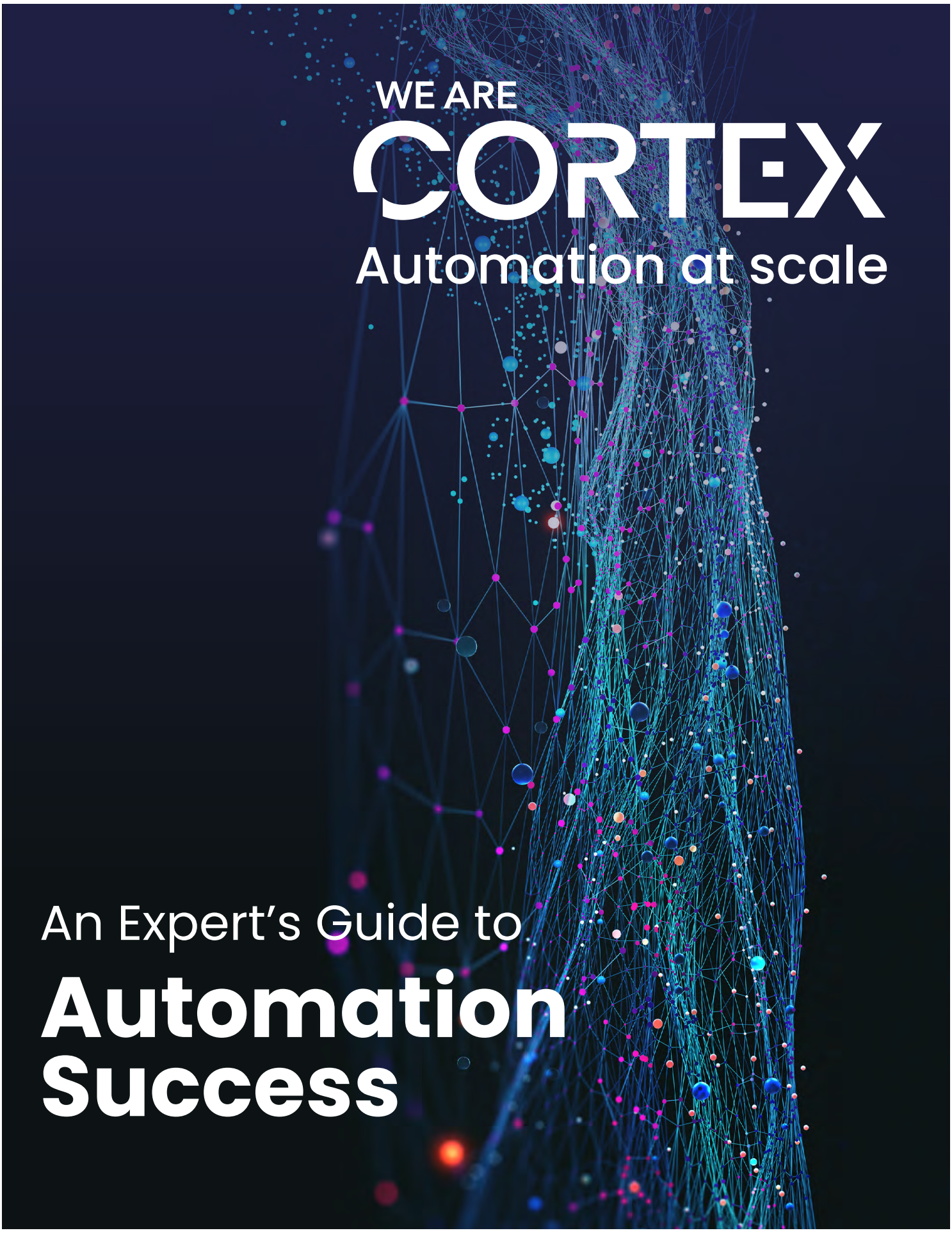

An Expert's Guide to

Automation Success

An Expert's Guide to

Automation Success

In today's rapidly evolving digital landscape, Communications Service Providers (CSPs) face immense challenges in meeting the ever-increasing demands of their customers while maintaining operational efficiency.

As technologies advance and competition intensifies, the need to streamline processes, reduce costs, and deliver exceptional services has never been more critical.

As a result, successful automation emerges as a key tool to enable CSPs to achieve unprecedented levels of efficiency, innovation, and customer satisfaction.

This eBook is a guide for CSPs to introduce automation successfully across their business. From choosing the right use case to enabling successful governance and benchmarking, we cover the key areas involved in establishing effective automation.

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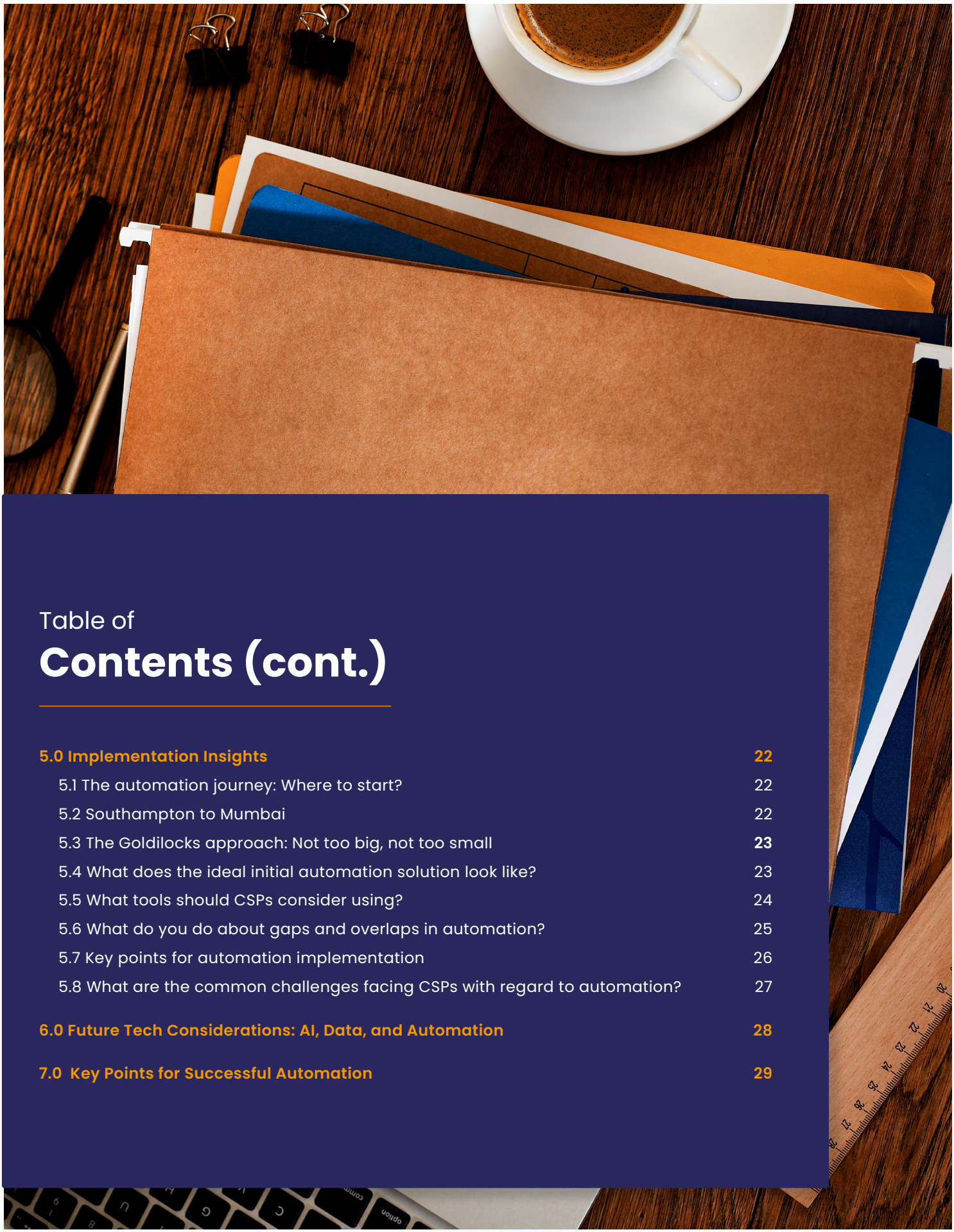

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WE ARE CORTEX

"You've got to start somewhere, and then grow your automation to cover the whole spectrum to get to the big project."

Eddie Watson
Operations Director, We Are CORTEX

1.0 Understanding

the Automation Landscape

1.1 What does automation mean in the context of a CSP?

It's a common misconception that automation simply involves automating routine yet isolated tasks. Instead, in the context of a CSP, automation is a vast and complex concept that goes far beyond this simple task.

For a CSP, it encompasses an end-to-end business process, involving various levels of automation, from task automation through to orchestrating multiple technologies into a seamless ecosystem.

