



Holding the line

**Enhancing accountability in public
financial management through
Integrated Assurance**



1. Preface

The Singapore public sector, like its equivalents elsewhere, is facing unprecedented change, challenge and complexity. The rise of public scrutiny has increased pressure for greater transparency in government and public sector institutions. This, in turn, has resulted in the need for more rigorous governance models, accountability and performance processes.

Every year, the Auditor-General's Office (AGO) releases a report that highlights its observations on system weaknesses, non-compliance with control procedures or legislation, and instances of excess, extravagance or inefficiency leading to waste in the use of public funds and resources. The mission of the AGO, an independent organ of state, is to "audit and report to the President and Parliament on the proper accounting and use of public resources to enhance public accountability".

In 2015, CPA Australia, KPMG and NUS Business School undertook a groundbreaking study to analyse 25 years of AGO Reports. Combining the latest 2016 report, released in July, our analysis shows that while the proportion of issues differed from year to year, the areas where the majority of issues occurred have been consistent across the 26 years based on information released publicly.

Why do some gaps and lapses continue to recur year after year? How robust are the governance frameworks for Singapore government ministries and statutory boards? How can integrated assurance enhance the way public sector finance, risk and internal audit departments work together to improve governance models and internal controls? What are the challenges faced by these stakeholders in adopting an integrated assurance framework?

To answer these questions, KPMG together with CPA Australia embarked on this latest study that gathered inputs from public sector heads of finance, risk and internal audit.

Data for our conclusions was collected through three separate surveys of the heads of finance, internal audit and risk management in the Singapore public sector. In addition, three focus group discussions involving a sample of respondents were subsequently conducted to obtain qualitative views on the issues surrounding the enhancement of governance frameworks in managing public funds through our suggested approach of integrated assurance.

We hope you find the insights in this report useful.



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2. Executive summary

The latest 2016 AGO Report suggests that weak governance practices continue to exist across the Singapore public sector, resulting in lapses and gaps in controls which are not being identified or remediated on a timely basis. The findings appear to continue a trend over a 26-year period from 1990-2016, where the majority of issues are seen to have occurred in five main areas: procurement, payments, revenue, grants and IT systems.

The key question is what could the public sector do differently to minimise the recurrence of such issues in the future? We believe that implementing integrated assurance in the public sector could improve compliance and risk management, reduce costs, and improve levels of decision-making in government agencies.

Critically, integrated assurance promotes risk management as a unified process across functional boundaries. In addition, it gives a holistic view of risk assurance and eliminates the inefficiency of having separate silo assurance processes, which may result in gaps

or overlaps across the organisation. It also relieves the cost pressure on organisations in an environment of reduced funding and increased costs.

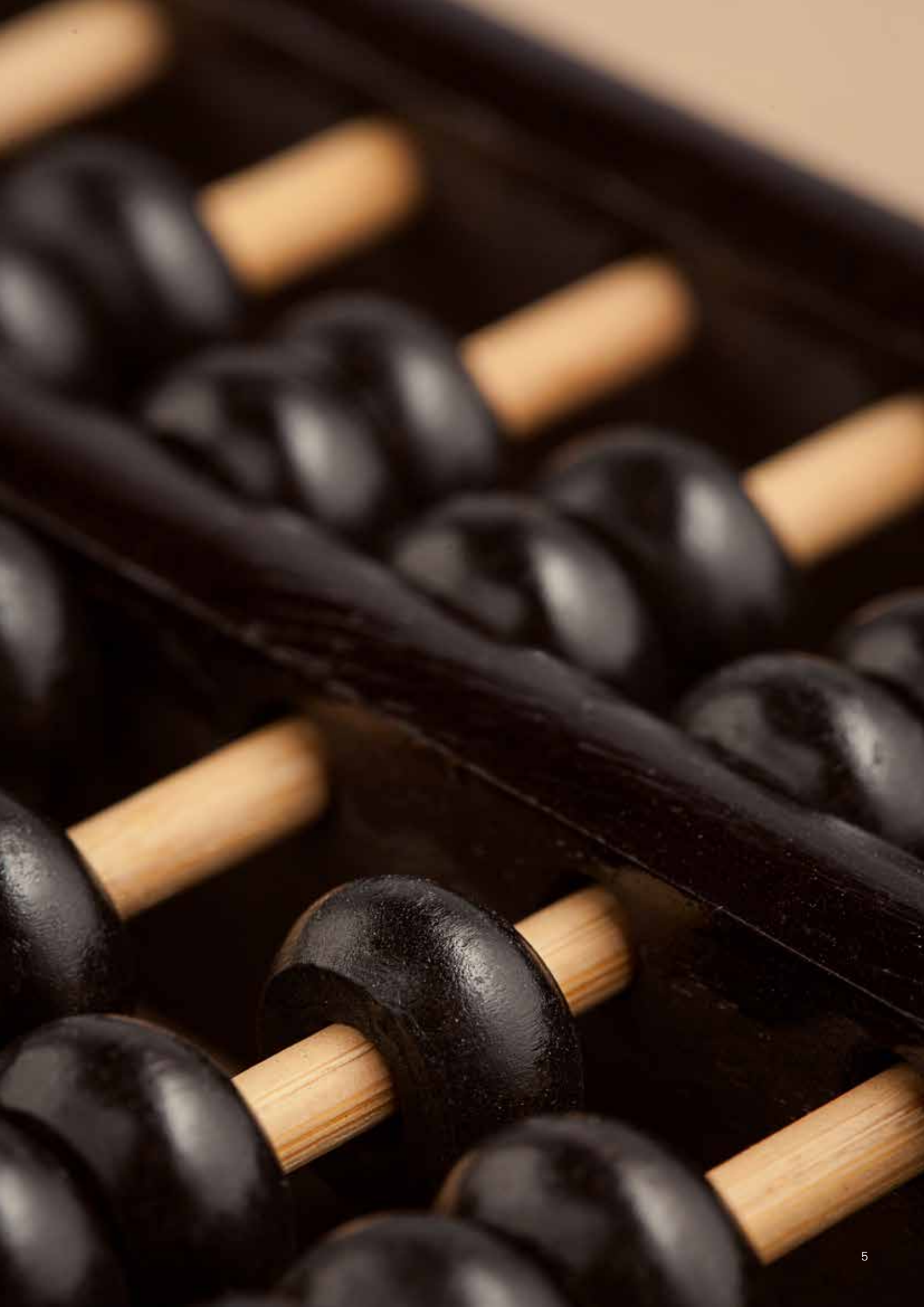
Based on the results of a survey and roundtable discussions, our analysis has highlighted several observations which are relevant to government agencies that may be considering the introduction of integrated assurance or enhancements to their current assurance framework.

- Integrated assurance is still in an emergent stage in the public sector.
- There is a disconnect between risk management and the other lines of defence across an organisation.
- The Internal Audit function may need to move towards a more risk-based model.
- The Finance function may need to take on a bigger role in driving integrated assurance.
- Data Analytics (DA) and Control Self-Assessment (CSA) are key tools that can help with successful implementation of integrated assurance.

This report shares some private sector best practices in integrated assurance for consideration to further enhance the checks and balances to reduce incidents of gaps and lapses in public sector entities.

We suggest that a possible approach is the KPMG four lines of defence, implemented in an integrated way, relying on the interplay between People, Process and Systems. The proper and effective functioning of the four lines of defence could be a first step in addressing the root causes.

The lapses in the AGO reports also raise the question of control consciousness and awareness. While we understand that training is conducted across the agencies, it needs to be more sustainable with continuing education and awareness-building to enhance the culture of control consciousness across any organisation. This is a critical success factor towards a strong and effective governance structure.



3. Enhancing governance in managing public funds

In 2015, KPMG, CPA Australia and NUS Business School studied the reports of the Auditor-General released from 1990-2015 to evaluate the key areas for gaps and lapses which have occurred consistently throughout the period. The analysis showed that while the proportion of issues differed from year to year, the areas where the majority of issues occurred have been consistent across the 26 years based on information released publicly (Figure 1).



