

Moving up the Audit Technology Curve - *next steps for leading IA departments*

Mark Thompson (Australia)
Sales Manager Wolters Kluwer TeamMate



Mark Thompson- Sales Manager TeamMate

- 5 years with TeamMate Audit Management System
- 8 Years of audit and risk technology experience
- 20 Years with running my own business in IT within Australia
- Responsible for TeamMate's Sales Business in the Oceanic Region including Australia and New Zealand.



Polling Devices

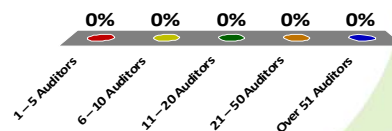
- Everyone should have a polling device
- Your responses are anonymous – only group statistics are captured
- Polling results have been posted on www.teammatesolutions.com
- Please leave them in the room after the session



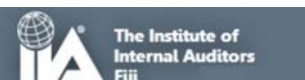
Sample Poll

What is the size of your audit department?

- A. 1 – 5 Auditors
- B. 6 – 10 Auditors
- C. 11 – 20 Auditors
- D. 21 – 50 Auditors
- E. Over 51 Auditors

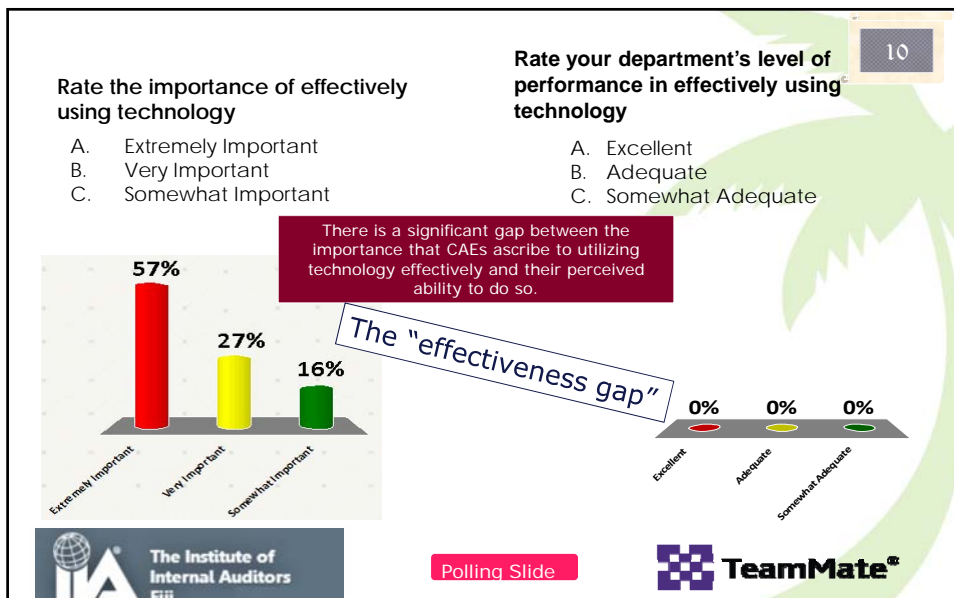
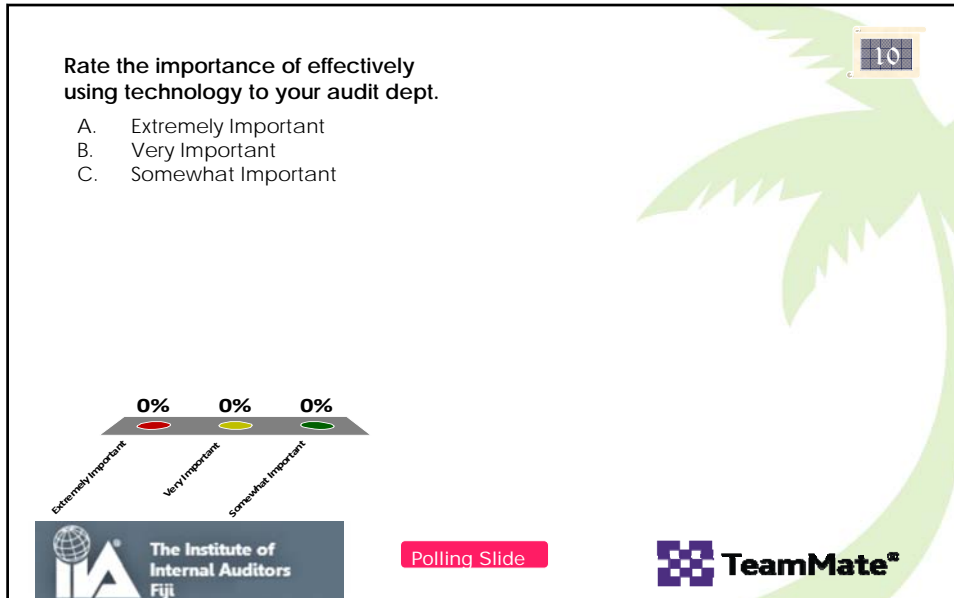


