Session 8
The value equation –
What makes a good internal audit function

Talk 2
Plugging data analytics into your audit plan

Presented by

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voice of the profession

Data Analytics
as an
Integral part
of your
Audit Plan

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We Live In Era of Change

	2013	**2020**
Lifespan of S&P 500 Company	~15 years	~9 years
Portion of Digital Natives in Workforce	35%	75%
Speed at which data in world doubles	~2 years	3 months
Core Focus of IT	Systems of record	Systems of engagement
Percentage of IT under CIO control	66%	10%

Ideas to keep in mind

- Volume and Access of Data is not the problem

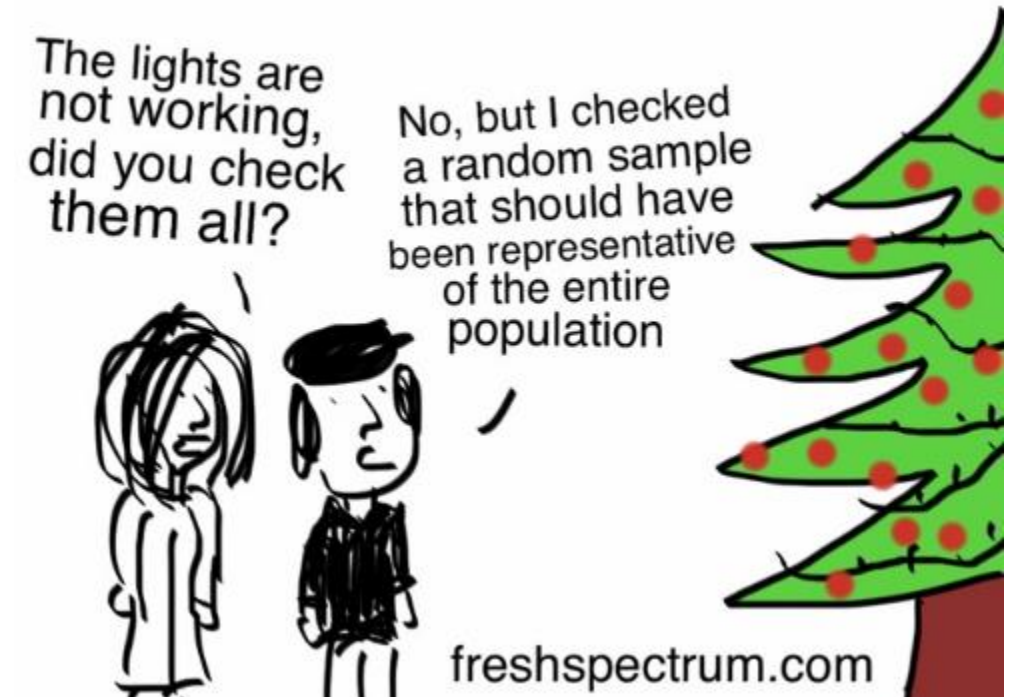 **What** to analyse   **Time** to do analysis

  Skills to do Analytics   **How** to Analyse

- Plan to **fail**
  - Fail **fast**
  - Learn from Failure in order to Succeed
  - Small **iterations**
  - Make time to try, the more you try, the better you get

- AUTOMATION
  - **A**utomate **R**outine **P**rocesses (or **RPA**)
  - Repetitive Analytics

- Data Analytics as a part of **all** Audit Planning and all Audits
  - Before – is it worth auditing, what should the focus be
  - During – confirming, finding more
  - After – did it make a difference, is it resolved

- What, When, Where to Audit / Focus

- Testing 100% of the data
  - Sampling or "eyeballing the data is not good enough"
  - Continuous Monitoring

The lights are not working, did you check them all?

No, but I checked a random sample that should have been representative of the entire population

freshspectrum.com

Use of Risk Indicators

Factor weighting

Risk factor weighting

By default all risk factors are weighted equally. Enter the desired risk factor weight.