Figure 1: Breakdown of issues

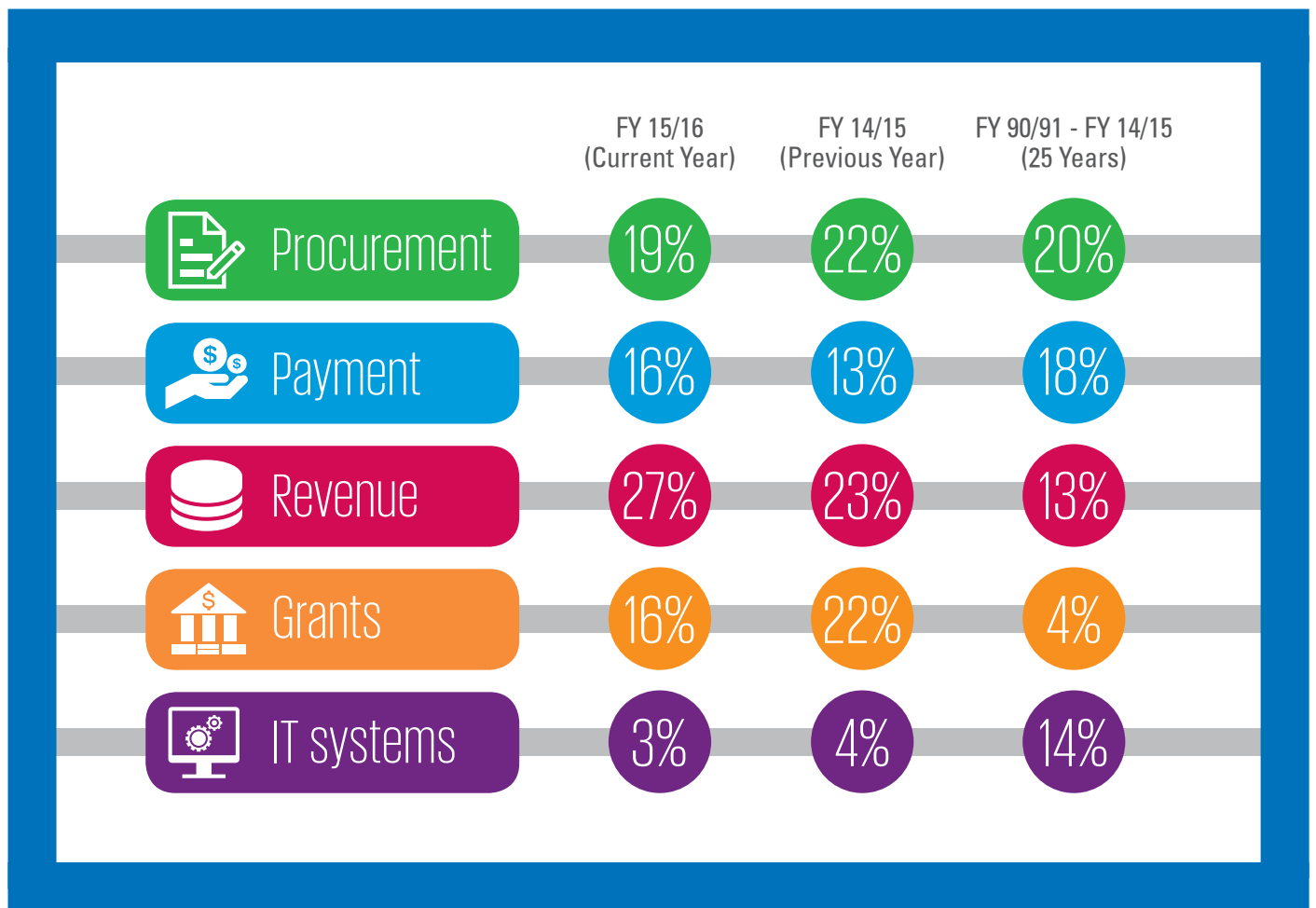
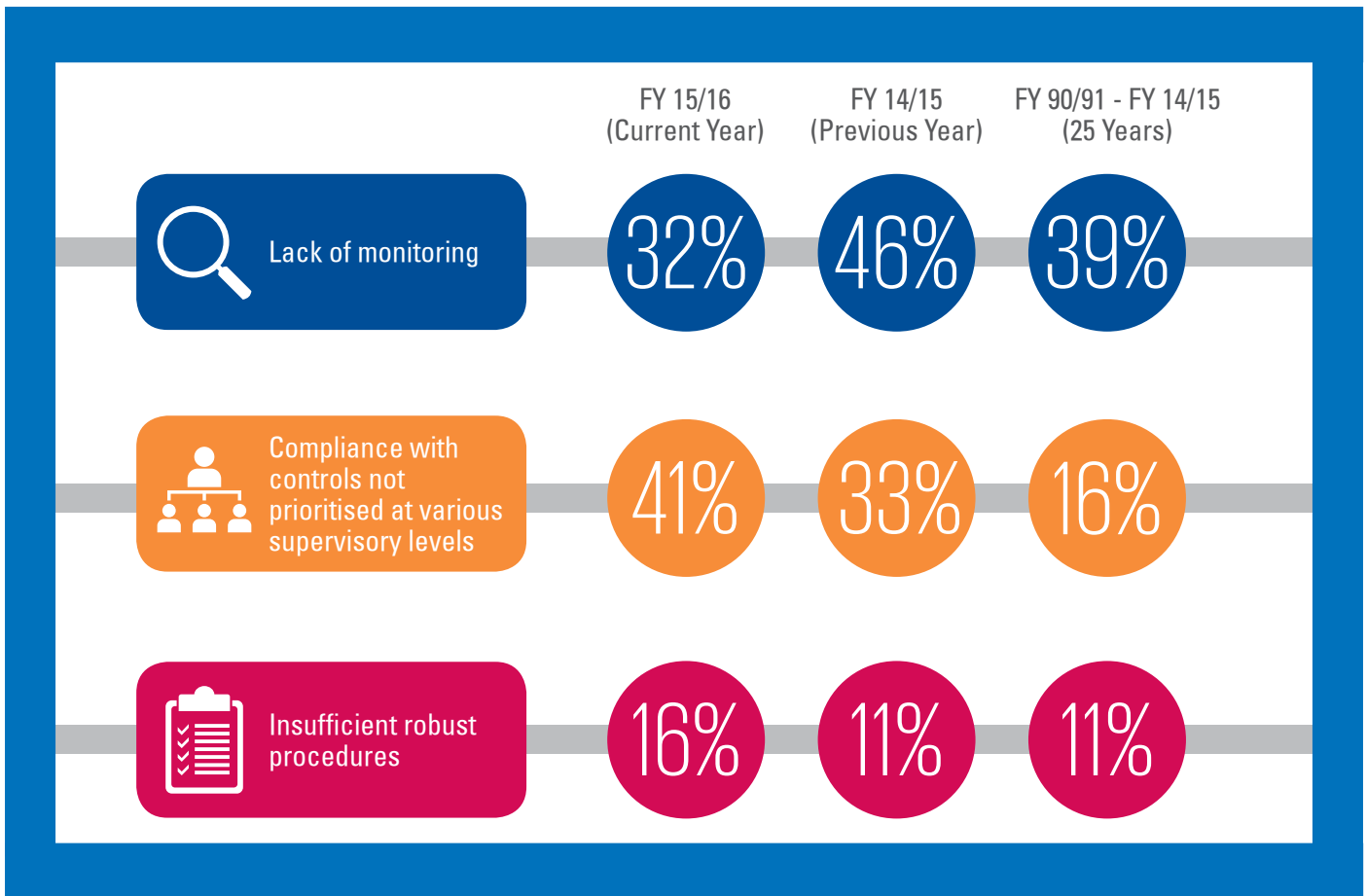


Figure 2: Top 3 root causes over the years



Consistently over the 26-year period, the majority of issues occurred in five main areas: procurement, payments, revenue, grants and IT systems.

Our 2015 report examined each of these areas in detail, including their root causes and sub-issues as well as examples of control lapses and relevant guidance from the Government Instruction Manuals.

The three major root causes are:

- lack of monitoring: indicating that while monitoring procedures are in place, such lapses occurred due to the standard of monitoring performed by the staff.
- compliance with controls not prioritised at various supervisory levels: procedures/ controls are in place but lapses occurred due to lack of oversight during each layer of control.

- insufficient robust procedures: procedures are present, however, they are not aligned with the Instruction Manuals, and hence not sufficient to address the risk.

Figure 2 shows the breakdown of the issues by root cause over a 26-year period.

Our study suggests that the lack of compliance with processes and controls at a supervisory level is trending up. The trend indicates a weak governance environment, which in turn points to issues relating to risk culture and 'tone at the top' in the affected government agencies.

If organisational culture tolerates failure to comply with policies and procedures, and senior levels are seen to be working around current processes which may be considered to be onerous or bureaucratic, there could be a negative impact on the

control environment of the whole organisation.