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Polling Slide



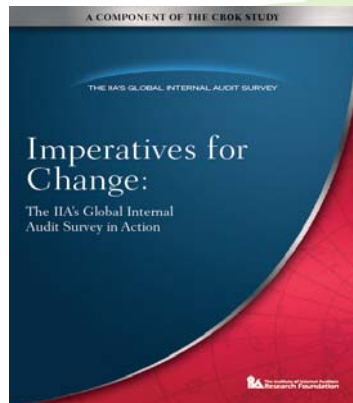


The Effectiveness Gap

Imperatives for Change:

The IIA's Global Internal Audit Survey in Action (Report V)

- Identified 10 forward-looking imperatives, including Technology
- Stepping up the use of audit technology cuts across multiple imperatives



There is more to it than the technology



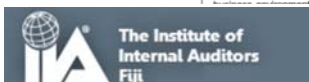
USING TECHNOLOGY TO SUPPORT INTERNAL AUDIT'S STRATEGIC MISSION

A Strategic Enabler

Internal audit technology is not an end in itself, yet internal audit functions often view technology as a "silver bullet" capable of producing substantial benefits simply by being implemented. However, even the best internal audit technologies are essentially enablers, tools that help internal audit functions achieve their mission. Today, as organizations struggle to enhance profitability in a difficult internal audit

Internal audit technology is not an end in itself, yet internal audit functions often view technology as a "silver bullet" capable of producing substantial benefits simply by being implemented.

Mike Gowell *Internal Auditor* 2001



Closing the effectiveness gap

- aka *Moving up the Technology Maturity Curve*

TeamMate is uniquely positioned to study the gap – we:

- have a consulting group that has deployed audit technology to over 2,000 organizations
- have access to 90,000 auditors using technology
- have a research and development group that spends 10,000 hours a month developing audit technology solutions
- host 4 annual technology conferences that are attended by over 1,000 auditors yearly
- have formally surveyed over 11,000 auditors on technology best practices



Enhancing Audit Technology Effectiveness
Key Insights from TeamMate's 2011 Global Technology Survey

AUDIT TECHNOLOGY INSIGHTS
Conversations with Audit Leaders

SPECIAL REPORT

DEVELOPING EFFECTIVE INTERNAL AUDITING TECHNOLOGY STRATEGY
SEPTEMBER 2012

Enhancing Key Insights from

Survey Data Refl Provides Insights

"Data mining, despite its widespread use, is a relatively new practice for many organizations."

Chart 1: Future Use of Technology

Research Studies Available

AUDIT TECHNOLOGY INSIGHTS
Leveraging Technology Effectively: A Critical Imperative for Small Audit Shops

2013

Increasing Technology Value

How to Increase Technology Value

A 5-Step Strategic Framework from TeamMate

Data from TeamMate's 2011 Internal Audit Technology Survey (IATS) suggests that internal auditors have ample room for improvement when it comes to making effective use of technology. According to self-assessments by survey participants, 70% of respondents rate their performance as "adequate, marginal or adequate" while only 24% rate themselves as above average or exceptional. The key success factor: Good business practices applied to the use of technology. Although the survey focuses on technology, it is clear that non-technology factors do much to drive higher levels of performance.

