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THE STATE UNIVERSITY
OF NEW JERSEY

Intelligent Process Automation in Audit

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43rd WCARS

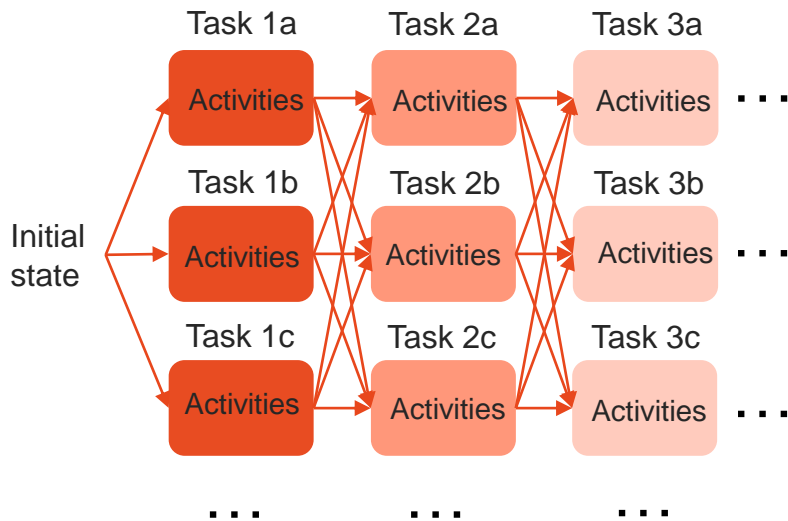
11/03/18

Overview

- Introduction
- “Auditor-in-the-loop” IPA ecosystem
- Audit workflow driven by IPA
- Implementation framework
- Ongoing and future research

Introduction

Audit workflow/process

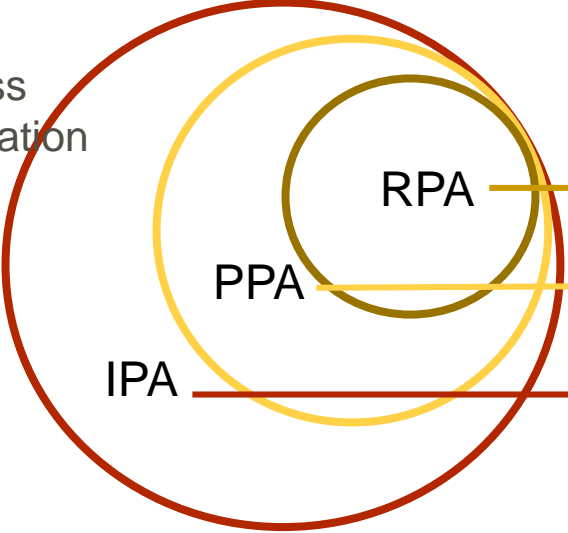


Pre-defined Process Automation (PPA): the patterns of the process are **pre-defined** by human.

Robotic Process Automation (RPA): run application software in the same way that a person works with that software.

