Link ‘n’ Learn 2018 – RPA (Robotics)
8th November 2018
Getting Started

Here with you today

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Agenda

1. What is RPA? What are the challenges? Why is RPA relevant?
2. RPA Today – RPA tomorrow
3. RPA what are the challenges and insights from the expert
4. RPA applications to the IM industry
5. Case Studies
6. Conclusions
7. Q & A
What’s happening in the Investment Management Industry?
The Investment Management industry is undergoing a secular transformation with traditional business models being challenged by multiple factors

1. **Challenging Industry Economics**
   - **Challenges:** Limited organic growth, fee and margin compression
   - **Business Question:** How can we generate additional alpha and make operations more cost-effective?

2. **Evolving Customer Demands**
   - **Challenges:** Appropriate products, pricing strategy and channels
   - **Business Question:** What services do we offer to stay competitive in the market?

3. **Disruptive Technologies**
   - **Challenges:** New competitors, cognitive technology, cloud and blockchain
   - **Business Question:** How should we meet the technical wave and which are the technologies that are worth the investment?

4. **Regulatory Headwinds**
   - **Challenges:** Substance requirements, investor protection, regulatory oversight and data protection
   - **Business Question:** How can we best meet the wave of regulatory requirements?
Market factors are putting cost pressures on Investment Management firms...

- Commoditisation of products and services
- Competition from traditional players and new entrants
- Higher regulatory burdens

... winning firms will deploy lean and agile operating models to compete successfully

Cost pressures

Operational Efficiency

Offshoring

Lean & Agile Organisation

Process Outsourcing/Smart Sourcing

Functional Outsourcing/Sale
What is Robotic Process Automation (RPA) and how can it help Investment Management firms?
**What is Robotic Process Automation?**

RPA is the use of software, configured to perform rules-based (deterministic) tasks, to replicate the actions of a human user interacting with applications.

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Robots are...

- Computer-coded software
- **Programs imitating human interaction with applications**
- Cross-functional and cross application software
- Agile and non-invasive, works with existing IT architecture
- Virtual workforce
- Owned by business operations

Which can interact with all application types...

- ERP
- BPMS
- Windows
- Citrix
- Mainframe
- O

Robots like processes that are...

- Rule-based & repetitive
- Based on structured input data
- Mid-to-high transactional volume
- Prone to human error
- Low exception rates and process variation
- Fluctuating demand
- Multiple systems
Why Adopt RPA?
Benefits from automation vary greatly depending on the process and its complexity; regardless, the benefits can be significant.

Why adopt RPA?

**Efficiency & Quality**
- Robots perform tasks with a high degree of accuracy and operate 24x7 leading to high-throughput
- RPA streamlines, standardizes and optimizes the processes, improving quality and reducing costs
- A process can be automated quickly, reducing reliance on recruitment to handle workload spikes
- Process automation helps engage talent by freeing up capacity to develop new competencies and build expertise
- RPA opens new doors for insourcing processes by providing greater control over service delivery model

**Scalability & Expertise**
- Robotic platforms are secure, audited and managed within an IT corridor of governance
- Process automation enables improved quality/consistency of data, that can result in better analytics, insights and increased revenue
- RPA has a short payback period since robots drive existing applications with low integration costs
- RPA provides high potential ROI which can be leveraged to drive critical initiatives

**Improved Metrics**
- FTE repurposing
- Rate of return
- Break even time
- Productivity
- Increased capacity
- Accuracy
- “Right First Time”
- Turn around time
- Reduction or improvement in process specific metrics, e.g. revenue leakage, processing time
Is RPA the same as Cognitive or Artificial Intelligence? No, but the tools sit on the same spectrum.