An analysis of survey results points to a strong link between five key internal audit practices and utilizing technology more effectively. These correlations suggest the following 5-step plan for boosting technology value:

1. Convey the right "Tone at the Top"
2. Place a high priority on leveraging technology to boost performance
3. Hire technology skills selectively
4. Train, train, train
5. Measure what really matters

Step 1: Convey the Right "Tone at the Top"

What single factor does the most to enhance technology effectiveness? According to input from 2011 TeamMate IATS respondents, the clear answer is Chief Audit Executive (CAE) leadership, which provides a strong foundation for Steps 2-5 and without which the strategic framework cannot exist.

Having the right "Tone at the Top" of the internal audit function, reflected by strong leadership and support from the chief audit executive, was cited by a number of survey participants as the key factor in improving technology value at their organizations. Through effective leadership, survey respondents suggest, CAEs can set the right tone and focus for the internal audit function.


Survey focus:


"How internal audit can more effectively leverage technology"

Identifies Five Key Success Factors

- Nearly 2,000 responses from internal auditors around the world
- Respondents described key factors that helped them increase their effective use of technology

Survey followed up by series of interviews with CAEs on topic of technology effectiveness





AUDIT TECHNOLOGY INSIGHTS

Conversations with Audit Leaders

Accident Fund Holdings 4

Small but Agile Team Talk as 6-Step Approach to Maximizing Technology Value

- ▶ Know Your Data
- ▶ Apply Technology to Every Audit
- ▶ Partner with IT
- ▶ Hire the Right People

Alliance Data 6

- ▶ Break the Data Extraction Paradigm
- ▶ Shorten Audit Cycles
- ▶ Use Continuous Auditing to Spur Continuous Monitoring

Bally Technologies 8

- ▶ Leverage the Power of ACL
- ▶ Develop IBM Technology Initiatives

Capline 10

- ▶ Want to Add Value? Ask Good Questions, Promote Data Analytics
- ▶ Automate to Cut Controls
- ▶ Leverage Continuous Monitoring to Reduce Sampling
- ▶ To Build a Great IA Team, Strike for Balance, Hire "Strategically"
- ▶ Sharpen Focus on Training

Genworth Financial 12

- ▶ Develop Solid Technology Strategy
- ▶ Partner with IT to Create Value
- ▶ Communicate Effectively to Strengthen Performance

Georgia Institute of Technology 14

- ▶ Mandate Use of Technology
- ▶ Adopt Comprehensive Rolling Audit
- ▶ Encourage Business-Unit Ownership of Controls & Monitoring
- ▶ Develop "Integrated Auditors" to Encourage IT Self-Reliance

HCA (Hospital Corporation of America) 16

- ▶ Creating Uncompromising Value for Business Units
- ▶ Continuous Monitoring: Seek Meeting of the Minds with Business Leaders
- ▶ Attracting IT Talent: Think Small & Opportunities to Add Value
- ▶ Partner with Business & IT to Access Data

The Home Depot 18

- ▶ Apply Data Analytics to Strengthen Business Processes
- ▶ Align Effectively with Stakeholder Needs

Jim Kaplan, AuditNet—Technology Insights & Observations 20

Kellogg Company 22

Maximize Efficiency through Risk-Based Auditing

Lifeway Christian Resources 24

- ▶ Leverage Integrated Automated Management System
- ▶ Strengthen Technology Tools & Skills Sets to Address Key Stakeholder Priorities

MGM Resorts 26

- ▶ Set the Right Tone at the Top to Leverage Technology Benefits
- ▶ Create Value by Developing Data Analytics Tools for Management

Microsoft 28

Using Technology-Enabled Continuous Auditing to Drive Greater Efficiency

Sala 30

3-Person Staff Leverages Technology to Cover Broad Audit Universe

- ▶ Assessing Tech-Related Risk
- ▶ Company-wide Imaging & Scanning Facilitates Effective Data Management

United Airlines 32

- ▶ Drive Change & Adoption with Technology Champions
- ▶ Target Risk Factors with Audit Analytics & Risk-Factors Database
- ▶ Look "Outside the Box" for Potential Software Solutions

University of Texas at San Antonio 34

- ▶ Develop Heat Map to Convey Risk Profile to Top Management
- ▶ Tapping ACL's Risk Dictionary to Create Construction-Related Audit Plan

Western Union 36

Taking a 5-Step Approach to Leveraging Power of Data Analytics

- ▶ Step 1: View Technology as Strategic Enabler
- ▶ Step 2: Create a Dedicated Data Analytics Team
- ▶ Step 3: Strive to Include Data Analytics in Every Audit
- ▶ Step 4: Test Entire Data Populations, Not Samples Alone
- ▶ Step 5: Use Flow Charting to Enhance Business Knowledge

Consolidation Pressures Drive Data Center Virtualization at IRS .. 38

Information-Sharing: Alive & Well in Government 39






With respect to the technology tone at the top! 10

Chief Audit Executive (CAE) which best describes your department?


