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Intelligent automation in insurance
Moving up the automation maturity curve

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Contents

Intelligent automation in insurance

For most insurers in Southeast Asia, the advantages of deploying intelligent automation (IA) – the umbrella of technologies that include, but are not limited to, robotic process automation (RPA), intelligent document processing (IDP), intelligent Business Process Management (iBPM), and advanced analytics – are well-established. By extending the power of technology to tasks traditionally performed by humans, IA enables insurers to break prevailing trade-offs between speed, cost, and quality.

But what is often less discussed is the fundamental difference between insurers who are piloting automations, and those who are scaling transformation efforts. While the former is more likely to automate current processes with limited change, the latter is more likely to have orchestrated a fundamental reimagination of what they do with significant process changes across functional boundaries.

Indeed, from our marketplace observations, the insurers who have been successful at scaling tend to be those with a clear vision, strategy, and approach to capturing value from automation. They would have approached automation as an enterprise-wide challenge, and established the new internal capabilities required. They are also more likely to have combined different automation technologies, and much more likely to be thinking about how automation will assist and augment their talent and workforce.

In this report, we will present a four-phase approach that we have developed to help insurers move up the automation maturity curve. Then, we will illustrate how we have deployed this methodology to support one of the world's largest insurance groups in assessing the impact of IA on its claims process; designing its IA capability; extending IA to its different units; and establishing an IA Centre of Excellence (CoE) for its operations in Southeast Asia.

Later, we will also discuss three key success factors that we believe insurers should consider as they look to accelerate their IA programs, and some of the goalposts to look out for – including the characteristics of a successful business case, and the key questions to ask when designing a CoE – based on our extensive experience supporting insurers through this journey.

We hope that you find our insights thought-provoking and practical, and we look forward to more discussions with you on the future of IA in insurance.
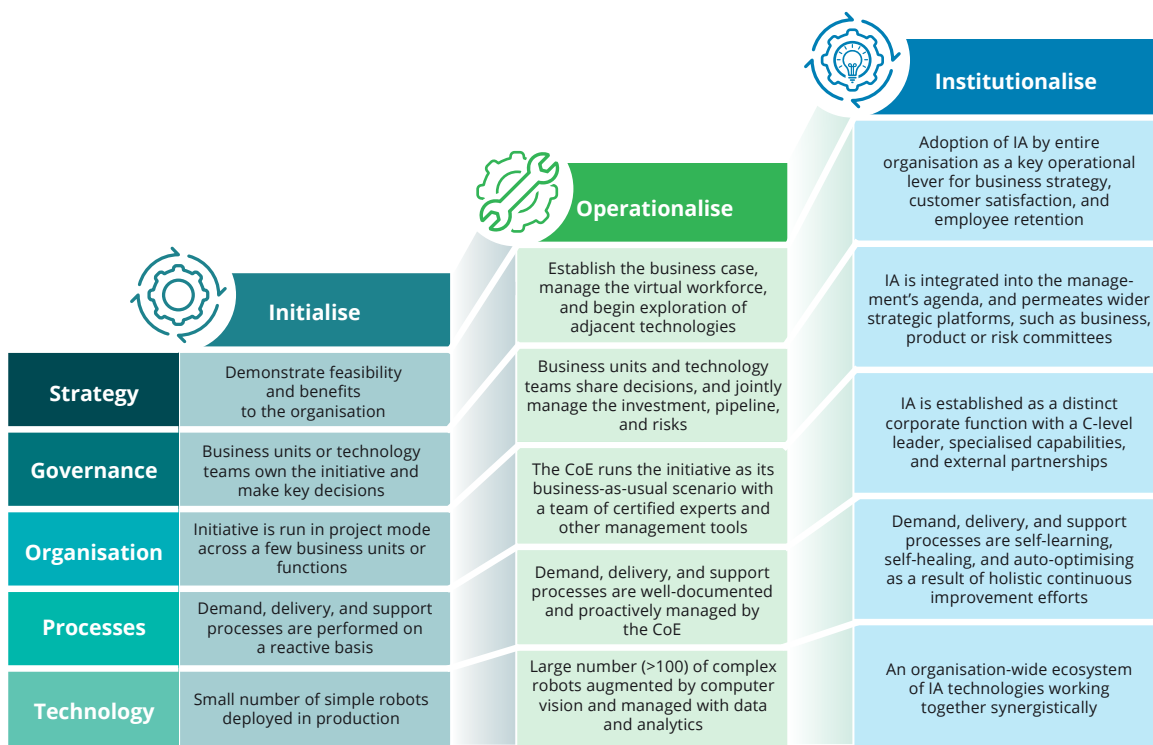
Moving up the automation maturity curve

The automation maturity curve consists of three broad levels: Initialise; Operationalise; and Institutionalise. Based on our experience, it typically takes organisations an average of about two years to move from Initialise to Operationalise, and another two years to move from Operationalise to Institutionalise.