The Automation Spectrum

- **Robotic Process Automation (RPA)**
  - "Mimics Human Actions"
  - Rules based processes
  - Structured data entry across multiple systems
  - Enables faster processing time, higher volumes and reduced errors

- **Cognitive Automation**
  - "Mimics/Augments Quantitative Human Judgement"
  - Interprets human behavior / judgement
  - Capabilities include natural language processing, natural language generation, machine learning, cognitive analytics, sensing

- **Artificial Intelligence**
  - "Augments Human Intelligence"
  - Predictive decision making
  - Dynamic self-adaptable and self-managing capabilities
  - Examples include Chat Bots, Virtual Assistants and Robo-Advisors

- **Turing Test Definition** - "A test for intelligence in a computer, requiring that a human being should be unable to distinguish the machine from another human being by using the replies to questions put to both"

Sample Vendors

- blueprism
- UiPath
- Redwood
- AutomationAnywhere
- NarrativeScience
- chatterboxlabs
- ARRIA
- Workfusion
- AYASDI
- Vpneuron
- semantify
- IBM Watson
- MIT CSAIL
- Soft
- Fast Forward Labs
- Beyond Limits
- Google DeepMind
- AlchemyAPI
- Digital Reasoning
- vicarious

Level of maturity
RPA Today – RPA tomorrow
RPA technology evolves rapidly...

**Today**
- Rules-based automation
- Human exception handling
- Scheduled or event-driven tools
- UI interface based on objects on screen
- Failed robots stop working
- Mostly standalone RPA products
- ...

**Tomorrow**
- Rules-, AI/ML-, and analytics-based automations
- AI and human exception handling
- UI interface aided by computer vision
- Failed robots will run self-diagnostics and self heal
- RPA platforms integrated with complimentary solutions such as BPM or AI

Source: Everest Group, April 2018, Robotic Process Automation (RPA) – Technology Vendor Landscape with Products PEAK Matrix™ Assessment 2018
...and integrates increasing cognitive capabilities

- Text analytics / NLP
- Multi-tenancy
- Process-level business intelligence
- Auto-scalability
- Security
- Intelligent workload balancing

Examples

- Strong vision to build an integrated digital workforce platform
- Expand automation with cognitive and BPM capabilities
- Offers reusable and modules features, enhancements in security features
- IQ Bot product and recent integration of NLP to boost features
- Offers proprietary algorithms and computer vision for UI element identification
- Expanding ecosystem of technology partners (Elasticsearch, Abbyy, Celonis, ...)
- Focus on integrating AI/cognitive capabilities to either provide a more integrated solution

Source: Everest Group, April 2018, Robotic Process Automation (RPA) – Technology Vendor Landscape with Products PEAK Matrix™ Assessment 2018
RPA what are the challenges and insights from the expert
The value of the work done by robots is proven

However organizational barriers are slowing down the adoption trend

Priorities

- Increased productivity
- Improved customer experience
- Happier workforce

Outcomes

Organisations are still struggling to scale robotic process automation

- 4% managed to scale their RPA strategies in 2018
- Increase from last year: 1%

Barriers

- Process fragmentation
- Lack of IT readiness
- Lack of clear vision

Source: *The robots are waiting* | Are you ready to reap the benefits? Deloitte (2018)
RPA is not an IT-only story, as it will impact various functions within your organization...

**People**
- Long-term HR/people strategy based on RPA and therefore changing skill requirements; Adjusted training and development structures regarding changing workforce structure

**Technology**
- Long-term RPA technology strategy, embedding RPA within existing IT architecture and lifecycle management of RPA solutions; RPA security concept

**Processes**
- Definition of workflows such as RPA demand processes; Compliance-related workflow impacts incl. ICS, audit procedures, additional management review controls

**Organization**
- Organizational setup based on increased use of RPA solutions (e.g. potential introduction of RPA CoE organization)

**Roles & responsibilities**
- Role split between major organizational areas such as IT, Shared Services, internal audit, functional departments as well as role descriptions for new RPA-related positions

**Governance**
- Impact and definition of governance bodies, management of external technology partners (incl. license management) and governance concept for ongoing process changes due to RPA
...Consequently, change management-aspects need to be considered whilst a series of pitfalls should be avoided considering that RPA is not the solution to all problems.

