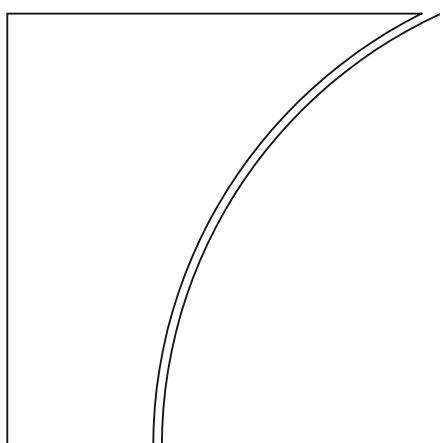




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High expectation but low integration? Experiences in modernising and integrating information systems for supervision

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High expectation but low integration? Experiences in modernising and integrating information systems for supervision¹

Executive summary

Rapid digitalisation and evolving risks in the financial system place high expectations on financial supervision. Digital innovation has accelerated financial activity and increased complexity, but regulatory and supervisory frameworks have not fully kept pace. This has created gaps that authorities must address. At the same time, pressures to simplify regulation and enhance competitiveness could result in less risk sensitivity, placing greater responsibility on supervision. Strengthening supervisory capability is therefore critical to maintaining financial stability.

Enhancing supervisory capability requires a more coherent and integrated approach to systems, processes and tools. While improvements in supervisory skills, tools and processes are important, their effectiveness and how well they function together depends in large part on the infrastructure and systems that support them. Suptech offers opportunities to improve efficiency and effectiveness, but current efforts are often fragmented and issue-specific. A holistic approach – anchored in digital transformation and data governance strategies – is essential to fully realise the benefits of these technologies.

Information systems that support the supervision cycle (ie supervision systems) have evolved. The supervision cycle encompasses planning, risk assessment, engagement with supervised entities, action and reporting. This cycle is supported by three main systems responsible for data collection, workflow management and analytics. These systems have progressed from manual processes to fragmented digital tools, partially integrated systems and, in some cases, fully integrated platforms that provide a single source of truth. While this is a simplified characterisation of supervision systems, it provides a useful model that supervisory authorities may use to assess the maturity of their supervision systems.

The level of maturity of supervision systems remains varied, with only a few authorities achieving full systems integration. The survey conducted for this paper shows that only eight respondents have fully integrated their supervision systems. Including those with partial integration raises the proportion to slightly more than half of respondent authorities. Lack of integration of supervision systems is more common among authorities in emerging market and developing economies (EMDEs).

Information technology (IT) environments differ across financial authorities, and integration approaches are therefore shaped by institutional circumstances. Smaller or newly established authorities typically operate with simpler IT infrastructures that allow for more straightforward integration, whereas large and long-established institutions often face more complex integration challenges due to legacy systems. Interviews with authorities and other anecdotal evidence suggest that many authorities are shifting from traditional management information system (MIS)-centric architectures towards more customer relationship management (CRM)-based platforms as the core of integrated supervision systems. This reflects CRM's perceived advantages in supporting workflow management –

¹ John Chiu (jychiu@hkma.gov.hk), Hong Kong Monetary Authority; Jermy Prenio (jermy.prenio@bis.org), Bank for International Settlements. The authors are extremely grateful to Ajay Alapatt, Rachel Arulraj, Konstantin Bottenberg, Carmen Chu, Noel Guinto, Paulo Haddad, Joanne Horgan, Perttu Korhonen, Renatus Kuk, Alvin Li, Carolyn Mapuna, Arnold Martinez, Melchor Plabasan, Hamilton Rodrigues, Brendan Rowan, Jose Recon Tano, Johannes Turner and Arthur Yuen for insightful comments. Theodora Mapfumo provided valuable administrative support.

improving user experience in interactions with supervised firms and enabling more streamlined, engagement-focused supervisory processes.

Integration of supervision systems is primarily driven by the need for better access to information and greater efficiency. Integrated systems enable supervisors to access timely, consistent and comprehensive data, reducing fragmentation and improving decision-making. They also eliminate duplication, automate processes and optimise resource allocation, resulting in more efficient supervision. In addition, integration enhances transparency in workflows and facilitates the adoption of advanced technologies. It also facilitates consistent interaction with supervised firms and clear communication of supervisory priorities and expectations.

Integrated supervision systems are a key enabler of effective artificial intelligence (AI) adoption. By improving data quality, standardisation and accessibility, integrated systems provide the necessary foundation for deploying AI applications at scale. They also allow authorities to experiment with AI in controlled environments and to easily transition from pilot use cases to fully embedded solutions. Moreover, integrated systems support more advanced capabilities such as agentic AI, which depends on interoperability across data, analytics and workflow platforms.

Despite its benefits, systems integration presents significant technical and organisational challenges. Common technical barriers include legacy infrastructure, limited interoperability, poor data quality and increased cyber risk. These issues complicate integration efforts but may have relatively straightforward solutions. In contrast, non-technical and people-related challenges – such as resistance to new ways of working and rigid organisational culture – are often more difficult to address. These challenges highlight the need for authorities to implement robust change management.

Vendor-related issues are increasingly demanding attention from authorities. Limited expertise in the market on the niche area of supervision is an issue that authorities have always faced when looking for technology solutions. This is now compounded by the growing prevalence of vendor proprietary models that are embedded in these solutions. This can lead to long-term dependence and concentration risk. Many authorities opting for the same vendor amplifies these issues. To address them, authorities need to carefully assess integration approaches, balancing efficiency with the need to leverage existing tools and future flexibility, while managing third-party risks.

Successful integration depends on strong governance, collaboration and sound implementation practices. Leadership support and a clear institutional strategy are critical to guiding integration efforts and allocating resources effectively. Collaboration across supervisory, IT, cyber security and other functions ensures that both technical and organisational aspects are addressed. Practical approaches such as prioritising data governance, starting with pilot projects and adopting iterative development processes help manage risks and build momentum.

Ultimately, supervision systems integration represents a strategic transformation rather than a purely technical exercise. Authorities that align digital transformation, data governance and suptech strategies are better positioned to enhance supervisory effectiveness and respond to emerging risks. As financial systems continue to evolve, the ability to operate integrated, data-driven supervisory frameworks will become a defining feature of effective financial oversight. Indeed, the success of systems integration should be measured not just by how effective the technology deployment has been but, more importantly, by how effective supervision has become.

Section 1 – Introduction

1. **Financial supervision is tasked with meeting high expectations given changes and developments in the financial system.** Digitalisation and innovation have changed the structure and speed of financial activity. However, regulatory and supervisory frameworks have not really evolved as much, particularly in certain parts of the financial system (Hernández de Cos (2026a)). There is therefore a need to close regulatory and supervisory gaps. At the same time, there is ongoing discussion in many jurisdictions about regulatory simplification in order to ease regulatory burden and boost competitiveness. To address the inevitable reduction in the risk sensitivity of regulation, one idea is to enhance the risk sensitivity of supervision (Restoy (2025)). More broadly, supervision is being entrusted with addressing the vulnerabilities identified in previous crises and financial turmoil (Hernández de Cos (2026b), Restoy (2026)).
2. **Meeting these expectations requires improvements in supervisory capability.** In all cases – closing gaps in supervision to keep up with digital transformation in the financial system, enhancing the risk sensitivity of supervision to compensate for regulatory simplification and addressing vulnerabilities identified in previous crises – financial authorities need to enhance their supervisory skills, processes and tools as well as the information technology (IT) infrastructure that supports them. Previous papers have already covered supervisory skills, processes and tools (Crisanto et al (2025), Balan and Zamil (2026), Prenio (2024)), but not much attention has been paid to whether these different elements are being pulled together in a coherent and efficient way.
3. **The use of supervisory technology (suptech) can help to enhance supervisory capability.** Many authorities, including those in major financial centres, have significant resource constraints (Coelho and Guerra (2024)). Authorities are addressing this through continuous investments in human resources. Many are complementing these efforts with investments in tools or applications enabled by new technologies – collectively referred to as suptech. Suptech applications can automate supervisory processes, making them more efficient and contributing to their effectiveness. However, successful adoption of suptech applications involves careful consideration.
4. **Financial authorities are actively experimenting with and developing suptech applications, but effective integration of these tools in supervisory processes is still ongoing for many.** Efforts to experiment with and develop suptech applications, including international work supporting these efforts, take on a more issues-focused approach (eg developing applications for cyber detection, crypto monitoring). While this approach is helpful in illustrating how tools might be developed for specific issues, it tends to view these applications in isolation without regard to how they might fit into supervisory processes and information systems supporting these processes. A holistic, process-focused approach is necessary to drive successful adoption of suptech applications (Prenio (2024)).
5. **Adoption of suptech applications should be pursued in the context of digital transformation and data governance strategies.** Suptech applications do not exist in a vacuum; they need to be effectively integrated into supervisory processes and systems. This means that financial authorities' information systems need to be able to support the deployment of suptech applications. This entails digitalising supervisory processes and pursuing not just a suptech strategy but also broader digital transformation and data governance strategies. It has been shown that authorities with all three strategies tend to deploy substantially more suptech applications and face fewer design and implementation challenges (Gambacorta et al (2025)).
6. **A holistic approach to digital transformation, data governance and suptech can raise the level of maturity of financial authorities' information systems.** An information system is a combination of technology (hardware, software, applications), data and procedures designed to support defined functions. Information systems used by financial authorities have evolved over the years, and modern technologies can now support more advanced information systems. Having clear and aligned

digitalisation, data and suptech strategies can enable financial authorities to harness advances in technology and move up the information system maturity scale.

7. **This paper explores the current state of information systems that support supervision (hereinafter referred to as supervision systems).** For purposes of this paper, we classified supervision systems into data collection (enables the collection and storage of all relevant supervisory data, including communications with supervised entities), workflow management (supports planning, managing and tracking supervisory activities) and analytics (facilitates risk assessments and regulatory compliance monitoring). The paper also examines trends in supervision systems integration, drawing lessons and insights from financial authorities' experiences.

8. **The paper is based on a survey of members of the FSI's Informal Suptech Network, complemented by interviews with selected authorities.** Forty-three financial authorities responded to the survey that was conducted from February to April 2026. Slightly more than half (54%) of the respondents are in emerging market and developing economies (EMDEs), and 46% are in advanced economies (AEs).² Most of the respondents have a mandate for banking supervision (86%), followed by anti-money laundering and countering the financing of terrorism (51%), insurance supervision (44%) and securities markets oversight (33%) (see Annex 1 for the list of respondents). In addition, eight authorities representing various stages of supervision systems integration were interviewed. Section 2 discusses the supervision cycle, the systems that support it, how these systems have evolved and the current state – in particular, the level of integration – of authorities' supervision systems. Section 3 examines authorities' experiences and insights in implementing integrated supervision systems. Section 4 showcases case studies of specific authorities' integration projects. Section 5 concludes.

