Measuring for Appropriateness

Continuous Audit and Reporting Symposium

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HPE Internal Audit
brad.ames@hpe.com
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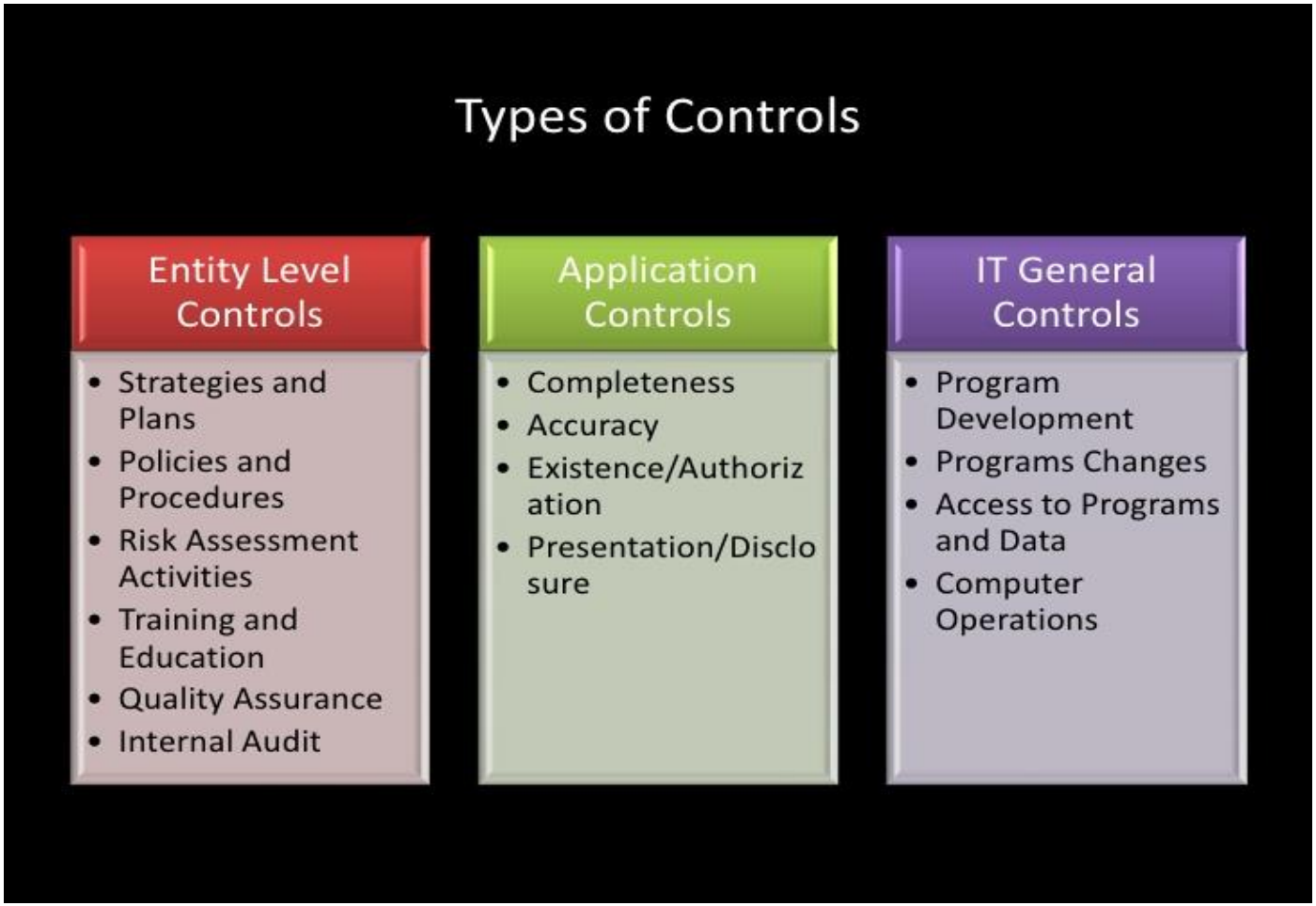
Sufficient Appropriate Audit Evidence

PCAOB Auditing Standard No. 15

> **Appropriateness is the measure of the quality of audit evidence**, i.e., its relevance and reliability. To be appropriate, audit evidence must be both relevant and reliable in providing support for the conclusions on which the auditor's opinion is based

Remember Application Controls?

Application Controls Optimizes Cost of Testing



What are Application Controls?

- ***Application controls*** are those controls that pertain to the scope of individual processes or application systems.
- They include data edits, separation of business functions, balancing of processing totals, transaction logging, and error reporting.

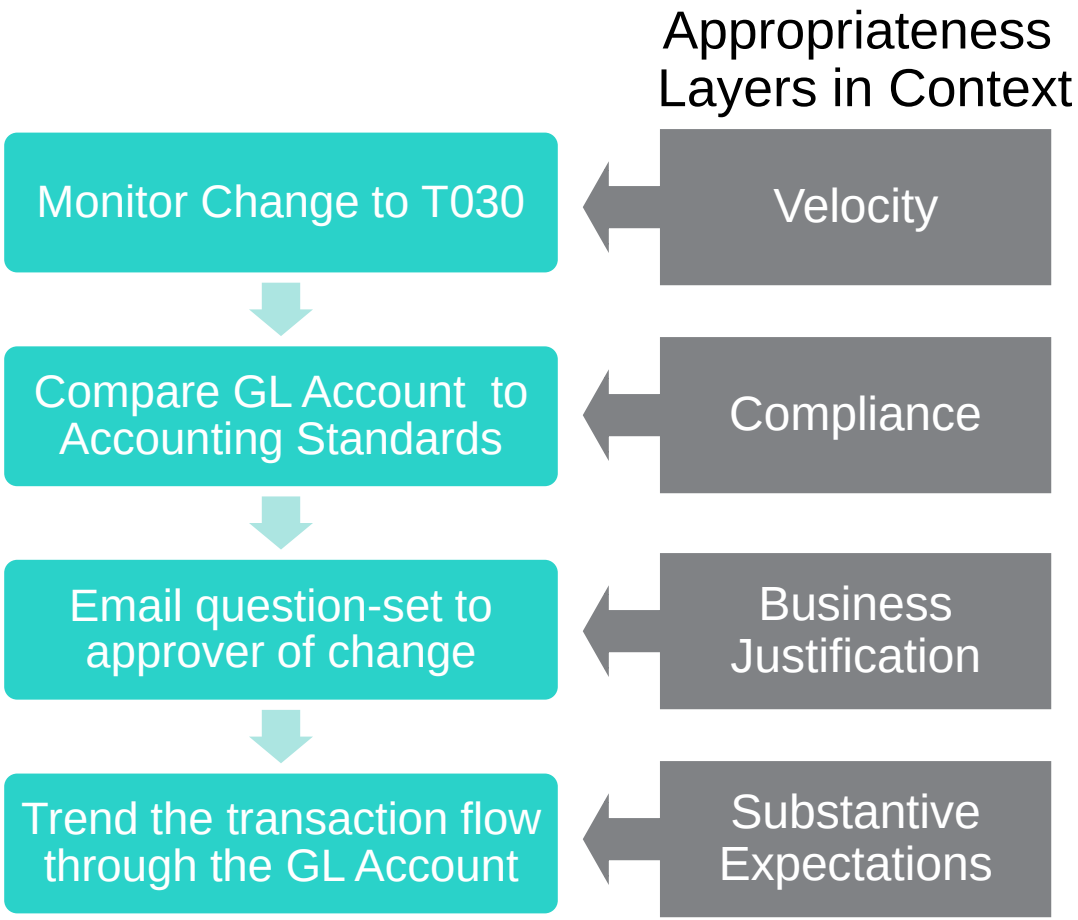
- They can be Embedded and/or Configurable
  - ***Embedded*** – the application control is already part of or program/logic within the application software (e.g. 2 or 3-way match capabilities).
  - ***Configurable*** – the application control is performed depending on how the application is setup/configured or workflow is designed (e.g. accounts payable tolerance levels).

