

2025 SURVEY REPORT

Understanding the State of Strategic Asset Management

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Foreward

Welcome to Siemens second State of Strategic Asset Management (SAM) report. This biennial report builds on our 2023 findings, providing new insights into where asset managers are on their journey, and how their practices have evolved in an increasingly complex environment.

With budget pressures, rising expectations and more extreme weather events, managing assets has never been more challenging. To ensure the essential infrastructure we rely on is safe and reliable, asset managers must constantly weigh up where, when, and how much to invest across a vast portfolio of assets ranging in lifespans, degradation patterns, and maintenance needs.

SAM is a modern, data-driven approach to asset management – helping organisations make smarter long-term decisions around maintenance, operations and investment by balancing cost, service levels, risk, sustainability goals and resilience. It harnesses data, predictive analytics and scenario modelling to show the consequences of decisions on infrastructure and related service levels in 5, 10, or 20+ years into the future, instead of relying on guesswork or anecdote.

SAM maturity is increasing

This year's findings show that SAM maturity is slowly increasing, with more businesses and governments integrating SAM into their investment and service-level decisions. Awareness of SAM is now very high, with 95% saying they were familiar with the concept – up 5% from 2023.

Funding constraints remain the top challenge

However, many of the same challenges persist and – in some cases – have intensified. Inflation and cost-of-living pressures continue to dominate headlines, with funding constraints remaining the number one challenge for asset managers. Local governments are grappling with rising costs in construction, operations, and labour, increasing the complexity of decisions about where to constrain costs and how to prioritise investments. The private sector faces similar pressures, working to balance cost control with maintaining service delivery and profitability in a challenging economic environment.

Greater need for reliable data and evidence-based decision making

With constrained budgets, it's no wonder asset managers are increasingly required to justify their funding requests with data-backed evidence. Up-to-date data about the condition and performance of assets is essential for long-term planning, as inaccurate data can result in misguided investments, unnecessary costs and increased risk.

Building AI on solid data foundations

The rise of artificial intelligence is also reshaping expectations. AI is poised to become the most significant force shaping asset management over the next decade, offering potential benefits such as improved efficiency and cost savings, better decision-making through predictive analytics, and enhanced community services. Yet, the promise of AI can't be realised without strong data foundations. Many organisations still struggle with the basics – like maintaining reliable asset registers, integrating systems, and ensuring consistent data flow – highlighting the critical need for quality data and robust asset management systems.

Climate risk and sustainability influencing long-term planning

To make infrastructure more resilient and to meet Environmental, Social, and Governance (ESG) goals, many local governments and businesses are incorporating climate risk and sustainability into their asset management planning. An effective sustainability strategy starts with data – monitoring energy consumption, measuring carbon emissions, understanding social impact / benefits and benchmarking results to establish clear, achievable targets.

We extend our sincere thanks to the 165 participants in this year's survey. Through your shared insights, you are helping to build a stronger, more resilient asset management community. Thank you, too, for taking the time to read this report so that **together, we can continue to advance SAM practices for the benefit of organisations, communities, and future generations.**

At a glance

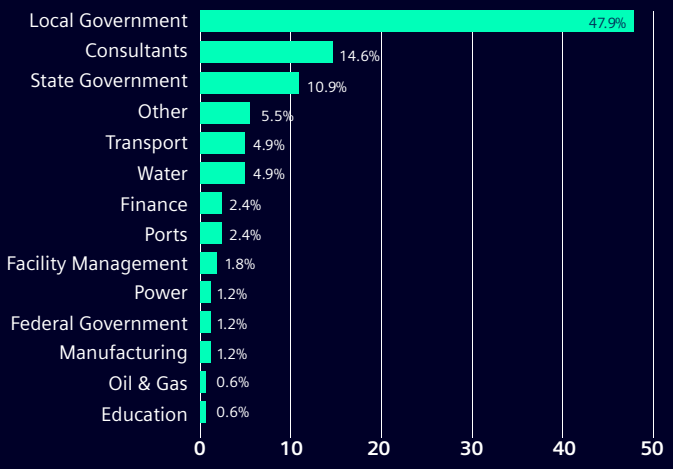
About our participants

We surveyed 165 participants from a wide range of roles, including senior managers, engineers, asset planners, asset managers, IT & data providers, project managers, corporate services, sustainability architects, finance professionals, policy managers, environmental managers, and building managers.