Volume

Total Expenses	1.0
Total Revenue	1.0
Total Assets	1.0
Number of Invoices	0.7
Number of PRIs	1.0
Number of acquisition cards	1.0

Variability

Pct discretionary spending	1.0
Pct period 12 or later	1.3
Number of JVs	1.0
Number of suspense recs	1.0
Number of loss recs	1.0
Number or reversal recs	1.0

Complexity

Number of object categories	1.0
Number of funds	1.0
Number of Cost Centres	1.3
Number of GLs	1.0
Number of currencies	1.0
Number of document types	1.0
Number of Internal Orders	1.0
Number of POs and FRs	1.0
Number of material documents	1.0
Number of Assets	1.0
Number of real estate blocks	1.0
Number of WBS documents	1.0
Pct Overtime to Salary	1.0
Pct Invoice Date Errors	1.2

OK   Cancel

Risk Rate by time

SUBURB	Ave	Feb 26, 2017	Jan 29, 2017	Jan 01, 2017	Nov 27, 20...	Oct 30, 2016	Oct 02, 2016	Aug 28, 20...	Jul 31, 2016	Jul 03, 2016	May 29, 20...
		8	7	6	5	4	3	2	1	12	11
ALBURY	60	57	59	63	73	56	50	47	44	78	51
ALEXANDRIA	56	73	51	46	76	71	45	48	58	73	66
ARTARMON	61	84	70	42	78	49	64	55	43	74	62
AUBURN	62	78	60	74	67	66	53	41	42	72	81
BALLARAT	56	75	71	65	61	58	64	64	54	63	50
BALLINA	59	80	70	65	53	61	54	57	42	70	60
BANKSTOWN	60	88	71	62	72	56	59	66	45	59	56

Storyboards

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CONTINUOUS CONTROL MONITORING

Period: From: Jul 01, 2016 | To: Jun 22, 2017 | Division Area: All | Business Unit: All

Accounts Payable Transactions

Validated Findings	Unpaid	Paid	Recovered	Exception	Last 12 Months ($)
$3,884,021 ⬇	$2,608,233	$1,275,788	$1,275,788	Savings and Recovery	
$4M				Data Quality	
#559	#342	#217	#217	Compliance	

Vendor Master

Validated Findings	Vendors ⓘ		Exception	Last 12 Months (#)
	Active	**Dormant**	Savings and Recovery	
#3,277 ⬆	# 206,420	# 136.288	Data Quality	
#648	100 %	66 %	Compliance	
$407,150,909	A D			

Credit Card Transactions

Validated Findings	Recovered	Exception	Last 12 Months ($)
$15,316 ⬇	$15,316	Savings and Recovery	
$49K		Data Quality	
#399	#399	Compliance	

Movement and Pending Reports	Reason and Actions Enquiry	Report Transaction Enquiry

Last Dashboard Update: 22/06/2017 01:15:30 AM   User: Admin

Overall Info (Last 12 Months)

Top 5 Reasons

	Issue / Root Cause	
1	Data Quality / Data Quality Entry Error (FS)	2,24
2	Vendor Data Quality / Incorrect Data Quality Provided (OU)	1,45
3	Policy Breach / Policy Breach (FS)	1,19
4	Duplicate Invoice / Data Entry Error Duplicate (FS)	48
5	Duplicate iExpense / Data Entry Error Duplicate (FS)	38

Repeat Offenders (Business Unit)

	Business Unit	#	Amount
1		1,896	$15,414,285
2		900	$53,764,470
3		718	$329,254,363
4		582	$5,143,203
5		267	$11,646,399

Repeat Offenders (Staff)

	Employee	#	Amount
1		425	$17,175
2		25	$1,080
3		3	$336
4		1	$26
5		1	$89

Repeat Offenders (Vendors)

	Vendor	#	Amount
1	Unknown	3,024	$30,526,160
2		15	$31,772
3		14	$5,383,744
4		14	$25,805,621
5		14	$2,389,489

Suspicious Activity

Jun. 2016	Jul. 2016	Aug. 2016	Sep. 2016	Oct. 2016	Nov. 2016	Dec. 2016	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May 2017
0	0	0	0	0	0	0	0	0	0	0	0

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- **REQUISITION**
  - → Requisition Limits
  - → Split Requisitions
  - → Stale Requisitions
  - → Unauthorized Requisitioner
  - → Data Validity
  - → SOD – Creator Vs Approver

- **Purchasing**
  - → Purchase Limits
  - → **Split Purchase Orders**
  - → Unauthorized Purchaser
  - → Duplicate Purchase Order
  - → SOD – Creator Vs Approver
  - → Data Validity

- **RECEIVING**
  - → **Two Way Match: Received Vs Purchased**
  - → Data Validity
  - → SOD – Purchaser Vs. Receiver
  - → Credit Memo
  - → SOD – Modified Purchase Order

- **PAYABLES**
  - → Retroactive PO
  - → Two Way Match – Purchase Vs Invoice
  - → Suspect Invoices – Invoice Sequences
  - → Data Validity
  - → SOD – Approve Invoice Vs. Create PO
  - → Prohibited Vendors

