2014 ACIIA CONFERENCE
BALI, INDONESIA

ASIAN CONFEDERATION OF INSTITUTE OF INTERNAL AUDITORS

The Stones Hotel - Legian, Bali

24 - 25 November 2014

The Institute of Internal Auditors Indonesia

Organized by:

Supported by:

Transforming Internal Audit Processes

Working Smarter, Not Harder

Amanda Wall B.Bus, CPA, MIIA (Aust)

Professional Development Instructor

for

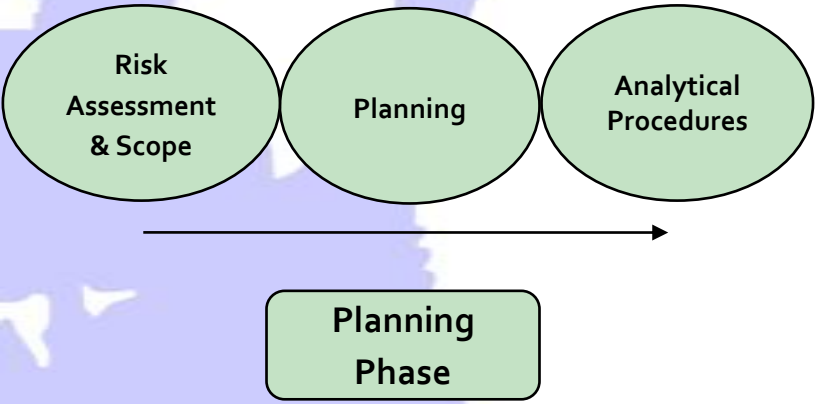
AUDITsmarter

NOT HARDER

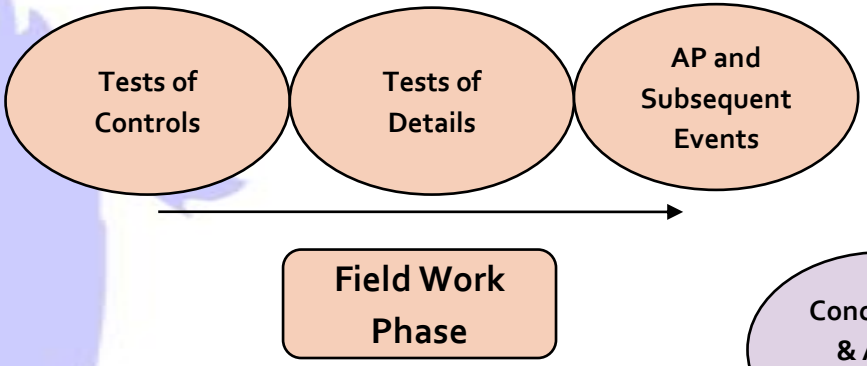
Audit Smarter, Not Harder!

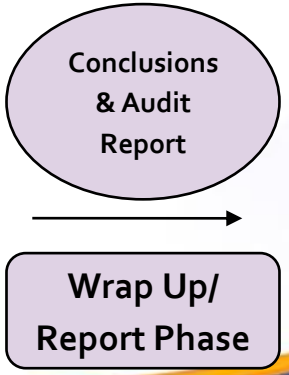
- The Problems With the “Traditional Approach”
- The Standards Support Auditing Smarter!
- The Key to Transformation
- You Can Do More with Less!
- What the World-Class Auditors are Doing… It’s at Your Fingertips!
- You Can Audit Smarter!

The Problems With the "Traditional Approach"



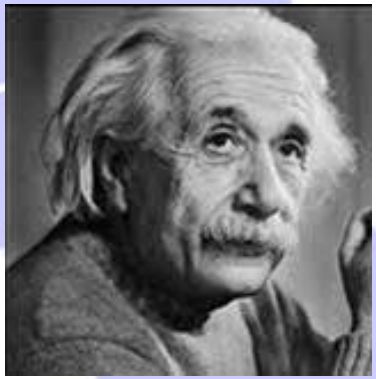
- An audit is not linear.
- These circles are not discrete tests.
- You will risk assess more than once.
- Front-load as much effort as possible.
- Move the field work phase to your office.





The Problems With the "Traditional Approach"

The world is calling for a "new auditor"…
six sigma, proactive, preventive rather than corrective



Albert Einstein said, "We cannot solve our problems with the same thinking we used when we created them."

We now say, "We can't keep doing it the same old way, and expect different results."

It's time to take a more mathematical and scientific approach to auditing

Are You Auditing Harder??

It's time to be more innovative!
However change is not always easy… we get comfortable with routine.

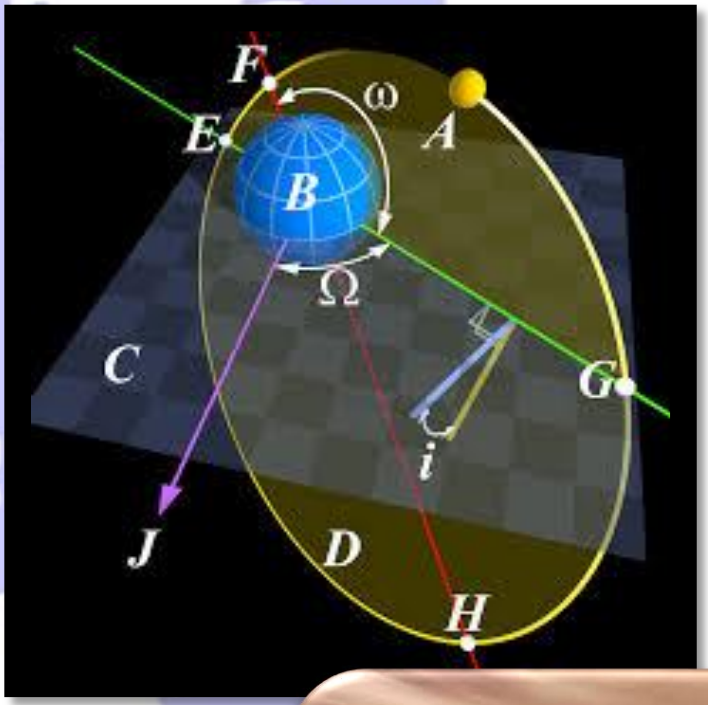
So if you are happy with

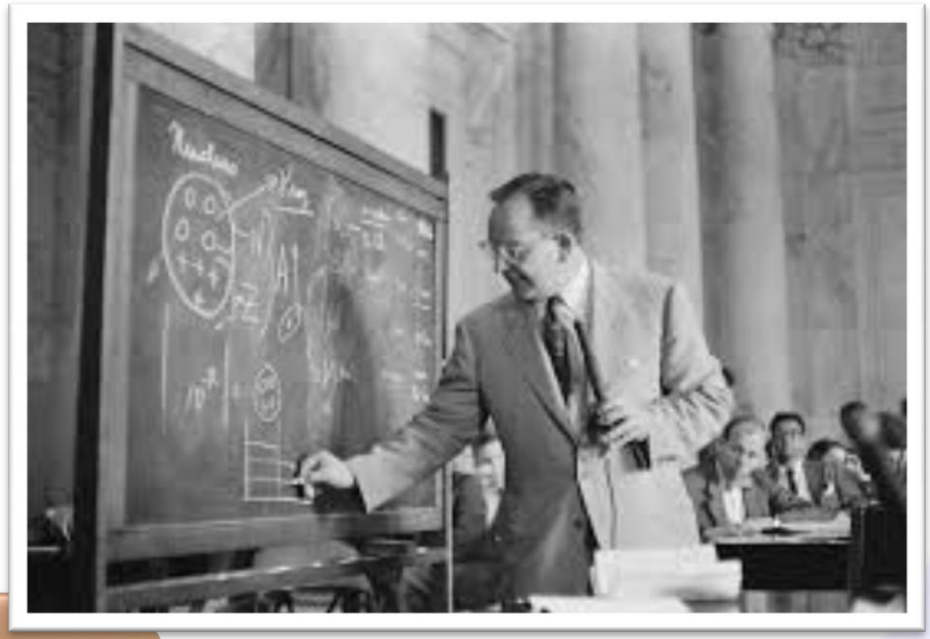
- A long and ever growing to do list
- Too much to do and never enough time to do it
- Tight deadlines
- Exceeding audit budgets and
- Inefficient, over-auditing…

Then this is not for you!

But if you want change to better practices…
Invest time now and save time later.

The Key to Transformation

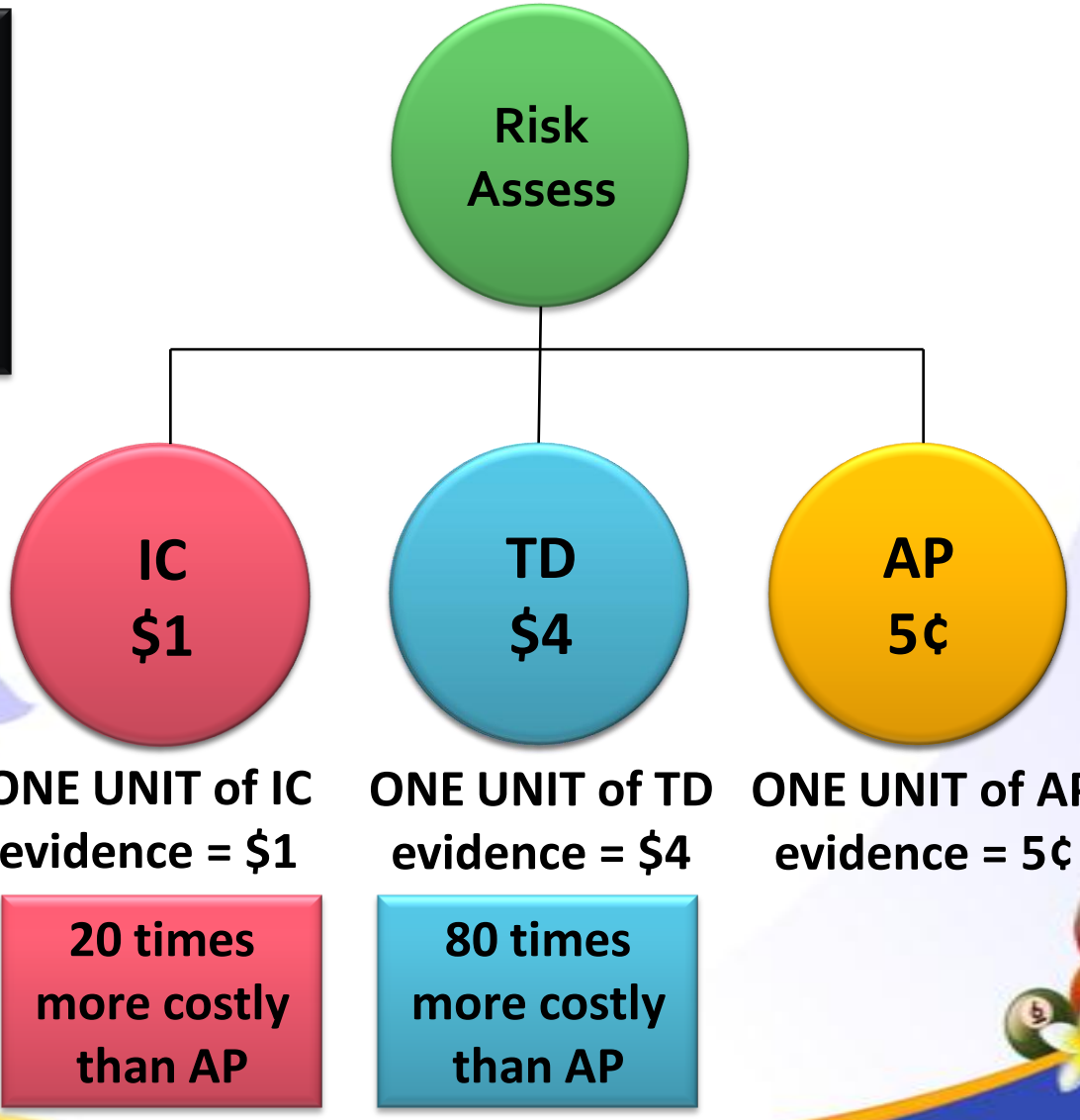




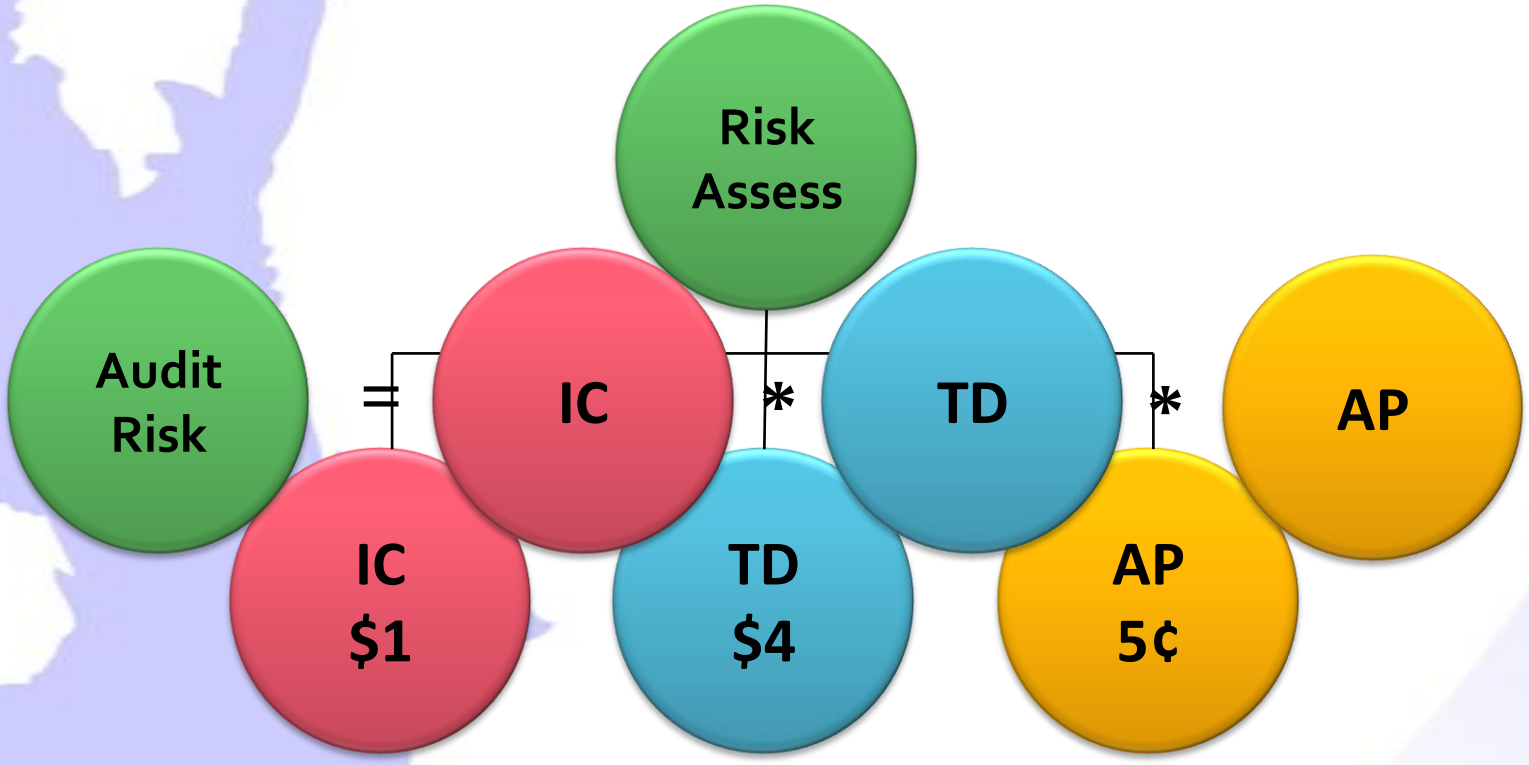
It's not Rocket Science!

The Key to Transformation

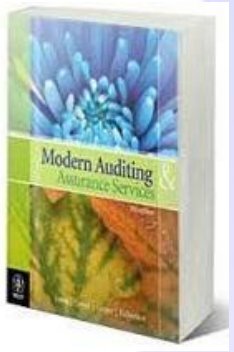
It is back to basics Audit 101



The Key to Transformation



Why Aren't I Using the Audit Risk Model



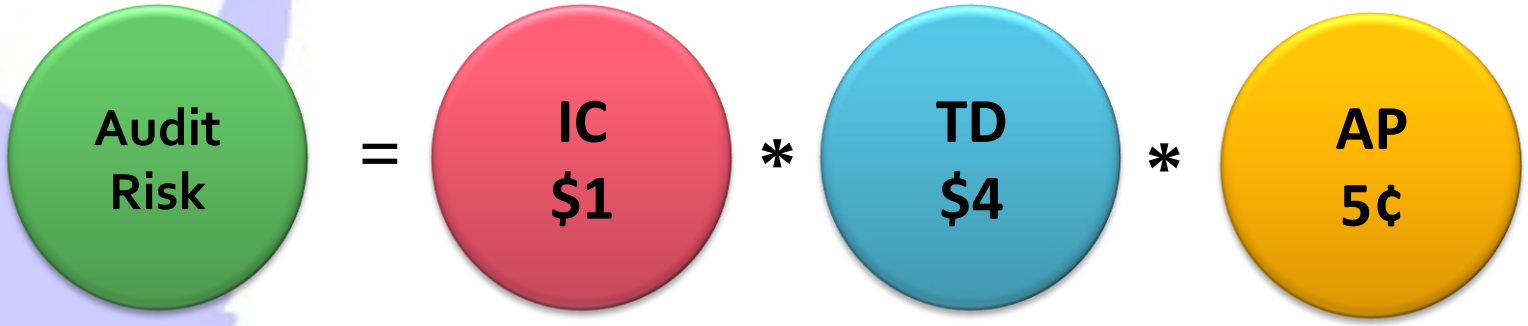
The Audit Risk Model is in chapter 1 of literality EVERY audit text ever written.