- A. The CAE strongly supports audit technology
- B. The CAE supports technology as needed
- C. Audit technology is not a priority item

0% 0% 0%

The CAE strongly support... The CAE supports techno... Audit technology is not a...



Polling Slide



TeamMate Technology Survey

Key Success Factors


a 5-STEP Strategic framework

1. Convey the right "Tone at the Top"


Single biggest factor for enhancing technology effectiveness is strong support from the CAE

"One of my first priorities when joining MGM Resorts in 2003 was to increase technology support for Internal Audit"

Robert Rudloff,
Vice President
Internal Audit
MGM Resorts



Another Key Factor:
Openness to Change



1. "Tone at the Top"

- CAE leadership can provide clarity about the benefits being sought from technology
- The CAE, using clear communications, can help members of the internal audit staff understand the anticipated benefits from technology, starting with more efficient audits
- Conducting more efficient audits:
 - Most sought-after benefit of technology, by far
 - Our top benefit, say 64% of survey respondents

#2 Improve issue tracking
 #3 Improve the quality and consistency of audits
 #4 Improve risk assessment processes



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FIIII



TeamMate®

1. "Tone at the Top"

- Effective CAE leadership is essential for internal audit to have a good relationship with management
- IA needs management support to

Inadequate budgets:

Second most frequently cited barrier to achieving greater success with technology, according to TeamMate survey respondents

IA needs effective leadership to address this potential barrier



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1. "Tone at the Top"

Targeting Cost Concerns

Recent cost-containment pressures can make it difficult for internal audit functions to get the financial backing they need to make significant investments in technology

- Stress Cost-Benefits
 - Need to demonstrate perceived benefits
 - Can help you develop your strategy and priorities
- Gain Stakeholder Support
 - How can technology be used to help stakeholders?

Might be the most important factor



1. "Tone at the Top" Gaining Stakeholder Support:

- Figure out how technology could help the CFO
 - Improve the audit-issues process
 - Automate follow-up process, Reduce time cycle for closure of issues
- Continuous monitoring of regulatory or compliance issues will help manage regulatory risk
- Improve timeliness of reporting to key stakeholders, including audit committees
- More audits with more in-depth coverage
- Reduce internal audit's footprint on the business with effective use of data analytics
- Leveraging historical information
 - An audit-management system can serve as an effective knowledge repository
 - Can help mitigate one of the most critical risks to smaller audit shops; loss of skills and knowledge due to unplanned turnover



2. Prioritize Technology Use

Make technology use a high priority or even compulsory

It is imperative that the audit staff both understand and use the technology tools on every audit

Technology use needs to be an expectation as opposed to a "nice to use."

"We expect every member of our team to apply technology to every audit. At the end of each audit, staff are required to demonstrate how they leveraged technology, and if they failed to do so, then they need to explain why."

Michael Sekoni
VP & General Auditor
Accident Fund Holdings

"We strive to use data analytics in every audit"

Tara Rexroth,
Internal Audit Director
Western Union



3. Hire Technology Skills Selectively

Inability to dedicate sufficient staff to technology activities and the lack of technology skills the most cited barrier to leveraging technology

To address these obstacles:

- a.) hire outside talent with strong technology skills to jump start major technology initiatives
- b.) establish a technology "champion" within your department

TeamMate Observation:

The ability to hire people with significant technology skills is challenging in today's operating environment:

- > Technology talent is likely to remain in short supply
- > Adequate budgets can be difficult to obtain

"My top goal is to find people with deeper, more intense data analysis experience that we can leverage"

Kimberly Phegley,
Internal Audit Director
Lifeway Christian Resources



Which best describes your Technology Champion



- A. We really don't have a technology champion
- B. We have an informal or self appointed technology champion
- C. We have a dedicated technology champion but do not allocate budget hours to this person
- D. We have a dedicated technology champion with a dedicated budget for champion duties

0%	0%	0%	0%
We really don't have a ...	We have an informal or se...	We have a dedicated te...	We have a dedicated te...




