### **Process Automation**

A New Horizon in Managing Cost and Risk





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# The topics to be covered today

- 01. Process Reengineering
- **02.** Process Automation
- **03.** Intelligent Automation
- **04.** Getting started with AI
- **05.** A potential approach for implementing Process Automation

### **06.** Process Automation impact on Risk Management



### **Process Reengineering**



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### Presently many organisations are struggling with increased cost and risk

- In the current global environment, many organisations are facing significant operational challenges:
  - Inflation leading to increased costs
  - Greater workforce instability and low unemployment levels
  - Increased regulatory overhead
  - Changes to globalisation
- So, what can be done about this? Intelligent approaches include
  - Removing waste
  - Standardising and simplifying business processes
  - Improving process controls
  - Exploring AI-powered tools

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#### Process reengineering has been around for a long-time, but AI is changing the way it can be used. Simply put - it broadens the solution set.



### One response to these pressures is process reengineering

- Process reengineering is the analysis and subsequent transformation of given business processes
- Process reengineering redefines how your processes work
- There are many potential benefits to process reengineering:
  - Improved efficiency (and therefore cost reduction)
  - Product quality improvement and enhanced customer satisfaction
  - Increased agility, flexibility, and innovation
  - Improved employee engagement
  - Better alignment with business goals
  - Creates a competitive advantage
- One of the more powerful process reengineering tools today is **process automation**, and its impact is only going to grow



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### Process reengineering takes standard process improvement to a whole new level. The details captured as a part of this process are considerably more suitable for automation purposes



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### Modern process reengineering incorporates Lean, process automation, and a range of risk management perspectives. For instance

- Removing waste such as
  - Errors (e.g. application of the wrong rules)
  - Unnecessary process steps (e.g. collecting data that is not needed)
  - Duplication
  - Rework
  - Avoidable search activity (e.g. taking time to find the right information)
  - Failure demand (work that results in a failure of the organisation to do something, such as put critical information on a web-site)
  - Delays (wait-time for customers)
  - Having the job done by the wrong role (e.g. complex work routed to the newest staff member)
- Designing processes which work for sub-categories of work (for instance processes simple applications might involve a different process to complex applications)
- Place controls at the start of a process rather than the end minimise potentially wasted effort





### The 14 office wastes still apply



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### Process reengineering can overlap substantially with operating model design

- A telecom brand was struggling with their customer service team receiving only 'high-needs' call from customers
- Customers were frustrated by the single call queue and complex IVR tree
- Instead of incremental improvement the decision was made to completely re-design the customer service team
- They implemented a Team of Experts (TEX) model
  - Organised cross-functional groups according to region
  - Each representative trained to manage calls from start to finish
- Representative performance evaluation was also redesigned to champion innovation and initiative
- The result was a 13% reduction in cost to serve and a 21% reduction in calls per account.





**Process Automation** 







### What do we 'traditionally' mean by process automation?

- Process automation refers to a group of technologies involved in the pursuit of eliminating manual human intervention in business processes
- The most prevalent form of automation is, of course, the software application
- However, two other prominent technologies for process automation are Robotic Process Automation (RPA) and Application Programming Interface (API) automation
- Naturally, each technology has its own uses, advantages and challenges



**RPA** – Use of robots / agents to complete tasks by emulating human-like behaviour in a system



### An API-based approach is different from what many would typically consider when thinking of process automation



- An API is a set of established protocols/codes/definitions which dictate how certain systems or applications interact with each other
- It can be thought of as a 'mediator' between two separate systems (or websites) and facilitate the transfer of data between them
  - Importantly, APIs enable services to interact with others without learning how they apply to one another
- Integration of system APIs reduces the need for human intervention by allowing systems to communicate directly
  - I.e. eliminating the need for manual data entry which is expensive, time consuming, and error prone
- Example: an ERP may be required to share information between GL software, a CRM platform, and a data warehouse. Proper utilisation of APIs allows this back-and-forth data transfer to occur behind the scenes without manual input



### RPA is already considered a 'traditional' form of process automation

- RPA bots are designed to interact with applications and processes in the same way a human would to complete a task
- They 'emulate' human actions according to a pre-defined series of instructions or steps to achieve an outcome without the need for human intervention
- Typical targets for RPA are standardised, repetitive, mundane and/or tedious tasks such as:
  - Processing invoices and applications
  - Sending reminders to customers via text
  - Fraud detection
  - Payment execution
- Example: invoice-entry process
  - Opening and scanning emails
  - Downloading invoice attachments
  - Reading and copying key data from attachments
- Ultimately frees up staff to complete higher value work
- Works better when combined with process reengineering





There are many existing vendors who provide packaged RPA solutions for a variety of different business cases



