DIGITAL TRANSFORMATION

WHAT DOES THIS MEAN TO INTERNAL AUDIT?
TODAY’S SPEAKERS

Clint McPherson is a Managing Director in Protiviti’s Dallas office with over 25 years of experience in internal audit, business operations, and information technology. He serves as the market leader of Protiviti’s Dallas Internal Audit and Financial Advisory practice. Prior to Protiviti, Clint was a member of Arthur Andersen’s Internal and IT Audit Services practice and also served in industry Internal Audit functions at PepsiCo and a large insurance based holding company. Clint began his career with Andersen Consulting (now Accenture) as a consultant.

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David Pluss is an Associate Director in Protiviti’s Dallas office. He is a CPA and certified program manager with over 14 years of experience spanning Internal Audit, IT strategy, transformation programs, sales operations and large scale integration programs. He has significant experience in leading programs with an approach that focuses on alignment across organizations and people, core processes, tools and technologies, and, complying with the underlying regulatory and legal requirements.

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TODAY’S AGENDA

- What is Digital Transformation?
- Changing Risk Environment
- Importance to Internal Audit
- Assessing a Digital Program
WHAT IS DIGITAL TRANSFORMATION?
IMPACT OF DIGITAL

“Technology is an ‘unstoppable force’ that would lead to better customer service and a wave of new banks becoming household names.”

Anthony Jenkins
Former Chief Executive of Barclays

“We need to become a software company in all divisions of GE.”

Jeffrey Immelt
Former Chief Executive of General Electric
Digital @Scale: McKinsey Study

“At least 40% of all businesses will die in the next 10 years…if they don’t figure out how to change their entire company to accommodate new technologies.”

John Chambers
Current Executive Chairman Cisco
Digital @Scale: McKinsey Study
DIGITAL DOMAINS / TECHNOLOGIES

- Internet of Things
- Cloud Computing
- Big Data & Decision Science
- FinTech & RegTech
- Drones
- Social Technologies
- Mobiles Devices/Beacons
- Blockchain and Virtual Currencies
- Robotic Automation & AI
- Biometrics & Voice Recognition

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DRIVING FORCES OF DIGITALIZATION

Customer Expectations…

- Real-time, online reporting of customer account activity.
- Purchased devices are ready for immediate use.
- Transactions are approved in minutes.
- Organizations have continuous access to customer data.
In 2012, revenues for San Francisco’s yellow cab industry were approximately $250M.

Uber, introduced in 2012, cut San Francisco’s yellow cab industry revenues to half ($125 million) by the end of 2013.

Within a year, Uber expanded the yellow cab market cap by approximately 110%.

Uber now has 64% of the existing market share in San Francisco and is disrupting other geographies internationally.

“"I’m predicting that over the next 10 years, we will see a number of very significant disruptions in financial services, let’s call them Uber moments.”

– Antony Jenkins, Former CEO of Barclays
UNCERTAIN FUTURE

- Average tenure of companies on S&P 500 is declining rapidly (from 33 years in 1965 to less than 15 by 2025);
- Rapid growth of technology start-ups with multi-billion dollar valuations;
- 6 of the Top 10 in S&P 500 are now technology companies: Apple, Microsoft, Amazon, Facebook and Google;
- Predictions that half of S&P 500 will be replaced in the next 10 years;
- Technology companies dominate Glassdoor Best Companies to Work For and are a magnet for talent.
ACCELERATED TRANSFORMATION

Meeting Expectations…

Companies must adapt and accelerate.

It is more than just process automation – this requires transforming entire business operations.
CHANGING RISK ENVIRONMENT
REDEFINING COMPANY VALUES

1. Customer Experience
2. Channel Options
3. Regulatory Governance
4. Digital Culture
5. Business/IT Agility
6. Secure Access
7. Behavioral Analytics
8. Real-Time Responses
Emerging risk areas demand increased attention as organizations continue to pursue digitalization opportunities.

- Digital Culture
- Digital Disruption
- Broadening Data Governance
- Connecting
- Globalization of IT
- Evolving Technology Trends
INCREASING IT RISK

1. Firms are using digital technologies to adapt their business models and create new business opportunities.

2. This has exponentially increased the amount of data produced and collected by companies.

3. For internal audit, it means that IT risk increasingly spans the breadth of a firm’s operations.
FOUNDATIONAL IT RISKS

Foundational IT risks are amplified in business functions and are risks that may not have received priority attention in the past (e.g., marketing, customer service, etc.).
WHAT LIES AHEAD?

Digital transformation will become the key strategic thrust for most CEOs.

Digital transformation initiatives will be consolidated into one vision and function.

Digital transformation will require new skills and shifts in IT investments.

Big data analytics will serve as the foundation of digital transformation.

Artificial intelligence (AI) will drive new digital transformation revenue streams.

