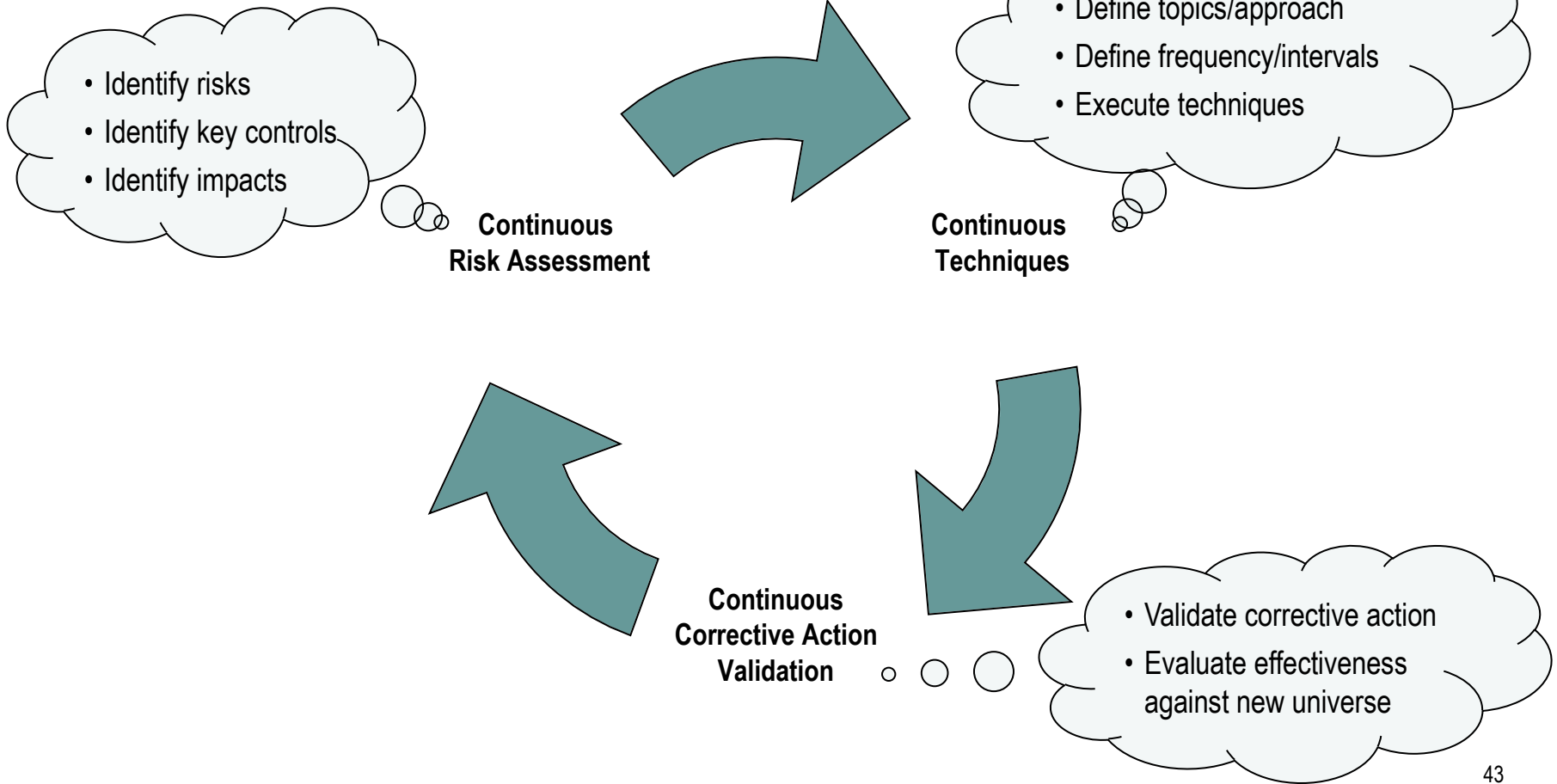
- Owned by Internal Audit
- Is an Audit activity and responsibility
- Independent of the control; therefore should not be preventive in nature
- IA should evaluate CM activities, trending and change management



