KPMG

# Navigating the evolving digital organization

April 2024

# Today's Agenda

1. Risk in Modern Technology
2. Internal Audit Digitization
3. What Next?
4. Q&A

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# Session Objectives

We will cover important aspects of agility and tech enablement in internal audit practices, including:

- Identifying scenarios where technology and risk evolve to impact business risk and the required internal audit activities (signals observability, continuous monitoring, etc.)
- Proactive strategies to enable internal auditors to plan and execute with agile techniques and technology solutions
- Overview of real-life scenarios, approaches, and solutions from across industries
- Forecast of short- and long-term opportunities for internal auditors, with a focus on analytics, automation, and artificial intelligence

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# Risk in Modern Technology

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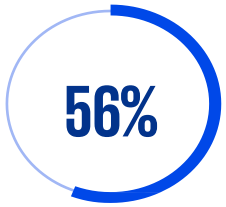
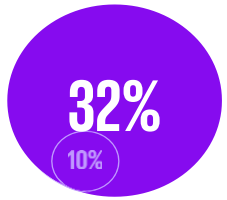
# Modern technology evolution

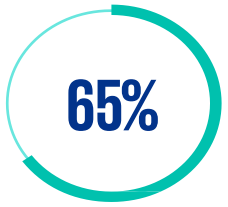
The 2023 US Technology Survey Report provides an outlook on the digital plans and priorities of US organizations, reflecting data from 400 US enterprise technology leaders.



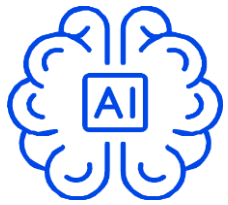

**say the returns from digital transformation** investments had exceeded their expectations.



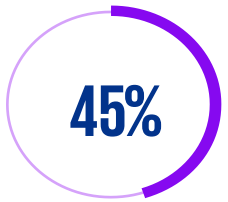

**The number of businesses with leadership buy-in for emerging tech** has more than tripled from 10% to 32%.



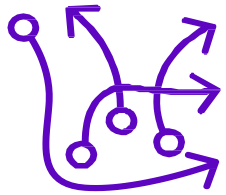

say in comparison to last year, they **are expected to do more with less budget**.



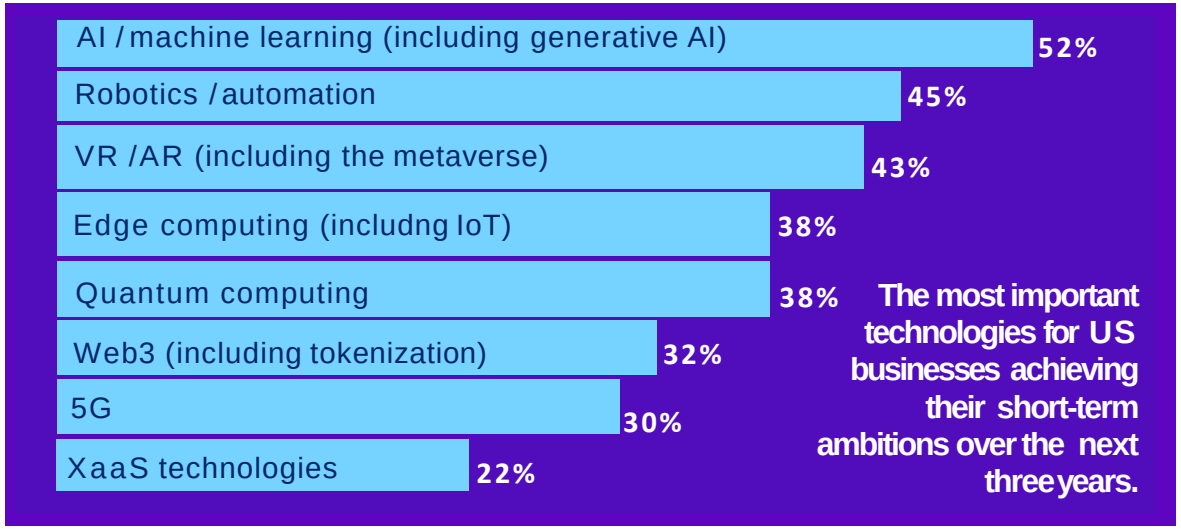

**AI is seen as the most important technology** for achieving short-term ambitions.

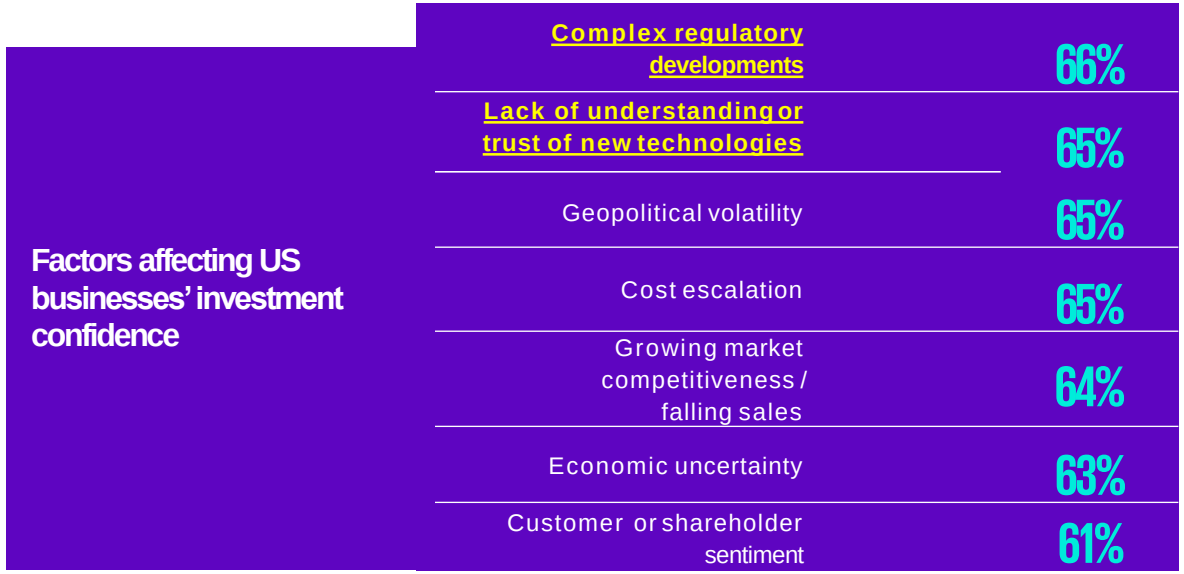



**have increased profitability or performance** from digital transformation investments.



**Technology functions lacking coordination is the #1 hurdle** for transformation progress.

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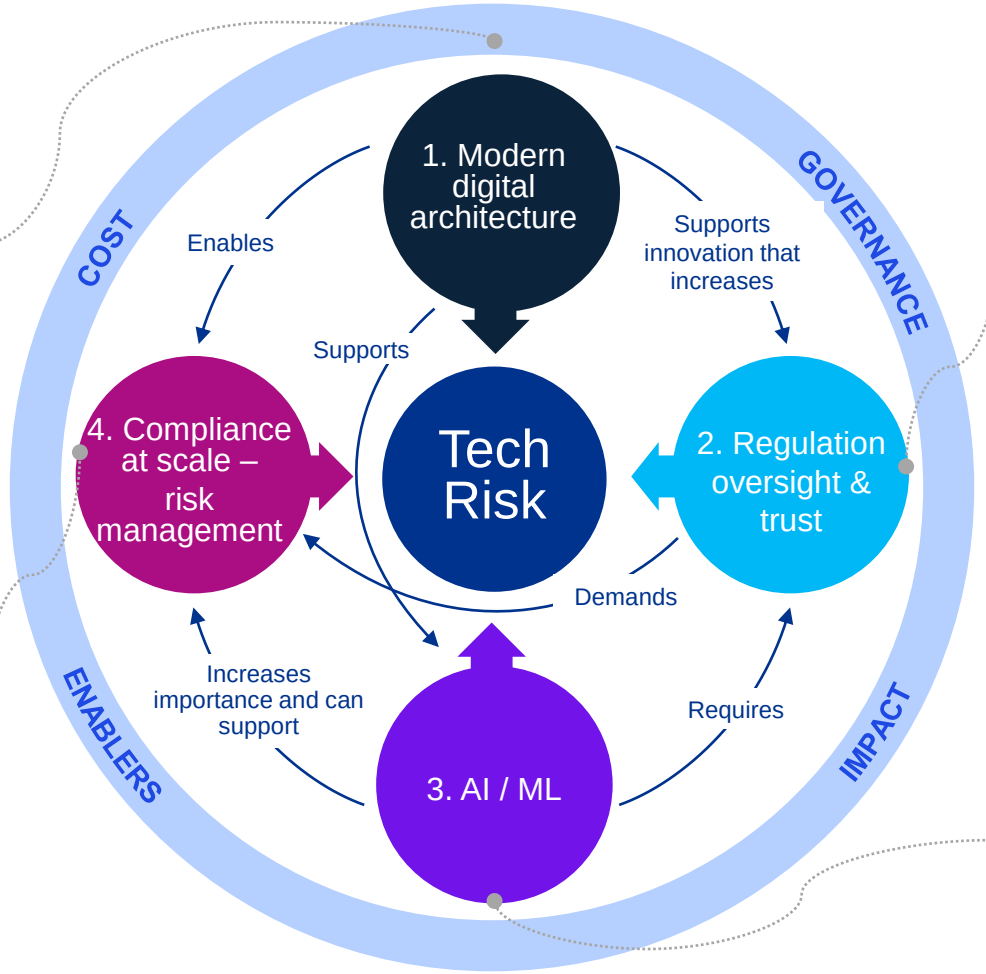
# Modern technology continues to change the risk landscape

### 1. Modern digital architecture

**Digital tools, solutions, and processes that** create the opportunity to treat compliance as code. E.g. Cloud computing

| | | | |
|---|---|---|---|
| DevSecOps (controls observability) | Enterprise Cloud Risk | APIs and Microservices | 5G and Connected |




### 2. Regulation oversight and trust

| | | | |
|---|---|---|---|
| Regulator Reviews | Security Standards and Certifications | Issue Management / Remediation | Tech Trust Culture |

| | | | |
|---|---|---|---|
| Unified Control Frameworks | Risk Workflow Tools | Continuous Controls Monitoring | KRI and KPI Libraries |

### 3. Compliance at scale – risk management

Compliance programs must scale and map to layers of internal, external, and regulatory control requirements.

