

IIA Chicago Annual Seminar

Modernizing your internal audit with artificial intelligence



The Institute of
Internal Auditors

Chicago

Dave Mahoney

March 18, 2024

IIA Chicago Annual Seminar

Speaker Bio



Dave Mahoney

Director, Risk Consulting - Artificial Intelligence Risk Leader

CISSP



The Institute of
Internal Auditors
Chicago

Learning Objectives

- Learn strategies for helping your team become more innovative
- Hear examples of truly innovative solutions and ways of thinking that other internal audit departments are embracing
- Share tips and tricks on how to change perceptions
- Walk away with an action plan to increase the innovation in your department



Agenda

1. Background
2. “Where” are Internal Audit departments embracing innovation?
3. “How” are they making it happen?
4. “Why” is managing stakeholder perceptions important
5. “When” should you start marketing your innovations and “What” should you message?
6. Wrap-up



Polling Question 1

How would you describe the innovation in your department?

- Unoriginal
- Some creative concepts in place
- Regularly innovative
- Setting the bar for the profession



Polling Question 2

How would your stakeholders describe the innovation in your department?

- Unoriginal
- Some creative concepts in place
- Regularly innovative
- Setting the bar for the profession





Background

Professional Demand



From the Institute of Internal Auditors:

“If internal auditors are to remain relevant and add real value to their organizations, their speed, flexibility, and proactive approach to problem solving must be optimized.”

Audit committee demand

Our clients are increasingly telling us that their audit committees are asking for, if not demanding, increased use of technology and innovations like artificial intelligence

If your audit committee is not asking today, how long do you have?



Audit Innovation Philosophy

Innovation, if implemented effectively, **drives down the cost** of compliance and supports the narrative that audit can be more than just a cost center.

Done well, innovation can also make your audit and risk management functions more effective by **examining full populations** (instead of samples) and identifying potential issues in **near real-time**.

We want to add value through **rationalizing compliance** activities, **optimizing business processes** and **delivering impactful and effective information** to key stakeholders throughout the business.

Innovative audit departments often have happier and more productive team members, thereby decreasing retention risk



Bring your context to an LLM



Process	Cost	Data	Effort	Cost	Complexities	Time to market	Skillset Required
Create a new model and train it using your company's data	Tens of millions	Trillions of tokens	Extremely High	Extremely High	Tailoring, high costs, many experts, data gathering, algorithms, tech setup.	Months to Years	Expert in ML, Data Engineering
Take a pre-trained model and fine-tune it using your company's data.	millions	Millions of tokens	Very High	Very High	Re-add safety, align data, add functions.	Weeks to Months	ML expertise, Data alignment
Take a pre-trained model and fine-tune for a specific format or task.	Tens of thousands	100k's of tokens	Moderate	High	Ensure model-system fit, correct output, no new data.	Weeks	ML & Software Development
Combine a LLM with a retrieval system.	Tens of thousands	Depends on your data	Moderate	Low	Keep data consistent across systems.	Weeks to Months	Data Engineering, Some ML
Craft specific prompts or input structures to guide the model's output	Cents	Length context	Extremely low	Low	Outputs may not always meet expectations.	Days to Weeks	Basic Coding, NLP Understanding

Where?