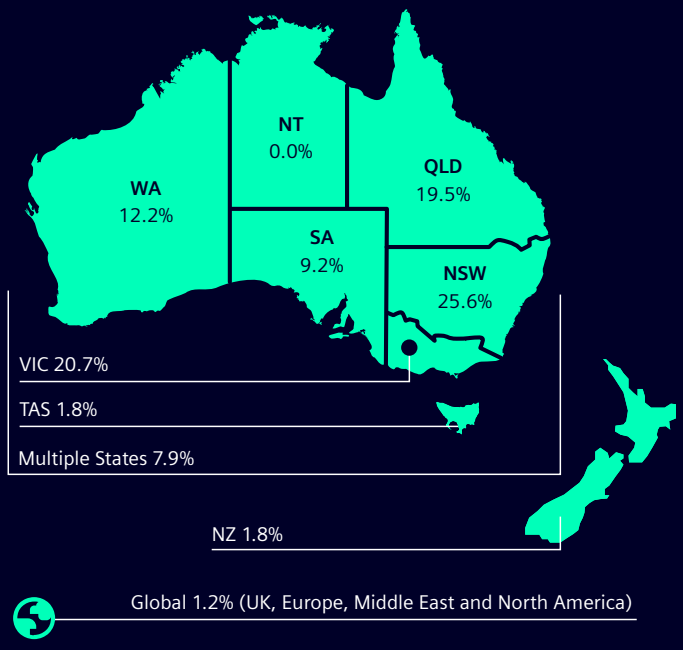
Participants were highly experienced in asset management, with 77% having over 5 years' experience, 53% having 10 or more years' experience, and 24% having over 20 years' experience.

They came from a range of asset-intensive industries and government, with local government, asset management consultants and state government featuring the highest representation. Other industries represented included transport, water, finance, ports, facility management, power, manufacturing, oil & gas and education, as well as federal government.

Industry representation



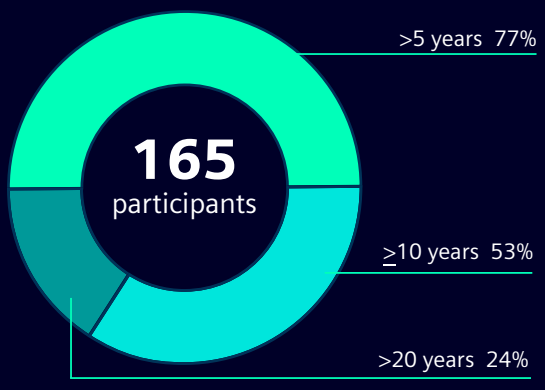
Participant location



Gross value of asset management portfolio



Asset management experience



Key survey highlights

SAM fundamentals

95%

Familiarity

95% were familiar with the concept of SAM

Up 5% from 2023

82%

Strategic direction

82% said their asset management practices align with their SAM policy, strategy, and plans

Up 1% from 2023

28%

Service plans

28% said that service planning had a significant influence on their asset management practices

Up 6% from 2023

50%

Decision making

50% said that SAM has a significant influence on service level and investment decisions

Up 31.5% from 2023

29%

System alignment

29% said that SAM is very well aligned with their financial systems and practices

Up 20% from 2023

SAM decision-making maturity

43%

Risk

43% said that risk impacts and changes to risk profiles are always considered in future forecasts of service levels and funding requirements

Up 3.8% from 2023

37%

Performance criteria

37% said that they often use criteria beyond the physical condition when assessing performance, including factors such as function and capacity to determine service level and investment requirements

Up 2% from 2023

23%

Capital works alignment

23% said that there is marginal to no alignment of asset management requirements with their actual works packaging and programming outcomes

Up 6% from 2023

62%

Sustainability/ESG

62% said sustainability and environmental, social & governance (ESG) requirements are somewhat or significantly tied to their asset management practices

Up 8% from 2023

Biggest SAM Challenges Right Now:

1. **57.7%** Funding constraints (same in 2023)
2. **50.3%** Data quality and reliability (was no. 3)
3. **46.0%** Evidence-based decision making (was no. 4)
4. **42.3%** Talent shortages (was no. 2)
5. **23.9%** Service planning (same)

Major Factors Impacting SAM Practices in the Next 10 Years:

