



# Controls transformation

How to optimize and automate your risk and control lifecycle

KPMG International

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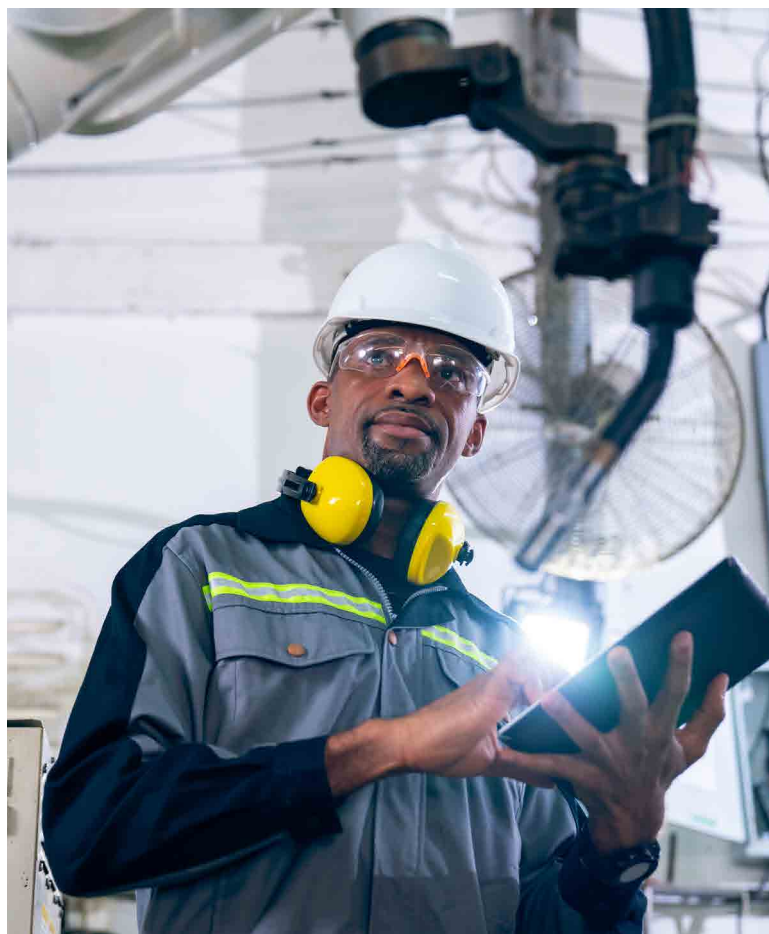
# Controls utopia

KPMG’s vision for our clients is a control framework with a clear purpose that can effectively and efficiently reduce risk and enable impactful decision-making. We can help your organization on its transformation journey toward a future state where you can benefit from:

- A simplified and sustainable risk and control environment.
- Controls that are preventative, automated and self-evidencing.
- Automation of controls, KCI monitoring and controls testing.
- Increased productivity and cost savings, freeing up capacity by reducing the effort required to maintain and manage superfluous controls.

Today, the drive for growth alongside changing technologies, risks, regulations and ways of working has caused some organizations to lose control of their controls.

Now is the time for your business to optimize and automate your risk and control framework to drive efficiency, effectiveness and sustainability while aiming to reduce risk.



## How KPMG can help

KPMG can help organizations achieve a fully integrated and automated risk and control lifecycle.

We have supported a number of organizations in defining their strategy and executing their vision for control optimization and automation.

Our subject matter professionals have years of experience and knowledge in risk, controls, compliance, finance, technology, automation and data.

With our experience and knowledge, we have developed leading methodologies and tools and worked with industry-leading technology providers.

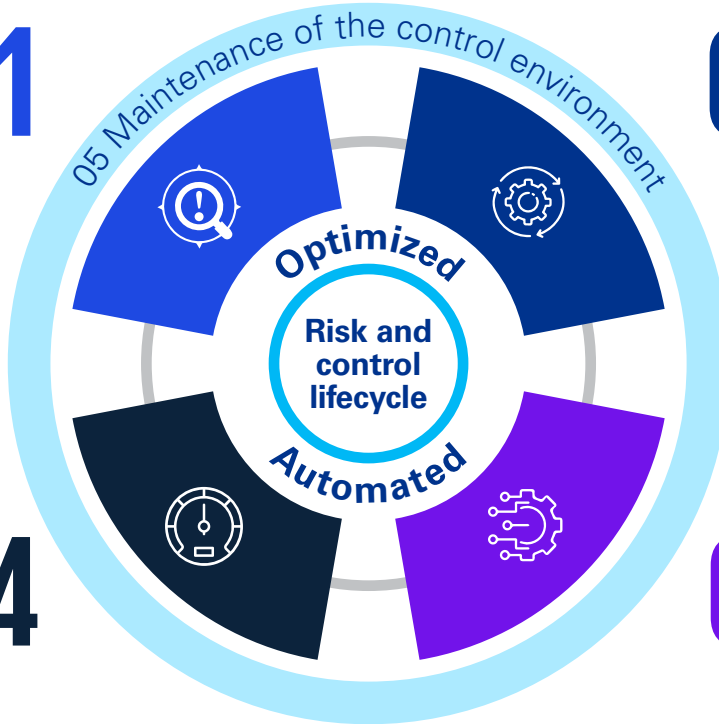
# The risk and control lifecycle — Optimized and automated

We envisage a risk and control lifecycle that is fully automated and integrated.

 [Click on topics to learn more](#)

**01 Identify and assess the risk and controls environment**  
Strive to ensure that the right risks are being mitigated by the right controls.

**02 Design and implement enhanced and automated controls**  
Revolutionize control design and operation by leveraging technology, tooling and automation.



**04 Enhance testing of controls**  
Help to increase the volume, speed, quality and timeliness of controls testing through automation and self-evidencing controls.

**03 Dynamic and automated monitoring of controls**  
Establish more dynamic, timely and automated control monitoring capabilities enabled by the digitization and automation of controls.

## What are the potential benefits?

The potential benefits of a fully automated and integrated risk and controls lifecycle are multi-faceted and can include the following:

### 1. Identify and assess the risk and controls framework

- Common methodology that can help all levels of the business see the relationship between process, risks, regulation, controls and risk appetite.
- Controls are synchronized with business and risk objectives, helping businesses reach strategic goals.
- Strategic control creation breaks down silos and provides a clear wide-ranging view of risks across the organization.

### 2. Design and implement enhanced and automated controls

- Controls are embedded in processes (not bolted on) and configured to be preventative and automated (rather than detective and manual). This embedding helps to mitigate risks more effectively, detect potential breaches earlier and enable rapid deployment of corrective measures compared to detective controls.
- Optimization of the control framework helps remove redundant and duplicate controls, leaving fewer controls to operate, monitor and test.
- Controls are automated, flexible and aligned to digitized and optimized processes resulting in less manual intervention, considerable cost savings and controls that can adapt to new risks and regulations.