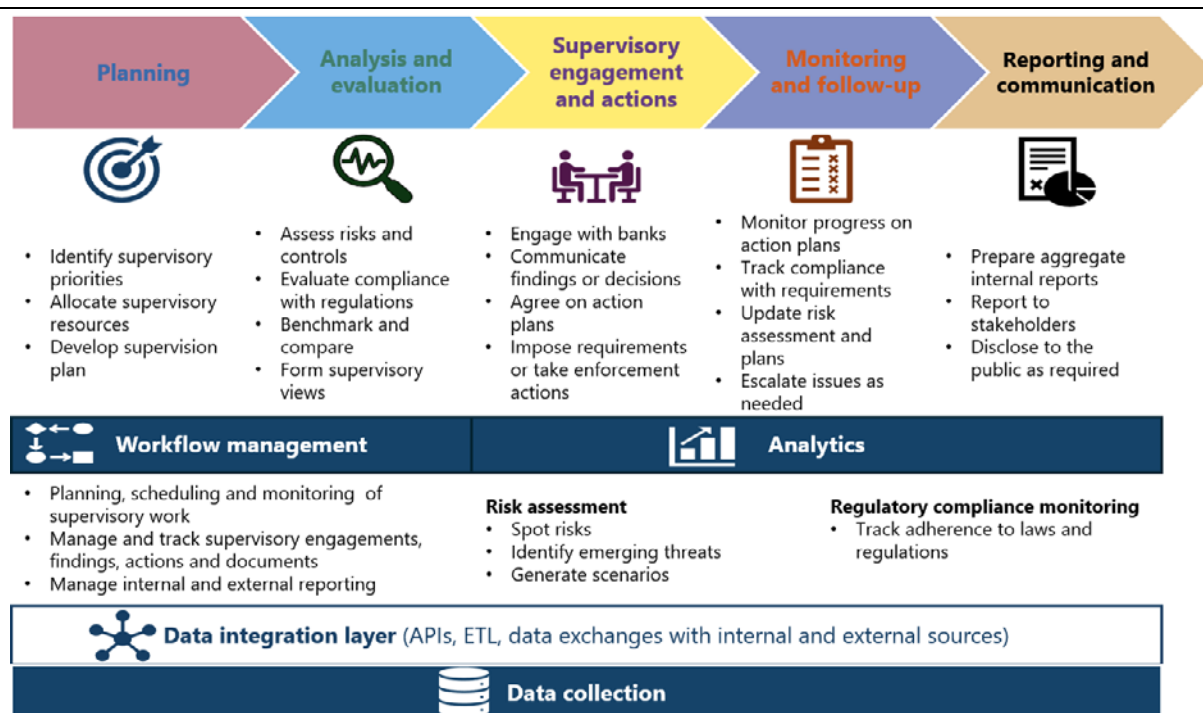
Section 2 – The supervision cycle and the generations of supervision systems

9. **The supervision cycle is made up of interlinked stages that together aim to achieve the supervisory mandate.** Figure 1 provides a stylised representation of the different stages of the supervision cycle and the systems that support them. The cycle starts by defining the supervisory plan based on priorities and available resources. Execution of the plan involves carrying out risk analysis, evaluating regulatory compliance, benchmarking with peers and forming views. Before deciding on a course of action, supervisors need to engage with supervised firms and communicate and discuss their findings. Supervisors and supervised firms may agree on certain action plans to address some of the findings. Progress on these action plans must be monitored. Finally, aggregate reports may have to be presented internally as well as to other stakeholders and the public. There are feedback loops across the different stages of the supervision cycle, with insights in one stage potentially informing the other stages.

² These percentages exclude six respondents that did not indicate their institution names.

Stages of the supervision cycle and the systems supporting them

Figure 1



Source: FSI.

10. **The three main supervision systems supporting the supervision cycle are data collection, workflow management and analytics.**³ The data collection system serves as the foundation.⁴ This system enables the collection, validation, storage and management of data relevant for supervision. These include firm-specific data, such as administrative information (eg firm location, ownership structure, contacts), regulatory reports (eg prudential or conduct-related reports) and other regulatory submissions (eg board minutes, applications for activities requiring supervisory approval); relevant market, economic and other external data; records of communications with supervised firms; and information on supervisory resources, activities and schedules. The data collection system feeds relevant information to the two upstream systems through the data integration layer, which allows for the transfer and use of data. Workflow management supports the planning, management and monitoring of supervisory activities. These include engaging with supervised firms; tracking supervisory findings, decisions and actions; and managing reporting. Analytics provides applications for assessing and monitoring risks and regulatory compliance, as well as for identifying emerging threats. Analytics for risk assessment and regulatory compliance monitoring may be separate.

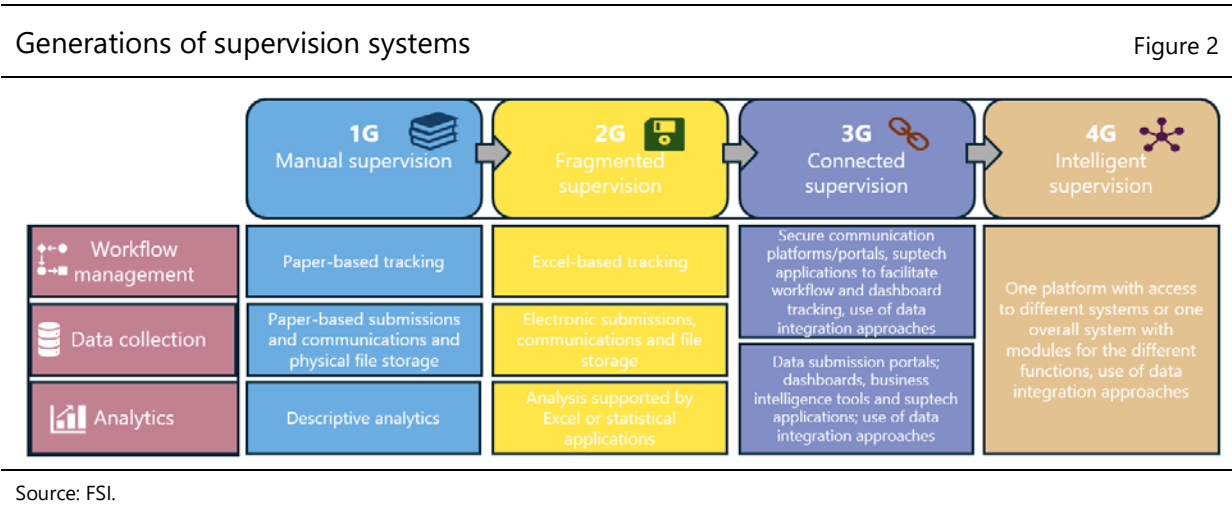
11. **The supervision tools or systems supporting the different stages of the supervision cycle have evolved over the years.** Figure 2 shows a simplified illustration of the generations of supervision

³ For simplicity, we presented them as three main systems based on their purpose. In practice, however, each main system may consist of multiple systems that may or may not be interconnected. See the following discussion on the evolution of supervision systems.

⁴ One could argue that supervised entities' regulatory reporting systems serve as the "fourth system" supporting supervision and that greater integration between supervisory authorities' and supervised entities' systems should be considered. This is out of scope of the paper, but see, for example, a similar idea of moving from "data reporting" to "data-sharing" in Crisanto et al (2020).

tools or systems,⁵ starting with manual tools and ending with full integration or interconnection of all systems. These are not necessarily discrete categories, but rather a continuum. Some financial authorities' supervision tools/systems may fall into different generations (eg communications with supervised entities may be carried out via untracked emails but systems for data collection and analytics may be interconnected).

12. **The generations of supervision systems provide a useful maturity model that supervisory authorities may use to assess progress.** Many supervisory authorities are putting in place digital transformation strategies. While Figure 2 shows a simplified characterisation of the different generations of supervision systems, it could be used to assess progress towards achieving the objectives of digital transformation strategies. It provides a clear path that supervisory authorities can follow in modernising their supervision systems from manual supervision, fragmented supervision and connected supervision to “intelligent” supervision that allows for the most seamless and efficient use, analysis and monitoring of all information available to supervisors.



13. **The first generation (manual supervision) involves supervision activities that are supported by manual tools.** Communications with supervised entities take the form of letters or phone calls, with the former kept in physical records. Physical records are also used to track the progress of workflows. Data collection takes the form of paper submissions, with manual validation and analysis that are mainly descriptive in nature.

14. **The second generation (fragmented supervision) covers the implementation of digital tools that are fragmented across different applications or systems.** Communications with supervised entities are now carried out through emails (or phone calls), with or without centralised records. Tracking of workflow progress is carried out using Excel either by individual staff or by the relevant team in a single file. Data submissions use electronic files sent through emails, web portals or bulk uploads (eg file transfer protocol), or even through a “data pull” approach (Crisanto et al (2020)), sometimes with automated validation checks. Analysis is supported by Excel or other statistical applications but uses data that are manually updated.