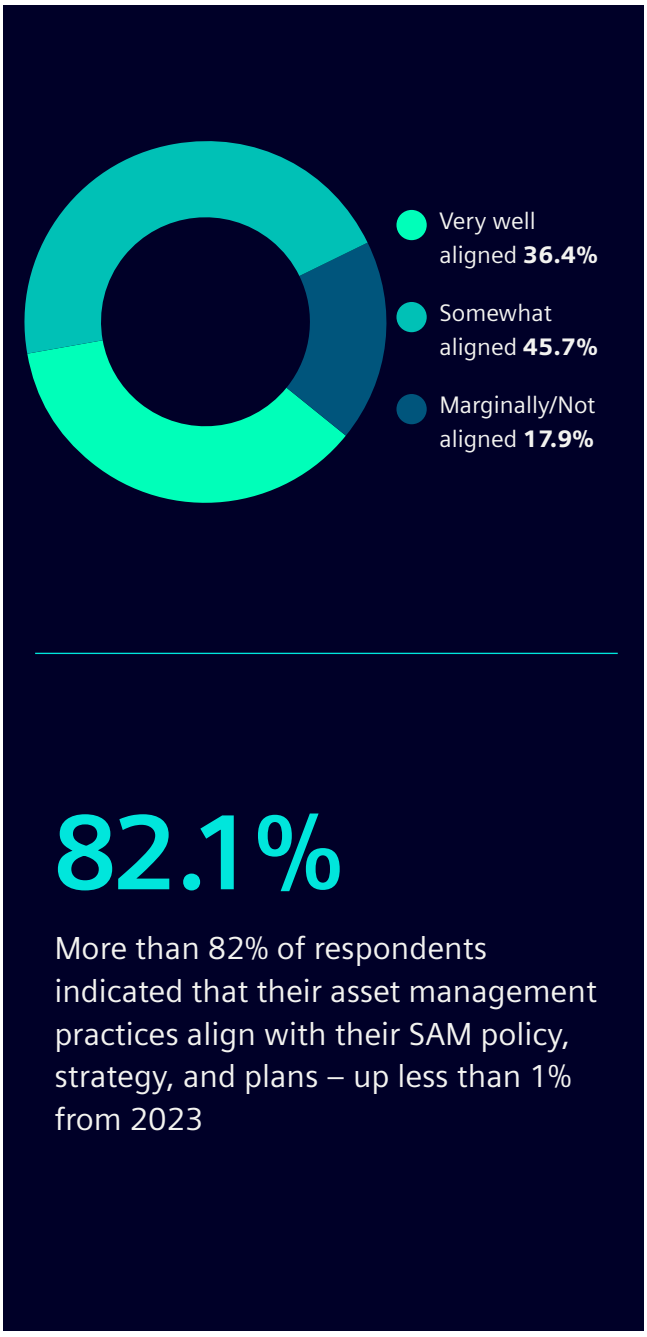
1. **57.9%** AI/machine learning (was no. 2)
2. **56.7%** ESG requirements (was no. 1)
3. **40.2%** Asset resilience (same)
4. **36.6%** Predictive analytics (same)
5. **19.5%** Smart city initiatives (was no. 8)

SAM Fundamentals

Strategic Direction

Alignment of asset management practices with policy, strategy, and plans

To what extent are your asset management practices guided by and in line with your asset management policy, and/or plans?



82.1%

More than 82% of respondents indicated that their asset management practices align with their SAM policy, strategy, and plans – up less than 1% from 2023

There is ongoing progress in aligning asset management plans with real-world practices in asset operations, maintenance and investment decision making. Encouragingly, there has been a 4.3% increase in participants reporting that their plans and practices are very well aligned, signalling growing SAM maturity in the Australian market and highlighting that more asset-intensive organisations are well underway in their SAM journey.

However, while there's been a slight decline in those reporting marginal to no alignment, this group still makes up around one-fifth of responses – underscoring that there's more work to do.

For this group, asset planning must evolve beyond a regulatory "tick-the-box" exercise. When there's a disconnect between planners and operational teams, there's a real risk of misdirected investment – something few organisations can afford amid ongoing funding constraints. Bridging this gap is essential to ensure resources are allocated effectively and that asset decisions deliver real value to the communities they serve.

Case Study: The Barossa Council optimises asset management and workforce efficiency

Establish a plan reporting framework that clearly links, measures, and responds to 'on the ground' practices in asset management and service delivery.

Service Plans

Service planning influence on asset management practices

To what extent are developed service plans guiding and influencing your asset management?



27.8%

More than a quarter of respondents indicated that service planning had significant influence on their asset management practices – up 6% from 2023

There is a gradual improvement in the extent to which service plans have an impact on asset management practices. This is important, as service planning – what services are to be provided and at what level – must be done in alignment with asset management planning across the lifecycle.

If asset plans and investment decisions are made without understanding the service needs of the community or customers, it can lead to asset performance issues, misaligned levels of service and over / under investment. On the flip side, if service planning does not align with financial and asset management constraints, then unrealistic expectations may be set, leading to unachievable and unsustainable service levels. At a portfolio level, over investment in one service area can also restrict funding availability for other service areas, delaying required works and increasing risk of asset failure.