Automation is far bigger than many people perceive it to be.

Automation is an end-to-end business process, with project scope often ending up bigger than first imagined and extends across all aspects of the business; people, operations, and technologies.

Although there will be a destination or goal, it really is all about how well you do the journey, and about the process of how you get there.

The important thing is to get started, and then take the incremental steps required to arrive at the final destination.

It's important to emphasise that the how of automation is as important as the what; ensuring that your CSP can organise for change, develop agile mindsets, democratise, govern, and control.

"Properly executed automation has the potential to revolutionise a CSP's operations, increasing efficiency and optimising processes to serve the business better."

1.2 What does automation look like in a CSP?

Firstly, it starts with an empowered and enabled 'implementation team', and a plan to move towards a centre of excellence (CoE) as the reach expands. This plan must also include 'operational readiness' to support automation as it moves into production. This should chart the route to a future CoE of some form to co-ordinate and enable as the automation expands laterally (cross department) and vertically (up and down the tech stack).

In the context of a CSP, automation is not limited to standalone tools, but involves a comprehensive automation framework encompassing various applications and technologies, including some which may already be in use. Understanding this existing landscape is crucial in crafting an effective automation strategy for your business.

Properly executed automation has the potential to revolutionise a CSP's operations, increasing efficiency and optimising processes to serve the business better.

To achieve an end-to-end automation goal in a CSP, it's necessary to navigate this complex and extensive process strategically.

This means there is something of a paradox of starting small yet thinking big. CSPs should seek to be continuously updating and refining the automation journey based on the evolving context and objectives.

1.3 The automation hierarchy

A hierarchy helps focus your automation implementation effort, helping you to build systems and processes in a reusable and reconfigurable manner. It can be helpful to define our terms when talking about the automation hierarchy.

At We Are CORTEX, we define it as follows:

CORTEX
Strategic Automation

Offers greatest potential for value and efficiency and customer experience.

Normally, these are long running, complex processes.

Examples:
Service assurance, lead-to-cash, life cycle management.

CORTEX
Advanced Automation

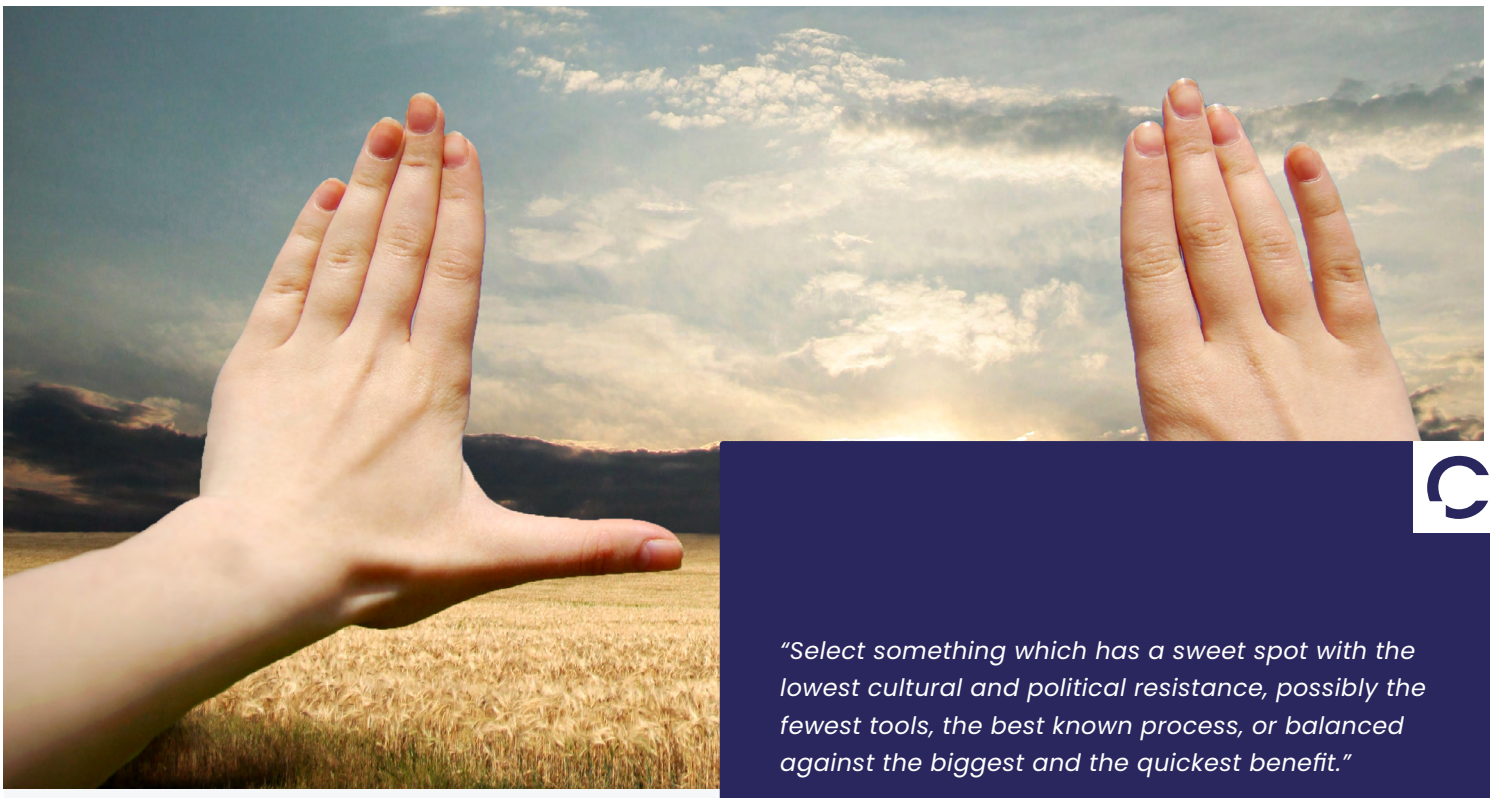
Can offer significant value, enriched Customer Experience. Will orchestrate sets of automations and task oriented solutions like RPA, scripts and vendor native automation.

Examples:
ITSM, bulk SIM activation, soft or hard cease, closed loop automation, order decomposition, data consistency.

CORTEX
Tactical Automation

Tactical sometimes known as 'dumb' automation offers limited value and efficiency. This will be task or step level automation. Single movement or automation.

Examples:
Moving data from application to application, alerting teams to overdue items or activities.



"Select something which has a sweet spot with the lowest cultural and political resistance, possibly the fewest tools, the best known process, or balanced against the biggest and the quickest benefit."

Eddie Watson

Operations Director, We Are CORTEX

2.0 Setting a

Business Vision

2.1 Who is using automation?

In a CSP, the business users who leverage automation play a significant role in the adoption and implementation of automation solutions. Leading analysts have surveyed just over 11,000 people and their data shows that 90% of automation initiatives are now owned by the business users and business technologists, rather than by IT.

This can have wide reaching implications, including democratisation of ownership of different parts of an end-to-end process, increase in governance and control and implications for training and support.

Some examples of these different business users include network operations, service provisioning, customer support, billing and revenue management, service assurance, IT operations, security and compliance and HR.

It is important that CSPs embrace business user-led automated processes.

These processes often represent significant intellectual property (IP) within the business. Additionally, the reason that processes have been automated (to varying degrees) is driven by a desire for efficiency and productivity.

Both elements represent significant value-added opportunities for CSPs.

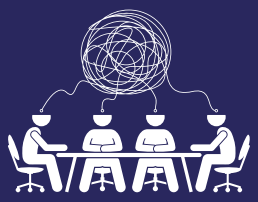
CSPs that can harness this automation creativity, can drive improvements in areas such as ARPU.

These business users encompass various roles and functions within the organisation, increasing the number of people, processes, and tools (e.g., SaaS products) involved in automation across the business. This can bring several challenges when implementing automation.

2.2 What are the challenges when introducing automation to a business?

Number of people

The number of people, with different job functions, job outlooks, and approaches to executing processes can make introducing automation challenging. When working with businesses to identify feasible use cases for automation, it becomes essential to involve the people directly engaged in those activities. By interviewing and engaging with these individuals, their innovative and clever ways of working can be harnessed to drive automation solutions. This also addresses some of the key blockers to automation; stakeholder buy-in and cultural resistance.



Job changes

As automation take on more and more responsibilities, so the roles and responsibilities of people will change. Some people will find that all their work is being done by machines, and their role has disappeared; they may need to be found other, more interesting and higher valued roles in the organisation, or be managed out. Other people may find that they are doing different work, and their job description, their remuneration, their line manager or even their location may need amending to reflect this. There may even be a need to establish new departments with responsibilities for governance and control of automation.