In such situations, perception is often just as important as reality. The higher echelons of public sector organisations should be seen to be acting ethically and with integrity, notwithstanding any mitigating factors, to set the right tone and instill the right culture across the organisation.

The findings of our 25-year study have highlighted similar issues recurring year after year, apparently triggered by the same root causes. So what could the public sector do differently to minimise the recurrence of such issues in the future?

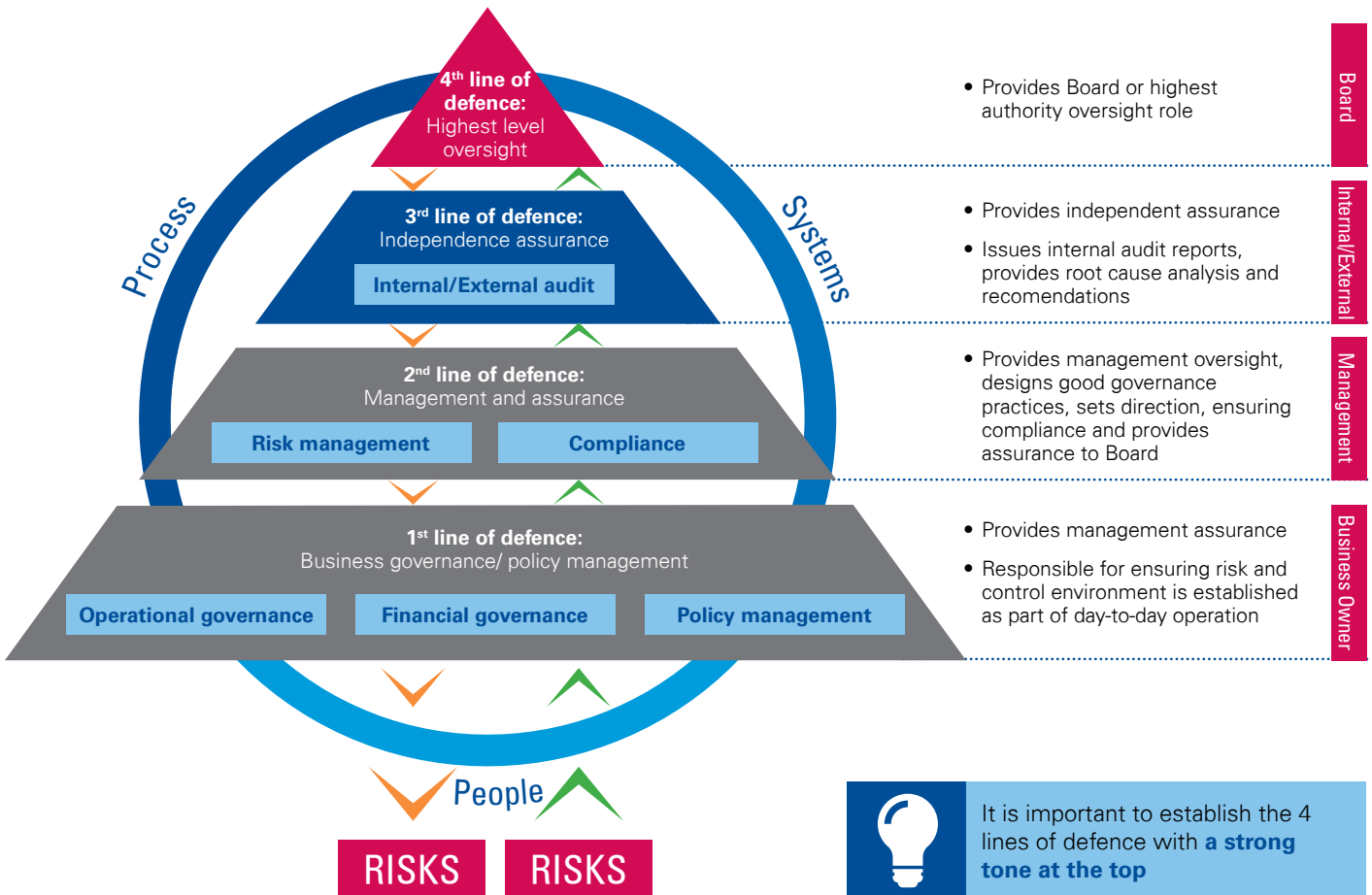
We suggest that integrated assurance could help build a more robust and effective governance, risk and control environment in the public sector.

4. Is integrated assurance the answer?

Integrated assurance provides an opinion on the **adequacy** and **effectiveness** of risk management and internal controls across an organisation. It creates a single organisation-wide understanding of risk and control derived from assurance activity undertaken across the four lines of defence. The importance of the four lines of defence was highlighted in our 2015 study, where we contended that the role of each line was critical in maintaining a robust risk management framework with an effective system of governance and internal controls.



Figure 3: KPMG's four lines of defence





The latest 2016 AGO Report suggests that weak governance practices continue to exist across the public sector, resulting in lapses and gaps in controls which are not being identified or remediated on a timely basis.

We believe that implementing integrated assurance in the public sector could be an answer which brings several benefits. Critically, it promotes risk management and its assurance as an integrated process across functional boundaries. In addition, it gives a holistic view of risk assurance and eliminates the inefficiency of having assurance processes in separate silos, which may result in gaps or overlaps across the organisation. Finally, it relieves the cost pressure on organisations in an environment of reduced funding and increased costs.

Following the global financial crisis of 2008, many businesses questioned why investments they had made into assurance functions and resources had failed to expose the weaknesses in their organisations. This, in turn, fueled the case for rethinking assurance in the boardroom. Common themes emerged of Boards not sufficiently challenging the executive, not understanding the business models and higher risk activities, and not receiving appropriate management information to allow directors to properly discharge their role.

In the case of the Singapore public sector, the Auditor-General's Office said in its 2016 AGO Report that "governance over management of public funds needs greater attention and improvements". An integrated assurance framework could

provide a more robust platform for effective coordination of different assurance activities across the public sector. This may lead to improved compliance and risk management, reduced costs, and improved levels of decision-making at the government agencies.

But how prepared is the Singapore public sector for integrated assurance? KPMG and CPA Australia sought to answer this question by conducting an Integrated Assurance Survey and a series of roundtables with the heads of finance, internal audit and risk management from various government agencies, in an attempt to gain further insights.

5. Results of the survey and roundtable discussions

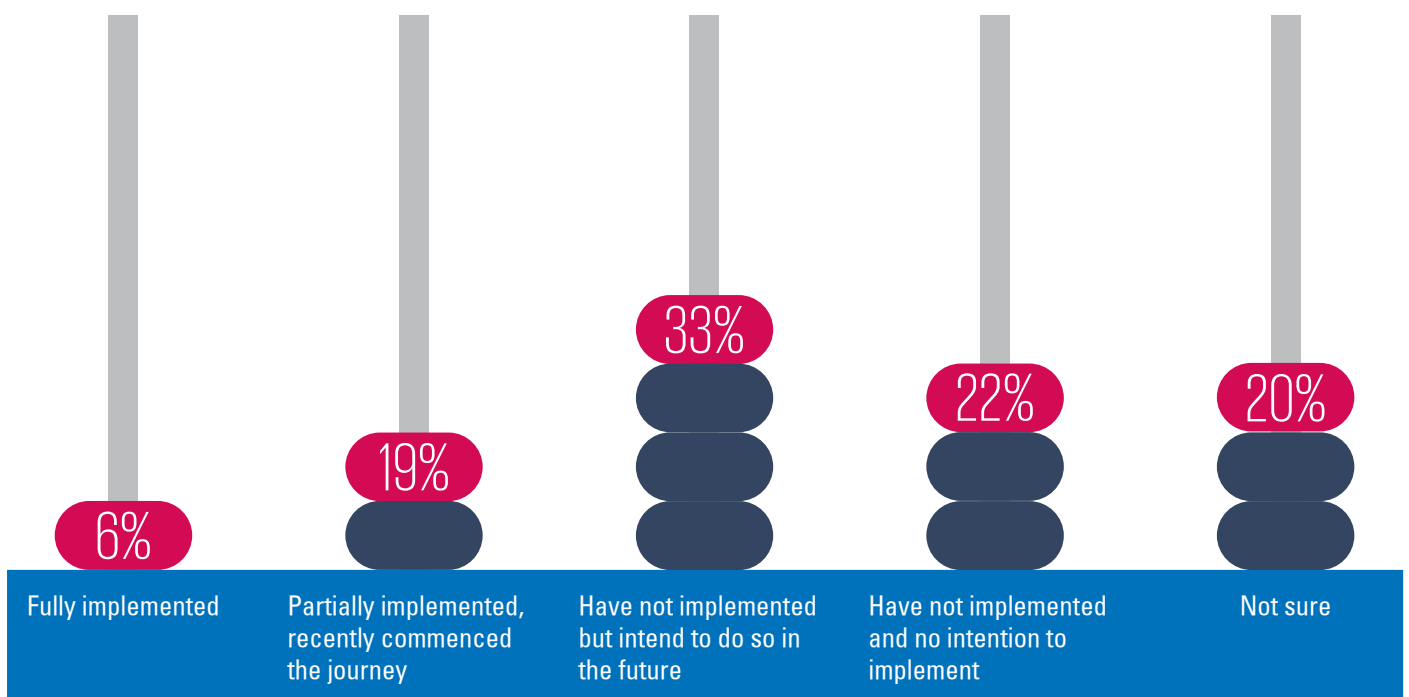
The results of the survey and roundtable discussions highlighted several key issues which are relevant to government agencies that may be considering the introduction of integrated assurance or enhancements to their current assurance framework.

