Internal Audit in 2021 and Beyond

A Profession in the State of Material Change

IIA Calgary Virtual Meeting
April 28th, 2021
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Partner, Enterprise Risk Services
National Leader – Internal Audit Services

Past Chair – IIA Canada Board

Past Roles:
VP Audit, Risk & Compliance – Berkshire Hathaway Energy, Canada
Global Director of Audit & Risk – General Mills Inc.

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1. Risk in 2030
2. The Future of Governance
3. Critical Skills Required in the Next Decade
4. Next Generation Internal Audit
5. Internal Audit Hot Topics 2020-2030
   • Continuous Risk Assessment and Scenario Planning
   • Integrated Assurance and Advisory
   • Risk Analytics
   • AI Continuous Monitoring
   • Agile Internal Audit (Change in IA Culture)
   • Virtual Auditing, Meetings, and Networking
   • Hyper & Continuous Learning
   • Data Governance, Monitoring & Security
   • Environment, Social, and Governance
   • Third Party Risk Management
   • A Degree in Internal Audit
6. The Future of IIA Canada
The Evolution of Internal Audit up to 2021

**Regulation**
- SEC Increases FCPA Enforcement: 1995 onwards
- Dodd Frank Act: 2010
- GDPR & Privacy Policy: 2018

**Data Analytics**
- Internet Launched: Late 1980's
- Y2K & Dot Com Crash: 1999
- Data Analytics & Continuous Monitoring: 2004 onwards
- Visual Analytics, Cloud & IA: 2010 onwards
- iPhone Launched & Cloud Boom: 2008
- Integration of AI, ML, RPA & IA: 2015 onwards
- Social Media Boom: 2008 onwards
- Financial Crash: 2008
- COVID19: 2020
- Applied Data & Robotics: 2015 onwards
- II A Three Lines of Defence: 2008-10 onwards
- SEC Increases FCPA Enforcement: 1995 onwards
- Integrated IA, ML, RPA & IA: 2015 onwards

**Digital Technology**
- Internet Launched: Late 1980's
- Y2K & Dot Com Crash: 1999
- IA Consulting Role: 1995 onwards
- IA Advisory Role: 2008 onwards
- Financial Crisis: 2008
- Dodd Frank Act: 2010
- iPhone Launched & Cloud Boom: 2008
- Integration of AI, ML, RPA & IA: 2015 onwards
- Integration of AI, ML, RPA & IA: 2015 onwards
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- COVID19: 2020
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**Thought Leadership**
- IA Consulting Role: 1995 onwards
- IA Advisory Role: 2008 onwards
- Financial Crisis: 2008
- Dodd Frank Act: 2010
- iPhone Launched & Cloud Boom: 2008
- Integration of AI, ML, RPA & IA: 2015 onwards
- Social Media Boom: 2008 onwards
- COVID19: 2020
- Integrated IA, ML, RPA & IA: 2015 onwards

**Economic & Political Events**
- Internet Launched: Late 1980's
- Y2K & Dot Com Crash: 1999
- IA Consulting Role: 1995 onwards
- IA Advisory Role: 2008 onwards
- Financial Crisis: 2008
- Dodd Frank Act: 2010
- iPhone Launched & Cloud Boom: 2008
- Integration of AI, ML, RPA & IA: 2015 onwards
- Social Media Boom: 2008 onwards
- COVID19: 2020