Why am I NOT using the Audit risk Model??
Well…

- **33% of the people reading this material were not accounting majors**
- **50% of the accounting majors never took an auditing class in college**
- **70% of internal auditors never worked in public accounting**

Based on the percentages above, statistically, the odds are very low that you have ever seen this model, even once.

The Key to Transformation

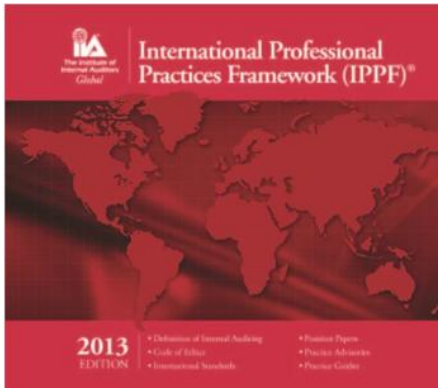


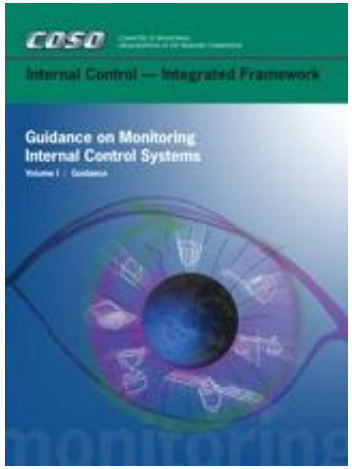
Are You Getting the Most out of Analytics?

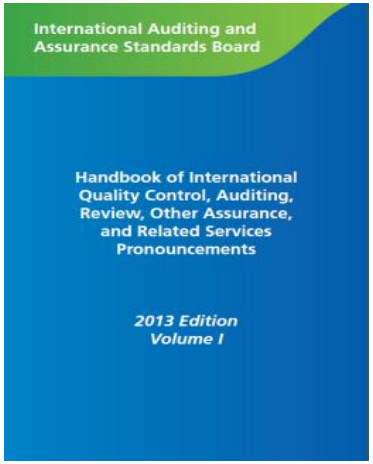
Are you:

- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

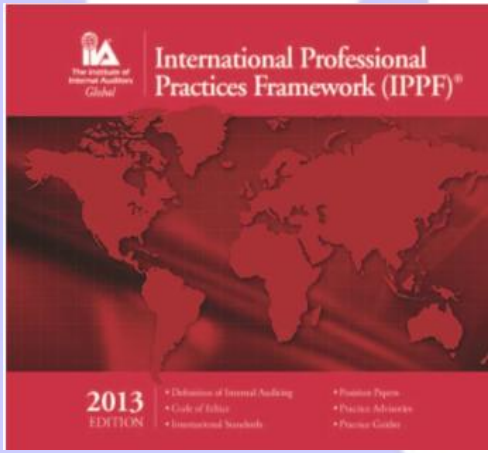
The Standards Support Auditing Smarter!







The Standards Support Auditing Smarter!



IPPF 2013 Revisions: Due Professional Care – Use of Technology-based Audits (Revised)

Standard 1220.A2 (Revision in bold)

In exercising due professional care internal auditors **must** consider the use of technology-based audit and other data analysis techniques.

Practice Advisory PA-2320-1 addresses analytical procedures.

3. Analytical procedures may be performed using monetary amounts, physical quantities, ratios, or percentages. Some analytical procedures may be: ratio, trend, and regression analysis, reasonableness tests, period-to-period comparisons, comparisons with budgets, forecasts, and external economic information.

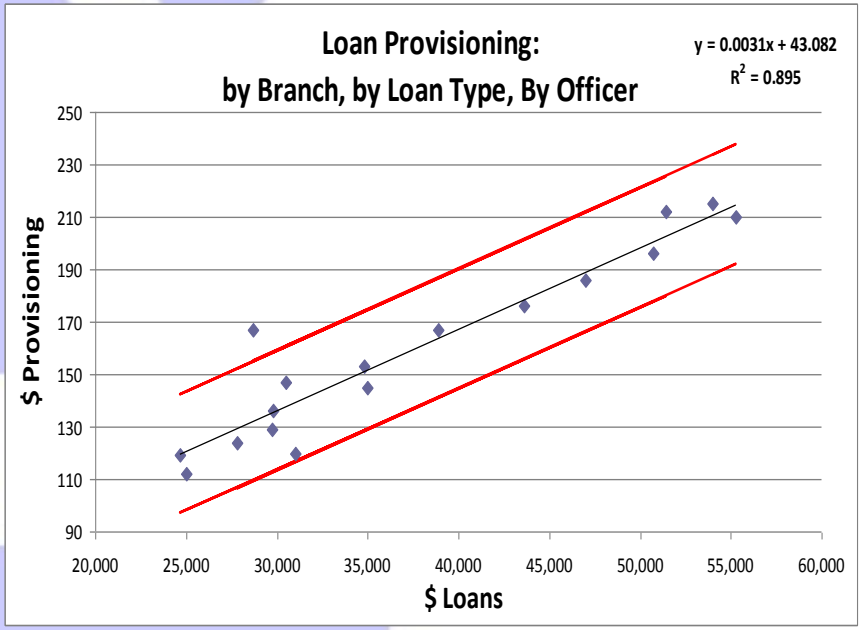
The Standards Support Auditing Smarter!

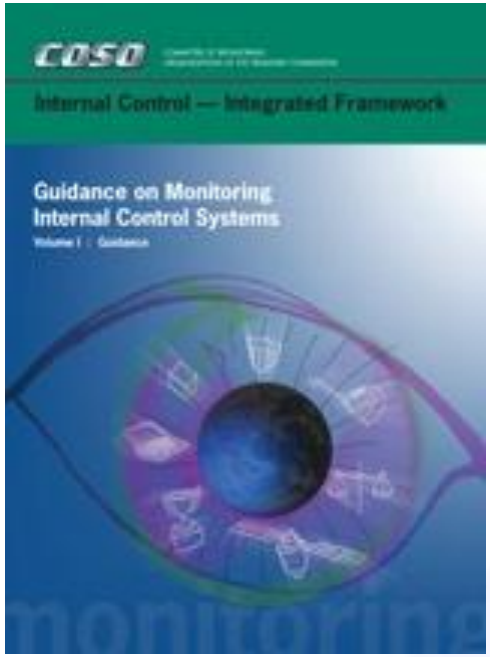
ISA 200 “Objectives of Auditor” states

“the auditor may utilize a model that expresses the components of audit risk, and their relationships, in mathematical terms to arrive at an acceptable level of detection risk.”.

The Standards Support Auditing Smarter!

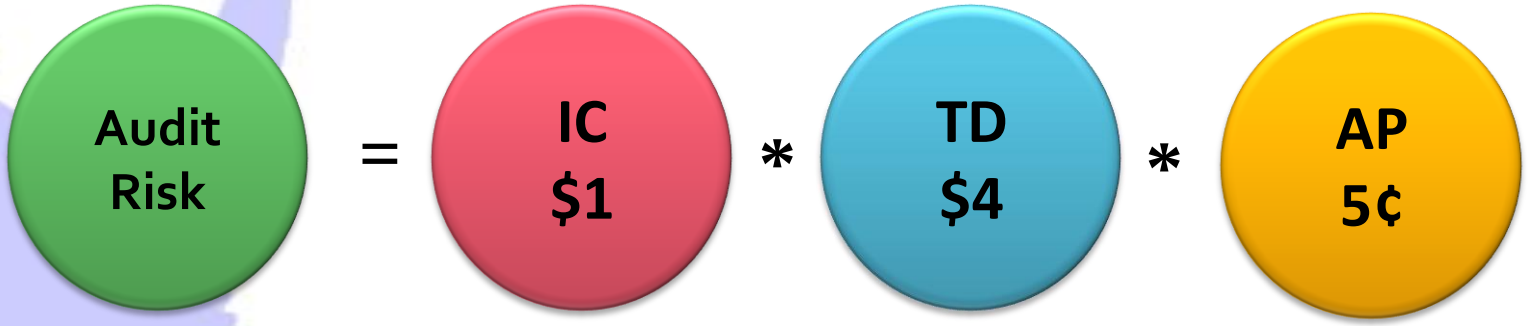
COSO "Guidance on Monitoring Internal Control Systems"





Dr Dan was an invited participant contributing practical "how to do it" business cases to Volume III of this document

The Key to Transformation



Are You Getting the Most out of Analytics?

Are you:

- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

Are You Doing the 5¢ Test?

We do analytics!

But there's analytics and there's ANALYTICS…

The Standards Support Auditing Smarter!

ISA 520 "Analytical Procedures" defines analytics as

"*evaluations of financial information through analysis of plausible relationships among both financial and non-financial data*".

Are You Doing the 5¢ Test?

Does use of technology to run queries over large data sets meet the definition of an 'analytical procedure' per the standards??

Is it really ANALYSIS of plausible relationships?

Let's compare!

Commonly Used "Data Analytics"

- Summary of spending by vendor;
- Identification of duplicate payments or duplicate payroll details;
- Identification of possible split orders;
- Review for blank fields/sequential ordering.

True "Analytical Procedures":

- The proportion of purchase order invoices to direct invoices;
- The proportion of overtime in relation to payroll hours;
- Comparing travel costs to number of nights spent out of town.

Are You Doing the 5¢ Test?

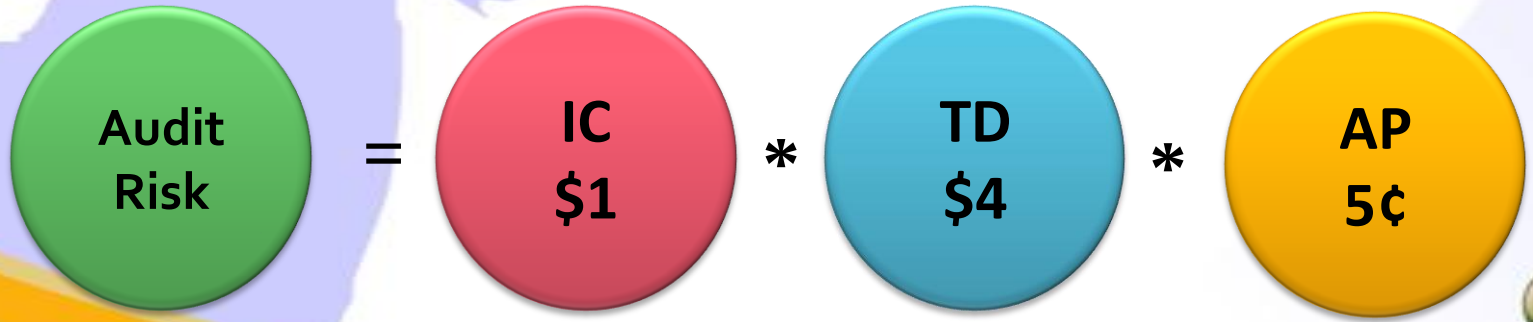
Let's put it another way…
are you automating the $4 test or doing the 5¢ test??

Commonly used "data analytics":

- Summary of spending by vendor;
- Identification of duplicate payments or duplicate payroll details;
- Identification of possible split orders;
- Review for blank fields/sequential ordering.

True "analytical procedures":

- The proportion of purchase order invoices to direct invoices;
- The proportion of overtime in relation to payroll hours;
- Comparing travel costs to number of nights spent out of town.



Are You Doing the 5¢ Test?

We do analytics!

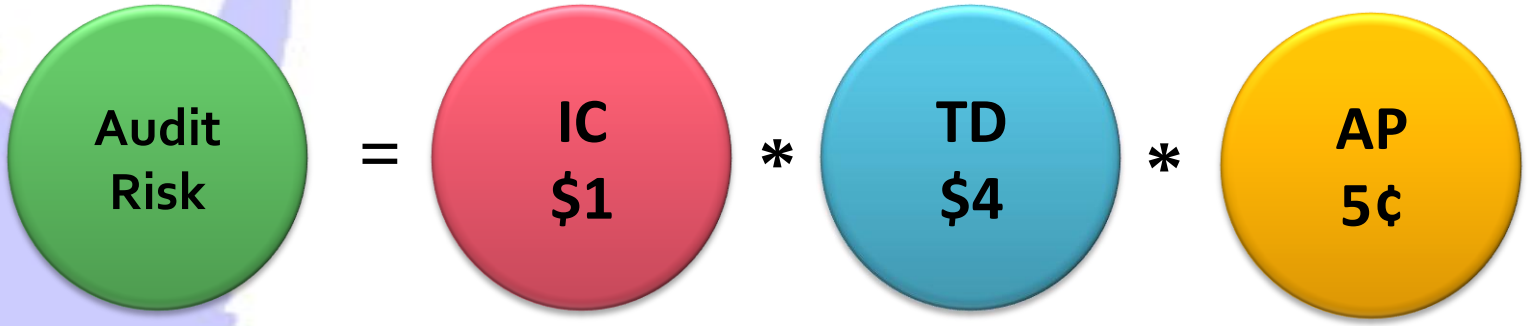
But are you doing

DATA ANALYTICS ($4)

or

ANALYTICAL PROCEDURES (5¢)…

The Key to Transformation



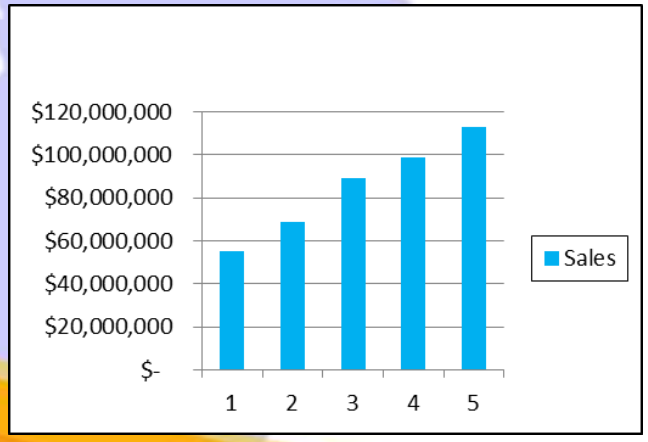
Are you:

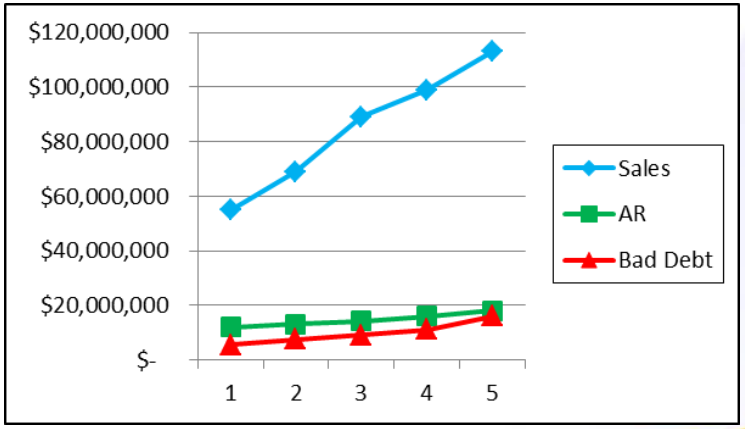
- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

Are You Using the 5¢ Test to Full Capacity?

We do analysis!
Ratios… Trending…

Accounts Payable / Expenditure = %	Compared to	Last year Accounts Payable / Last year Expenditure = %
Payroll Expense / Total Expenditure = %	Compared to	Last year Payroll Expense / Last year Total Expend = %





Are You Using the 5¢ Test to Full Capacity?