Culture/ politics

Organisational politics and culture can make implementing automation a challenge. The business must own the automation initiatives with IT being key stakeholders and enablers. It is crucial to get all business users on board with the automation initiative, reducing resistance and moving the project forward and extracting the best practices to ensure they feel part of the innovation. It's important to show benefits of automation quickly, as well as harnessing the expertise and involvement of business users.

Lack of governance

Teams are selecting and implementing automation tools independently, without any form of enterprise governance and process. This may assist velocity in the early "pathfinder project" phases but as automation projects become more successful and expand, the introduction of governance becomes crucial. Governance encompasses not only the leading edge of requirements but also involves ensuring adherence to standards, proper administration of tools, and seamless integration of automation initiatives within the business. This is critical as business users and processes increase, mitigating risk.

2.3 Designing an effective automation culture

With more people at all levels within a CSP looking to automate, the case for a structured approach to automation has never been stronger.

Fostering a culture that sees automation as a positive tool to be used within the organisation is a critical aspect of any CSPs' automation agenda. In a world that required greater levels of efficiency, sustainability, and profitability, innovation of business operations and processes is necessary to sustain a competitive advantage.

CSPs need to think strategically about their principles and practices regarding automation. Individuals working on their projects tend to focus on tactical needs. At the strategic level, many more factors need to be considered to address the risks and opportunities. This is where automation governance starts to play a significant role.

3.0 Organising for
Automation Success

Organising for success in the context of automation involves setting up a centre of excellence (CoE) as a critical foundation. The CoE plays a central role in driving automation projects, promoting best practices, and fostering collaboration across departments. It serves as a repository of knowledge and expertise, maintaining a directory of automations and integration capabilities.

The CoE identifies areas where automation can be effectively leveraged to drive business growth and improve operational efficiency. In addition to the CoE, it is also essential to establish clear governance structures, including dedicated automation teams and cross-functional collaboration.

For an Enterprise automating at scale these 'dedicated automation teams' are "line of business" or Project specific and are supported and enabled by a central CoE which provides guidance and access to subject matter experts (tools, practices, and methodology etc.)

These teams must work in tandem with business leaders, technology experts, and subject matter experts to identify suitable automation use cases and ensure seamless implementation.

A robust communication framework is vital to ensure that all stakeholders are aligned with the automation strategy and its objectives. By creating a well-organised and collaborative ecosystem involving benchmarking and governance, CSPs can unlock the full potential of automation.

"CSPs need to think strategically about their principles and practices regarding automation. Individuals working on their projects tend to focus on tactical needs. At the strategic level, many more factors need to be considered to address the risks and opportunities."

3.1 What is a centre of excellence?

The centre of excellence (CoE) plays a pivotal role in organisations where business users themselves are actively involved in creating automation solutions. It is not a rigid, high-level organisation but a flexible and agile entity that provides support and enablement for automation initiatives.

When Enterprises are automating at scale it is essential to ensure that there is a consistent, coherent and flexible approach to automation across the whole business.

The structure and form of CoE's will vary considerably from business to business and these can be centralised or decentralised and should provide access to automation "go-to" experts.

The primary functions of a CoE should include:

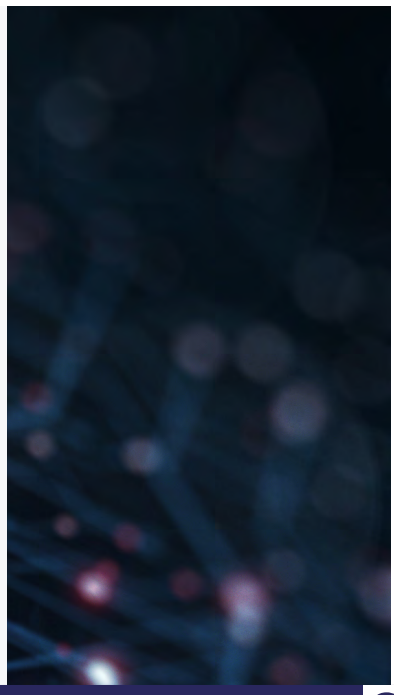
1. **Executive sponsorship:**
   Automation is a strategic imperative and as such need's visible executive leadership, empowerment, oversight, and guidance.

2. **Technology:**
   Knowledge on the selected automation tools and their integrations with each other and the systems being automated.

3. **Governance and guidance:**
   a. **Methodologies and best practice:** Best practice covering the entire life cycle of automation from ideation, evaluation, selection, implementation, in-life support and end of life.
   b. **Architecture and design:** This would cover best practices of how to design and implement automation optimising use of the portfolio of tools available. A key aspect of this would be to ensure re-use of repeatable or frequently used automation sequences are identified, built appropriately, visible, and available across all teams.
   c. **Standards and templates:** Defined, available and consistently implemented and used.
   d. **Security and risk management:** Ensuring a balanced approach.
   e. **Asset curation and management:** Libraries of automation, version control and management, gates, and approvals to manage production use. These technical capabilities should be an inherent function and feature of strategic tools.
   f. **Value/benefit identification**: metrication, monitoring, and reporting.

4. **Skills and training:**
   Learning paths, resources and schemes for teams and individuals.

5. **Communication:**
   Crowd source ideation and innovation, stakeholder engagement and celebrate successes.



3.2 How can a CSP ensure effective governance of its automation capability?

Governance is crucial to ensure effective automation implementation. This involves providing a structured framework for evaluating use cases, considering technical aspects, business value, and alignment with company strategy. By establishing a centre of excellence, organisations can control the automation process, standardise tools, and monitor performance.

Additionally, governance helps manage Human-in-the-Loop participation, gradually reducing it as confidence in automation grows. Ensuring data reliability, integration capabilities, and adherence to protocols are vital components of governance.

Expert

Within the CoE, there are experts proficient in the automation tools being used, and an executive sponsor who can facilitate decision making and unblock any hurdles that may arise. Correct tool usage is emphasised, ensuring that each tool is employed for its intended functionality. For instance, if a customer was automating events through a trouble ticketing system, the CoE might advise transferring the event management to a more suitable automation platform, thus avoiding ticket overload.

Evaluation

The CoE also actively monitors and evaluates existing automations to ensure their continued appropriateness and efficiency. An example is when a customer's automation needed adjustments due to changes in the environment. The CoE identified the inefficiencies and improved the automation accordingly.

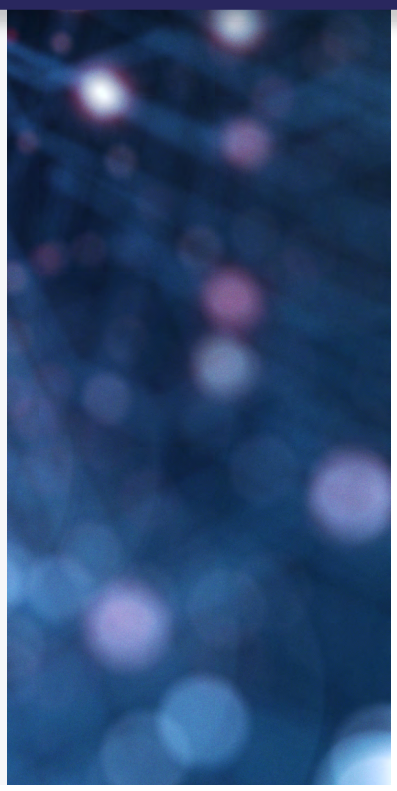
Maintaining Excellence

Overall, the CoE's central role is to provide governance, maintain standards, and foster excellence in automation across the organisation. As different businesses have unique cultures and requirements, the CoE's approach may vary, but its mission remains focused on driving transformative automation initiatives effectively.

"Automation is all about the journey of how you get to your final destination. And that's where you start."

Eddie Watson

Operations Director, We Are CORTEX



"You need to keep relevant and to keep relevant, you need to measure, report, and assess. If you don't, it atrophies. And that's a very dangerous thing. One of the things that you can end up with is that the automation is no longer relevant."