At this juncture, it is perhaps worthwhile noting that this framework is by no means static. As organisations are often at variable levels of maturity for each of the five dimensions – strategy; governance; organisation; process; and technology – they may simultaneously straddle different levels of maturity (see Figure 1).

The value of this framework, therefore, lies not in its use as a scorecard, but as a forward-looking strategic planning tool to enable insurers to assess their current situation, determine the desired next steps, and develop a plan to close the identified gaps.

Figure 1: Three levels in the automation maturity curve

Institutionalise

Adoption of IA by entire organisation as a key operational lever for business strategy, customer satisfaction, and employee retention

IA is integrated into the management's agenda, and permeates wider strategic platforms, such as business, product or risk committees

IA is established as a distinct corporate function with a C-level leader, specialised capabilities, and external partnerships

Demand, delivery, and support processes are self-learning, self-healing, and auto-optimising as a result of holistic continuous improvement efforts

An organisation-wide ecosystem of IA technologies working together synergistically

Operationalise

Establish the business case, manage the virtual workforce, and begin exploration of adjacent technologies

Business units and technology teams share decisions, and jointly manage the investment, pipeline, and risks

The CoE runs the initiative as its business-as-usual scenario with a team of certified experts and other management tools

Demand, delivery, and support processes are well-documented and proactively managed by the CoE

Large number (>100) of complex robots augmented by computer vision and managed with data and analytics

Initialise

Strategy	Demonstrate feasibility and benefits to the organisation
Governance	Business units or technology teams own the initiative and make key decisions
Organisation	Initiative is run in project mode across a few business units or functions
Processes	Demand, delivery, and support processes are performed on a reactive basis
Technology	Small number of simple robots deployed in production

In this section, we will discuss a four-phase approach that we have developed to support insurers in accelerating their automation maturity from Initialise to Operationalise:

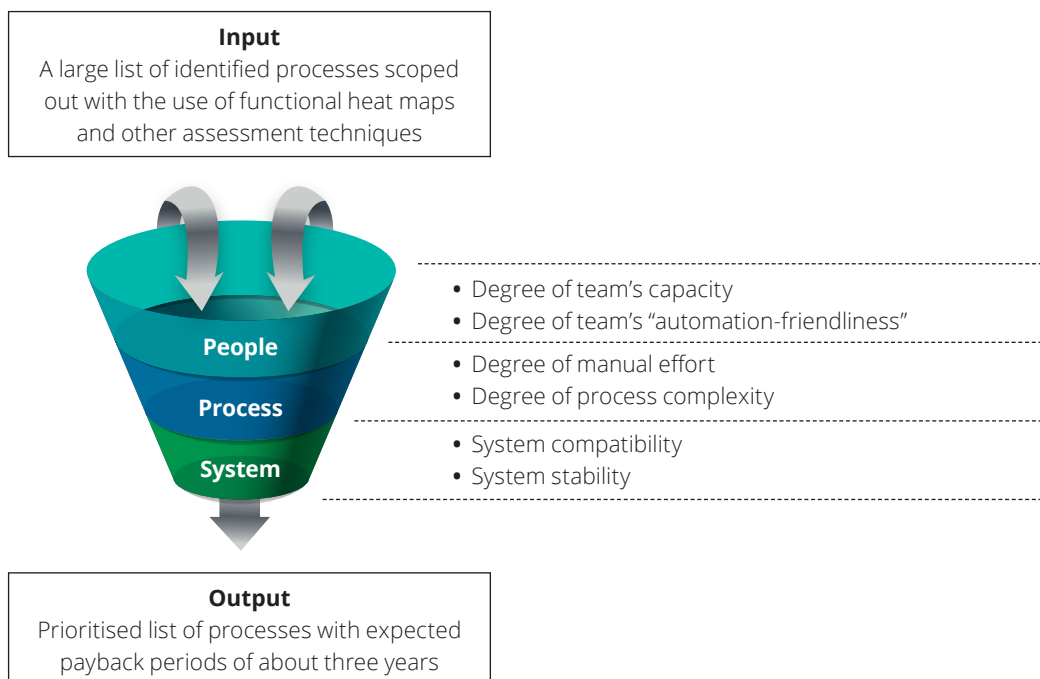**Phase 1: Perform opportunity assessment sprints**
Generally, the most promising IA opportunities tend to be those that offer high potential benefits, while being of medium to low complexity. To identify these high-value opportunities and establish a book of work, a series of opportunity assessment sprints – one for each department within scope – will need to be conducted.