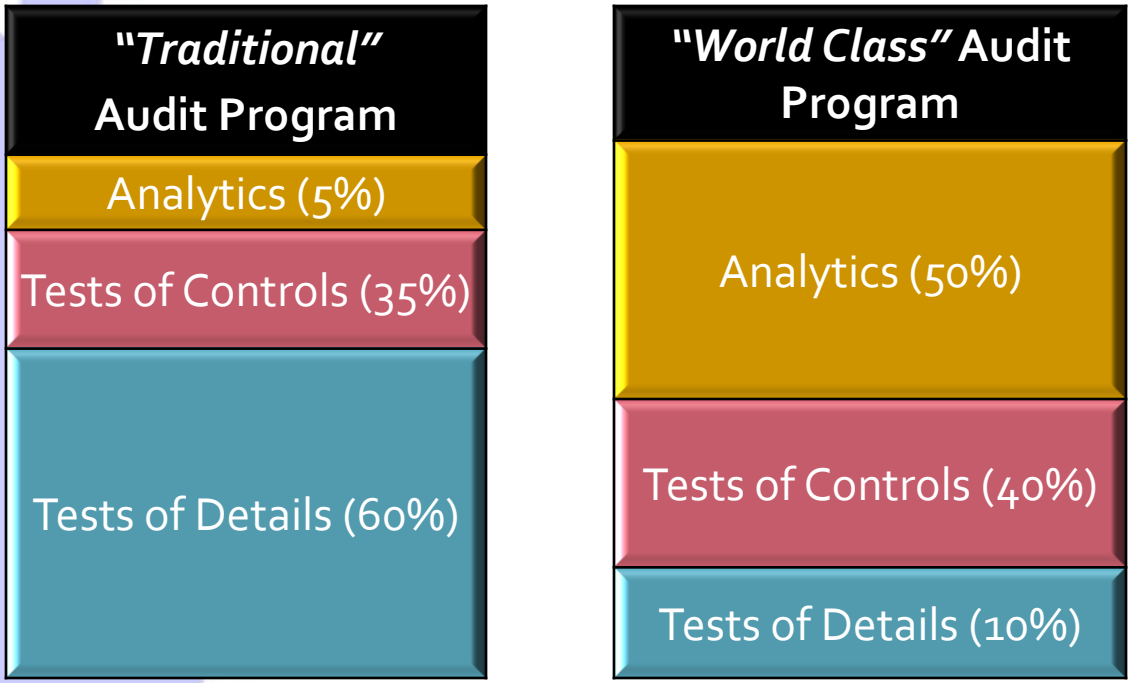
ISA 520 Analytical Procedures:

Analytics range from performing simple comparisons to performing complex analyses using advanced statistical techniques.

Are You Using the 5¢ Test to Full Capacity?

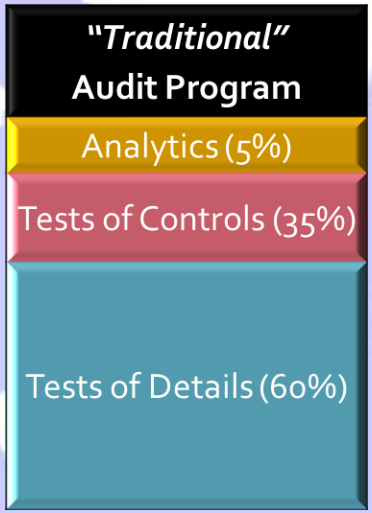
Strength of Model (understanding the process & data relationships)	Commonly Known As	Payback (Predictive Power, Useful, Applicable, Relevant)	Ease of Use	Statistical Precision?
Naïve	1. Trend Analysis	Low	Easy	No
	2. Financial Ratio Analysis	Low	Easy	No
	3. Operational Ratios (metrics)	Medium	Easy	No
	4. Anchor & Adjustment/ Flux Analysis	Medium-High	Harder	Yes-Some measure of magnitude
	5. Reasonableness / Mini-Max Tests	Medium-High	Harder	Yes-Some measure of magnitude
Robust	6. Regression Analysis	Very High	Harder (but leads to continuous monitoring, dropping cost dramatically)	Yes - Lots! And can be quantified

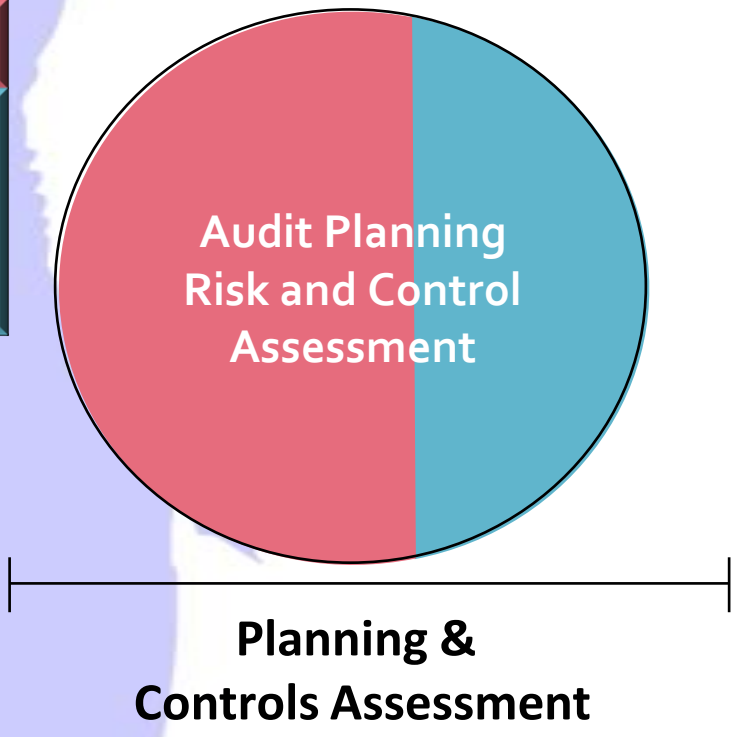
Are You Using the 5¢ Test to Full Capacity?

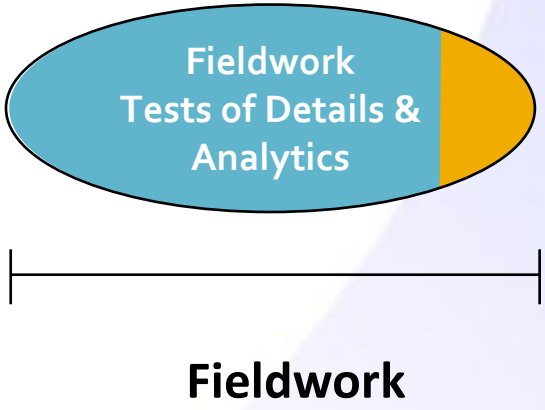


More Planning = Less Auditing!

Are You Using the 5¢ Test to Full Capacity?

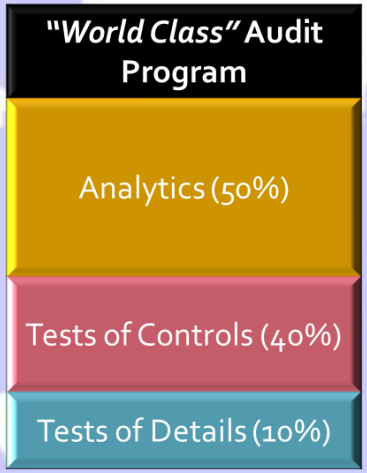






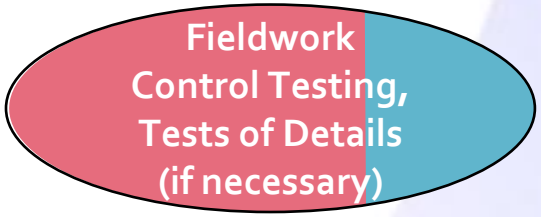
More Planning = Less Auditing!

Are You Using the 5¢ Test to Full Capacity?



Planning & Controls Assessment

Possibly NO fieldwork!



Fieldwork

More Planning = Less Auditing!

Are You Using the 5¢ Test to Full Capacity?

ISA 330 *The Auditor's Responses to Assessed Risks*:

Definitions

4 For purposes of the Australian Auditing Standards, the following

Did someone just say possibly NO FIELDWORK??

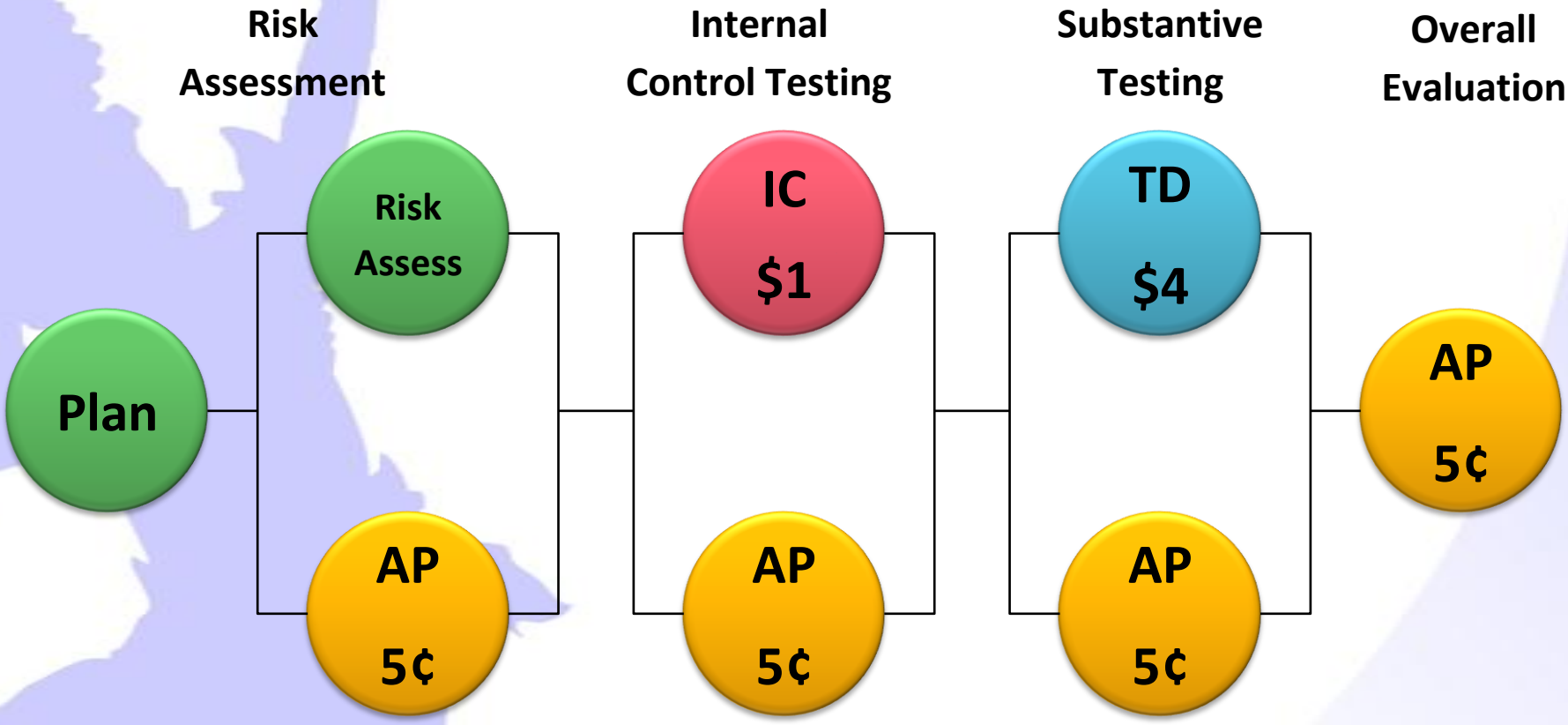
(a) Substantive procedure means an audit procedure designed to detect material misstatements at the assertion level. Substantive procedures comprise:

(i) Tests of details (of classes of transactions, account balances, and disclosures); and

(ii) Substantive analytical procedures.

You can use the 5¢ test as a $4 test…
if you perform robust analysis!

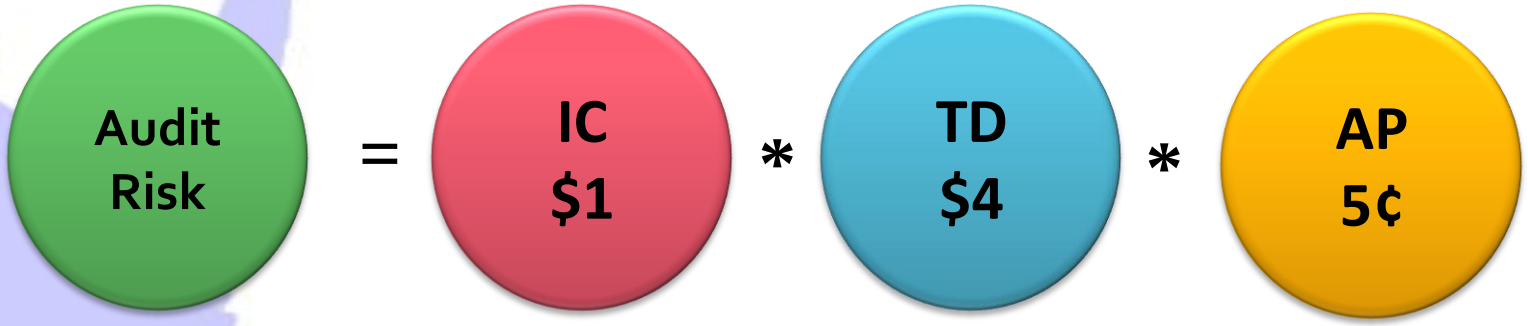
Are You Using the 5¢ Test to Full Capacity?



ISA 330 "The auditor may determine that performing only substantive analytical procedures will be sufficient to reduce audit risk to an acceptably low level"

Are you using analytical procedures to full capacity?

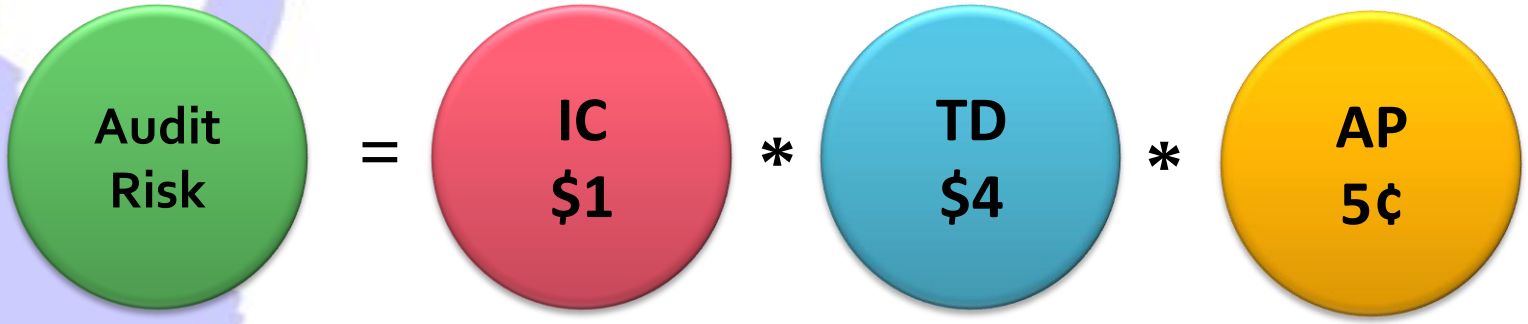
The Key to Transformation



Are you:

- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

Are You Quantifying Reliance on Each Type of Evidence?



Do you do this?

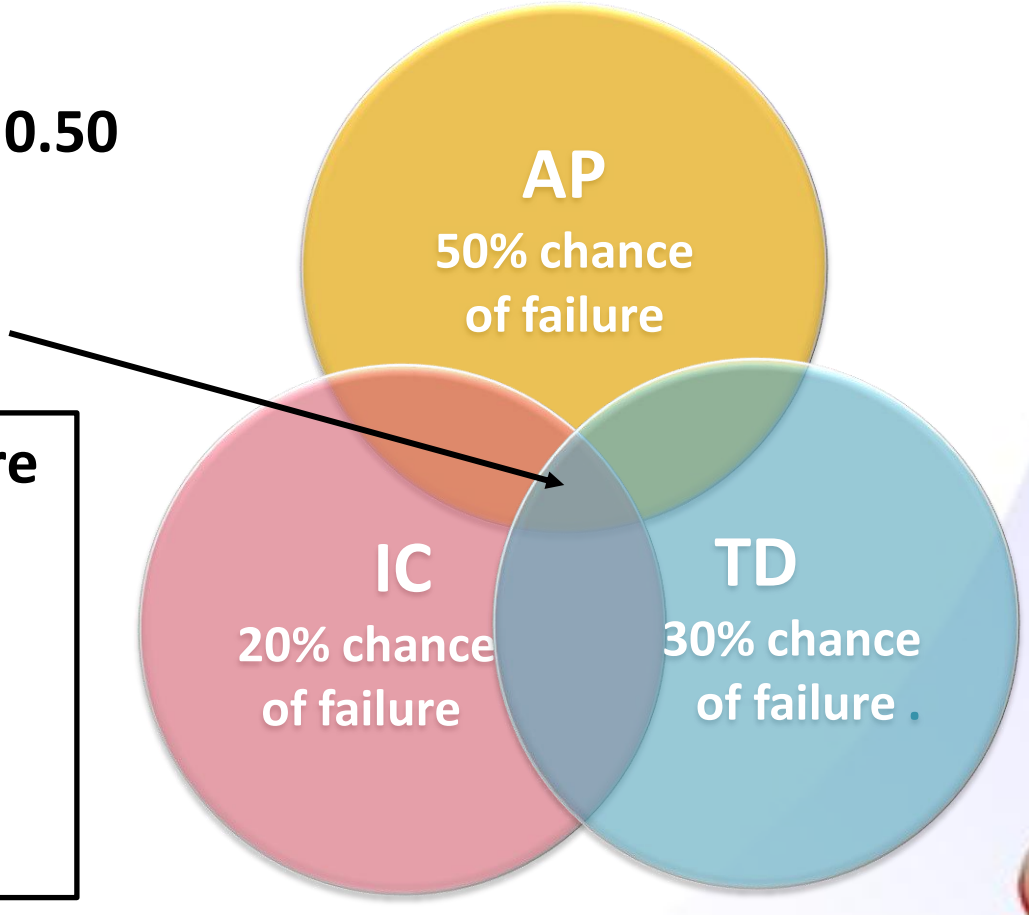
AR	=	IC	*	TD	*	AP
	=	High	*	None	*	Low-None
	=	High-Mod	*	None	*	Low
	=	Mod	*	Low	*	High
	=	Low	*	High	*	Moderate

Or this?