- **PAYMENTS**
  - → Split Payments
  - → Two Way Match – Payment Vs. Invoice
  - → **Duplicate Payments:** Vendor, Amount
  - → **Duplicate Payments:** Vendor, Invoice Number
  - → **Duplicate Payments:** Vendor, Similar Amount
  - → **Duplicate Payments:** Diff. Vendor, Same Bank Account
  - → SOD – Purchase Vs. Payments
  - → Data Validity
  - → Cost Splitting

Suite of Tests over time

ACCOUNTS PAYABLE	**12 Tests**
ACCOUNTS RECEIVABLE	**6 Tests**
CASH DISBURSEMENT	**4 Tests**
CONFLICT OF INTEREST	**8 Tests**
FIXED ASSET MANAGEMENT	**4 Tests**
GENERAL JOURNAL ANALYSIS	**16 Tests**
HUMAN RESOURCES	**19 Tests**
PURCHASE ORDER MANAGEMENT / SUPPLY CHAIN	**8 Tests**
SALES ANALYSIS	**9 Tests**
SALARIES AND PAYROLL	**11 Tests**
STOCK AND INVENTORY	**10 Tests**
VENDOR MANAGEMENT	**14 Tests**

- Cannot keep doing what we did → Change in how we perform Audits

- Sampling, Eyeball data,Adhoc →Analytics

- Fewer Resources, Smaller Budget→Automation, Library of Tests

- Relevance to the organisation→ Insight of the corporate data

- Need to use the new oil → Audits unique access to **DATA**

- More you do it the better you get at it

- Need new toys to handle the data and volumes

INTERNAL AUDITORS NEED TO BECOME SOUGHT AFTER

Vs.