Leveraging Deloitte's Opportunity Assessment Funnel framework, this process entails inputting a large list of identified processes that have been scoped out with the use of functional heat maps and other assessment techniques, and filtering them through three layers of analysis focused on the themes of people; process; and system (see Figure 2).

As part of the filtering process, prioritisation workshops will be conducted with department managers, with a walkthrough of the key parameters to shortlist the processes that are most likely to deliver maximum business benefits. This will then be followed by a series of deep dives with process subject matter experts that focus on finalising the process selection and documenting high-level processes.

The output is a book of work comprising the prioritised list of processes and their respective detailed payback estimations. Such a top-down approach is preferred over a more targeted approach, because it enables us to consider a wider set of possibilities to identify the best opportunities; prioritise and fully assess key departments and processes; and ensure that all opportunities have been ranked based on their potential benefits.

Figure 2: Overview of Deloitte's Opportunity Assessment Funnel framework

Input
A large list of identified processes scoped out with the use of functional heat maps and other assessment techniques

People
- Degree of team's capacity
- Degree of team's "automation-friendliness"

Process
- Degree of manual effort
- Degree of process complexity

System
- System compatibility
- System stability

Output
Prioritised list of processes with expected payback periods of about three years

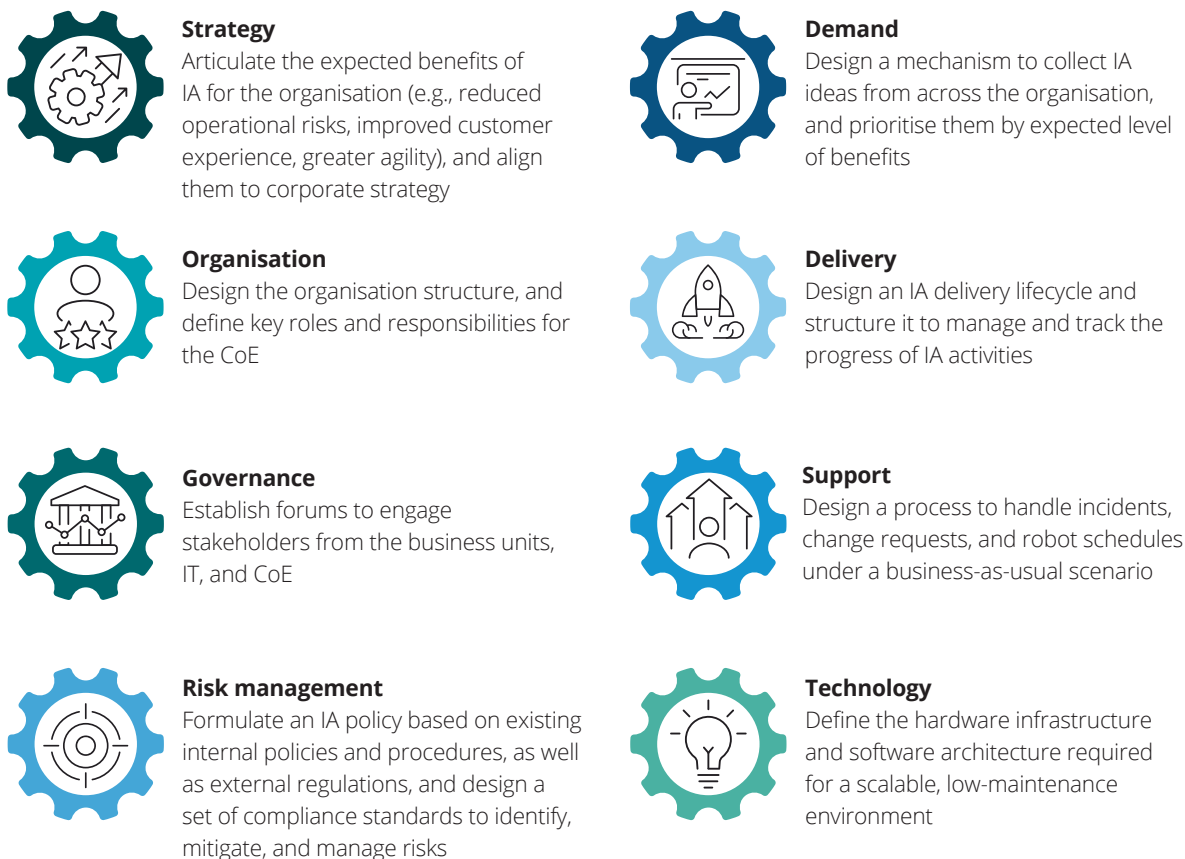**Phase 2: Implement robots and algorithms**