Not-So-Obvious Benefits of Application Controls

- Many Application Controls are **configured in a common table** (e.g., 43 SAP configurable controls in-scope for SOX are maintained in the same T030 table)
- Application Controls that are designed to validate and tolerate variances are **identified to GL account numbers** (i.e., 3-way matching, tolerances, purchase price variances)
- Changes to GL account numbers in the T030 table can be **monitored for appropriate evidence**:
  - Whether business justification is sufficient
  - Whether debit and credit are the same
  - Whether the GL account used for the transaction complies with the Accounting & Finance Manual description
  - Whether the impact of the change is material to the period

Automating appropriateness testing

Evidence quality is increased by relating control-based configuration AND substantive analytics



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Illustrate Velocity of change to T030

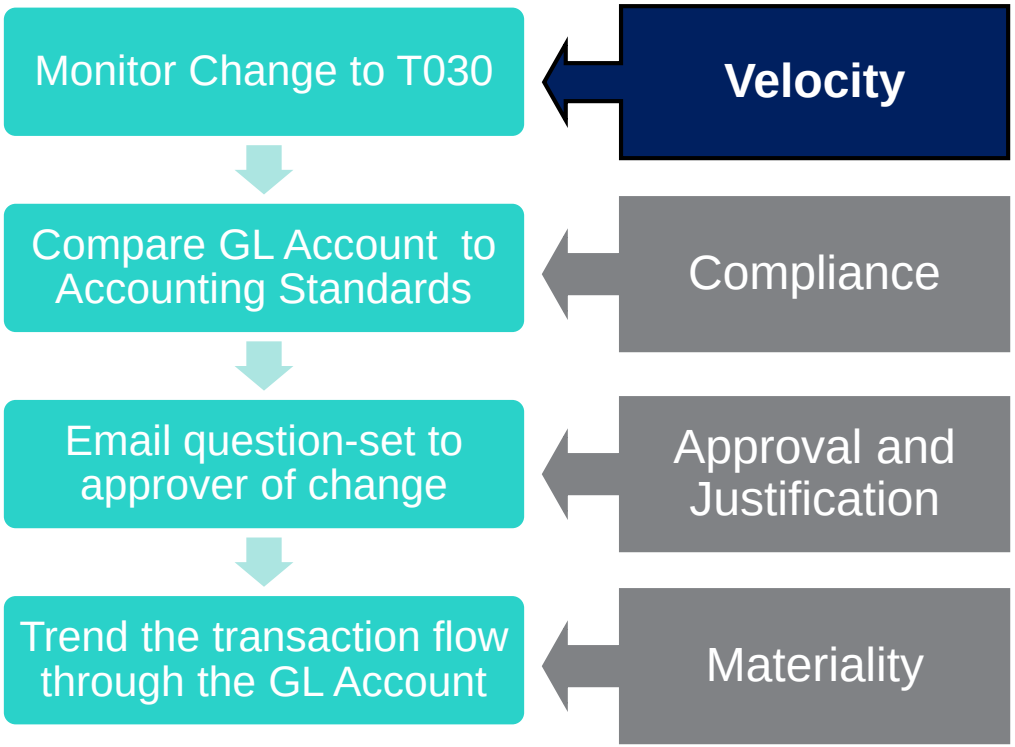
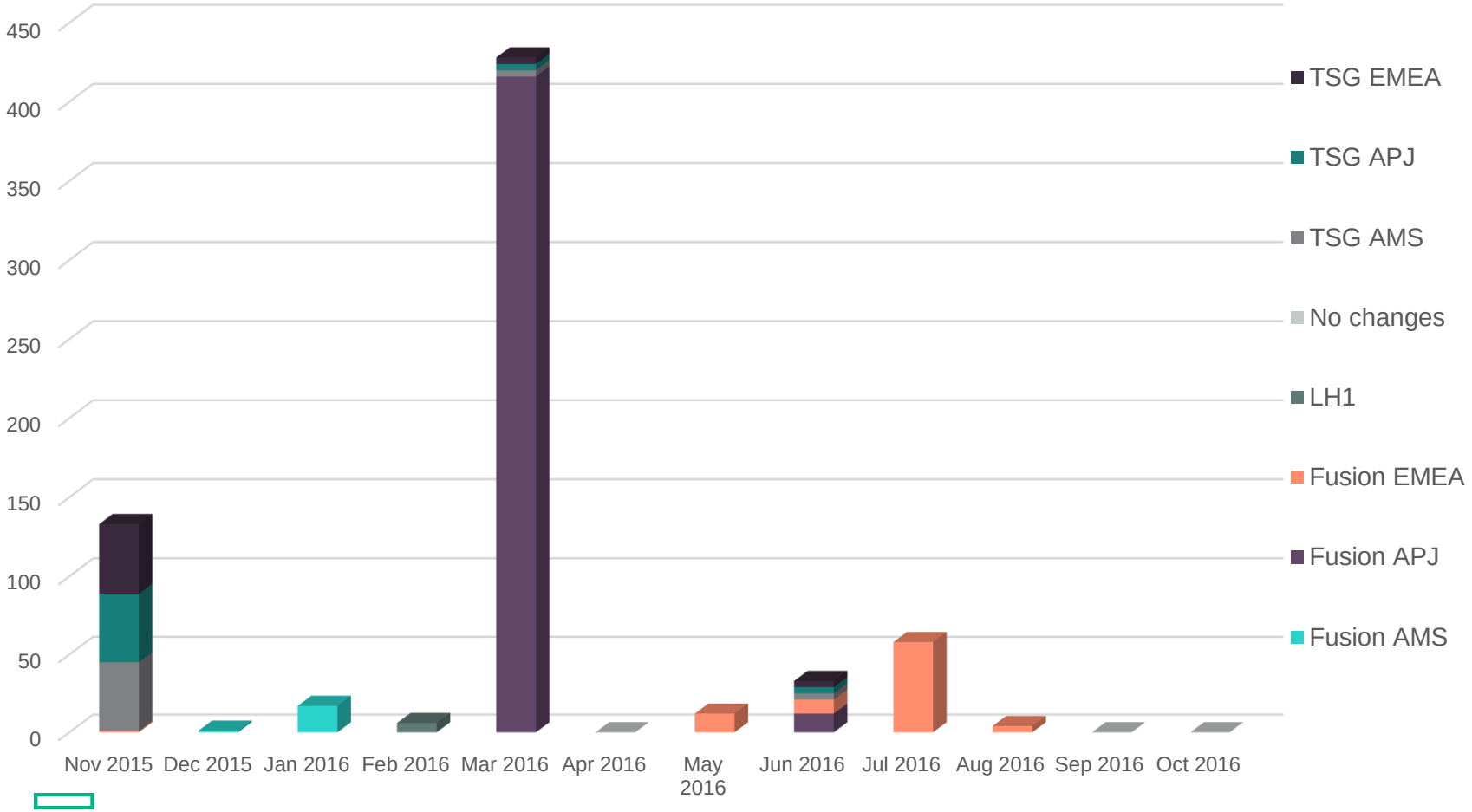