### 3. Dynamic and automated monitoring of controls

- Greater ownership of risks and controls by the first line and improved collaboration between the first, second and third lines provide better data quality, embedded assurance, increased clarity, and minimized overlapping review.
- Digitized and automated monitoring capabilities allow for real-time issue identification and data analysis, enabling accurate prediction of emerging trends and associated risks impacting process and risk environments.
- Self-evidencing and automated controls and monitoring capabilities provide complete and standardized data and better reporting to an evolved internal audit, focusing on key risks, advice, the anticipation of future risks and control transformation.

### 4. Enhance testing of controls

- Increase the volume (including sample sizes), speed, quality, accuracy, timeliness and assurance gained from controls testing through automation.
- Configured self-evidenced controls provide standardized outputs that enable more holistic (e.g. global controls), efficient and effective controls testing.
- Automated controls typically require smaller sample sizes meaning less manual, labor-intensive control testing is required.

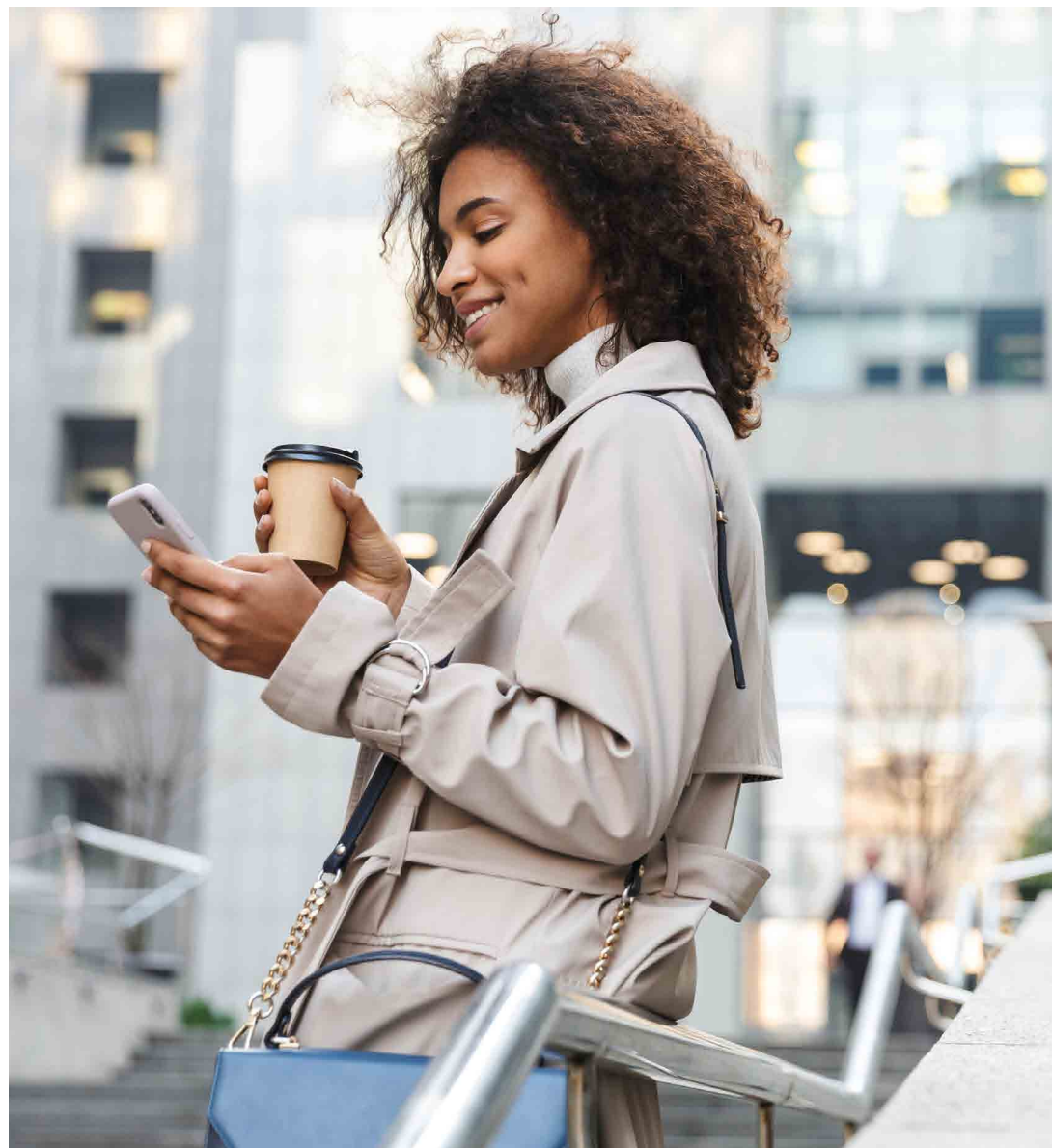
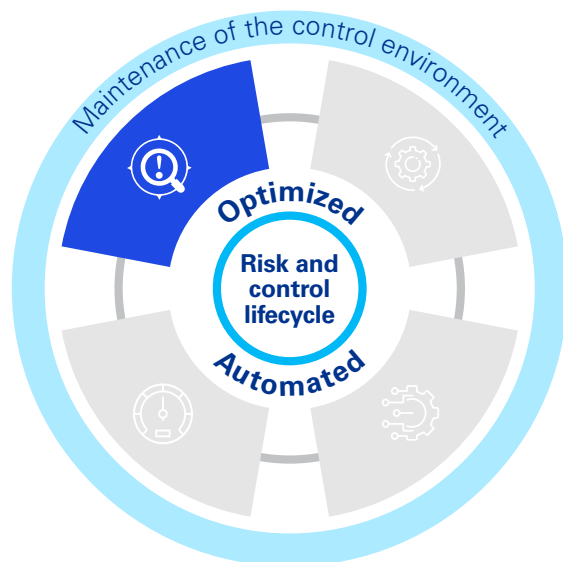
### 5. Maintenance of the control environment

- Standardized, optimized, automated controls and data are more easily maintained.
- Controls can quickly scale and adapt to new or changing risks.
- Controls and data can be easily re-platformed to new technology or solutions (such as an outsourced managed service).
- Redundant controls can be quickly identified and retired.

## 01

# Identify and assess the risk and controls environment

How to ensure that the right risks are being mitigated by the right controls.






## Identifying and assessing risks and controls

To create a sustainable control environment that is efficient and effective at helping reduce risk, organizations should be confident that they have identified and documented all appropriate risks across their processes. Therefore, the organization’s risk taxonomy is the foundation for confirming that the control framework is complete and accurate.