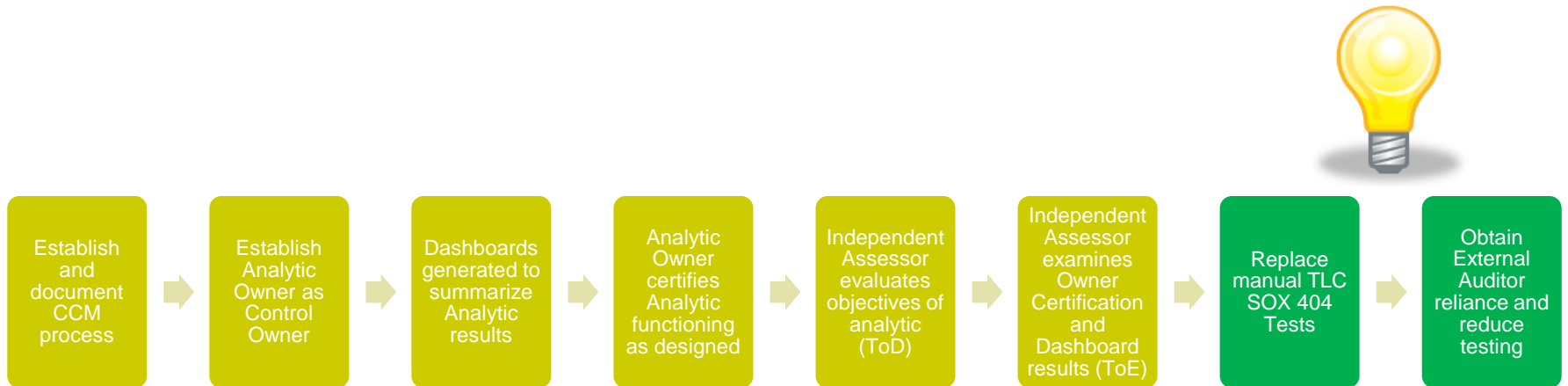
Continuous Assurance-
Built Upon the Two Pillars of
Continuous Monitoring and Continuous Auditing

