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Robotic Process Automation



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9-10 May, Chengdu, China



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Agenda

- Technology and actuaries
- Robotic Process Automation - Introduction
- RPA in the actuarial world
- Q&A



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Technology and actuaries



“ActTech” = Technology useful for Actuaries



“Don’t be a know-it-all – be a learn-it-all”

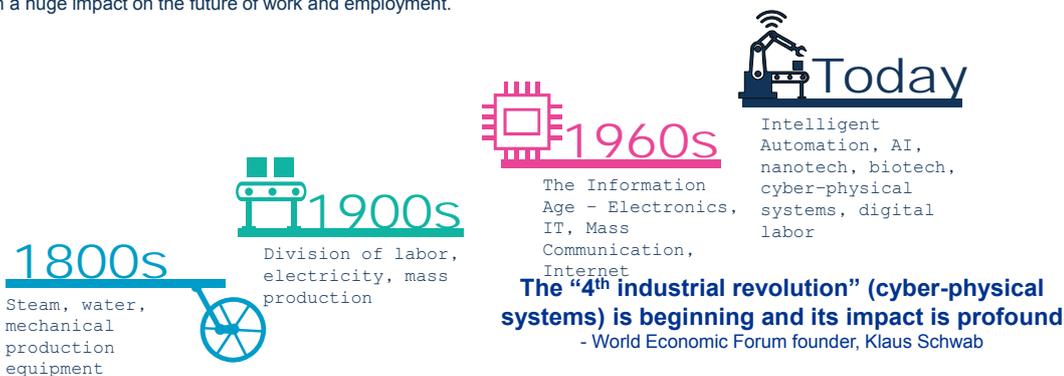
The culture Microsoft CEO Satya Nadella tries to foster



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Technology is at another major inflection point

The 2016 World Economic Forum in Davos referred to this as the Fourth Industrial Revolution, but the rapid adoption of digital technologies and digital business models are enabling a period of a rapid technological change that is transforming every aspect of our lives with a huge impact on the future of work and employment.



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Technology allows actuaries to focus on adding value

- Automation frees up time and resources, especially during key periods (e.g. reporting deadlines)
- Allows actuaries to focus on insight generation and value adding analysis



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A wide range of technology options for actuaries

Robotics /
automation



UiPath

blueprism

AUTOMATION
ANYWHERE



Today's Focus

Data
Analytics



Power BI

Qlik

tableau

Coding



R

python

SciPy

Cognitive /
AI



TensorFlow

Spark

hadoop

KPMG



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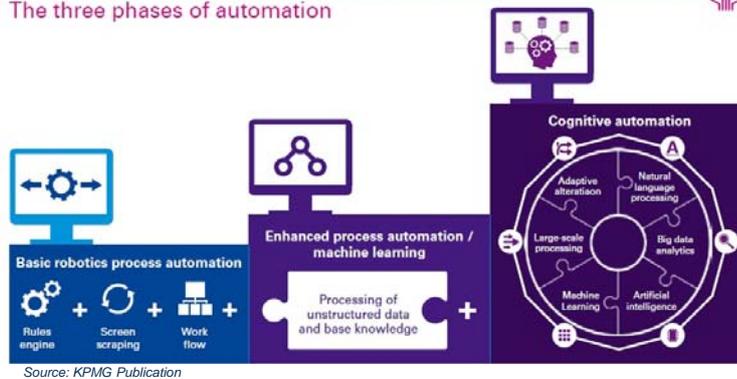
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Robotic Process Automation (RPA) - Introduction



The phases of automation

The three phases of automation



What is RPA



Robotics Process Automation (RPA)

RPA is a combination of technologies: engines, workflow, and screen scraping, which are used in concert to automate processes and operations traditionally done by humans. It is essentially a type of digital labor and the Software supplied as part of a RPA solution is known as a robot or "bot".

Basic RPA recommended for these situations:

- Repetitive, structured transactional processes
- Need to rapidly enable automation of human task: Without costly system integration
- Need to interact with multiple automation in a "non-invasive" manner

Its relative ease of implementation and low cost make RPA an ideal digital gateway to help organizations take the first step towards becoming highly-automated or even artificial intelligence-enabled enterprises.

RPA in Finance Functions in Hong Kong

Jointly with ACCA, KPMG conducted a survey in the fourth quarter of 2017, focusing on Robotic Process Automation (RPA) adoption in Hong Kong. 388 responses from C-level executives from a diverse range of sectors.



- Top three triggers for RPA:**
- 1 Refocus resources on value-adding tasks
 - 2 Reduce errors and inconsistencies
 - 3 Cost savings and efficiency

- Key hurdles for RPA:**
- 1 Perceived benefits do not outweigh the costs
 - 2 Lack of knowledge or awareness around what is possible and where to start
 - 3 Concerns over the people impact or the view that automation is not necessary



RPA take-up rates by country (as at Q4 2017)



Source: KPMG Publication



The 1-2-3 of intelligent automation



“Size the Prize” – Evaluate processes and prioritize based on their feasibility for automation. Estimate the benefit potential and arrive at the business case.



Execute a Proof-of-Concept – Evaluate the capability of the technology and validate performance based on pre defined success criteria.