Across the audit lifecycle



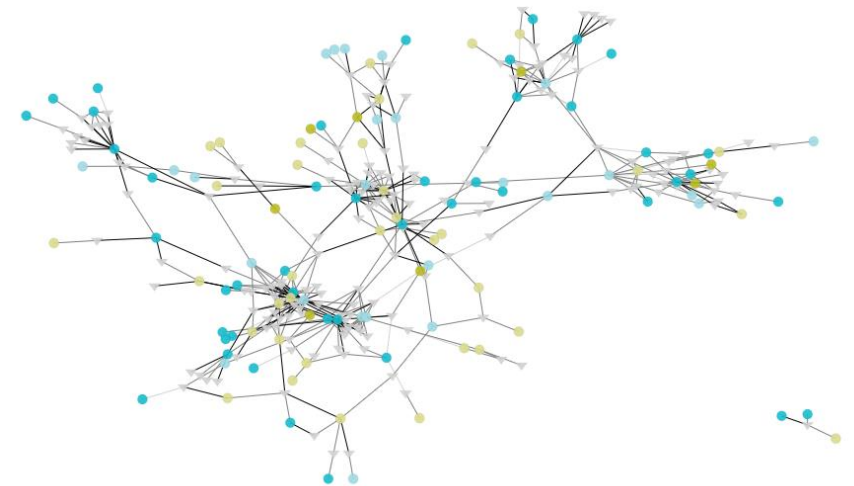
Example 1: Identifying risk & control gaps

Risk Assessment
& Audit Planning

Citation Mapping: Embedding models to map all the citations of regulation and the controls to:

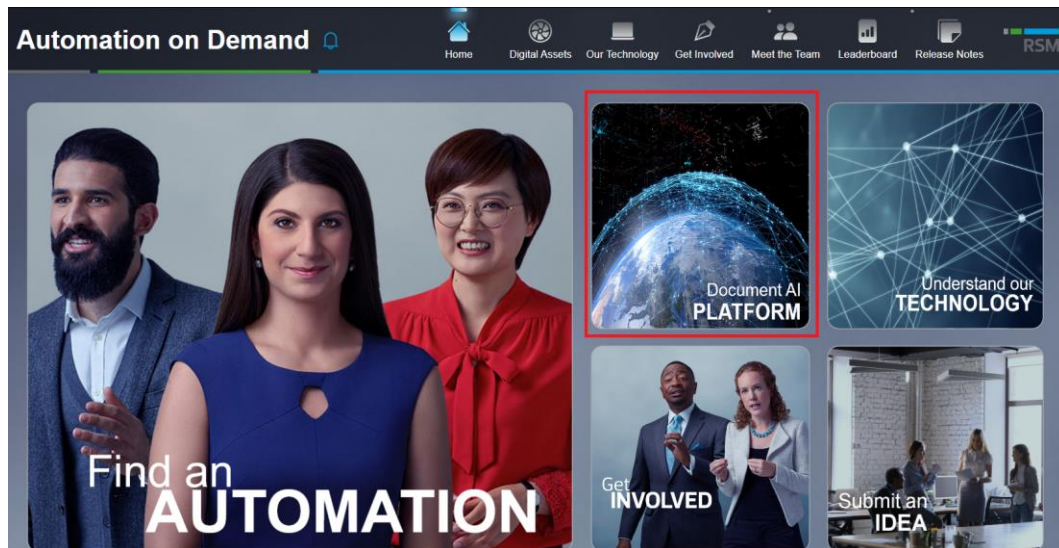
- Visualize how controls align with a given reg
- ID parts of a reg not covered by a control
- Spot controls that don't align to a reg (orphans)
- Detect potential duplication of controls

Ctrl Enhancement: Recommend improvements based on current reg to ctrl mappings.



Example 2: Streamlining loan analysis

Audit Scoping &
Fieldwork



- Automatically extract data from loan documents
- Verify compliance with credit policy guidelines
- Handle large volumes of PDFs with ease
- Results automatically distributed via email

Example 3: Enhanced GRC reporting



Reporting

Facilitate valuable discussions:

- What are the most vulnerable process areas?
- What areas have the most turnover or dependency on an individual?
- Which controls are the most costly?