Case Study: From Bogey to Birdie: City of Monash Maintains Golf Courses with Siemens Confirm

Ensure that service plan commitments are used to establish operational, maintenance, and capital works programs that can be efficiently and reliably scheduled, reported on and analysed.

Decision Making

Influence of asset management on service level and investment decisions

How much influence does asset management have on service level and investment decisions of your organisation?

50%

Half of all respondents indicated that SAM has a significant influence on service level and investment decisions – up 31.5% from 2023.



- Significant influence **50%**
  ↑ 31.5% from 2023
- Some influence **50%**
  ↓ 14.6% from 2023
- Little/No influence **14%**
  ↓ 29.3% from 2023

This is another positive indication of the growing maturity in SAM planning within the asset management community. At the same time, we've seen a 29.3% drop in those indicating that asset management has little to no influence on these decisions. This demonstrates that many are well on their journey of optimised line-of-sight decision making, which validates their service level choices, considers service level trade-offs where appropriate, and calibrates asset investment accordingly.

Case Study: Future-Proofing Western Australia's Maritime Assets for Navigational Aids with Scenario Modelling

Use evidence-based scenario analysis to identify the asset performance, works backlog and risk profile impacts of alternative service level and investment strategies.

Systems

Alignment of asset management and financial systems/practices

How well aligned are your asset management and financial systems/practices?

29%

Almost a third of respondents indicated that SAM is very well aligned with their financial systems and practices – up 20.3% from 2023.



- Somewhat aligned **53.1%**
  ↑ 1.3% from 2023
- Marginally/Not aligned **17.9%**
  ↓ 23.8% from 2023
- Very well aligned **29.0%**
  ↑ 20.3% from 2023

Again, it is pleasing to see this trending in the right direction and that asset management both informs and responds to long-term financial planning requirements and constraints. Failure to align SAM and financial systems and processes may result in escalating life cycle costs, unavoidable reductions in service levels, premature failure of assets, increasing risk profiles, and financial instability of the organisation.

It is imperative that service planners, asset managers, and finance professionals coordinate their contributions to asset investments and service-level decisions to mitigate risk. Greater collaboration can also lead to more opportunities to unlock hidden capital.

Case Study: Golden Plains Shire Council creates single source of truth for asset data and maintenance by migrating to cloud

Adopt a best-of-breed asset management solution that supports reliable, high-quality integration of asset, works, and financial data, without compromising on required functionality across disciplines.

SAM Decision-Making Maturity

Risk

Consideration of risk in service level and funding requirements

How often are risk impacts and changes to risk profiles being considered in your future forecasts of service levels and funding requirements?



- Always considered **43.3%**
  ↑ 3.8% from 2023
- Occasionally considered **39%**
  ↑ 10.5% from 2023
- Rarely/Never considered **17.7%**
  ↓ 23% from 2023

43.3%

Almost half of respondents indicated that risk impacts and changes to risk profiles are always considered in future forecasts of service levels and funding requirements – up 3.8% from 2023.

A shift in thinking – and better risk literacy – is essential to ensure investments deliver the greatest benefit with the least risk. Risk is a core principle of effective asset management, yet it's often overlooked in strategic decision-making and investment planning, with almost 18% saying that risk is rarely or never considered in service level and funding requirements. While operational risk is typically embedded in maintenance standards and intervention levels, broader planning efforts that rely solely on physical condition indicators are missing a vital part of the picture.

Not all assets carry the same risk, even if their conditions appear similar. For instance, a deteriorated footpath in a quiet suburb doesn't pose the same level of risk as one in a high-traffic city area. Volume and type of use significantly affect the potential consequences of asset failure, which should directly inform service levels and investment priorities. To embed risk more meaningfully into planning, asset managers, at a minimum, need to consider asset criticality and the consequence of failure (CoF). These metrics support more targeted service levels and treatment strategies and can be used in scenario modelling to forecast how risk profiles might change under different investment approaches.

Case Study: The University of Adelaide optimises asset investment planning for 300+ buildings

Apply the impact factors from your corporate risk framework to an evaluation of asset consequence of failure, enabling forecast scenario-based risk profiles to be a key driver in your asset investment decision making.

Performance Criteria

Incorporation of performance criteria other than physical condition

How often does your organisation use asset performance criteria other than physical condition (e.g. function, capacity, etc.) to determine service level and investment requirements?



- Often **37.7%**
  ↑ 2.2% from 2023
- Occasionally **42.0%**
  ↑ 15.4% from 2023
- Rarely/Never **20.4%**
  ↓ 23.6% from 2023

37.7%

More than a third of respondents indicated that they often use criteria beyond the physical condition when assessing performance, including factors such as function and capacity to determine service level and investment requirements – up 2.2% from 2023.