The risk taxonomy should be a comprehensive view of an organization’s risks. It should have standardized risks with consistent descriptions configured to the organization’s specific risk environment and business model. KPMG has developed a database of risks using industry best practices, regulatory requirements and our knowledge of leading businesses that can help organizations redefine their risk taxonomies.

The risk environment is not static, and as regulation evolves and increases, organizations must stay up-to-date with regulatory change and emerging risks. The KPMG Regulatory Horizon tool can help organizations by providing real-time coverage of regulatory news and curating data for further analysis and resolution. The tool features include:

 <h3 style="margin: 0;">Real-time regulatory news feed</h3> <ul style="list-style-type: none"> <li>• Live updates from over 400 regulatory sources across the globe, with helpful search options across categorized news.</li> <li>• Tracks over 90 regulatory topics, broad themes, and specific regulations.</li> </ul>	 <h3 style="margin: 0;">KPMG insights</h3> <ul style="list-style-type: none"> <li>• Summaries of key regulatory developments written by KPMG professionals.</li> <li>• Customized reporting and tailored plans configured by data sources, regulatory topics or jurisdictions.</li> </ul>	 <h3 style="margin: 0;">Flexible functionality and integration</h3> <ul style="list-style-type: none"> <li>• Facilitates direct data integration with third-party systems.</li> <li>• Optional web-based interface for ‘out of the box’ deployment.</li> <li>• Optional managed service to provide ongoing client-tailored support in assessing regulatory changes.</li> </ul>
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A complete and accurate view of an organization’s risk profile can be vital to helping ensure that the right controls mitigate the risks.

From here, KPMG can support organizations by designing agile, consistently documented, and sustainable standardized control frameworks. With KPMG’s experience and market insights, we can help redefine and enhance your control framework to address potential control gaps and help prioritize key controls to mitigate material risks. This framework supports consistent understanding and embedding across the business and helps address potential control proliferation.

With a complete view of your risks and controls — you can continue your journey to control optimization and automation.

## 02

# Design and implement enhanced and automated controls

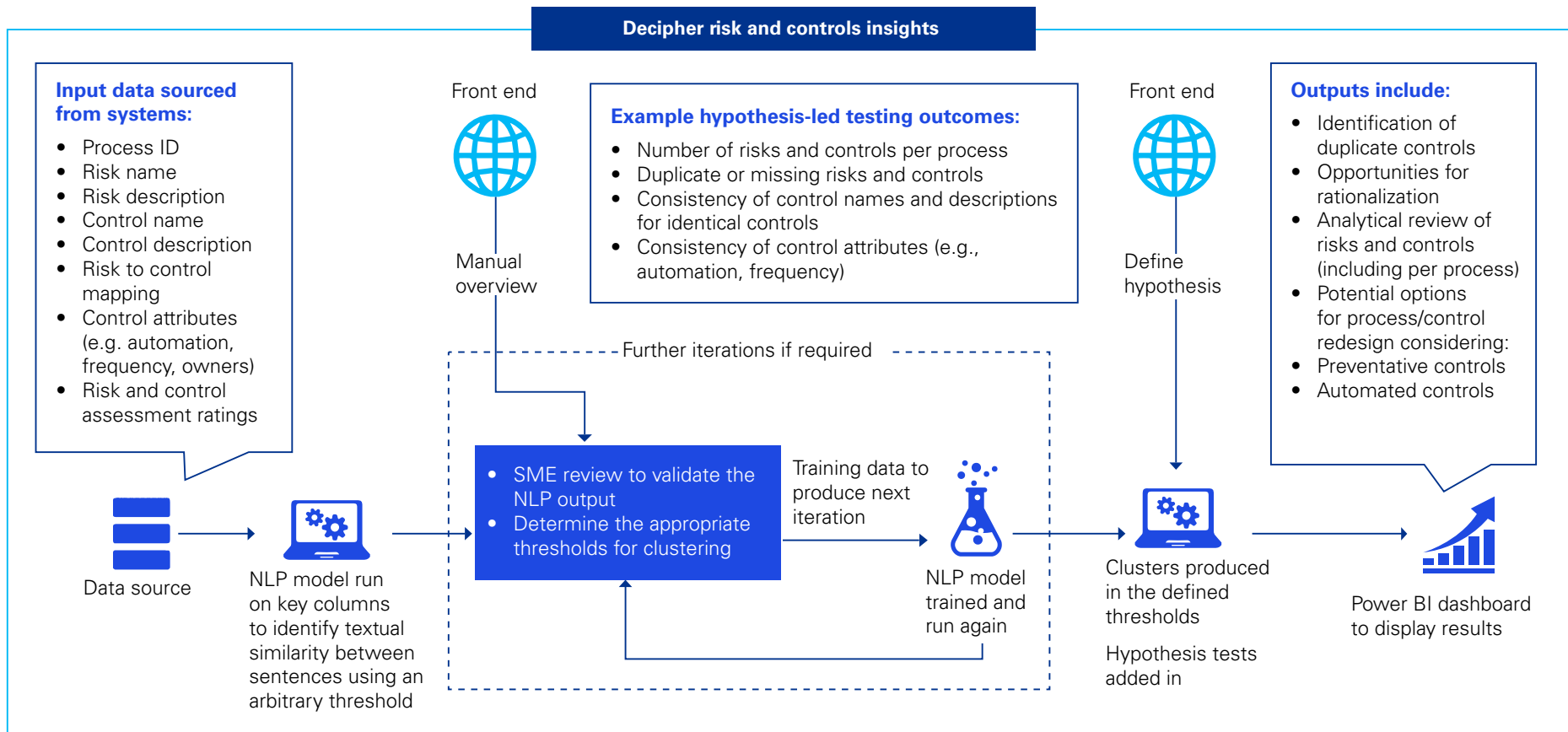
How to revolutionize control design and operation by leveraging technology, tooling and automation.



## Optimizing the risk and control framework

Before considering automating controls, it's vital to first optimize the risk and control framework. Organizations can achieve rapid benefits through the assessment of the entire control suite for 'hot spots', duplicates and redundant controls. For example, a control that runs centrally on behalf of multiple business areas or locations, with local control instances running as well, results in duplication and wastes operating, testing and reporting efforts on the control.

The KPMG Decipher Risk and Controls Insights tool can be deployed, to help quickly identify and prioritize opportunities for change. The tool uses artificial intelligence (AI) and natural language processing (NLP) to perform a front-to-back analysis of risk and control data.

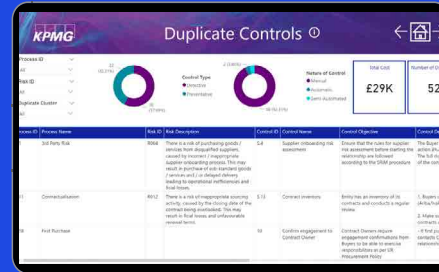




For example, the tool can identify the number of risks and controls per process, duplicate or missing risks and controls, and consistency of control names, descriptions and attributes. The following examples illustrate the tool’s outputs and how these can help address organizations’ current challenges.