Table T030 Changes recorded in FY 2016
Volume and Velocity of Change:
Most Change occurs in one instance in March



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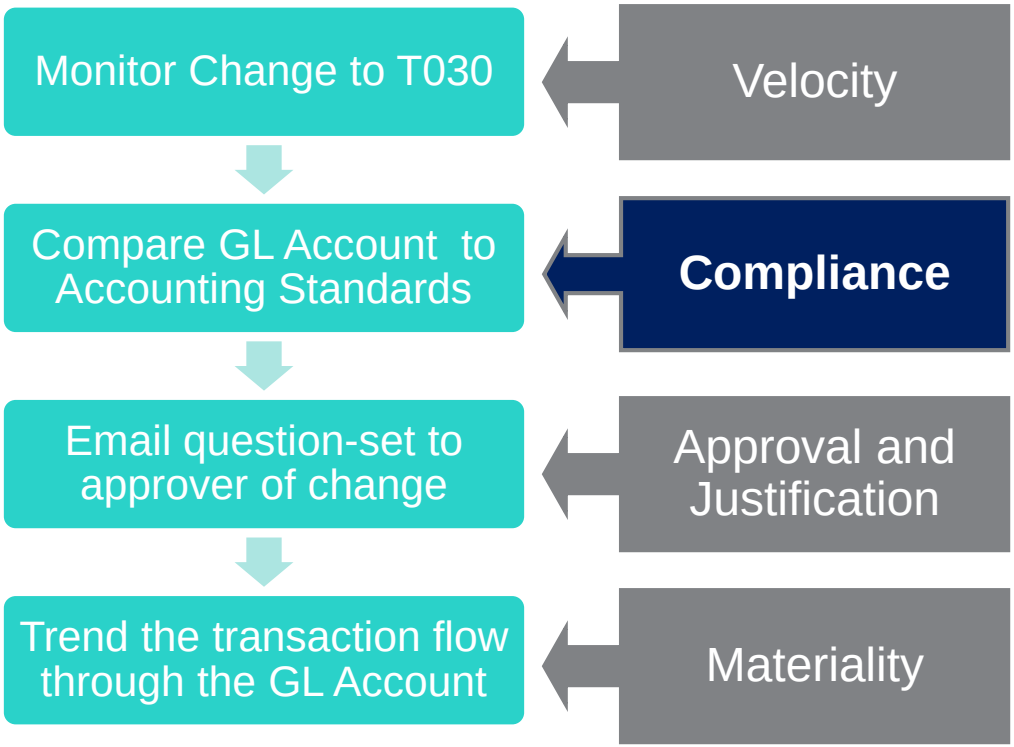
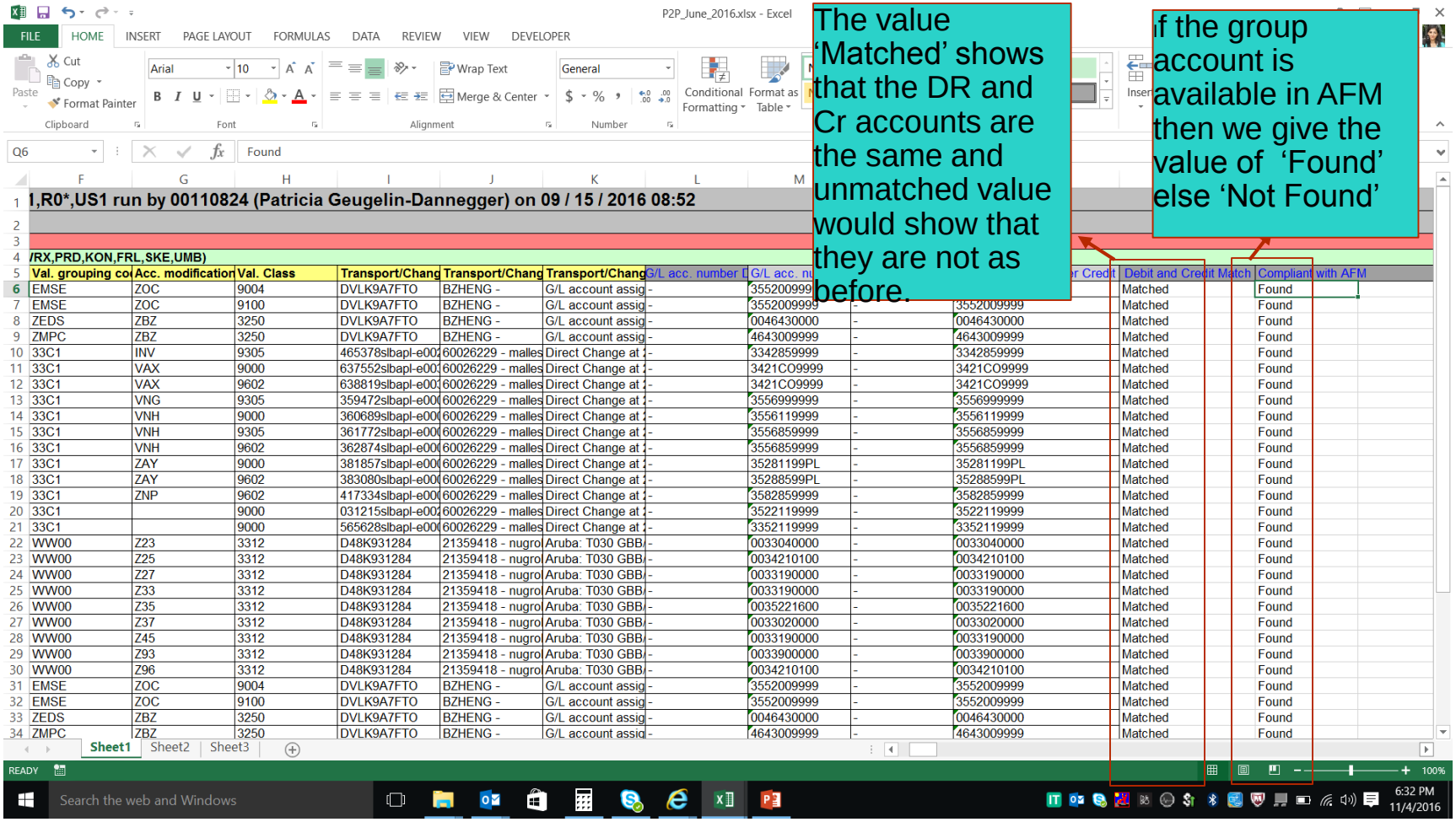
Illustrate Compliance with AFM



