Intelligent Automation in the Public Sector

Empowering the Public Sector with Cognitive Capabilities

Presented by:
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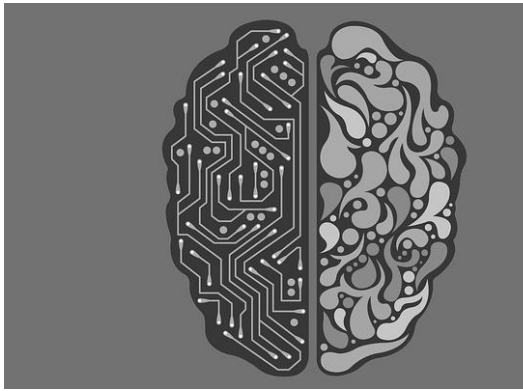
About Cognilytica

- Cognilytica is an ***Artificial Intelligence-focused analyst and advisory firm***.
  - Produce market research, advisory and guidance on ***AI, ML, and Cognitive Technology***
  - Produce the popular ***AI Today podcast***, in addition to ***infographic series, whitepapers, webinars, newsletters***, and other popular content.
- Focused on ***enterprise and public sector adoption*** of AI, ML, and Cognitive Technology
- Kathleen Walch and Ron Schmelzer are ***Principal Analysts and Managing Partners*** of Cognilytica
- Contributing writers to ***Forbes***, ***TechTarget*** (SearchEnterpriseAI), ***Cognitive World***, and ***CTOVision***

The Big Picture of AI

Artificial Intelligence (AI) is machine behavior and function that exhibits the intelligence and behavior of humans.



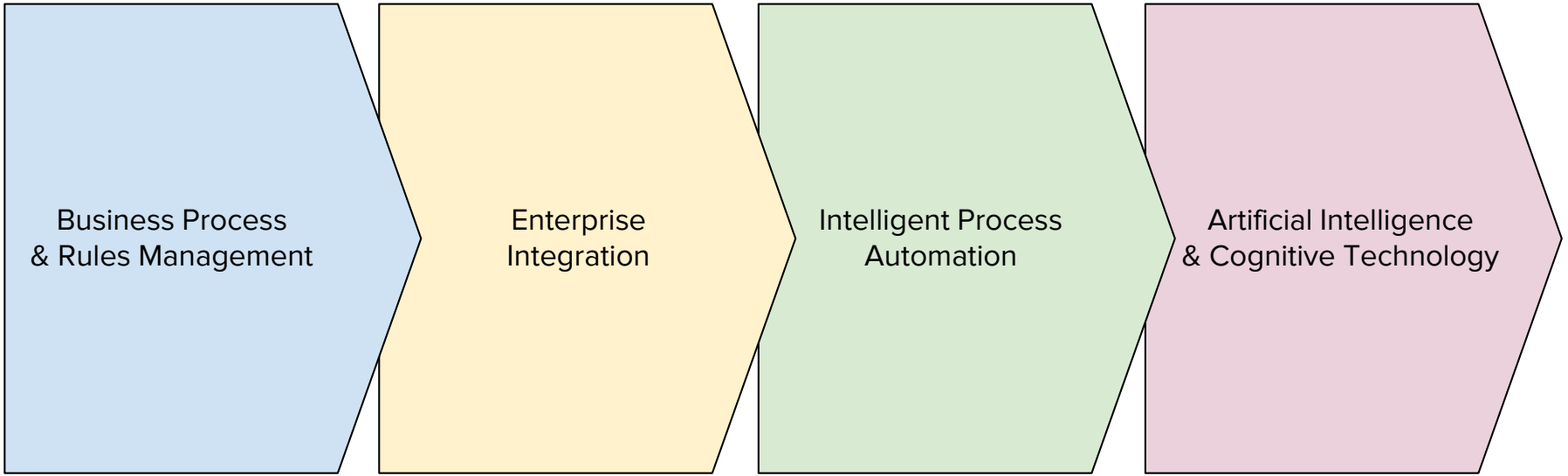
Solve problems that can't be solved with unintelligent, automated systems:

- ***Simple Rules Don't Work***
  - If you can use simple rules processing or workflow, you should
  - Machine learning is probabilistic not deterministic (see below)
- ***Requires Object Identification or Classification***
  - You can't easily program image recognition. Let the neural network do it.
- ***Pattern matching across large quantities of data***
  - Could you build advanced programs without AI to do it? Maybe. ML is easier.
- ***Probabilistic vs. Deterministic Patterns***
  - If behavior doesn't happen the same way every single time, consider Cognitive Tech.
- ***Advanced Statistics or Analytics is Too Complex***
  - Machine learning does better than non-learning formulas.