Following the identification of high-value opportunities, the focus in this phase shifts to the delivery of RPA bots and algorithms to demonstrate immediate benefits realisation for one pilot business process. Typically, benefits are measured in terms of full-time equivalent (FTE) capacity creation, uploading times, as well as ability for the automated process to manage multiple systems and high volumes of data without human supervision.

This will then be followed by a subsequent scaling up process, during which automation will be rolled out to other businesses processes identified in prior opportunity assessment sprints. At this juncture, RPA will also be integrated with other automation technologies – including but not limited to IDP, iBPM, and advanced analytics – for enhanced benefits.

Phase 3: Develop internal capabilities

In this phase, the focus is to establish a standard approach for IA activities across the organisation with the design of an IA CoE blueprint. Briefly, this exercise will take into consideration the following eight dimensions of the CoE operating model: strategy; organisation; governance; risk management; demand; delivery; support; and technology (see Figure 3).

Figure 3: Eight dimensions of the CoE operating model

Strategy
Articulate the expected benefits of IA for the organisation (e.g., reduced operational risks, improved customer experience, greater agility), and align them to corporate strategy

Demand
Design a mechanism to collect IA ideas from across the organisation, and prioritise them by expected level of benefits

Organisation
Design the organisation structure, and define key roles and responsibilities for the CoE

Delivery
Design an IA delivery lifecycle and structure it to manage and track the progress of IA activities

Governance
Establish forums to engage stakeholders from the business units, IT, and CoE

Support
Design a process to handle incidents, change requests, and robot schedules under a business-as-usual scenario

Risk management
Formulate an IA policy based on existing internal policies and procedures, as well as external regulations, and design a set of compliance standards to identify, mitigate, and manage risks

Technology
Define the hardware infrastructure and software architecture required for a scalable, low-maintenance environment
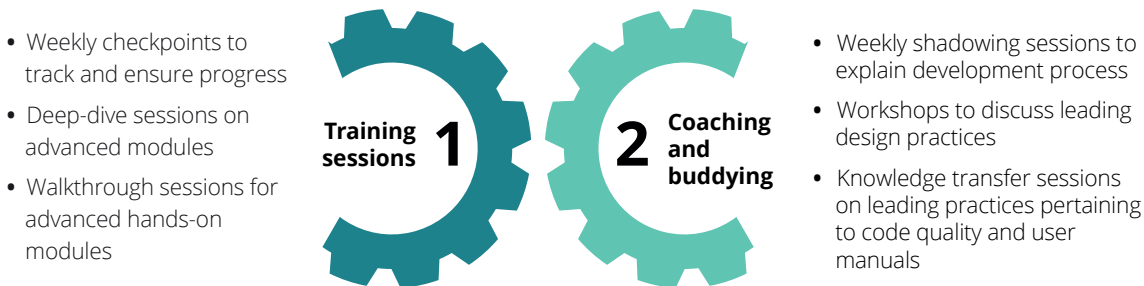
Overall, the approach will centre around the concept of reusability – that is, the application of existing IA software licences and bot components to other similar business processes – to enable rapid and consistent scaling. To this end, an IA reusable library will be established to catalogue all reusable components, and the common ways of building such components.

Based on our prior implementation experience, leveraging a reusable library typically accelerates the IA solution-building process by about 20%, in addition to offering higher scalability and easier maintenance. To establish best-in-class practices for the CoE, the IA reusable library should also be supplemented with user manuals, process design documents, and code review checklists.