**Internal Audit Report Leading Practices**
- Financial Focused
- Risk Focused
- Risk & Value Focused
- Agile Risk & Value Focus
- Long and Detailed Reports
- Shorter Issue Focused Reports
- Shorter & Concise Reports
- Real Time Continuous Monitoring, UBER Audits & Data Analytics Dashboard Reporting
- Minimal Use of Technology
- Data Analytics Experimentation
- Data Analytics Expertise
- Extensive use of Analytics and AI
- 100% Audits
- 70% Audits & 30% Advisory
- 40% Audits & 60% Advisory
- Extreme Change Driving Risk
- Most Auditors are CPA’s
- IA Leading SOX Implementations
- IA Becoming Trusted Advisor
- Increasing Focus on Business Models, Sustainability & ESG
- Growing Operational Audits
- Most Auditors are CPA’s
- Multi Discipline Audit Teams
- Growing Technology & Data Audits
- Co-Source and Out-Source Models
- Increasing Focus on IT & Cyber Security
- UB E R Audits & Data Analytics Dashboard Reporting
- Compliance Focus Instead of Risk
- Increasing Focus on Disruption & Impact From Technology
- Virtual Remote Auditing
- Co-Source and Out-Source Models
- Increasing Focus on Business Models, Sustainability & ESG
- Co-Source Model Very Common
- Extensive use of Analytics and AI
- Extreme Change Driving Risk

**Timeline**
- 1990
- 2000
- 2010
- 2020
Polling Question 1
1. Risk in 2030
### Anticipating Future Risk

- Maturing Intelligent Digital Technologies
- Ongoing Global Pandemic Risk Mitigation
- Self-Disruption is a Competitive Advantage
- War for Leadership Succession Talent
- Extreme Generational Differences in Preferences
- Constant Increase in ESG Expectations
- Data Insight Competitive Advantage
- Never Ending Cyber Threat Innovation
- Virtual, Automated, and Continuous Risk Management
- Robot Co-Workers

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**Top Risks for 2021**

1. Pandemic-related policies and regulation impact business performance (M)
2. Economic conditions constrain growth opportunities (M)
3. Pandemic-related market conditions reduce customer demand (S)
4. Adoption of digital technologies may require new skills or significant efforts to upskill/re-skilling existing employees (M)
5. Privacy/identity management and information security (O)
6. Cyber threats that could significantly disrupt core operations and/or damage our brand (O)
7. Impact of regulatory change and scrutiny on operational resilience, products, and services (S)
8. Succession challenges, ability to attract and retain top talent (O)
9. Resistance to making necessary adjustments to the business model and core operations (O)
10. Ability to compete with "born digital" and other competitors (O)

| Source: Protiviti/NC State University ERM Initiative, Top Risks for 2021 and 2030 |

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**Top Risks for 2030**

1. Adoption of digital technologies may require new skills or significant efforts to upskill/re-skilling existing employees (M)
2. Impact of regulatory change and scrutiny on operational resilience, products, and services (S)
3. Rapid speed of disruptive innovation may outpace our ability to compete (S)
4. Succession challenges, ability to attract and retain top talent (O)
5. Privacy/identity management and information security (O)
6. Substitute products or services may arise that affect our business model and planned strategic initiatives (S)
7. Sustaining customer loyalty and retention may be difficult as customer preferences and demographic shifts evolve (S)
8. Ability to compete with "born digital" and other competitors (O)
9. Inability to utilize data analytics and "big data" to achieve market intelligence and increase productivity and efficiency (O)
10. Cyber threats (O)

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**Source:** Protiviti/NC State University ERM Initiative, Top Risks for 2021 and 2030
Gartner 2020 Technology Mega Trends

- **People Centricity**
  - Internet of Behaviors
  - Total Experience Strategy
  - Privacy Enhancing Computing

- **Location Independence**
  - Distributed Cloud
  - Anywhere Operations
  - Cybersecurity Mesh

- **Resilient Delivery**
  - Intelligent Composable Business
  - AI Engineering
  - Hyper Automation
2. The Future of Governance
NEW - IIA Three Lines Model
(Interactive Governance)
As ERM Matures It Will Separate From IA
Polling Question 2
3. Critical Skills Required in the Next Decade
2016 – 2030 Forecasted Change in Hours Worked

Source: McKinsey

Automation and AI will accelerate skill shifts.