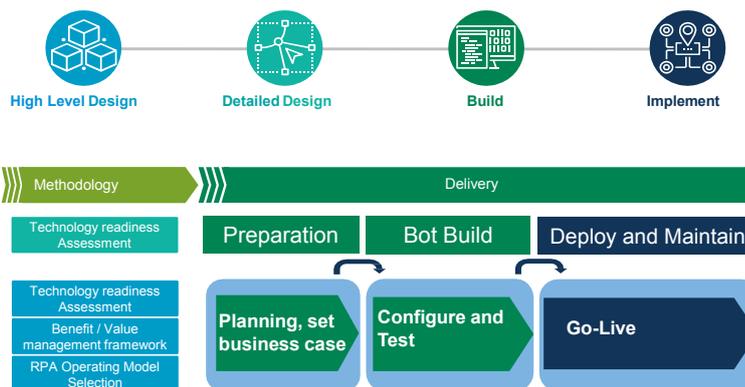


Define a roadmap – Outline steps to stand up the intelligent automation capability and operationalize to scale across the enterprise



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Approach to implementation of RPA



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RPA in the actuarial world



Applicability of RPA

RPA can be applied to many facets of an actuaries' work.

RPA results in major savings on time and effort

- Any process where significant time is spent on data extraction and preparation can benefit heavily.
- Reserving, solvency calculations, regulatory submissions

RPA allows actuaries to do more analysis

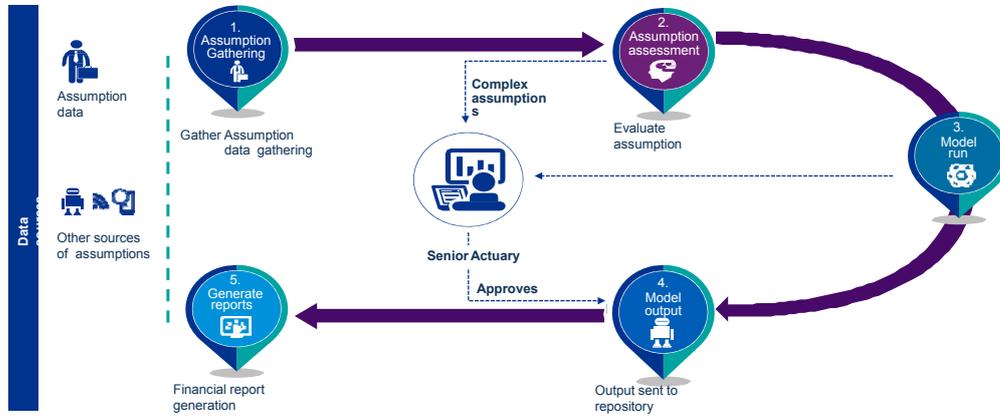
- Repeating processes such as model runs can be automated to allow more iterations
- Stress and scenario testing, reserving, risk monitoring

Where RPA is best applied depends on your own needs, pain points, and processes.



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A focus on assumption generation and assessment



Source: KPMG Publication

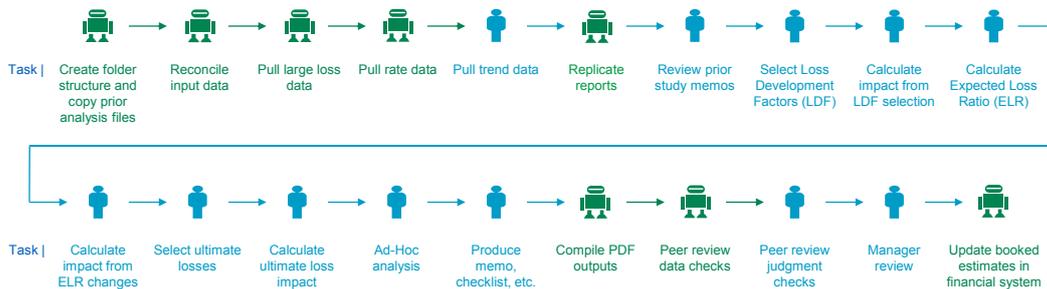


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Use case: Commercial lines reserving



- In 10 weeks, we automated approximately 20% of analyst effort in roll-forwards
- We also identified process re-engineering opportunities (incl. RPA) that are expected to reduce analyst effort approximately 50%

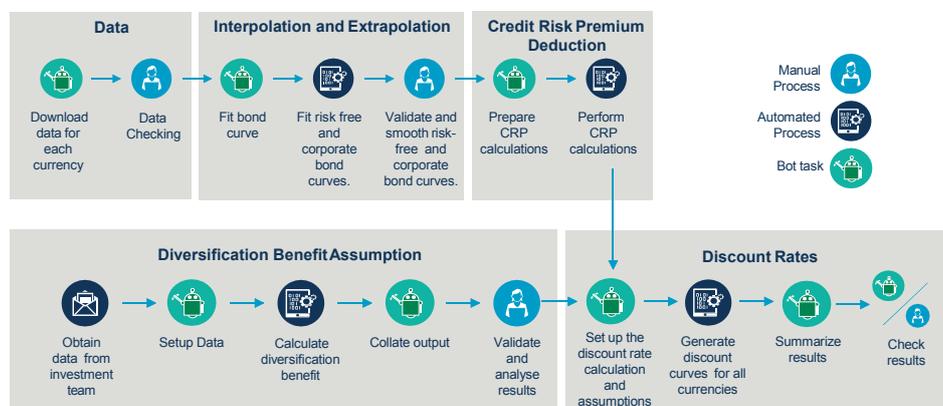


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Use case: discount rate curve generation



Use case: regional reporting consolidation

Existing State

- Monthly P&L statements are prepared by individual business units and sent to regional for consolidation
- Certain processes (e.g. extracting exchange rate from central system) are performed in the same way by each BU
- Regional must wait for all BU to submit before consolidating

Target State

- Monthly P&L statements are prepared centrally by RPA, and managed by regional office.
- Repeat processes are performed only once, eliminating the risk of inconsistencies

Benefits

- Reporting process is sped up and would not be held up due to delays from an individual BU
- All data extraction is centralized which eliminates the risk of inconsistencies between separate BUs
- Frees up time both in regional team and local BU during reporting period

RPA across the insurance company



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Questions

Comments

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