IoT will be a catalyst for the expansion of digital transformation to all corners of the economy.
The speed of changes and proliferation of data are creating new opportunities for internal audit to add valuable insights.

Stakeholders are open to new ways of consuming insights.

Internal auditors are looking to build their skills to work effectively in this new world and underwrite their future value to the organization.
INTERNAL AUDIT PERSPECTIVE

INSIGHT

- How can the process, measurements, and controls be modified or enhanced?
- What are other companies doing?
- Are you missing out on some best practices?

OVERSIGHT

- Is the process operating as planned?
- Are controls, resources, and performance measures adequate and operating effectively?
- Are policies being adhered to as intended?

FORESIGHT

- Where is this process going? Can it scale as the company grows?
- Will current controls be adequate in the future?
- What planned or future adjustments should be considered?

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DIGITAL MATURE ASSESSMENT

CORE CAPABILITIES

Our research has identified a set of 36 capabilities and/or attributes that leaders in the digital economy excel at which are outlined below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Core Capabilities</th>
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<tbody>
<tr>
<td>VISION MISSION</td>
<td>Digital Leadership, Corporate Culture, Customer Centricity and Experience</td>
</tr>
<tr>
<td>MANAGEMENT STRATEGY</td>
<td>Big Data Value Creation, Technology Organization, Data Value Creation</td>
</tr>
<tr>
<td>MANAGEMENT EMPLOYEES CULTURE</td>
<td>Management Culture, Structure Hierarchy, Marketing Campaigns</td>
</tr>
<tr>
<td>ORGANIZATION STRUCTURE PROCESS</td>
<td>Architecture and Infrastructure, BI Analytics, Data Science Team</td>
</tr>
<tr>
<td>COMMUNICATION MARKETING SALES</td>
<td>Marketing Provider Management, Software Development &amp; Delivery, Third Party Collaboration &amp; Integration</td>
</tr>
<tr>
<td>TECHNOLOGY INNOVATION DEVELOPMENT</td>
<td>Software Development &amp; Delivery, Third Party Collaboration &amp; Integration</td>
</tr>
<tr>
<td>BIG DATA ANALYTICS AUTOMATION</td>
<td>Data Analytics, Data Governance, Business Automation/AI</td>
</tr>
<tr>
<td>BUSINESS MODEL</td>
<td>Employees Skills, Human Resource Management, Marketing Research</td>
</tr>
<tr>
<td>STRATEGY</td>
<td>Employee Performance, Innovation Research, Channel Strategy</td>
</tr>
<tr>
<td>DIGITAL MATURITY</td>
<td>Team Performance, Innovation Research, Channel Strategy</td>
</tr>
<tr>
<td>FINANCE PLANNING</td>
<td>Digital Sponsorship, Knowledge Management, Media Performance</td>
</tr>
<tr>
<td>GOVERNANCE COMPLIANCE</td>
<td>Workplace Collaboration, Administration, Budget KPI Tracking, Cyber Security &amp; Privacy</td>
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DIGITAL MATURITY APPROACH

CAPABILITY MATURITY MODEL

1. Digital Sceptic
   - Digital plans are not formalized and initiatives are managed in an ad-hoc or reactive manner.

2. Digital Beginner
   - Digital plans are not fully developed although multiple digital initiatives are underway and the objectives of these initiatives are understood.

3. Digital Follower
   - A digital strategy has been developed and the organization has a proven track record delivering on digital initiatives. Digital initiatives are typically focused on discrete aspects of Customer Journey.

4. Digital Expert
   - Digital aspects are in place and managed quantitatively enterprise wide. High levels of process automation have been achieved. The organization has a proven track record adopting emerging technologies.

5. Digital Leader
   - Organization has a proven track record of disrupting traditional business models. Digital aspects of strategic plans are continually improved based on lessons learned and predictive indicators.
IMPACT ON AUDIT PLANS

Example Audits to Consider

Cybersecurity Audits
1. Data loss detection evaluation
2. Incident response plan review
3. Insider threat and vulnerability analysis

Information Governance and Data Privacy Audits
1. Information accountability review
2. Personal information mapping review
3. Employee behavior tests
4. Data destruction audit

Mobile Technologies and Applications
1. Data encryption assessment
2. Mobile device management audit
3. Application development security risk assessment

Current Systems and Vendor Audits
1. Systems vulnerability assessment
2. Vendor preparedness review
3. System Development Lifecycle
QUESTIONS FOR INTERNAL AUDIT TO CONSIDER

1. Does the current-state internal audit plan consider digitalization risks?

2. Does IT leadership have a good understanding of the potential control impacts associated with digitalization?

3. Does the internal audit function understand digitalization?

4. Do our auditors have the right skills to effectively evaluate digitalization risks and controls?

5. Does the organization understand the impacts that digitalization may have on data privacy, cybersecurity and other regulatory compliance obligations?