Business Process Automation
Journey to AI

Day 1
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Agenda

• Introduction to BPA and AI
• Journey to AI
• Robotic Process Automation
• RPA methodology and our project experiences
• Example of full automation with IBM - Woodside

*Business Process Automation (BPA)
*Artificial Intelligence (AI)
Introduction to BPA and AI

Business Process Automation Journey to Artificial Intelligence

BPA toolsets vary in sophistication, but there is an increasing trend towards the use of AI technologies that can:

- Understand natural language and unstructured data sets
- Interact with human beings
- Adapt to new types of problems without human-guided training

Approach 1:

provide the shortest route to automation by exploiting the user interface layer rather than going deeply into the application code or databases sitting behind them.

**PRO**: speed of development

**CONTRA**: another IT supplier in the organization

Approach 2:

simplify BPA toolset interface to the extent that these tools can be used directly by non-technically qualified staff.
IBM has **Automation Centres of Excellence** located in strategic centres globally, with regional process expertise and Cloud Hosting locations in Europe.
Business Process Automation (BPA)
technology-enabled automation of complex business processes

- Increase Service Quality
- Achieve Digital Transformation
- Streamline Business for Simplicity
- Improve Service Delivery
- Reduce Costs

- Using Software Applications Throughout the Organization
- Integrating Applications
- Restructuring Labor Resources
IBM's Automation Journey to AI

Desktop Automation
- Scripting
- Workflow
- Macros

Robotic Process Automation
- Clear, object based rules
- Standard and simple rules
- Extensible and adaptive pre-built process object libraries
- Global robotics command center and dedicated SMEs

Autonomic Process Automation
- Extension of RPA capabilities by addressing common obstacles of unstructured data and complex rules
- Example: Datacap-driven unstructured data processing with WPM (Watson Policy Manager) enabled automation for complex rules

Cognitive/Intelligent Automation
- Autonomous decision-making ("reasoning and remembering")
- New insights and data discovery ("learning")
- Personal and interactive support ("engagement")
- Insight-driven knowledge
- Industry-specific virtual assistants
- Example: Cognitive Buy Assistant

Simple Transactional Data | Structured Data/Simple Rules | Unstructured Data/Complex Rules | RPA Meets Cognitive Computing
Robotic Process Automation (RPA)
emerging field within BPA and uses artificial intelligence

What is Robotics?

Computer software which provides a Virtualised FTE that can manipulate, operate, and orchestrate other applications, follow business rules, and execute transactions...

...Doing with technology what humans would normally do... but faster and better
Automation won’t destroy all jobs,
but it will transform many of the jobs as we know them today...

By 2019
Robotics will change 25% of every job category
Source: Forrester Research
**Automation Goal:**
Digitized, Intelligent, Integrated Processes
Available Anytime, Anywhere

**Automation Obstacles:**
Many!
Process Selection and Outcomes
for Robotics Process Automation

Best Fit Process Criteria

- Processes with high error rate
- Digitized data
- Standardized / Structured data
- Fluctuation in demand/backlog
- Processes with high cycle times
- Processes with high FTEs

Benefits

- Orchestration of the Virtual Workforce across processes
- Eliminate human errors
- Enhanced response & remediation times
- On-demand scalability
- Retained teams focus on higher-value work/exceptions
- Process Compliance and Audit Tracking
- Up to 5x increased efficiency and 24x7 operational capability
- Cost reduction

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# IBM’s Global Implementation Approach
For Robotics Process Automation

## Design Stage (incl. Design Workshops)
1. **Understand**
   - Identify key stakeholders and processes
   - Share pre-requisite for robot implementation (process and IT)
   - Identify opportunities for automation and innovation
   - Understand process pain points / inefficiencies / specifics
   - Review as-is process maps & documentation

2. **Explore**
   - Perform process walkthrough & capture details in Process Activity & Attribute Template
   - Work with best possible solutions and prioritise
   - Create benefit analysis, detailed Process Definition Document(s) (PDD) and To be maps for selected processes
   - Define PoC success criteria and IT / system requirements

3. **Prototype (PoC)**
   - Prepare development & test environment
   - Create / Finalise Solution Design Document(s) (SDD) for selected prototype(s)
   - Develop functional prototype based on SDD & PDD
   - Perform system integration analysis

4. **Evaluate**
   - Test with sponsor users from business, process mgt. and IT
   - Playback test results and synthesize learning
   - Make sure production environment in prepared

5. **Implement & Evaluate**
   - Set up production environment and release robot(s)
   - Monitor robot in production and bug fixing if required
   - Validate robot (performance) against PoC success criteria

6. **Continued Deployment**
   - Build automation roadmap
   - Identify further processes to automate
   - Develop robots
   - Implement & support
   - Set Up an Automation Centre of Excellence

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<th>PILOT</th>
<th>PRODUCTION</th>
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<tr>
<td>1. Understand</td>
<td>5. Implement &amp; Evaluate</td>
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<td>2. Explore</td>
<td>6. Continued Deployment</td>
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<td>3. Prototype (PoC)</td>
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<td>4. Evaluate</td>
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<td>Opportunity discovery</td>
<td>Deploy</td>
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<td>Feasibility assessment</td>
<td>Not part of PoC</td>
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<td>Develop</td>
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<td>Design Stage (incl. Design Workshops)</td>
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Robotic Process Automation

Manual Work  |  Attended or Front Office Robot  |  Unattended or Back Office Robot

Business Process Automation with RPA
RPA Factory
Delivery Method using sprints

Weekly Sprints

Daily review

Process Analysis

Business Users

RPA Development Team

RPA automated business processes
Woodside: BPA and AI example with IBM Watson

NEW YORK CITY & MELBOURNE, AUSTRALIA - 27 May 2015: IBM (NYSE: IBM) and Woodside today announced they will use IBM Watson as part of the oil and gas company’s next steps in data science.

Source: Woodside website

https://www.youtube.com/watch?v=plPhzpXLE0
Thank you

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