AR	=	IC	*	TD	*	AP
2%	=	20%	*	20%	*	50%
3.75%	=	50%	*	15%	*	50%
5%	=	50%	*	20%	*	50%
5.6%	=	20%	*	40%	*	70%

Are You Quantifying Reliance on Each Type of Evidence?

Audit Risk = 0.20 * 0.30 * 0.50
Audit Risk = 0.03 (3%)
i.e. 97% Reliable!



You are only at risk where

Your IC tests fail

AND

Your TD fail

AND

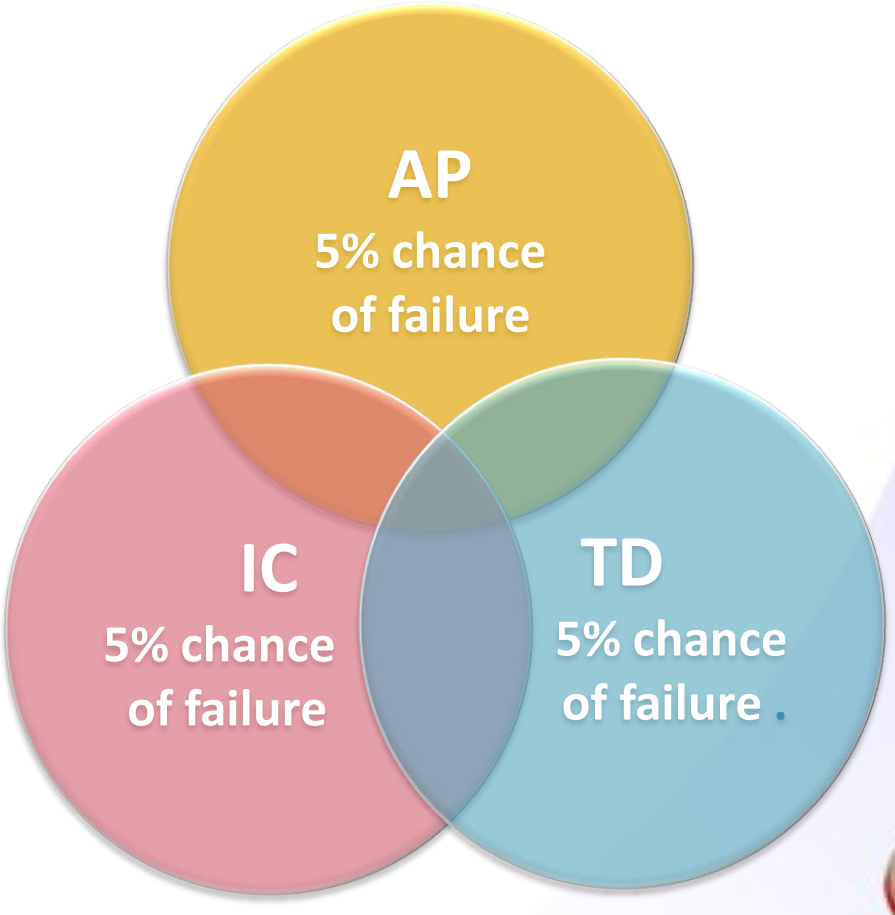
Your AP fail

Are You Quantifying Reliance on Each Type of Evidence?

Audit Risk = 0.05 * 0.05 * 0.05

Audit Risk = 0.000125 (0.01%)

This is OVER-AUDITING!!

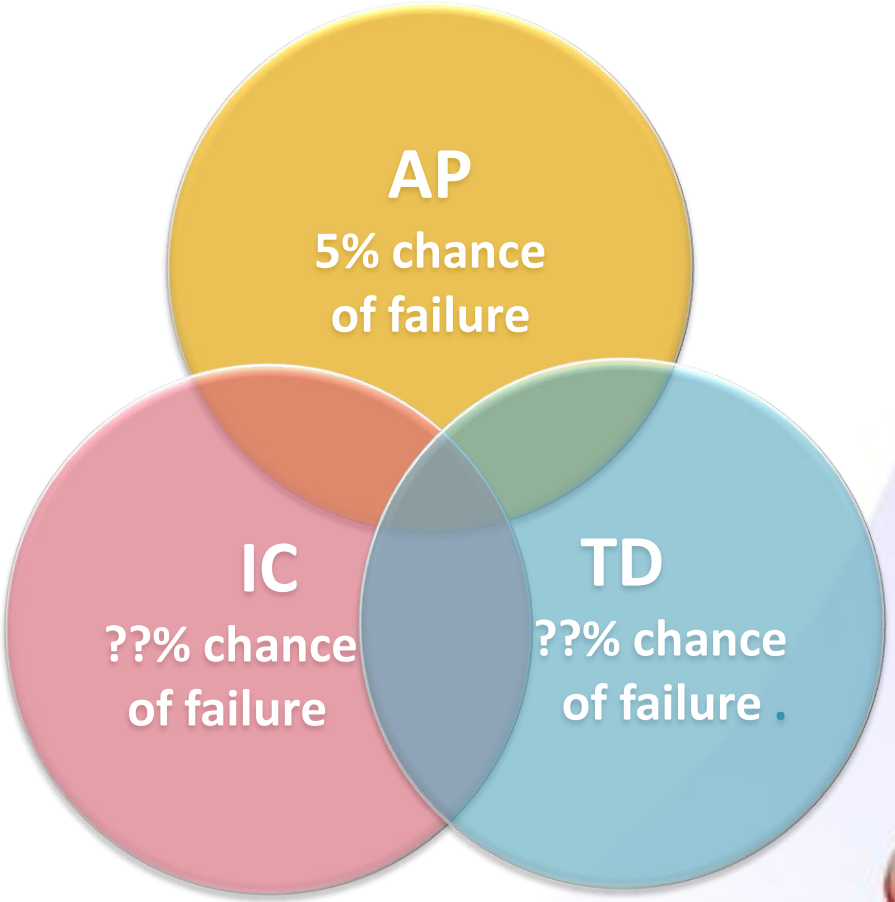


Are You Quantifying Reliance on Each Type of Evidence?

Audit Risk = 0.05 * ?? * ??

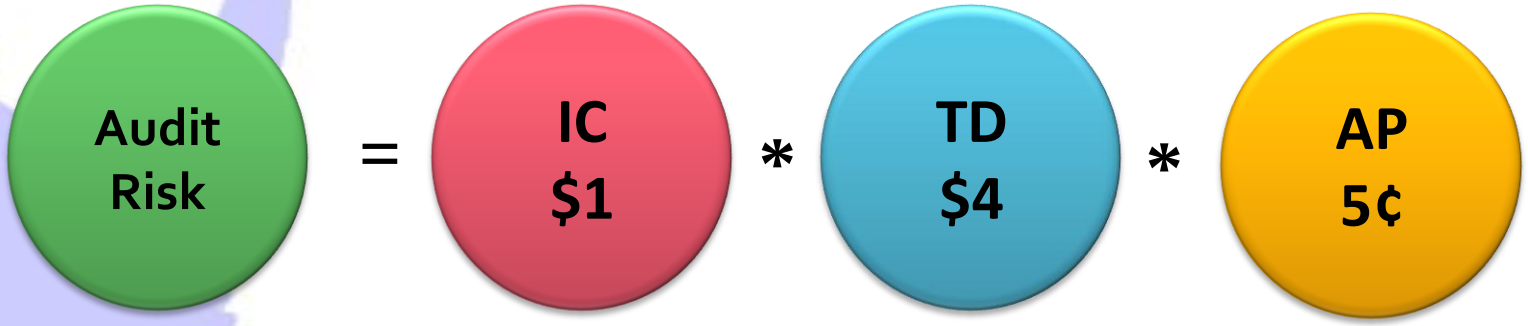
Audit Risk = 0.05 (5%)

This is Efficient Auditing!!



Are you quantifying reliance or over-auditing?

The Key to Transformation



Are you:

- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

Are You Performing Data-driven Risk Assessment?

We do risk based auditing!

Great!

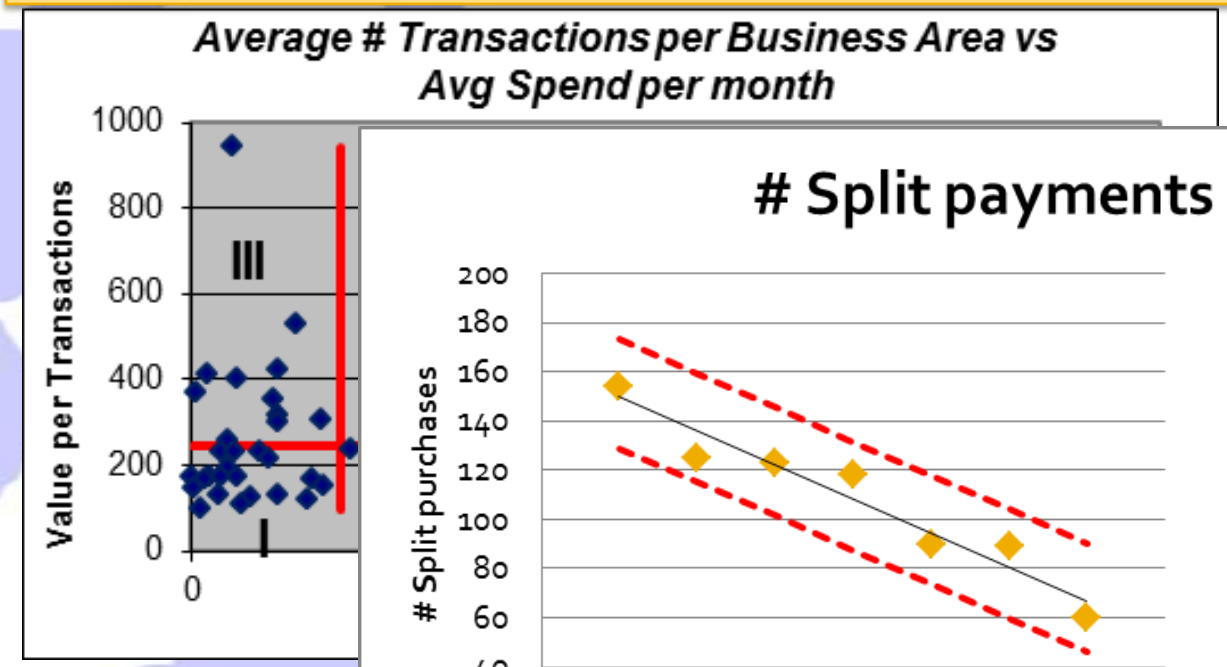
On what do you base your control risk assessment:

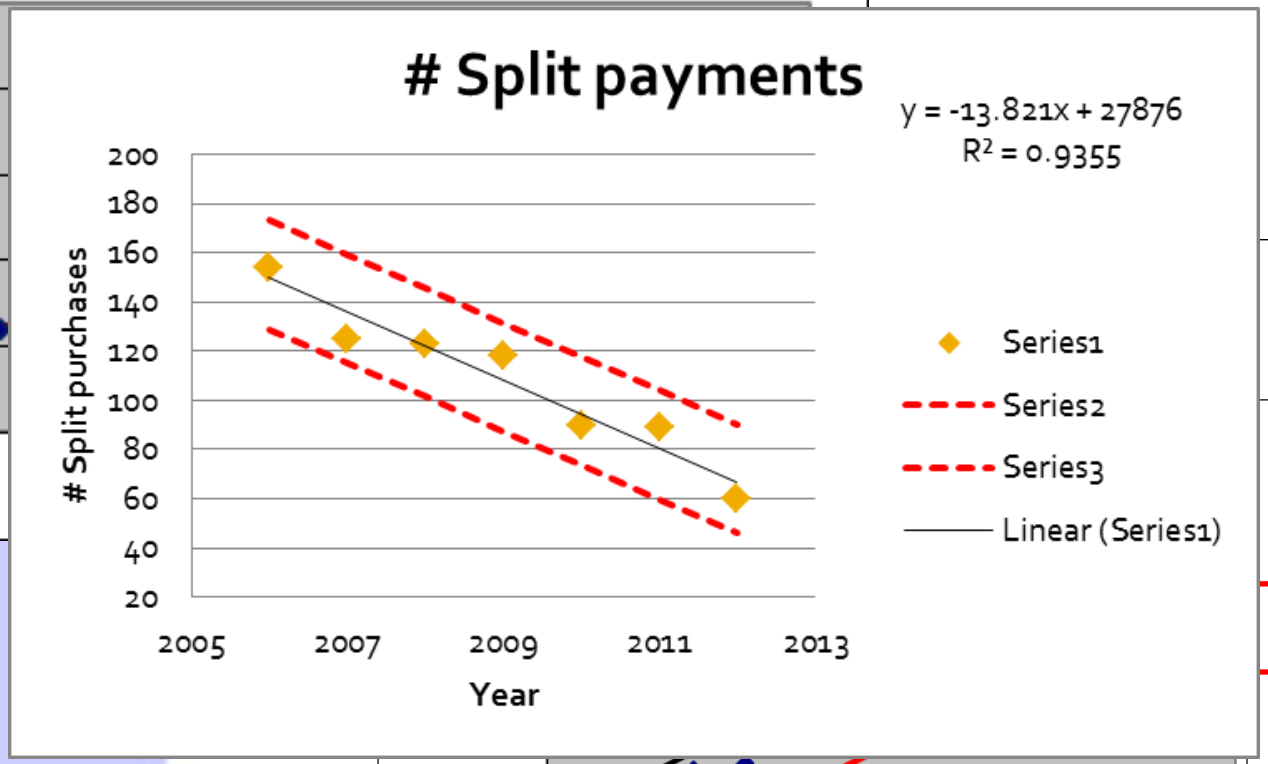
- **Knowledge of the client?**
- **Previous experience?**
- **Enterprise Risk Management Framework?**
- **Fraud Risk Assessments?**
- **Economic environment?**
- **IT environment?**

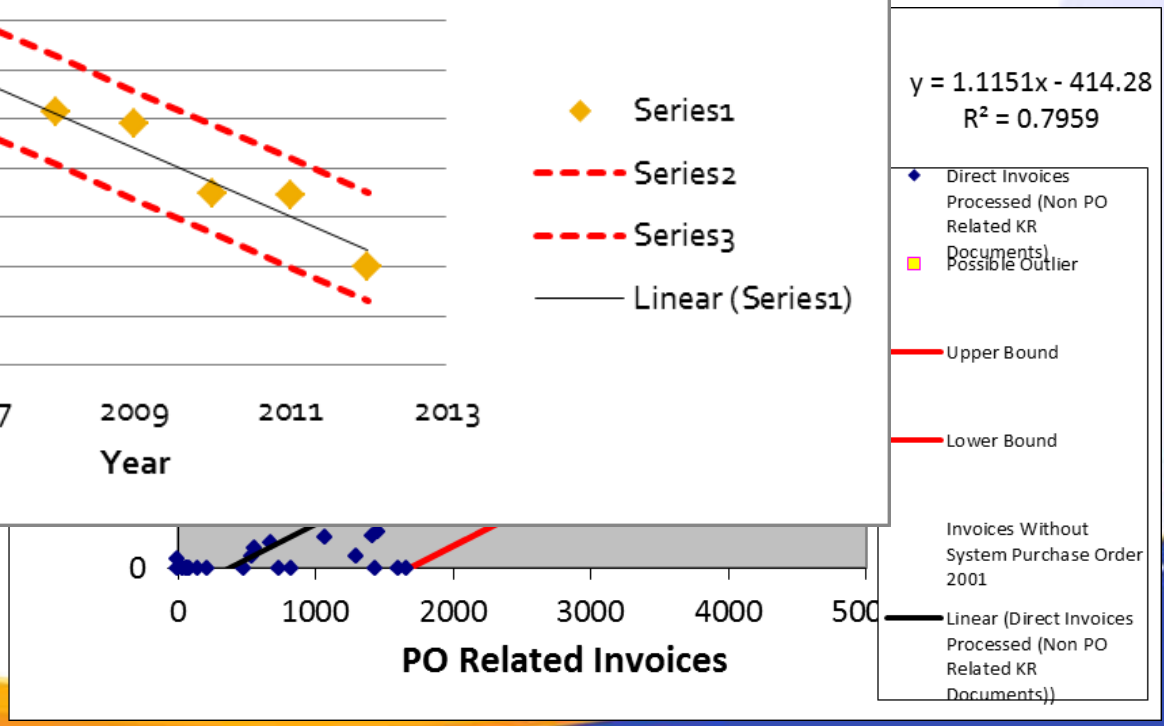
…DATA?

Are You Performing Data-driven Risk Assessment?