Compliance check – i) Debit and Credit account match ii) Compliant with AFM



	F	G	H	I	J	K	L	M			Debit and Credit Match	Compliant with AFM
1	I,R0*,US1 run by 00110824 (Patricia Geugelin-Dannegger) on 09 / 15 / 2016 08:52											
2												
3												
4	/RX,PRD,KON,FRL,SKE,UMB)											
5	Val. grouping co	Acc. modification	Val. Class	Transport/Chang	Transport/Chang	Transport/Chang	G/L acc. number D	G/L acc. nu		r Credit	Debit and Credit Match	Compliant with AFM
6	EMSE	ZOC	9004	DVLK9A7FTO	BZHENG -	G/L account assig	-	3552009999	-	3552009999	Matched	Found
7	EMSE	ZOC	9100	DVLK9A7FTO	BZHENG -	G/L account assig	-	3552009999	-	3552009999	Matched	Found
8	ZEDS	ZBZ	3250	DVLK9A7FTO	BZHENG -	G/L account assig	-	0046430000	-	0046430000	Matched	Found
9	ZMPC	ZBZ	3250	DVLK9A7FTO	BZHENG -	G/L account assig	-	4643009999	-	4643009999	Matched	Found
10	33C1	INV	9305	465378slbapl-e002	60026229 - malles	Direct Change at	-	3342859999	-	3342859999	Matched	Found
11	33C1	VAX	9000	637552slbapl-e001	60026229 - malles	Direct Change at	-	3421CO9999	-	3421CO9999	Matched	Found
12	33C1	VAX	9602	638819slbapl-e001	60026229 - malles	Direct Change at	-	3421CO9999	-	3421CO9999	Matched	Found
13	33C1	VNG	9305	359472slbapl-e00(	60026229 - malles	Direct Change at	-	3556999999	-	3556999999	Matched	Found
14	33C1	VNH	9000	360689slbapl-e00(	60026229 - malles	Direct Change at	-	3556119999	-	3556119999	Matched	Found
15	33C1	VNH	9305	361772slbapl-e00(	60026229 - malles	Direct Change at	-	3556859999	-	3556859999	Matched	Found
16	33C1	VNH	9602	362874slbapl-e00(	60026229 - malles	Direct Change at	-	3556859999	-	3556859999	Matched	Found
17	33C1	ZAY	9000	381857slbapl-e00(	60026229 - malles	Direct Change at	-	35281199PL	-	35281199PL	Matched	Found
18	33C1	ZAY	9602	383080slbapl-e00(	60026229 - malles	Direct Change at	-	35288599PL	-	35288599PL	Matched	Found
19	33C1	ZNP	9602	417334slbapl-e00(	60026229 - malles	Direct Change at	-	3582859999	-	3582859999	Matched	Found
20	33C1		9000	031215slbapl-e002	60026229 - malles	Direct Change at	-	3522119999	-	3522119999	Matched	Found
21	33C1		9000	565628slbapl-e00(	60026229 - malles	Direct Change at	-	3352119999	-	3352119999	Matched	Found
22	WW00	Z23	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0033040000	-	0033040000	Matched	Found
23	WW00	Z25	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0034210100	-	0034210100	Matched	Found
24	WW00	Z27	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0033190000	-	0033190000	Matched	Found
25	WW00	Z33	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0033190000	-	0033190000	Matched	Found
26	WW00	Z35	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0035221600	-	0035221600	Matched	Found
27	WW00	Z37	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0033020000	-	0033020000	Matched	Found
28	WW00	Z45	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0033190000	-	0033190000	Matched	Found
29	WW00	Z93	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0033900000	-	0033900000	Matched	Found
30	WW00	Z96	3312	D48K931284	21359418 - nugro	Aruba: T030 GBB	-	0034210100	-	0034210100	Matched	Found
31	EMSE	ZOC	9004	DVLK9A7FTO	BZHENG -	G/L account assig	-	3552009999	-	3552009999	Matched	Found
32	EMSE	ZOC	9100	DVLK9A7FTO	BZHENG -	G/L account assig	-	3552009999	-	3552009999	Matched	Found
33	ZEDS	ZBZ	3250	DVLK9A7FTO	BZHENG -	G/L account assig	-	0046430000	-	0046430000	Matched	Found
34	ZMPC	ZBZ	3250	DVLK9A7FTO	BZHENG -	G/L account assig	-	4643009999	-	4643009999	Matched	Found