15. **The third generation (connected supervision) involves partial integration or interconnection of systems that support related activities.** Here, there may still be multiple data collection systems, but each system handles related data. For example, there is a secure platform or portal for communication with supervised entities, particularly as it pertains to supervisory workflows (eg

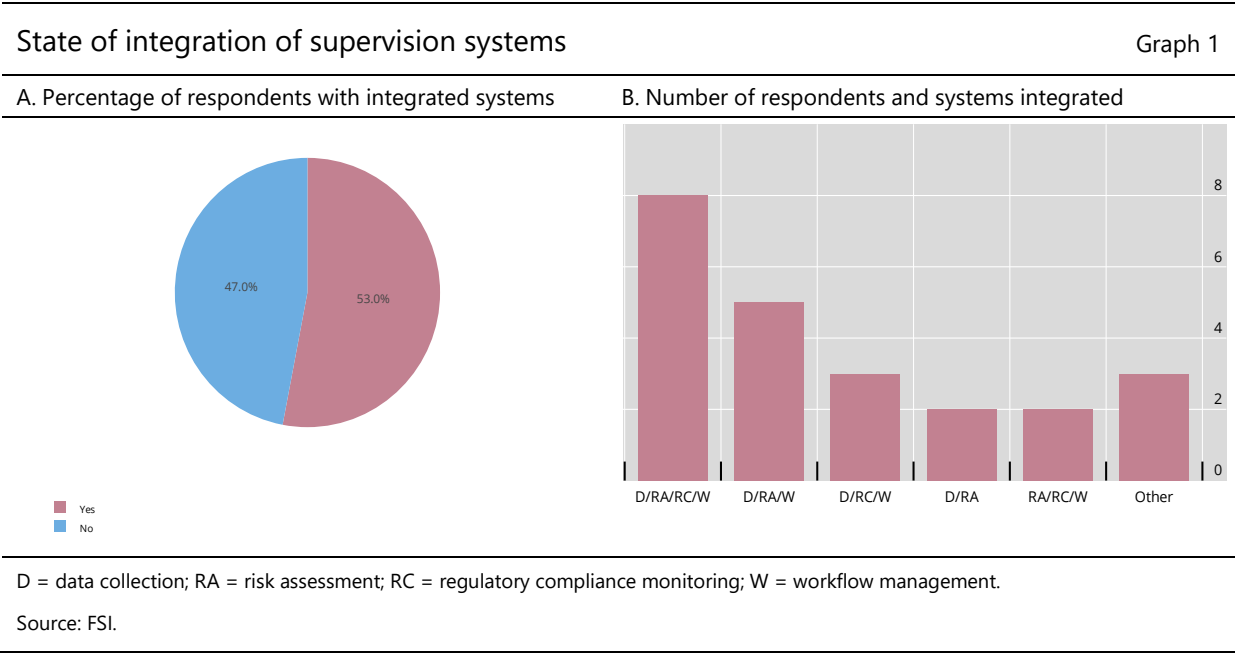
⁵ This expands on the suptech generations in di Castri et al (2019). While this earlier paper focused on the evolution of data collection and analytics tools or applications, this paper provides a broader view of the tools and systems that enable supervision activities and how they are integrated.

licensing, inspections, approvals, enforcement actions etc). Such communications are centrally stored and automatically tracked. Workflow-related submissions – mainly in unstructured data format – are also stored centrally and are integrated with suptech applications that can identify issues in these submissions that require supervisory attention. Integrated suptech applications may also provide visualisation to track workflow progress. Likewise, systems for collecting structured data (eg prudential reports) are now integrated with suptech analytics applications that can track trends, spot risks and monitor compliance.

16. **The fourth generation (intelligent supervision) sees the full integration of all supervision systems.** There is one “single source of truth” – or a centralised repository or system for all information, as well as interaction – related to supervised entities. This could also take the form of a data foundation (ie common data model and dictionary) that all supervision systems adhere to, enabling them to interact with each other. This ensures that supervision staff have access to the same accurate, updated and consistent information that then feeds into tracking and managing workflows, analysing risk, monitoring regulatory compliance and informing further communication and interaction with supervised entities.

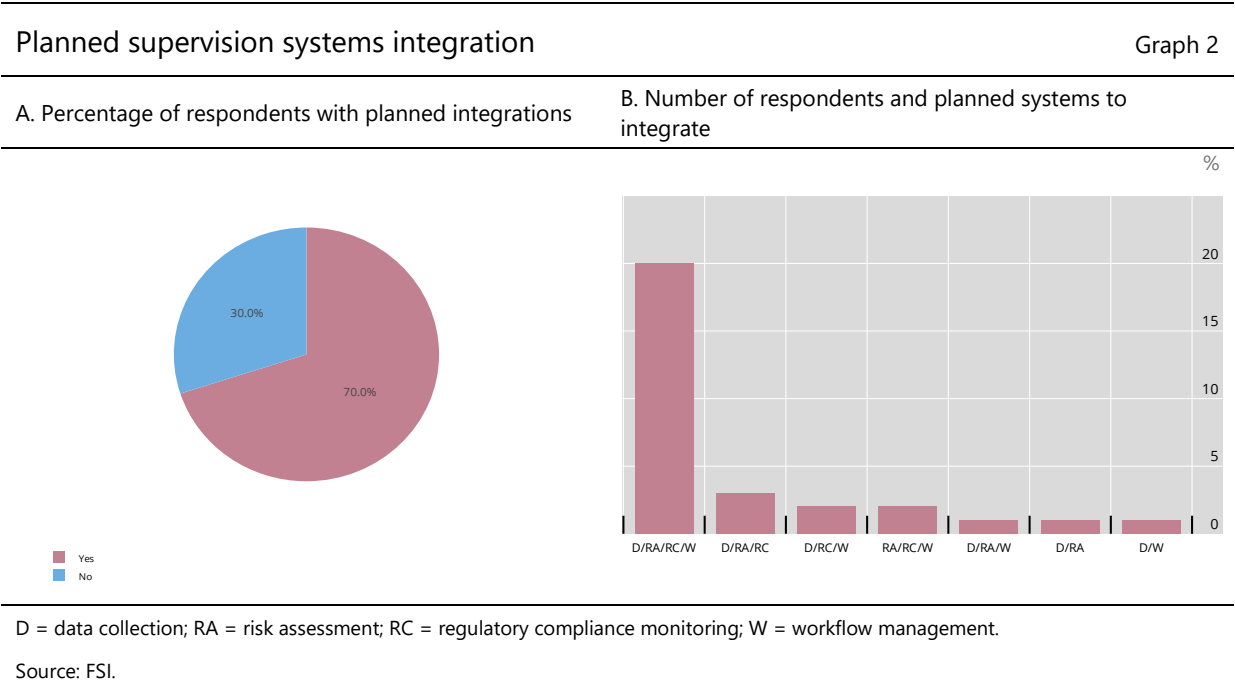
State of supervision systems around the world

17. **Using this simplified characterisation of the generations of supervision systems as a lens through which to view the survey responses, only a few authorities have advanced to the fourth generation.**⁶ Only eight out of 43 respondents have fully integrated or interconnected their systems for data collection, risk assessment, regulatory compliance monitoring and workflow management. Fifteen respondents have integrated systems for at least two processes, ie they have advanced to the third generation. In most cases, partial integration is anchored to the data collection system, paired with related processes (Graph 1).



⁶ One respondent authority does not have integrated systems for banking supervision, but it plans to have them for payment supervision. For the respondent, this reflects the payment industry’s higher operational complexity and data intensity and thus the need for end-to-end process integration. The planned integration will focus on workflow management, with supporting capabilities for data collection, risk assessment and regulatory compliance monitoring also being planned at a later stage. For purposes of the paper, we counted this respondent as among those without integrated systems.

18. **Including those planning to implement integrated systems increases the proportion of respondents that have advanced to the third and fourth generations to 70%.** Twelve more respondents are planning to integrate systems for data collection, risk assessment, regulatory compliance monitoring and workflow management. Integration of the data collection system with systems for analytics and/or workflow management is the plan for 10 other respondents (Graph 2). This indicates that most of the respondents intend to fully or at least partially integrate supervision systems (ie advance to the third or fourth generation of supervision systems). The question is how quickly and effectively authorities can achieve integration.



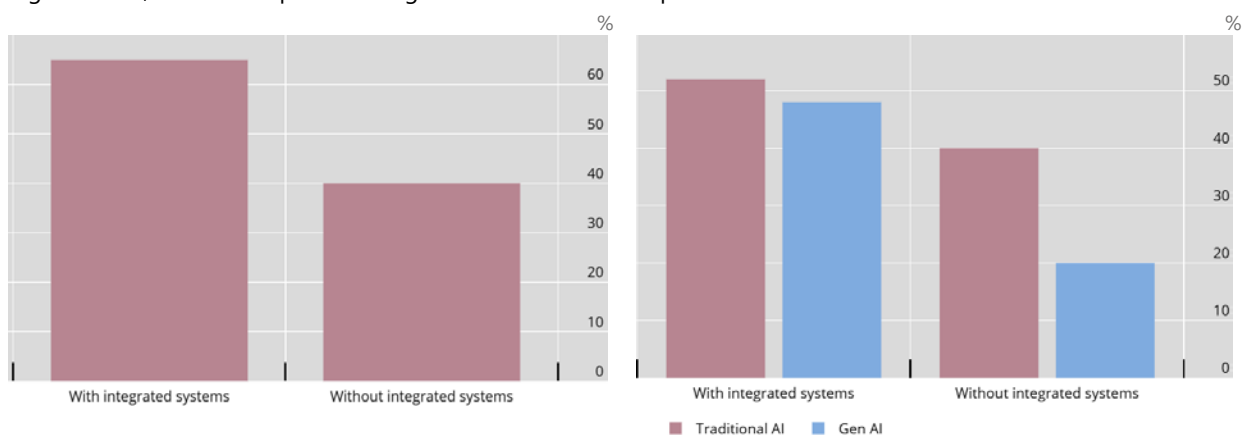
19. **Respondents with existing integrated systems tend to have a holistic approach to digitalising their supervisory processes.** About two thirds of these respondents have strategies for digital transformation, data governance and suptech. In most of these cases, they also have an AI strategy. In contrast, only 40% of respondents without integrated systems have all these strategies in place (Graph 3.A). The difference between the two groups of respondents is also apparent in their adoption of AI-enabled suptech applications. Among respondents with integrated systems, more than half are using traditional AI applications and almost half are using generative AI (gen AI) applications for supervision purposes. Among respondents without integrated systems, only 40% and 20% are using traditional AI and gen AI applications, respectively (Graph 3.B). These observations support the findings in Gambacorta et al (2025).

Differentiating between authorities with and without integrated systems

Graph 3

A. Respondents with integrated systems tend to have digitalisation, data and suptech strategies...

B. ...and are more likely to be using AI applications for supervision



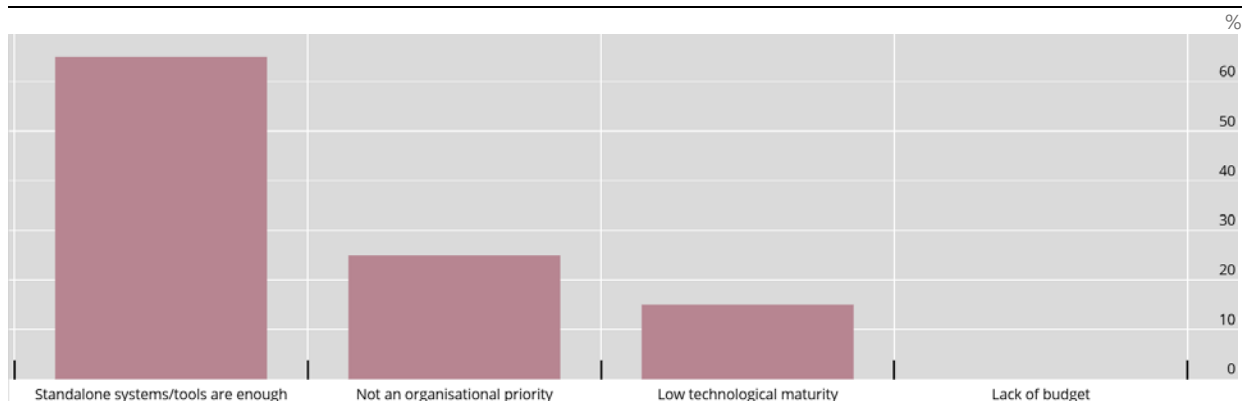
Source: FSI.