In addition, in accordance with a two-pronged training plan, a series of internal upskilling activities – including training and knowledge transfer sessions, as well as coaching and buddying systems – will be conducted to support the CoE talent in managing all aspects of demand, delivery, and support (see Figure 4).

Figure 4: A two-pronged training plan

- Weekly checkpoints to track and ensure progress
- Deep-dive sessions on advanced modules
- Walkthrough sessions for advanced hands-on modules

Training sessions 1

2 Coaching and buddying

- Weekly shadowing sessions to explain development process
- Workshops to discuss leading design practices
- Knowledge transfer sessions on leading practices pertaining to code quality and user manuals

Phase 4: Conduct continuous monitoring and improvement
Upon production go-live, the CoE will take over the support and maintenance of the IA bots, including incident management and change requests, as well as continuous monitoring and improvement activities. Briefly, this will entail monitoring and maintaining the organisation's IA infrastructure, managing its vendor relationships for platform support, and overseeing the activities of the digital workforce.
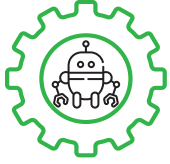
Scaling IA at one of the world's largest insurance groups

Business problem

Headquartered in Asia Pacific, one of the world's largest multinational insurance groups had embarked a digital transformation journey to introduce RPA technologies to its Southeast Asia operations. This initiative was largely motivated by the perpetuation of highly manual and inefficient business processes in its operations, particularly in the area of claims.
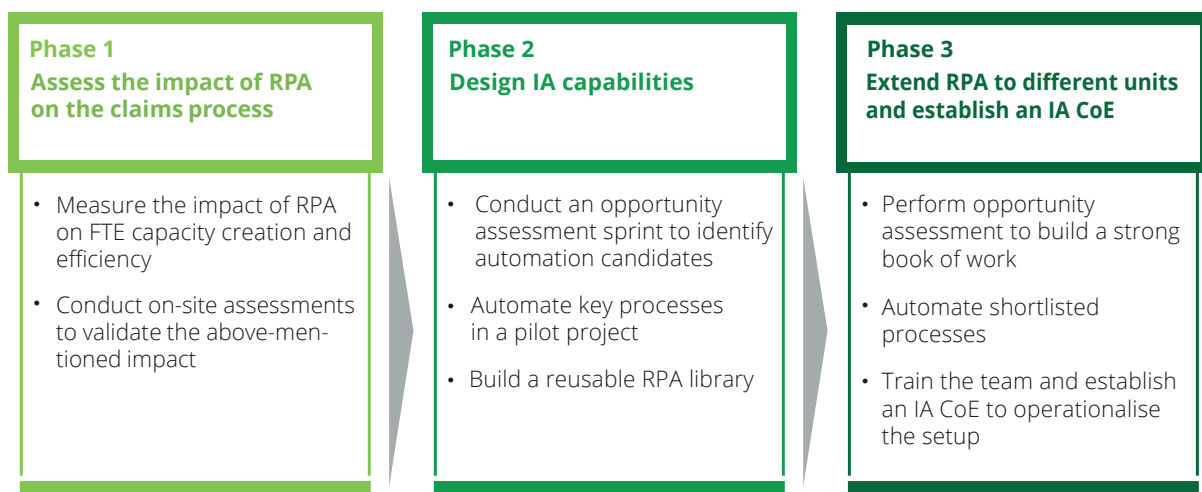
For example, manual handoffs that existed between divisions had created dependencies at multiple process touchpoints that eventually led to delayed claim settlement. Other challenges also included highly paper-based operations that were not only labour-intensive but also prone to human error; inconsistent or redundant processes; as well as high turnover and low job satisfaction rates amongst employees tasked with mundane and repetitive tasks.

A three-phased approach

Despite its best efforts to roll out RPA technologies across its organisation, the insurer eventually found it too difficult to scale its program: as a result of its federated organisation structure, the insurer was unable to attain consistent levels of RPA adoption across its numerous group companies spread across the entire Asia Pacific region.

In order to address these structural issues – and thereby support the insurer in scaling its IA program – Deloitte deployed a three-phase approach to assess the impact of RPA on its claims process; design its IA capabilities; as well as extend IA to its various business units and establish an IA CoE (see Figure 5).