Library of Data and Analytics

Independent Assurance

Connect to multiple data sources

Run 365 days a year, 24/7

Download 100% of the data

Safe & secure access without IT assistance
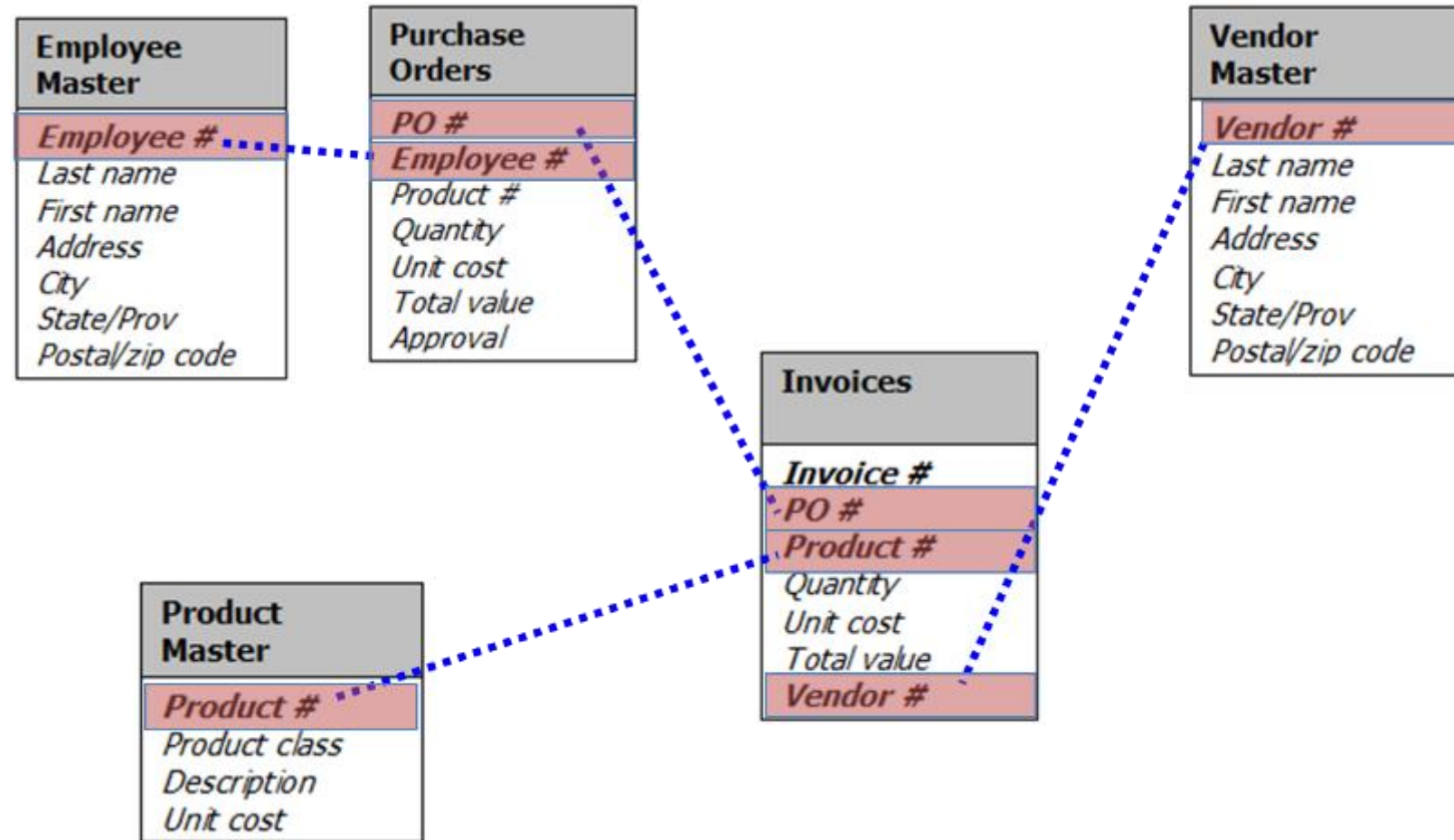
SYSTEM AGNOSTIC
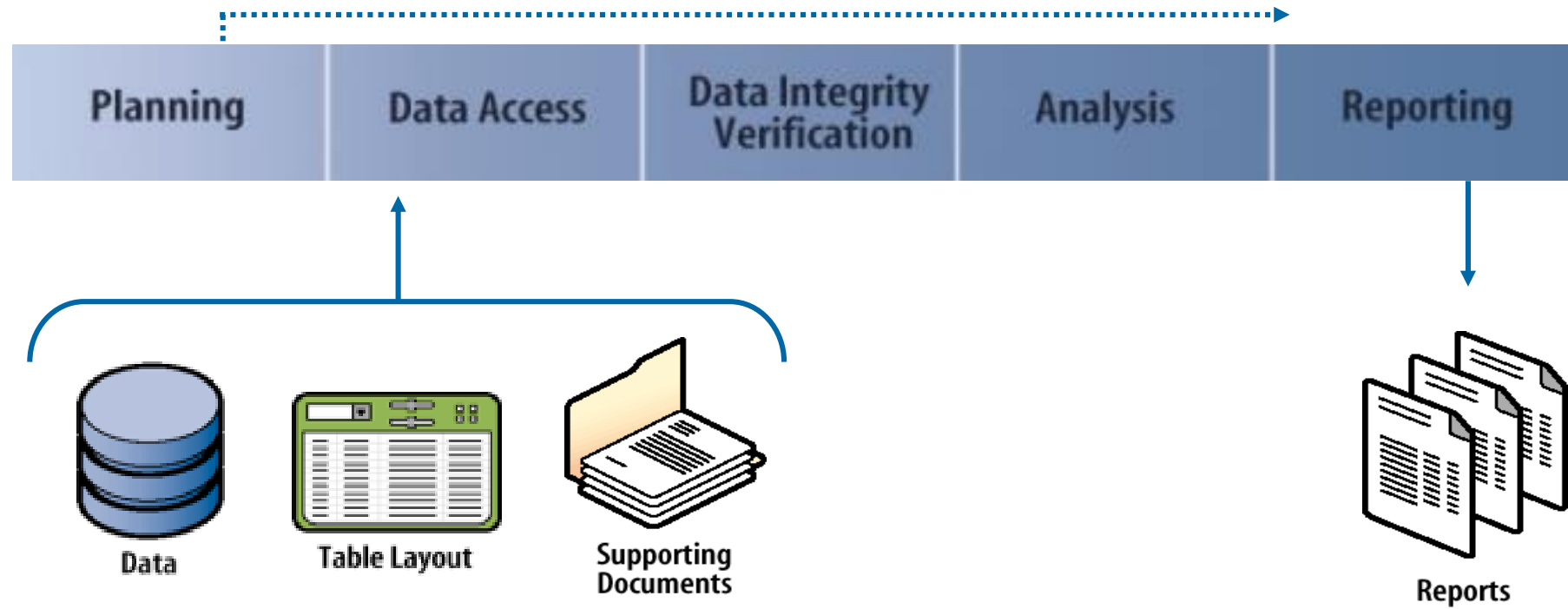
- Understand Data structure
- Relationships in Data
- Some programming skills
  - R, Python, SAS, ACL, Scripting
- Mathematical
- Understand Control Testing
  - Life sciences
  - Researchers
  - Geneticists
- Can learn the audit skills

- Focus on **what** and **when** to audit

- Add greater **value** to the Audit

- Attain greater **relevance**

- **Become Sought After**

THANK YOU