Stephen Connor
Head of Pre-Sales, We Are CORTEX

3.3 What is Benchmarking?

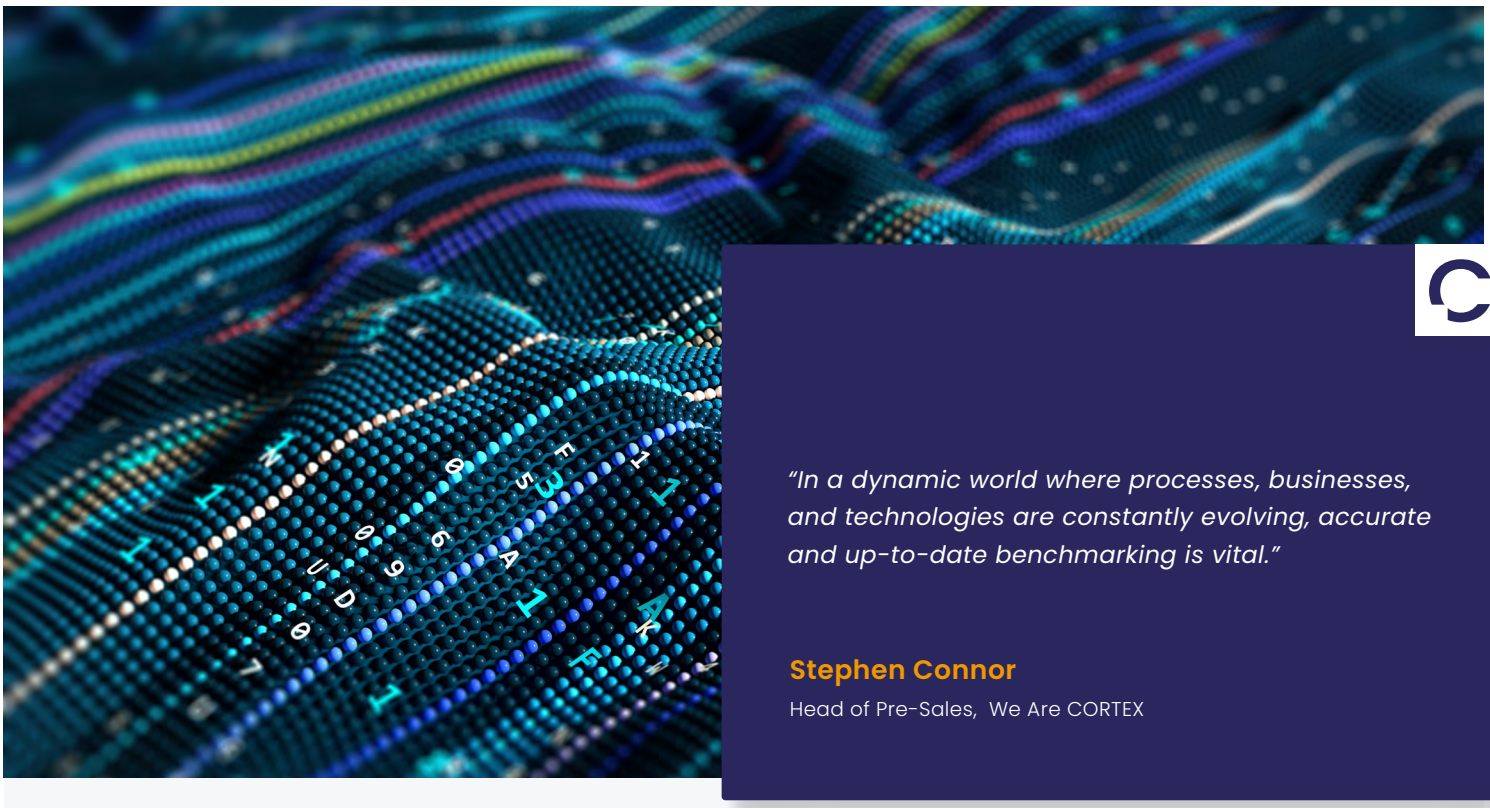
Benchmarking is essential for assessing the efficacy of automation projects. Most analysts are now in agreement that the metrication, measurement and reporting of the value and benefits of automation are critical for success. It helps measure the benefits, monitor performance, and continuously evaluate automation's impact on the business. Neglecting benchmarking can lead to misconceptions about the value of automation and may result in issues such as inaccurate data and operational inefficiencies.

CSPs should be aware that when automation is working well, there is a tendency towards "out of sight, out of mind". A close eye needs to be kept upon all aspects of the Automation process to ensure that what worked yesterday will carry on working today and tomorrow.

Continuous, small incremental changes to automation are relevant. In 1993, the speed of the Internet was 9.6 kilobits per second.

Today, we are sitting at 500 megabits per second, and the benchmark is orders of magnitude different. It's the same with automation, you need to stay relevant! CSPs need to have processes in place to measure, report, and assess their automations on a regular basis. If CSPs don't have measures in place to assess the performance of their automation, it atrophies. And that's a very dangerous thing.

"CSPs should be aware that when automation is working well, there is a tendency towards 'out of sight, out of mind'. A close eye needs to be kept upon all aspects of the automation..."



"In a dynamic world where processes, businesses, and technologies are constantly evolving, accurate and up-to-date benchmarking is vital."

Stephen Connor

Head of Pre-Sales, We Are CORTEX

3.4 Benchmarking case study: Dirty Lake Data

We Are CORTEX worked with a CSP who had automated their data feed into a data lake to streamline their processes. However, they were facing significant billing problems. It was discovered that the automation had not been appropriately benchmarked and lacked contextual understanding. There was also no comprehensive monitoring in place.

As a result, the automation had drifted over time, leading to improper usage and the influx of erroneous data into the data lake. This, in turn, compromised the overall data quality, leading to inaccuracies in billing processes.

Downstream this led to peaks of calls to the contact centre, so increased workloads on them, unhappy customers with incorrect bills, then longer waiting times to chat with an agent, who they didn't want to have to call to begin with.

Agent queries went to billing systems which created tickets for billing teams, who in turn had extra work to resolve the query to the customers satisfaction, or business need.

Lots of time wasted, customer goodwill burned, and money spent, all because RPA bots had lost context.

The above example underscores the importance of effective benchmarking. In a dynamic world where processes, businesses, and technologies are constantly evolving, accurate and up-to-date benchmarking is vital. Without it, automation can easily become obsolete and fail to deliver the intended benefits, causing significant challenges and inefficiencies within an organisation.

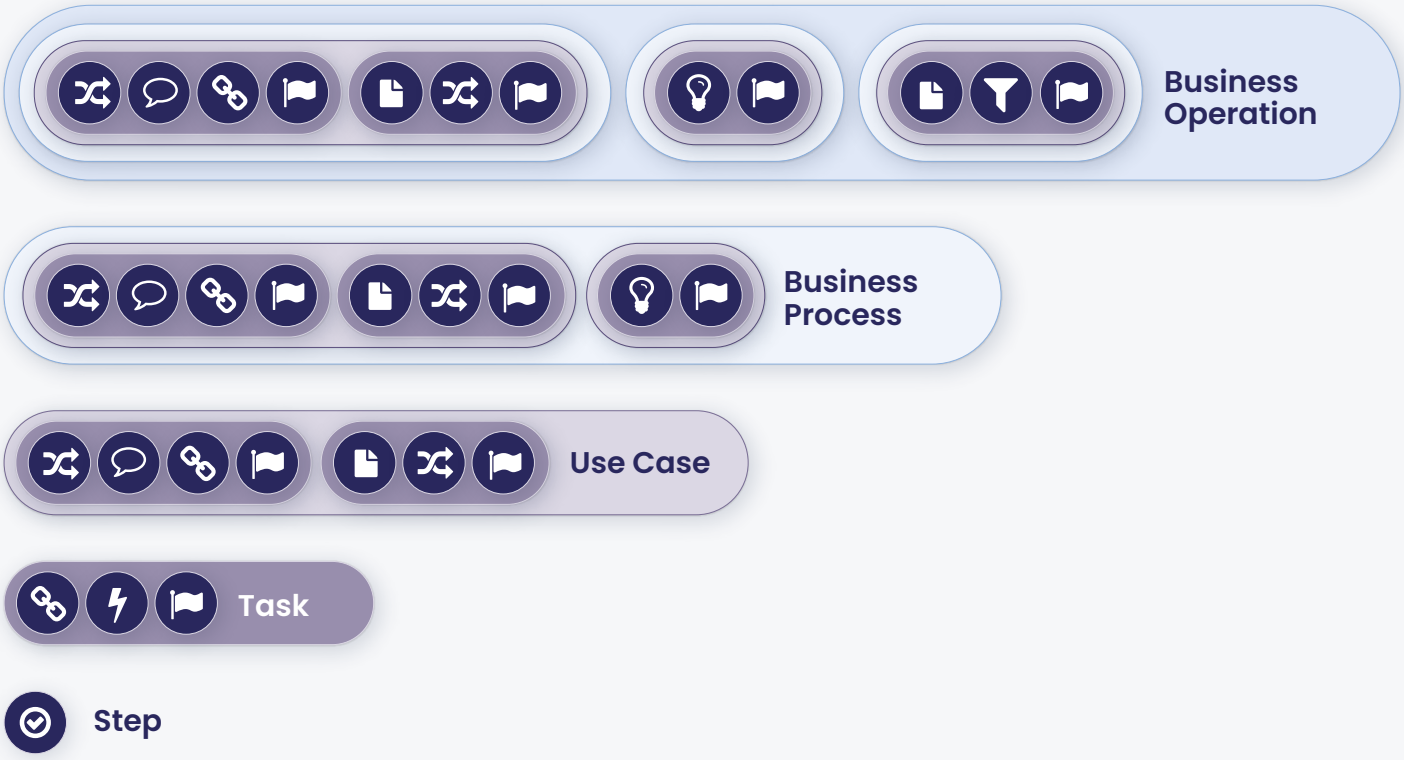
"Often, we engage with clients who are seeking to automate an entire process. This is a big activity if you are not used to automating end-to-end processes. Should you not be confident you could complete an entire process, select a well aligned sub-set of use cases. This will ensure success and early value. It also accelerates you towards the end-to-end process automation your business has prioritised."