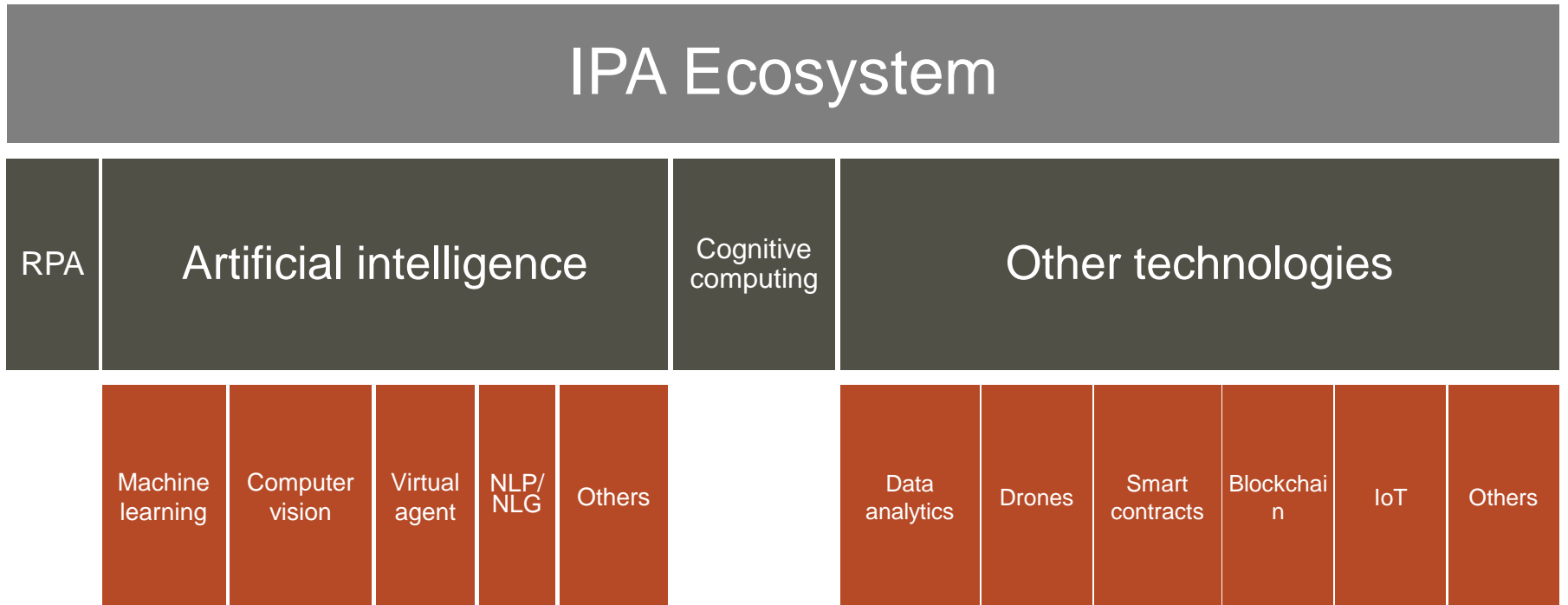
Intelligent Process Automation (IPA): the patterns of the process **can be learned and predicted** by AI, and then **recommended to human**.