5.1 Integrated assurance is still in an emergent stage in the public sector

The survey shows a quarter (25%) of respondents belong to organisations that have adopted an integrated assurance framework. But only 6% had fully implemented the framework. Just over four-in-ten (42%) of those polled indicated their organisations do not intend to implement the framework or are not sure (Figure 4).



Figure 4: To what extent has your organisation adopted an integrated assurance framework?



Responses varied for which functions were responsible for leading and coordinating the implementation of the integrated assurance framework. The main leaders were Risk management (29%), Internal audit (23%) and Finance (15%). Another 26% said they were not sure or not defined (Figure 5).

Some 25% of respondents indicated that there was a lack of awareness of risks, controls and assurance across their organisations. A similar percentage (25%) said there were challenges in forming a view on the adequacy and effectiveness of risk management and internal controls of the organisation. For 28% of respondents, there was also a lack of coordination across functions or



departments in managing key risks and controls, resulting in duplication of effort (Figure 6).

The survey suggests that integrated assurance has not been widely adopted or robustly embedded across the public sector.

Our subsequent roundtable discussions pointed to a need for more partnership and a collaborative approach. Continuous training to maintain awareness is also an area which should be looked into more closely.

Figure 5: Which function in your organisation is responsible for leading and coordinating the implementation of the integrated assurance framework? (More than one function can be selected)

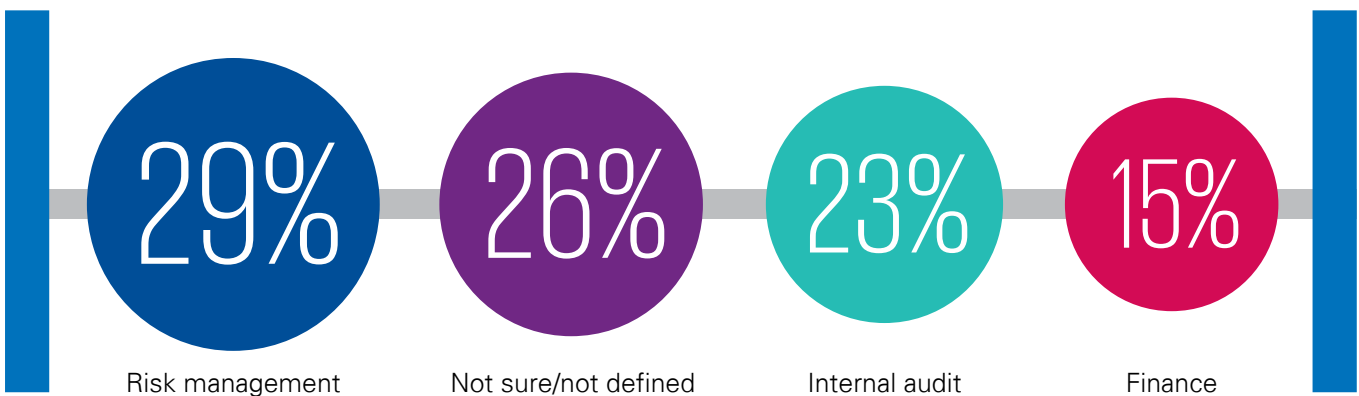


Figure 6: Is your organisation experiencing any of the following situations? (More than one option can be selected)



5.2 There is a disconnect between risk management and the other lines of defence across an organisation

A large majority of public sector organisations appear to have assigned resources for risk management. Three quarters (74%) of respondents said their organisation had a dedicated risk management function, while 78% indicated their organisations had a formal policy or approach for an enterprise risk management framework. (Figures 7 and 8). Only 44% of the risk management function is delivered by a dedicated risk management team (Figure 9).



Figure 7. Does your organisation have a dedicated risk management function?

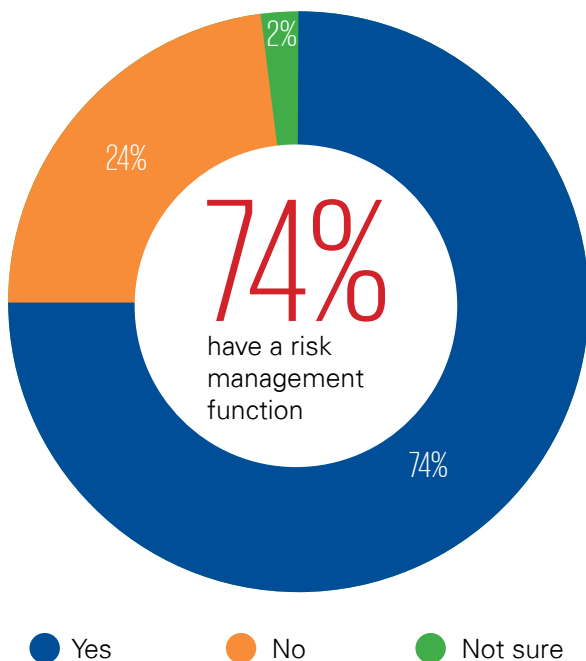


Figure 8. Is there a formally defined policy/approach (e.g. formal enterprise risk management framework) to managing risks within your organisation?

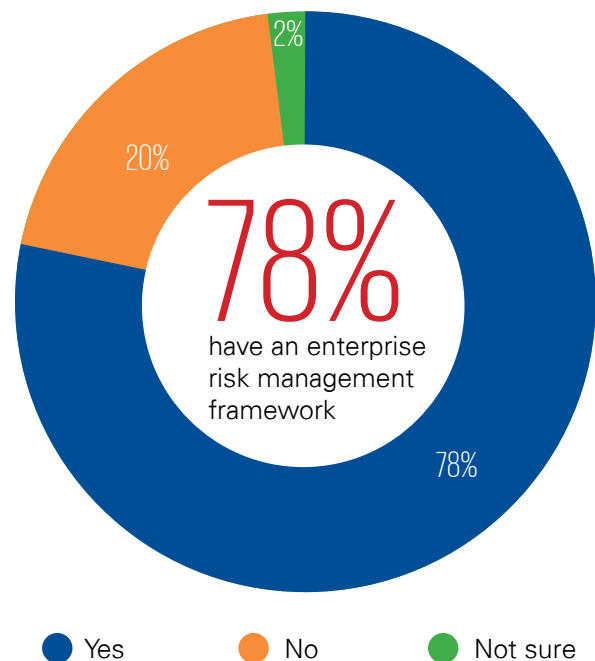
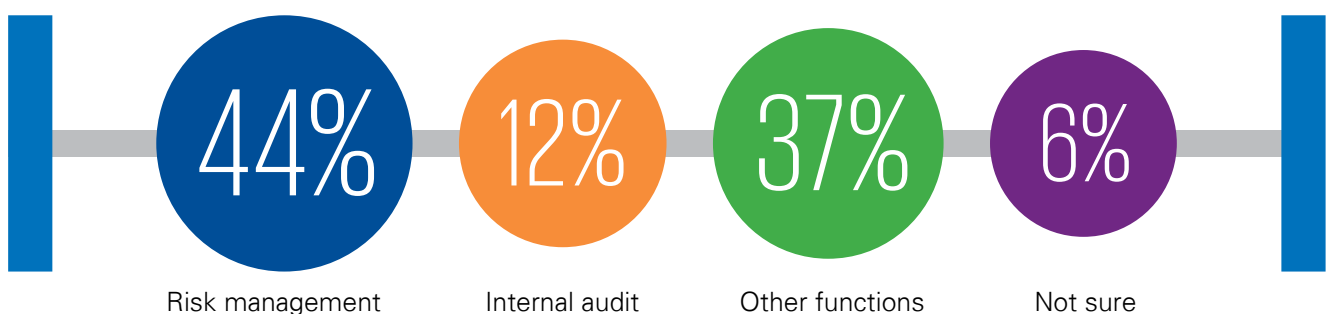


Figure 9. How is the risk management function structured?