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#### Case study: Australian energy retailer

- An energy retailer in Australia was having trouble with paper-based, manual transactional billing processes resulting in opportunity cost and a higher than acceptable error rate
- The retailer enacted an RPA-based response
- 280 bots within a growing library were used to automate transactional billing processes resulting in:
  - \$650,000 benefits realised and 80% of processes automated in 1 year
  - Error rates were reduced to below 5%, this was a massive reduction in errors
  - Average transaction processing time decreased by 20%
- Ultimately this retailer enjoyed a 163% ROI valued at \$2.3m per annum





### Intelligent Automation



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### Process Automation takes on a whole new meaning when it is AI-driven

Utilising AI in Process Automation doesn't simply mean automating the steps, but rather viewing the way to achieve the overall objective in a new light



When processing claims, IA can:

- Compile and analyse data using machine learning to automatically generate accurate client files
- Interpret a larger variety of customer/member responses without needing to involve a human for review

Some organisations are leveraging IA to improve onboarding / off-boarding processes.

- Pre-populate digital forms with information already present in HR systems
- Automatically apply business rules and decide which contact paragraphs are appropriate

### The process of robotic process automation is being altered with AI

Robotic Process Automation (RPA) has evolved into Intelligent Automation

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- Alternatively, "automation + decisioning"
- How we collect and identify opportunities is changing
  - Some companies are using AI combined with data crawlers to automatically identify efficiency uplift opportunities (e.g. Aera technologies), however this is limited to processes where data can be collected for analysis

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• Automation and optimization of business processes for increased efficiency

#### However, there are frustrating limitations to traditional RPA process automation

- The benefits of RPA are often limited to minor business processes due to their inability to manage more nuanced workloads
- The same rules that enhance RPA's efficiency limit its ability to tackle more complex tasks
  - For example, if a customer fills out a straight through processed form incorrectly, RPA may be unable to interpret it as it falls outside of its rigid rules, therefore creating manual work for a human
- RPA can make a process more efficient, but it does not itself improve the fundamentals of the underlying process
- RPA can "break" if an underlying system changes





### Intelligent Automation can help with waste reduction but can also automate value added activities.

- If an RPA agent can
  - Open and scan emails
  - Download invoice attachments
  - Read and copy key data from attachments
- An Intelligent Automation agent can
  - Summarise the information
  - Apply rules
  - Prepare an email or letter
  - Change the status on a file
- To a modern process engineer the RPA agent is removing waste, while the Intelligent Automation agent is assisting the human in value added activity



### Microsoft Copilot is an example of intelligent automation that is likely to be both accessible and relevant for many organisations

#### How does Copilot work?

Constructing a first-draft presentation from an email chain

- 1. A request is issued to Copilot from within PowerPoint to draft a presentation based on an email chain
- 2. Copilot uses the request to retrieve the relevant data from the Microsoft Graph (in this case the emails)
- 3. The emails and request are passed to a Large Language Model (LMM, in this case GPT-4) which constructs natural language content
- 4. LLM generates content from the emails as natural language
- 5. Content is compared against the Microsoft Graph to sense-check
- 6. Finally, Copilot actions the request in PowerPoint; building, formatting and populating a draft presentation based on the contents of the email chain



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### Microsoft Copilot: a potential example of ubiquitous AI

- Announced in March 2023, currently in early access
- Integrates with Outlook, Word, Excel, PPT, Teams, OneNote and possibly more 365 apps
- Currently in testing with expected release later this year
- Likely an additional cost beyond Enterprise subscription (~\$30 per user per month)
- How will it work?
  - **Copilot in Word** writes, edits, summarizes and creates right alongside people as they work.
  - Copilot in PowerPoint enables the creation process by turning ideas into a designed presentation through natural language commands.
  - Copilot in Excel helps unlock insights, identify trends or create professional-looking data visualisations in a fraction of the time.
  - **Copilot in Outlook** can help synthesize and manage the inbox to allow more time to be spent on communication.
  - Copilot in Teams makes meetings more productive with real-time summaries and action items directly in the context of the conversation.
  - Copilot in Power Platform will help developers of all skill levels accelerate, streamline development with low-code tools with the introduction of two new capabilities within Power Apps and Power Virtual Agents (provides accessible workflow automation).
  - **Business Chat (in Teams)** brings together data from across documents, presentations, email, calendar, notes and contacts to help summarise chats, write emails, find key dates or even write a plan based on other project files.