Example 4: Autonomous monitoring

For control failures identified through or able to be monitored via automation:

The nightly job identifies all “resolved” control failures in the GRC system

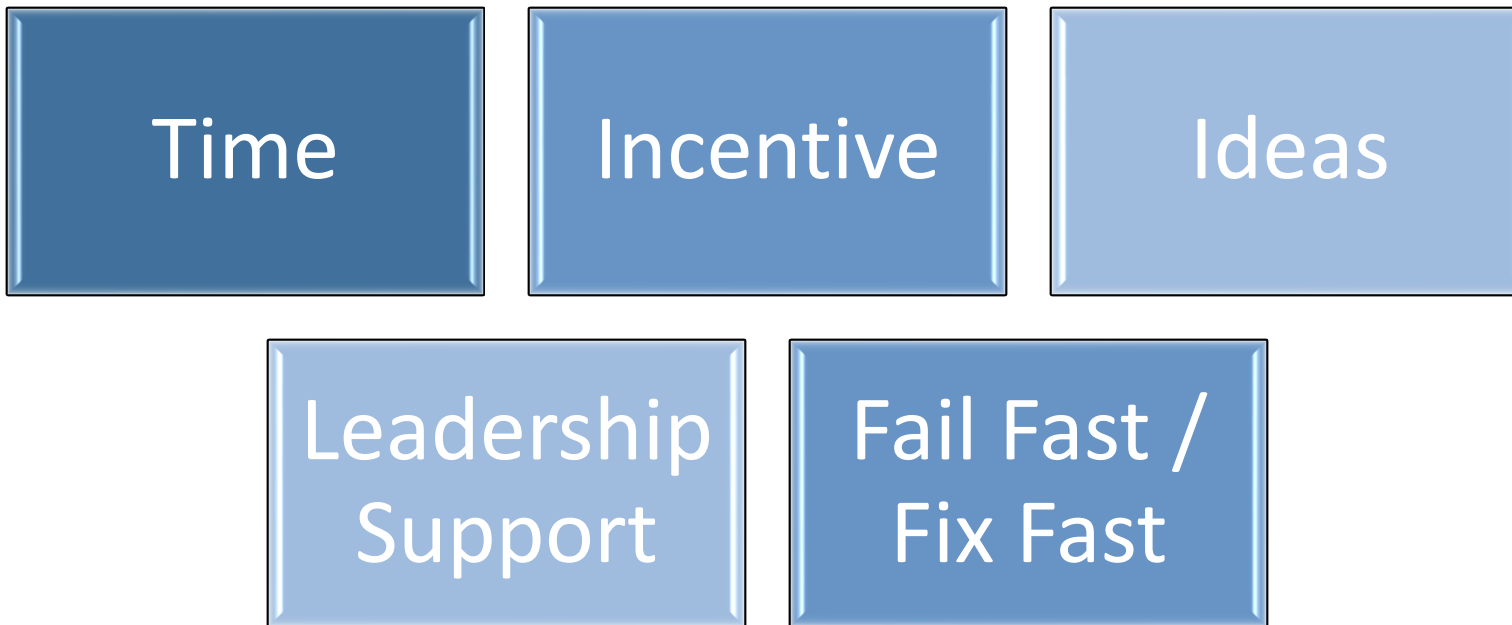
Automated:

- Email sent to the user who closed the issue if analytic/automation still IDs the problem
- Re-opening of issue in the GRC system

How?



Creating a culture of innovation in IA



How IA departments manage these blocks



Time

Quarterly innovation day (typically individual time)

Periodic innovation challenge (typically group time)

“For one audit this year, don’t worry about the budget hours...do it right (within reason)”

How IA departments manage these blocks

Incentive

Ensure the removal or management of potential dis-incentives (e.g., time, judgment, feeling unqualified)

Recognize that some team members have inherent incentives because they naturally think innovatively, whereas others may need alternate incentives (e.g., gamification, recognition, tie-in to career path)

Foster an environment of open communication

How IA departments manage these blocks



Ideas

Shared list of ideas/concepts gathered from conferences and professional publications

Separate the recognition of ideas from the execution of those ideas

Provide creativity training

How IA departments manage these blocks

Leadership
Support

Regular communications and discussions re: innovation (you don't value what you don't measure)

Open door to barrier removal

Active leadership participation in brainstorming/training

Newsletter/intranet site touting success

How IA departments manage these blocks

Fail Fast / Fix
Fast

T-shirt seen in the Newark airport: “I don’t fail; I either win or I learn.”