4.0 Selecting

Use Cases

4.1 What is a use case?

In the context of automation for a CSP, a “use case” refers to a group of tasks which form the business process. The processes all nest within the Business Operation.



We Are CORTEX automation hierarchy explained:

Business Operation
A conceptual grouping of business processes

Business Process
A candidate for business orchestration and process automation. A set of related use cases that deliver a well-defined objective; may be shared by many business operations.

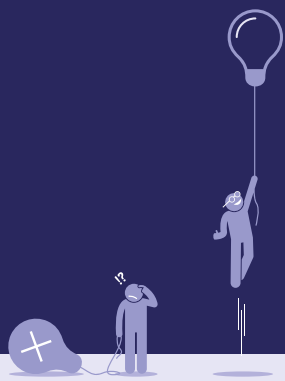
Use case
A candidate for business-grade automation. Defined as a set of tasks in sequences that complete a well-defined objective; may be shared by many business processes.

Task
A set of steps or activities that, when completed in sequence, achieve a simple outcome.

Step
An individual aspect of a task.

e.g. The processes of life cycle management, service provisioning and service activation each contain a set of use cases. These business processes are complex; involving multiple departments and third-party applications responsible for data management and actions related to that specific business operation.

"In the context of automation for a CSP, a "use case" refers to a group of tasks which form the business process. The processes all nest within the business operation."



4.2 How to identify the right use case or cases for automation?

Often, we engage with clients who are seeking to automate an entire process. This is a big activity if you are not used to automating end-to-end processes. Should you not be confident you could complete an entire process, select a well aligned sub-set of use cases. This will ensure success and early value. It also accelerates you towards the end-to-end process automation your business has prioritised.

If this was a life cycle management (process) the use cases would likely be:

- Create resource (possibly SIMs, ports, networks, devices, services, vendors
- Design & assign i.e. the allocate & configure process
- Activation
- Assurance for events and alarms – identify, enrich, correlate, resolve (ITSM concepts)
- Compliance (technology, cyber, functional
- End of life / decommissioning e.g. soft cease, hard cease, number porting etc.
- Green chain, e.g. ensuring effective disposal or repurposing, WEEE compliance or auctioning

"A structured approach to automation, starting with a well-defined use case, can help organisations see real and tangible benefits quickly while paving the way for broader automation implementations in the future."

While it may be tempting to start with individual departments, companies should consider the wider context and prioritise automation initiatives that align with the organisation's overall goals. A structured approach to automation, starting with a well-defined use case, can help organisations see real and tangible benefits quickly while paving the way for broader automation implementations in the future.

The number of processes, people and tools involved across a CSP means that there are a number of possible use cases that can be chosen. So how do you choose the best one?

4.3 People, processes and technology

The process of defining use cases for automation in a CSP involves a structured evaluation encompassing people, process, and technology aspects.

People

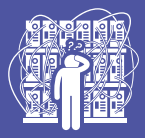
In the context of automation, understanding the people aspect involves identifying the relevant departments and individuals within the organisation who are involved in the use case.

These individuals possess knowledge about how the use case functions and have the responsibility of approving or making decisions related to different parts of the use case. There are multiple groups and types of people involved, including - people who know the use case (the current process steps and the systems involved), people impacted by the use case (upstream, downstream, sideways, customers), people implementing the use case and those changing the organisation.

Process

There are several things to consider when evaluating the process component of an automation use case. While large amounts are analysis aren't needed, it's essential to involve people who know the use case's process steps and systems and data, and how it operates in various scenarios, not just the ideal situation.

This includes identifying potential issues, such as resource shortages, exceptions, or delays, and determining appropriate responses for each scenario. They can also give insights into why the process currently operates as it does – maybe there are regulatory requirements; maybe there are functional limitations in existing applications; maybe there are organisational reasons why things are done in a certain order.



Technology

It's crucial to understand the data sources and systems involved in the use case. Integrations, approvals, connectivity, and protocols will all need evaluation. For example, where is the data for the use case going to come from? Which systems will you need to work with? How are you going to integrate with those systems? What approvals do you need to perform that integration?

Assessing these aspects, combined will potential business value will enable you to prioritise the order of automation implementation.

4.4 Balanced scorecard methodology

CSPs can use a balanced scorecard methodology to help identify and prioritise potential use cases for automation.

The balanced scorecard methodology helps organisations assess the feasibility of a use case by identifying potential complexities, organisational politics, and cultural resistance.

By focusing on a subset of use cases with fewer obstacles and aligning all necessary resources, CSPs can confidently start their automation journey.

Equally important, the methodology also highlights areas with red flags, cautioning against attempting automation in such cases to avoid potential failures. Through a well-implemented Balanced Scorecard, organisations can establish clear performance targets, monitor progress, and make data-driven decisions to drive their strategic automation initiatives effectively.

4.5 Human-in-the-loop for use case execution

Another aspect to consider when choosing use cases is when, and where people are going to be involved in the execution of a use case. There are typically three reasons for having what we call 'Human-in-the-loop' in use case execution. These are:

1. When human input, decision-making or approval is required.
There may be points within a process when human decision making or approval is required; this may be because of legal or regulatory requirements; because of your management and operational policies; or because there are external factors such as customers who need to participate in the process. Each separate execution of the process may or may not require such human input.

2. Building confidence in automation.
At certain points during use case execution, people are given the opportunity to review and approve or reject the automation's decisions. This allows you to give people the opportunity to review if automation is making the right decision at that point in time, and then either to approve or reject its continued operation for that execution instance. Over time, as trust in the automation grows, the need for human oversight reduces.

3. Overcoming technical obstacles.
Human-in-the-loop can be utilised when there are technical, legal, organisational or other obstacles preventing direct integration with a third-party application. In such cases, human intervention is introduced as a temporary or permanent workaround, but the end-to-end automation of the business process continues, During each separate execution of the process, when that integration is required, you can implement a human in-the-loop 'swivel chair' type workaround, where you put some activity on a person's work queue. That person would accept and execute the activity and input back into the automation any resultant data. At that point the automation of the executing process would continue. This means that as third-party components evolve which require integration capability, you can replace just that swivel chair operation with an API type integration. The end-to-end business process is the same as it was before.

4.6 A structured approach with We Are CORTEX

We are CORTEX offers a structured approach to assessing use cases for automation.

In this approach, We are CORTEX uses design sprints to provide qualifying questions and drawing on past experiences.

This approach reduces the risk of encountering obstacles during implementation. This expertise, and knowledge about what sort of questions to ask at the start will help identify potential challenges early on, preventing project failure and ensuring successful automation of business operations for organisations.

WE ARE CORTEX

4.7 Key takeaways for prioritising use cases

In summarising the discussion above, here are some key points that CSPs should consider when evaluating and selecting use cases for automation:

Vision and objectives
Ensure the overall strategic intent is well defined, understood and clearly articulated. This will ensure use cases are assessed as being relevant and contributing to achieving these objectives.

Use case identification
Establish a mechanism for identifying potential use cases for automation that can be accessed across the organisation.

Framework analysis and assessment
Employ a well-structured framework for use case analysis and assessment. Ensure this covers people, process, and technology aspects as well as business objectives. Factors to consider include the potential return on investment (ROI) and the ease of implementation from cultural and political standpoints.

Comprehensive business evaluation
Evaluate each use case in line with your selected analysis framework.

Stakeholder identification
Identify key individuals involved in the automation initiative.

Technical specification planning

- Do not defer technical specification planning to later stages.
- Address connectivity to data-holding systems early in the process.
- Assess permissions and security considerations for system integration.
- Define the technologies and protocols necessary for making connections.
- Determine integration timing, data transmission specifics, and data interpretation methods.
- Defining success criteria: Develop a clear process for defining what success means in the context of your automation initiative.

Be consistent
By automating, consistency is achieved both in process execution as well as predictable and reliable “time to completion”. Variability in time to completion with manual process varies considerably with load, manning capacity, prevailing operations conditions, and even day of the week. The impact of this predictability on customer experience should not be underestimated. There is often huge diversity in the approach and detail taken between individual members. Capturing the process into an orchestrated and automated sequence achieves ultimate consistency in response to every automated scenario.