However, the survey suggests the risk management function is operating in silos and not getting adequate support from other functions. In particular, there appears to be a lack of understanding by the first line of defence of their role in risk management. Two-thirds (66%) of respondents said they do not currently have transparent, regular and structured interaction between the key functions involved in managing risks in the organisation (Figure 10). As Figure 6 shows, 28% of respondents also highlighted a lack of coordination across functions and departments in managing risks.

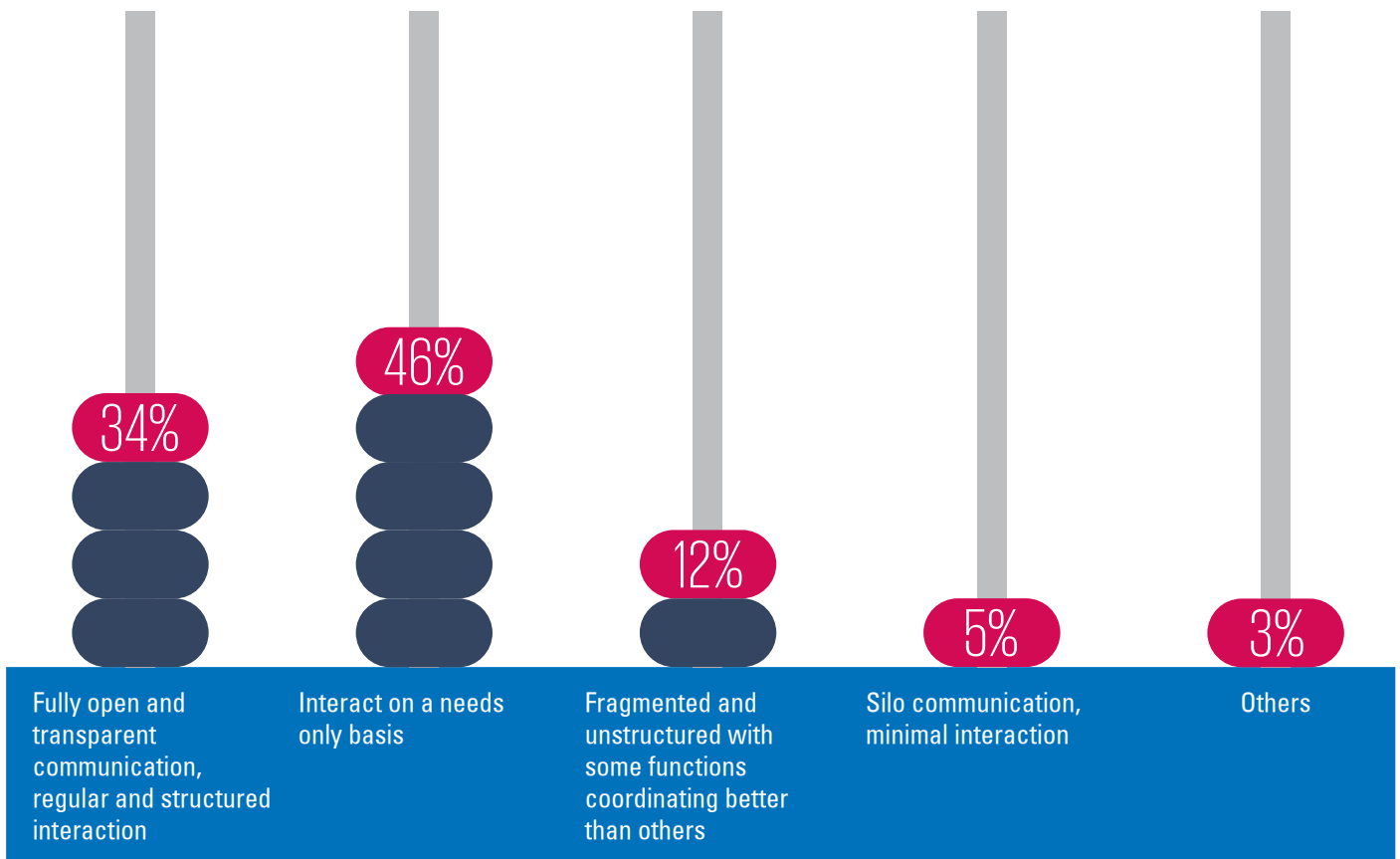
The survey results suggest that many organisations have implemented a risk management framework and also documented risk management policies to address the “adequacy” of a risk management practice. However, the effectiveness of the practice is harder to substantiate. More

than half (50%) of organisations appear to not have a dedicated risk management function (Figure 9). The roundtable discussions suggest that the organisation structure,

together with the leadership setting the correct tone from the top, play key roles in the drive to connect risk management and internal controls across the government agencies.



Figure 10. How would you assess the current levels of communication between key functions involved in managing risks in the organisation?



5.3 Is Internal audit moving towards a risk-based model?

Almost all the government agencies surveyed (93%) have an Internal Audit function. The internal auditor's role is to provide an independent, objective assurance and consulting activity designed to add value and improve an organisation's operations. But the survey suggested that 12% of Internal Audit functions also undertake risk management activities (Figure 9). This could raise questions of whether necessary safeguards have been implemented to maintain their objectivity and independence especially when providing assurance on the effectiveness of the agencies' risk management framework and processes.

While 78% of respondents said they have a formal risk management framework in place (Figure 8), only 20% of organisations indicated they have a fully risk-based internal audit plan, which focuses on key risk areas and is adjusted when changes to the risk profile occur (Figure 11). This suggests that while a risk management framework may

exist, in practice, questions may be raised as to whether internal audit is providing objective assurance on what really matters to the organisation.

A risk-based internal audit plan is a significant component in the implementation of integrated assurance, where key risks are mapped and internal audit provides the assurance that the risks are being adequately managed and the risk management framework is operating effectively.

Figure 11 suggests that two-thirds of respondents have a somewhat risk-based internal audit plan. Adding depth to the analysis, our roundtable discussions suggested that internal audit is evolving from traditional post-mortem audit on historical transactions or events to one where internal audit proactively engages business units to provide stronger linkage and alignment between risk and assurance mechanisms to focus on what matters.



Figure 11. To what extent does your organisation adopt risk-based internal auditing (ie. Using the entity level risk profile to drive the internal audit plan focus)?



5.4 What is the finance function's role in integrated assurance?

The survey suggested that the Finance function is still primarily involved in financial processes, including financial statement preparation and reporting. Figure 5 shows that 15% of respondents believe that Finance is responsible for leading and coordinating the implementation of an integrated assurance framework. Yet, only 27% of respondents said Finance is currently involved with risk assessment, while 71% indicated that Finance is involved in compliance review of financial controls (Figure 12). This is consistent with the traditional Finance role which adopts a more "back office" model in assurance activities.

In the roundtable discussions, participants said data analytics



techniques are being used to enhance the Finance function's check-and-balance monitoring role. This is supported by the survey results where the Finance function (44%) has been identified as one of the key units responsible for driving data analytics activities (Figure 13).

The roundtable discussions also indicated there is a need to strike a balance between being a finance

steward and partnering with business owners when embarking on the integrated assurance journey. But roundtable participants also indicated difficulties in finding a suitable person to head the coordination of the integrated assurance process. Such a person would need to possess in-depth knowledge of operations, controls, and risk.