This remains largely unchanged from our last survey, although on a positive note, there is a drop in those who say they rarely or never include criteria other than physical condition when assessing asset performance.

Physical condition indicates where an asset is in its lifecycle – but not the full picture in terms of how well it meets current and future service requirements. That's why mature SAM methods look beyond condition alone, to factors like functionality, capacity, accessibility, resilience, environmental and compliance. For example, an asset that appears in good shape might be inefficient or no longer be fit for purpose, have the required capacity, be accessible to all users, or be in line with modern standards or environmental goals. To make informed investment decisions, asset managers must consider the bigger picture – not just how assets appear today, but how they perform, adapt, and impact the future.

Case Study: Wyndham City Council - Optimising facilities investment with multiple performance criteria

Ensure all relevant asset performance measures (functionality, capacity, accessibility, resilience, environmental, etc.), rather than just physical condition, are used to inform and guide asset investment planning.

Capital Works

Alignment with capital works packaging and programming outcomes

How well aligned are your asset management identified requirements with your actual works packaging and programming outcomes?

23.3%

Almost a quarter of respondents indicated marginal to no alignment of asset management requirements with their actual works packaging and programming outcomes – up 5.9% from 2023.



- Very well aligned **27%**
  ↓ 4.6% from 2023
- Somewhat aligned **49.7%**
  Same as 2023
- Marginally/Not aligned **23.3%**
  ↑ 5.9% from 2023

This trend highlights an area of potentially greater focus required from an asset management perspective.

Significant savings can be unlocked by using a collaborative works packaging platform that spans projects, portfolios, and funding streams. Visualising and bundling treatments across years and portfolios allows for smarter planning, better use of tight budgets, and clearer reinvestment paths. Formalised project closure and asset handover processes also help to maintain accurate asset data for future planning.

Case Study: The Town of Walkerville balancing Council decisions with community expectations

Adopt works planning, packaging, sequencing and handover capabilities that support portfolio level collaboration and optimisation of your delivery program, in line with community and / or organisational priorities.

Sustainability

Sustainability/ESG influence on SAM practices

To what extent are sustainability and/or ESG initiatives influencing or impacting your asset management practices?



- Significantly impacting **18.9%**
  ↓ 9.6% from 2023
- Somewhat impacting **43.3%**
  ↓ 7.9% from 2023
- Slightly/Not impacting **37.8%**
  ↑ 17.8% from 2023

62.2%

Just under two thirds of respondents indicated that sustainability and environmental, social & governance (ESG) requirements are somewhat or significantly tied to their asset management practices – down 8.4% from 2023.

There has been a slight trend downward regarding the influence of sustainability on asset management practices. This may be an indication that budget constraints, rising customer community expectations, and the increasing recognition of AI capabilities are overshadowing ESG priorities, as suggested with the rise in interest around AI and its capabilities to improve efficiency and free up resources.

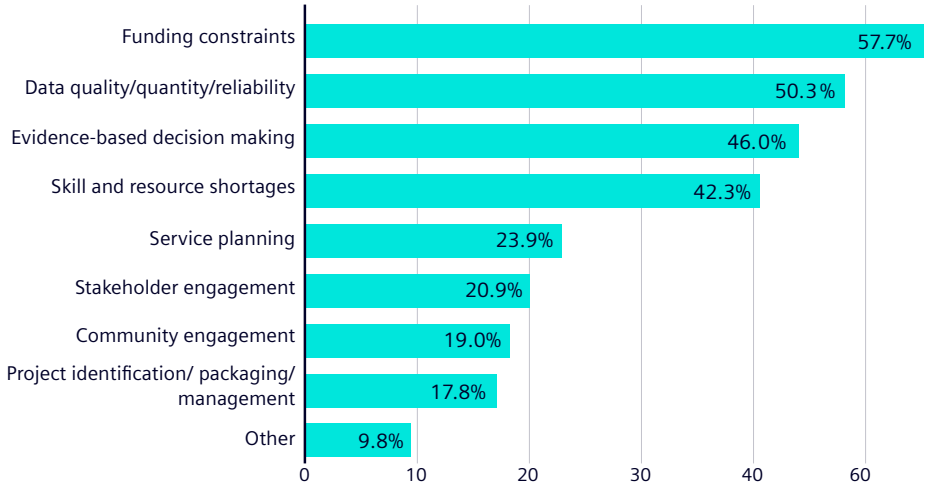
Nevertheless, ESG remains a critical issue for local governments and businesses. Organisations that ignore ESG risks may face costly operational changes as regulations and consumer expectations evolve globally. It's not just about net zero – social outcomes matter too. We can anticipate a continued focus on ESG requirements, including an expanding focus on the social impacts of our asset management decisions and practices.