An interesting aspect of this is the “levelling up” affect – if the process capture is done with the whole team, the most experienced and best practice actions are captured and automated. The step change in efficiency achieved by this is often only apparent at the time. Monitoring the automated executions provides a sound foundation for continuous improvement and optimisation.

Monitor and report benefits
It is essential that the benefits to be achieved by the automation are measured and reported. This means benchmarking performance before automation and identifying metrics against which to measure and report the results This makes the benefits of automation visible and tangible and provides the foundation for continuous improvement. Remember, effective automation requires a comprehensive approach that encompasses technical, business, and operational considerations. By adhering to these guidelines, you can maximise the chances of a successful automation implementation.

5.0 Implementation

Insights

5.1 The automation journey: Where to start?

Knowing how to start the automation journey can be a difficult task.

There are a number of factors to consider, including identifying the right area to begin, focusing on the objectives of the entire business operation, and aligning stakeholders around the chosen automation focus.

It's also important to recognise areas where automation might not be suitable or feasible, steering clear of potential pitfalls.

However, it's essential to start. automation carries a shelf life. Delays between conception and implementation risk rendering it outdated, as people, processes, and technology rapidly evolve.

Delaying automation for a perfect solution is not the way forward; taking action and adapting the process is the key to successful, dynamic automation integration.

"Delaying automation for a perfect solution is not the way forward . . ."

Stephen Connor
Head of Pre-Sales, We Are CORTEX

5.2 Southampton to Mumbai

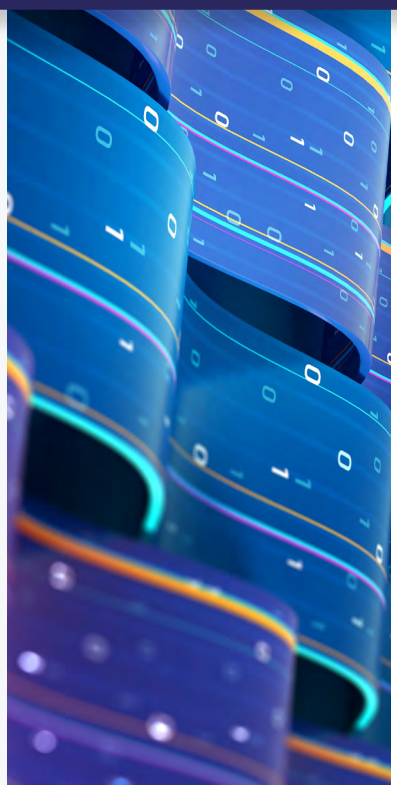
Starting the automation process for a CSP can be thought of as a journey from Southampton to Mumbai.

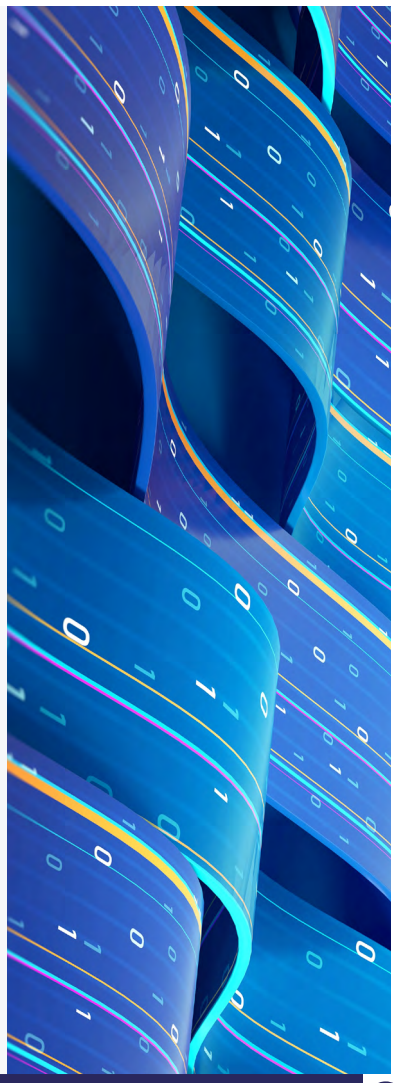
Firstly, you need to decide to begin your journey, without hesitation, knowing of course the general direction you're heading in on the first leg of your journey to Mumbai.

Drawing on an analogy of travelling from Southampton to Mumbai on a limited budget, each segment of the journey will be carefully planned, considering various factors such as budgetary constraints, transport options, and the time required to reach the next milestone. While each leg of the journey holds significance, the ultimate vison, arriving in Mumbai, is always the focus.

In addition to this, it is essential that the journey is approached in an agile fashion taking into account plans for subsequent steps will change as knowledge grows and context dictates (E.g. delays, cancellations, weather etc.)

The automation journey for CSPs is much the same. Committing to and beginning the automation process is the vital first step. Keeping the end objective of the process in sight is vital, even with changing contexts and business demands along the automation journey.





5.3 The Goldilocks approach: not too Big, not too small

When choosing your automation strategy, adopting a "Goldilocks" approach is critical, seeking the middle ground for automation that strikes the perfect balance.

The hierarchical framework facilitates this process, enabling a focused implementation effort with clear benefits to the business. The key lies in selecting an automation scope that is neither too big nor too small.

This Goldilocks approach will allow you to choose a solution that delivers substantial value, without overwhelming the organisation. It will also help you avoid excessively small initiatives which will offer limited value.

5.4 What does the ideal initial automation solution look like?

The ideal automation solution should be relatively straightforward to implement yet serve as a foundation for future growth and evolution.

Starting small allows you to implement fast, deploying a functional automation solution that quickly delivers benefits. Importantly, you need to be able to evolve this automation rapidly, extending it in a variety of directions::

- Moving it upstream, handling more of the work that happens before the automation invoked;
- Moving it downstream, handling more of the work that happens after the automation ends;
- Moving it outwards, handling similar but different use cases, scenarios and inputs;
- Making it more robust, handling a variety of expected and unexpected errors and exceptions.

An agile approach allows adjustments and adaptations in response to changing needs, ensuring that the automation solution remains dynamic and aligned with organisational goals.

"The ideal automation solution should be relatively straightforward to implement, yet serve as a foundation for future growth and evolution."

Stephen Connor

Head of Pre-Sales and Telco Domain, We Are CORTEX

"It is essential to start any automation programme by focusing on the business objectives and requirements, not the technologies. Only once these have been identified and understood should the technology and tool requirements be considered."

5.5 What tools should CSPs consider using?

It is essential to start any automation programme by focusing on the business objectives and requirements, not the technologies. Only once these have been identified and understood should the technology and tool requirements be considered.

This approach minimises the risks of:

1. **Designing automation around technology. The business requirements should dictate the automation and technology must service those needs.**
2. **Limiting automation design due to real or assumed technology capabilities (art of the possible).**

Instead, organisations should strive to:

1. **Maximise the benefits of existing capabilities and tools**
   Businesses inevitably have "pockets" of existing automation. Where possible and appropriate these should be factored into end-to-end automation.

   This builds on previous investments and can provide a head start with more ambitious automations. This also provides a unique opportunity for a strategic approach to solution life cycle management.

2. **Adopting an ecosystem mindset**
   Companies often possess a diverse array of automation tools as part of their IT landscape, but it's vital to understand that there is no one-size-fits-all solution.

   Some tools may offer task-specific automation, aligning with their respective functions, which is perfectly acceptable. However, companies must distinguish and segregate the end-to-end business processes, or business operations, from the automation pieces within specific tools.

"It is essential not to overly focus on the existence of overlapping tools, as it empowers businesses to tailor automation to specific needs. An overlap should be viewed as a luxury or advantage to a CSP, as opposed to a problem.

On the other hand, a gap represents a critical concern. It arises when a necessary functionality or automation capability is absent or unavailable, posing a risk to the overall strategy."

5.6 What do you do about gaps and overlaps in automation?

A CSP will almost certainly have existing automation investments. Some of these will overlap with the strategic orchestration platform. Sometimes, when evaluating the technology you already have, you will also identify the gaps.

What do we mean by this?

An overlap refers to the ability to automate a particular functionality in multiple places, offering the advantage of flexibility and choice in deciding where to implement automation.

It is essential not to overly focus on the existence of overlapping tools, as it empowers businesses to tailor automation to specific needs. An overlap should be viewed as a luxury or advantage to a CSP, as opposed to a problem.

On the other hand, a gap represents a critical concern. It arises when a necessary functionality or automation capability is absent or unavailable, posing a risk to the overall strategy.

Addressing gaps becomes imperative to ensure the smooth functioning of automation, and CSPs must concentrate efforts on filling these gaps to safeguard their automation strategy.