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Illustrate Business Justification

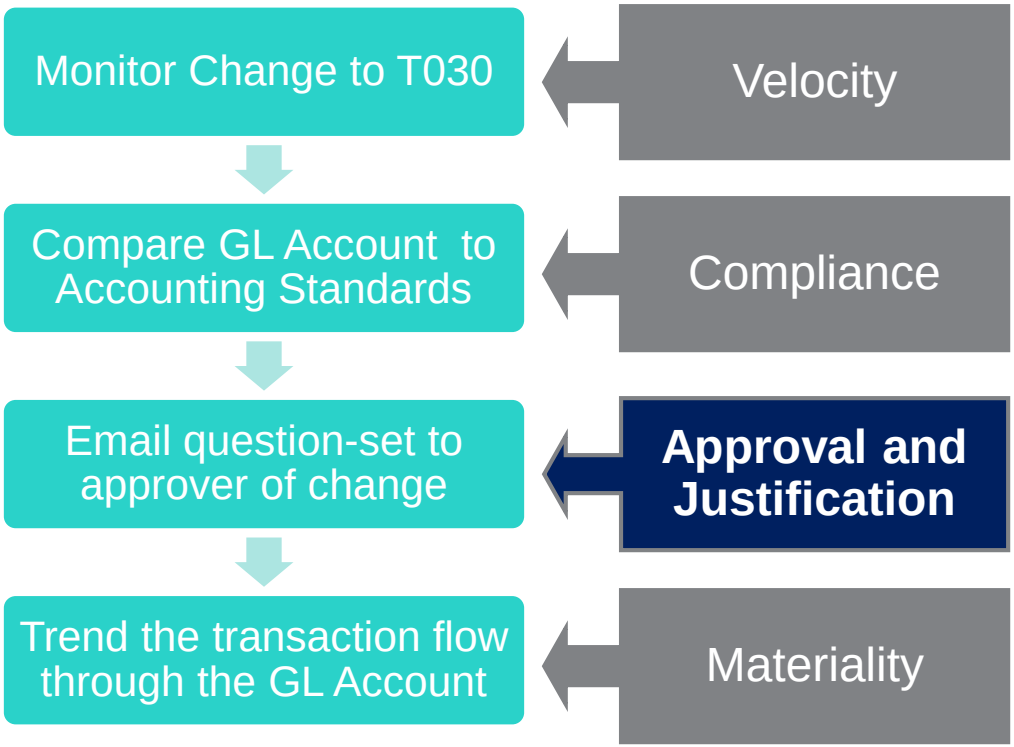

Illustration of the email sent requesting for Business Justification

From: SAP SOX Table Changes
Sent: Monday, Aug 1, 2016 12:06 PM
To: R, Srividya <srividya.rajanna@hpe.com>; Rickett, Jade <jade.rickett@hpe.com>
Subject: Appropriateness Testing Monthly Reports

As required by the annual statutory audit by our auditors, EY, and for SOX, Internal Audit (IA) conducts appropriateness testing for SAP applications. For this testing IA reviews all of the additions and/or changes to key tables, programs and configurations, via an internal application called KPI.

In reviewing the table change activity for the month of July 2016, for T030, a change was noted and you were the transport creator.

Please provide the following information regarding the change:

1.High level description of the project/request that required the update(s)

2.The Request ID/Project Number and Project name

3.UAT sign off

4.The original documentation from the business that drove the request for the direct change or the business contact who can provide the information

Please not that obtaining this information is time-sensitive so the request will be escalated after 3 days.

If you have any questions, please send an email to the SOX SAP Table Monitoring mailbox and someone will get back in touch.

Thank you for your assistance.

SOX SAP Table Monitoring Team.