Figure 5: Scaling the insurer's IA program

Phase 1 **Assess the impact of RPA on the claims process**	**Phase 2** **Design IA capabilities**	**Phase 3** **Extend RPA to different units and establish an IA CoE**
• Measure the impact of RPA on FTE capacity creation and efficiency • Conduct on-site assessments to validate the above-mentioned impact	• Conduct an opportunity assessment sprint to identify automation candidates • Automate key processes in a pilot project • Build a reusable RPA library	• Perform opportunity assessment to build a strong book of work • Automate shortlisted processes • Train the team and establish an IA CoE to operationalise the setup

Value delivered

The design of the CoE was centred around two core functions – governance and operations – with the former managed by a dedicated team within the insurer's organisation, and the latter managed by Deloitte.

In terms of governance, the insurer's dedicated team was responsible for setting the overall IA strategy; establishing the relevant Report Definition Language Client (RDLC) and enterprise risk management (ERM) frameworks; securing the last line of defence in terms of controls design and compliance with standards; managing the central platform and vendor relationships; as well as communicating the progress against key performance indicators (KPIs).

For Deloitte's part, the operations component included managing the three pipelines for demand, delivery, and support. Briefly, this entailed identifying new IA opportunities; building the necessary robots and algorithms; as well as maintaining and resolving incidents. By offloading the insurer from the operational aspects, it became easier for it to gain scale more quickly while still de-risking the initiative.

Although the program is still in progress at this time of writing, the insurer's IA program has already begun gaining significant scale. Valued realised so far include, for example, the identification of about 150 processes for automation and capacity creation of more than 140 FTE. Looking ahead, the program is expected to expand its current focus on RPA and IDP technologies to also include iBPM, data wrangling, and artificial intelligence (AI) technologies.
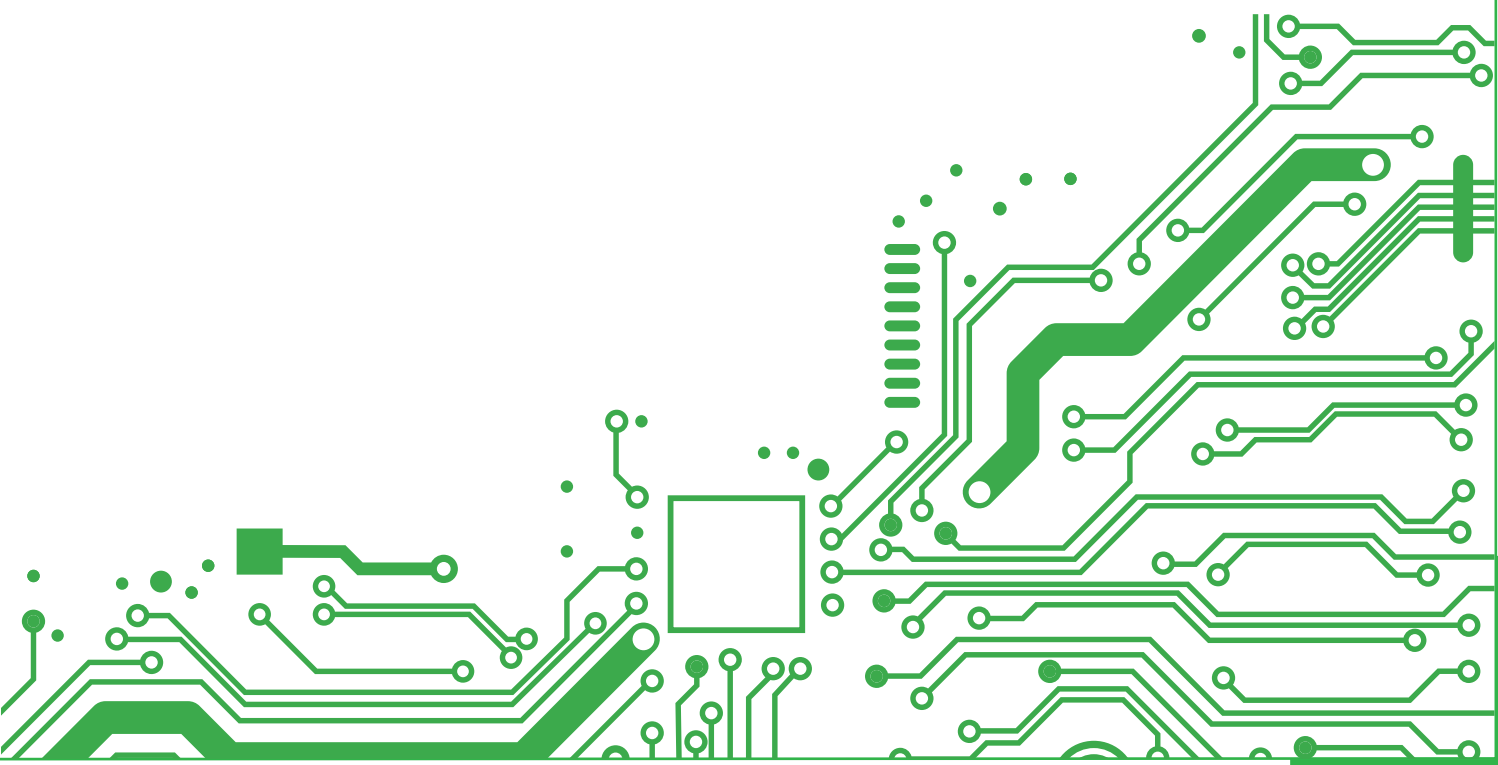
Key success factors