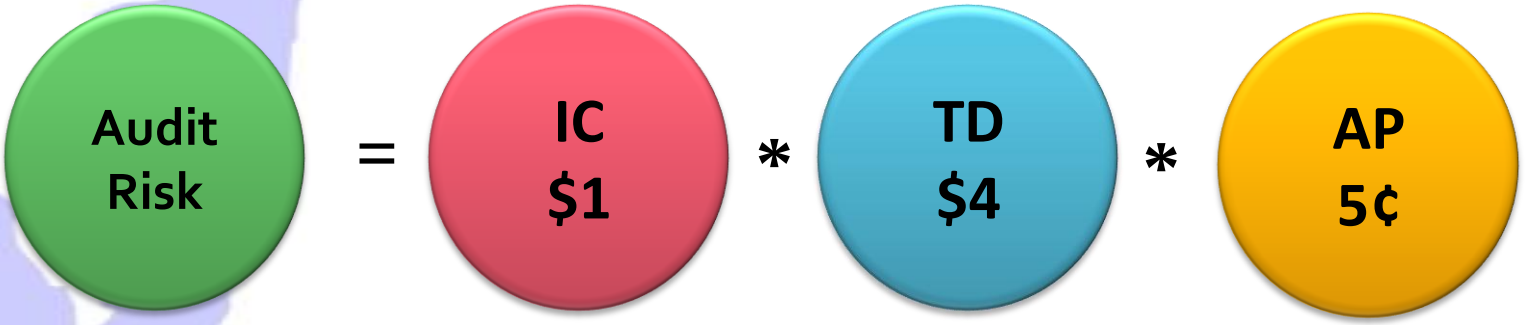
Would front-loaded analyses like these inform your risk assessment?







The Key to Transformation



Are you:

- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

If you answered 'NO' to one or more of these questions…
You are cheating yourself!
You are over-auditing!
AND
You are auditing HARDER not smarter!

Are You Auditing Harder??

Auditors like big samples

Auditors love to sweep files

(data analytics… not analytical procedures!)

Auditors don't perform many or any true AP

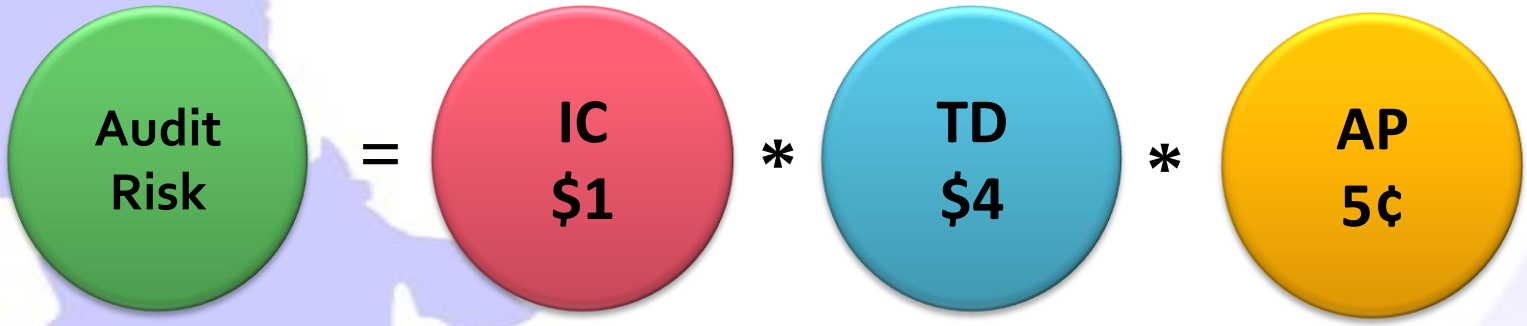
Auditors talk in adjectives

A great deal of legacy thinking exists

Want to Audit Smarter??

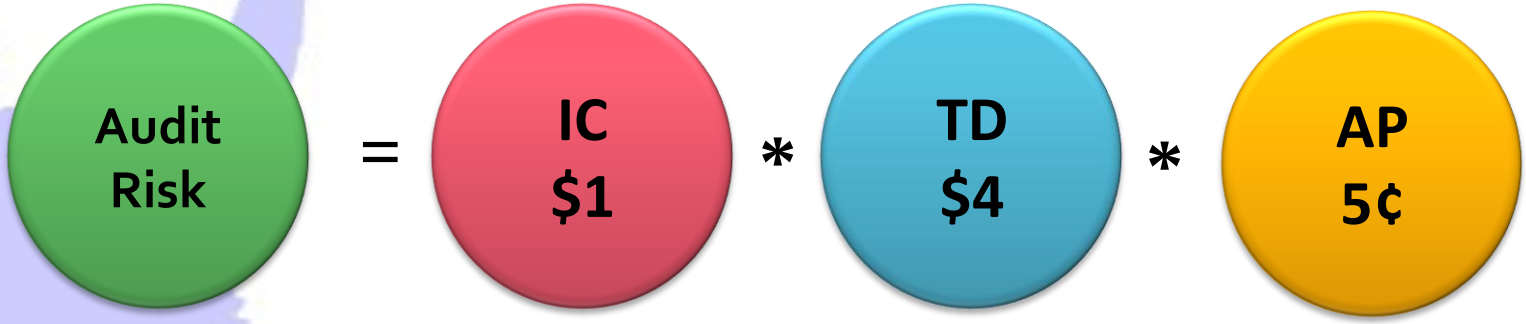
Let's see what's possible… you CAN audit smarter!!

Here's how, it's not rocket science!



Start every cycle of your audit with the audit risk model!

You Can Do More With Less!



How does this help??

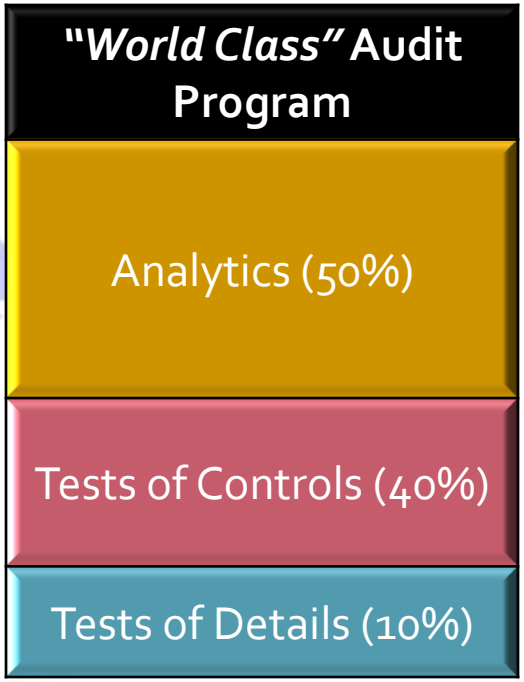
If you fail to plan… you plan to fail!

This model gives your planning some PERSPECTIVE, specifically…

- **Start with RISK**
- **Quantify risk/reliance**
- **Utilise and maximise the 5¢ test (not the $4 test!)**

You Can Do More With Less!

Sounds great!
But how do I even begin to QUANTIFY reliance on AP??

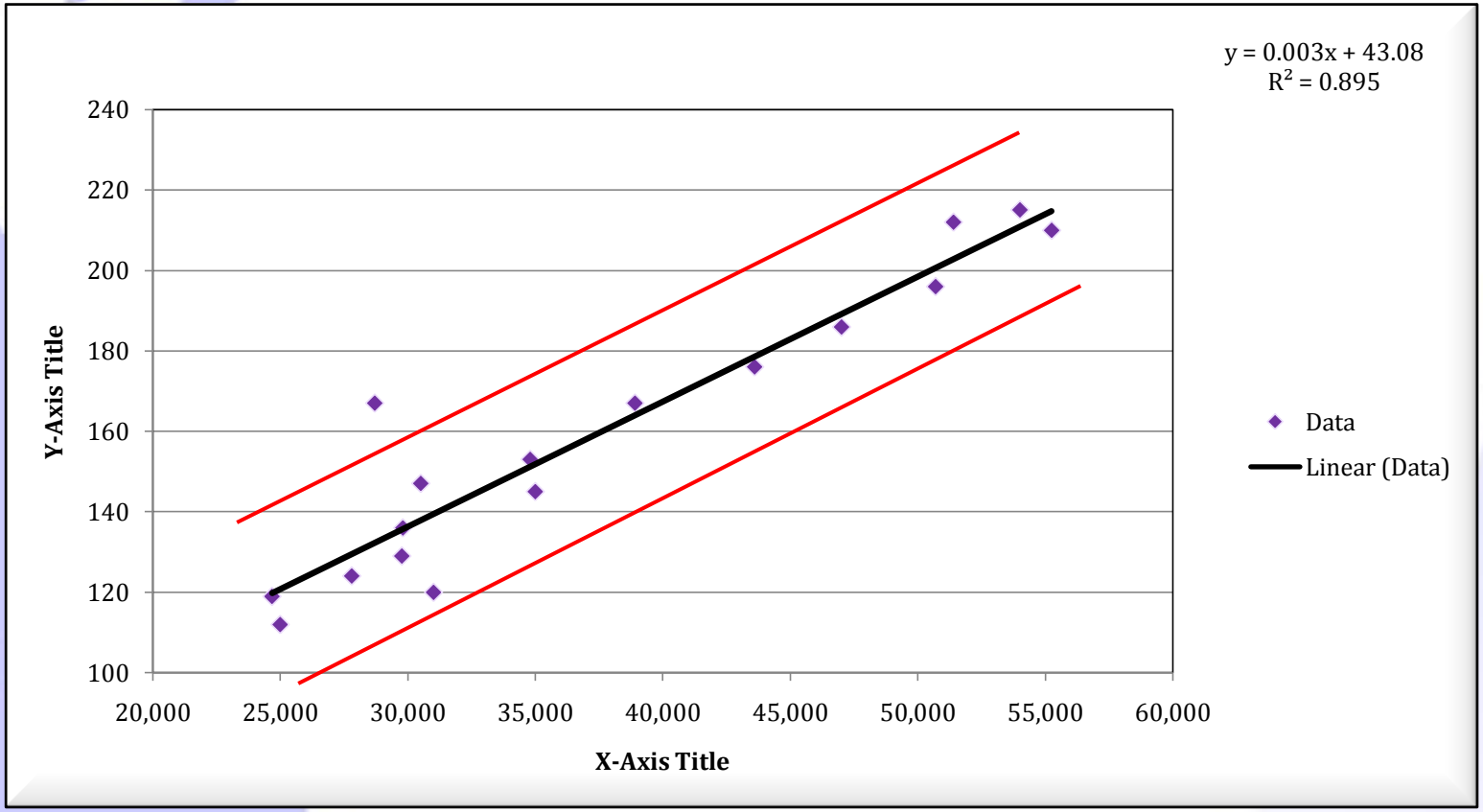


World class auditors are not simply doing ratios and trending!

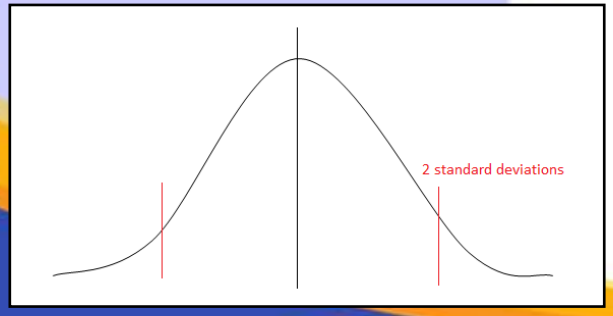
You Can Do More With Less!

Strength of Model (understanding the process & data relationships)	Commonly Known As	Payback (Predictive Power, Useful, Applicable, Relevant)	Ease of Use	Statistical Precision?
Naïve	1. Trend Analysis	Low	Easy	No
	2. Financial Ratio Analysis	Low	Easy	No
	3. Operational Ratios (metrics)	Medium	Easy	No
	4. Anchor & Adjustment/ Flux Analysis	Medium-High	Harder	Yes-Some measure of magnitude
	5. Reasonableness / Mini-Max Tests	Medium-High	Harder	Yes-Some measure of magnitude
Robust	6. Regression Analysis	Very High	Harder (but leads to continuous monitoring, dropping cost dramatically)	Yes - Lots! And can be quantified

You Can Do More With Less!



Y Axis



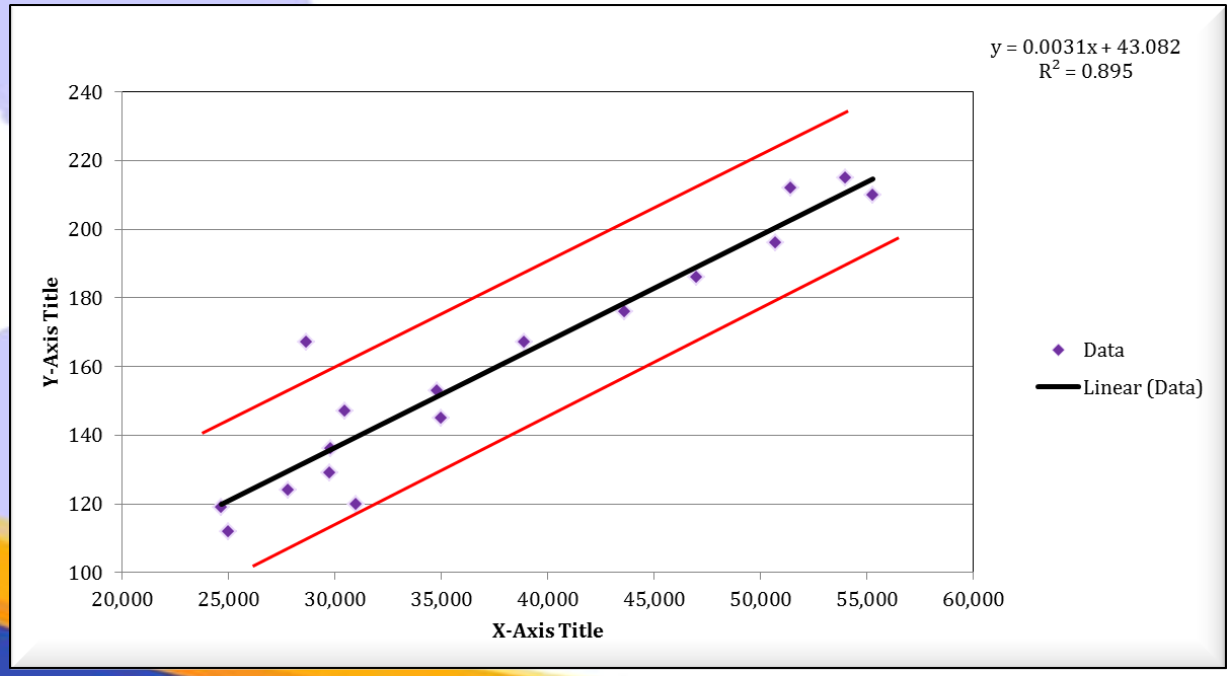
X Axis

Perform robust analyses with mathematical precision and tolerances…

You Can Do More With Less!

The result for your effort is that you will be able to:

- Maximise your use of the 5c test
- QUANTIFY reliance on AP and thereby reduce IC and TD
- Replace the $1 and $4 test with the 5¢ test
- Perform data-driven risk assessment
- Make powerful audit conclusions

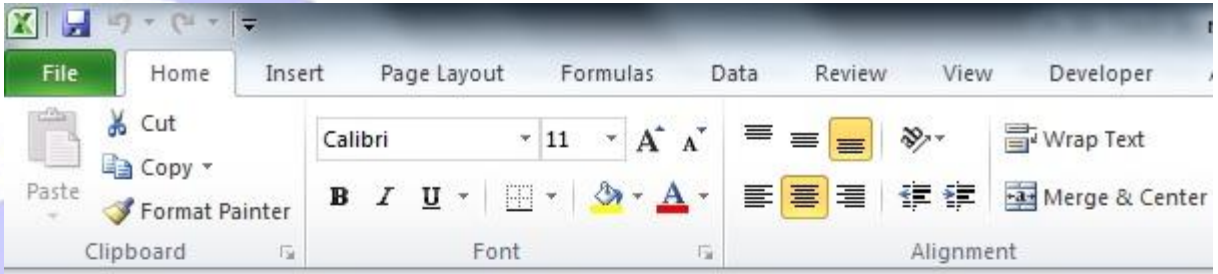


"I'm 95% confident this process is in control…"

You Can Do More With Less!

Step-By-Step

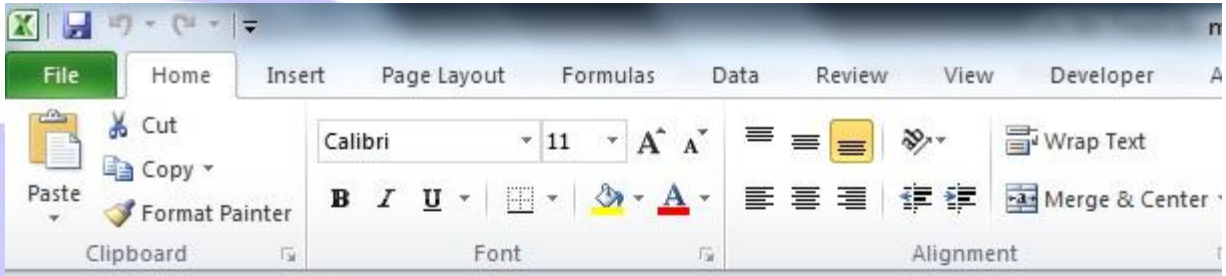
You Can Do More With Less!