20. **Lack of integrated systems is more common in EMDEs than in AEs.** Half of respondents in EMDEs indicated that they do not have integrated systems, whether full or partial. In contrast, less than a quarter of respondents in AEs do not have integrated systems. This difference may be due to several factors, including the size of the authority or of the financial system it oversees (which are correlated), technological maturity and resources.

21. **Those without or that have no plans to have integrated systems tend to view their standalone systems as sufficient.** About two thirds of those with no integrated systems in place consider their existing standalone systems/tools to already meet their organisation's needs. About a quarter responded that having integrated systems is not an organisational priority. A small proportion point to low technological maturity in their organisation as the reason for not pursuing integrated systems. Meanwhile, none of the respondents cited lack of budget as the reason for not having or not planning to have integrated systems (Graph 4). The responses suggest that the dominant factor in lack of integration may be the size of the authority rather than its technological maturity or resources. Supervisory authorities that are smaller and that oversee fewer institutions may consider standalone systems/tools sufficient; as a result, integration is not an organisational priority.

Reasons for not having or not planning to have integrated systems

Graph 4



Source: FSI.

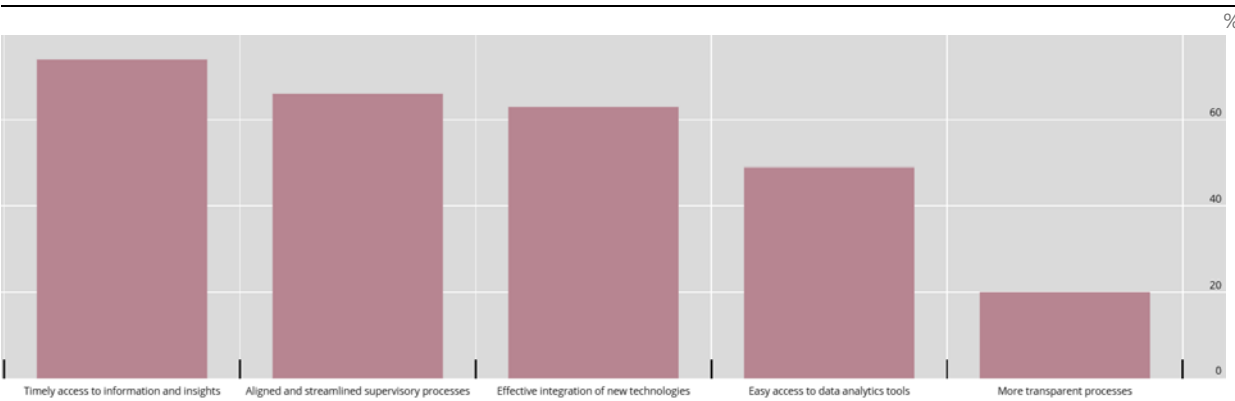
Section 3 – Integrating supervision systems: implementation experiences and insights

22. **Authorities’ experiences in integrating their supervision systems can provide valuable insights to other authorities.** The objectives of undertaking integration projects may differ slightly in emphasis, but the core objective is the same – to be able to effectively and efficiently leverage the information available to supervisors. Likewise, challenges in implementing systems integration are quite similar, but looking at authorities’ experiences collectively highlights common risks that may not be apparent at the individual authority level. Since authorities with integrated systems tend to use more AI applications, it is important to draw upon their perspective on how their integrated systems have facilitated AI adoption. More broadly, it is important to stress the good practices developed and lessons learned from experiences in implementing integrated systems. All these are discussed in the following subsections.

Objectives

23. **Financial authorities’ main objective in integrating their supervision systems is to achieve easier access to information and foster more efficiency.** Timely access by supervisors to information and insights came out as the top objective of authorities in pursuing integrated supervision systems, chosen by about three quarters of the respondents (Graph 5) (respondents were asked to choose their top three objectives). Aligned and streamlined supervisory processes came second, reflecting the need for more efficiency. The next two objectives – more effective integration of new technologies and analytics tools – may also be viewed as contributing to more efficient supervision. Only 20% of the respondents indicated that more transparency is an objective, but this could also bring important improvements in workflows (see the discussion below on the transparency objective).

Main objectives of having (or planning to have) integrated supervision systems Graph 5



Source: FSI.

24. **Having integrated supervision systems allows authorities to have better control and to optimise the use of the data available to them.** Financial supervision is a complex undertaking. There are several activities, workflows and interactions with supervised entities. Yet, in many cases, data are scattered across a fragmented IT infrastructure and are trapped in artificial silos, making data available only to those who receive or make them. Therefore, different supervision staff may not be able to easily leverage the full information available to the authority or may access slightly different versions of the same data. For example, findings stemming from different supervisory processes but pertaining to the same risk area may be stored in separate locations, making it harder for supervisors to consider all findings in their

risk assessment (Dahlgren et al (2023)). Moreover, a fragmented IT infrastructure does not facilitate effective cross-institution comparisons or the data aggregation necessary for system-wide monitoring for macroprudential purposes. Having integrated systems – at least, for data collection – allows for a single source of truth for supervision staff and enables a more data-driven authority.

25. **Integrated supervision systems can improve efficiency.** They eliminate duplication of records, avoid unnecessary manual interventions that lead to errors and allow for more effective monitoring of processes. Integrated systems also support better resource management. Moreover, integrated systems facilitate the adoption of new technologies, making advanced analytical tools easier to access (see the discussion below on how integrated systems facilitate AI adoption). These new technologies and tools, in turn, result in even more efficiencies in supervision. Achieving efficiency is especially important for smaller and lightly resourced financial authorities.

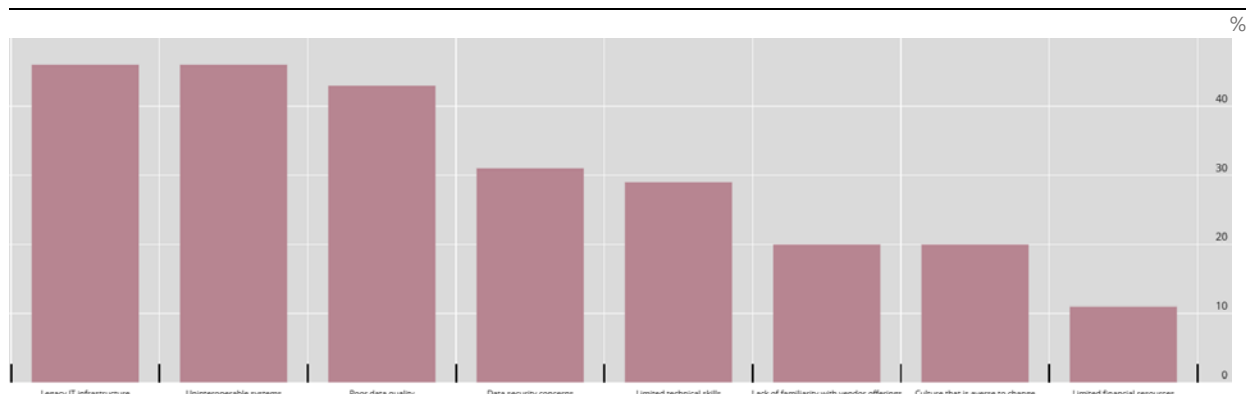
26. **Integrated systems enhance transparency in supervision workflows.** While not many authorities choose transparency as an explicit objective, integrated systems support more effective monitoring of progress on supervision work. For example, in fragmented systems, on-site examiners have their working files stored in their own devices and save only the final reports in a centralised portal accessible by their managers (or simply submit the final report by email for the manager's review). By bringing these different stages of the workflow into one system, managers have early visibility of supporting documents and examiners' rationale, facilitating comparison across peer institutions and tracking work progress. Similarly, in fragmented systems, critical interactions by a supervisor and its supervised entity may only be stored in an individual supervisor's email inbox. Integrated systems enable a central repository that stores and makes visible to relevant supervision staff and senior officials all critical communications with supervised entities. This builds trust in supervision and helps avoid issues that commonly arise from lack of transparency.

Challenges

27. **The challenges that were often mentioned in the survey responses were technical and data-related.** The survey asked respondents to select their top three challenges in achieving integrated supervision systems. More than 40% of the respondents pointed to legacy IT infrastructure, lack of interoperability of existing systems and poor data quality (Graph 6). These challenges are quite similar to those banks face in adopting the Basel Committee on Banking Supervision's (BCBS) Principles for effective risk data aggregation and risk reporting (BCBS (2023)), presenting an opportunity for authorities to learn from their supervised firms in improving their IT infrastructure. One specific concern that came out of the interviews is the potential of increased cyber risk. Integrated systems include outward-facing capabilities for better engagement with supervised firms. However, this also means increasing the potential attack surface and enabling its quick spread throughout the supervision systems. These challenges are expected since systems integration is a technical undertaking that involves, at its foundation, the efficient use of data. However, during interviews with selected authorities, the challenges often mentioned are non-technical and relate more to change management and vendor relationships.

Main challenges faced (or expected to be faced) in achieving integrated supervision systems

Graph 6



Source: FSI.

28. **The common challenge in any technology project is indeed technical-related but the hardest to address may be the people element.** Integration of supervision systems entails changes in established processes or workflows. It may also involve adopting new taxonomies, file formats and tools. It is inevitable that adoption may not be smooth at the start because changing engrained habits takes time. This may be exacerbated by the qualities that make supervisors good at their job: risk aversion and scepticism. The challenge is compounded if changes are perceived to be decided by vendors who supervisors may view as not particularly knowledgeable about supervision. Hence, authorities point to the importance of effective change management and clear articulation and communication of the rationale and the value of proposed changes when undertaking digitalisation projects.

29. **Technology projects often involve vendors that may pose distinct challenges to authorities.** There may be vendors with extensive experience in providing technology solutions to supervisory authorities. In theory, they could help transmit learnings from one authority to the other. However, authorities noted that in practice it could take time to find a vendor that is familiar with supervision and that meets all their needs given that supervision is such a niche area. Because of the specificity of supervision, even if authorities find an ideal vendor knowledgeable about supervision, it takes time to make vendor consultants familiar with authorities' distinct internal processes before they can come up with feasible adapted solutions. There is also a possibility that resulting solutions end up being far from ideal even after significant supervisory resources and time have been spent teaching consultants.