There are several automation capabilities a CSP should expect to exist. This includes

- Scripts
- Local and Task automation
- Tool centric automation (included in apps e.g., within SAP, Devices, Element Management solutions etc.)
- RPA
- Process Automation & Orchestration
- Enterprise-wide strategic platform
- Reusability
- Modification access control
- Version control
- Release management
- Execution visibility
- Long-running processes
- Human –in- the- Loop
- Jeopardy management
- Separation of process logic from integration logic
- Concurrent executions
- Geo-resilience
- Skills required
- Accessibility

It can be exceptionally challenging to automate around existing applications, but the focus should always be on bridging gaps to optimise automation.

Similarly, waiting for a perfect technical application framework or a comprehensive solution is not feasible. Instead, it is crucial to initiate automation promptly, abstracting business process automation from applications.

Delaying automation for a perfect solution is not the way forward; taking action and adapting the process is the key.

A comprehensive and independent end-to-end orchestration platform like CORTEX becomes essential to addressing all the above challenges. Business operations and process automations are separated and are largely unaffected by the evolution of individual tools or vendor changes. This approach ensures that while the business process remains consistent, the specific tools utilised to execute certain tasks may vary. Adaptability is crucial, and the end-to-end process orchestrator must possess the agility to accommodate changes and evolution within the IT landscape.

4.7 Key takeaways for prioritising use cases

In summarising the discussion above, here are some key points that CSPs should consider when prioritising use cases:

Have a clear vision
It's important to ensure that your vision for automation is clearly articulated and appropriately communicated. This helps ensure that during the implementation as roadblocks and challenges are met, they will be overcome in the way that moves the organisation most appropriately towards that vision.

Just start
One critical step is starting your automation journey decisively, avoiding hesitation and getting automation into use as quickly as possible. This prevents automation concepts from becoming outdated before implementation. In our experience, CSPs can suffer from "paralysis by analysis" resulting in potential opportunity costs and frustrated stakeholders. Taking an informed first step with a "land and expand" mentality helps CSPs drive progress.

People, process, and technology
The automation process lies at the intersection of three key elements: people, process, and technology. This complex intersection adds further challenges, as it involves dealing with politics, unclear processes, and a diverse range of technologies that need to be orchestrated seamlessly. Additionally, recognise that automating existing processes will change some people's roles and responsibilities; that change itself requires human effort and actions.

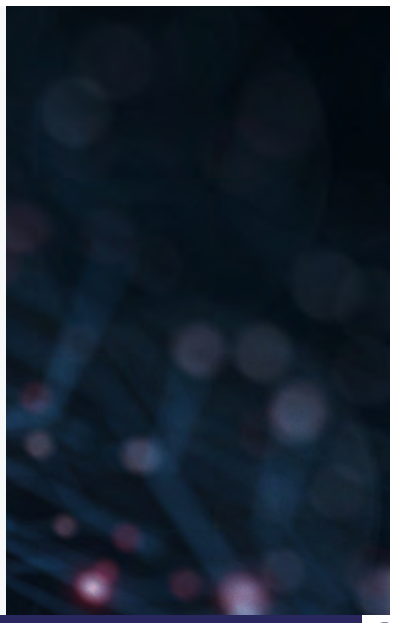
Data sovereignty
Automation depends on and interacts with extensive data repositories. These need to be factored into the automation design particularly where there are data overlaps between repositories. It is essential that a master data source for all data is selected, and the overlaps are either engineered out or synchronisation of data included in the automations.

There may also be cases where the data required is not held in existing repositories. Early identification of this and catering for these eventualities in the automation is essential.

Starting small
Starting small and building incrementally is often the key to success. By approaching automation in a modular way and focusing on reusability, businesses can develop canned automation components that can be integrated into multiple processes, leading to increased efficiency and velocity. This also allows the business to seize the benefits of automation quickly. It's important not to try and boil the ocean!

Understanding the art of the possible
A strategic approach involves understanding the 'art of the possible': thinking big and aligning each leg of the 'journey' with the ultimate objective. The automation lifecycle should encompass the entire business process, from inception to retirement, ensuring that the context and objectives are consistently updated to keep pace with evolving needs.

Consistently assess
Throughout the automation journey, businesses should constantly assess the context and adapt their strategies accordingly. Automation is perishable and time sensitive, so organisations must stay agile and make informed decisions based on real-time circumstances.



5.8 What are the common challenges facing CSPs with regard to automation?

Focusing on single use cases

This can be a challenge to automation implementation, as focusing on single use cases can lead to a fragmented approach. Many organisations tend to address specific pain points or individual tasks without considering the bigger picture. This can result in disjointed automation efforts which lack synergy and fail to deliver significant overall improvements. Candidate use cases in an automation focus area should be evaluated against a common set of assessments to ensure the optimal use cases are prioritised in terms of feasibility, minimum number of stakeholders, and benefit/RoI,

Not understanding the art of the possible

Understanding the art of the possible in automation can be incredibly challenging due to various factors, including the involvement of people, complex processes, and the intricate technologies. Comprehending the art of the possible is crucial as it allows organisations to think big and envision end-to-end solutions. When approached strategically and with the right area of focus, automation becomes more manageable and efficient.

As automation components are developed as part of a continuous journey, businesses begin to notice patterns of repetition, allowing for increased efficiency through process reuse. This realisation is empowering and sets the stage for transformative automation initiatives.

Not embracing automation as an end-to-end process

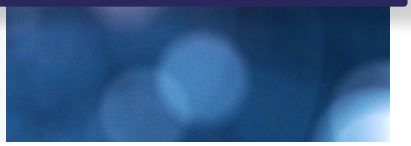
Embracing automation as an end-to-end process involves automating entire business operations, and this demands a comprehensive understanding of processes, technology, and people. Some key steps in the process are:

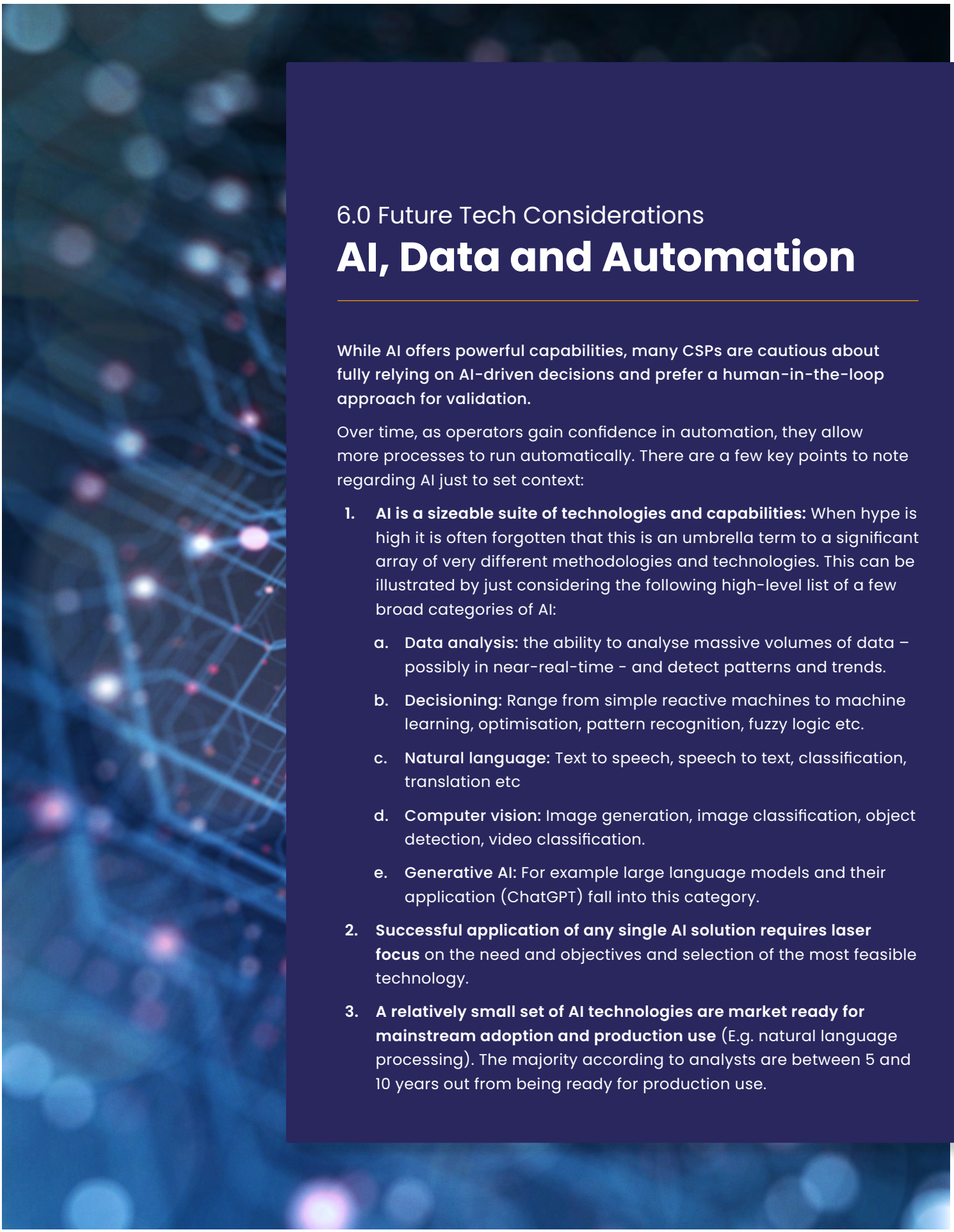
1. **Understand your business** operations and specifically the end objectives. These are your "North Star" or vision.
2. **Analyse and identify the best place to start the automation:** usually a business process or use case covering a limited number of scenarios.
3. **Focus on implementing that automation** as a pathfinder project from which to extend automation (ahead, behind, and adding more scenarios) [Land and expand concept].
4. **Implement automations in an iterative agile fashion** and get each component into productive use at the earliest opportunity possible.
5. **Ensure all automations are designed and implemented** with the overall target intent and objectives in mind.