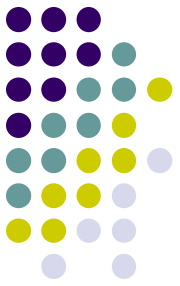


Continuous Methodology

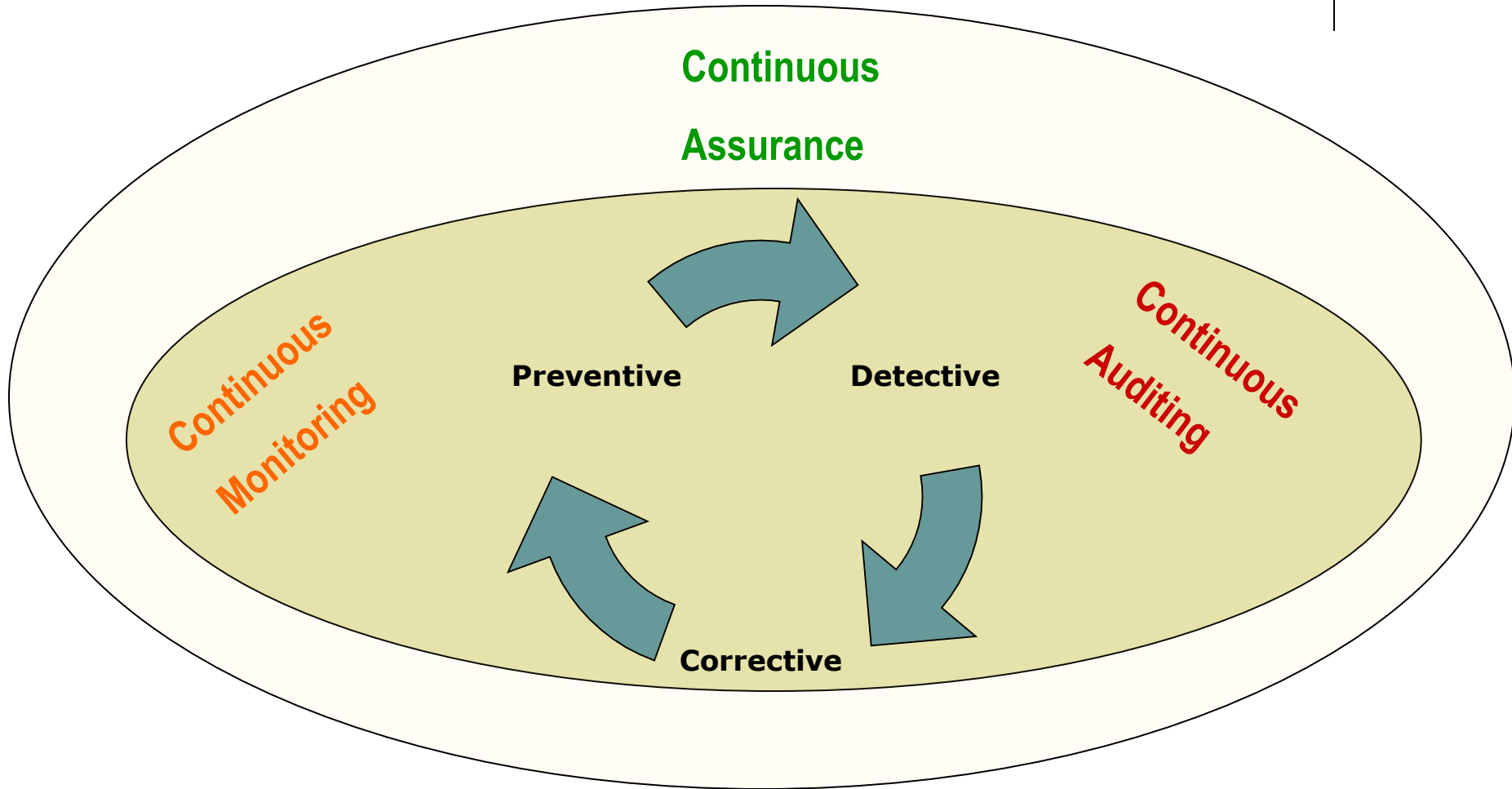


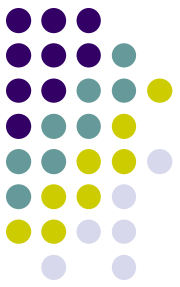
Harmonization of CCM into SOX Methodology:





Finding the Right Mix...