30. **Authorities may need to start assessing their own vendor lock-in and concentration risks.** Vendors that offer technology solutions typically embed their proprietary models and tools in these solutions. For smaller or less resourced authorities, this may be efficient since they do not have to start from scratch, but it will lead to long-term reliance and difficulty moving to other solutions when needed. For authorities that are more advanced in their journey, this means their existing models and tools are rendered redundant, but they may still be inclined to go for a particular vendor because it is already providing technology solutions to other parts of the institution. Interestingly, it appears many authorities are also going for the same vendor solution, highlighting a potential concentration risk in the supervisory community. These issues point to the need for financial authorities to manage their own third-party risks in line with what they expect from supervised firms. Guidance on third-party risk management issued by the BCBS and the Financial Stability Board (FSB) would be helpful in this regard (FSB (2023), BCBS (2025)).

31. **Authorities may need to consider approaches to vendor engagement and to integration in general.** For example, they could consider separating their technology needs (eg the technology platform) and expertise needs (eg model or tools developer) and just buy either the technology or the expertise depending on what they do not have. They can also choose different providers for each. It is also important

to weigh the implications of different integration approaches, especially since in most cases integration is built on top of existing infrastructure rather than from the ground up. For example, a monolithic solution that covers all layers may be fastest to implement, but it may not be suitable if its design does not leverage existing tools, inhibits existing workflows or constrains future enhancements.

32. **Vendor-related issues can also be managed proactively through modern procurement and architectural strategies.** Instead of viewing technology acquisition as a single, monolithic purchase, authorities can benefit from a highly modular approach that focuses on three pillars:

- an open architecture, prioritising solutions built on open standards and APIs to ensure individual components can be replaced or upgraded in the future without dismantling the entire system;
- a data foundation, establishing a single, standardised granular data model as the core of the supervisory ecosystem; and
- domain expertise, recognising that supervision is a niche domain and that implementing supervisory systems relies on both technology and supervisory expertise.

Facilitating AI adoption

33. **AI is a defining feature of supotech tools that makes supervisory processes more efficient and effective.** AI functionalities drive the most advanced supotech tools (di Castri et al (2019)). They allow for the analysis of large and complex data that would otherwise be impossible for humans to perform. AI is particularly useful for combining and analysing different types of data – both quantitative and qualitative – from disparate sources such as regulatory reports, economic statistics, supervised entities' internal documents, news articles and social media (Beerman et al (2021)). Supervisory authorities have been leveraging the use of traditional AI techniques, such as machine learning, for several years now. More recently, they have also started exploring the use of more advanced AI models such as gen AI (Prenio (2025)) and agentic AI.⁷ While such AI models can be experimented with and deployed in isolated systems, their benefits are maximised when systems are integrated.

34. **Authorities recognise that systems integration facilitates AI adoption, but views on when AI functionalities should be integrated differ.** Authorities acknowledge that outdated IT infrastructure is a key challenge to the adoption of AI applications; hence, they recognise the need for IT modernisation, including achieving systems integration (Prenio (2025)). Some authorities that started or implemented their integration projects several years back did not include AI functionalities because these were relatively new, modest in capabilities and not easily available at that time. If these authorities were to implement their integration project now, they would prefer to integrate such functionalities from the start. This is also because AI adoption can hasten the breakdown of silos and will underscore the need to integrate disparate systems. Other authorities, on the other hand, are taking a foundations-first approach. These authorities seek first to get the basics right before incrementally building on these by adding advanced functionalities and technologies like AI.

35. **Integrated supervision systems enable effective AI experimentation.** Integrated systems allow for AI tools to be tested in parallel with existing supervisory processes. For example, a virtual sandbox could be created within an integrated system in order to develop and test AI use cases using supervisory data. This facilitates implementation and rapid prototyping before successful solutions are scaled to the live production or workflow environment.

36. **Integrated supervision systems also enable effective AI implementation.** Integrated systems fulfil the key prerequisites for effective AI use, namely standardised and improved availability and quality of data and a centralised data environment, as well as standardised workflows and automated processes.

⁷ Agentic AI refers to AI systems capable of achieving user-defined goals autonomously.

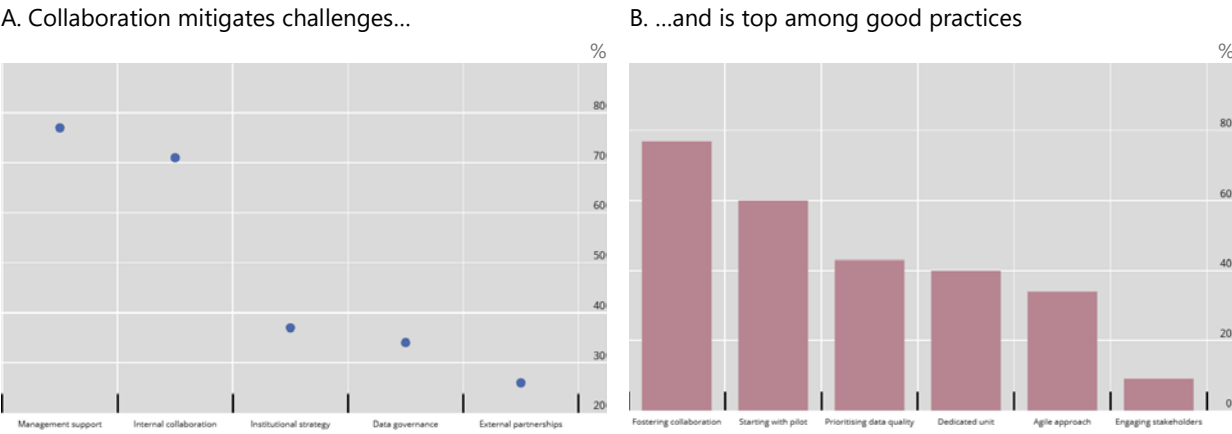
These prerequisites significantly lower the technical barriers to AI adoption by improving the scalability of AI applications. They can also support the transition from proofs of concept to applications that can readily be embedded in existing processes rather than operating as standalone applications or requiring custom-built integrations for each application.

37. **Integrated supervision systems provide the foundation for the use of agentic AI.** Agentic AI increases the importance of systems integration because AI agents require underlying systems to be accessible and interoperable. AI agents can orchestrate actions across interconnected systems but not across independent or standalone systems. For example, one authority has deployed an AI agent for regulatory applications. The AI agent uses analytics applications to assess whether application submissions conform to required content, pulls relevant data about the applicant institution to assess compliance with other requirements and initiates or endorses the next step of the workflow (eg returns the submission to the applicant institution for revision, sends it to the relevant supervisor for review or approves it). These actions are not possible if the AI agent cannot leverage the interconnections between data collection, analytics and workflow management systems. It is therefore likely that authorities with poor integration foundations will struggle to implement agentic AI.

Good practices and lessons learned

38. **Not surprisingly, strong support at the top and collaboration are important factors in addressing the challenges identified above.** When asked to choose three key drivers in mitigating or addressing implementation challenges, more than 70% of respondents chose strong support from the board and senior management and internal collaboration (Graph 7.A). Clear institutional strategy came third at almost 40%. When asked to choose three good practices in implementing integration projects, almost 80% of respondents again chose collaboration (Graph 7.B). Starting with a pilot project before full-scale rollout and prioritising data quality and governance from the outset came second and third at 60% and 43%, respectively.

Mitigants to challenges and good practices observed in implementing integrated supervision systems Graph 7



Source: FSI.

39. **The need for collaboration is a clear theme that came out of the survey responses.** While authorities acknowledged that projects integrating supervision systems should be business-led, ie led by the supervision function within a financial authority, it is important to collaborate with other functions, such as IT, human resources (HR) or strategy/transformation functions, to ensure a project's success. IT can help draw out the technical specifications of the project that would be useful in engaging vendors and can serve as an indispensable partner during implementation. HR or the strategy/transformation functions

can help with change management, ensuring user buy-in. Collaborating with information/cyber security is imperative given the sensitive information contained in supervision systems. Moreover, collaboration with vendors should be built on true partnerships that should seek to effectively leverage their technology expertise to complement the supervision expertise of the authorities.

40. **Collaboration with other supervisory authorities can also be used to address vendor-related issues.** Supervisory authorities have broadly similar processes, tools and practices and are facing similar issues in conducting supervision. At the same time, unlike supervised entities, supervisory authorities do not compete with each other, so no one will lose if they exchange information and work together. There is therefore a strong argument for supervisory authorities to collaborate with their peers in developing supervision systems or open-source applications.⁸ This will help minimise vendor dependency and lock-in risks.

41. **Strong foundations are needed for collaboration to work.** These would include management support and a clear institutional strategy. Having a clear vision of where the institution wants to go in terms of its supervision system is important to be able to establish the project details. This vision should be backed by resources, which would be possible only with management support. In addition, the success of supervision systems integration projects will depend on the readiness of the underlying ingredient – data. This highlights the value of data quality and governance, with some authorities noting that the resources needed for data cleaning and migration should not be underestimated.

42. **Good practices in project management support the realisation of quick wins that help propel projects forward.** It is essential to take time during the discovery and design phase to have a strong understanding of the objectives of the project and the elements necessary to achieve them. Learnings during the discovery and design phase are used to start building specific components of the project and iterating where necessary. Having a short feedback loop between business users and developers would be ideal to build confidence, keep the momentum and move the process forward. Piloting before full-scale rollout then validates that the project's output works in practice.

Section 4 – Integrating supervision systems: case studies

43. **IT environments differ from one financial authority to the other, so the choice of integration approach ultimately depends on an authority's circumstances.** Smaller or newly established financial authorities may have fairly straightforward IT environments. Large financial authorities that have long been established may require complex systems integration. While the previous sections provide an aggregated view of implementation experiences, this section showcases experiences of specific financial authorities in their respective integration journeys.

44. **One notable observation is that integrated supervision systems seem to increasingly use customer relationship management (CRM)-type systems as a foundation.** In practice, there are several types of information system that support organisations, with each type having distinct functions, eg transaction processing, process control, resource management, CRM and management information systems (MIS) (Al-Tuhaifi (2024)). Older supervision systems tend to be designed primarily as MIS with CRM-type applications or modules attached to them. For newer systems, interviews with authorities and anecdotal evidence appear to point to CRM as the foundation system of choice. CRM provides a better user experience when engaging with supervised firms and allows for more streamlined processes, while MIS is not really designed as a workflow system. This suggests that engagement with supervised firms and workflow management are being prioritised by financial authorities.

⁸ The BIS Innovation Hub has several initiatives in this area.

Case studies

The following boxes (A–D) provide examples of authorities' integration of supervision systems.