The diagnostic summary provides an overview of key control metrics, including the highest and lowest concentration of controls, the longest and shortest control descriptions and where control quality is lacking.



The tool can identify duplicate controls with the same or similar control attributes and descriptions — providing an opportunity to merge or remove duplicate and redundant controls and realize cost savings.



The relationship and mapping between risks and controls are analyzed to identify areas of over or under control.



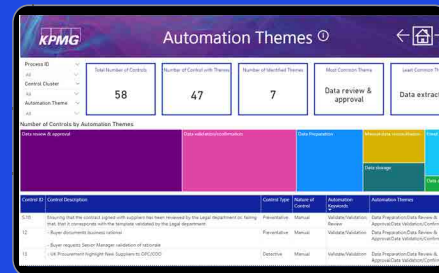
The quality of control descriptions is analyzed to determine whether controls contain sufficient detail. Including the who, what, why, where, when and how. This analysis identifies where the control design needs optimizing and automating.



The tool benchmarks data against peers to identify areas for improvement, including the percentage of automated, manual, preventative and detective controls.



The tool allows users to dive deep into the data to identify specific risks and controls to transform.



The tool identifies control automation opportunities.



The tool analyzes expected cost savings from optimization and automation — all while helping to reduce risk.

## Potential benefits of the diagnostic tool

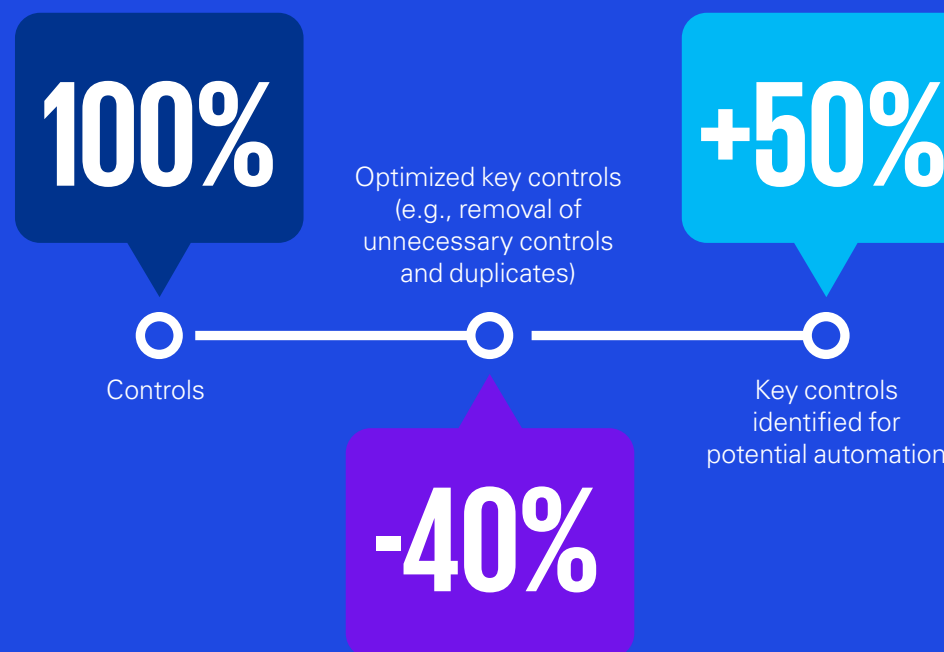
Specialist tooling offers a rapid, objective, consistent, automated, repeatable and sustainable analysis approach that can be deployed organization-wide with limited operational disruption. Tooling can gather data to support the business case for controls optimization and automation and provide input to the business strategy — identifying which risks, control or process areas are a priority. Diagnostic tooling can also be used for ongoing management and governance to verify that the risk and control framework remains optimized.

Optimizing controls can provide expected benefits without the use of technology. “Cutting the fat off” control frameworks can help streamline the operation, monitoring and testing of controls.

## Case study

### Use of the diagnostic tool in practice

A recent review into processes and controls for a bank identified over 4000 controls bank-wide, of which greater than 90 percent of the controls were manual and over 65 percent were detective controls. Additionally, many individuals were involved in manual control testing rather than using more efficient automation techniques. Through a controls analysis using KPMG Decipher Risk and Controls Insights Tool, KPMG in the UK identified controls could be optimized by 40 percent (reduction in the number of controls) and identified automation opportunities for >50 percent of the remaining controls. The analysis also identified a number of key themes for further transformation programs.



## Automating controls

Once risk and control frameworks are optimized, controls can be considered for automation. For example, turning manual detective controls into automated preventative controls that are self-evidencing and self-learning using technology such as process orchestration, artificial intelligence (AI), robotic process automation (RPA) or cloud.

Optimized and automated controls lay the foundation for other phases in the lifecycle (monitoring and testing).