4. Train, train, train ...



Training does more than any other practice to help utilize technology more effectively.

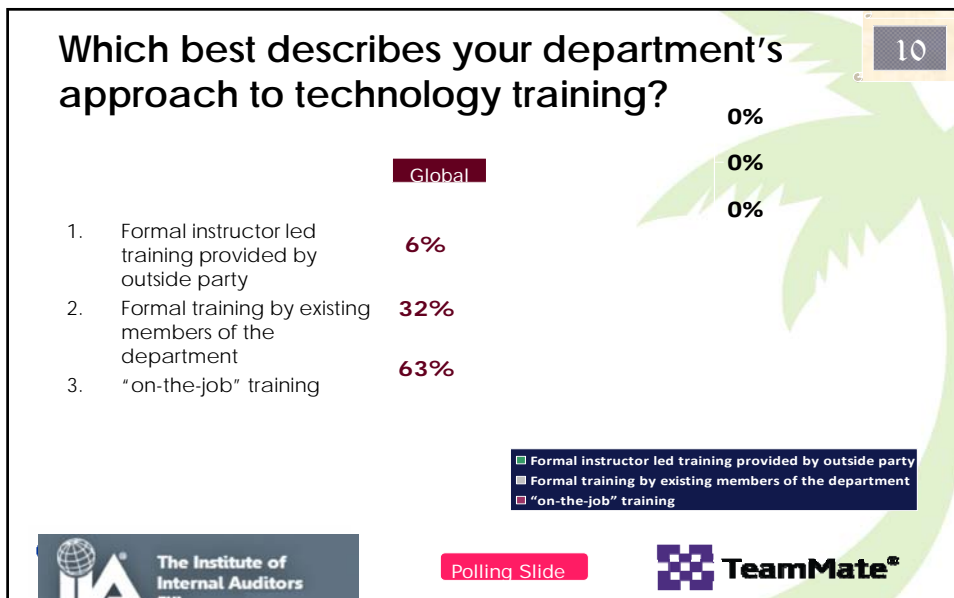
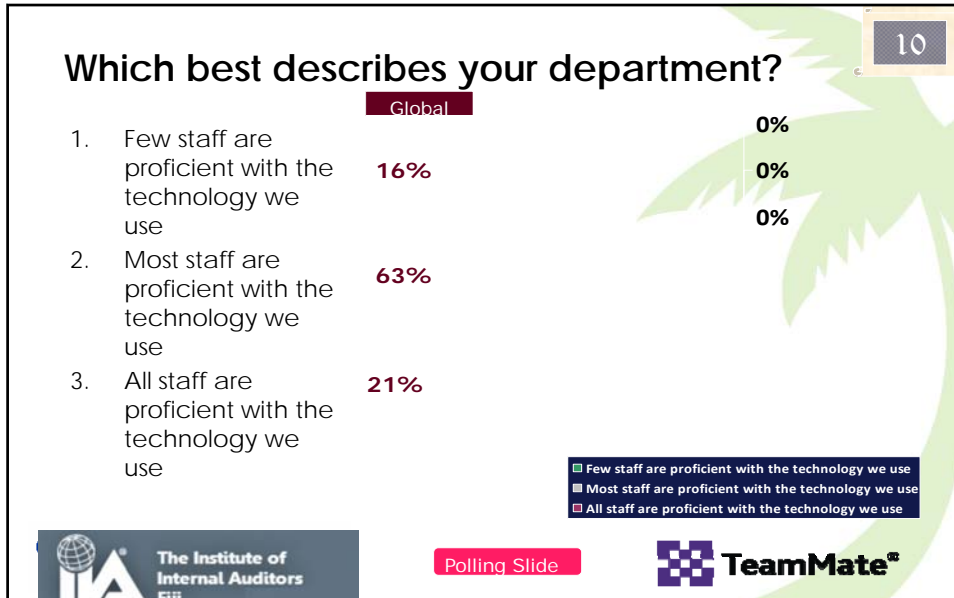
- Keep in mind
 - technical skills fade quickly if they are not used
 - New versions of software often require update

In addition to training conducted within the corporation, I allocate about \$5,000 per staff member for outside technology and business training – and that's over and above the cost of travel and lodging.