Use Cognitive Technologies when you can't code the rules or you can't scale easily (with people or automation)

Intelligent Automation Big Picture

Intelligent automaton is the smart combination of four major areas of process awareness and improvement:



Intelligent Process Automation (IPA) Overview

This chart outlines the increasingly more advanced capabilities of next-generation Intelligent Automation systems

Level 0: Enhanced Process Automation (not AI)	Level 1: Language & Context Aware	Level 2: Intelligent Process Awareness	Level 3: Autonomous Process Optimization
❖Screen recorder with visual flow designer ❖Complex rule sets ❖Complex user interaction capabilities with keyboard, mouse, swipe, and behavior modeling	❖Use of natural language processing tools for text (OCR), speech, and other interaction ❖Virtual assistants to help with process development ❖Fix and validate data as necessary for context ❖Can deal with unstructured data and inputs	❖ Automatically identify process flows in new systems (“process discovery”) ❖ Anticipate and mitigate process flow exceptions ❖ Understand UI changes & make dynamic process changes ❖ Find and fix missing or incorrect data ❖ Automatic process documentation	❖ Suggest and make modifications to processes to improve overall flow ❖ Learns from itself to figure out better ways to handle process flow ❖ Automatic orchestration of multiple bots to optimize processes
Source: Cognilytica			

Use Cases of Intelligent Automation

- Through the use of intelligent automation, San Diego County Dept of HHS:

  - **Allowed agents to bring up verification documents from multiple sources and launch the verification process with a single hotkey**
  - **Increased efficiency and saved time for 2,000 agents**
  - **Fewer errors, particularly in the verification process**

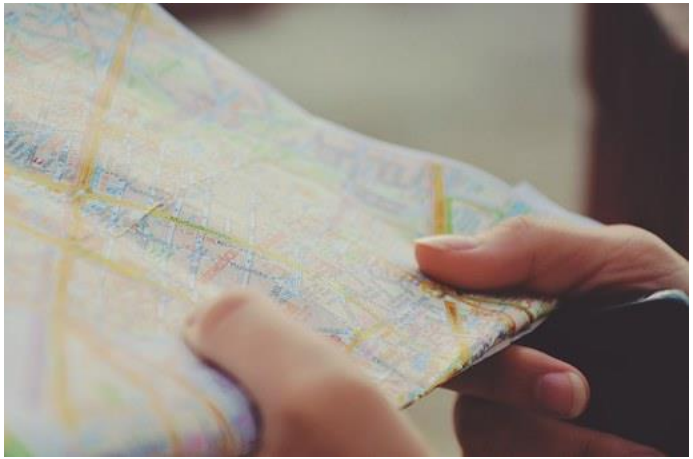
- A Federal Health Agency was able to gain great efficiencies including:

  - **34 processes automated**
  - **1,000+ invoices automatically reviewed**
  - **Improved data quality of over 100,000 records**
  - **13,500 manual labor hours reallocated to work on higher value tasks**

Intelligent Automation adoption journey - How to get started

Governments should take an incremental, step-wise approach to intelligent automation including:

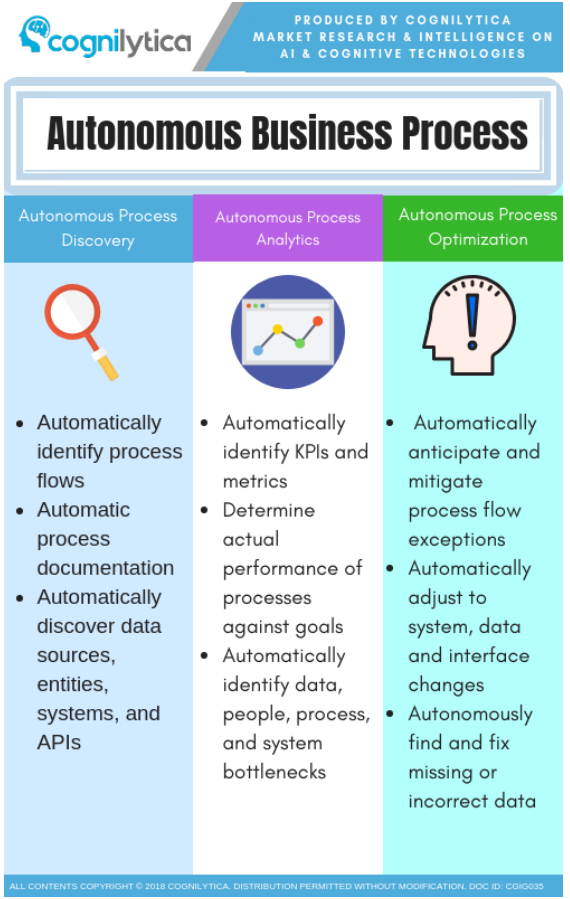
- Identify Process Bottlenecks and Inefficiencies
- Process Awareness and Definition
- Identify Existing Data & System Data Sources for Integration
- Determine Repeatable, Automatable Processes
- Identify AI-enabled workflows to augment integration and automation tasks
- Continuously Measure against KPIs



The Vision of Autonomous Business Process

Cognilytica's vision of the future of process

- **Autonomous Process Discovery & Modeling**
  - Automatically identify process flows in new systems ("process discovery")
  - Automatic process documentation
  - Automatically discover explicit as well as implicit process flows by observing actual human, data, and system operation
  - Automatically discover the entities which government interacts with
- **Autonomous Process Analytics & Management**
  - Automatically identify actual key performance indicators (KPIs) and metrics that determine process efficiency
  - Automatically use overall business goals to measure how discovered processes are actually performing
  - Automatically identify people, data, and system bottlenecks
- **Autonomous Process Optimization**
  - Automatically anticipate and mitigate process flow exceptions
  - Automatically understand system data and interface changes & make dynamic process changes
  - Autonomously find and fix missing or incorrect data



Wrap Up / Conclusion

- AI fits into the picture of Intelligent Automation
  - What are the things Government leadership needs to consider?
- Focus on getting increased **efficiency**, increased **mission** success, greater worker **productivity**, and **cost savings**
- Read the white paper for details on practical applications, use cases and considerations to use Intelligent Automation in the public sector

Thank you!

Presenters:

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