	A	B	C	D
1			X	Y
2	Observation	Location	Litres of Water Pumped (in 000's)	Maintenance Costs (in 00's)
3	1	Yeppoon	25,000	112
4	2	Rockhampton	43,600	176
5	3	Gympie	24,678	119
6	4	Bongaree	29,760	129
7	5	Mount Isa	29,800	136
8	6	Townsville	51,400	212
9	7	Gladstone	31,000	120
10	8	Maryborough	30,500	147
11	9	Hervey Bay	34,790	153
12	10	Bundaberg	35,000	145
13	11	Nambour	28,700	167
14	12	Mackay	38,900	167
15	13	Toowoomba	47,000	186
16	14	Cairns	50,700	196
17	15	Warwick	27,800	124
18	16	Brisbane	55,250	210
19	17	Gold Coast	54,000	215
20				
21				
22				

Start with a plausible relationship

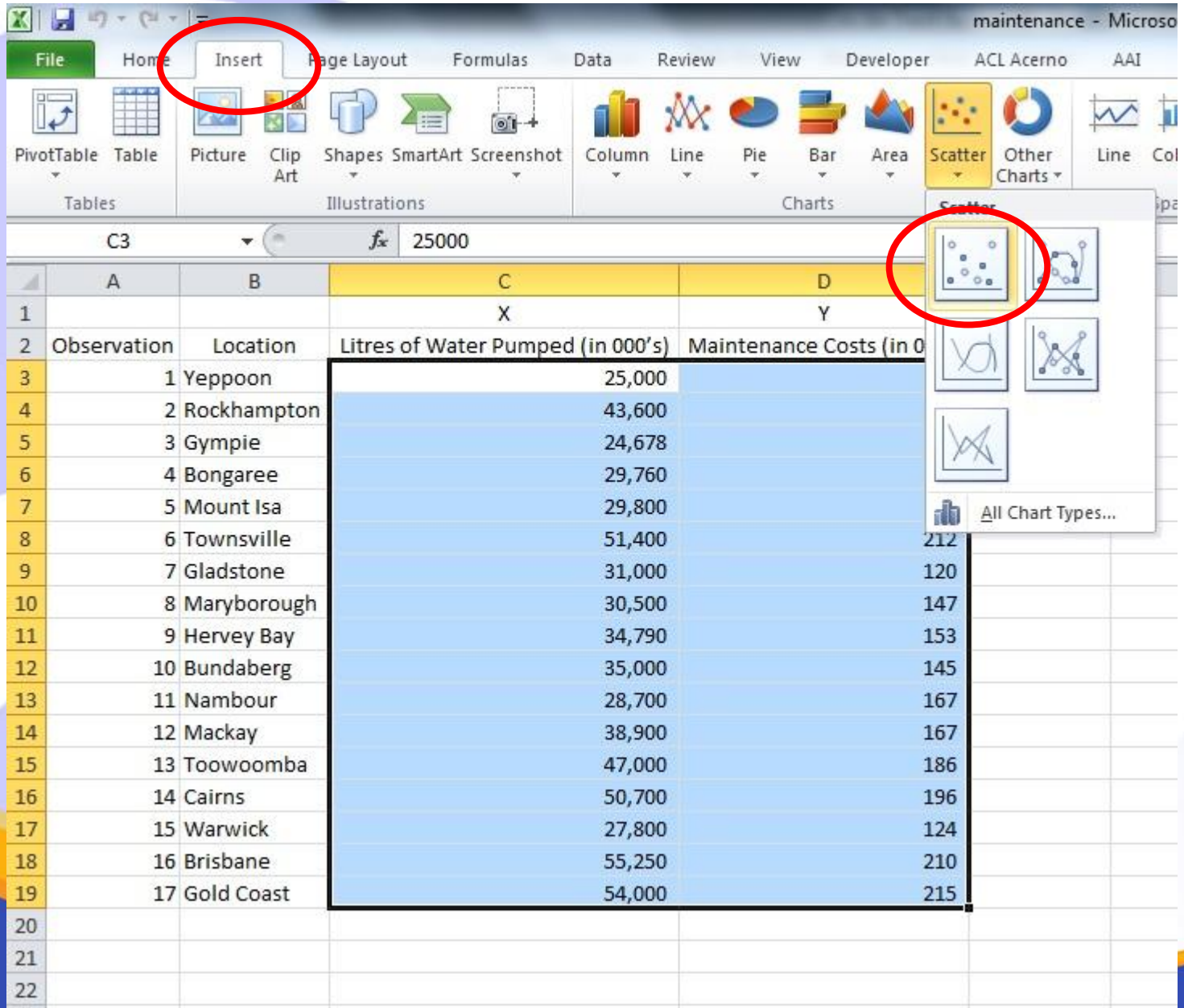
You Can Do More With Less!



	A	B	C	D
1			X	Y
2	Observation	Location	Litres of Water Pumped (in 000's)	Maintenance Costs (in 00's)
3	1	Yeppoon	25,000	112
4	2	Rockhampton	43,600	176
5	3	Gympie	24,678	119
6	4	Bongaree	29,760	129
7	5	Mount Isa	29,800	136
8	6	Townsville	51,400	212
9	7	Gladstone	31,000	120
10	8	Maryborough	30,500	147
11	9	Hervey Bay	34,790	153
12	10	Bundaberg	35,000	145
13	11	Nambour	28,700	167
14	12	Mackay	38,900	167
15	13	Toowoomba	47,000	186
16	14	Cairns	50,700	196
17	15	Warwick	27,800	124
18	16	Brisbane	55,250	210
19	17	Gold Coast	54,000	215
20				
21				
22				

Highlight your data

You Can Do More With Less!

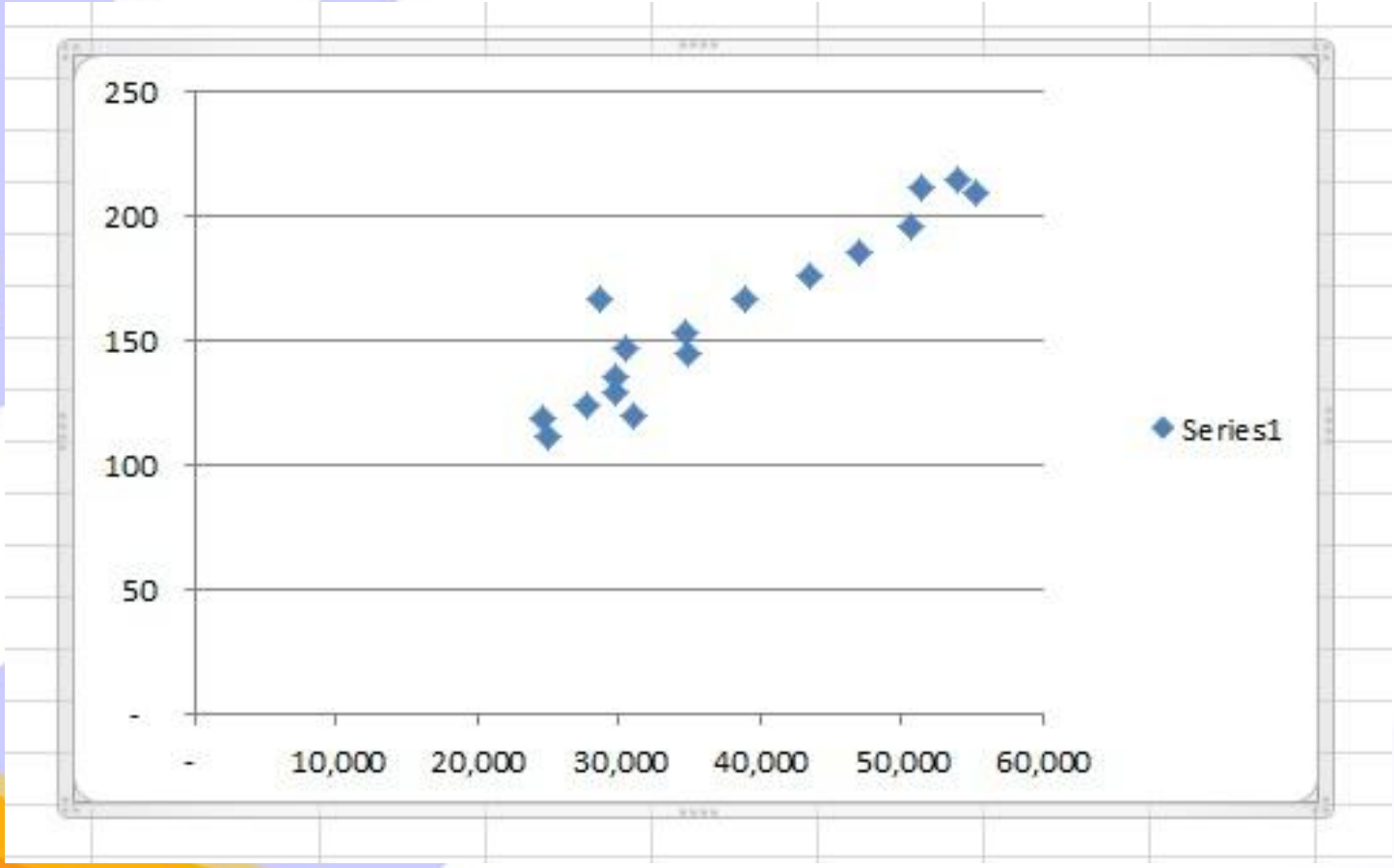


	A	B	C	D
1			X	Y
2	Observation	Location	Litres of Water Pumped (in 000's)	Maintenance Costs (in 0
3	1	Yeppoon	25,000	
4	2	Rockhampton	43,600	
5	3	Gympie	24,678	
6	4	Bongaree	29,760	
7	5	Mount Isa	29,800	
8	6	Townsville	51,400	212
9	7	Gladstone	31,000	120
10	8	Maryborough	30,500	147
11	9	Hervey Bay	34,790	153
12	10	Bundaberg	35,000	145
13	11	Nambour	28,700	167
14	12	Mackay	38,900	167
15	13	Toowoomba	47,000	186
16	14	Cairns	50,700	196
17	15	Warwick	27,800	124
18	16	Brisbane	55,250	210
19	17	Gold Coast	54,000	215
20				
21				
22				

Insert a scatter chart

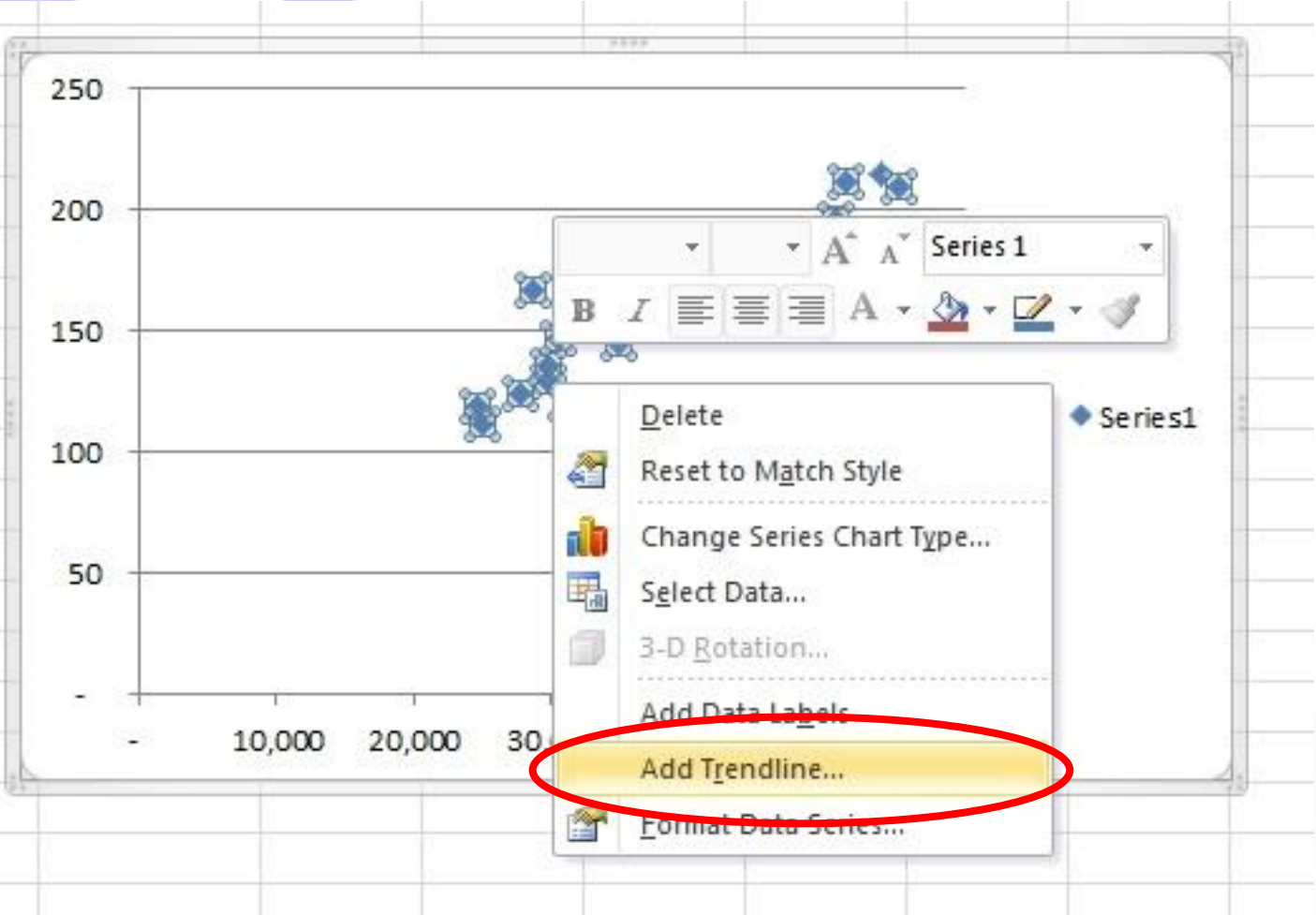
You Can Do More With Less!

You created a chart

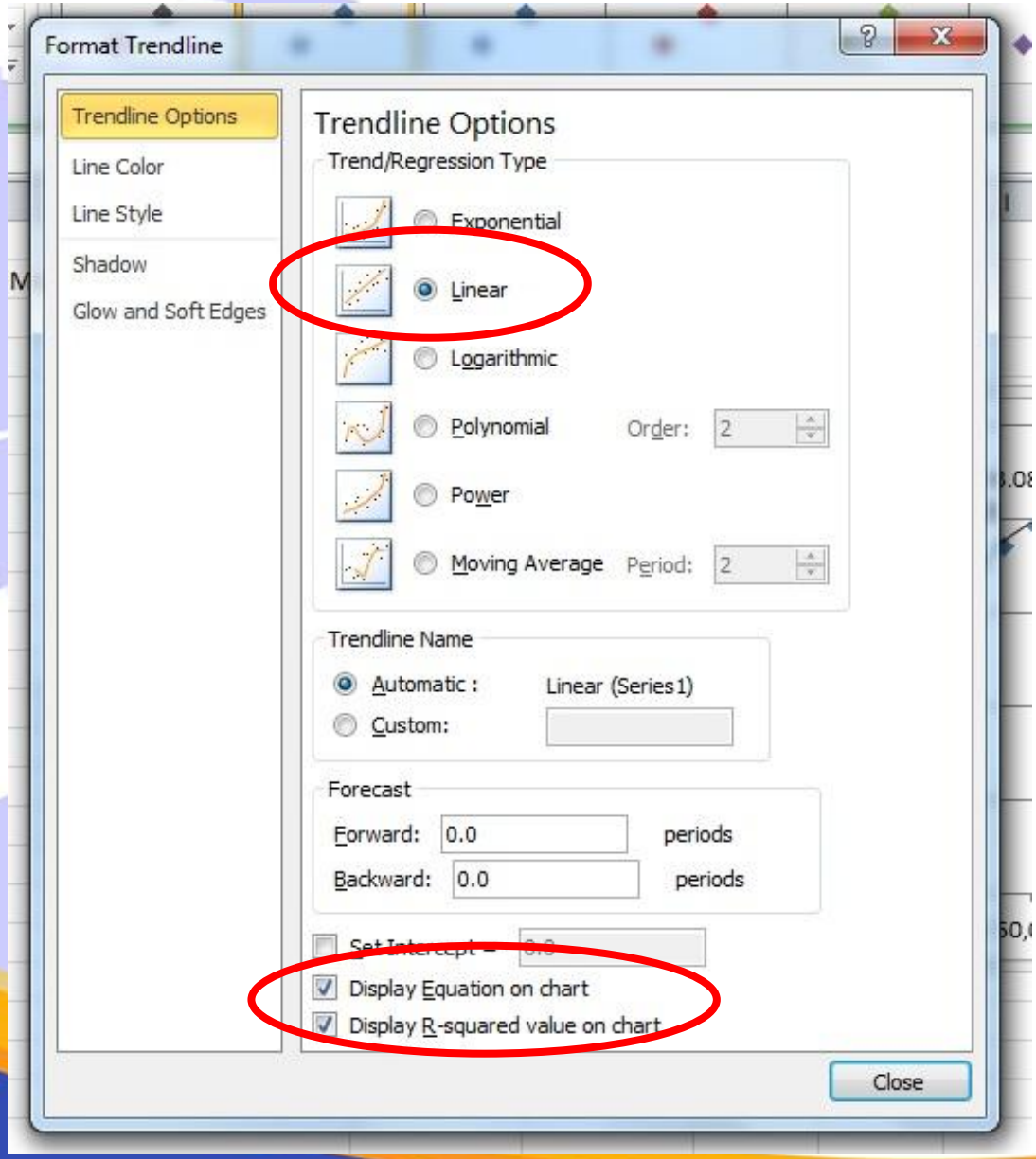


You Can Do More With Less!