### 3. Artificial intelligence and machine learning

| | | | |
|---|---|---|---|
| Low Code Automation | Process Automation | Quantum Computing | Big Data |

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# In response, proactive and value-driven risk management must be embedded in tech-transformation cycles

| | 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|---|
| | **Provisioning risk products and services** | **Starting the transformation** | **Delivering the transformation** | **Realizing the transformation** | **Sustaining, improving, and monitoring** | **Continuing the journey** |
| Objectives | Dynamic governance and risk management practices | Identify the threats, risks, and compliance requirements unique to the transformation project. | Instill “compliance by design” principles to embed risk and controls throughout implementation. | Enable a culture of trust through stakeholder engagement, proactive training, awareness, and adoption of transformation risk and controls. | Activate continuous risk and control monitoring practices to drive insights and risk added value. | Align the organization’s transformation strategy with a risk and compliance roadmap for a scalable and adaptable risk program. |
| Initiatives | • Unified control frameworks<br>• Governance and compliance program implementation<br>• GRC workflow tool planning and optimization | • Current state gap and maturity<br>• Requirements gathering and mapping (policies, security frameworks, and regulations)<br>• Stakeholder awareness and education training | • Define and build elements of the risk and control framework (control packages)<br>• Configure GRC workflow tools and enable automation<br>• Independent control testing and remediation planning | • Customized coaching sessions for control operators<br>• Targeted check-ins or satellite assessments to monitor adoption<br>• Stakeholder engagement and reporting | • Deploy KRI and KPI monitoring through dynamic risk assessment methods<br>• Activate continuous control monitoring program<br>• Issue remediation project management and validation | • Develop multi-year risk and compliance strategy<br>• Draft the compliance roadmap and business case for future transformation needs<br>• Advise on audit and reviews from regulator, etc. |

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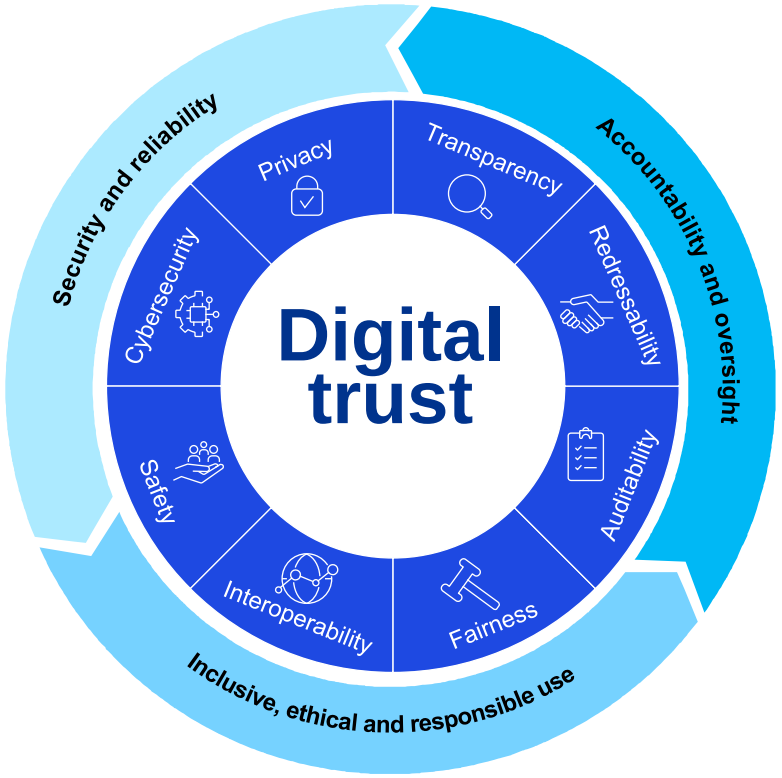
# A digital trust framework may be employed to achieve sustainable approach to risk

**A framework can be used to define digital trust goals and help drive consistency throughout the organization as modern technologies are evaluated and operationalized.**




*Source: World Economic Forum*

- Digital trust strategy and commitment
- ISO 27001 and other regulatory compliance
- Responsible artificial intelligence
- Cloud governance and controls
- SOC 1 or SOC2 assurance
- External trust portal/transparency on website
- Product cyber security and controls
- Professional and community involvement
- Technology resiliency

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# Internal Audit Digitization

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# Internal Audit must deliver value as it aligns with enterprise technology transformation

Internal Audit should leverage a more agile and dynamic approach to respond to the organization's changing risk landscape and deliver on its value promise to protect and enhance organizational value.

| | | | |
|---|---|---|---|
| **Risk Assessment and Planning** | Automated Risk Assessment | Process mining | Unified controls framework |
| **Execution** | Testing automation bots | Continuous auditing and compliance | Artificial Intelligence |
| **Reporting** | KPI/SLA insight tracker | Status dashboarding | Other Expense Optimization |

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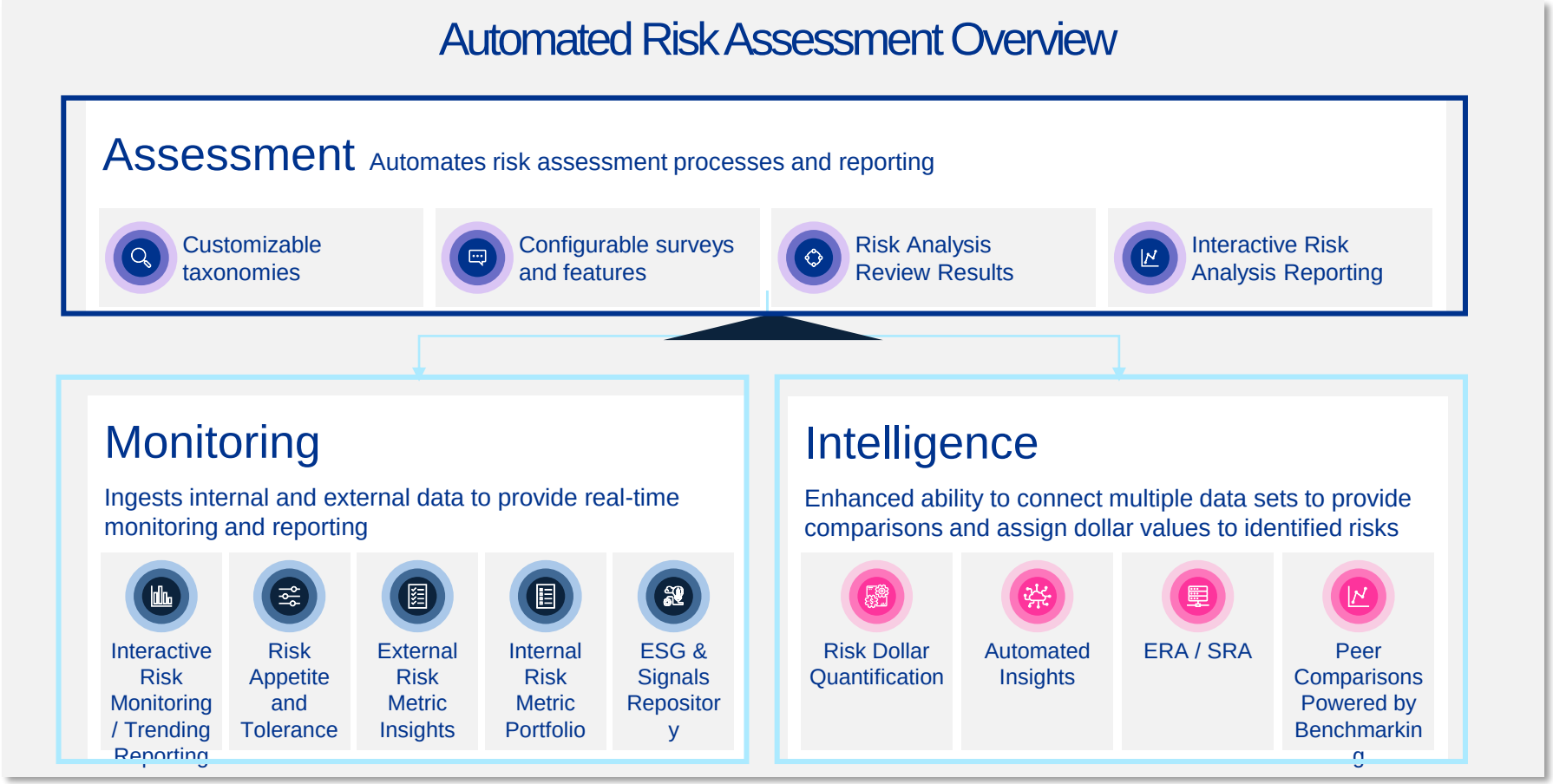
# Automated risk assessment - Risk assessment and planning

Risk assessment solutions with built-in questionnaires defined based on relevant frameworks should be adopted. These solutions enable continuous risk updates by participating members of the organization, who provide qualitative and quantitative responses. Such solutions also provide external risk insights through which the company's risk and compliance maturity scale may be benchmarked.