I also budget \$7,500 per manager and \$10,000 per director for training.

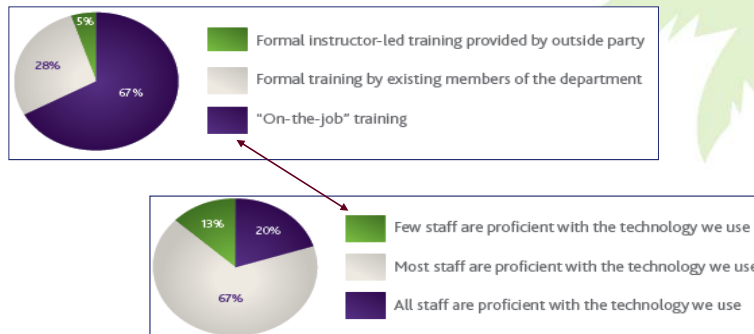
Kevin McMahon,
Senior Vice President & Chief Compliance Officer
Calpine



4. Train, train, train ...

The evidence demonstrates a strong correlation



5. Measure what Matters

Measure what really matters because what gets measured gets done

Performance Measures Take on New Importance

Some internal audit groups have implemented performance measures to assess the nature and extent of their technology utilization.

A solid program of performance measures may be the "missing link" to enhance technology effectiveness.

survey responses:

76% rate their own performance measures as "inadequate, marginal or adequate"

80% lack performance measures to know how effectively they are leveraging technology

73% do not track or measure the extent to which they utilize technology to perform audits

Metrics can include:

- Length of Audits – pre and post technology
- Days to issue report
- Timeliness of issue follow-up
- Time to prepare audit committee reports
- Timeliness of audit file reviews
- QAR results



How to Increase Technology Value A 5-Step Strategic Framework from TeamMate



Data from TeamMate's 2011 Internal Audit Technology Survey (ATS) suggests that internal auditors have ample room for improvement when it comes to making effective use of technology. According to self-assessments by survey participants, 76% of respondents rate their performance as "inadequate, marginal or adequate" while only 24% rate themselves as above average or exceptional. The key success factor: Good business practices applied to the use of technology. Although the survey focuses on technology, it is clear that non-technology factors do much to drive higher levels of performance.

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Step 1: Convey the Right "Tone at the Top"
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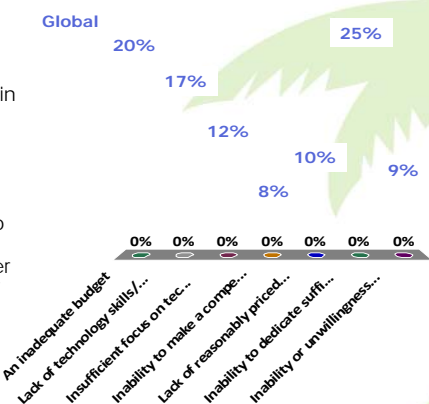
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Our chief barrier to making more effective use of technology is:

1. An in-adequate budget
2. Lack of technology skills/training
3. Insufficient focus on technology within the department
4. Inability to make a compelling cost/benefit justification
5. Lack of reasonably priced, effective technology tools in the market
6. Inability to dedicate sufficient staff to technology related activities
7. Inability or unwillingness to reengineer cost internal audit processes in order to leverage technology effectively