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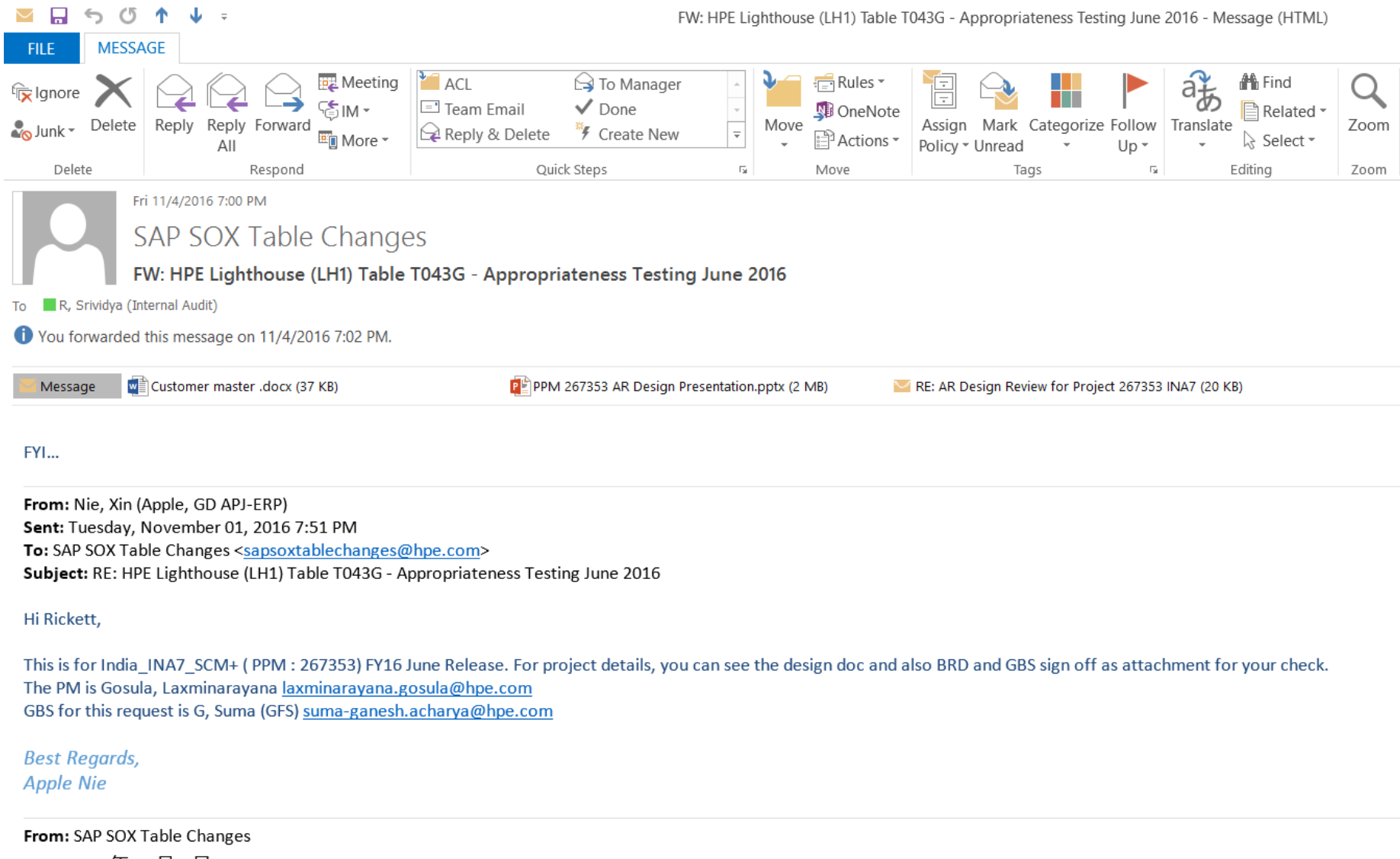
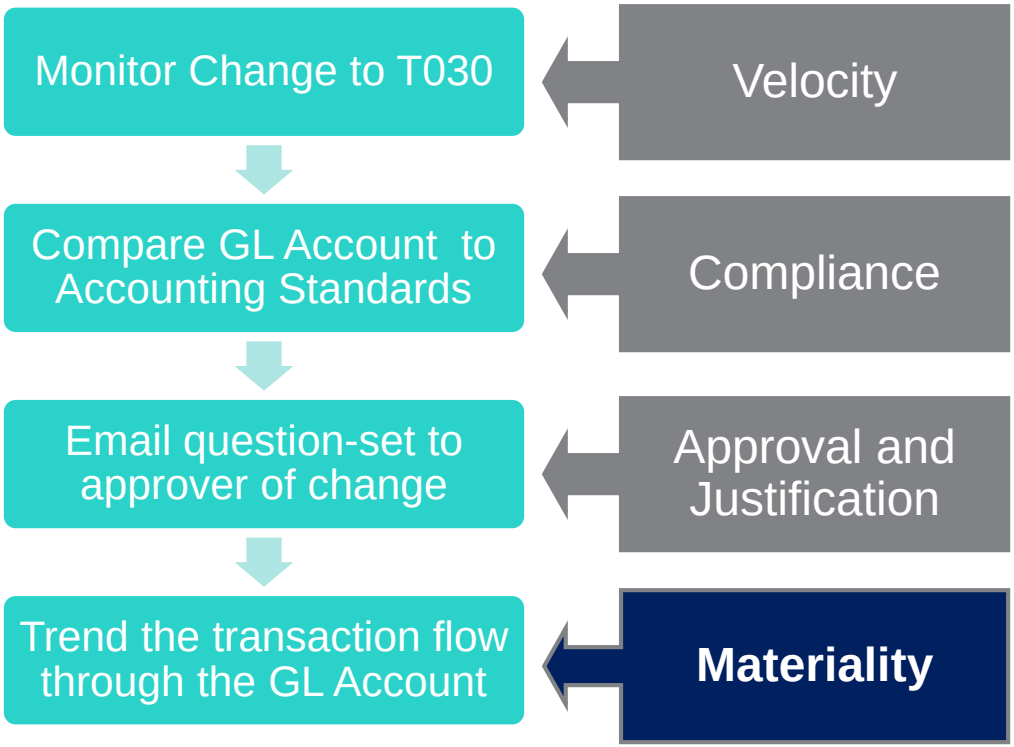
Illustration of the email received with Business Justification



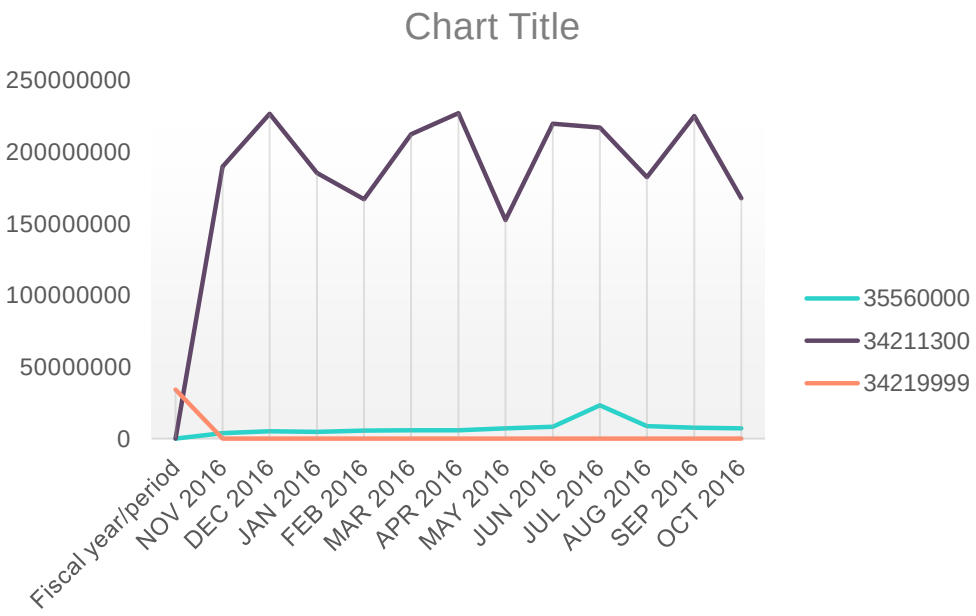
Automating appropriateness testing

Illustrate Materiality of the New GL Account data flow



Results from the Benchmark Report

- Substantive Analytical Procedures Related:
- 3 new accounts were identified in T030 table – 35560000, 34211300, 34219999
- Plotting the activity in those accounts for the FY16 is as given below:



The following observations were made for these 3 accounts:

1. The account no. 35560000 sees a spike in the month of July and emerging velocity.
2. The account no. 34211300 sees a bigger balance in dollars: Increased velocity = increased risk
3. The account no. 34219999 is a inactive account: as there are no transactions or balances = risk is limited

Focusing on appropriateness enables the auditor to de-scope testing.