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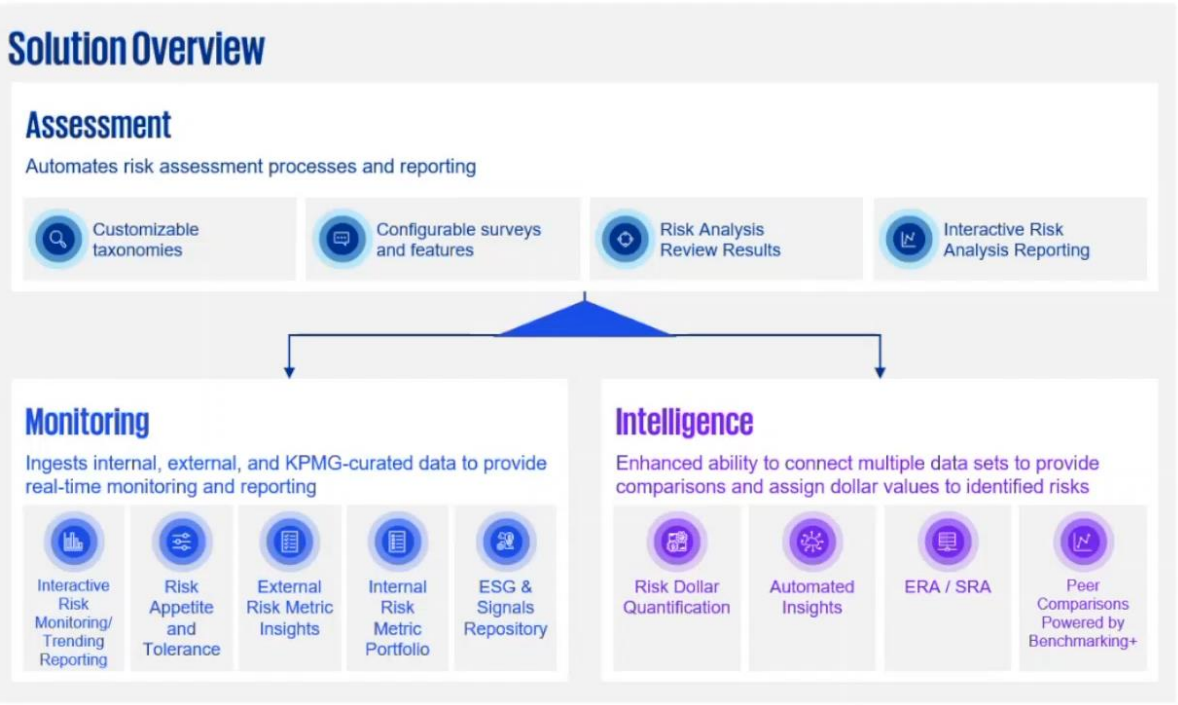
# Automated risk assessment - Risk assessment and planning

Our platform is built within the Microsoft Azure cloud, with additional survey and visualization tools leveraged for user interface and reporting capabilities.

The solution provides three sets of capabilities through modules, which can be selected in part or whole to meet each organization's needs.

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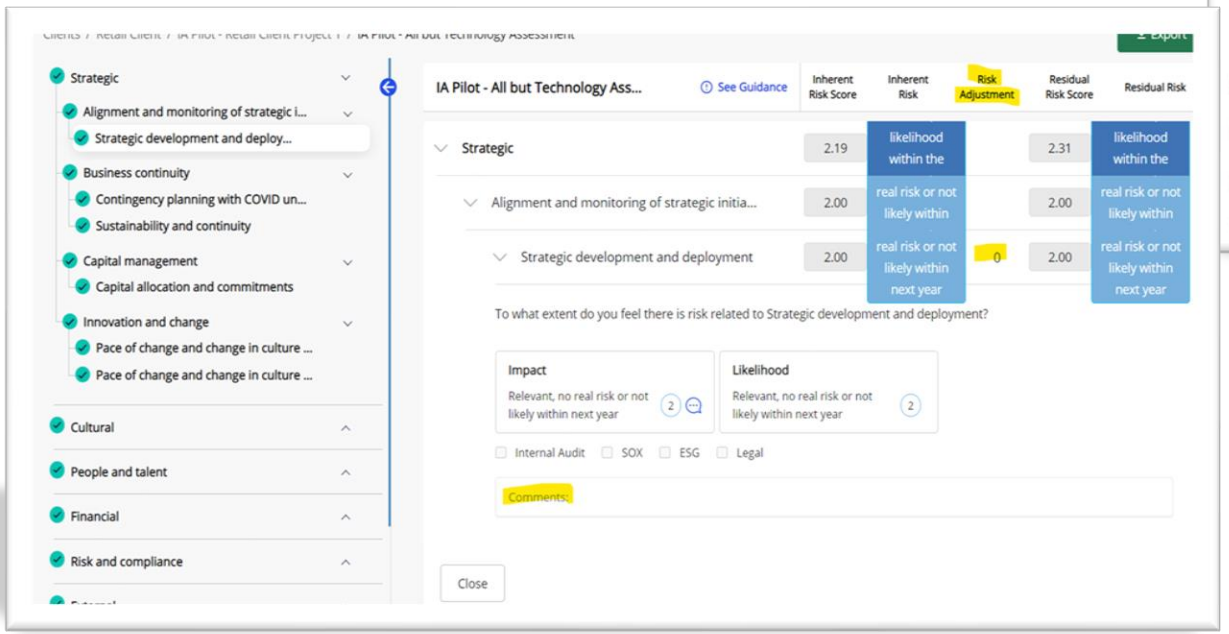
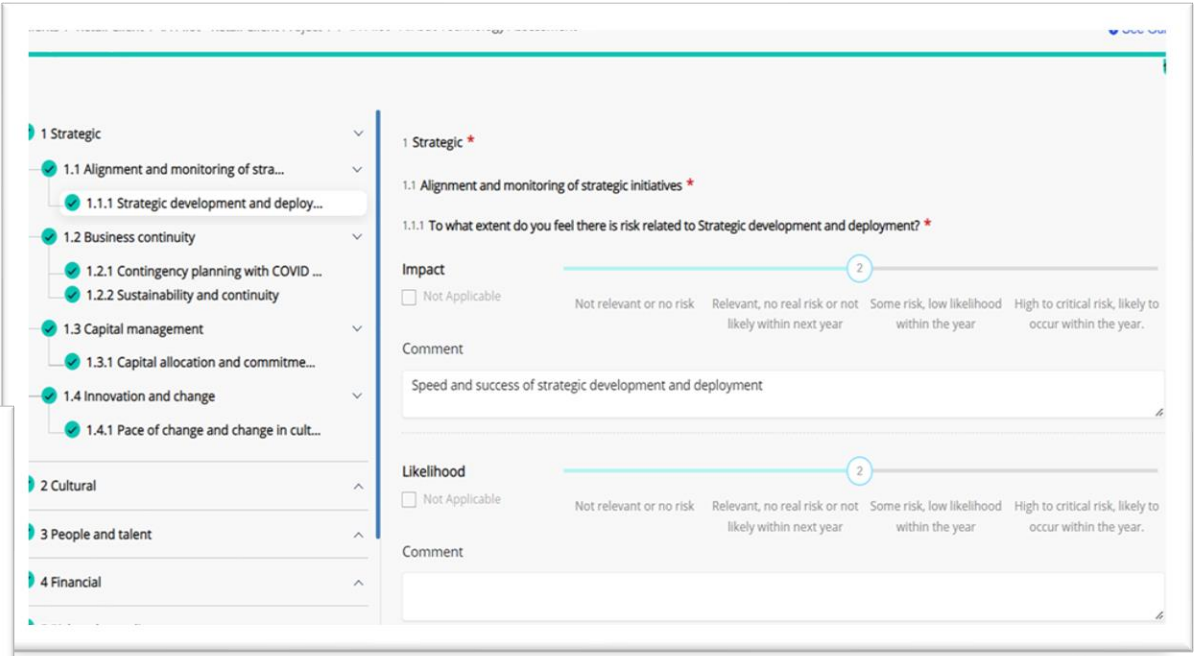
# Automated risk assessment - Risk assessment and planning

Illustrative view of risk assessment completion process.

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# Automated risk assessment - Risk assessment and planning

Illustrative view of example dashboards generated as result of risk assessment



A Domain Detail report can be generated, detailing the risk hierarchy and scoring, which in turn can be exported for sharing more broadly.