### Case study

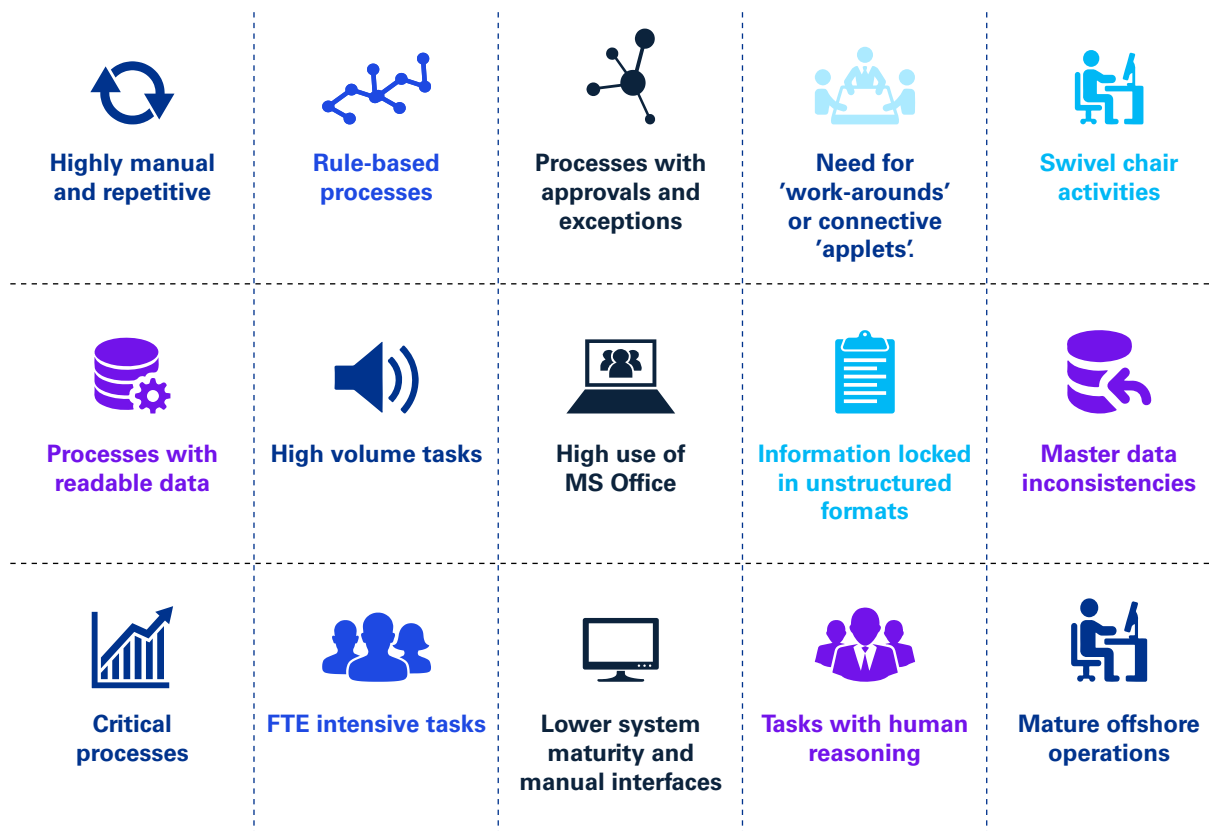
#### Automation of controls in practice

A large financial services institution realized a 50 percent reduction in quality assurance (QA) time and costs through controls optimization and a further 50 percent reduction through controls automation.

While substantially reducing cost, assurance and insights were significantly increased. The business moved from 2 percent random manual sampling to automated risk-based sampling, based on 100 percent of the population — leading the business to get more assurance for less cost.

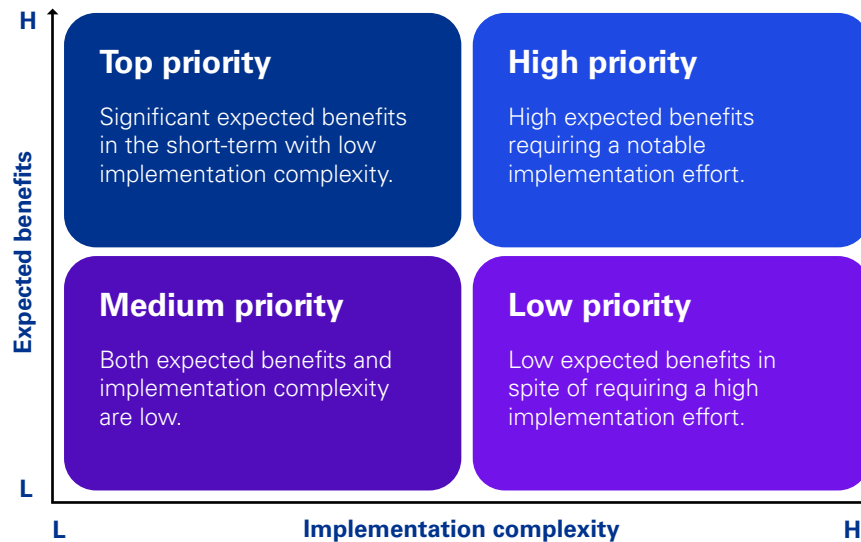
## Control automation assessment

Control automation opportunities typically have the following indicators:



As illustrated below, automation opportunities can be identified and assessed based on their expected benefits and cost (automation complexity). For example, opportunities identified as high benefit/low complexity, should be prioritized.

A benefits realization assessment should be performed after each control automation sprint. The assessment results can confirm the potential benefit and return on investment and unlock resources, investment and buy-in for further phases.



**Implementation complexity considerations:**

Data format/data structure/ transactionality/documentation/process stability/control/handoff required.

**Automation expected benefit considerations:**

No. of FTEs/process cycle time/ quality improvement/impact on related processes/ability to focus on value added tasks/risk reduction.



KPMG professionals help clients automate controls by using:

**Natural language processing and artificial intelligence** to analyze 100 percent of customer interactions to identify customer vulnerability or poor customer outcomes to inform risk-based sampling for investigation.

**Artificial intelligence** to analyze customer data, predict creditworthiness and make lending decisions.

**Self-learning digital assistance** to review customer onboarding documents, populate the KYC (Know Your Customer) checklist, analyze the data and prepare a summary for the Customer Service Manager for approval (see below).

End user computing (EUC) controls to replace **digitized workflow** using **processes orchestration** to integrate preventative controls.

**Robotic process automation** to automate the revocation of user access by linking user access to payroll.

**Off-the-shelf tooling** to automate the migration of changes and post implementation reviews.

**Natural language processing and artificial intelligence** to prompt and instruct customer call handlers in real-time regarding consumer duty.

**Robotic process automation** to automate the transfer and reconciliation of data with errors automatically identified and resolved.

**Robotic process automation** to collate, standardize, integrate, analyze and summarize data for management reporting.

**Robotic process automation** to automate the anti-money laundering (AML) investigation process.

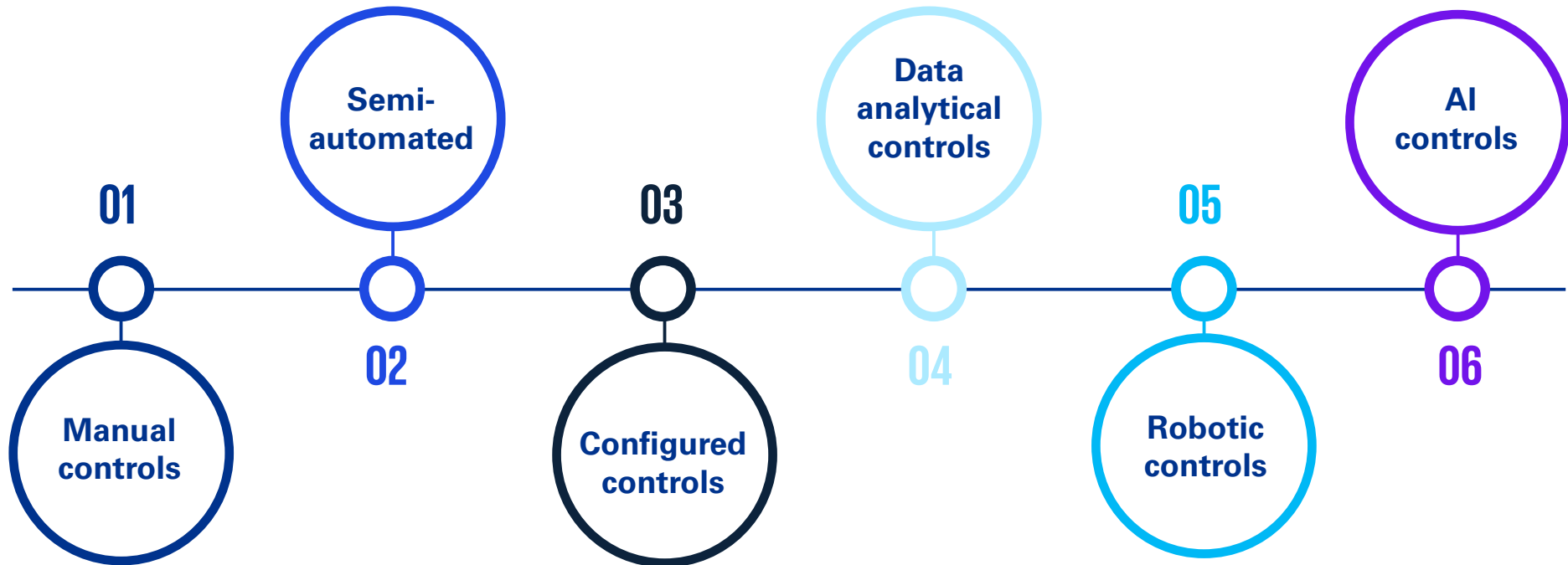
**Artificial intelligence** to prevent, detect and respond to cybersecurity vulnerabilities, threats and events.