Case Study: New South Wales Land and Housing Corporation embraces predictive maintenance to deliver quality social housing

Consider the environmental, social, and governance outcomes that are relevant and critical to your community and / or organisational objectives, and ensure these are incorporated in your asset management decision making, practices and reporting.

Major SAM Challenges Right Now

What do you see as the biggest asset management challenges facing your organisation at the moment?



57.7%

1. Funding constraints

(still no. 1)

Unsurprisingly, funding constraints remains the number one issue for asset managers in 2025. Local governments and businesses across Australia are facing significant budget funding pressures, primarily due to rising costs, increasing service demands and repair costs arising from extreme weather.

By implementing SAM practices, asset managers can extend the life of their assets and increase resilience, while making better, more timely decisions – enabling them to stretch every dollar further.

50.3%

2. Data quality and reliability (no. 2 in 2023)

Accurate asset data is critical for informed decision-making and effective long-term strategic and financial planning. Poor-quality data can lead to misguided investments and unnecessary expenses – an added burden when working within tight budget constraints. Reliable data is also essential for end-of-year reporting, meeting regulatory requirements, and forming a strong foundation for AI-driven initiatives.

To improve data quality, reduce manual effort, and minimise data management costs, focus on only the data elements that genuinely matter to your operations and decision making. Don't waste time and resources on data that isn't impactful.

46.0%

3. Evidence-based decision making

(no. 4 in 2023)

As asset managers are increasingly required to justify their funding requests to access constrained budgets, evidence-based decision making has moved to the no. 3 spot.

A data-driven, evidence-based approach is an integral part of SAM, allowing leaders to compare different investment options across their asset portfolio and make more informed decisions on what to invest in and when.

42.3%

4. Talent shortages

(no. 2 in 2023)

Local governments and businesses continue to face significant talent resource challenges, including skills shortages, gaps in workforce capability, and difficulties in attracting and retaining talent – impacting organisation service delivery and costs.

It's not surprising that many are increasingly looking at what AI can offer to help bridge resource gaps and improve efficiency. A common problem, however, is that data may be trapped in disconnected systems, spreadsheets or hardcopy, not ready to support AI capabilities. This brings home the point that asset managers must not lose sight of the basics and centralise their asset data to leverage the benefits of AI and free up teams for higher-value work.

23.9%

5. Service planning

(no. 5 in 2023)

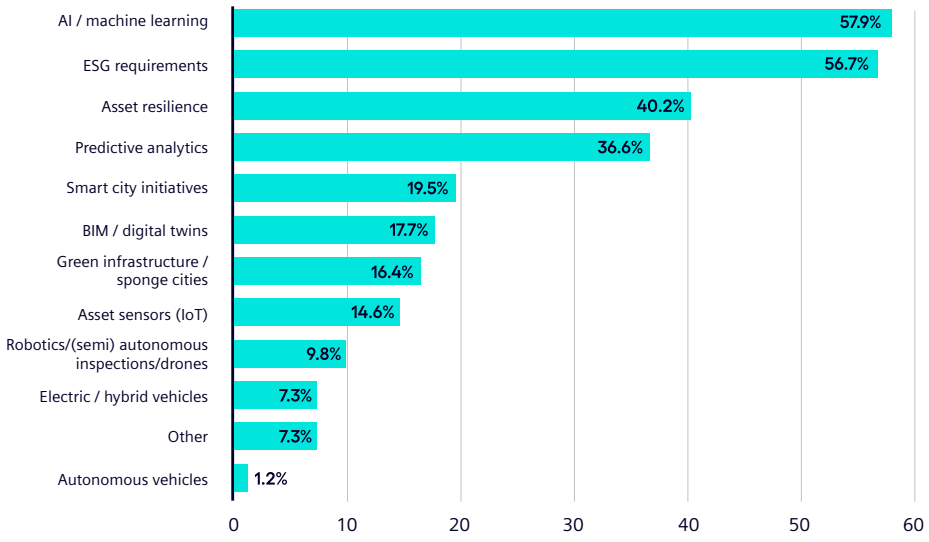
Service planning often faces challenges related to increasing community demand, legislative requirements, and financial constraints. One of the key issues is that it is often done in isolation from asset management planning.

Service planning, asset management and financial management must be integrated for the efficient and sustainable delivery of community services.



Major Factors Impacting SAM Practices in the Next 10 Years

What do you see as the major changes or initiatives impacting your asset management practices over the next 10 years?