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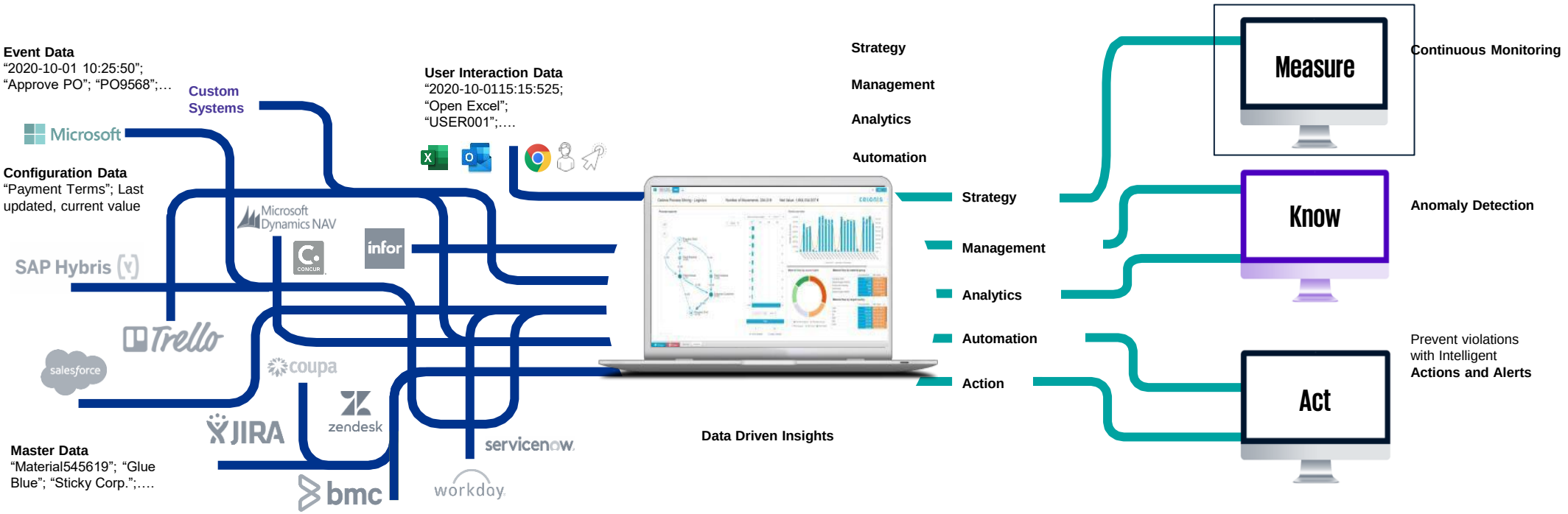
# Process Mining- Risk assessment and planning

Process mining is smart, big-data technology that may be used to derive data driven insights to target key risk areas using historical data.




**Data extraction from all systems for 100% case coverage**

**Process understanding & automatic detection of compliance violations**

**Transparency in testing, design and monitoring of controls**

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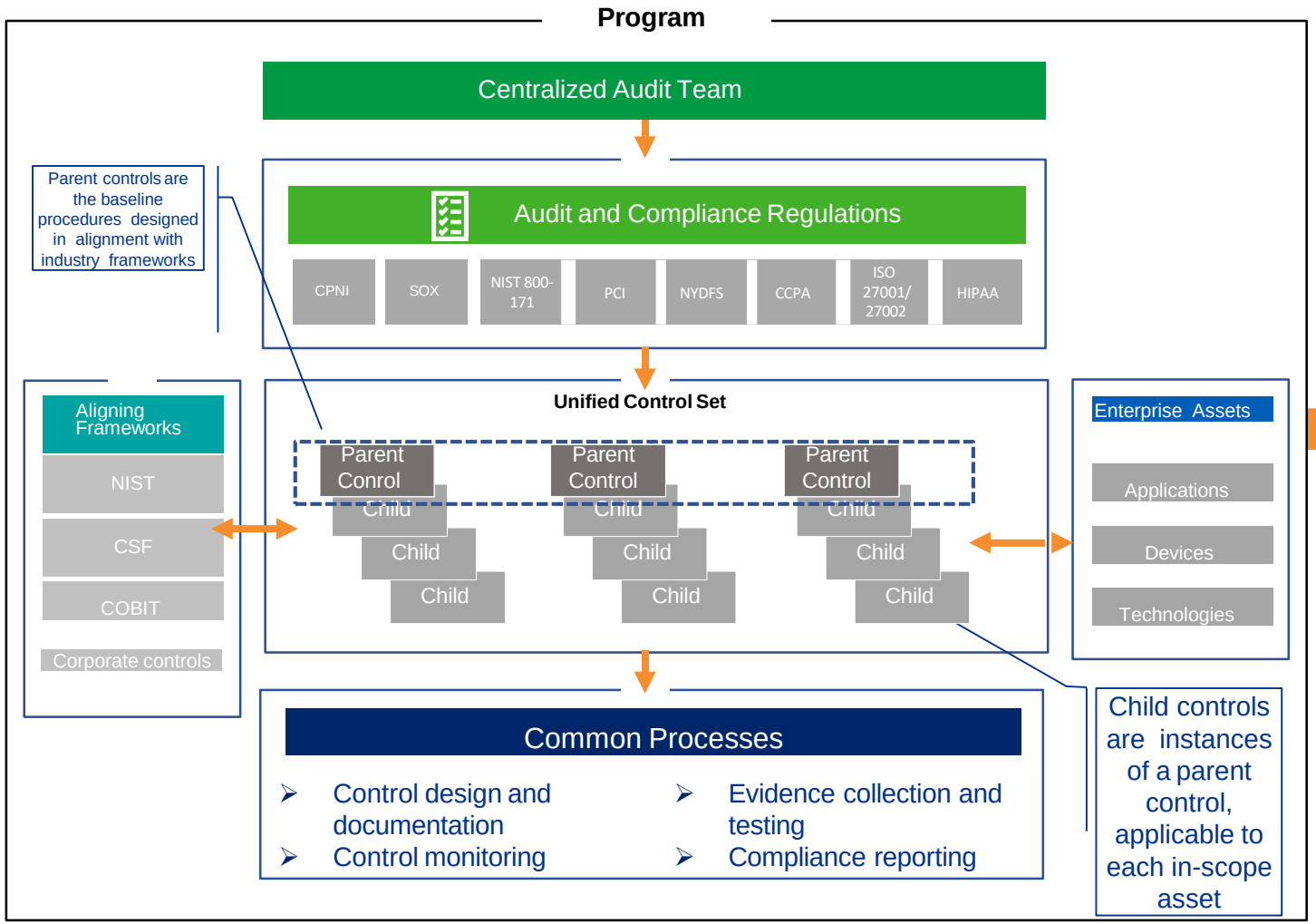
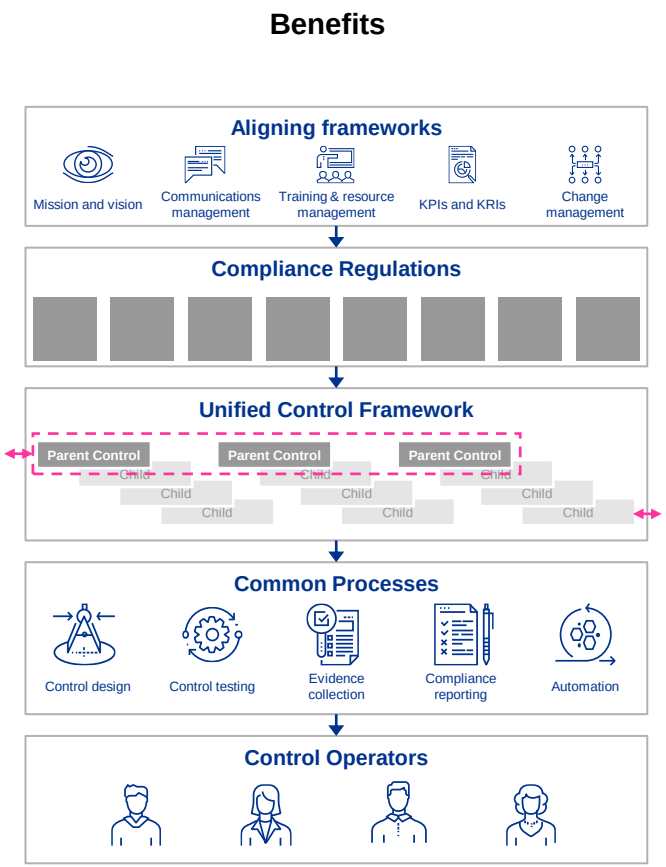
# Unified controls framework - Risk assessment and planning

A unified framework creates scalable framework to onboard new programs and regulations while reducing testing redundancy (test once comply many).

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# Process Mining- Risk assessment and planning

**Process mining for risk assessment**

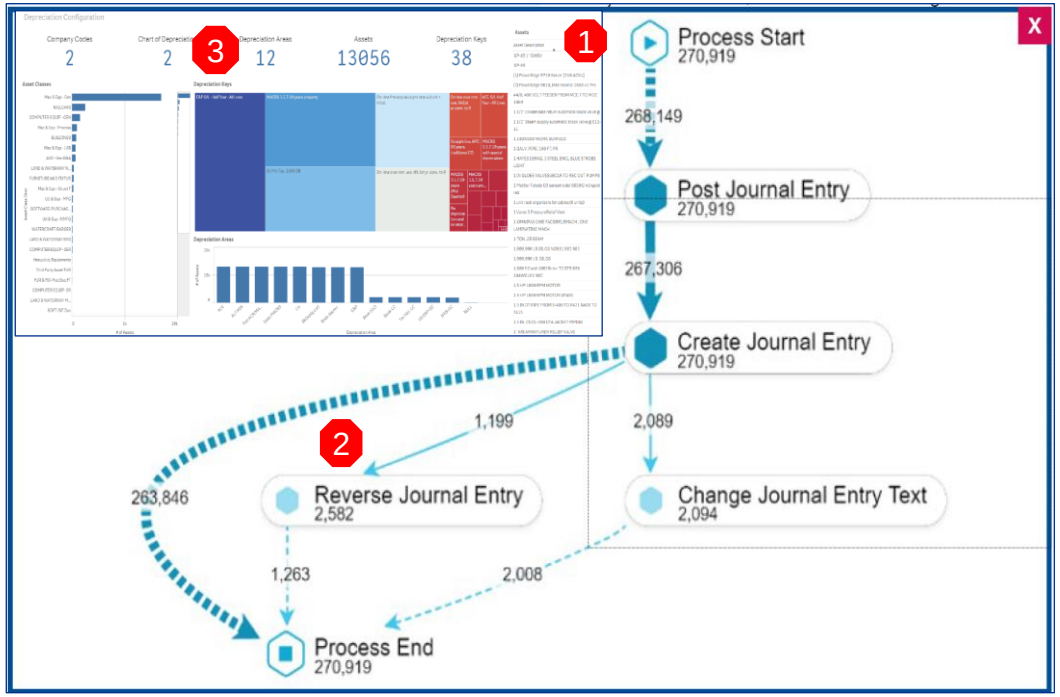
Identification of **variants** and **focus areas**

Highlighting most relevant "**hot spots**" based on volume & financial amount

**Simulate Business Impact** of Transformation

## Client example

A utility client is using process mining to identify journal entries deviated from a defined process and based its sample on a specific population of JEs




1. Assess journal entries and identify manual versus automated entries.
2. Identify reasons for rework (manual adjustment entries) and manual recurring entries. Identify opportunities where manual journal entries volume can be reduced.
3. Analyze key risk indicators: conflicting GL account combinations for debits and credits, round amounts, miscellaneous account postings, and other entries.