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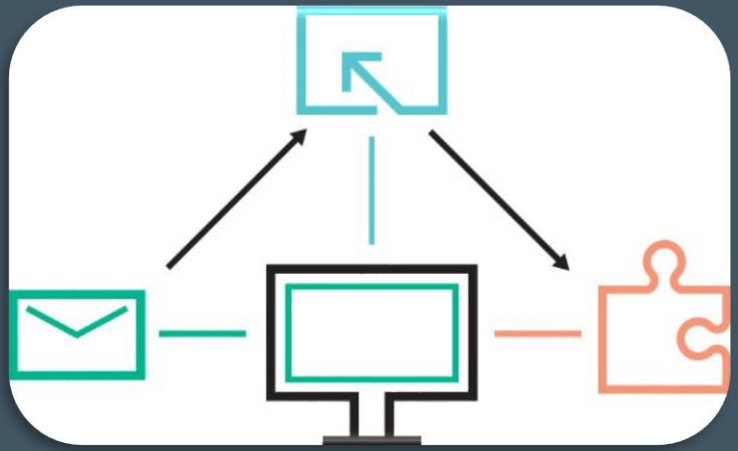
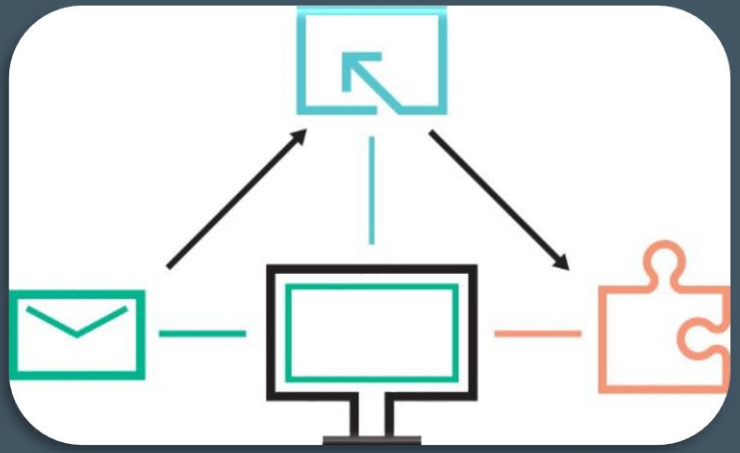
–http://hp.force.com/external/FriendsandFamily

Appendix



Objectives of Application Controls

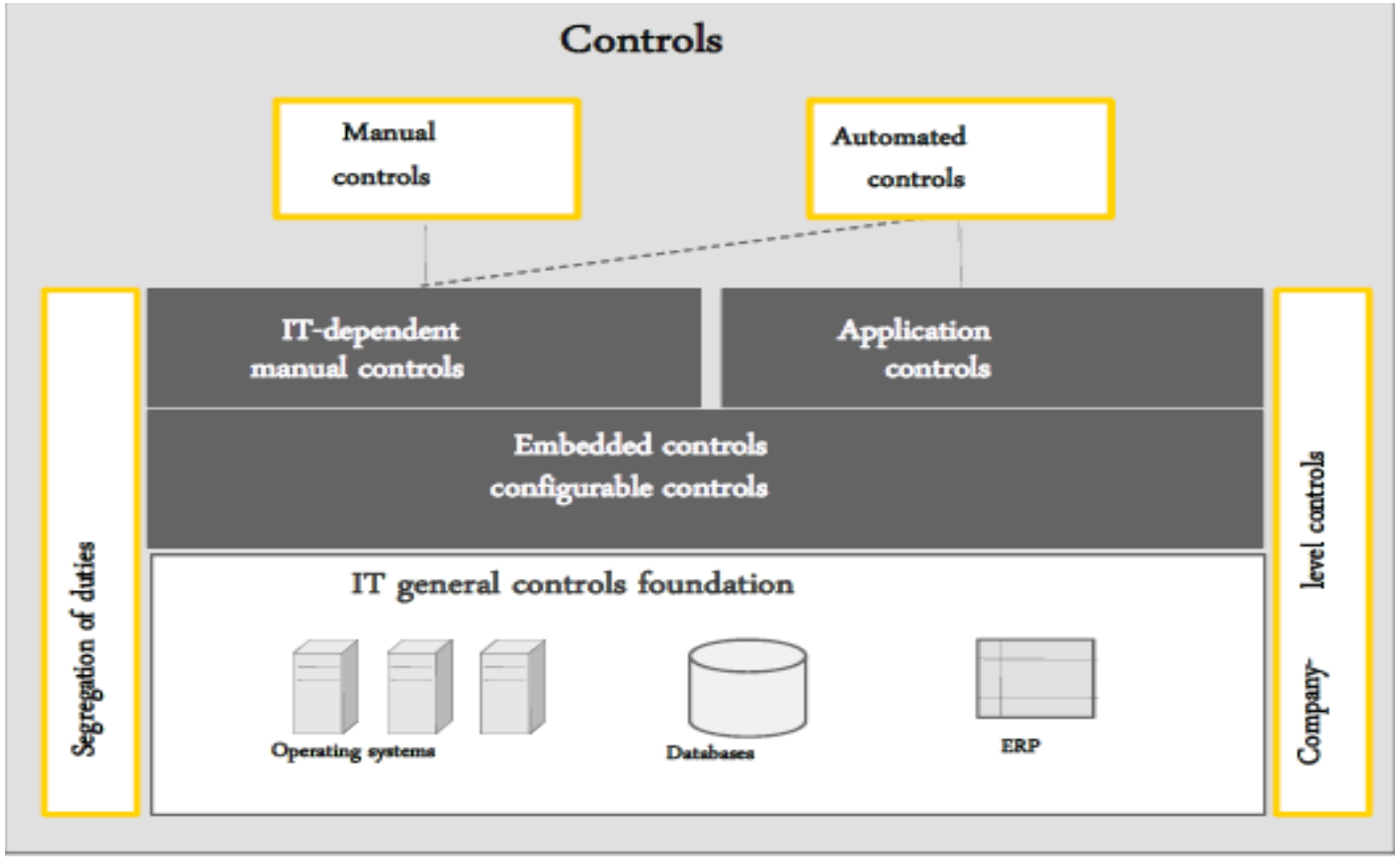


Objectives of Application Controls

- Input data is accurate, complete, authorized, and correct
- Data is processed in an acceptable time period
- Data stored is accurate and complete
- Outputs are accurate and complete
- A record is maintained to track the process of data from input to storage and the eventual output

Control Types

Control Types



Note:
ITGC are pervasive IT controls around the environment supporting the application.