Box A

Central Bank of Brazil – SisAPS (Supervision Process Automation System)

The Central Bank of Brazil (BCB) has pursued the automation and integration of its supervisory processes through the development of a custom, in-house platform known as SisAPS since as early as 2015. The authority aimed to deliver a comprehensive management system that would centralise access to information, serve as the custodian of supervisory data and automate internal work processes, as well as to establish a secure, private communication channel for exchanges with supervised entities.

Drivers and opportunities

The development of SisAPS was driven by the need to support a more integrated, risk-based and efficient supervisory model. As supervisory work became more data-intensive and required stronger coordination across teams, the BCB needed a single environment capable of consolidating information, standardising workflows and preserving institutional knowledge. This created opportunities not only to streamline communication with supervised entities but also to improve traceability, strengthen governance over supervisory actions and enable more consistent use of qualitative and quantitative inputs in supervisory judgment. With AI now becoming more accessible, a further opportunity is emerging to use AI capabilities to support and enhance supervisory processes.

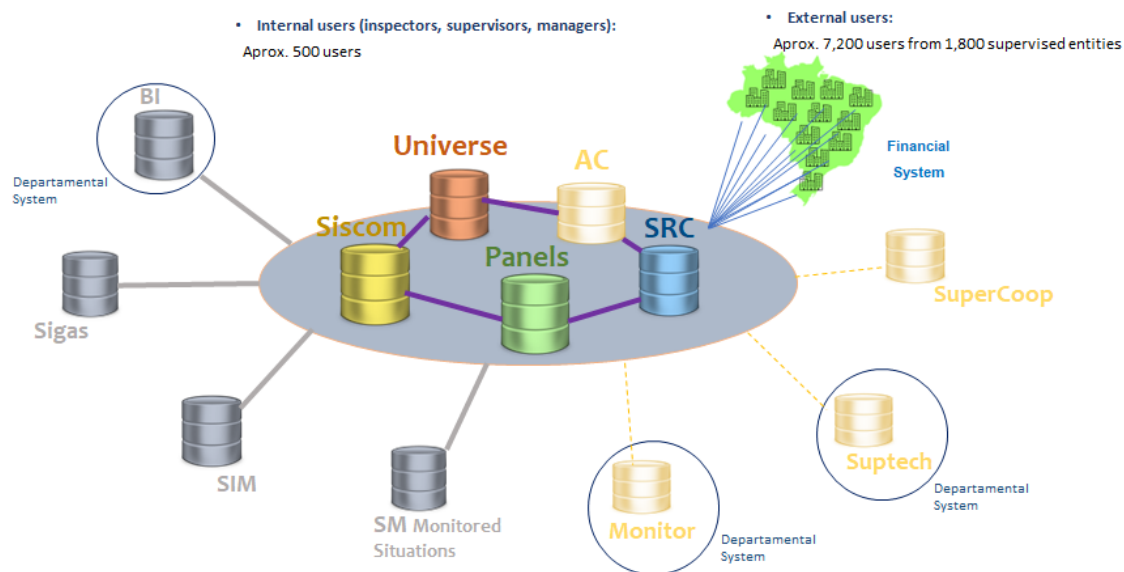
System design philosophy

SisAPS was built in house, giving the authority control over its architecture and evolution. The platform follows a modular design, with interconnected components covering the full supervisory life cycle from data storage and communication to risk assessment.

Core components and key functions

SisAPS comprises five key integrated modules, addressing distinct supervisory functions (Figure A1):

1. **Universe** – a database that stores unstructured information collected for all financial institutions under BCB supervision throughout the supervisory process. It serves as the central repository for qualitative data and documents.
2. **Siscom (communication system)** – the communication system that enables data collection and information exchange with financial institutions. Supervisors use Siscom to initiate inspections and request information, with all interactions recorded and linked to the relevant entity.
3. **Panels** – dashboards that provide supervisors with a visual overview of supervisory activities and link to other suptech tools, including monitoring systems and early warning indicators. The dashboards integrate quantitative signals from multiple sources, giving supervisors a consolidated view of risk signals.
4. **SRC (risk and controls assessment system)** – a module that calculates the supervisory risk rating for each financial institution using a standardised methodology.
5. **AC (credit union audit entities)** – a module supporting the interaction between BCB and credit union audit entities (BCB delegates specific supervision tasks to audit companies, which in turn provide reports to BCB). AC manages the workflow for these activities, tracking their progress and integrating the outputs back into the SisAPS environment.



Source: BCB.

Adoption and outcomes

As an in-house development, SisAPS was built incrementally, with modules rolled out as they became ready. The modular architecture reduced integration risk and enabled teams to adopt the new tools progressively. The phased deployment of SisAPS has delivered material improvements to the BCB's supervisory operations. Communication with supervised entities has become more efficient. Information is now centralised: supervisors access all relevant data, documents and supervisory history on a single platform, eliminating the need to consult multiple systems. These outcomes align closely with the BCB's original targets and have strengthened the authority's ability to conduct data-driven, risk-focused supervision.

For the system's security, it has a log access control and a service that allows each supervisor and team to see only the information aligned with their work. SisAPS is connected with other departmental systems and is a fast way to communicate with all financial institutions at the same time.

Future plan

The BCB is now working to integrate AI capabilities and functionalities into SisAPS. With the use of GenAI already being tested, these enhancements are expected to further automate routine tasks such as going through responses to questionnaires and information contained in relevant documents. It is expected to improve supervisory analysis of unstructured data, simplify assessment of compliance with regulations and generate more advanced predictive insights for risk assessment and early warning. The system's development roadmap includes support for other supervision tasks, upgrades to the API library and integration with other systems.

European Central Bank – IMAS (SSM Information Management System)

Since the establishment of the Single Supervisory Mechanism (SSM) in 2014, the European Central Bank (ECB) has progressively built its supotech infrastructure. The centrepiece of this effort is IMAS, an integrated platform designed to serve as a single digital environment for supervisory activities.

Drivers and opportunities

As the SSM grew in scope and complexity, IMAS scaled alongside it, continuously expanding its coverage and capabilities to meet evolving supervisory needs.

Existing supervisory processes offered clear opportunities for improvement. Communication with banks relied on a variety of channels, with manual submission of information and limited transparency on the status of supervisory procedures. Supervisory data were dispersed across multiple channels and formats, complicating cross-border analysis and raising barriers to knowledge-sharing among supervisory teams. Workflows were not uniformly digital, and document management was often fragmented. From the outset, IMAS set the standard for how supervision within the SSM would be conducted, embedding structured workflows, centralised data management and transparent status tracking as core features of the supervisory operating model.

System design philosophy

While the ECB's architecture is not built around a CRM core, the underlying philosophy is closely aligned with that of entity-centric systems: a unified entry point for supervised institutions and a harmonised data and workflow layer that supports the day-to-day work of supervisors and bank users across the SSM.

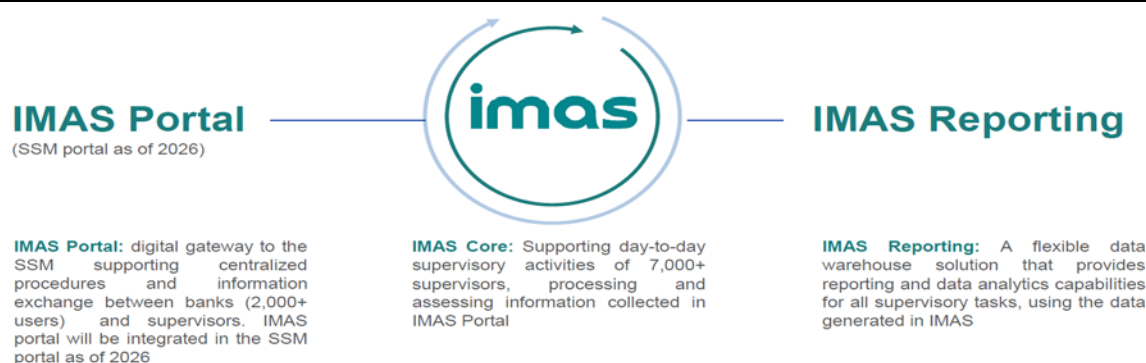
Core components and key functions

IMAS is structured around three interconnected components that together form its backbone (Figure B1):

1. **IMAS Core** – the processing engine. This component handles all supervisory activities processing and serves as the central repository for the information collected by supervisors. The Core is where the logic of supervisory procedures resides, ensuring that tasks are routed, tracked and recorded in a standardised, auditable manner.
2. **SSM Portal** – the digital gateway to the SSM. This provides supervised institutions with a secure, web-based entry point for submitting information, addressing supervisory requests and exchanging messages with their supervisors. This information is stored in a structured way in the IMAS Core.
3. **IMAS Reporting** – a flexible data warehouse. This provides reporting and advanced data analytics capabilities. Drawing on the data captured by the Portal and structured by the Core, this component enables supervisors to generate reports, conduct horizontal analyses and derive insights from consolidated prudential and supervisory information. It provides the quantitative foundation for risk assessment and policy decisions.

Key components of IMAS

Figure B1



Source: ECB.

IMAS delivers a comprehensive set of capabilities that transversally support supervisory processes:

- **document management** – secure storage, versioning and retrieval of supervisory files
- **business workflow** – digital orchestration of supervisory procedures, with status tracking and task assignment
- **alerts and notification** – automated alerts that keep both banks and supervisors informed of deadlines, updates and required actions
- **user access rights** – granular role-based access controls that govern what each user can see and do
- **drafting of reports and decisions** – for drafting and review of supervisory outputs directly within the platform.