Global

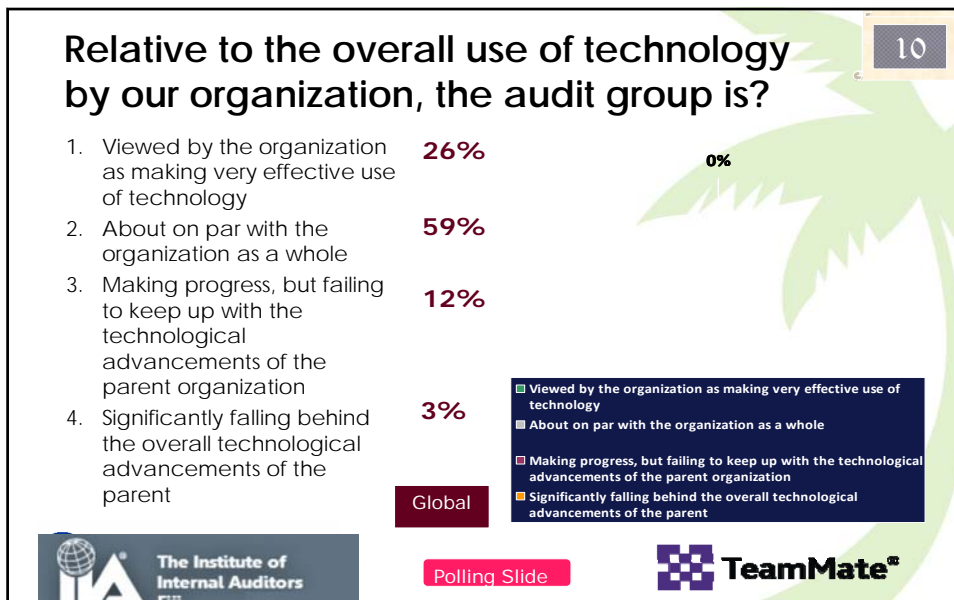


Barrier	Percentage
An in-adequate budget	25%
Lack of technology skills/training	20%
Insufficient focus on technology within the department	17%
Inability to make a compelling cost/benefit justification	12%
Lack of reasonably priced, effective technology tools in the market	10%
Inability to dedicate sufficient staff to technology related activities	9%
Inability or unwillingness to reengineer cost internal audit processes in order to leverage technology effectively	0%

15

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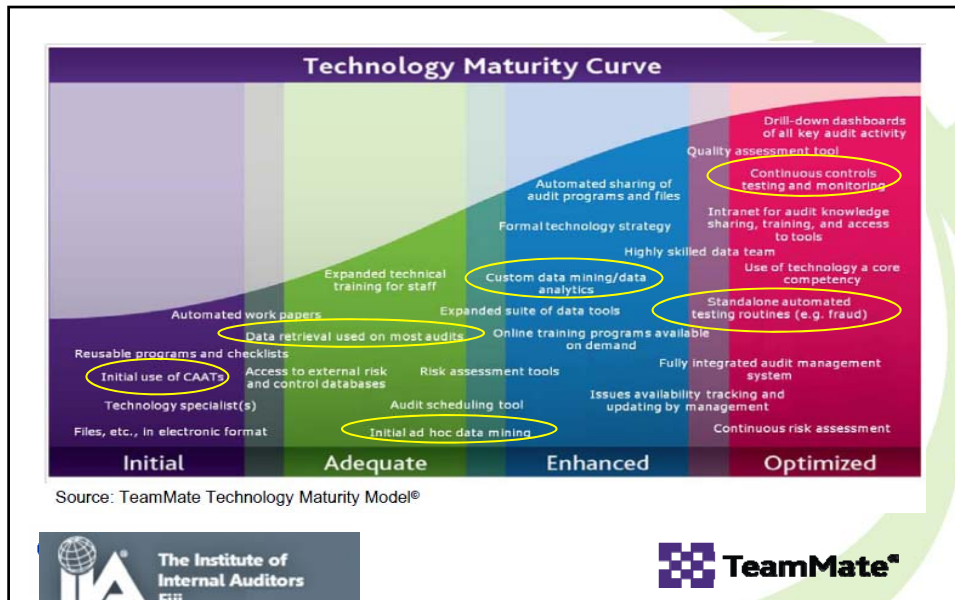
Audit Executive Center - Special Report

Developing an Effective IA Technology Strategy

DEVELOPING AN EFFECTIVE INTERNAL AUDIT TECHNOLOGY STRATEGY
SEPTEMBER 2012
AUDIT EXECUTIVE CENTER

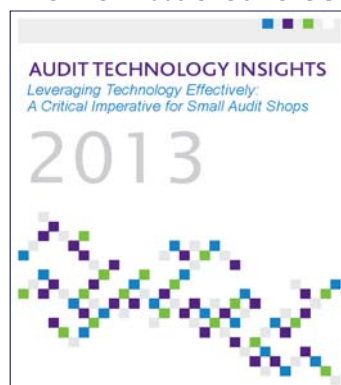
- Technology Maturity Model
- Key Success Factors for improving the use of Technology
- The importance of a technology "strategy"