Process Automation

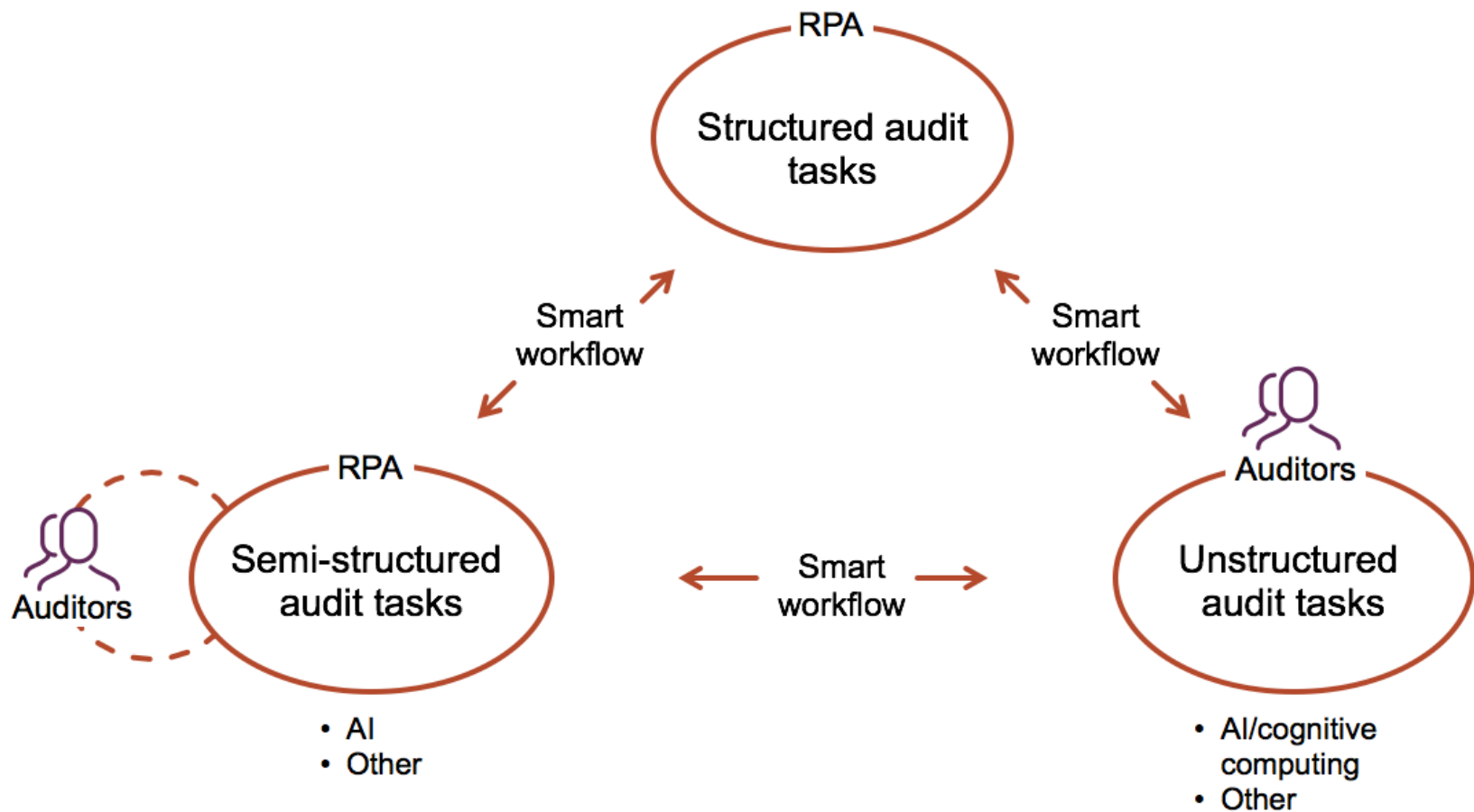


Objective:
 Establish a framework and build a prototype of IPA in audit, and evaluate their efficiency of effectiveness.