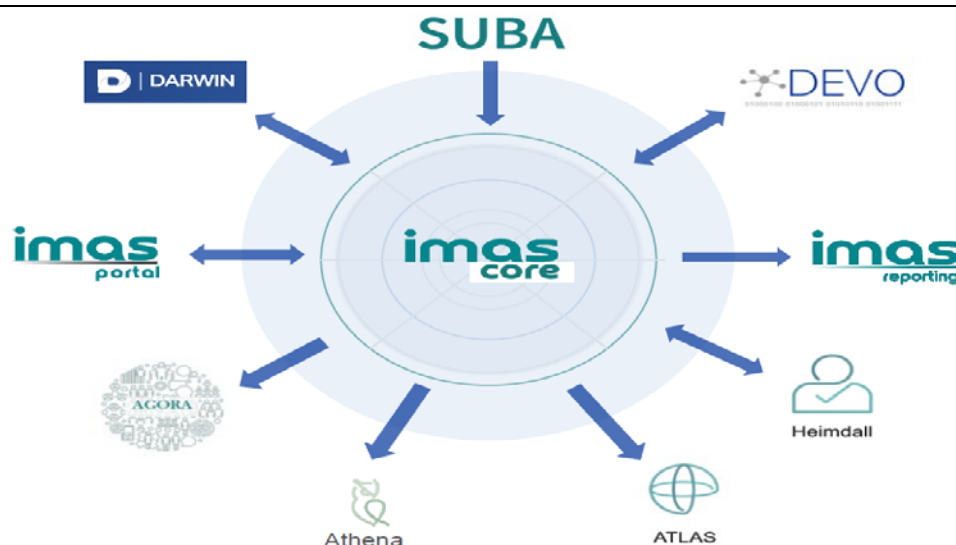
IMAS currently supports over 70% of all supervisory processes through several specialised modules:

1. **SREP** – Supervisory Review and Evaluation Process tasks, including risk assessments and scoring across all SREP elements
2. **authorisations and fit and proper** – end-to-end support for licensing, qualifying holdings and fit and proper assessments, including workflows for stakeholder interaction, registration of results and follow-up
3. **on-site inspections** – covering planning, execution and monitoring and including registration of findings and measures, mission letters of appointment and pre-inspection notes
4. **internal models** – evaluation of new model applications and material model changes; monitoring of obligations, conditions and limitations; and automated assessment of regular validation reports
5. **crisis risk management** – submission and processing of recovery planning documentation, as well as early implementation procedures
6. **enforcements and sanctions** – management of enforcement actions and sanctioning procedures
7. **ongoing supervision** – integrated workflows for core day-to-day supervisory activities, including planning, execution and follow-up, as well as monitoring of the annual Supervisory Examination Programme
8. **findings and measures** – registration, monitoring and management of supervisory findings and remediation measures
9. **ID card** – maintenance of institutional classification, business model categorisation and key reference data for each supervised entity.

IMAS is the hub of a broader ecosystem (Figure B2). Other tools, such as Heimdall, Agora and Athena (ECB (2023)), help complement the core platforms by targeting specific use cases within the supervisory life cycle.

IMAS's integration with other IT systems

Figure B2



Source: ECB.

Beyond the consolidation of IT systems, the ECB's suptech suite has driven a material shift in how supervision is conducted. Knowledge management has been strengthened by digitally capturing bank interactions and submissions within IMAS and by centralising supervisory data in Agora and the data warehouse. Knowledge-sharing has been enhanced through the common data layer, which enables joint supervisory teams across different authorities to access the same information and conduct consistent SREP assessments across all eight risk areas.

Adoption and outcomes

The ECB has invested heavily in the human dimension of adoption. Each year, approximately 1,000 staff are trained on IMAS and related tools via training sessions, seminars and workshops, ensuring that supervisors have the skills to operate effectively in the digital environment. Usage data confirm high engagement by banks: over 50,000 messages have been exchanged through the platform.

By offering structured online forms and status tracking, the portal has replaced previously manual, email-based processes and significantly reduced operational risk on both sides. IMAS is now the standard operating environment for banking supervision within the SSM and has demonstrated that a well-designed, integrated platform can underpin effective and efficient supervision on a cross-border scale.

Future plan

The ECB continues to advance its supervisory digital ecosystem through the Olympus programme, a multi-year strategic initiative to create a more integrated, data-driven and AI-enabled technology landscape for European banking supervision.

A central element of this transformation is the SSM Cockpit, a single-entry point for supervisors that was launched as a minimum viable product in February 2026 and is being progressively expanded with additional capabilities. By bringing together supervisory applications, dashboards, AI assistants, analytical tools and IMAS in one integrated environment, the SSM Cockpit is providing seamless access to information and significantly improving the supervisory user experience.

With the enhancements through the Olympus programme, IMAS will continue to evolve through closer integration with the wider SSM technology landscape, including enhanced interoperability with data platforms and supervisory tools. AI capabilities will increasingly be embedded in IMAS and its surrounding ecosystem, enabling supervisors to search and analyse supervisory information more intuitively, automate repetitive tasks, support document drafting and retrieval, and strengthen advanced analytics for earlier identification of supervisory risks. Together, these developments will further reinforce IMAS as the digital backbone of European banking supervision.

Hong Kong Monetary Authority – Supervision360 (S360) platform

The Hong Kong Monetary Authority (HKMA) set out on its suptech journey to strengthen banking supervision by making it more effective, efficient and forward-looking. A central part of this effort was the development of an integrated suptech platform, Supervision360 (S360), designed to serve as the single workspace for supervisory teams and, in doing so, to modernise the way supervision is conducted.

Drivers and opportunities

Previously, supervisory processes were supported by a mix of tools. Analytical work relied on a separate MIS, while structured and unstructured information was spread across multiple repositories. The status of ongoing supervisory activities had to be collated from time to time in order to obtain a consolidated view. These conditions presented clear opportunities to improve efficiency, consistency and data integration. They also highlighted the opportunity to enhance knowledge management and the sharing of supervisory insights across teams, an area that had relied heavily on individual practices rather than institutional systems. The HKMA therefore designed a multi-year roadmap for an integrated supervision platform.

System design philosophy

A distinctive feature of the S360 platform is its entity-centric architecture, modelled on CRM systems. In this approach, each supervised bank is treated as a single, central profile around which all data, documents, interactions and activities are organised. This CRM-inspired thinking is noteworthy: a growing number of financial authorities are exploring or adopting similar designs to break down information silos and create a comprehensive supervisory view. The HKMA built S360 on a commercial CRM foundation that was then customised to meet specific supervisory requirements, embedding workflow logic, access controls and analytical tools around the entity record.

Core components and key functions

S360 brings together several main components: a CRM core module for entity management and activity tracking, a document management system (DMS), a bank-facing online survey tool and an analytical component with dashboards and advanced analytics (Figure C1). These components underpin key integrated functions that cover the full supervisory cycle:

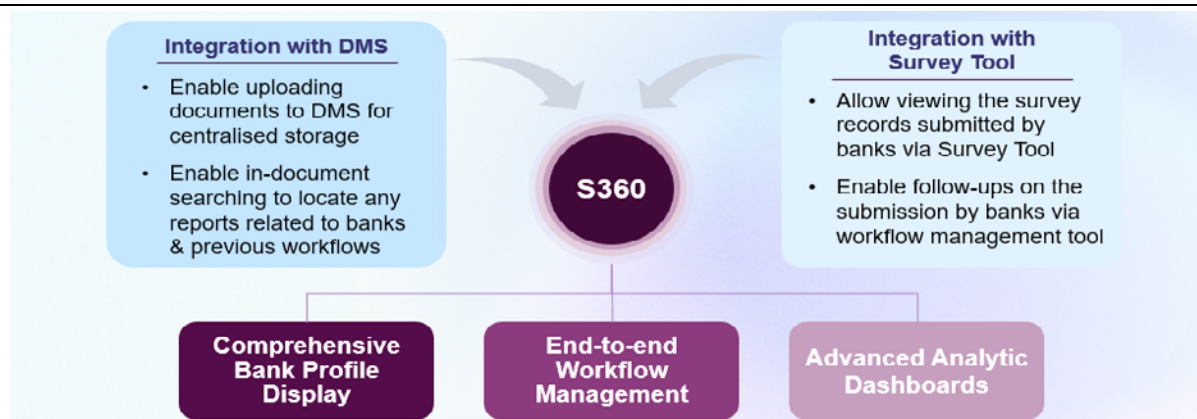
1. **Entity profile** – A comprehensive view of each bank is maintained, combining static information (eg office details, structures) with regularly collected data such as financial returns and incident reports. This entity profile serves as a single source of institutional knowledge, enabling supervisors to quickly understand a bank's history and current condition. All data access is governed with appropriate access controls.
2. **Workflow management** – Standardised workflows with predefined subtasks and approval hierarchies are embedded in the platform. These workflows guide supervisors through various supervisory activities, making processes repeatable and auditable. The system currently manages over 1,000 supervisory activities every year.
3. **Document management integration** – The document management system holds millions of supervisory documents. These are classified, indexed and made searchable so that supervisors can retrieve relevant files rapidly from within the workflow or entity profile, supporting better knowledge management.
4. **Integration of communication channels** – Correspondence with banks through email and the survey tool is automatically captured and linked to the appropriate entity and workflow. This ensures that supervisory communication is systematically recorded, traceable and available to all authorised users, strengthening institutional memory and transparency.
5. **Analytical dashboards** – Dashboards present supervisors with views of banks' financials, risk indicators and incidents, supporting data-driven supervision and shared situational awareness across teams.

By centralising information and standardising processes, the platform strengthens knowledge management: institutional knowledge is captured within workflows and entity profiles rather than residing primarily in individuals'

email inboxes or personal files. It also promotes knowledge-sharing, as supervisors can access the full context of a bank's supervisory history, learn from previous assessments and draw on colleagues' documented experiences. Furthermore, the integration of communication channels has improved the quality and completeness of supervisory communication, creating a clear record of interactions with banks and supporting a more collaborative internal dialogue about risk assessments and supervisory strategies.

Key building blocks of S360

Figure C1



Source: HKMA.

Adoption and outcomes

Strong, visible support from senior management signalled the strategic importance of the platform and encouraged supervisors to embrace the new way of working. The authority promoted adoption through formal training, regular briefings, a short newsletter series, short videos of colleagues sharing practical tips and ongoing usage monitoring.

Over 90% of targeted users are actively using S360 multiple times a week. The platform manages more than 1,000 supervisory activities and millions of intelligently indexed documents. Beyond these operational metrics, the platform has institutionalised knowledge-sharing and strengthened the continuity of supervisory communication. Its success has also influenced teams responsible for non-bank regulated entities, and plans are underway to extend the approach to those areas.

Future plan

The HKMA is now working to embed gen AI capabilities in S360 (Figure C2), including those to support supervisors in reconciling unstructured information for the CAMEL (capital adequacy, asset quality, management, earnings and liquidity) rating process and to enable more efficient extraction and prioritisation of risk insights. The aim is to further enhance analytical depth, automate routine tasks and provide intelligent assistance to supervisors.

Supervision Empowered by Artificial Intelligence



Source: HKMA.

Box D

Reserve Bank of New Zealand – an integrated, entity-centric supervision platform

The Reserve Bank of New Zealand (RBNZ) operates as a relatively lightly resourced authority, making operational efficiency an essential element of its supervision. With an aspiration to become a more modern and data-driven supervisor, the RBNZ set out to replace its ageing supervisory systems with an integrated digital platform that would serve as the single source of truth for prudential activities.

Drivers and opportunities

The catalyst for change was the impending end of support for the existing supervisory system. Beyond the technical obsolescence, this situation presented a broader opportunity to address long-standing fragmentation in supervisory data and workflows. The legacy environment did not provide a single source of truth; entity information, supervisory actions and communications were dispersed, with a limited consolidated view of a regulated institution's supervisory history. This created inefficiencies in reporting, inconsistencies in record-keeping and barriers to knowledge-sharing. The RBNZ therefore seized the moment to design a solution that would embed data-driven supervision in its day-to-day operations, appropriately scaled for the authority.

