

### Towards RPA in Audit

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## The Story

• The world is rapidly changing, technology enables a 365/24/7 economy

How has the audit profession evolved?
Some major transformations...

Robot arm is developed for assembly lines	First virtual reality glasses and gloves	Deep Blue defeats chess player	Smart Phone is developed	Driveless cars	Society
1970s	1980s	1990s	2000s	2010s	
Sampling is introduced	IT audit becomes common	Move to Risk-based approach	Disclose audit fees	Adopts CAM	Audit

#### Where are we?

- Audit as an artisanal process composed of practice manuals, templated audit plans, and supportive software
- The advent of many IT tools, potential formalization of decisions and accessibility to large data make it essential to rethink the audit process
- Reengineering of the audit process can be divided into:
  - Audit areas that are prone to the utilization of workflow and time and motion improvements
  - Audit areas with repeatable and deterministic judgments
  - Audit areas with stochastic judgments

## What is RPA (Robotic Process Automation)?

- The IEEE defines RPA as "A preconfigured software instance that uses business rules and predefined activity choreography to complete the autonomous execution of a combination of processes, activities, transactions, and tasks in one or more unrelated software systems to deliver a result or service with human exception management (IEEE Corporate Advisory Group, 2017)."
- RPA robots conduct work the same way that humans do through the software presentation layer

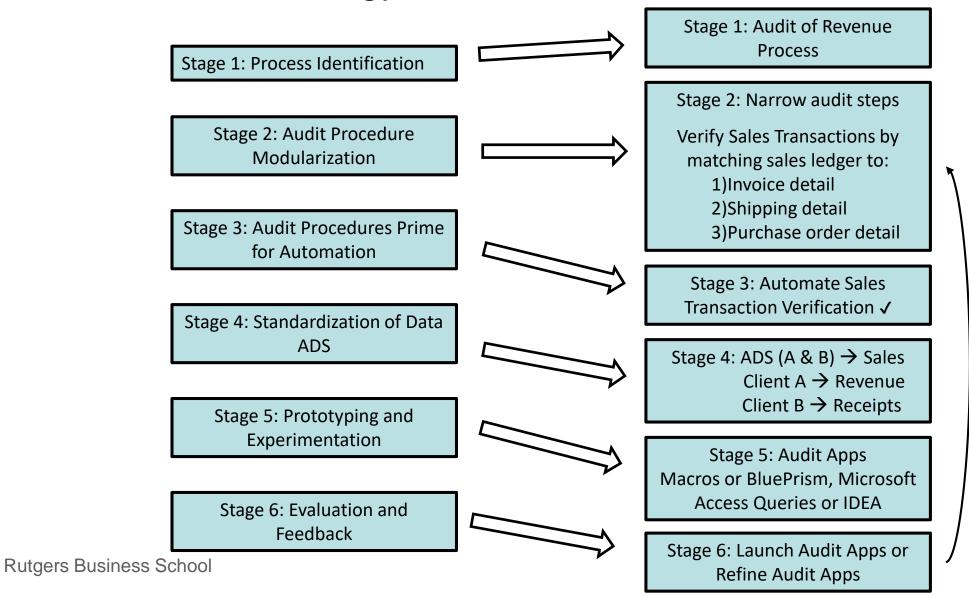
#### RPA in Audit

- RPA can result in improved audit quality when the steps to perform a rules-based task are repetitive, and manual
- Audit tasks such as reconciliations, internal control testing, and detail testing can be facilitated by RPA
- Transforming auditors' role towards emphasizing higher order thinking skills would lead to enhanced audit quality

### **RPA Tools**

	Tools	<b>Tool Execution</b>	Audit Task
	Excel IDEA	Rules-based functions	Reconciliations,
		Calculations	Analytical Procedures,
			Internal Control Testing,
			Detail Testing (attribute match)
	Python	Rules-based functions	Reconciliations,
	R		
	UiPath	Calculations	Analytical Procedures,
		Web scraping	Internal Control Testing,
		Importing data	Detail Testing (attribute match)
		Exporting data	matory
			Input: collection of data
Rutgers Business			Output: compilation of audit test results

# Methodology for RPA in Audit



#### Considerations for RPA-Based Audits

- Verifying the reliability of RPA tools and digital audit evidence
- Handling of numerous notable items
- Privacy and security of digital audit evidence
- Costs related to RPA development and deployment