Right click to add a Trendline



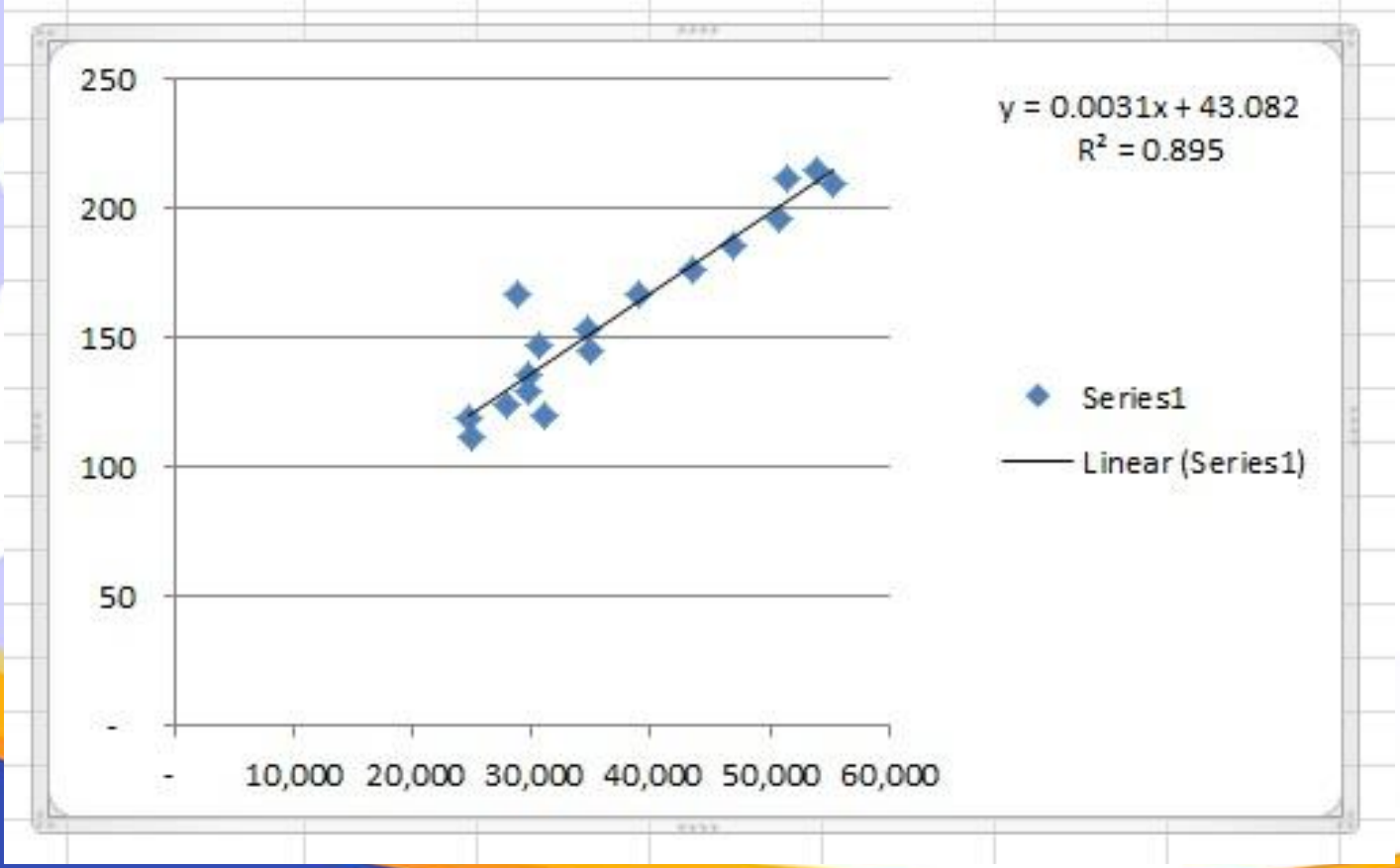
You Can Do More With Less!



Select Linear Regression Type and display equations

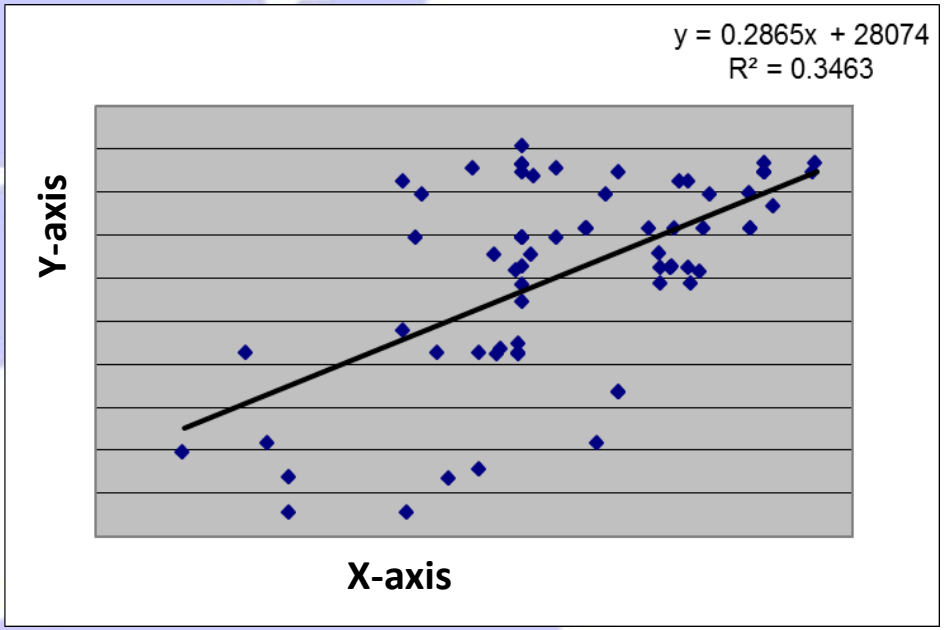
You Can Do More With Less!

Congratulations! You have run simple linear regression!



You Can Do More With Less!

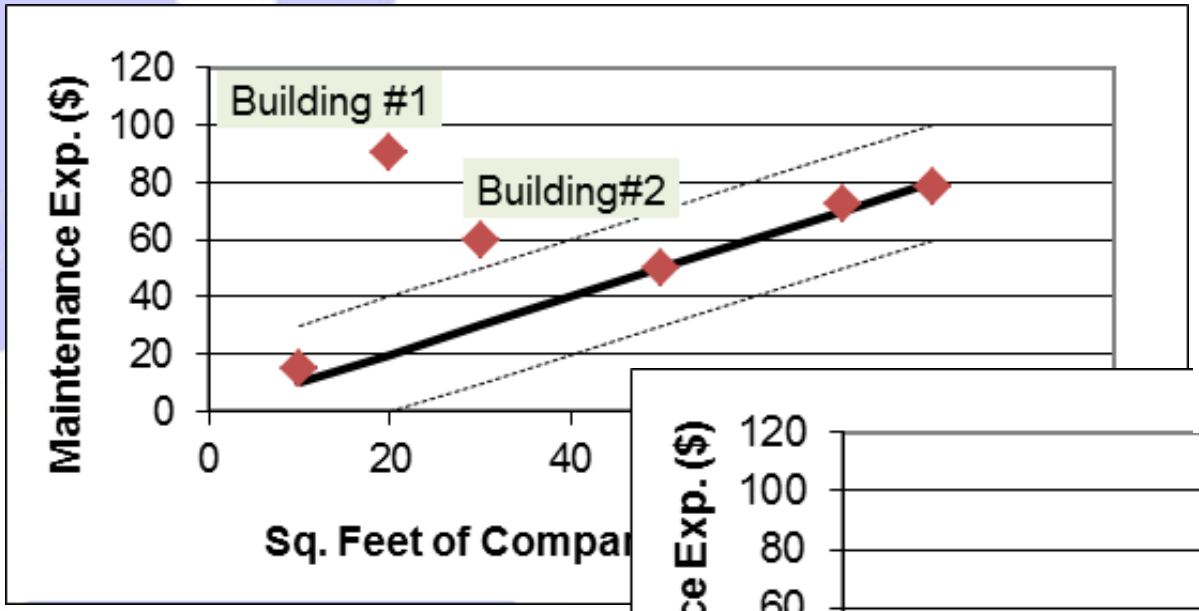
But… it's not just about pressing buttons…



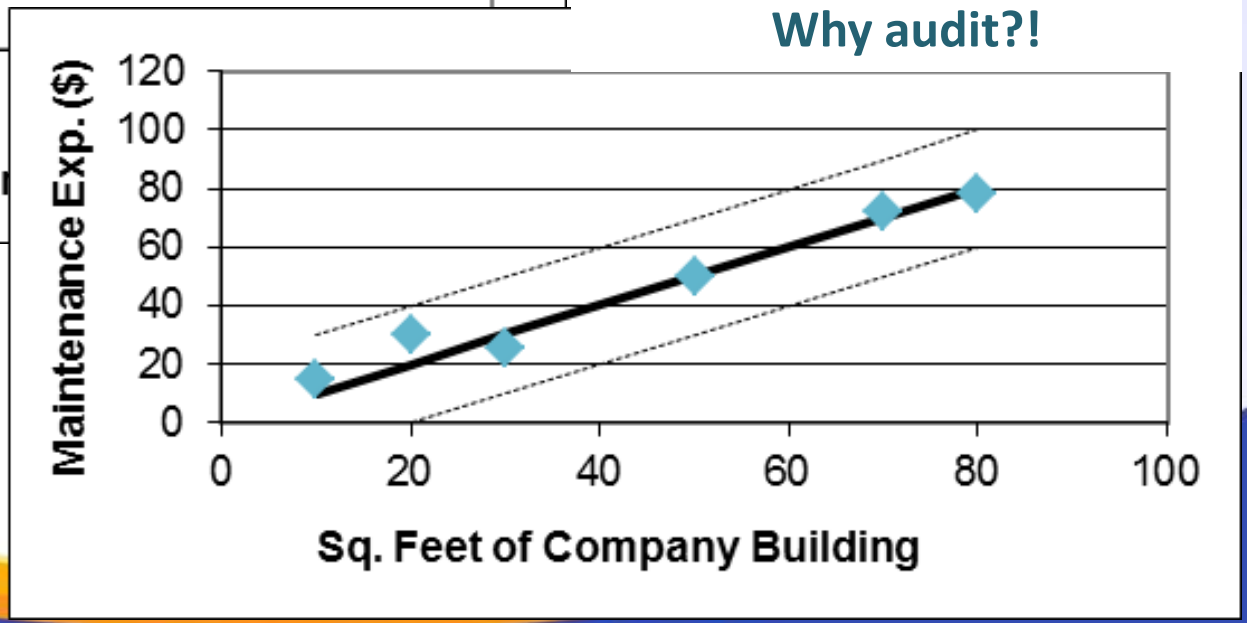
- What do I put on the X-axis and Y-axis?
- How do I interpret the math?
- What if the data is not linear?
- What if the data is not in a steady state?
- How to check the validity of the model?
- Are there subpopulations in the data?
- What conclusion can I make about the statistical bounds?
- What can I say about outliers?
- How can I build benchmarks?
- How do I use it as a substitute for the $1 and $4 test?

You Can Do More With Less!

Your current default position is to audit HARDER
It's time to change your audit DNA
It's all about your mindset.

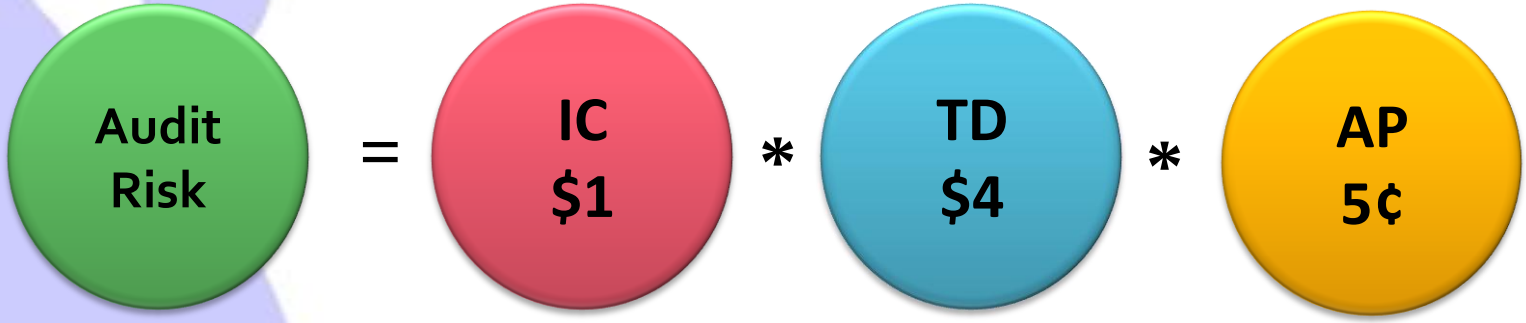


If you apply true risk based auditing and there's no risk…
Why audit?!



If there is risk, identify it early and target your testing!
Don't over-audit!

You Can Do More With Less!



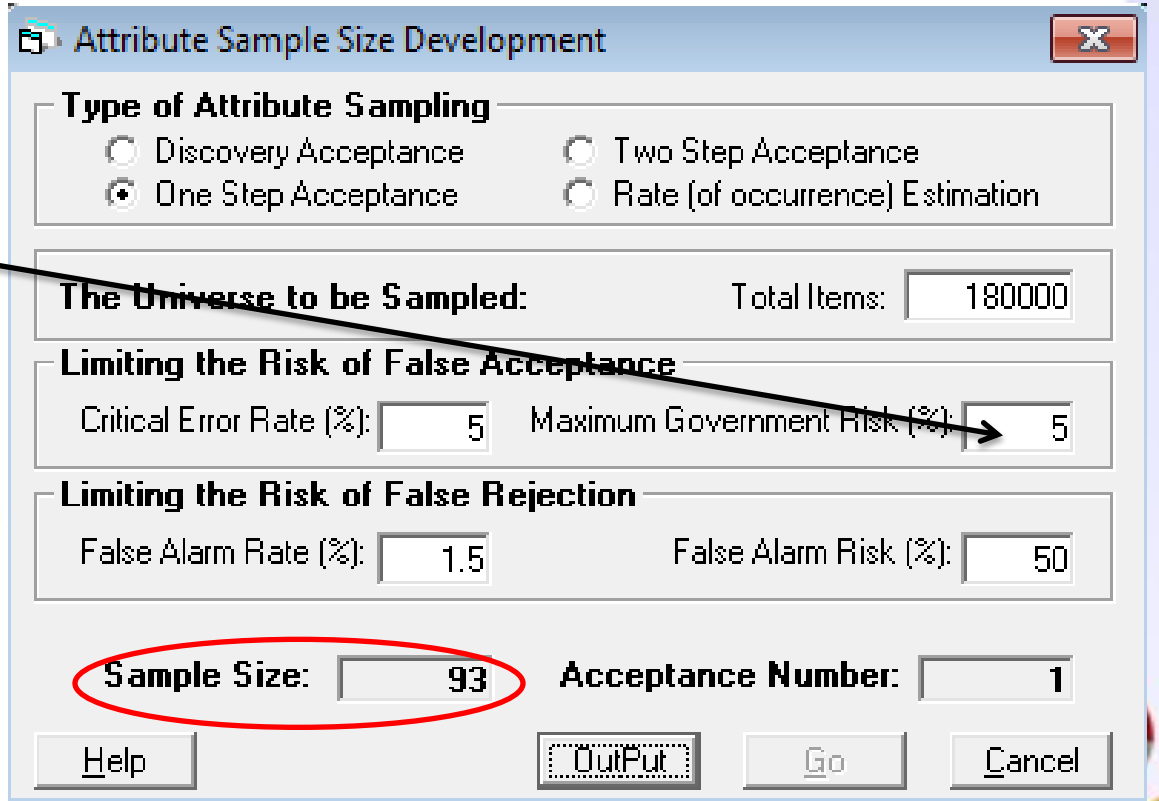
If you can get maximum assurance from the 5¢ test, how much IC and TD do you need to do??

You Can Do More With Less!

