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The Evolution of Technology in Auditing

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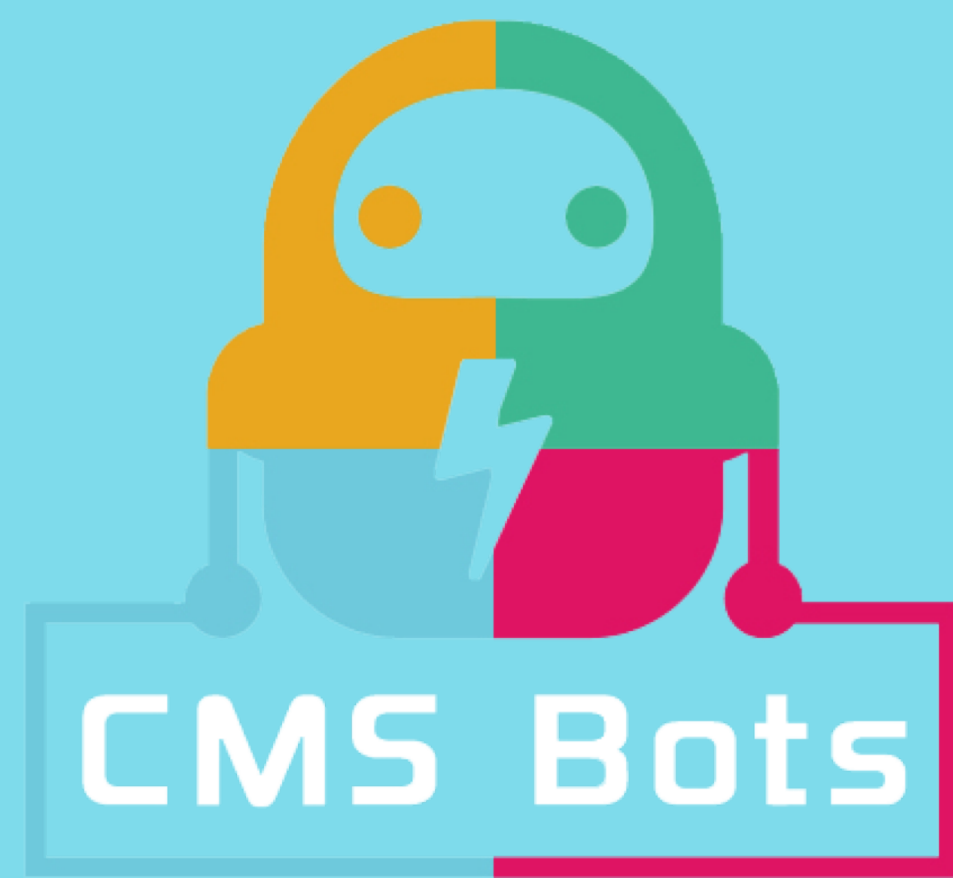


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The evolution of technology in auditing

Alexandra Roberti, Accounting
 Sponsor: Edmund Boyle, College of Business



Brief history of auditing

- Industrial Revolution led to a growth in business activity
- Need for financial accountability and fraud detection
- Stock market crash in 1929 required auditing for public companies
- Securities and Exchange Commission (SEC) created by the Securities and Exchange Act of 1934
- Periodic financial reports in accordance with generally accepted accounting principles
- Sarbanes-Oxley Act (SOX) 2002 increased awareness on detecting fraud
 - Enron
 - Worldcom
- Public Company Accounting Oversight Board (PCAOB) was created by SOX in 2002
- The importance of auditing is all about the integrity of what a company is sharing with their investors



Evolution of auditing

- Mass amount of people to verify and perform audits
- 1950's welcomed automated accounting systems
 - UNIVAC
 - IBM
- Haskins & Sells AUDITAPE
 - Computer assisted audit tool (CAAT)
 - Facilitated general auditing software (GAS)
- Personal computers 1960s increased speed and audit quality

Introduction

The way an audit is performed is changing due to technological advances. In order for audit firms to stay competitive and keep their clients, they need to adhere to these changes. There is a universal phenomenon that restricts people from wanting to adapt to change, but the pressure to re-engineer how an audit is performed is growing.