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# Unified controls framework - Risk assessment and planning

**Organizationally Unique Controls**

**Organizational controls relationships**

**Applicable control frameworks across the Enterprise**


**Owners filterable at SVP, VP and Control Owner**

**Applicable Entities aligned across the Enterprise**

**Control Details and Testing Procedures on hover**

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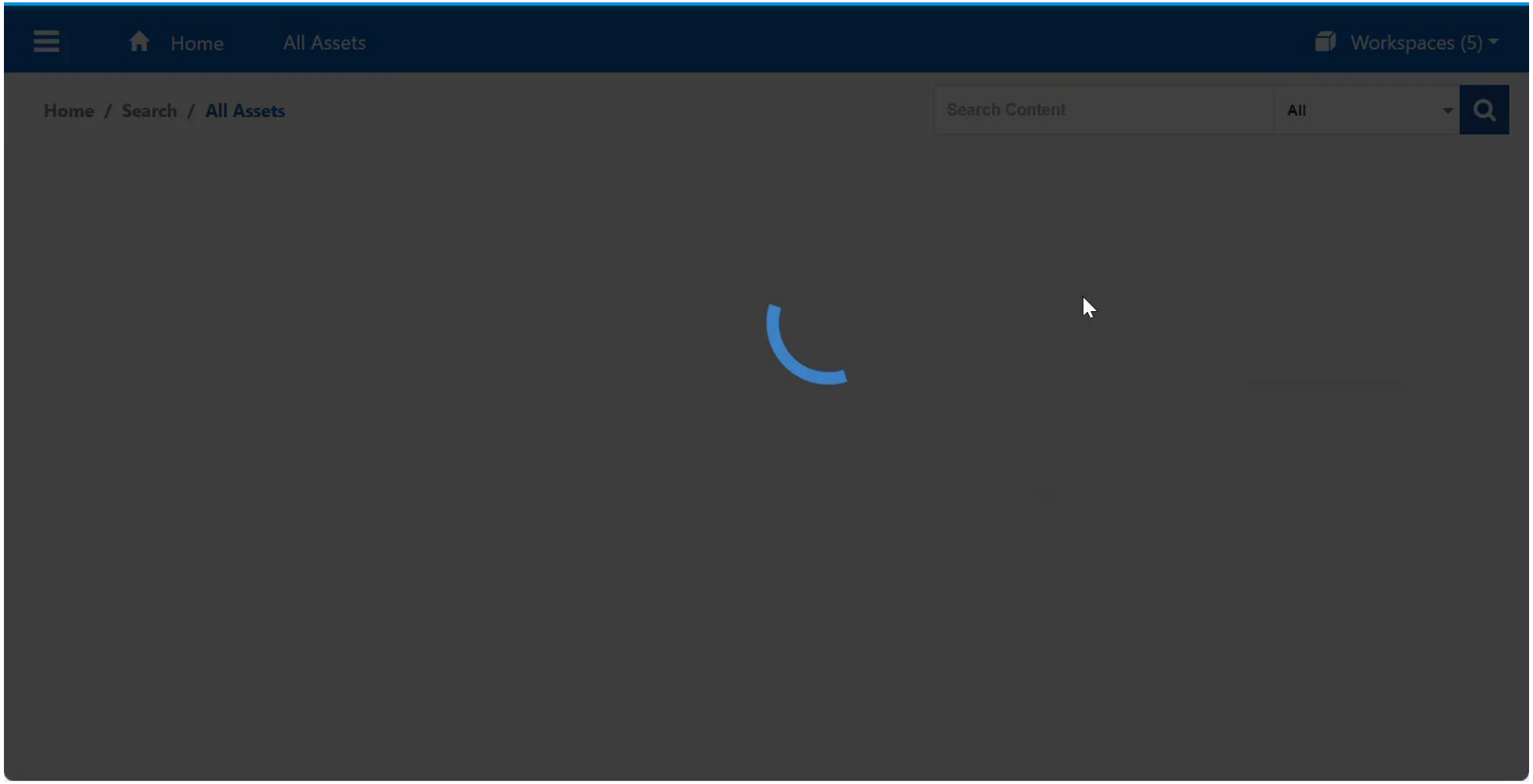
# Testing Automation bots - Execution

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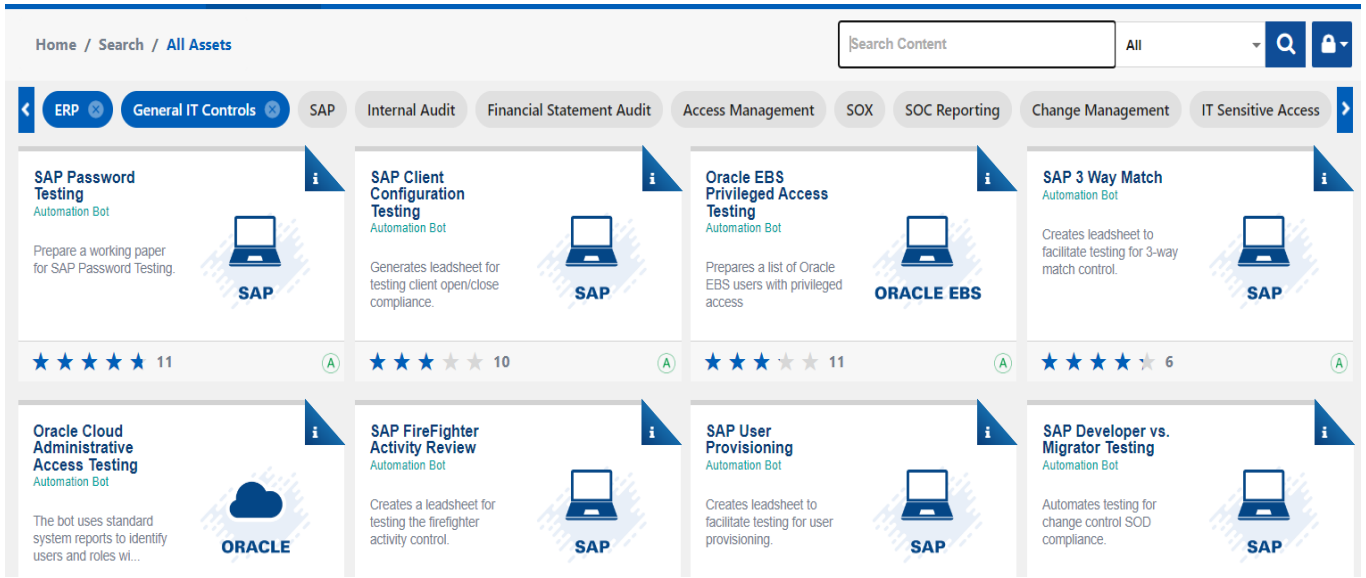
# Testing Automation bots - Execution

Illustrative view of a testing bot library of over 300 assets designed to enable controls performance, test procedures and administrative activities.




**Immediate impact**

**Quality improvement**

**Increased coverage**

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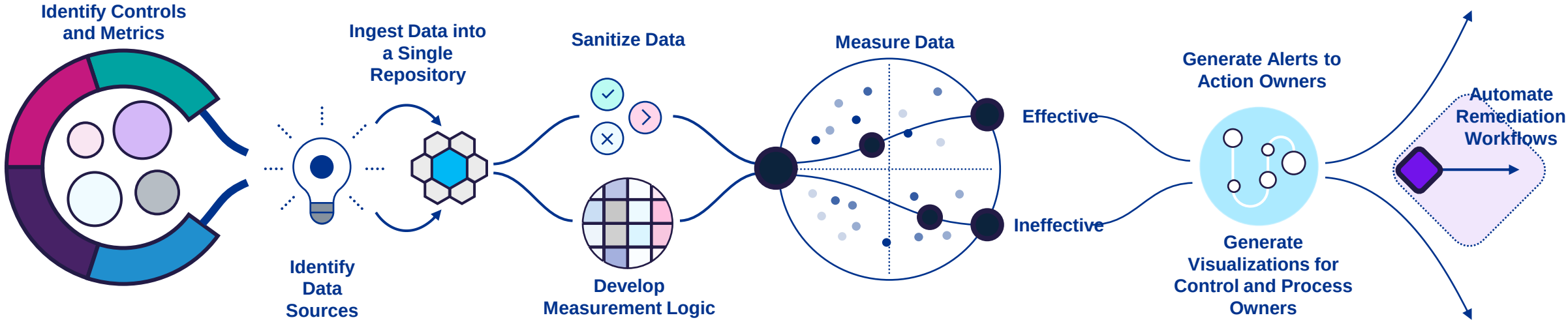
# Continuous auditing and monitoring - Execution

Data Analytics Tools allow teams to create and configure analytics that automate internal control tests. This allows repeatable analytical tests as often as desired to achieve more timely results with no incremental effort.