Concept of failing fast to learn fast

Minimum Viable Product (MVP) thinking



Polling Question 3

Which building blocks do you find the hardest to manage with your team?

- Time
- Incentive
- Ideas
- Leadership support
- Fail Fast / Fix Fast



Why?



Consulting saying: Perception is reality

ChatGPT Interpretation:

The illustration vividly portrays the consulting principle "perception is reality" through a scenario where a consultant and a client view the same graph differently due to a semi-transparent screen between them.

This visual metaphor *underscores the critical impact of individual perceptions, illustrating how the same information can be interpreted in vastly different ways and emphasizing the importance of aligning these perceptions for successful outcomes.*



Harsh Reality – Stakeholder Perception

Budget \$

Attention from Sr.
leadership

Access to key
people & resources

Ability to attract
and retain talent

Internal (and
sometimes
external) career
paths

Credibility



When?
What?



The now is easy: There's no time like the present!

Consider this:

If marketing your innovations makes you queasy because you don't know what to share, what does that tell you about your program?



“What” depends on audience and objectives: internal



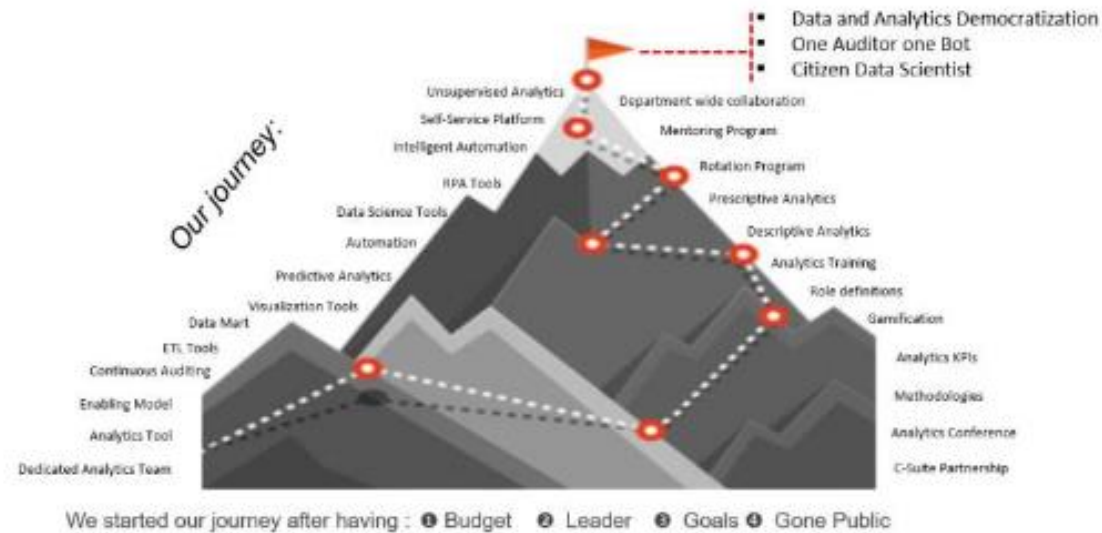
The what depends on audience and objectives: external



Manuel (He/Him) • 1st
Audit Analytics
4yr •



There are many ways to climb to the top of the mountain. Our analytics journey has been a fun climb with obstacles along the way. The team keeps an eye on the compass and everyone is willing to make small ac ...see more



Polling Question 4

How do you market your team's innovations?





Wrapping Up

Call to action:

Before the end of the week, document:

What do you see as your largest barriers to innovation?

- What 1 thing can you do this month to reduce the size of that barrier?
- What 1 thing can you do next quarter to reduce or eliminate the next barrier?

Where do you see your biggest opportunities for innovation across the audit process?

- What 1 is the most achievable/realistic pilot in the next six months—get started
- What 1-3 could have the biggest impact in the next two years—start getting buy-in.

Questions?

Dave.mahoney@rsmus.com