**Optical character recognition (OCR) and natural language processing (NLP)** to analyze invoices and automatically escalate issues to the correct team.



## Organizations have different automation needs

A range of automation options are available to organizations, from semi-automated controls to configured controls, data analytics-based controls, and more sophisticated controls that utilize robotics and artificial intelligence.



There is no one-size-fits-all when implementing control automation. Different organizations can potentially benefit from other automation models based on the nature of their business, the complexity of their IT landscape and cost/benefit considerations. Furthermore, each control should be assessed individually. An example of the control automation spectrum is provided below.

## Example of a KYC control across the automation spectrum

### 01 Manual control option

A KYC checklist is reviewed and physically signed by the customer service manager (CSM). CSM sends an email to the IT team to open the account in the core banking system per KYC policy. Any exceptions are noted in the KYC checklist and resolved in a timely manner.



 High residual risk  
 ▶ High cost/FTE

### 02 Semi-automated control option

A scanned copy of the KYC checklist is uploaded to the onboarding system, and input validation checks are performed and approved by the CSM before an account is opened in the core banking system as per KYC policy. Exceptions are noted in the onboarding system.



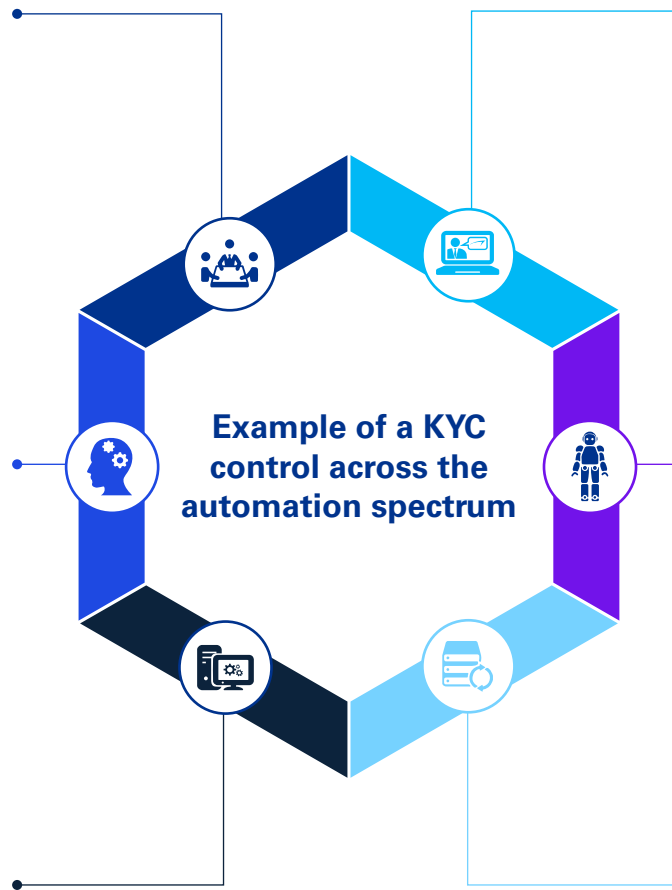
 Medium high residual risk  
 ▶ High cost/FTE

### 03 Configured control option

A customer submits the requirements per the KYC checklist and it's reviewed and approved in the onboarding application before an account is opened per the KYC policy. Exceptions are followed as part of the issue management workflow.



 Medium residual risk  
 ▶ Medium cost/FTE



### 06 AI control option

A self-learning digital assistant reviews customer on-boarding documents and populates the KYC checklist and prepares a summary to help the CSM to approve the case. If any exceptions are noted a workflow is triggered to resolve the issue.



 Low residual risk  
 ▶ Low cost/FTE

### 05 Robotic control option

A digital onboarding assistant reviews all the documents submitted per the KYC checklist by the customer directly, and a workflow is triggered to handle any exceptions. For all compliant cases, a CSM reviews and approves the case per KYC policy.



 Low medium residual risk  
 ▶ Low cost/FTE

### 04 Data analytic option

A D&A utility is configured to perform the review of optical character recognition (OCR) details captured from scanned documents submitted per the KYC checklist by the customer directly and workflow is triggered to handle any exceptions. For all compliant cases, CSM reviews and approves the case per KYC policy.