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There is already an abundance of AI tools, with more being developed constantly (as many as one new tool released per day)



### **Today's Enterprise Automation Software Landscape**

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#### Information inflow is outpacing our ability to create

#### What people want that AI can deliver



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23 Source: Microsoft Work Trend Index 2023

### Getting started with AI







### Amara's Law

### "We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run"



### There are three sensible approaches emerging for an AI response

#### Al architecture, meaning how you remain safe when implementing Al powered solutions

#### **Determining where to deploy AI:**

- 1. Scenario Planning Understanding context and selecting common strategies
- 2. Value Driver Trees Choosing which levers to pull
- 3. Getting the detail Understanding which processes or manual steps will significantly change or disappear

### Getting your Operating Model right so you can leverage the power of AI

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### Despite the potential of AI-powered solutions, there are important considerations that must be made in the interest of safety

Outcome = Faster growth

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### **Artificial Intelligence Architecture**



A potential approach for implementing Process Automation



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### Implementing process reengineering and process automation simultaneously creates stronger outcomes

- If you automate without considering the 'big picture' process, you might be 'missing the forest for the trees' and leaving potential efficiencies unrealised
- You could automate a second check in the process, but it is still duplicated effort in the new process
- You might be collecting data that is not useful, it would be a waste of resources to automate this collection



Automation can give you the ability to remove unnecessary process steps

e.g. a four-eye check becomes unnecessary - a robot is incapable of 'human error'



e.g. onboarding process can be integrated together rather than being split across HR, IT and Security departments - robots do NOT leak sensitive information.

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#### Intelligent human decisions are necessary to decide where to focus your AI efforts



30 Source: Microsoft Work Trend Index 2023, Bevington Group

There are key steps that should be followed when moving to implement a process automationbased solution

> Determine which processes you want enhance with automation

#### Process reengineering

Create a detailed process map to understand the current state

Reengineer the process as appropriate before automating

Determine which specific parts of the new business process will be automated

Implement the chosen solution

Capitalising on the opportunity to reengineer a process before automation could drastically improve the quality of the outcome

This is an important opportunity for innovation, be creative with how and what you choose to automate



### Intelligent process automation case study: Health insurance

- A health insurance company wanted to digitise their processing of health insurance claims (they received approximately 100,000 per day) thereby increasing member satisfaction and improving plan quality ratings
- They engaged a long time IT and operations partner to implement a cloud-based intelligent process automation solution
- More than 2,000 bots augmenting the workforce resulted in a 600% increase in claims processing
- Approximately 95% of claims were processed automatically by the bots with a success rate of 99%





Process Automation will also dramatically impact Risk Management





### There are fundamental impacts that AI and process automation will have on the way we manage risk

- Automated processes may have an inherently lower "risk of error"
  - However, training and testing of Intelligent Agents is a fundamental precursor to achieving this outcome
- Automated processes may change how and where compliance testing is done
  - Compliance checks themselves can be automated
  - Compliance checks can become increasingly real-time rather than post hoc
- Specific risks can be identified in advance e.g. probability of financial stress or default
- Responses to specific risks can be faster
  - Notification of key decision maker
  - Preparing required materials for the decision maker to make an informed assessment
  - Preparing response materials (e.g. letter, email or phone script).





### Automated compliance augments the reliability and efficiency of "checks and balances"

- What is it?
  - Traditionally compliance procedures are a slow but necessary bottleneck pushed as far along the process as possible to minimise their impact on overall efficiency (which can be counter-productive)
  - In automated compliance, checks are incorporated into the process itself (not an after-thought)
  - Checks are applied throughout the process stages without the need for human intervention

### • What does it do?

- Helps identify issues faster so they can be resolved immediately
- The earlier a problem is found the less damage is done
- Reduced rework in response to an output not meeting regulatory standards
- Improved quality, speed and agility of outcomes by helping you avoid compliance breaches

### Real world examples:

- Enabling IT teams to respond faster to market changes and evolving business needs
- Streamlining practitioner ID checks, prescriptions and transplant organ movements





### However, risks benefits may depend on "good training"

- RPA bots do not require any "training" to provide real benefit to an organisation, however, to leverage the additional power of Intelligent Automation effective "training" is essential
- Training an AI agent is a time and resource intensive process with several key aspects beyond the actual "training":

#### Data collection

Training an AI agent requires material quantities of real-world data

#### Data pre-processing

Messy raw data is "improved"

#### **Model selection**

The correct choice depends on different factors: problem complexity, available data, desired accuracy, etc.

#### Validation and testing

Any AI model requires extensive validation and testing to ensure it functions as intended

• Depending on your specific use case, it may be better to utilise some of the readily available pre-trained AI (e.g. GPT-4, PaLM2, etc.)