With growing automation ambitions, insurers today are making significant investments to move along their automation maturity curve. Yet, many consistent barriers – including but not limited to an inability to avoid common pitfalls, a lack of strategic direction, and inadequate internal capabilities – continue to hold them back from moving beyond pilots.

In this section, we will discuss three key success factors that our extensive experience has revealed to be critical to the long-term success of IA programs:

Success factor 1: Establish a strong business case
Establishing a strong business case from the outset is critical to framing the IA program as an important strategic priority for senior management (see "What a strong business case looks like"). Obtaining their buy-in would, in turn, enable the program to unlock the necessary funding required to scale transformation activities in the long run.

More importantly, however, defining the business case upfront also enables the organisation to define the right scope, select the right processes for automation, and develop the necessary strategies to mitigate the risk of incurring scope creep or other unexpected costs.

To achieve this, we recommend adopting a detailed and fact-based approach. Specifically, the analysis of the business case should focus on the precise costs, financial benefits, and return on investment (ROI) of each process selected for automation, taking into consideration the anticipated implementation challenges and accompanying process improvements. To ensure accountability, this analysis should also be signed off by the respective process owners, following a series of deep dives with the process operators.
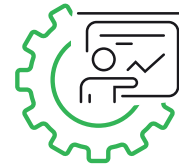
What a strong business case looks like
Based on our observations, a strong IA business case usually possesses the following characteristics:

- Sufficient book of work with at least 20 processes leveraging a range of different technologies, such as RPA, IDP, and iBPM

- Expected FTE capacity creation of about 10-20%, with an average of 1 FTE capacity creation per process

- Expected gross benefits of at least US$5 million over a five-year period

- Expected payback period of less than three years

Typically, around 90% of processes are either not automatable (e.g., human judgement or other physical steps are required), or have expected payback periods of more than five years (i.e., the average lifespan of a robot).

Success factor 2: Learn from the best

IA programs represent a radical change to the ways in which insurers operate: to enable humans, robots, and algorithms to work synergistically together, insurers will need to develop and align the relevant functional and technical skillsets. When embarking on such a complex endeavour, it is therefore crucial that insurers are able to avoid common pitfalls and save precious time by extracting the lessons from best-in-class transformation programs.

As previously discussed, there are three different levels of maturity for IA programs: Initialise; Operationalise; and Institutionalise. While it can take up to five years for organisations to move from Initialise to Operationalise through trial-and-error, our experience has shown that insurers that learn from the best could potentially compress this amount of time to approximately 18 months by fast-tracking the Operationalise stage (see Figure 6).