Do not attempt to define the entire business operation in detail before starting - you will never start!

Rome wasn't built in a day...

It's important to realise that any strategic automation project is going to take time. Projects will typically span from six months to three years to be fully implemented. However, by starting with the end in mind, it is often possible to re-use automation assets across multiple business operations. As automation becomes more of a cultural norm, this cross-fertilisation of ideas, processes, tools, and governance can help deliver projects with greater effectiveness and efficiency.





6.0 Future Tech Considerations

AI, Data and Automation

While AI offers powerful capabilities, many CSPs are cautious about fully relying on AI-driven decisions and prefer a human-in-the-loop approach for validation.

Over time, as operators gain confidence in automation, they allow more processes to run automatically. There are a few key points to note regarding AI just to set context:

1. **AI is a sizeable suite of technologies and capabilities:** When hype is high it is often forgotten that this is an umbrella term to a significant array of very different methodologies and technologies. This can be illustrated by just considering the following high-level list of a few broad categories of AI:
    a. **Data analysis:** the ability to analyse massive volumes of data – possibly in near-real-time - and detect patterns and trends.
    b. **Decisioning:** Range from simple reactive machines to machine learning, optimisation, pattern recognition, fuzzy logic etc.
    c. **Natural language:** Text to speech, speech to text, classification, translation etc
    d. **Computer vision:** Image generation, image classification, object detection, video classification.
    e. **Generative AI:** For example large language models and their application (ChatGPT) fall into this category.
2. **Successful application of any single AI solution requires laser focus** on the need and objectives and selection of the most feasible technology.
3. **A relatively small set of AI technologies are market ready for mainstream adoption and production use** (E.g. natural language processing). The majority according to analysts are between 5 and 10 years out from being ready for production use.

7.0 Key Points for

Successful Automation

Automation presents significant opportunities for CSPs to improve efficiency and drive innovation. To implement successful automation, a strategic mindset is crucial. In this document, we have discussed many aspects relating to how to implement automation successfully within a CSP.

If we had to summarise the key points that a CSP should consider when embarking on automation projects, these would be:

Be strategic

CSPs should consider automation projects that align with the strategic goals of the organisation. The number of potential business operations, business processes and use cases that could be involved in any given automation project is significant. The technical complexity, the range of stakeholders and the prioritisation of resources all require a strategic approach to developing automation capabilities.

Think big but start small

When it comes to automation, think big, but start small. Starting somewhere is vital. This will allow you to see benefits of automation in your business and starting 'small' will allow you to evolve and remain agile, while always keeping the big goals of automation central.

Understand the landscape

Understanding the landscape, the big picture and end-to-end processes.

Organise for success

Start with a project but be alive to the establishment of a centre of excellence when appropriate time to ensure your automation implementations are co-ordinated, consistent and occur at the right time, in the right way and with the right technology.

Choose the right use cases

Having a well-defined plan for deploying automation, selecting use cases, and implementing these use cases is essential. Governance plays a vital role in managing automation projects effectively, and a centre of excellence can provide valuable support and guidance to ensure efficiency and reusability.

Plan well

When planning for automation, engage with vendors and partners to explore the full potential of automation. Consider both strategic and practical aspects, such as technology, connectivity, security, and data management.

A Structured Approach with We Are CORTEX

We are CORTEX offers a structured approach to assessing use cases for automation.

In this approach, We are CORTEX uses Design Sprints to provide qualifying questions and drawing on past experiences. This approach reduces the risk of encountering obstacles during implementation.

This expertise, and knowledge about what sort of questions to ask at the start will help identify potential challenges early on, preventing project failure and ensuring successful automation of business operations for organisations.

Evaluate Your automation's success

Continuous monitoring and evaluation of automation performance are imperative to ensure it continues to deliver value to your business. It's important to be proactive and agile to react to changing factors in your business.

Manage risk with effective governance

CSPs should encourage all Stakeholders to engage with automation, as this can help drive operational efficiencies and innovation. However, with a greater level of participation in automating business processes and use cases, there is an increased risk of automations conflicting with one another. As such, management of this risk through effective governance policies and procedures is critical as CSPs develop their automation capabilities.

Benchmark consistently

Proper benchmarking ensures that automation remains relevant and aligned with changing requirements, enabling businesses to achieve optimal results from their automation initiatives.

Automation is no longer a luxury but a necessity for CSPs seeking to thrive in the digital era. By embracing the power of automation, CSPs can elevate their operations, deliver exceptional customer experiences, and position themselves as leaders in an ever-competitive landscape.

Go green

With an increased focus on issues relating to ESG (Environmental and Social Governance), from both consumers and regulatory bodies, CSPs have a greater need to demonstrate their green credentials.

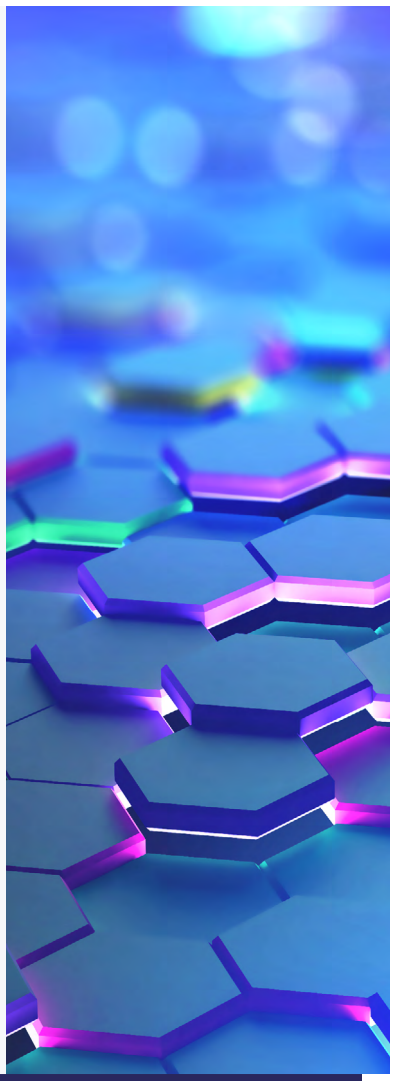
Automation of the green chain ensures compliance with regulatory and legal requirements (for example, UK WEEE). This provides auditability of activities undertaken, as well as a solid auditable foundation of assets.

Automation provides optimal re-use and /or re-allocation of assets when the primary duty reaches EOL. There should be a secure and auditable retirement of asset process. The process should ensure a reset of data and configuration, or deletion on removal. This is made easier with Automation.

Manage data security

Whilst data security has always been central to CSPs' operations, the introduction of GDPR regulations in the European Union has placed greater demands upon organisations to demonstrate data integrity. Automation logic can detect and manage erroneous data efficiently, including being able to adapt in handling changes, as well as identify and manage flawed data.

CSPs should acknowledge the imperfect nature of data, and not delay automation in pursuit of perfection. Rather than waiting for data perfection, automation can be harnessed to concurrently cleanse data, ensuring quality throughout the process.



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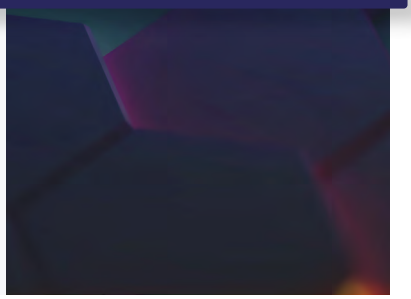

Get in touch to

Start a conversation today!

Hopefully, we have inspired some new ways of thinking about automation that could benefit your CSP.

Clearly, there is more that could be said, and your CSP will have specific automation requirements. We would be delighted to discuss these in more detail with you and help your automation journey.

Get in touch to start a discussion today!

Thanks for reading.

WE ARE CORTEX

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