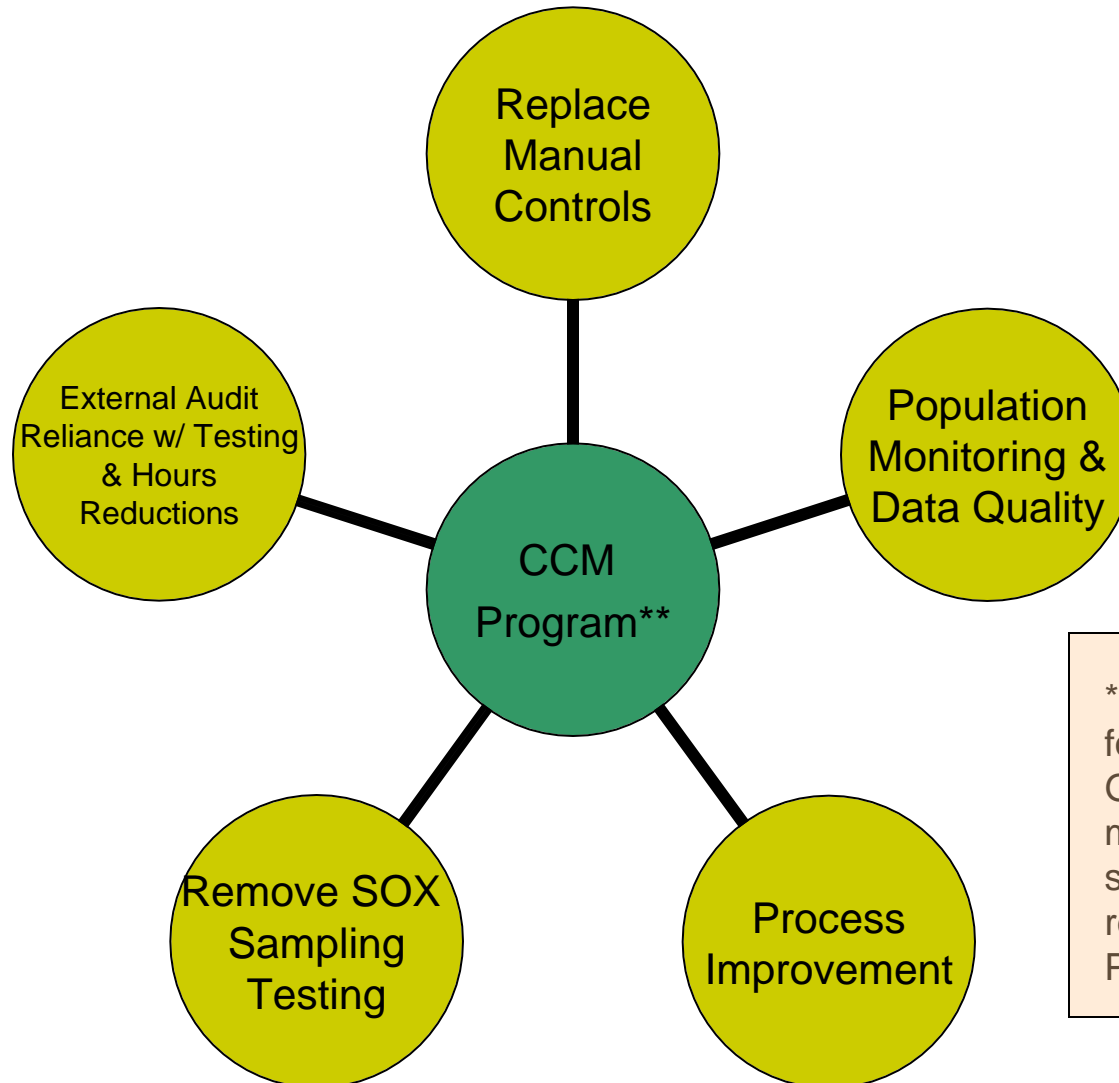


Opportunity Areas

- Accounts Payable
- Accounts Receivable
- Cash Disbursements
- Claims
- Credit Card / Procurement Card
- Deposits
- Expenses
- Inventory
- Investments
- General Ledger
- Loans
- Payroll
- PP&E
- Purchases
- Procurement
- Retail Transactions
- Revenues
- System Maintenance
- Travel & Entertainment
- Vendor Management

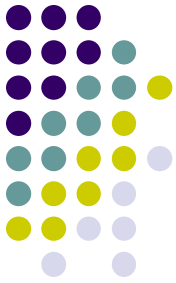


Benefits of Well-Controlled CCM Program



** Requires well-controlled foundation with strong IT General Controls (change mgmt, user access, security, etc.) to ensure reliance upon the CCM Program.

Reference Info



ACL CASE STUDY



Siemens Financial Services, Inc.

Automated controls testing elevates an ACL continuous monitoring solution



“Our ACL continuous monitoring solution helps us work much more efficiently. We’ve reduced our dependency on manual controls and streamlined our SOX testing approach.”

Jason A. Gross, CPA, CIA, CFE, CISA, ACDA, Vice President, Controls Management

SOLUTION

- Continuous Monitoring
 - ACL AuditExchange & Services
 - AX™ Exception
 - Implementation & Consulting
 - Support

KEY BENEFITS

- Continuous monitoring with a custom exception management workflow
- Streamlined SOX and compliance requirements
- Reduce risk and provide greater assurance across the organization

INDUSTRY

- Financial Services

REGION

- North America

Company Profile

Siemens Financial Services, Inc. (SFS) is a leading provider of business-to-business financial services in the United States. The company, based in Iselin, NJ, enables business expansion for thousands of customers in healthcare, energy and industrial sectors by providing customized solutions that range from equipment financing and working capital to project and export finance and insurance solutions. www.usa.siemens.com/finance

Objectives

The SFS controls management team implemented a continuous monitoring program that identifies, tracks and communicates key exceptions to business stakeholders. The team needed a user-friendly workflow engine to standardize the process of tracking and correcting exceptions – with minimal manual intervention.

As longtime proponents of ACL audit analytics, in February 2010 the SFS control team upgraded to a sophisticated ACL solution that includes a web-based application designed to manage, distribute, assign, review and escalate exceptions throughout their business. SFS worked with ACL consulting services to perform the installation and to ensure the solution adhered to IT protocols. ACL consulting and technical support services got the team quickly up and running so they could begin to see results immediately.

Implementation and Planning

The SFS team uses ACL technology to run continuous controls monitoring routines on a daily basis. Analyzed transactions include data input validations, system processing and calculations, edit checks, data trending, change management, authorization and table maintenance. Extractions and analytics run overnight on the server to promote peak performance. By the following morning, the exception management solution automatically notifies business owners about critical issues. With almost no manual intervention, the analytics can reveal opportunities for greater profitability and data discrepancies that might impair management’s ability to make informed decisions.

<http://www.acl.com/portfolio/siemens-financial-services-inc/>