Figure 6: Accelerated fast track from Initialise to Institutionalise

Initialise   Operationalise   Institutionalise

Accelerated fast track by learning from the best
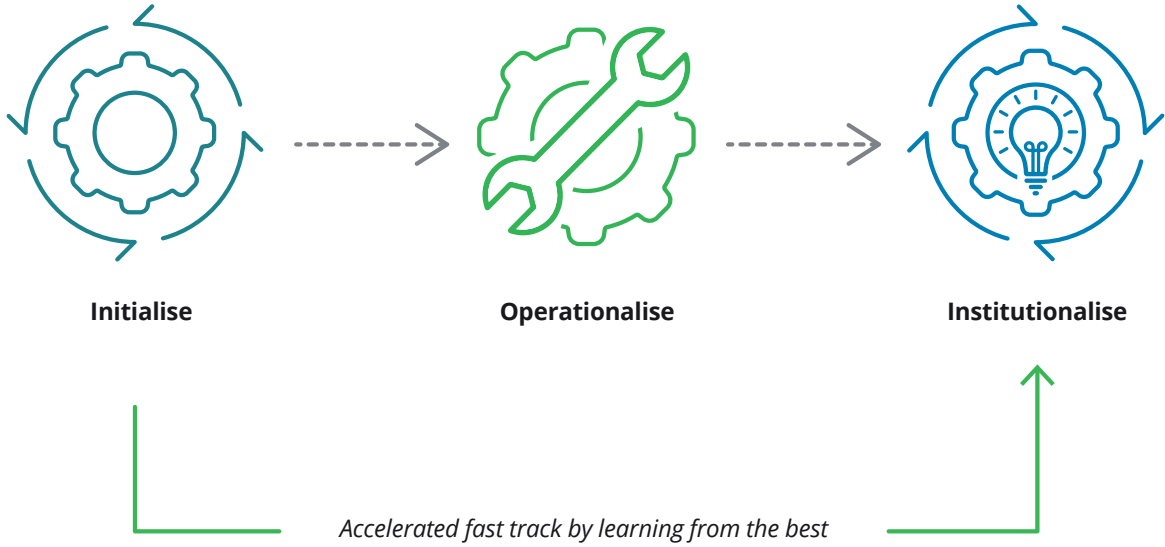
Success factor 3: Build internal capabilities

As a benchmark, a healthy pace of scaling typically begins with the deployment of about 50 automations after the first 12 months, with this rate doubling every year thereafter. To support such continuous scaling in the long haul, however, an insurer will need to build the necessary internal capabilities.

One important way in which they can execute this is by establishing an IA CoE responsible for overseeing the following three pipelines as its business-as-usual mandate (see "Key questions to ask when designing a CoE"):

• **Demand pipeline:** A dedicated CoE team equipped with advanced tools to continuously discover new IA opportunities across the organisation

• **Delivery pipeline:** A CoE delivery team responsible for the continuous implementation of prioritised IA processes, while ensuring adherence to leading design and coding standards

• **Support pipeline:** A CoE support team that continuously monitors IA activities with the support of an analytics platform, and ensures that these processes remain up-to-date and fit-for-purpose

Key questions to ask when designing a CoE

The first step to designing a CoE is asking the right questions. Here, we have detailed eight key questions that insurers should consider when embarking on this journey:

1. **Strategy:** What are our objectives for IA for the next five years?

2. **Governance:** How will we manage the risks and make decisions?

3. **Organisation:** Who will manage the digital workforce, and how?

4. **Risk management:** How can we orchestrate IA activities while mitigating and controlling the accompanying risks?

5. **Demand:** How can we maintain a pipeline of new IA opportunities?

6. **Delivery:** How can we implement IA processes in accordance with leading standards?

7. **Support:** How do we monitor IA processes and resolve incidents?

8. **Technology:** Which technologies should our IA platform support?

Towards end-to-end automation

Across Southeast Asia, most insurers began their automation journeys by leveraging only or two basic tools to automate tasks in several targeted areas. Increasingly, however, there is a growing realisation that while these initiatives delivered value initially, many of the low-value opportunities from simple task-based automation have since been exhausted.

As a result, many insurers can be observed to be seeking more next-generation solutions, and leveraging multiple advanced technologies to make their automations smarter. Indeed, the most advanced adopters are steadily moving towards end-to-end automation – that is, the implementation of automatable workflows across entire processes, with additional technology tools added to the toolkit.

To do this right, however, insurers must fundamentally reimagine the end-to-end wiring of their processes in line with their overarching strategic objectives. At the same time, as automation becomes ever more pervasive across their organisations, the human element also needs to play catch up. Specifically, apart from reskilling talent to interact with robots and machines, insurers also need to make sure that they put meaning back into work, and leverage automation initiatives as opportunities to address the human experience.

Ultimately, the bottomline is that the insurers that are likely to benefit most from IA are those who possess a clear path to scalability – with quantifiable results and return on investment – and are the most willing to invest in the necessary workflow redesign and capability enhancements to take advantage of the opportunities that it presents.

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