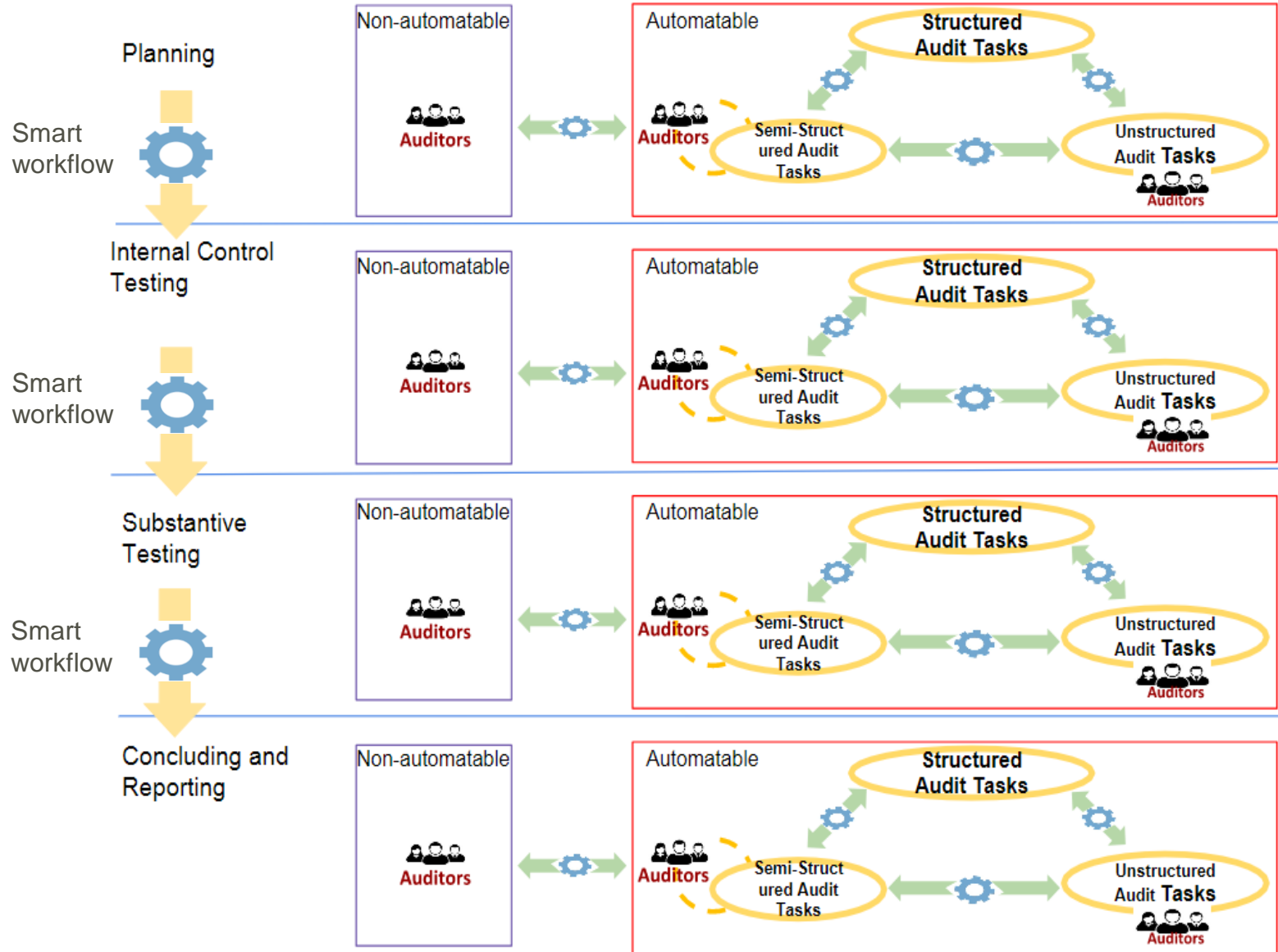
IPA Ecosystem in Audit



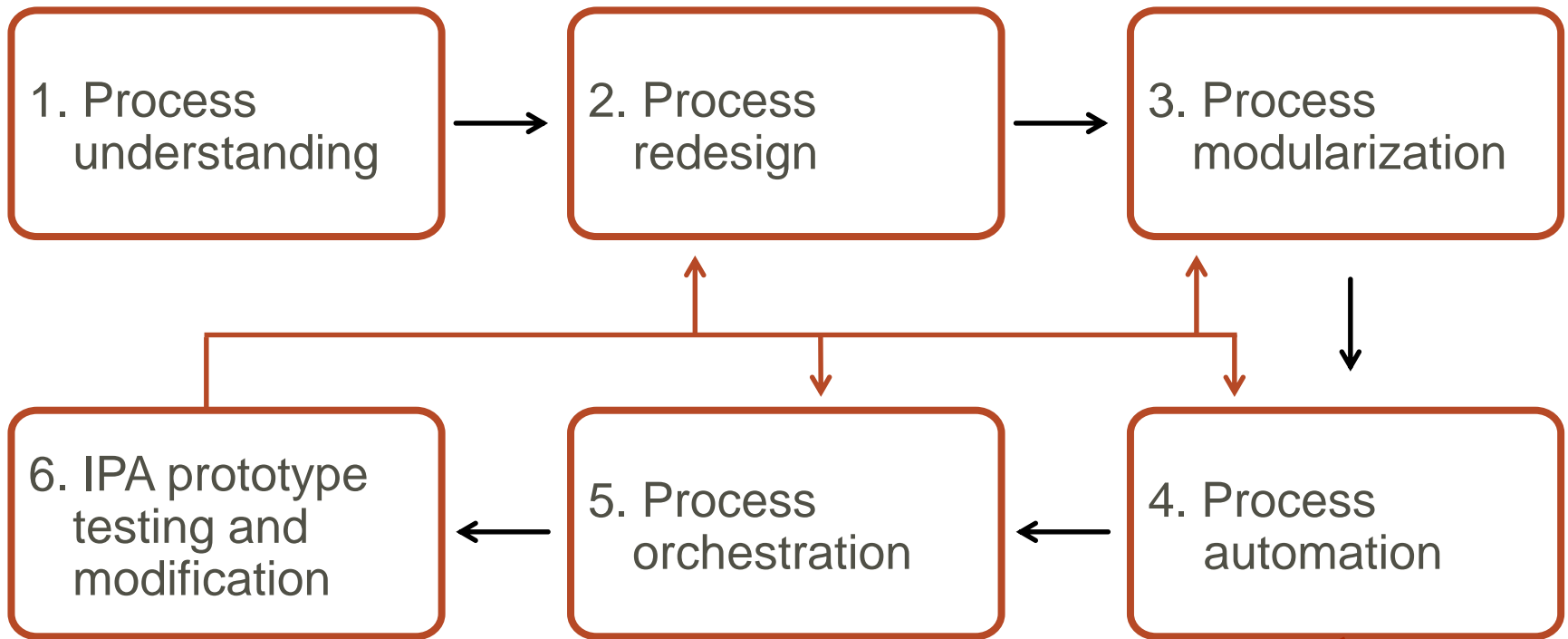
The “Auditor-in-the-Loop” IPA Ecosystem



The Audit Workflow Driven by IPA

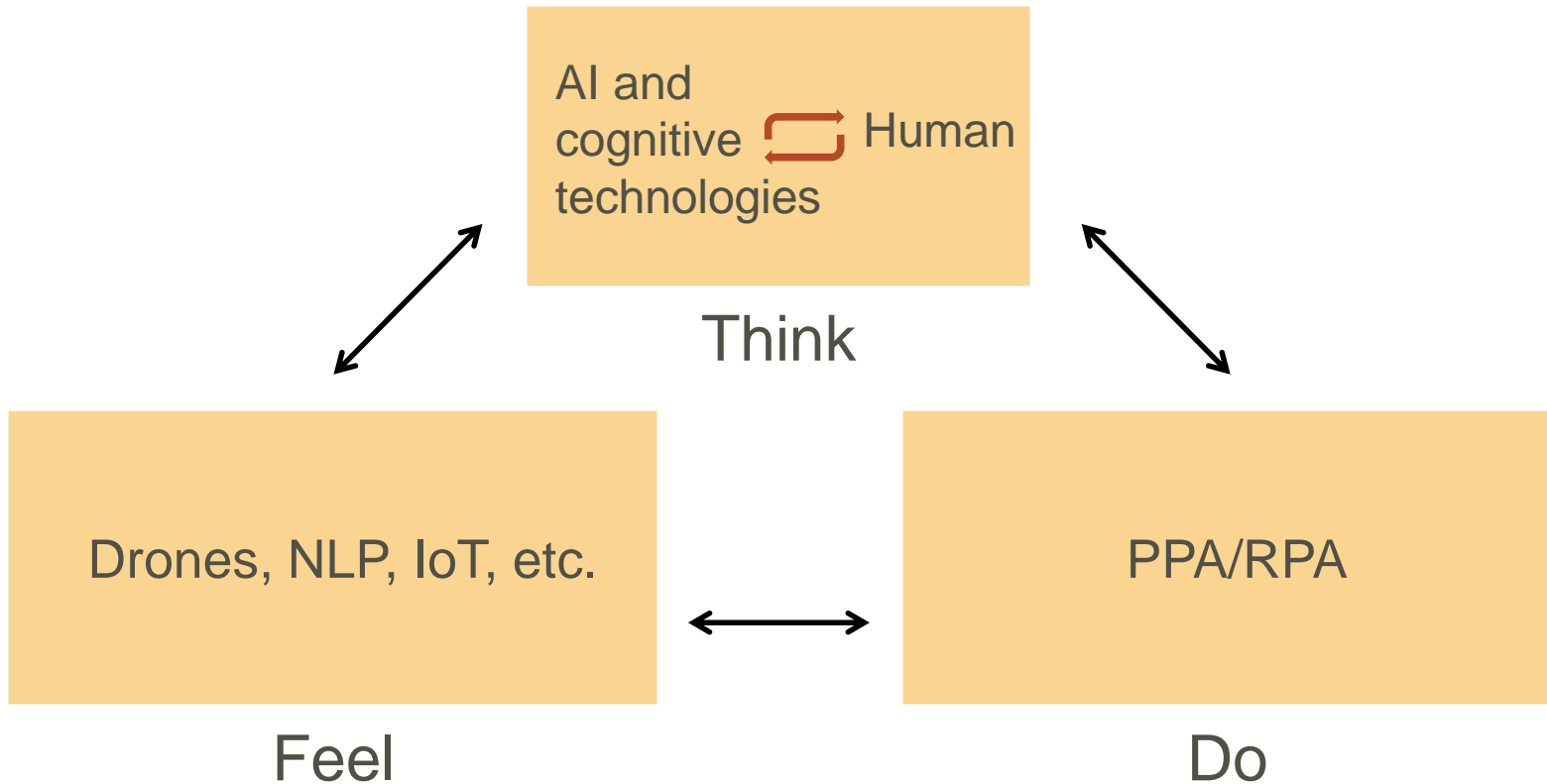


Framework of Implementing IPA in Audit



- PPA/RPA
- Algorithm training and testing

Potential Application of IPA in Audit-Inventory testing



Ongoing and Future Research



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- Prototypes in audits
- Impacts



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“If we knew what it was we were doing, it would not be called research, would it?”

-Albert Einstein



Thank you!