Figure 12. Which areas does the finance function currently get involved with? (More than one option can be selected)

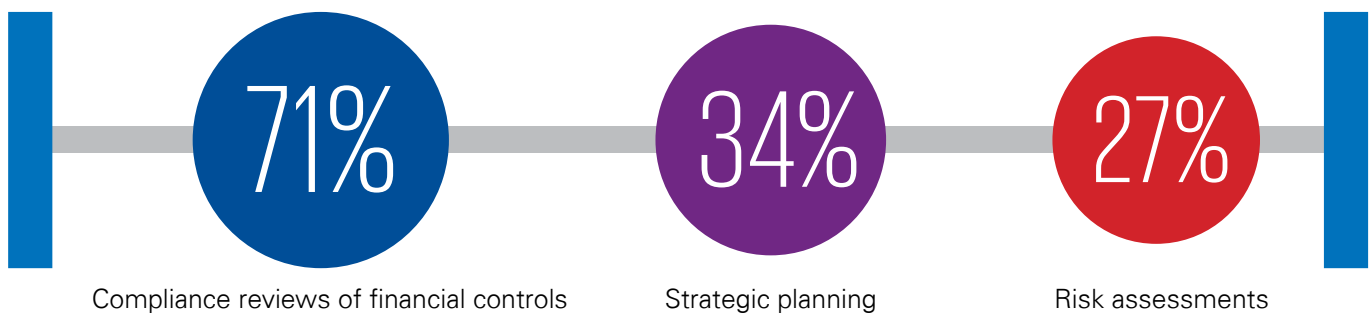
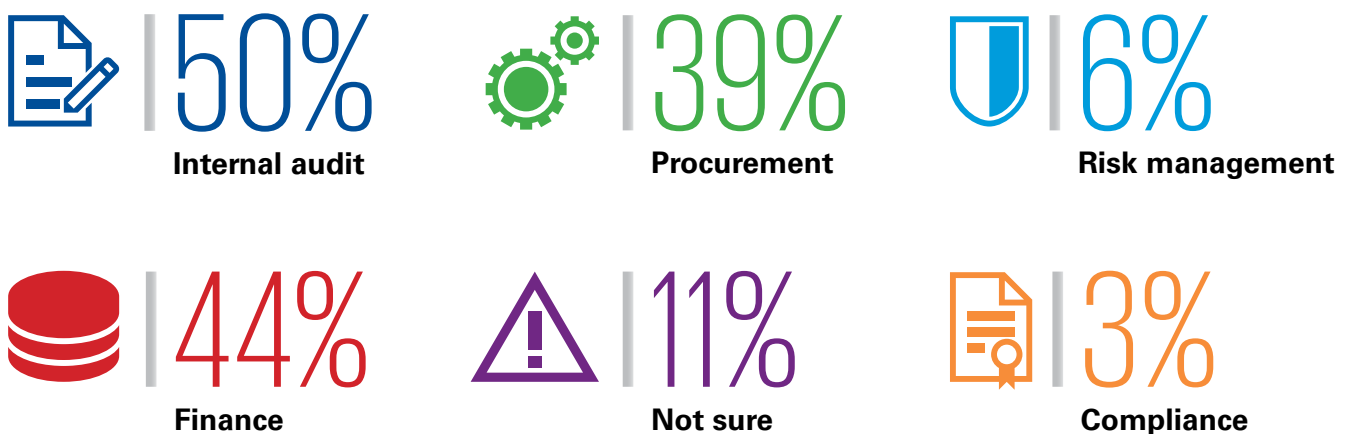


Figure 13. Which function is responsible for driving the data analytics activities within your organisation? (More than one function is selected)



5.5 Exploring other sources of assurance and the use of technology

Effectively harnessing technology to support risk management is the greatest weakness or opportunity for most public sector organisations. However, the survey results indicate a lack of take-up of Data Analytics (DA), and Control Self-Assessment (CSA) - key tools that can help to streamline governance, risk management and internal control processes.

The survey showed that only 27% of respondents had deployed a CSA programme (Figure 14). Of these, four-in-ten (41%) were somewhat satisfied with the level of assurance provided by the CSA programme. No

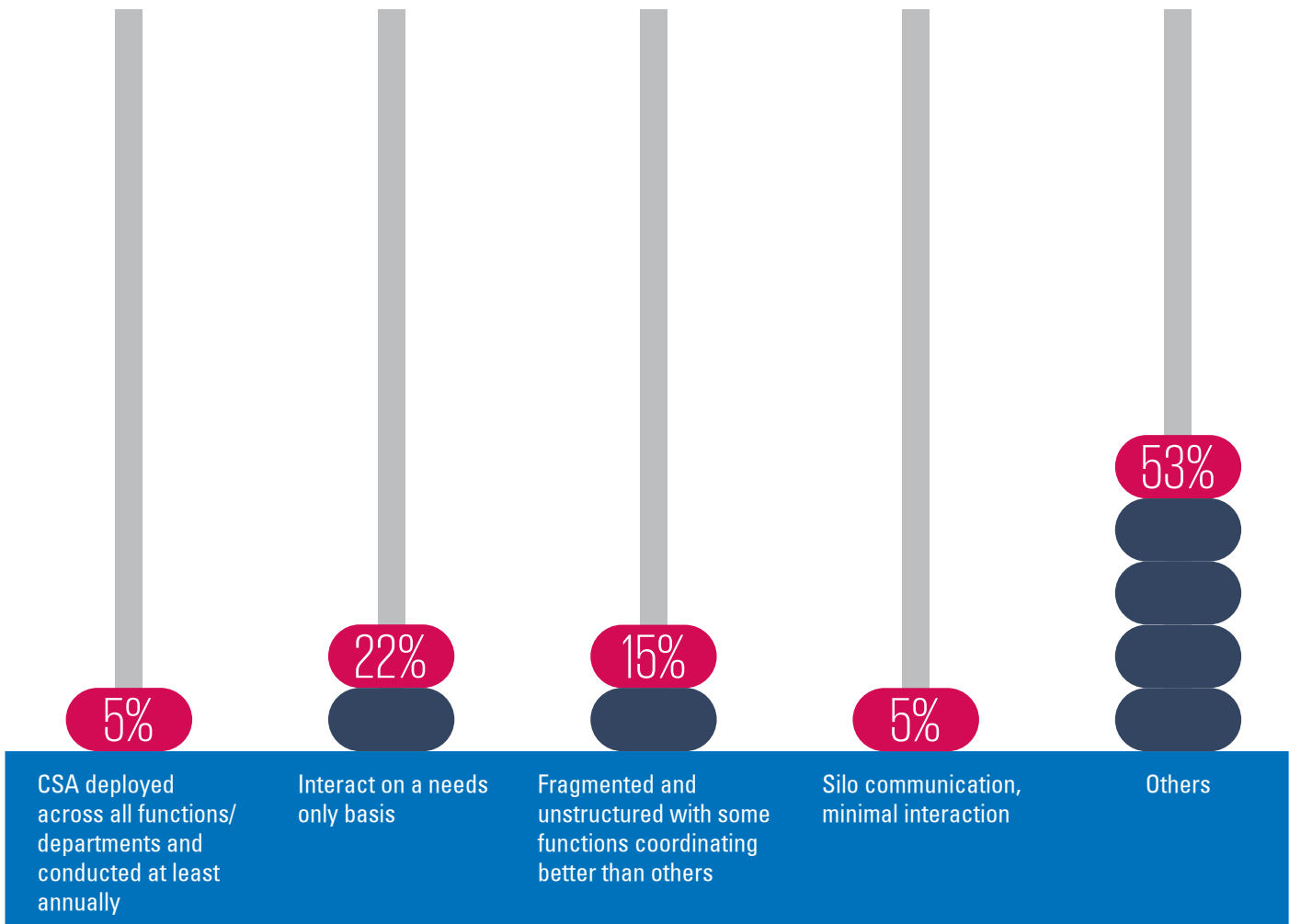
respondents indicated that they were extremely satisfied (Figure 15).

The roundtable discussions echoed a similar view, suggesting that CSA

programmes are “box-ticking” and “paper-pushing” exercises which add little value and do not have a track record of identifying risks before issues arise.



Figure 14. To what extent does your organisation adopt control self-assessment?



Based on the survey, 85% of organisations indicated that they used DA techniques to analyse risk, control and assurance activities. But 67% only use DA techniques for selective key processes and functions, while only 8% use it across all processes and functions (Figure 16). In addition, as Figure 13 shows, DA techniques are mostly

used by the IA function (50%), which indicates historical analysis of data rather than more proactive monitoring techniques. Only 6% of organisations said that DA activities are the responsibility of the risk management function (Figure 13).

The survey results were corroborated by the roundtable discussions.

Participants said the use of DA techniques to detect anomalies is more a mitigation strategy to address what has happened. The collection and analysis of data by the risk management function to generate predictive analysis, scenario simulation, stress and reverse stress testing is still in its infancy.

Figure 15. To what extent are you satisfied that the CSA programme provides a valuable source of assurance?