System design philosophy

The RBNZ chose to build a custom application on a third-party data platform as its underlying data layer. This technology choice allowed for rapid, iterative development without the overhead of a bespoke hard-coded system. The platform was also designed around an entity-centric, CRM-inspired model: each regulated institution is treated as the core record, with all interactions, documents, decisions and analytical views organised around that entity.

Core components and key functions

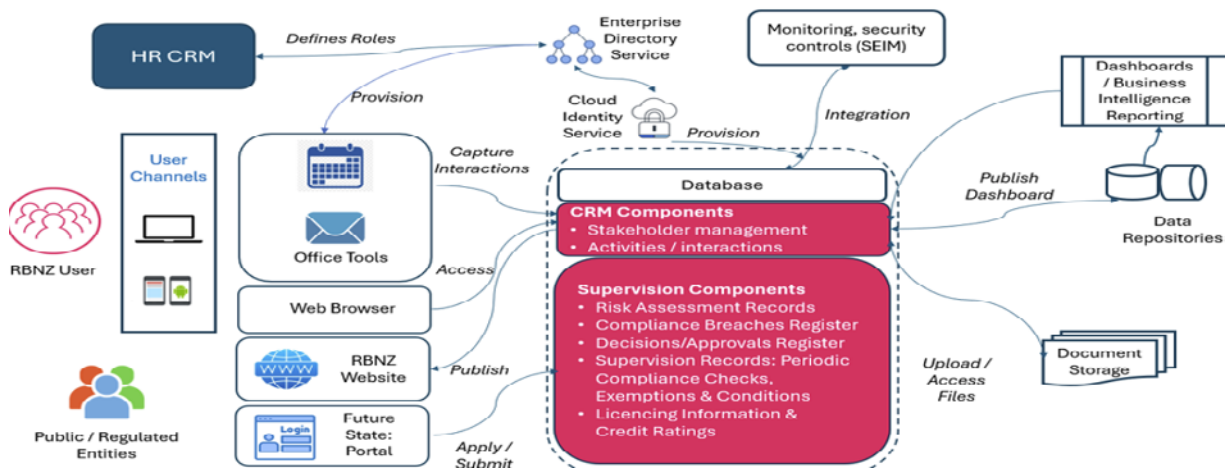
The platform consolidates several critical functions into a single environment (Figure D1):

1. **Entity-centric CRM-like management** – All organisational contacts, interactions and supervisory artefacts are linked to the regulated entity, providing a complete institutional profile and interaction history. Data access on the platform is governed by role-based access controls.

2. **Workflow and supervisory records**– Supervisors use the platform to record, track and manage a broad range of supervisory actions, including decisions, concerns, compliance breaches, notices and conditions. A key record type that has been systemised is the periodic risk assessment of an entity conducted by a supervisor.
3. **Document management** – Integration with a cloud-based platform allows for supervisory documents to be stored, versioned and retrieved directly from the entity record, providing a consolidated access point for distributed file storage.
4. **Integrated dashboards** – Analytics dashboards give supervisors real-time visibility of key in-flight transactions and entity metrics, supporting data-driven insights and consistent reporting.
5. **Automated communication capture** – When an email is sent, the integration allows it to be saved to the platform. Once saved, all subsequent emails in that conversation thread are automatically captured. Alternatively, if the email is initiated directly from a record within the platform, all related communications are automatically tracked and stored against that record.

CRM – architecture overview

Figure D1



Source: RBNZ.

Adoption and outcomes

The platform's requirements were business-led, developed through a significant discovery and design phase that secured deep supervisor buy-in from the outset. The RBNZ adopted a minimum viable product approach, deploying the foundational capabilities first to realise benefits early, then iterating based on supervisor feedback.

Adoption was driven through a balanced approach combining education, engagement and accountability. Initially, RBNZ focused on promoting the platform's benefits, supported by training resources and targeted guidance, to highlight quick wins and build early momentum. Over time, this was reinforced with additional materials such as short videos and newsletters to sustain engagement. Platform usage reporting was also shared widely, providing transparency and helping to reinforce behaviours while encouraging continued adoption.

The platform has delivered a tangible shift in supervisory working practices. Reporting has been streamlined and is now based on a single source of truth, significantly improving consistency. The entity-centric architecture has strengthened knowledge management by making an institution's full supervisory history instantly accessible, improving knowledge-sharing across departments and assisting in the training of new supervisors by providing an easily searchable database of precedents.

Future plan

Building on the platform's foundation, the RBNZ plans to extend its coverage to licensing and approval processes. With AI embedded in the platform in a number of places, other enhancements will focus on leveraging the current structured records to help deliver efficiency to the supervisor. An in-progress initiative is the automation of elements of the platform whereby certain record changes will trigger appropriate approvals. These changes will then be reflected in the RBNZ public website register of licensed entities, further streamlining information flows between the supervisor, regulated firms and the public.

Section 5 – Conclusion

45. **Accelerating digitalisation and emerging risks place high expectations on financial supervision, highlighting the need to continuously evolve and modernise.** While many financial authorities have made significant strides in developing suptech capabilities and enhancing supervisory tools, the full potential of these advancements remains constrained by fragmented and non-integrated supervision systems. The evidence from this paper shows that although more than half of the surveyed authorities have achieved at least partial integration of their supervision systems, moving from isolated tools to interconnected platforms, this progress is uneven and often limited to specific functions.

46. **Integration of supervision systems is not merely a technical upgrade but a strategic transformation.** Authorities that have successfully integrated their systems report greater efficiency, improved access to timely and consistent data, enhanced transparency in workflows and stronger foundations for adopting advanced technologies such as AI. These benefits are not incidental; they stem from a deliberate alignment of digital transformation, data governance and suptech strategies.

47. **Without robust integration, authorities may face challenges in adopting advanced AI solutions.** Integrated supervision systems play an important role in enabling effective AI adoption. These systems allow AI tools to be tested in parallel with existing processes through virtual sandboxes, facilitating rapid prototyping and scaling of successful solutions. They fulfil key prerequisites for AI implementation, such as standardised workflows, improved data quality, centralised data environments and automated processes. Furthermore, they are essential for agentic AI, as they ensure accessibility and interoperability across interconnected systems.

48. **The shift towards integrated, entity-centric platforms, often built on CRM-like architectures, reflects a broader change in supervisory philosophy from managing isolated processes to enabling holistic, data-driven oversight.** The case studies of selected regulators illustrate how integration enhances knowledge management, strengthens institutional memory and improves collaboration across teams. These platforms not only streamline operations but also support more consistent risk assessments and better-informed supervisory decisions. They also allow authorities to have consistent interactions with supervised firms and clearly communicate supervisory priorities and expectations. In the end, the success of supervision systems integration will be measured not only by how effective the technology deployment has been but also, more importantly, by how effective supervision has become.

49. **However, the path to integration is fraught with technical and organisational challenges that may be complicated to address.** Technical barriers such as legacy infrastructure, poor data quality, interoperability and increased cyber risk remain significant hurdles. Yet, the most persistent obstacles are often organisational: resistance to change, siloed working cultures and difficulties in vendor engagement. Authorities must therefore prioritise strong leadership, cross-functional collaboration and robust change management to navigate these challenges. The survey responses indicate that good governance, starting with data quality and a clear institutional strategy, is critical to sustainable success.

50. **Vendor engagement poses distinct issues and gives rise to risks that may require more attention.** Finding a suitable vendor that understands supervision can be time-consuming, and even ideal vendors require significant resource investment during onboarding that may still result in sub-optimal solutions. Embedded proprietary models in vendor solutions can lead to long-term reliance, making the transition to other solutions difficult. Many authorities opting for the same vendor heightens concentration risk within the supervisory community. To address these issues, authorities need to carefully assess integration approaches, balancing the speed of monolithic solutions with the need to leverage existing tools and future flexibility. Managing third-party risks is important and underscores the need to align authorities' practices with expectations placed on supervised firms.

51. **The integration of supervision systems represents a fundamental shift in how supervisory authorities operate.** It enables a more proactive, consistent and transparent approach to supervision, which is better equipped to detect emerging risks, respond to crises and uphold financial stability. For authorities still at the early stages of integration, the journey may seem daunting, but the experiences shared in this paper offer a clear roadmap: start with a vision, prioritise data and governance, foster collaboration and build incrementally.

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Annex – List of authorities that responded to the survey⁹

Jurisdiction	Authority
Argentina	Central Bank of Argentina (BCRA)
Belgium	National Bank of Belgium (NBB)
Brazil	Central Bank of Brazil (BCB)*
Bulgaria	Bulgarian National Bank (BNB)
Denmark	Danish Financial Services Authority (Danish FSA)
European Union	European Central Bank (ECB)*
	European Insurance and Occupational Pensions Authority (EIOPA)
France	French Prudential Supervision and Resolution Authority (ACPR)
Guernsey	Guernsey Financial Services Commission (GFSC)
Hong Kong SAR	Hong Kong Monetary Authority (HKMA)*
	Hong Kong Securities and Futures Commission (SFC)
Israel	Bank of Israel (BoI)
Italy	Bank of Italy (BdI)
Malaysia	Central Bank of Malaysia (BNM)
Mauritius	Bank of Mauritius (BoM)
Montenegro	Central Bank of Montenegro (CBM)
Morocco	Bank Al-Maghrib (BKAM)
Namibia	Bank of Namibia (BoN)
Netherlands	De Nederlandsche Bank (DNB)
New Zealand	Reserve Bank of New Zealand (RBNZ)*
Oman	Central Bank of Oman (CBO)
Peru	Central Reserve Bank of Peru (CBP)
	Superintendency of Banking, Insurance and Private Pension Funds (SBS)
Philippines	Bangko Sentral ng Pilipinas (BSP)*
Poland	Polish Financial Supervision Authority (KNF)
Qatar	Qatar Financial Centre Regulatory Authority (QFCRA)*
Rwanda	National Bank of Rwanda (BNR)
Saudi Arabia	Saudi Central Bank (SAMA)
Serbia	National Bank of Serbia (NBS)
Singapore	Monetary Authority of Singapore (MAS)
South Africa	Financial Sector Conduct Authority (FSCA)
	Prudential Authority, South African Reserve Bank (PA – SARB)
Spain	Bank of Spain (BdE)
Switzerland	Swiss Financial Market Supervisory Authority (FINMA)*
United Arab Emirates	Dubai Financial Services Authority (Dubai FSA)*
United Kingdom	Financial Conduct Authority (FCA)
United States	Federal Deposit Insurance Corporation (FDIC)

* Interviewed authorities.

⁹ Six authorities did not indicate their institution names in their survey responses.