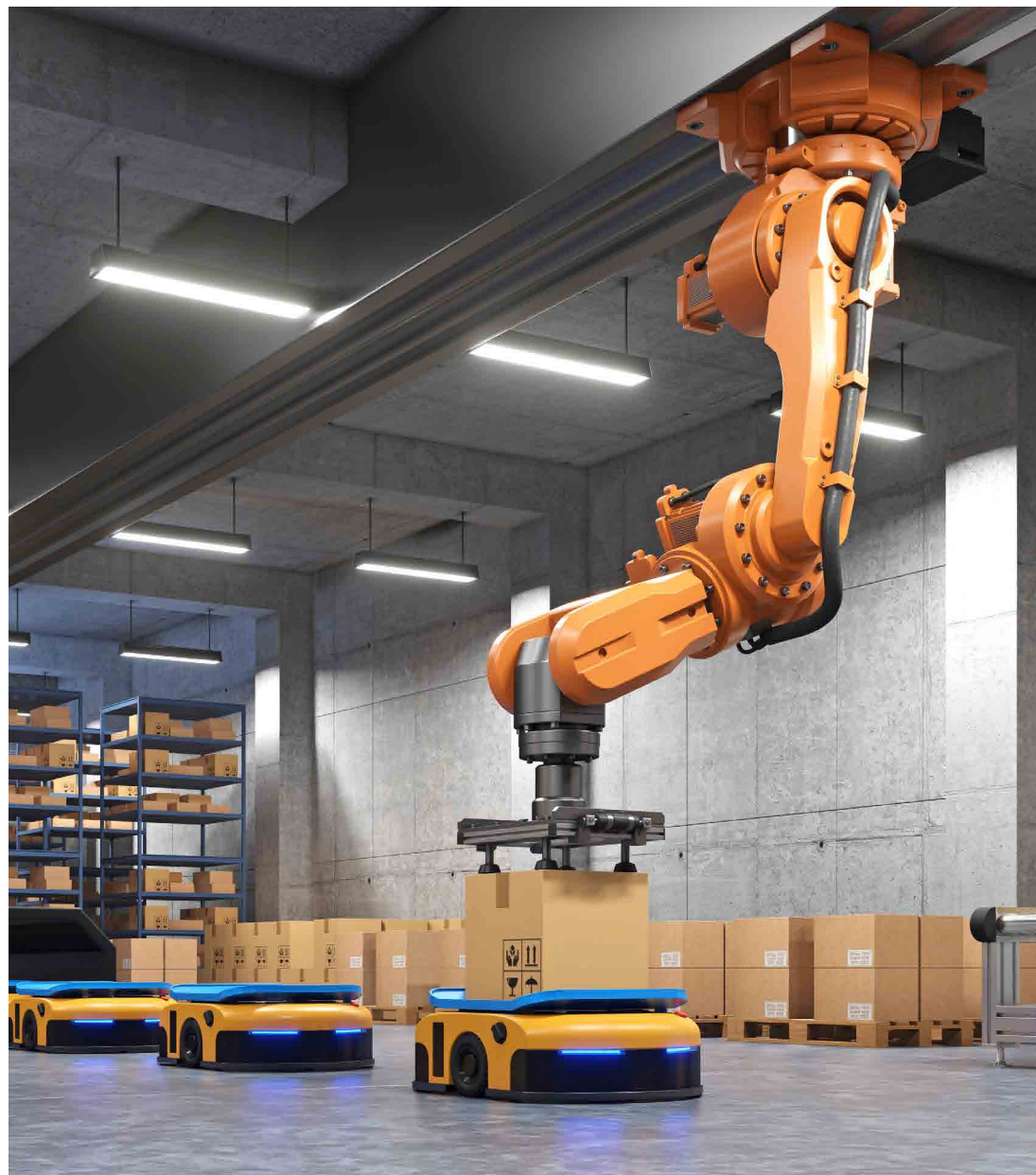
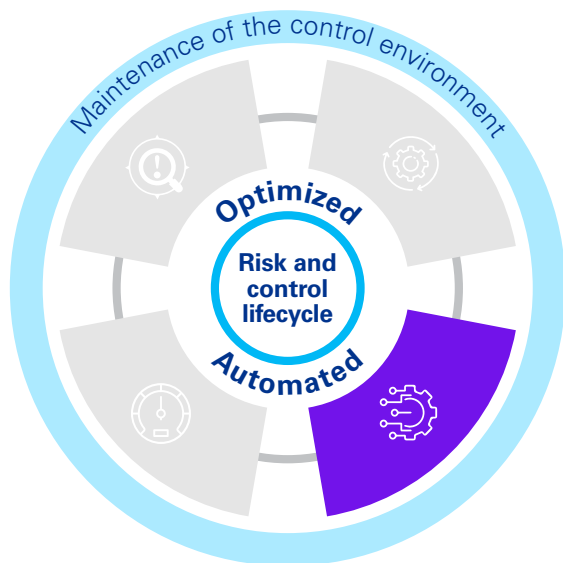


 Medium low residual risk  
 ▶ Medium cost/FTE

03

# Dynamic and automated monitoring of controls

How to establish more dynamic, timely and automated control monitoring capabilities enabled by the digitization and automation of controls.



Optimized and automated controls enhance monitoring capabilities and provide a more dynamic and real-time view of control effectiveness through key control indicators (KCIs) and continuous control monitoring (CCM).

Additional potential benefits can include better quality data (including the ability to self-serve), embedded assurance into processes, and real-time issue identification and resolution, all of which

can lead to reduced risks, reduced impact when things go wrong and more insightful reporting and assurance.

This can be achieved through capturing control meta-data, effective data lineage and automated reporting through defined logic and indicators — linking regulation to policies, processes, risks, controls and automating outputs. This lineage provides a timely feedback loop to assess whether controls have been

designed, implemented and are operating effectively to help reduce risk.

This approach helps organizations integrate and interpret risk and control data from multiple platforms. It empowers control owners and operators in the first line to and operate their own risks and controls, which enhances the second and third lines of defense's ability to monitor first-line activities and increases the value of the three lines of defense.