Based on McKinsey Global Institute workforce skills model
United States, all sectors, 2002–30

Evolution in skill categories
% of time

2002
2016
2030

Change in hours worked
% difference

Skill categories
- Physical and manual skills
- Basic cognitive skills
- Higher cognitive skills
- Social and emotional skills
- Technological skills

Change in 2002–16:
- ▲ 3
- ▲ 1
- ▲ 9
- ▲ 13
- ▲ 27

Change in 2016–30:
- ▼ 11
- ▼ 14
- ▲ 9
- ▲ 26
- ▲ 60

Notes:
1. Calculated using the 2004 to 2016 CAGR extrapolated to a 14-year period.
2. Based on difference between hours worked per skill in 2016 and modeled hours worked in 2030. Numbers may not sum due to rounding.

Higher cognitive skills are increasingly displacing basic cognitive skills across occupations.

Based on McKinsey Global Institute workforce skills model

United States and Western Europe
% of time spent on cognitive skills

<table>
<thead>
<tr>
<th>Year</th>
<th>Basic Cognitive Skills</th>
<th>Higher Cognitive Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>2030</td>
<td>39</td>
<td>61</td>
</tr>
</tbody>
</table>

Example activities:
- Take customer orders
- Provide basic information to customers
- Maintain operational and sales records
- Prepare sales or other contracts
- Explain technical information to customers
- Maintain and manage product inventories

NOTE: Western Europe: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute workforce skills model; McKinsey Global Institute analysis

Source: McKinsey
Skills Needed Today vs Future

Source: McKinsey
4. Next Generation Internal Audit
Next Generation Internal Audit

Source: The Next Generation of Internal Auditing - Are You Ready? Catch the Innovation Wave, Protiviti, November 2018
Polling Question 3
5. Internal Audit Hot Topics 2020-2030
Continuous Risk Assessment & Scenario Planning
Integrated Assurance and Advisory

Management Assurance

Internal Assurance

External Assurance

Risk areas affecting the company

Combined Assurance to Board & Executives

• Strategy
• Operations
• Quality Management
• Finance & Treasury
• Information Technology

• Development
• Engineering
• Commercial Services
• Supply Chain
• Others

• Risk Management
• Regulatory Compliance
• Legal
• Company Secretary
• Health and Safety
• Others

• External audit
• ISO
• Sustainability
• Actuarial
• Others

Profiling assurance providers

Combined assurance will leverage an existing model - such as the three lines model - to help clarify roles and responsibilities for assurance providers.

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Risk Analytics

Critical Risk Analytics Capabilities

Technical & Analytical

Testing & Validation
Defining, developing, and implementing quality assurance practices

SQL Querying
Querying and manipulating data to facilitate the solving of more complex problems

Data Modelling
Structuring data to enable the analysis of information, both internal and external to the business

Data Analytics
Valuating data using analytical and logical reasoning for the discovery of insight [e.g. predictive modeling]

Reporting Software
Understanding the underlying theory and application of key reporting software

Business & Communication

Technology Alignment
Understand how technology can be leveraged to solve business problems

Macro-Perspective
Understanding the company’s business strategy, current business issues and priorities, and current industry trends

Business Knowledge
Understand the business measurement of key performance indicators and business frameworks

Business Commentary
Articulation of insight to explain current and forecasted trends, their impact and opportunities for the business

Soft Skills
Communication and interpersonal skills necessary to articulate insight gained from analysis

Business Acumen

Storytelling
Risk Analytic Projects

- **Data Integrity Assurance**: Client wants comfort that the data has integrity.
- **Compliance to Internal Policy or Regulation**: Identify anomalies outside of acceptable ranges.
- **Vendor Billing**: Determine inaccurate billing based on comparison to contract terms.
- **Fraud Detection**: Identify red flags that may lead to fraudulent activity [i.e. Benford's Law].
Risk Analytic Projects

Inaccurate Accounting
Identify anomalies that could indicate inaccuracies

Display Trends Over Time
Utilize visual analytics to display positive and negative trends

Global Mapping of Activity/Assets/Other
Overlaying critical data and activities on a geographic map

Predictive and Descriptive Capability
Advanced prediction on what happens next and prescribed action plan
AI Continuous Monitoring