If you do need to take samples,
quantify reliance and see your sample size reduce…

You desire 95% reliability, and you perform NO analytics. High reliance must be placed on sampling.

n = 93

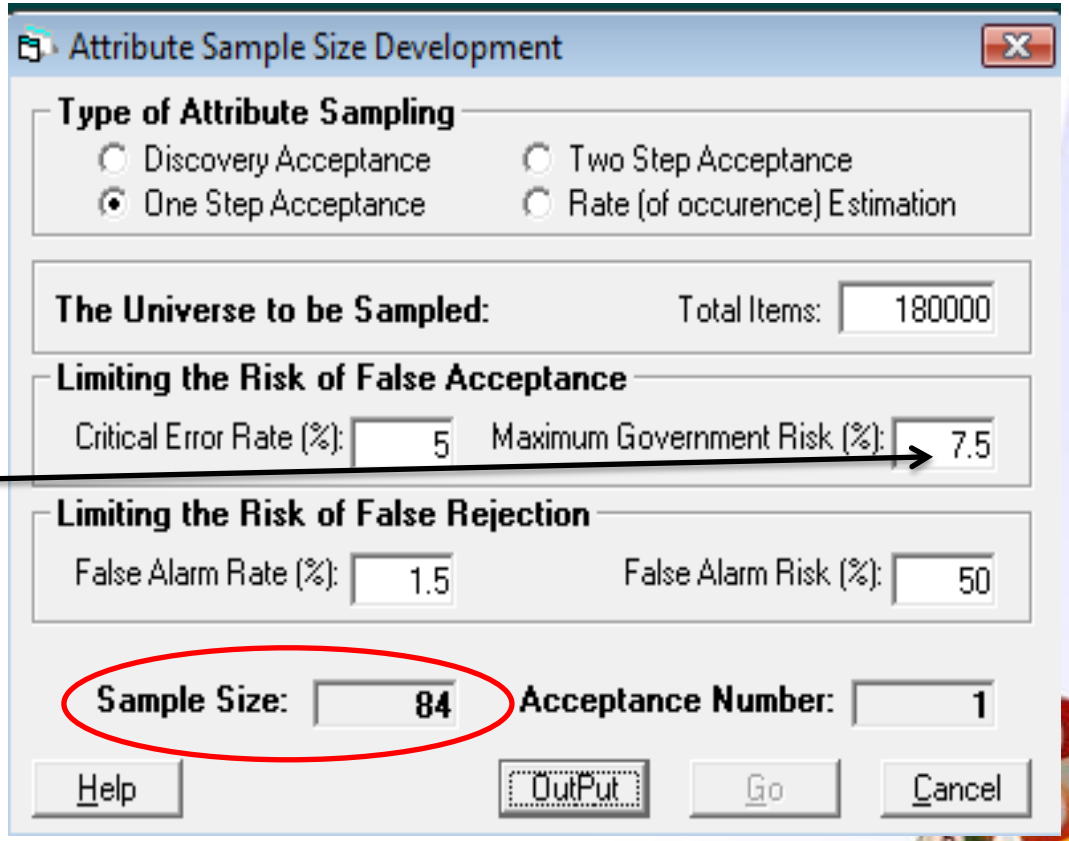


You Can Do More With Less!

If you do need to sample,
quantify reliance and see your sample size reduce…

You decide to perform some not-so-robust analytics (ratios), reducing your reliance on sampling to 92.5%

n = 84

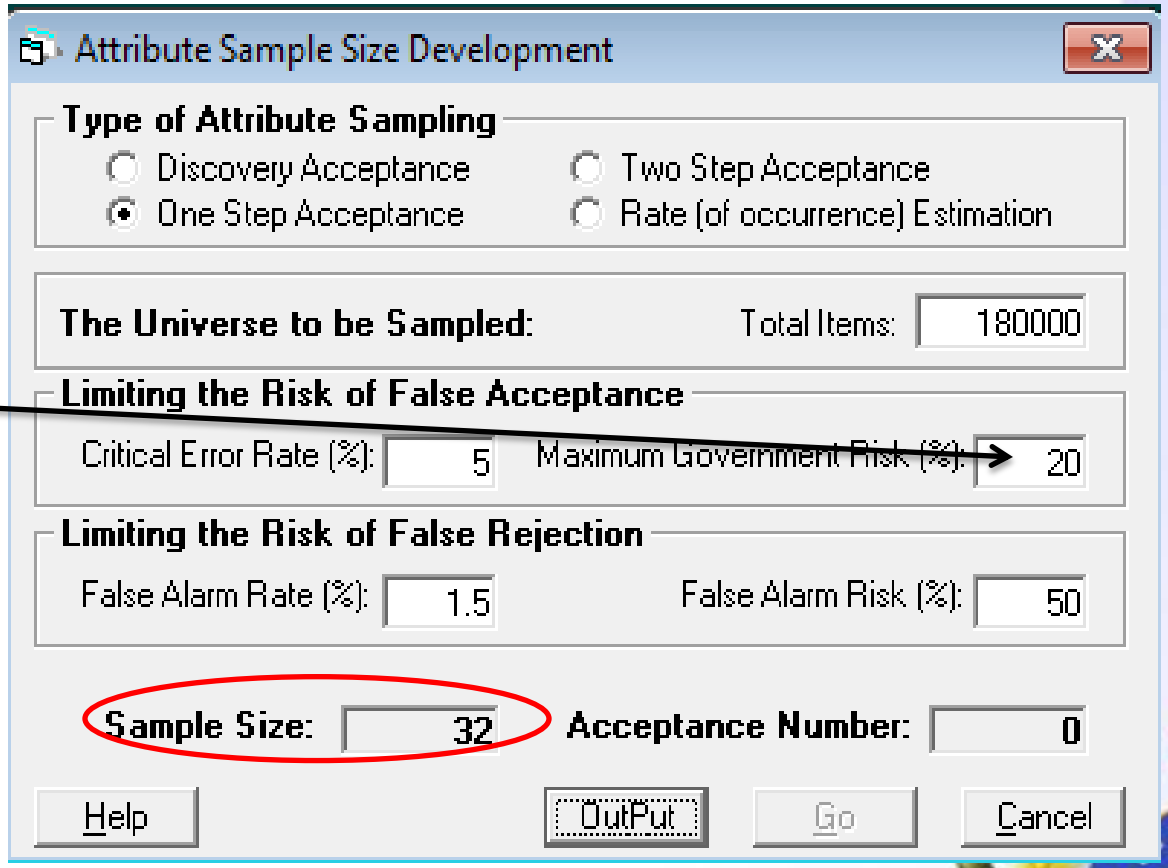


You Can Do More With Less!

If you do need to sample,
quantify reliance and see your sample size reduce…

Then you perform some robust analytics, reducing your reliance on sampling to 80%

n = 32



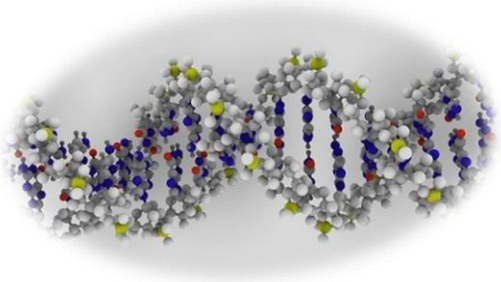
You Can Do More With Less!

Old habits ARE hard to break!

One auditor remarked

"We ARE doing what you taught us, and then we STILL DO all the old techniques, so we doubled our efforts and 'audit harder: not smarter'!"

We are not teaching you ANOTHER thing to do
We are teaching you a better way… it's time to change your audit DNA!



The world is calling for a "new auditor"…
six sigma, proactive, preventive rather than corrective.
It can be YOU!

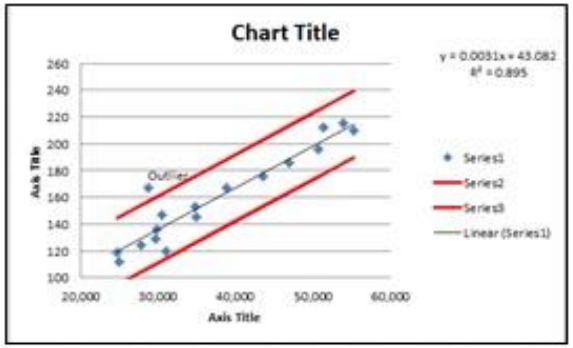
What the World-Class Auditors Are Doing… Its at Your Fingertips

With analytics you can do half of the 1-2 punch

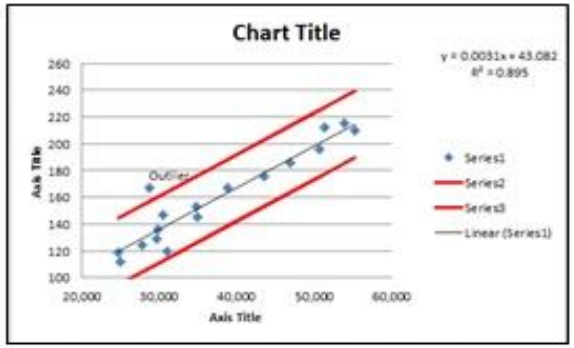
Model (e.g. monthly, weekly) >> **Monitor** (proof of concept) >> **Audit by exception**

(i.e. implement effective detective controls)

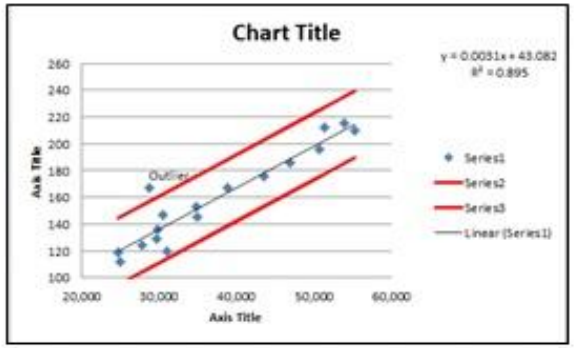
January



February



March



What the World-Class Auditors Are Doing… Its at Your Fingertips

With embedded controls you can do the other half of the 1-2 punch

Configure >> Monitor >> Audit by exception

(i.e. implement effective preventative controls)

Allow the transaction, to go "thru" the system, but "log it" in an audit log … for later review. → Go

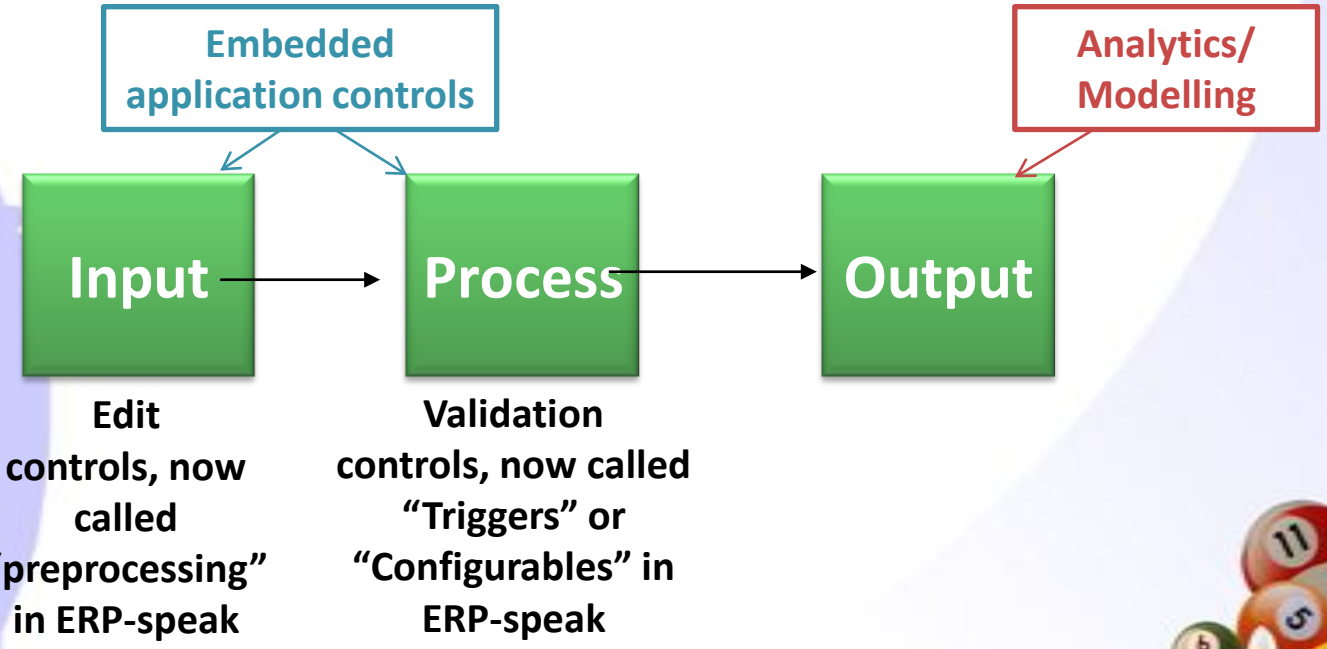
Suspend the transaction … **don't process it … but don't reject it … send a real-time threshold alert** → Yield

This is the big kahuna: **STOP THE TRANSACTION … IN REAL-TIME!** → Stop

What the World-Class Auditors Are Doing… Its at Your Fingertips

Embedded Process Level Controls

Looking at the basic I-P-O model you see the placement of these event/transaction-level controls, EMBEDDED in the processes.



What the World-Class Auditors Are Doing… Its at Your Fingertips

How Enterprise Resource Planning (ERP) Systems Disappoint

This is really going to frustrate you!

Are you aware that all applications (SAP, Oracle, PeopleSoft, even Cobol) have the capabilities for embedded process-level controls.

- **SAP: Pre-processing Controls /Configurable Controls**
- **Oracle: Triggers**
- **PeopleSoft: Triggers**

Yet, and here comes the bad news, these controls are rarely invoked.

A well-known Oracle installer said,
"In 1,000 installs, I have been asked one time to turn on some triggers."

What the World-Class Auditors Are Doing… Its at Your Fingertips

Embedded controls are the ULTIMATE controls – they are:

- **Automated (they never sleep),**
- **Preventative (not after the fact),**
- **Real-time (at point of entry)**
- **Virtual (computerized, no human error)**
- **Tests of the operating effectiveness of controls**

With the 1-2 punch implemented,

you have achieved the pinnacle of an efficient audit.

Not only does audit benefit from true CCM,

but management benefits from real-time business intelligence.

What the World-Class Auditors Are Doing… Its at Your Fingertips

The 1-2 Punch Necessary for True CCM

EMBEDDED CONTROLS:
Monitoring Controls in Applications via Embedded Triggers: We can configure and monitor the business rules and gain "Proximity to Process" (can we configure and monitor it?)
($1)

ADVANCED ANALYTICS:
Monitoring Business Transactions and Events via Advanced Analytics: We can model business rules and gain "Predictability to Process" (can we model it?)
(5¢)

Making the $1 test Faster and Better: IT Auditor Needed Here

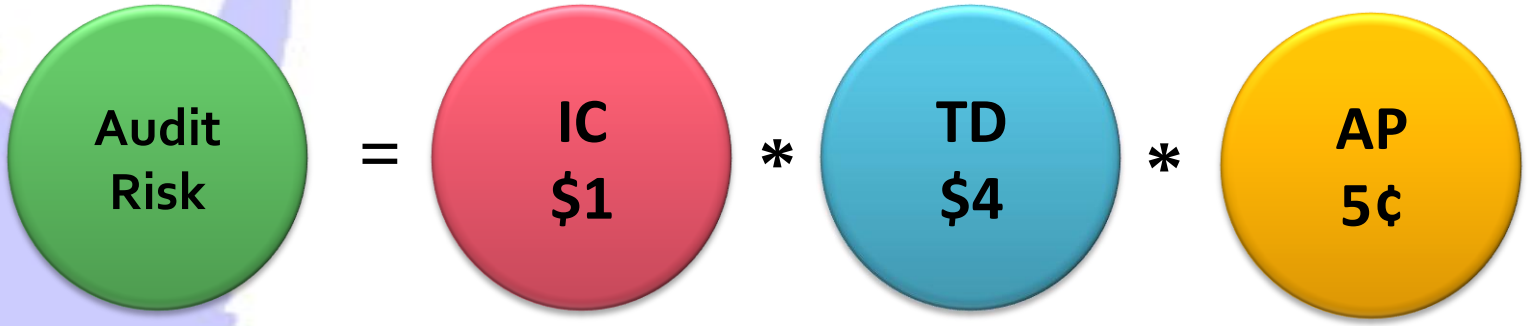
Making the 5¢ test Faster and Better: Business Auditor Needed Here

What the World-Class Auditors Are Doing… Its at Your Fingertips

If it can be quantified, it can be measured,
If it can measured, it can be modeled, and
If it can be modeled, it can be monitored, thus
If it can be monitored, it can be audited in REAL-TIME/RUN-TIME, remotely, by exception!

The goal is to monitor the monitors who monitor the monitors!

You Can Audit Smarter



Start every audit with the Audit Risk Model!

And ask yourself "Am I Getting the Most out of Analytics?

Am I:

- **Doing the 5¢ test?**
- **Using the 5¢ test to full capacity?**
- **Quantifying reliance on each type of evidence?**
- **Performing data-driven risk assessment?**

You Can Audit Smarter!

And… can I take it to the next level?

The 1-2 Punch Necessary for True CCM

EMBEDDED CONTROLS:
Monitoring Controls in Applications via Embedded Triggers: We can configure and monitor the business rules and gain "Proximity to Process" (can we configure and monitor it?)
($1)

ADVANCED ANALYTICS:
Monitoring Business Transactions and Events via Advanced Analytics: We can model business rules and gain "Predictability to Process" (can we model it?)
(5¢)

Making the $1 test Faster and Better: IT Auditor Needed Here

Making the 5¢ test Faster and Better: Business Auditor Needed Here

It doesn’t matter how many resources you have.

If you don’t know how to use them,
it will never be enough.

amanda@auditsmarter.com.au
+61 414 407 448

AUDITsmarter

NOT HARDER