Intelligent Automation (IA) enables Artificial Intelligence (AI)

Oil & Gas Industry

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AI is increasing Intelligent Automation use cases

**Where we started**
- RPA
- OCR/IDP
- Chat/NLP

**First expansion**
- No code / Low code
- Process mining
- AI for decisions

**Happening now**
- Content generation
- Text
- Images
- Video
- Software generation
- Content validation
- And more
Potential impact to day-to-day business from intelligent automation

Operational costs decreases by 30% from IA paired with process redesign (by 2024)

>70% of large global enterprises to have 70 concurrent IA initiatives needing governance (by 2024)

50% of enterprises have devised AI orchestration platforms to operationalize AI (by 2025, up from <10% in 2020).

Source: Assorted Gartner Articles

What analysts have said about intelligent automation growth
We’re still just getting started with AI!

**AI Penetration**

- **33%** IT processes
- **28%** Business Processes

Historically, AI supports decision-making and is focused on pattern and exception recognition.

**AI Examples**

- **29%** IT Security and Threat Detection
- **26%** Business Analytics or intelligence
- **22%** Financial Planning and Analysis
- **23%** Fraud Detection
- **22%** Sensor Data Analysis
- **22%** Monitoring and Governance

We’re still just getting started with AI! Historically, AI supports decision-making and is focused on pattern and exception recognition.
The revolution has begun...

THEN
People needed to learn the languages of computers

NOW
Computers have learned to ‘speak’ in our languages

... it’s true impact is still unclear
AI: Guru or Conman

**Business Improvement**

Tracks activities and tells leaders what’s really happening and where to focus for improvement

**Six ‘Bogus’ Citations**

Generate documents containing judicial precedents in support of plaintiff’s case
Three Avenues to start Process Improvement

1. **100% Technology led**
   - Process mining
   - Task capture & mining

2. **Tech + SME led**
   - Leveraging mining tools
   - SME experience

3. **SME led**
   - Traditional LSS approach
   - Manual mining of data & Process information

Data Maturity Levels:
- **High data maturity**
  - Standard processes

- **Medium data maturity**
  - Semi-standard processes

- **Low data maturity**
  - Lack of process standardization
Aggregate your organization’s previously unavailable data
Leverage best-of-breed discovery technologies to identify processes and tasks performed within your organization

How it works

- Identify a targeted area for evaluation, or roll out to the entire enterprise
- Collect system event logs from your applications to help identify end-to-end processes
- Install a recording agent on employee machines to track process and task-related activity
- Run models to identify processes and generate an initial set of process metrics and SOP documentation (PDD)
- Unwanted applications and websites can be blacklisted, to only track what you want
ETL Essentials – Extract, Transform, Load

ETL Essentials are the critical steps to collect, collate, clean, and format application logs from your source systems into a structure that facilitates creation of end-to-end process flows

**Extract**

- Extraction gathers application information from systems used in your processes, both internal and external
- If an exception occurs, ETL Essentials can ask an authorized knowledge worker or application owner to pull the logs

**Transform**

- Transformation manipulated gathered logs into a form that is valuable for the discovery tool
- Transformation can perform calculations and validations, add tags, remove unnecessary information, and formats the information from different systems into one consistent database

**Load**

- Structured information is delivered directly to the discovery tool for analysis
Intelligent Document Processing (IDP)

1. Receive
   - Documents
     - Various formats and languages
     - Handwriting
     - Tables & checkboxes
     - Different quality scans

2. Understand
   - AI-powered processing
   - Digitize
   - Classify
   - Extract
   - Human in the loop
     - Validate the extracted information and handle exceptions

3. Act
   - Automation
     - Initiate other automations
     - Input into system of record
     - Drive other actions

Sample Use Cases

- Invoices from Service Providers are processed automatically with Gen AI and Rules
- Review Environmental Water Reports and upload to regulators after extraction and summary with Gen AI
- Analyze drilling and other data/documents from vendors using LLMs and auto update/act
Modernizing legacy technology with ALEX

ALEX can optimize your interactions with legacy applications that require aging skill sets. Use AI to generate, review, evaluate, and translate code to drastically speed deployment.