MindBridge Ensemble AI

Financial Data
Customer Input
MindBridge SMEs
Analysis Configuration

Actionable Results on Quarterly Data in under 15 days!
Agile Internal Audit

- Making the Shift to Agile (Small a)

  - Perfect communication
  - Rigidly planned activities
  - Comprehensive documentation
  - Established roles
  - Following a preset plan
  - Auditing to IA resources
  - Control of the audit process

- Frequent communication
- Quick, iterative activities
- Timely, relevant documentation and reporting
- Empowered roles and flexible system
- Responding to emerging needs
- Transparency in the process
Virtual Auditing, Meetings, and Networking
Hyper and Continuous Learning

NATIONAL CONFERENCE
CONFÉRENCE NATIONALE
September 20 – 23
Pivoting In A Reimagined World
Data Governance Monitoring & Security

- Data Architecture Management
  - Enterprise Data Modeling
  - Value Chain Analysis
  - Related Data Architecture

- Data Development
  - Analysis
  - Data Modeling
  - Database Design
  - Implementation

- Database Operations Management
  - Acquisition
  - Recovery
  - Tuning
  - Retention
  - Purging

- Data Security Management
  - Standards
  - Classification
  - Administration
  - Authentication
  - Auditing

- Master Data Management
  - Architecture
  - Integration
  - Control
  - Delivery

- Document & Content Management
  - Acquisition & Storage
  - Backup & Recovery
  - Content Management
  - Retrieval
  - Retention

- Data Warehousing & Business Intelligence Management
  - Architecture
  - Implementation
  - Training & Support
  - Monitor & Tuning

- Reference & Master Data Management
  - External Codes
  - Internal Codes
  - Customer Data
  - Product Data
  - Dimension Management
ESG: Environment, Social, and Governance

ESG, which stands for Environmental, Social and Governance, refers to a cluster of non-financial factors about a company that can sometimes prove material for investors and other stakeholders.

The disclosure topics below can have a material impact on an organization’s operating and financial performance... and all are driven by the operating culture of the organization.

- Energy efficiency
- Carbon footprint
- Water usage
- Waste management
- Packaging
- Biodiversity management

- Employee attraction and retention
- Diversity and inclusion
- Pay equity
- Customer data privacy
- Social acceptability of projects/business
- Organizational culture

- Climate change
- Cybersecurity
- Corruption and bribery
- Responsible taxes
- Compensation
- Reliable financial disclosure
Key Considerations of CAE in ESG

1. Baseline Assessment
   ▪ Validate mapping of operational footprint, products and services, as well as customers, markets and geographic locations.
   ▪ Completeness and accuracy of evaluation is necessary for ESG adoption.

2. Stakeholder Identification & Consultation
   ▪ Validate identification of all stakeholders directly influencing and/or being influenced by your organization.
   ▪ Ensure stakeholder consultation is sufficient and remains unbiased.

3. ESG Framework
   ▪ Assess reasonableness and applicability of framework adopted (or to be adopted) for alignment.
   ▪ Ensure framework meets industry requirements, regulatory expectations, and comparability with like entities.
   ▪ Where more than one framework is selected ensure appropriate mapping between each.

4. Impact Assessment
   ▪ Reassess management's approach to and conclusions regarding both positive and negative ESG impacts resultant from operations and in line with ESG framework requirements.
   ▪ Identify key metrics to be used to measure success in pursuit of sustainability strategies.
   ▪ Evaluate sufficiency of approach to emerging ESG factors and/or risk issues.