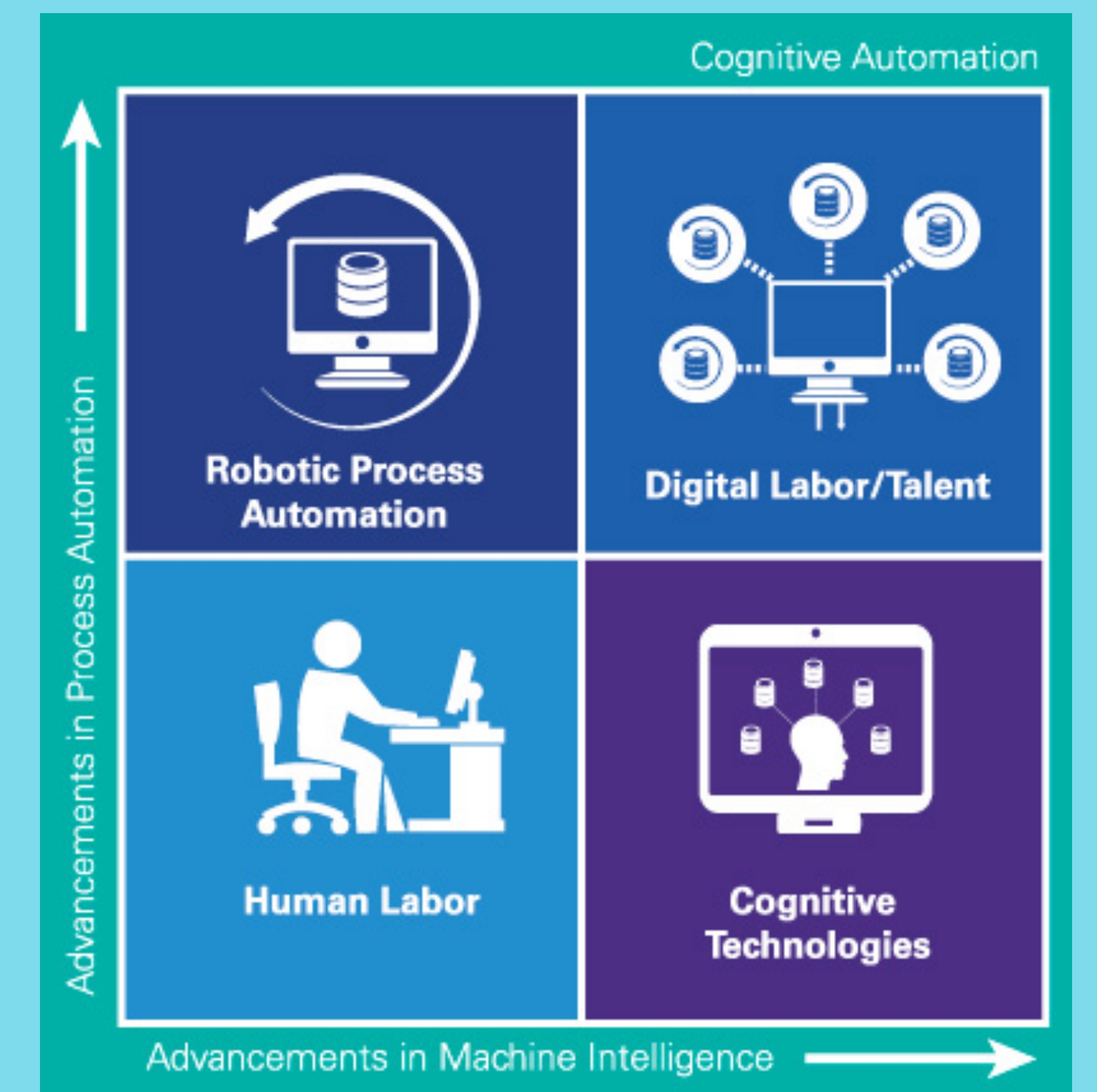
Firms are able to remit a more in-depth and higher-quality audit with the use of technology. By learning about how technology has and continues to impact the accounting field, I feel more prepared to start my career.

What the future holds

- Artificial intelligence (AI)
 - Select full populations
 - Greater accuracy
 - Increase predictions about fraud
- Blockchain
 - Secure records of transactions
 - Immediate reconciliation
 - Builds trust
 - Independent visibility of data
- Inventory drones
- Robotic Processing Automation (RPA)
 - Process understanding
 - Audit data standardization (ADS)
 - Execution of automated audit tests
- Autopilot basic functions
- Automated graphics and charting
- More likely to show data anomalies

The human element

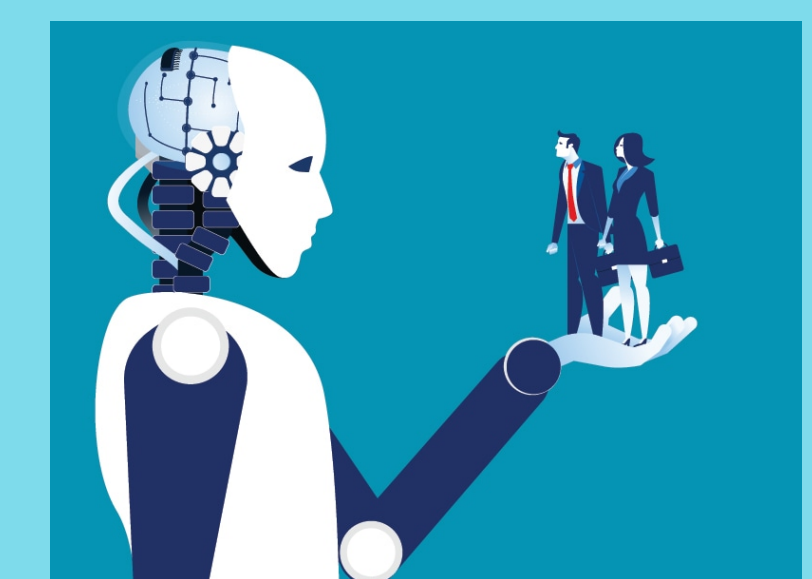
- People need to be able to adapt to the changes with technology
- With technology, there will be an increase in the audit quality
 - Mundane and manual audit tasks no longer require a person
- Professional services reckon on human attributes
 - Advice
 - Integrity
 - Judgment
- Stronger client-auditor relationship
- Always a need for analysis and expertise
- Emotional value does not translate into a robot
- Utilize what differentiates a human from a robot