**Deloitte RPA adoption process**

1. Identify opportunities and create awareness
   - Create awareness amongst employees and assess opportunities

2. Prove the concept
   - Trial the use of robotics RPA and prove the business value, test in production

3. Assess, strategize and plan
   - Socialize the value and ascertain the scope, applicability, and impact of wider robotics rollout; build out capabilities and move first PoC into production

4. Deploy
   - Deploy strategically across the organization value chain achieving maximum benefit and automation for stakeholders

5. Integrate & evolve
   - Incorporate robotics into the core DNA of the organization and operate controlled continuous improvement

**Pitfalls to be avoided in RPA projects**

- **The Shotgun Approach**
  - RPA is applied on all kinds of processes, but not all processes are equally suitable for RPA
  - The potential for frustration in implementation is high as automation may become a bumpy task

- **The Silver Bullet Myth**
  - Using RPA to automate tasks within one application, potentially results in a re-invention of the wheel as the application itself hosts the required features already
  - This causes inefficient process execution during Robot runtime

- **The Digital Anarchy Scenario**
  - Companies have no experience how to integrate the new – virtual – workforce into their organization
  - Thus, the integration is disregarded and postponed, resulting in a vacuum of ownership and governance

- **The Total Euphoria Phenomenon**
  - Although RPA products are user-friendly, there will still be a learning curve
  - Keep a more conservative perspective and be prepared to handle any glitches that may occur

- **The Lone Voice Dilemma**
  - Successful pilot projects often flop because they lack widespread support
  - Even if initially successful, without a clear strategy to scale the robot workforce and build a solid operating model around it, a pilot can fail in hindsight
From our experience, valuable RPA implementation are due to key success factors

1. **Do not automate broken processes**
   Processes should be amended and made as efficient as possible before implementing robotics.

2. **Conduct robust testing**
   Business process testing is required to ensure that any issues which the robot may have when determining the next step can be identified. This is to ensure that the robot can 'have their eyes open' during the process.

3. **Ensure vendor and business vision alignment**
   The chosen IT vendor should meet the long term process automation requirements of the business.

4. **Monitor the quality of the outputs and invest heavily in exceptions management**
   The quality of the outputs from the robots must be continuously monitored to ensure that they are trustworthy. It is important to invest heavily in exceptions management for quality purposes.

5. **Consider wider strategic technology initiatives**
   Selected automation of process should align with broader technological investment in the client’s overall IT strategy.

6. **Have a strong checklist in place regarding infrastructure and compliance requirements**
   Ensure that the correct infrastructure is in place and compliance requirements have been met early on in the project.

7. **Invest in comprehensive stakeholder management**
   Stakeholders need to be engaged from the programme’s outset to ensure effective buy-in, collaboration and adoption of changes.

8. **Agree on up-front approach to measuring and tracking benefits delivered**
   Strong focus should be afforded to ensure benefits of robotics are tracked and understood, with a detailed approach to measurement agreed prior to implementation.
RPA applications to the IM industry
Most firms are looking to RPA as a means to free-up capacity especially within the Reconciliations, Client Reporting & Finance groups due to sheer scale of manual work involved.

The Investment Management value chain below is a starting point to identify automation opportunities.
RPA – Case studies
## Recent examples of RPA Projects in IM industry (1/2)

### Global Asset Servicing Company

**Issue**
- The Local entity is required to reduce costs of operations
- A global RPA project exists where the entity is not yet prioritized
- The COO requested to get a clear description of the value RPA can bring across the operational departments and a business case to position the local entity within the global project timeline

**Services provided & solution**
- Initiative Identified automation benefits (potential leverage in other sites, risk reduction, etc.) and assessed automation complexity for identified process candidates
- Created a prioritization matrix for automation
- Developed automation business case

**Value delivered**
- Provided full overview of company's RPA potential resulting in a long list of ca. 150 candidate processes
- Pre-selected 25 process candidates with most impact covering more than 20 FTEs
- Developed business case for automation (potential saving of €4.2m within first 3 years) and corresponding roadmap

### Assets Services (in a Private Bank)

**Issue**
- The Client initiated a RPA program to lower costs, improve efficiency as well as quality, and decrease risks
- The Client identified 3 processes which they would like to deploy in a pilot phase and then 50+ others in production
- Objectives: to develop and deploy in production the first robots, set up the foundation of a governance structure dedicated to RPA as well as ensure the Client's staff gains in RPA expertise