57.9%

1. AI/machine learning

(no. 2 / 42.9% in 2023)

The ability of AI to analyse large volumes of data, automate routine administrative tasks, and improve citizen response times and service is seen as a major circuit breaker to the challenges faced by local governments and businesses in 2025. By leveraging AI, organisations can stretch limited resources further while delivering more responsive, data-informed, and transparent governance.

Having good data is critical to successfully using AI in asset management. AI models rely on accurate, integrated and contextual data to deliver reliable outcomes that enable better decision-making and more efficient service delivery. Without having up-to-date, centralised data, AI tools can produce flawed insights, leading to wasted resources or poor public outcomes. Many organisations still struggle with the fundamentals, like capturing reliable data, maintaining accurate asset registers, and enabling meaningful data flow between systems. To unlock the power of AI organisations must first build the data foundations that make AI viable and valuable. With a unified source of data, organisations can then harness AI and predictive analytics to better understand what their assets are trying to tell them – such as providing early warnings on whether action is needed to prevent asset failure.

56.7%

2. ESG requirements

(no. 1 / 48.9% in 2023)

With growing public and investor awareness – and 70% of customers and citizens expecting organisations to act sustainably – inaction can have real consequences. Sustainability today goes beyond conserving resources; it's about balancing environmental protection, economic viability, and social equity. Effective strategies require more than token efforts like recycling.

For councils and businesses, this means focusing on reducing energy use and emissions while still meeting financial and operational targets. A strong sustainability approach is grounded in data: tracking energy use, identifying carbon outputs, and benchmarking performance to set measurable, realistic goals. By understanding where energy is used and emissions are generated, organisations can reduce utility costs, lower their carbon footprint, and demonstrate tangible progress. Data-driven strategies not only support emissions reductions but also deliver cost savings and help meet both short- and long-term community expectations.

40.2%

3. Asset resilience

(no. 3 / 37.4% in 2023)

With extreme weather becoming a new normal in Australia, asset resilience continues to remain in the top three for factors influencing SAM practices over the next 10 years. Climate change continues to warm Australia and our oceans at an accelerated pace, impacting weather patterns that lead to more frequent and intense weather events. Heatwaves can be expected to last longer, extreme rainfall from thunderstorms will likely get heavier, and fire weather days will increase in number. This can lead to costly damages to infrastructure and impact the health and well-being of communities.

With climate change having the potential to impact services and infrastructure, asset plans need to be reviewed to consider climate risk. Using scenario modelling, organisations can predict the future of asset health and make higher-impact maintenance plans, such as knowing when to invest in proactive or preventative maintenance in preparation for extreme weather.



36.6%

4. Predictive analytics

(no. 4 / 35.2% in 2023)

While urgent issues will always demand attention, relying solely on short-term fixes is costly and unsustainable. Predictive analytics tools offer a smarter way forward – helping organisations plan and prioritise maintenance before issues arrive, while reducing risk and saving money. With proactive interventions saving organisations up to three times as much as reactive tactics, predictive analytics delivers on value by analysing risks, performance, conditions, and budgets.

By analysing multitudes of data on community requirements, budgets and historic outcomes, risks can be assessed based on regulations, environmental impact, community size, traffic flow, infrastructure condition and more. Budgets can be pre-planned and allocated for maximum long-term effectiveness, enabling organisations to prioritise projects based on urgency, ROI, and the impact it will have on the community. And infrastructure upgrade requirements can be identified and prioritised based on the needs of the community. Whether it's roads, buildings, or public spaces, predictive analytics helps ensure that resources are directed where they'll make the biggest long-term difference.

19.5%

5. Smart city initiatives

(no. 8 / 13.7% in 2023)

Across Australia, local governments are gradually embracing technology and sustainable practices to build smarter, more efficient, and resilient cities. These "smart cities" use data and digital tools to improve services, engage communities, and manage infrastructure more effectively. Initiatives include smart traffic systems, EV charging and real-time wayfinding signs. They are also a chance to improve sustainability and ESG outcomes, such as through IoT environmental sensors to measure heat microclimates. Smart city programs are already underway in state capitals and major regional centres. These efforts enable councils to optimise resource use, improve mobility, enhance public safety, and reduce environmental impact.

By leveraging data, smart cities can optimise resource allocation, improve transportation, enhance public safety, and promote sustainability. For example, using Geographic Information Systems (GIS) and predictive modelling can help urban planners evaluate the impact of new developments and balance economic growth with environmental preservation.



