Accelerate Adoption of Artificial Intelligence to Discover Insights at Machine Speed

The Artificial Intelligence (AI) Center of Excellence (CoE) incorporates machine learning, neural networks, intelligent process design and Robotic Process Automation (RPA) to develop AI solutions that address unique business challenges agency-wide. The team provides strategic tools and infrastructure support to rapidly discover use cases, identify applicable artificial intelligence methods, and deploy scalable solutions across the enterprise.

OVERVIEW

Lean innovation provides the speed necessary to experiment and iterate, while quickly identifying important use cases within an agency. The AI CoE team establishes institutional enablers to support innovation, creating pathways for the sustainable transition of successful pilots in the following areas of expertise:

- Artificial Intelligence
- Machine Learning
- Robotics Process Automation
- Natural Language Processing
- Computer Vision
- Intelligent Process Design
- Intelligent Data Discovery, Access, and Use

OUTCOMES

The AI CoE generates the following benefits through mature AI programs across the federal government:

- Increase the agility of acquisition processes to accelerate adoption of AI solutions.
- Understand the true cost of ownership for AI solutions.
- Establish a customer-centric approach to implementing solutions.
- Identify previously unknown trends and patterns in data across enterprise systems.
- Develop a deep understanding of user workflows and a library of reusable tools to operate at machine speed.
- Reduce time to task completion and overall process error rates and increase overall labor hour capacity.
- Collect and promote AI and RPA best practices.
- Transition from performing low-value to high-value work through process automation and intelligent systems integration.

CASE STUDIES

U.S. Department of Labor
- RPA Use-Case Development to Production
- RPA Bot Development
- Development of Procurement Bot Pilots

Joint Artificial Intelligence Center
- JCF Infrastructure Build to support AI/ML Missions
- AI/ML Tools assessment, acquisition and implementation
- AI/ML Training for the DoD Joint Artificial Intelligence Center (JAIC) Joint Common Foundation (JCF)
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<thead>
<tr>
<th>SERVICE</th>
<th>DESCRIPTION</th>
<th>SAMPLE DELIVERABLES</th>
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| **Governance and Enablers Assessment**      | Assess agency’s preparedness to explore AI solutions that address organizational challenges, establish a governance model for innovating with AI, and create organizational support structures to grow and scale a mature AI program. | • AI Readiness Assessment  
  • AI Maturity Assessment  
  • AI Governance  
  • AI Model Change Management  
  • KPI Development  
  • System Configuration Management and Version Control  
  • Path-to-ATO Report  
  • Agile/Technical Training |
| **Use Case Discovery and Selection**         | Identify opportunities to address operations within the organization, and develop methods to intake, prioritize, and select candidate use cases for AI development efforts. | • Value-Based Strategy Evaluation  
  • Use Case Intake and Evaluation Process  
  • AI Readiness Survey  
  • Use Case Prioritization Models |
| **Process Automation and Workflow Mapping**  | Define as-is business processes to understand human and machine touch points across workflows, implement process automation to shift from low-value to high-value work, and leverage intelligent processes to collect more accurate and reliable data. | • Current and Future State Assessment  
  • Workflow Diagrams  
  • Business Process Improvement Report  
  • Technical Solution Proposal  
  • Critical Dependency and Critical Path Identification  
  • RPA Bots  
  • Intelligent Process Automation  
  • Training and Reference Guides |
| **Lean Innovation Process Design**           | Establish business processes and acquisition tools to promote innovation from within, and techniques to develop and scale AI initiatives from pilot to enterprise solutions. | • Organizational Innovation Strategy  
  • Innovation Pilot Business Model  
  • Agile Acquisition Tools  
  • Technology Transition Process  
  • Transition Cost Calculator |
| **Identification and Implementation of AI Solutions** | Identify and implement technical solutions to address challenges by using AI techniques like predictive analytics, machine learning, deep learning, RPA, natural language processing, computer vision, and recommendation engines. | • AI Suitability Assessment  
  • AI Technology Evaluation  
  • Rapid Prototyping  
  • Training Data Sourcing  
  • Data and Technology Acquisition Support  
  • Explainable AI Report  
  • Model Test, Validation, Verification and Deconfliction  
  • Training and Reference Guides |