The Institute of Internal Auditors
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Moving up the Curve – *New Lessons*

Two new studies released in 2013



- Surveys of small audit shops.
- Roundtable discussions and interviews with 30+ internal audit groups
- Results relevant to all audit shops
- Reinforce POV that using technology effectively is a must, not an option or luxury



Next Generation Auditing?

- Smart planning systems
- Social networking applied to auditing
- Extended audit teams
- Mobile device audit functionality
- Data analytics in the Cloud
- Elimination of the audit report (as we know it)



Where is technology usage expected to increase the most in the next two years?

Chart 1: Future Use of Technology

Over the next two years, we expect our use of each of the following tools to increase:	Rank
Data Analytics (e.g., ACL, IDEA)	1
Risk Assessment	2
Automated Issues Tracking, Follow-Up & Reporting	3
Audit & Resource Scheduling / Continuous Controls Monitoring	4 (tie)

"Data mining despite its widespread use, is a relatively new practice for many organizations."

- Risk Assessment was #1 and Data Analytics was #2 last year



Definition of Data Analytics

Oxford Dictionary – “It is the analysis of data as a process of inspecting, cleaning, transforming, and modelling data with the goal of discovering useful information, suggesting conclusions, and supporting decision making.

Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domains.

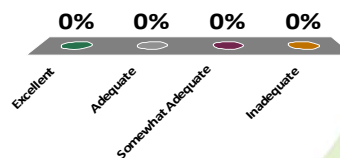
Data mining is a particular data analysis technique that focuses on modelling and knowledge discovery.”



Rate your department's level of performance in effectively using data analytics

- A. Excellent
- B. Adequate
- C. Somewhat Adequate
- D. Inadequate

10



Polling Slide



Moving up the Curve – *New Lessons*

Two new studies released in 2014

Enhancing Audit Technology Effectiveness
 Key Insights from TeamMate's 2012 Global Technology Survey

Survey Data Reflects Broad Global Use of Data Mining, Provides Insights to Move Up Technology Maturity Curve

The 2012 TeamMate Internal Audit Technology Survey (IATS) confirms that data mining and data analytics are top of mind considerations for internal auditors around the world. At the same time, however, survey results indicate that data mining, despite its widespread use, is a relatively new practice for many organizations.

"Data mining, despite its widespread use, is a relatively new practice for many organizations." When asked which technology tools they expect to use to a greater extent over the next two years, the 2012 survey respondents ranked data analytics as their #1 priority. Risk assessment tools, ranked #2 in the 2012 TeamMate global technology survey, moved to second place in 2013, followed by issue tracking tools, which were ranked #3 in 2013, although risk assessment tools dropped a notch in the rankings. There is obviously a strong and growing connection between data mining and risk assessment applications.

Over the next two years, we expect that use of each of the following tools to increase:

Chart 1: Anticipated Use	Rank
Data Analytics (e.g., ACL, IDEA)	1
Risk Assessment	2
Automated Issue Tracking, Follow-Up & Reporting	3
Audit & Business Scheduling / Continuous Controls Monitoring	4 (2012)

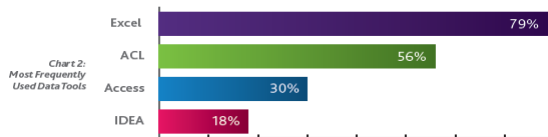
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AUDIT TECHNOLOGY INSIGHTS
 Leveraging Technology Effectively:
 A Critical Imperative for Small Audit Shops

2013



Data Analytics – tool usage



"The widespread use of Excel suggests that significant value from data analytics can be realized without having to acquire highly specialized data tools."

- 2014 Survey respondents are leveraging built-in data and reporting capabilities using a variety of differing products – Excel is the heaviest tool being used currently



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2011

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Over the next few years, we expect our use of each of the following tools to increase

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Resources Available
www.teammatesolutions.com

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Thank you for your participation

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