**Key Activities / Outcomes:**

| Data Identification | Design > Develop > Deploy | Monitoring, Alerting & Reporting |
|---|---|---|
| • Discovery and Analysis<br>• Define Controls Catalog<br>• Define KPI/KRI Metrics<br>• Scoring and Prioritization of Metrics<br>• Develop Risk Register | • Detailed Requirements Gathering<br>• Detailed Metric Solution Design<br>• Metric Pipeline, ETL Development<br>• Pre-Production Deployment and Testing<br>• Production Deployment (CI/CD) *Including Hypercare* | • Automated Metric Data Monitoring<br>• Automated Threshold Breach Alerting/Report Generation<br>• [Optional] Automated Triggering of Remediation Workflow Case Management |

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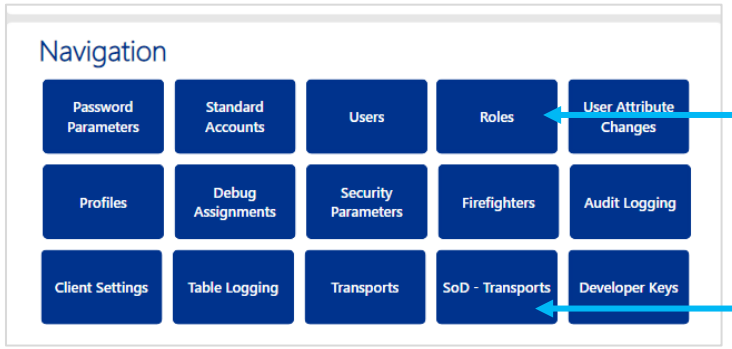
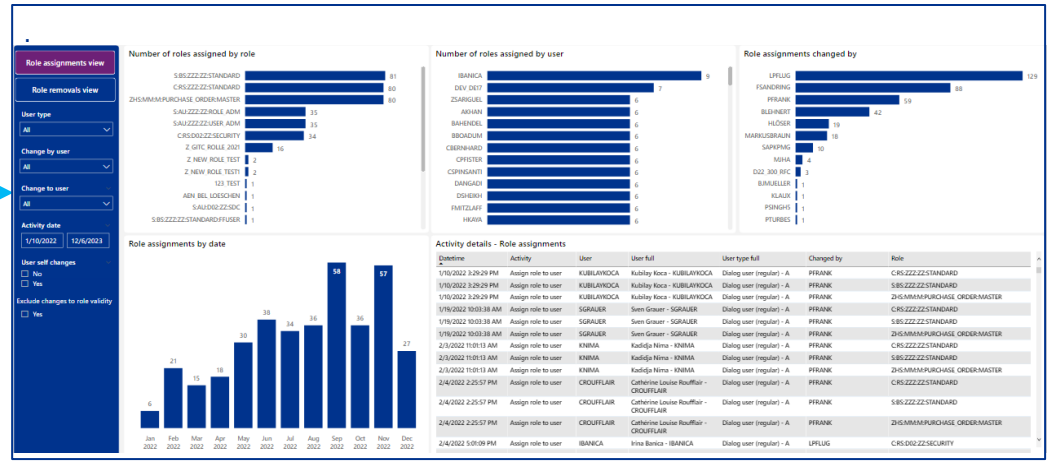
# Continuous auditing and monitoring - Execution

Illustrative example of a continuous monitoring tool (SAP ERP analyzer) that ingests and generates insights on anomalies and deviations that should be addressed.




Interactive Role dashboard that can be filtered by assignment, deletion, activity date, user, and other attributes.




Interactive Transport dashboard that can be filtered by date, category, change method, user, and other attributes.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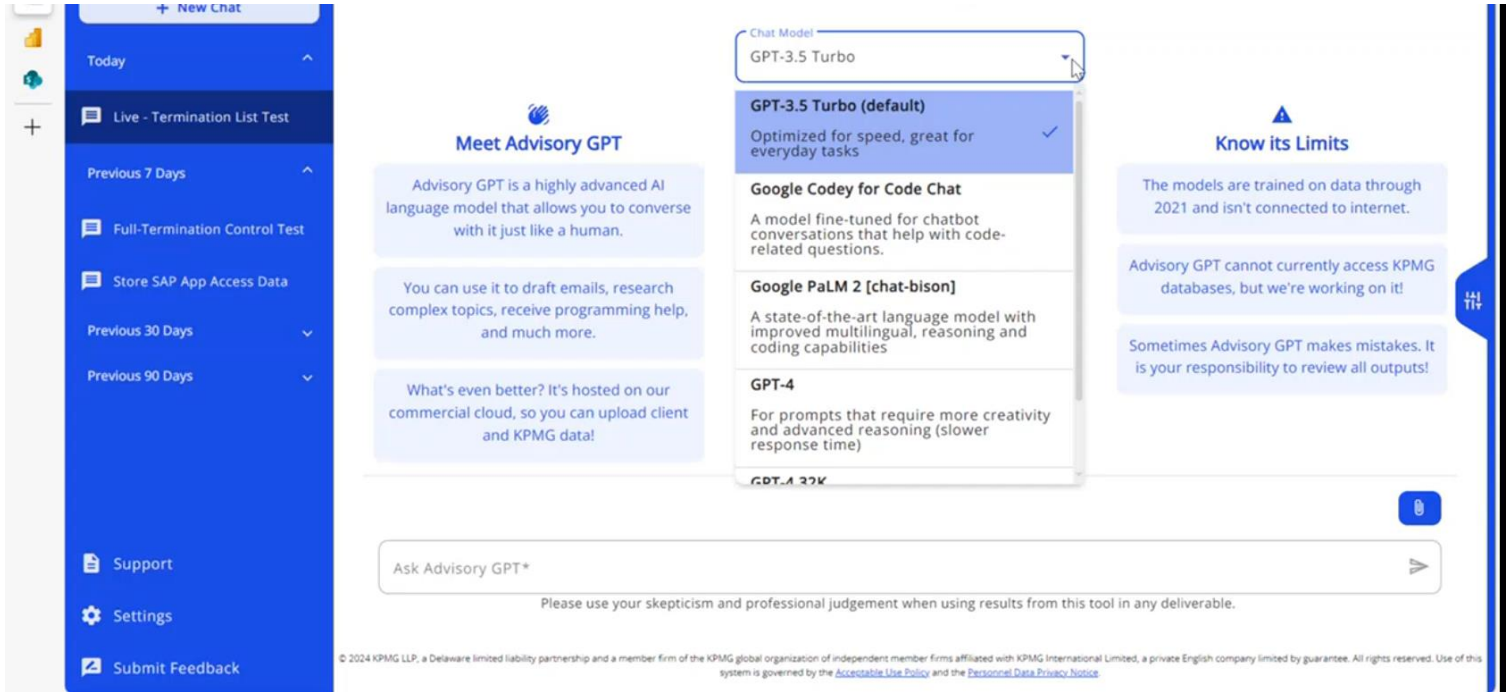
# Artificial Intelligence - Execution

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# Artificial Intelligence - Execution

## Research and Planning

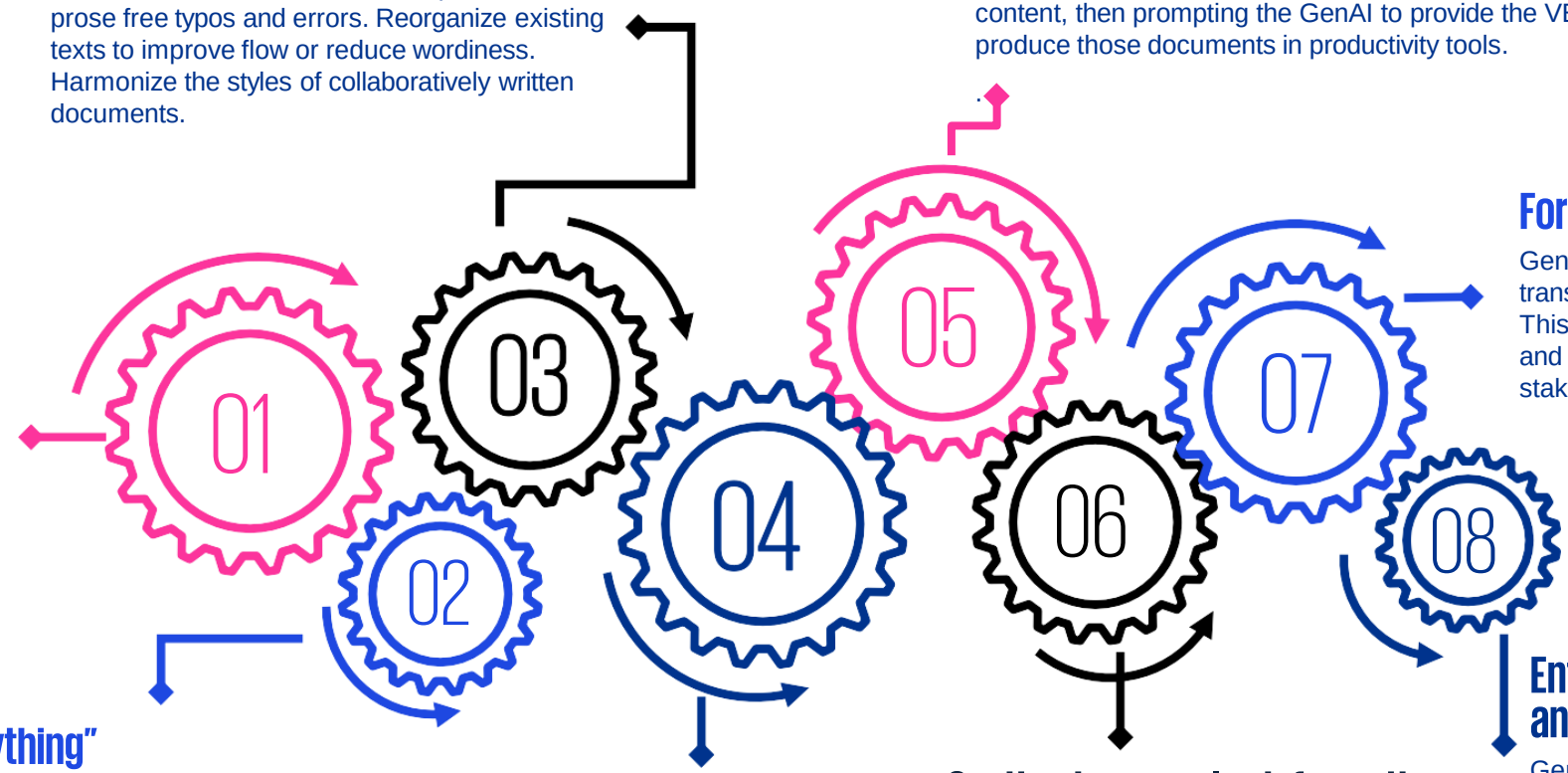
Learn about business processes and industry issues. Understand typical risks and controls inherent in processes, functions, and systems.