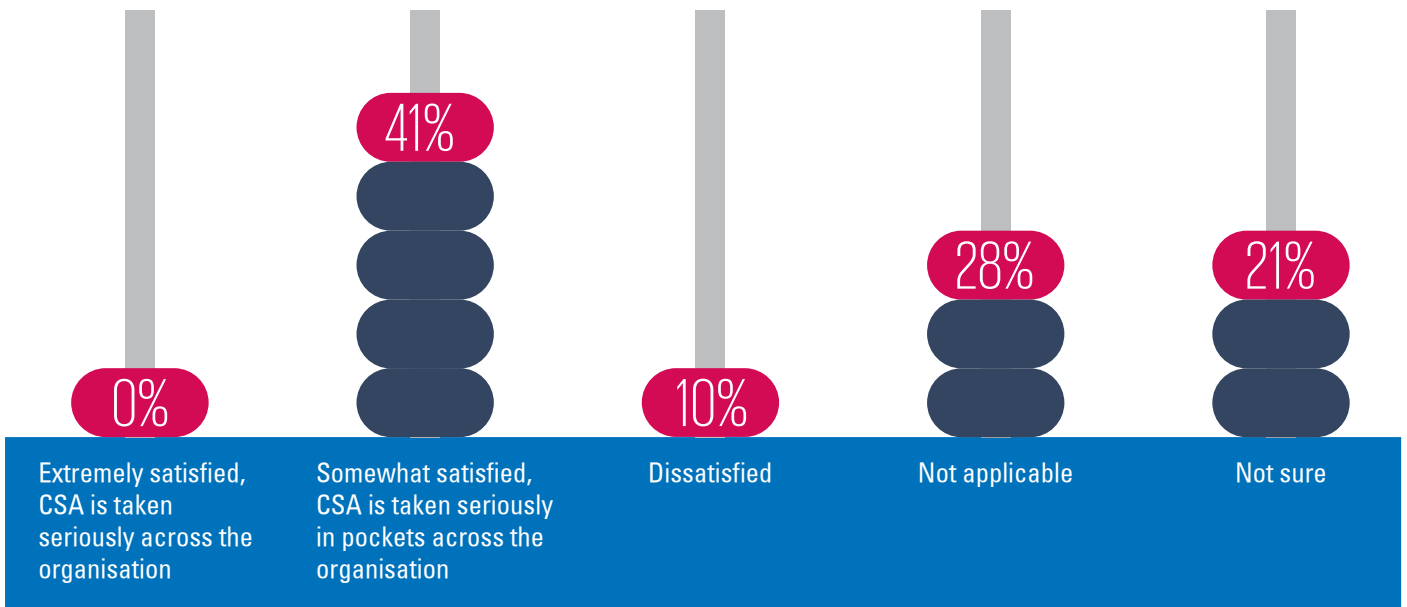
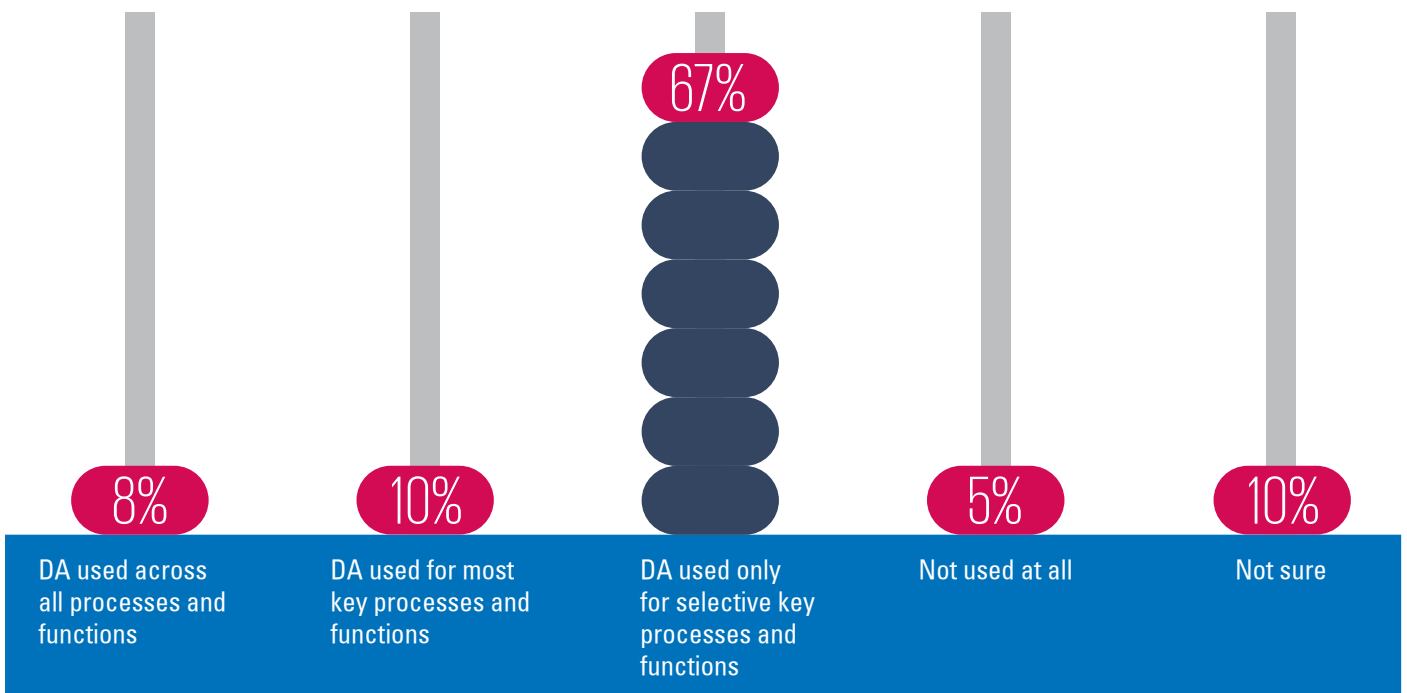


Figure 16. To what extent are data analytics techniques deployed to analyse risk, controls and assurance activities?



6. Implementing an integrated assurance framework -

Driving from risk management to assurance process

Public sector organisations have a myriad of Instruction Manuals, internal policies and procedures, and regulatory updates on their systems and processes. Yet, these do not appear to be sufficient in preventing a recurrence of common findings in the annual AGO Reports.

This gives rise to the debate on whether government agencies have adopted a myopic view of “fire-fighting” the recurring findings highlighted in the AGO Reports, such as focusing on transactional levels and ignoring the root causes of weak governance practices and poor risk culture.

The key question then for public sector organisations to consider is how do they strengthen governance practices and align their operations to changes in strategies and compliance requirements.

Implementing an integrated assurance framework can reduce the functional gaps, overlaps and duplication in assurance activity, and remove the silo approach to risk identification, assessment, mitigation and reporting. Fundamental to the building of this framework is a clear understanding of the four lines of defence and the distinct and different roles played by each function in the organisation (Figure 17).

The Board, or the highest oversight authority in the public sector organisation, holds the last line of defence. This is an important role in the governance process to maintain oversight and monitor the adequacy and effectiveness of risk