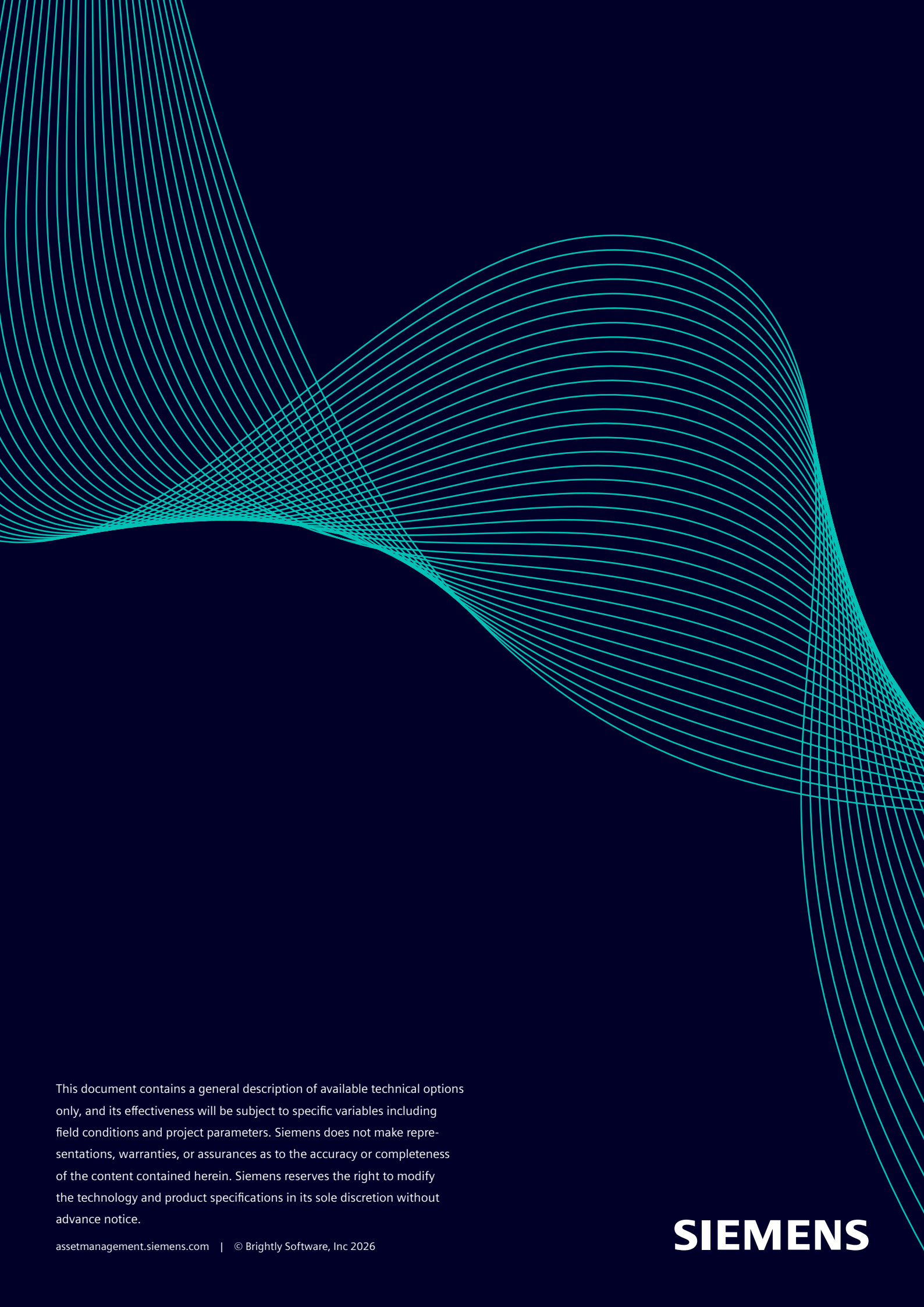
Conclusion

The momentum behind SAM continues to grow as businesses and councils advance in their maturity journey. It's encouraging to see more organisations using their data to guide smarter, more sustainable investment decisions – but challenges remain. With rising costs, tighter budgets, climate extremes, and increasing community expectations, reactive approaches and siloed systems are not viable or sustainable solutions.

SAM provides a smarter, future-focused framework to navigate the complexity of balancing cost, risk, service levels, sustainability, and long-term resilience. This report shows promising progress: SAM awareness is high, and more organisations are integrating it into decision-making. However, the basics – like clean data, system capabilities, and effective stakeholder alignment – are still holding many back. The potential of technologies like AI and predictive analytics can only be realised with strong data and system foundations.

That's where Siemens Asset Management Software can help. With over 20 years' experience and 12,000+ clients globally, we help you ask the right questions, strengthen your SAM practices, leverage the best in technology, and turn data into action. Speak to a Siemens expert today to assess your challenges, identify opportunities and take the next step in building a more resilient, sustainable future for your community.





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