## "First draft of everything"

Create initial drafts of audit programs, walkthrough guides, presentations, narratives and more. GenAI can often save hours when creating a good starting point for audit documentation.

## Document editing and refinement

Convert a first draft or bullets into professional prose free typos and errors. Reorganize existing texts to improve flow or reduce wordiness. Harmonize the styles of collaboratively written documents.




## Analytics Co-pilot

Draft SQL queries or Python scripts. Create algorithms and ideas about how to prepare and process data. Generate explanatory information about analytics and data.

## Complex document creation

Create slide decks, spreadsheet models, or flowcharts by first generating the content, then prompting the GenAI to provide the VBA (or equivalent) scripts to produce those documents in productivity tools.

## Synthesize complex information

Product documentation, meeting notes, standards, regulations, and even computer code can be summarized into plain language. Key data points can be extracted and summarized.

## Foreign language translation

GenAI tools can rapidly provide faithful translations to and from many languages. This enables auditors to make requests and process documents from foreign stakeholders

## Enterprise risk assessment and analysis

Generate risk scenarios and possible responses that consider trends and possible impacts from multiple perspectives.

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# Artificial Intelligence - Execution

Illustrative example AI platform designed for risk and compliance to enable content creation, data analysis, and process automation through analysis of text, audio, and code patterns.

## Gen AI Capabilities

| Text Generation (LLMs) | Code Generation | Data Analysis | Content Conversion |
|---|---|---|---|

### General knowledge search

- Understand commonly used business terms and acronyms
- Industry trends
- Validate key financial and IT concepts

### Help with business communication

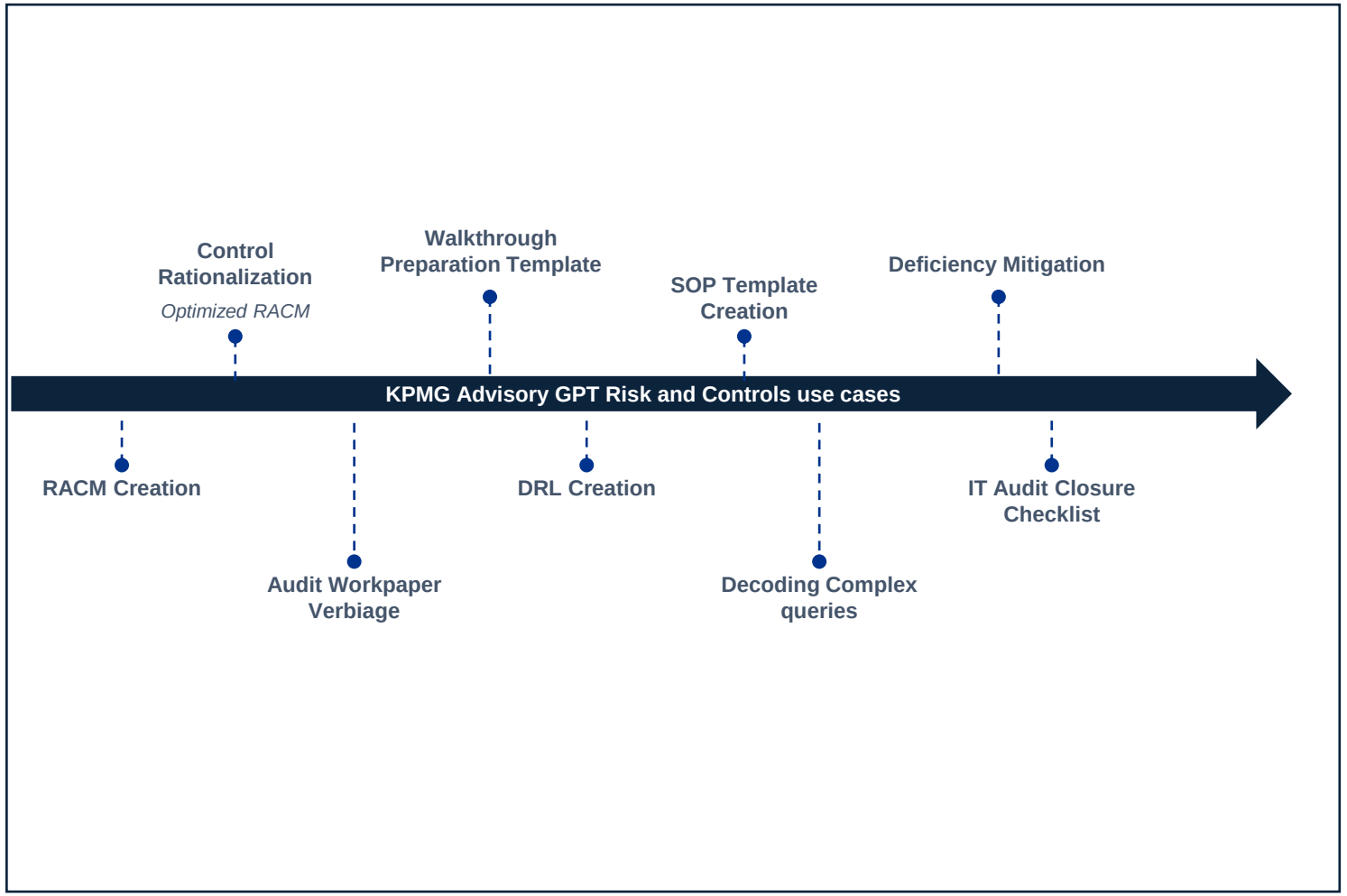
- Professional-style email
- Concise status reports
- Executive summary
- Business writing techniques

### Coding assistance

- Code generation assistance with Python, Java Script, DAX, Power query, SQL, R, SAS etc.
- Code documentation by sharing code snippets with Advisory GPT
- Code optimization by requesting performance and function optimization or alternatives

### How to master business tools

- Assistance with VBA or other advanced Excel help for data analysis
- Effective PowerPoint presentations
- Project management actions

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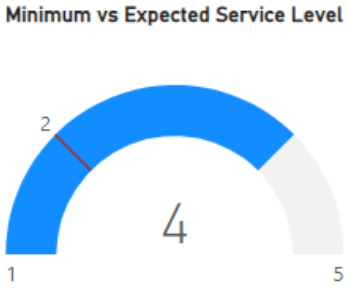
# KPI/SLA insight tracker - Reporting

Illustrative example of KPI/SLA data-driven reporting, typically preconfigured through data visualization tools.

## Stakeholder Feedback

Average of numeric scores from customer feedback surveys on a rating scale of 1 to 5




Monthly Evaluation

## Control Testing Speed

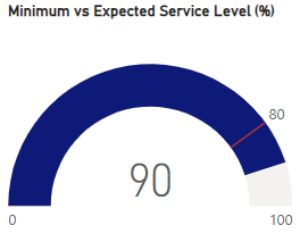
Average time taken to complete testing cycles