<table>
<thead>
<tr>
<th>Activity request</th>
<th>ALEX processing</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application design update</td>
<td>Generate design specs based on the request</td>
<td>Route for design and code review</td>
</tr>
<tr>
<td></td>
<td>Write code in the required language</td>
<td>Retire legacy code and review change management considerations</td>
</tr>
<tr>
<td>Code assessment</td>
<td>Evaluate existing code base</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identify dead code and upgrade considerations</td>
<td></td>
</tr>
<tr>
<td>Code translation</td>
<td>Translate legacy code into modern code</td>
<td>Route for design and code review</td>
</tr>
</tbody>
</table>
Chat with your data

Chat with your data lets you interact with the data that matters to your processes. Submit a structured (or unstructured) prompt to the interface and get direct results.

**Chat with your Data**

**INPUT**
- AI Assistant portal
- MS Teams
- WhatsApp
- Text

**PROCESSING**
- Select model to be used
- Enable structured or unstructured prompts
- Train model on your data

**Output**
- Write back to your systems of record
- Generate documentation
- Respond to requestor
Risk Analysis
AI will help you leverage your contract data

Contract management solution uses AI, Natural Language Processing (NLP), and RPA to retrieve vendor contracts, read contract data, and update or create the customer record in a procurement system.

**Benefits**

- **Better Contract Management**: Improved contract tracking, renewal, and compliance management.
- **Improved Vendor Evaluation**: Measuring vendor performance against contract requirements.
- **Accurate Financial Forecasting**: Better optimization of budget allocation strategies.
- **Effective Risk Management**: Mitigate potential risks associated with vendor relationships.

**Industry Impact**

- Missed deadlines or slowed negotiations costs companies 9.2% of bottom line.
- Poor vendor performance can contribute to 15-20% higher costs.
- Average cost of a data breach is $4.45 million.
- In 2017, over 900 regulatory agencies issued a combined 200+ regulatory updates, every day.

**Automation Tech**: RPA powered by ReportBotz+ pre-built solution

**Automation Tech**: AI / Natural Language Processing (NLP) solution

**Automation Tech**: RPA powered by ReportBotz+ pre-built solution

**Start**

- Solution retrieves vendor contracts from Lucernex

**End**

- Create new (or update existing) vendor in a system using contract data.
The Summarizer: The AI Solution

The Summarizer is a standardized, extensible, AI based framework which is focused on generating the summary of text fed to it. It is customized to ingest a rule engine to find the relevant articles before summarizing them using the desired styling guide.

Pre-Processing Stage
- Web Watcher
- Receive & Retrieve
- De Duplication
- Data Extraction & Keyword Chk

AI Processing Engine
- Summarize
- Apply Style Guide
- Relevancy Check
- Retrieve Configuration

Post-Processing Stage
- Summary
- Finetune Stage
  - Detect
  - Re-Train²

Process Stages
- Deliver results
- Reviewer
- Feedback
- RPA

Finetune Stages
- Pre-Processing Stage
- AI Processing Engine
- Post-Processing Stage

Custom Code
- RPA
- Custom Code

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Important practices to adopt

AI is part of Intelligent Automation

Authenticate, curate, and protect your data

Craft your AI prompts wisely

Verify AI results using expertise and/or independent sources

Use AI as part of integrated intelligent automation for end-to-end processing, not just for knowledge worker tasks

• Exposing confidential information to public AI models is inviting a breach
• Audit trails for compliance

• Leading questions bake in bias
• Perhaps, models should have their own identity

• Treat AI as a person you’ve just met
• AI may help validate other AI results
Let’s stay in touch!

Thank you!

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