5. Data Management
   ▪ Identify the data necessary to report on ESG strategy (i.e. source, workflow, calculation and storage).
   ▪ Assess the control environment designed to ensure data is complete and accurate for decisions and reporting across the management system.
### Key Considerations of CAE in ESG

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<th>Target Setting</th>
<th>Progress Monitoring</th>
<th>Policies and Procedures</th>
<th>Reporting</th>
<th>Governance</th>
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| 6 | - Evaluate whether targets have been identified by management, are SMART, and stretch the organization for achieving meaningful change.  
- Assess whether targets are prioritized based on significance from impact assessment. | - Evaluate linkage of ESG targets to strategic priorities and ensure management is sufficiently monitoring/tracking performance.  
- Identify risk(s) of missing targets and implications to strategy and operations. | - Assess policies and procedures to ensure expected ESG actions and behaviors are embedded.  
- Review policies and procedures routinely to ensure relevant and timely reflection of changes from internal and external factors. | - Evaluate disclosure controls and procedures for integrated reporting, standalone sustainability reporting, or online provision.  
- Assess management’s opinion of target(s) achievement.  
- Obtain third-party SME to calculate and validate metrics where appropriate (i.e. GhG). | - Evaluate board training/conduct board training on ESG.  
- Evaluate board reporting whether includes necessary information for required board oversight.  
- Provide IA opinion on testing conducted to validate ESG disclosures. |
Third Party Risk Management

Growing Reliance on Third Parties
Explosive growth in the reliance of companies on third party services

Growing Awareness
Higher management and key stakeholders are getting more aware for the risks entailed in third parties

Attacks
Attacks via third parties are increasing every year because of the growing reliance on them and the negligence of risk management around them

Growing Compliance
Increasing robust regulation requirements

The way companies conduct business is changing through the use of cloud, big data, social media

Technology is Changing
Emergence of new technologies like Industry 4.0 and IoT
A Degree in Internal Audit

Institute of Internal Auditors (IIA)

The School of Accounting and Finance is a member of the Institute of Internal Auditor’s (IIA) Internal Audit Education Partnership (IAEP) program. To receive IAEP program designation, schools must demonstrate a commitment to internal audit education and pass a rigorous review of their curriculum.

The IIA is an international professional association that serves as the profession’s global voice and recognized authority, and provides leadership for the global profession of internal auditing. Members of the IIA work in diverse areas such as internal auditing, risk management, governance, internal control, information technology
Polling Question 4
6. The Future of IIA Canada
The Future of IIA Canada:

- Connected Global Network (200+ Countries) Through New Digital Cloud System
- New Global Branding and Promotion
- Enhanced IA Standards (Assurance and Advisory)
- Increase in Advanced Technology Professional Development
- Country Specific Research and Thought Leadership
- Increased Global Work Opportunity
- Hybrid Virtual and In-Person Conferences and Training
- Full and Virtual Chapters
- Global Networking and Communication Opportunity
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<tr>
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<td>David Helberg</td>
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<td>Natalie Lalonde (New)</td>
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<td>NAB Rep Beili Wong</td>
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STRONGER TOGETHER

2021-2022 STRATEGIC PLAN REFRESH
CORE PURPOSE
To lead the Canadian Internal Audit profession and advance its value.

VISION
Internal audit professionals are universally recognized as agile trusted advisors, and indispensable for effective governance, risk management and control optimization

GOALS
Together we will:
- Strengthen the profile and demand for the Internal Audit profession in Canada
- Support members by providing the resources they need to excel
- Expand the leadership presence, capability and capacity of the Internal Audit profession in Canada
Together we will promote internal audit as a profession of choice to potential sources, and to those organizations that create and develop internal audit functions. We will do this with a view to expand and sustain the availability of skilled Internal Auditors with diverse experience, and deep competencies to serve across different sectors.

Together we will educate, promote, and enhance the value (Governance, Risk Management, & Compliance) of internal audit to stakeholders who grow and sustain internal audit functions across key sectors. We will do this by identifying stakeholders, understanding their needs, and leveraging The IIA Canada, Chapter resources, and other collaborators to promote the value and benefits of internal audit.

Together we will develop a Thought Leadership Program to actively share emerging thinking on the changes and disruptions facing our industry to help IA professionals prepare themselves.

Together we will champion the ongoing professional development of IA professionals and ensure they know the full range of resources available to support them.

Together we will develop and implement a Membership Growth Strategy.

Together we will grow the capacity and relevance of our profession through strategic partnerships with key stakeholders.
Questions & Answers
Thank You!

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Partner, Enterprise Risk Services
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