### **Concluding remarks**



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### The data needs for process automation are often different, and potentially less demanding, than other forms of AI implementation (e.g. customer segmentation models)

- All forms of training for AI will require some form of data. So, an absence of clean data becomes an impediment
- However, tactical data implications of specific RPA or IA use cases may be relatively data light (e.g. transcribing information, preparing simple information packages or applying compliance rules)
- This means that while many organisations have, necessarily, started to improve their data architectures, there are still considerable opportunities to apply the new technologies while this activity is in train
- Process reengineering, with RPA or Intelligent Automation, may provide improvement opportunities while the data is being restructured





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### Let's Talk

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Lean Process Reengineering



Change Management



**Accelerated Implementation** 

Process Automation, Digitisation & Workflow



**Risk Intelligence** 

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### Appendix

Getting started with AI



### There are three sensible approaches emerging for an AI response

#### Al architecture, meaning how you remain safe when implementing Al powered solutions

#### **Determining where to deploy AI:**

- 1. Scenario Planning Understanding context and selecting common strategies
- 2. Value Driver Trees Choosing which levers to pull
- 3. Getting the detail Understanding which processes or manual steps will significantly change or disappear

### Getting your Operating Model right so you can leverage the power of AI

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### Despite the potential of AI-powered solutions, there are important considerations that must be made in the interest of safety

Outcome = Faster growth

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### **Artificial Intelligence Architecture**



### To strategically respond to AI, it is useful to understand what approaches can be deployed in multiple situations. Scenario planning is helpful for this

• Made famous by Royal Dutch Shell Company when they outperformed their competitors in spite of (or because of) a major oil shock



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### Scenarios will need to be built at multiple levels - understanding your context helps you to build better strategies



#### ... and many more questions



### Scenario Planning can be enhanced by building a Value Driver Tree - this helps you target which levers you really want to pull

- By developing and analysing their Value Driver Tree (VDT), organisations can clearly identify the levers where Al implementation will make quantifiable differences
- AI will impact VDTs on both the **cost AND revenue** sides

• There are multiple points on both the Revenue and Cost sides where benefit can be derived. This includes:

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- Improved service level and customer experience
- Dynamic pricing
- Personalised sales and recommendations



### What is our 'value discipline' strategic choice?

The three strategic choices...

- *Product Leadership* companies strive to offer customers the best product possible by continuously innovating and pushing the boundaries of performance. Here the value proposition to consumers is the offer the best product on the market
- *Customer Intimacy* companies focus on delivering what specific customers want, not what the market in general wants. Their value proposition to customers is that they will provide the best total solution to the customer's needs
- Operational Excellence companies focus on efficient and effective delivery of products or services. Their value proposition is to provide products or services at the best price and the least inconvenience to the largest portion of the market possible. This can be in the form of a low price and hassle-free service, or the greatest amount of value for a given cost base



**Rule 1:** Try to be the best by excelling in one of the value disciplines or at least have a clear order of disciplines

Rule 2: Maintain threshold standards on other value disciplines

**Rule 3:** Control the market by improving value year after year

**Rule 4:** Align your Operating Model to the value discipline that you have opted to excel in

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Another approach is to examine your roles and processes for early opportunity - preferably in a manner consistent with your scenario and Value Driver Tree work

- We find that an examination of role and process data will provide clients with a large opportunity set
- Typical examples of opportunities can be found below:

Sales	Marketing	Accounting	HR Management	Customer Service
<ul> <li>Identify trends - market anticipation</li> <li>Score and prioritise leads</li> <li>Automated chat and email support for sales staff</li> <li>"Businesses who implement Al in their sales process saw a 50% boost in sales and a 70% decrease in call time" - Harvard Business Review</li> </ul>	<ul> <li>Customised website experiences</li> <li>Assisting in the customisation of intelligent algorithms</li> <li>Personalised push notifications</li> <li>Image recognition using Computer Vision</li> <li>SEO</li> </ul>	<ul> <li>Automation of manual tasks</li> <li>Inputting and matching data from scanned receipts</li> <li>Assessing expenditure reports</li> <li>Tracking fluctuations</li> <li>Semi automate Payroll</li> </ul>	<ul> <li>Initial candidate screening</li> <li>Robot recruiter (see; Vera - PepsiCo <ul> <li>Candidate calling</li> <li>Assessment of suitability for job</li> </ul> </li> </ul>	<ul> <li>Support customer service representatives (provide scrips for resolution, next steps)</li> <li>Processing (such as loans)</li> <li>Facilitate product discovery based on customer data</li> </ul>



### Traditional Operating Models need to be reevaluated to ensure they are fit and flexible

- The evolution of cars is a good metaphor for the change that AI will demand of our Operating Models.
- The raw elements of a car has stood the test of time, and we still need to provide the same core service to our customers
- By optimising the body, we can maximise the value of **upgrading the engine**
- Organisations need to be faster, simpler, and more agile to respond to a rapidly moving market





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