**Services provided & solution**
- A mixt team of developers
- Implementation of 3 pilot processes already identified with Automation Anyhwere
- Set up of a framework to assess Deloitte provided assistance in implementing a RPA governance, including a training plan on AA, defining the best RPA operating model and determining KPI tools
- 6 months of support during industrialization phase

**Value delivered**
- 25+ robots in production
- Reduction of costs
- Redeployment of 7 FTEs to higher value added activities
- Increase in efficiency of execution of processes
- RPA Awareness initiated across the client entities such as Asset Management service line
Recent examples of RPA Projects in IM industry (2/2)

### Asset Management

#### Issue

- Demonstrate through a proof-of-concept the added value of RPA to cover operational tasks and regulatory duties in Fund Administration department.
- Process selected: BCL reporting (i.e.: TPT, S213)

#### Services provided & solution

- Process selected: BCL reporting (i.e.: TPT, S213)
- Technology: UiPath
- Process review and new operational flow designed

#### Value delivered

- Partial automation and automatic running of 1 selected report processing
- Decrease average processing time
- Free up accountants from execution
- Avoid backlog and BCL reminders
- Mitigate reputational risk

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### Reports download from Central Administration website

#### Issue

- Downloading large volume of accounting reports for Audit purpose from Central Administration website.
- For each subfund and each report (10) fill parameters to generate the report and get the download link.

#### Services provided & solution

- Implementation of an automated process, to connect on the platform, fill the parameters for each report and subfund, generate the reports, download and store the reports on the network.
- Send by email, the download instructions (subfunds and reports list) in a template file
- Download feedback report send to the user
- Technology: UiPath

#### Value delivered

- Consequent time saving
- Efficiency gain (no more human error)
- All downloads required for Audit season completed more than 2 weeks earlier with only one Robot working only during the night.
Conclusion
In the IM industry, Competitors are aggressively moving to adopt robotics and cognitive automation enterprise-wide

To maintain your competitive advantage, we recommend adopting an enterprise-wide view on automation

Key Stages Of The Automation Journey

**THINK BIG**

- Target Operating Model
- Investment Case
- Delivery Methodology
- RPA Playbook

**START SMALL**

- Pilot Deployments
- RPA Roadmap
- RPA Environment Set-up

**PRODUCTION & SCALE**

- Production Licenses
- Enterprise Infrastructure solution
- Enterprise Investment Case
- Enterprise Roll-out Roadmap

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Establish Your Vision / Strategy

- I understand how RPA can work in your organization, and where to start
- I have an initial repeatable methodology to design & deliver RPA
- I know how to be organizationally structured to deliver RPA effectively

Develop, Test & Refine a Standard Approach

- I understand the Technology requirements to govern RPA in production
- I have validated our approach and refined the organizations' thinking on delivering RPA
- I have plan to scale RPA across the Enterprise

Enterprise Scale

- I have an Enterprise virtual workforce in production
- I have revised our roadmap, delivery methodology, governance and investment case to fully reflect a Business-As-Usual operating environment
- I understand how to leverage RPA to enhance analytics

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Deloitte has a global professional services presence in Robotics to deliver large scale robotics-enabled transformation, which make us the leading firm in the field.

Scalable resource pool
We have knowledgeable local resources with proven experience in RPA project planning and implementation to response to Deutsche Bank requirements. Moreover, we have a large global footprint and resource pool to tap from on demand.

System-agnostic RPA solution implementations
We are software agnostic but maintain strong alliances with the most relevant providers in the market, with each of whom we have also carried out multiple RPA implementation projects.

Broad functional expertise
We bring in the business understanding needed for successful automation of processes throughout the bank, from core business (Advisory, custody, etc.) to support functions (HR, Finance, etc.).

We have been awarded for everything you are looking for:

- Deloitte ranks No.1 in Global Consulting
- Deloitte ranks #1 in Global Strategy and Operations Consulting
- Deloitte ranks #2 in Global HR Consulting and #3 in Global IT Consulting

Sources: ALM Intelligence Global Consulting Index

Deloitte’s leading position in the competitive landscape is supported by:
- Client knowledge
- Industry knowledge
- Consulting skills and methodologies
- Collaborative and value-added approach
- Broad team expertise
Q&A
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