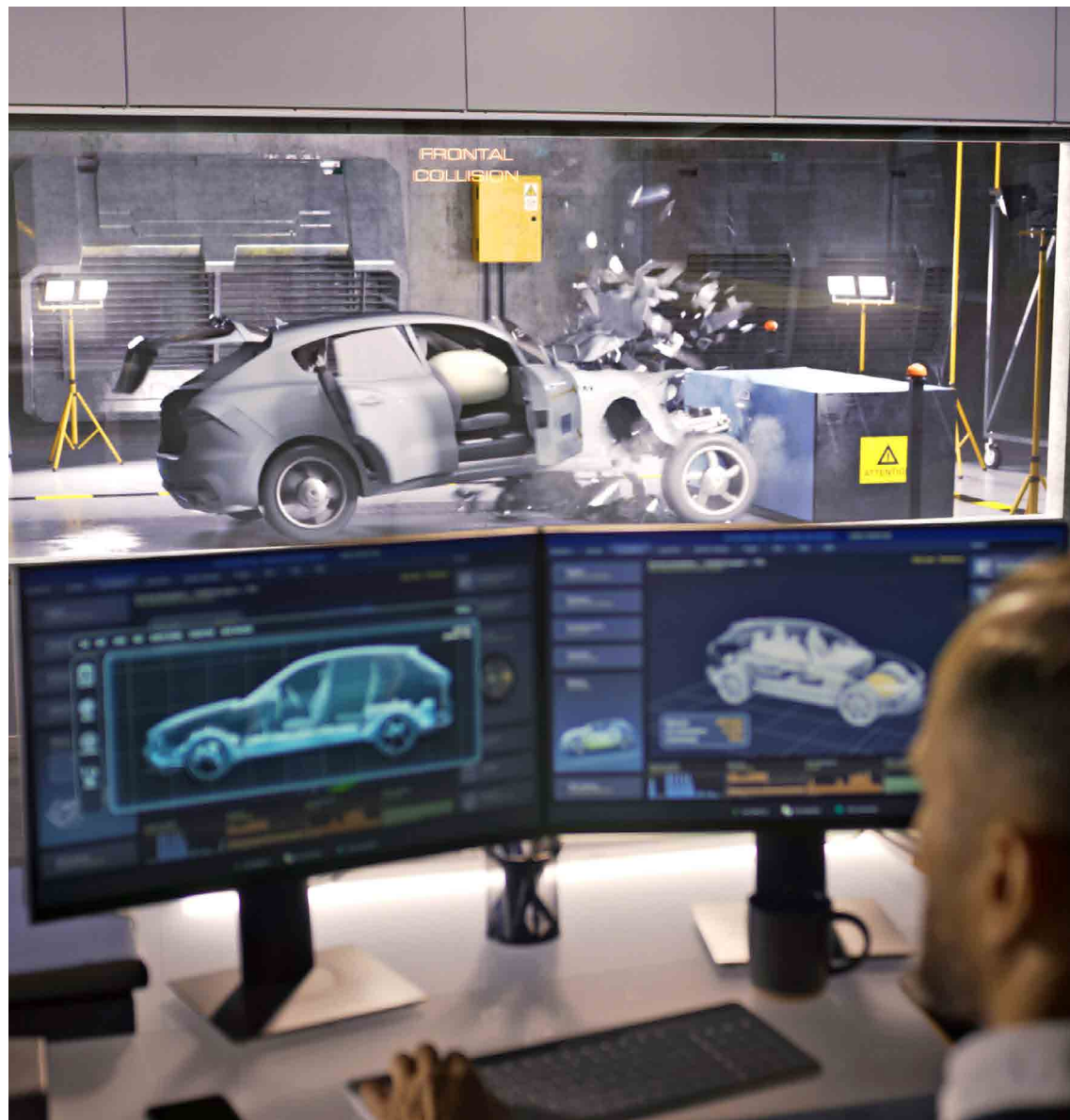




04

# Enhance testing of controls

How to increase the volume, speed, quality and timeliness of controls testing through automation and self-evidencing controls.





## Testing automation

If controls have been optimized and automated further upstream in the lifecycle, benefits can be realized through testing as these controls typically take less time and effort to test.

In addition, bots can be used to transform controls testing. These control testing bots use robotic process automation (RPA) to directly analyze systems and control populations, pick risk-based samples, analyze sample evidence and produce work papers and dashboards (detailing findings and root causes). This means less operational disruption (given that the bot analyses the system directly rather than via human control operators), increased assurance (larger risk-based samples and better and quicker insights) and helps reduce costs (faster testing results and remediation of deficiencies). This also enables a faster feedback loop to determine residual risk profile so more focused and timely

action can be taken. KPMG professionals have helped build and deploy many of these bots.

## Testing managed services

Organizations spend a lot of time, resources and money testing their control frameworks. There's overlap, duplication and lack of alignment between the three lines of defense and too much reliance on the third line of defense to identify control deficiencies (when it's too late). As a result, we see organizations outsourcing their control testing.

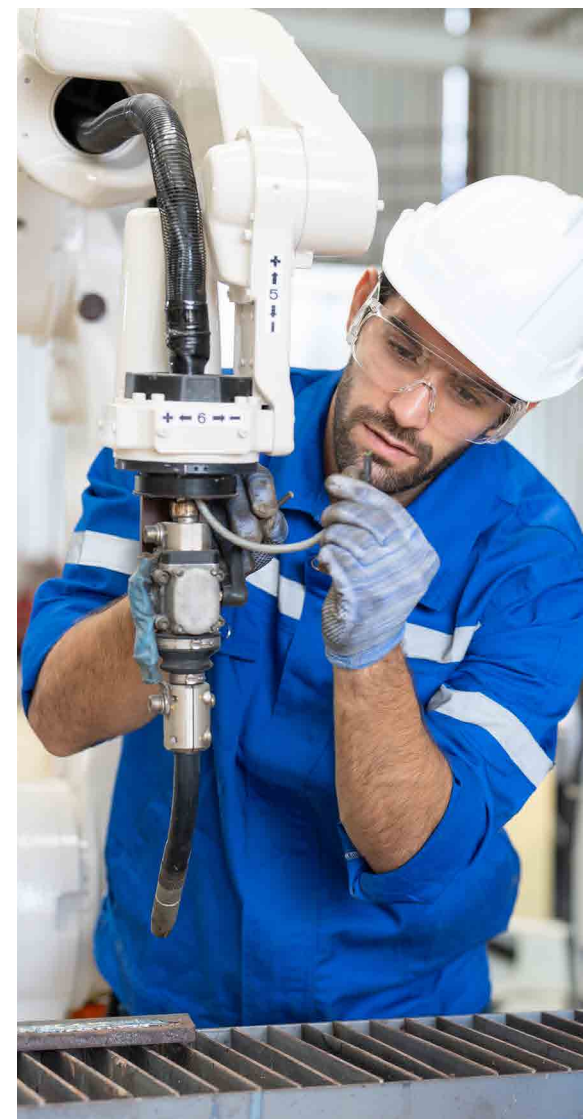
KPMG firms offer control testing as an outsourced managed service. We have successfully helped organizations provide independent testing for their three lines of defense. We work with clients to develop a controls testing strategy that can coordinate our resources and automation methods to provide robust, cost-effective testing and better insights.

## Case study

### Automation of control testing in practice

KPMG transformed controls testing for a major retail and commercial bank in the UK. They helped build a digital solution that automatically collated and tested control data and produced work papers for human review.

The client achieved an in-year return on investment and processing speed was significantly increased, from 53 days of manual effort to 12 hours of automated bot effort. Testing coverage also increased by a factor of 18, resulting in improved assurance, insights and response.



# Why KPMG?

Does your organization have ineffective, inefficient and inflexible control frameworks?

KPMG firms have market-leading risk and technology practices that can harmoniously, utilize cutting-edge tools to work with you on your control transformation journey. We help you regain control of your controls and create a future-ready control environment.



**We are risk and control focused**

We put risk and control at the heart of what we do and take a control by design approach. We believe that if you can manage risk and control well, compliance with regulation will come naturally.



**We offer an integrated digital solution**

Our digital solution is modular, wide-ranging, and integrated. There are no handovers, with clear ownership from start to finish.



**We have leading people**

Our leadership team have practical experience with approaching your challenges and problems. This is supported by technical experience in the latest methods, regulations, and technologies across a range of industries.



**We have a wealth of resources**

We have a blend of risk, control, technology, data and automation experience. This means we can approach problems comprehensively using leading methods and technologies, enabled by KPMG professionals, assets, tools and alliances.

# Contact us

Contact us to discuss your organization's needs.



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