**Minimum SL: 7 days**
**Expected SL: 5 days**

Quarterly Evaluation

## Audit Plan Completion

Percentage of approved audits completed by the agreed due date




Quarterly Evaluation

## Control Testing Quality

Percentage of control tests resulting in errors or requiring rework

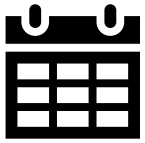
**Minimum: 7% | Expected: 4%**

Quarterly Evaluation

## Audit Report Timeliness

Average number of days between fieldwork exit and report issuance

**45 days (Min)**

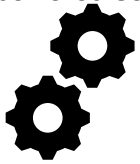


**30 days (Exp)**

Monthly Evaluation

## AI-Driven Testing Rate

Percentage of controls tested using AI-powered solutions

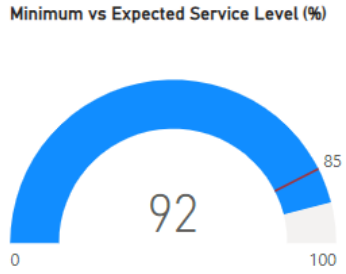


**Minimum SL: 30%**
**Expected SL: 50%**

Quarterly Evaluation

## Control Completion Timeliness

Percentage of control testing completed by due dates




Quarterly Evaluation

## Overall User Satisfaction

Average user satisfaction score on a rating scale of 1 to 5

**| Minimum: 3.0 | Expected: 4.1 |**

Monthly Evaluation

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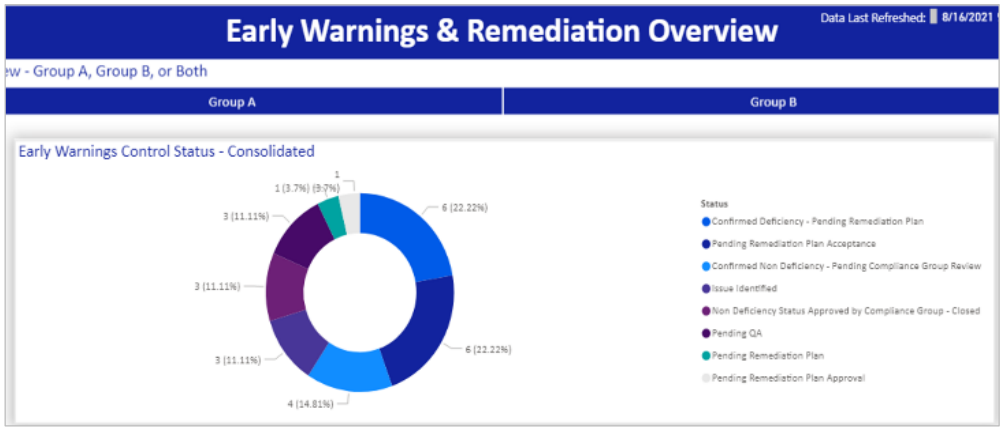
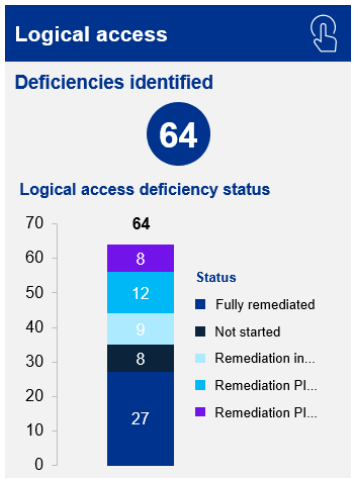
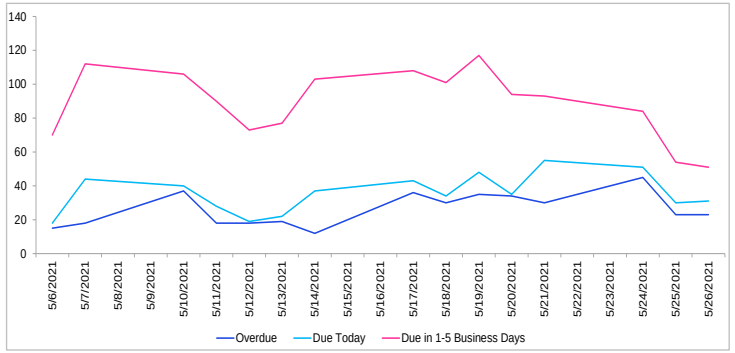
# Status Dashboarding - Reporting

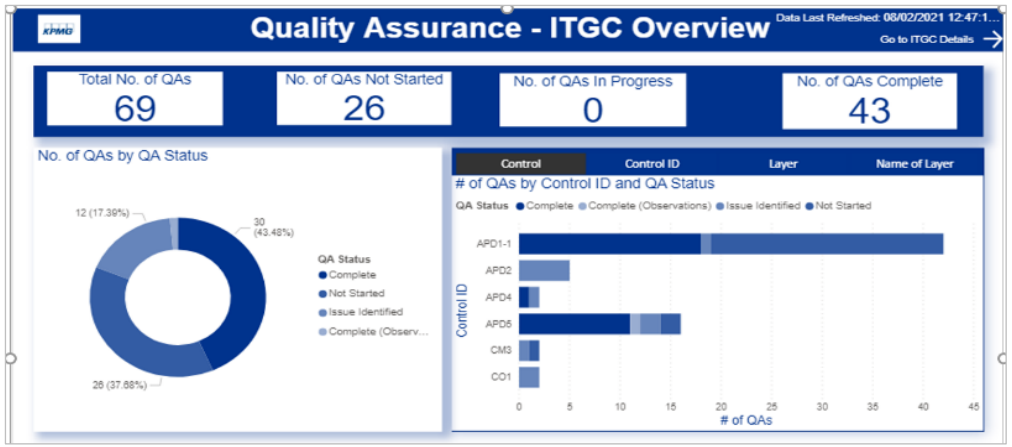
Intelligent reporting enables reporting to key stakeholders at the “right” level. Each set of key stakeholders' value different information and must be provided level of reporting that is of most value to them. Below are illustrative examples of personalized reporting dashboards that enable agile and efficient decision-making.



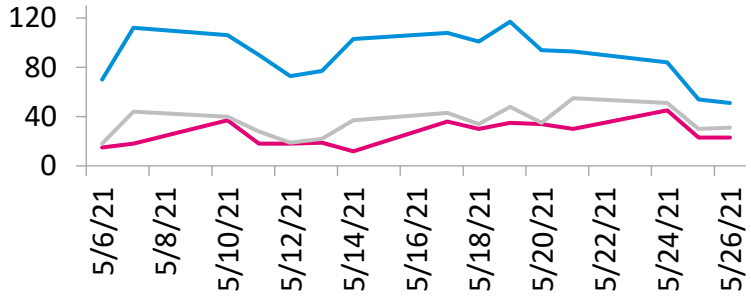




## Schedule Tasks Burndown Charts




## Audit Requests Trend Line



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# What next?

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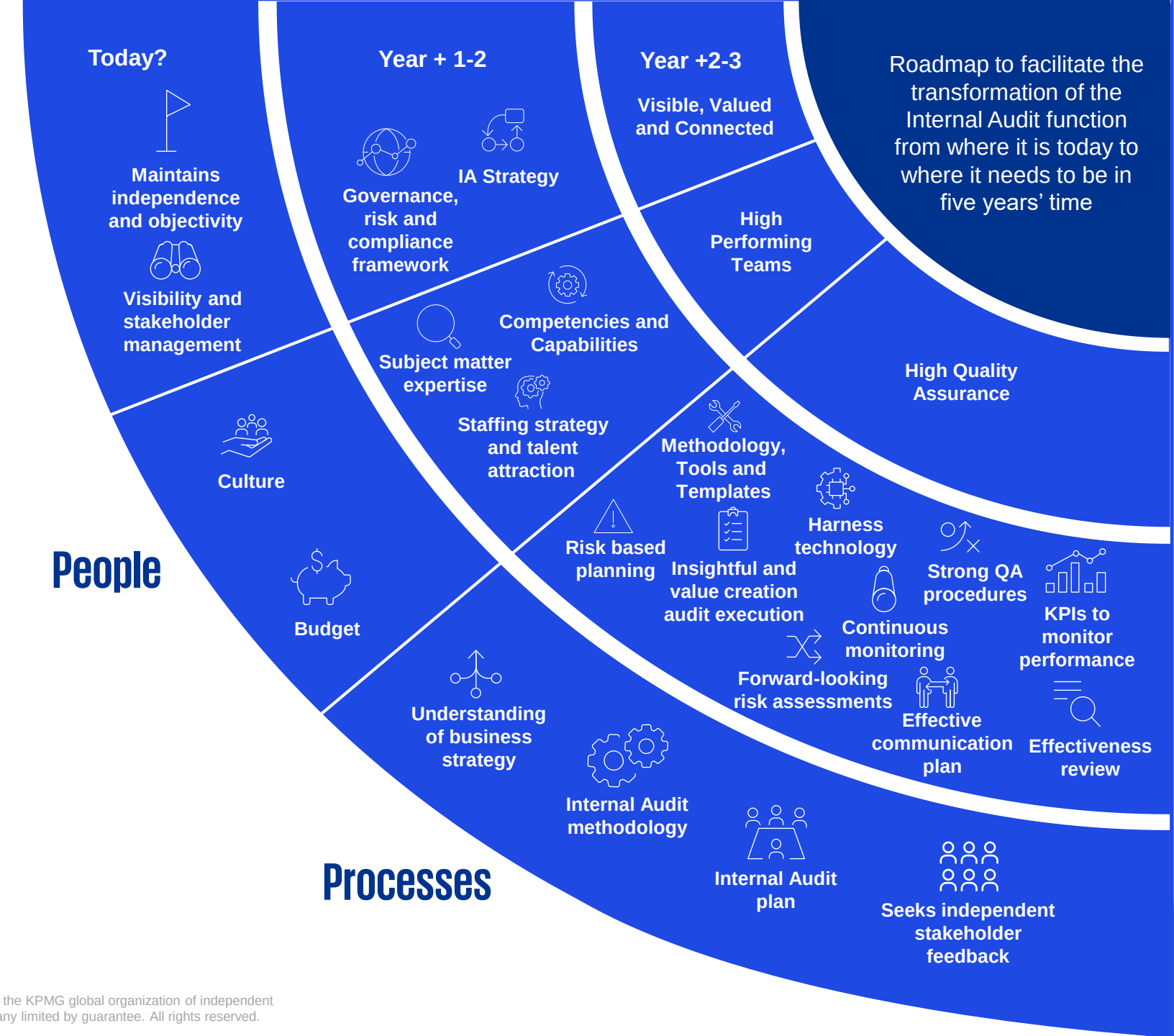


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**Tamura Gidado**

Technology Risk Advisory Director @ KPMG

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