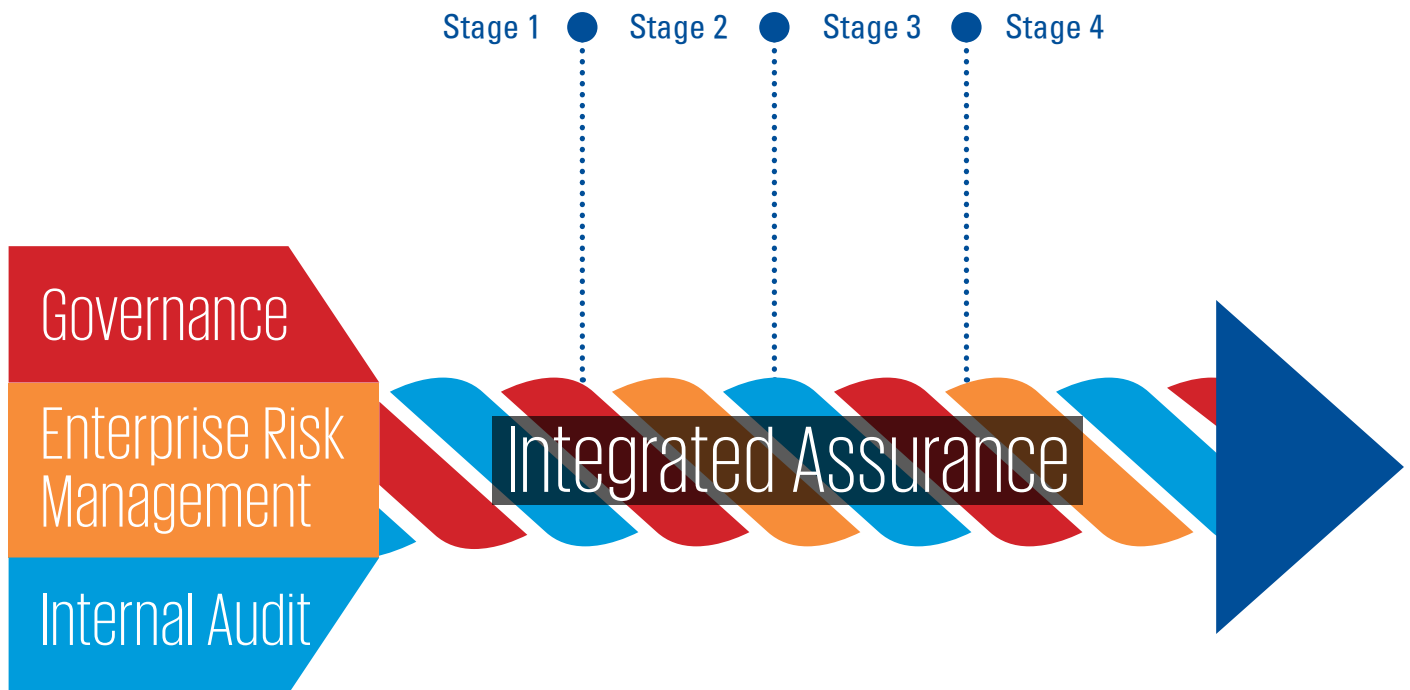
“ Having the overall or “helicopter view” of current governance practices across the organisation. ”

management and internal control processes. To allow the Board or similar structure to discharge its responsibilities, there is a need for a clear overview of the organisation’s risk management and internal control processes. Hence, it is important for public sector organisations to take stock of existing practices in relation to their strategy and review if they meet compliance requirements and add value. After which, practices can be realigned to support the

future strategic direction of the organisation.

What are some practical steps in improving the risk, governance and assurance process in the public sector? The private sector has best practices for consideration of the “Who”, “What” and “How” in implementing an integrated assurance framework.

Figure 17. Functioning of the four lines of defence (Figure 3) and the interdependence of each key function in the implementation of an integrated assurance framework.



**Stage 1:
Having the right people to drive each line of defence**

Management of public sector organisations can set the tone at the top. The survey results and roundtable discussions emphasised the importance of the “right person” or “right team” to drive the culture of coordinated approach in the organisation to align strategy, risk and policies. These management oversight functions are thus responsible for designing good governance practices, setting direction, ensuring compliance and providing assurance for the ultimate reporting to the Board and highest oversight authority, as well as being accountable to other stakeholders including the public.

The survey results and roundtable discussions suggest it is important for the finance and internal audit functions to support and be involved

in the integrated assurance journey. While the finance function continues to reiterate and enforce compliance of financial controls, as custodian of public finances, they could also be tapped to provide guidance and promote awareness of risk and controls across the organisation.

Likewise, the internal audit function is evolving from the traditional focus on post-mortem audit of historical transactions – from a policing role to a more consultative one. This includes proactively engaging with business units to provide a stronger linkage and alignment between risk and assurance activities, and focusing on what matters. The principal objective is to allow the internal audit function to develop a risk-based internal audit plan to focus on what is important to the organisation.

While the role of internal audit can be consultative, the third line of defence

entails independent challenge when performing its role in integrated assurance. It is therefore important to have in place the necessary safeguards against “self-review” threats. This includes not providing objective assurance on any areas of the framework that it is responsible for. Such a role is best undertaken by other qualified parties.

Experience has shown that it is important for the leader of the integrated assurance framework to define what assurance means to everyone in the various lines of defence and what they want to achieve from that assurance. They will need to have a clear definition of assurance which is agreed by Board or highest authority, as well as all stakeholders. This will be important in determining how assurance activities from all lines of defence are evaluated.

**Stage 2:
Establishing a risk culture; making risk management part of strategic planning**

The survey results and discussions suggest that in public sector organisations, risks are managed in silos. This means the development of business resilience may be overlooked due to an absence of interconnectivities and nerve centres. Our research also suggests that public sector organisations have widely perceived risk management to be a conformance task, disconnected from the strategic or even operational objectives.

The changing risk landscape with heightened threats from cyber-space, social media and terrorism activities mean that risk management needs to be transformed into a powerful tool that fosters faster and better quality decision-making while providing assurance of good governance. Acting and managing risks reactively rather than proactively may result in not identifying clusters of risks and their potential domino effects.

Hence, it is important for public sector organisations to review their current risk management models and promote a stronger risk culture. As noted earlier, risk management functions and frameworks already exist but they need to be enhanced to promote a more effective risk management culture. Public sector organisations could consider building on existing good practices and bringing them upstream to be part of strategic planning; tackling emerging risks and themes and communicating them downstream to business operations and their people; and identifying early warning indicators

to evaluate and respond to changes quickly.

**Stage 3:
Linking risk management to operations and processes; mapping various sources of assurance**

The next step is to conduct a risk, control and assurance mapping exercise to identify the linkages between risk and controls to determine where assurance could be focused. At this point, consideration could be given to the different types or sources of assurance (management review, internal audit, external audit, regulatory audit etc) and the strength of assurance offered by these sources (e.g. strong, medium or weak depending on the level of independence/frequency/scope of assurance). Coordinated reporting on total assurance activities will help to eliminate duplications or gaps in processes and controls.

**Stage 4:
Adopting data analytics and control self-assessment**

The most effective integrated assurance, and indeed the integrated assurance of the future, will utilise DA and CSA so that key control indicators can be identified across all business risks and monitored on an ongoing basis with threshold reporting. This will emphasise the adequacy and effectiveness of risk management and risk identification, with dynamic risk monitoring of how risks and risk drivers are moving. Public sector organisations may consider a system of monitoring and supervision, which includes tools such as DA and CSA, and leverage technology as much as possible to

produce continuous auditing and monitoring.

The survey results and roundtable discussions indicate a healthy trend towards the adoption of DA. With public sector processes and systems updated to align with the strategy of mass adoption of technology, DA methodology will continue to gain traction as a future assurance technique.

One of the key enablers of DA is the presence of useful information. Public sector organisations will find it beneficial to refine their processes and IT systems so that the right amount of data is collected and condensed for meaningful analysis. An emerging trend in risk management is to adopt DA tools as part of predictive analysis in the risk management process.

The benefits of a well-designed and implemented DA methodology have been widely acknowledged. But the survey has suggested that CSA is not being widely adopted and has not been universally successful in operation. CSA works best in the following environments:

- good governance and control culture
- highly standardised processes/controls
- low-to-moderate control complexity.

Critically, for both CSA and DA to work, there needs to be strong governance and the right tone at the top to build a common risk and control language.



Conclusion

In this report, we identified issues that have recurred consistently over the last 26 years, primarily triggered by the same root causes. The fundamental problem cited by the latest AGO report was “weak governance” of the agencies. This could potentially highlight a number of issues:

- the need to review the internal control structure
- how the agencies are organised
- whether the practices that have been established are adequate and “fit-for-purpose” and
- are working effectively to address the risk and control issues highlighted across the organisation.

We suggest that a possible approach is the KPMG four lines of defence, implemented in an integrated way, relying on the interplay between People, Process and Systems. The proper and effective functioning of the four lines of defence could be a first step in addressing the root causes. The lapses in the AGO reports also raise the question of control consciousness and awareness.

While we understand that training is conducted across the agencies, it needs to be more sustainable with continuing education and awareness-building to enhance the culture of control consciousness across any organisation. This is a critical success factor towards building a strong and effective governance structure.

7. About this Report

Information relating to the AGO Reports is based on publications from the Auditor-General's Office from 1990 to 2016. It is important to note that the analysis of the AGO Reports is purely an interpretation of the issues recorded in the publications.

The survey results are based on data collected from 50 respondents from government ministries, statutory boards and organs of state. The survey was conducted between June and July 2016 and was augmented by a series of roundtable discussions with representatives from public sector organisations and facilitated by KPMG and CPA Australia.



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