Marc T. Macaulay

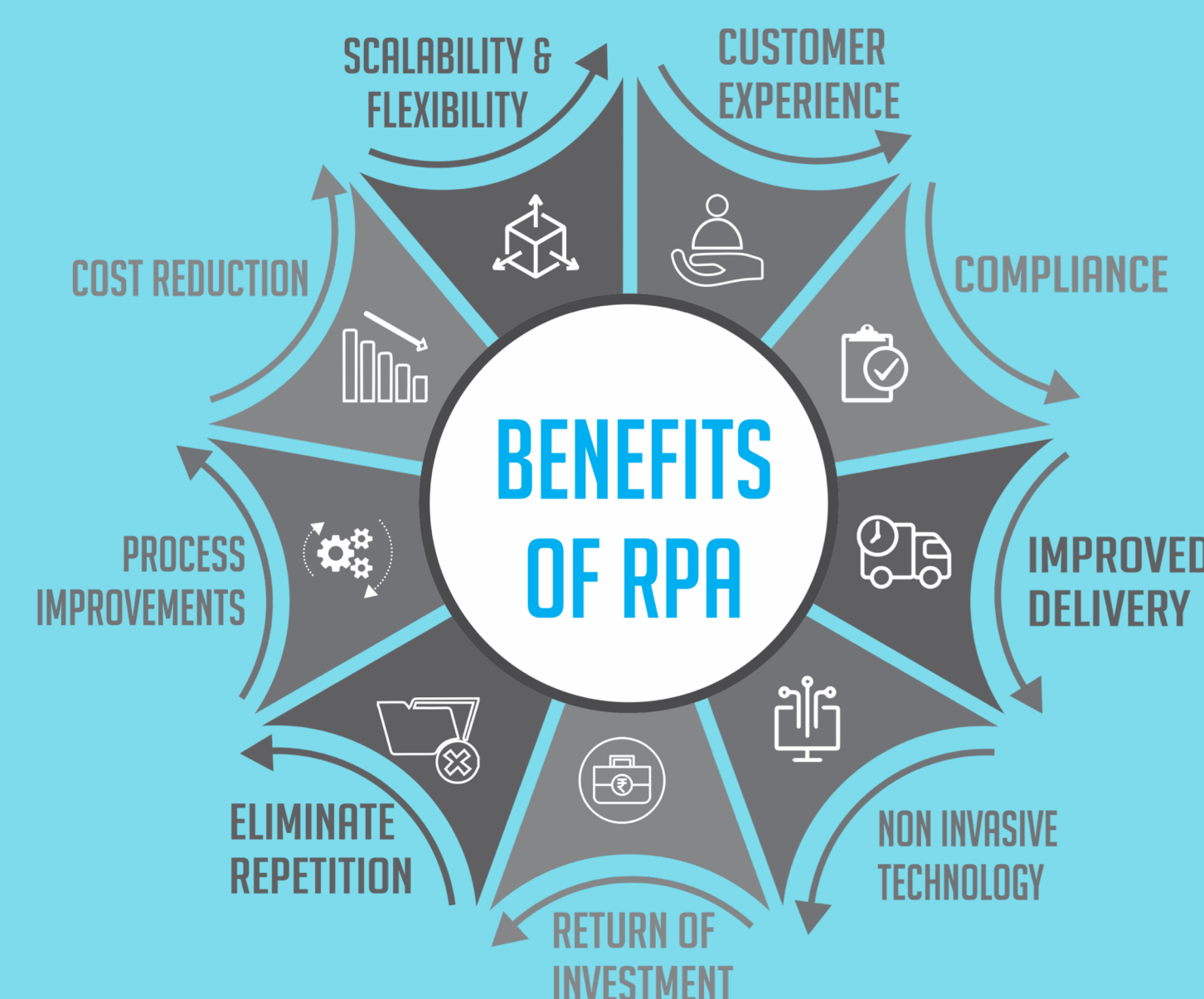
Controversy

- Paradox of creating more risks
 - There can be flaws in the technological systems
- Risks with AI
 - Algorithmic bias
 - Overestimating capabilities
 - Programmatic errors
 - Risk of cyber attacks
- Cooperation to change
- Replacement of humans?



“RPA enables preservation of the human element in workplaces, allowing us to engage in relationships, activities and projects that are more inspiring and better aligned with an organization’s purpose.”

-Vasu Yedavalli, Ernst & Young LLP



Takeaways

- Technology has greatly impacted auditing over the past six decades and it will continue to go forward
- The combination of humans and robots is the ultimate innovation
- Accounting firms show commitment to their clients by investing in and improving their technology