Types of Application Controls

Type	Description	Examples
Input (Edit) Controls	Application checks data inputs to reduce risk of inappropriate data being inputted.	• Required data fields • Specific data format on input (Alpha vs. Numeric)
Output Controls	Control around output of data from the application. Check to ensure output data is consistent with the data entered.	• Financial reports are consistent with input data (e.g. GL, Sub-ledger).
Validations	Application performs validation checks based on a test against some rule that is defined in the system.	• Tolerance limits (Sales Order customer credit limits) • Two or Three-way match
Calculations	The application automatically performs calculations based on data provided.	• Asset depreciation • Accounts receivable aging • Pricing calculations
Authorizations / Approvals	Application could perform checks on access rights to ensure segregation of incompatible duties. It could also check authorization levels to perform approval functions etc.	• Approval to post journal entries or for Purchase Order • Two approvals for check printing or wire transfers

Types of Application Controls?

Type	Description	Examples
Interfaces	Controls around data that is being exchanged from one application to another.	• Transfer of employee data between HR and Payroll systems.
Integrity Check Controls	Typically embedded in the application/database to ensure that data is not altered or corrupted during processing, transmission or storage.	• Checksums
Processing Controls	Provides automated means to help ensure processing is complete and accurate.	• Job processing log reviews
Audit Trail of Data Transactions	Provides audit trail of transaction to help management monitor and identify errors.	• Transaction log reviews

Application Controls vs. ITGC

ITGC	IT Application Controls (ITAC)
ITGC apply to all the system components, processes, and data present in an organization.	Application controls relate to transactions and data pertaining to each computer based application system and they are specific to each individual application
Example Controls: Logical Access controls over infrastructure, applications, and data Program Change Management System development life cycle controls Computer Operations Physical security controls over data centers Backup and recovery controls	Example Control : Edit checks Validations Calculations Interfaces Authorizations
Testing of control is usually on a sample basis	A control test of one sample can be performed if the Design has been assessed to be effective

Benefits of Application Control

Benefits of Application Control

Reliability

- Once an application control is established, and there is little change to the application, database, or supporting technology, the organization can rely on the application control until a change occurs.
- An application control will continue to operate more effectively if the general controls that have a direct impact on its programmatic nature are operating effectively as well. As a result, the auditor will be able to test the control once and not multiple times during the testing period.

Benchmarking

- If general controls that are used to monitor program changes, access to programs, and computer operations are effective and continue to be tested on a regular basis, the auditor can conclude that the application control is effective without having to repeat the previous year's control test.
- Auditor should evaluate the appropriate use of benchmarking or an automated control by considering how frequently the application changes. (If application changes frequently, auditor should not rely on benchmarking)

Benefits of Application Control

Time and Cost Saving

- Application Controls take less time to test than Manual Controls
- Application controls are typically tested one time as long as the general controls are effective and there are no changes to the application

Linkage to SAP Application Controls

- Each table relates to multiple application controls.
- When application controls change significantly (program change), IA performs walkthrough.
  - Rates of change increasing→ increased SAP application controls testing

Linkage to Sensitive Access Reviews

- Month end close project:
  - Systems scope includes: LH1, BW (the consolidation functionality), Equate, Compass (PJ1, P01, PN1), Velocity
  - Sensitive Access for month end close activities (core GL functionality, open/close posting periods, foreign exchange rates)
  - Utilizing GRC for SAP monitoring
  - Also including sensitive IT access

Perspective on Table Monitoring

- System prevent control implemented in six supply chain systems (IA verifying it's operating as intended) to prevent tag-along changes.
  - Of the tag-along changes identified in FY13 in Velocity and Americas Fusion, both systems have implemented this control
- SOX IT implemented more rigor in Change Management testing, as previously mentioned
- SAP application controls looks at these same tables
- Considering whether risk is high enough to find a business owner to continue detailed monitoring.

Backup

Monitoring Procedures by table

- T030:
  - Whether debit and credit are the same
  - Whether the GL used for the transaction key matched the norms for the transaction key, as documented in the AFM description
  - Whether EY has provided perspective on earlier the usage of the GL
  - Whether the GL is appropriate or not based on the above criteria
- T169G and T043G
  - Whether the tolerance limit configured is well within the limits in the sap instance
  - Whether controllership approval exists (not for T043G)
- T049A: Whether the accounts that are configured in T049A are not Inventory, Revenue or any other inappropriate account.
- TTKAB: Whether the new entries were created using one of the existing 12 Balance Sheet series
- C001: Whether the Chart of Accounts, Sales Organizations and General Ledger accounts are consistent

Table T030

Current State

- Systems reviewed: Velocity, US1, LH1, FI1, Fusion EMEA, Fusion Americas
- Transaction keys in scope include GBB, BSX, WRX, PRD, UMB, KON, FRL, SKE and UMB .
- Frequency of review:
  - All changes reviewed monthly. SAP KPI Reports pulled monthly and analyzed; produces quarterly report to EY.
- Each T030 table entries is analyzed for the following:
  - Whether business justification is there
  - Whether debit and credit are the same
  - Whether the GL used for the transaction key satisfies the AFM description
  - Whether EY has approved earlier the usage of the GL
  - Whether the GL is appropriate or not based on the above criteria

T030 Linkage to Application Controls

– 43 (Email confirmation to Sabrina and Patricia) SAP Configurable controls in-scope for SOX are maintained in the T030 table:

Microsoft Office
Excel Worksheet

Thank you