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3 technologies you need to future-proof your organization

New technology can be a scary thing. New processes to learn, new systems to teach your team and new ways to do things. Change isn't easy, but the key to good change is when it makes things better and is therefore worth the investment.

In your world of maintenance, operations, community development and beyond, you're all too familiar with change. And you're constantly searching for ways to do thing faster, easier and better.

That's exactly where these three new technologies we are highlighting come in.

They're each about making connections that matter to help you:

- → Complete work faster and easier
- → Maximize your team resources
- → Improve the safety and longevity of your organization

It all comes back to operating smarter and looking toward a better future – one where you have more control over your daily tasks, you can get more done and you have daily successes to share.

Let's dive in to learn more about these three technologies you need to future-proof your organization:

1. Internet of Things (IoT)
2. Artificial intelligence (AI)
3. Strategic asset management (SAM)

Internet of Things

You've likely heard of the Internet of Things (IoT), and we believe that it's going to become a crucial part of your operations in the future.

What is IoT?

IoT has been said to be the next IT, as it's the way of the future for communicating between devices. IoT involves devices that are connected to each other, typically through the internet, that work together or communicate data in some way.

IoT connects with many types of systems, asset, devices and sensors – some examples:

- HVAC, lighting and security systems
- Modern "smart" devices such as doorbells, speakers, and lights
- Asset and facility sensors that measure temperature, pressure, vibration, hours run, etc.
- Internet ready personal devices such as mobile phones, tablets, smart speakers (Alexa of Google Home)

Whether you realize it or not, you likely already have many IoT devices in your possession and wirelessly sharing data (often thru the cloud). Your maintenance operations will similarly benefit from this sharing of digital data directly from your facilities and assets.

Why does IoT matter?

Within your workspace, whether that is a manufacturing floor, school, hospital, community or otherwise, you have plenty of devices or assets that you need to monitor. Imagine if an IoT connection could do the monitoring for you, letting you know when your HVAC unit gets too hot or that piece of machinery's vibration is off.

Then, if connected straight into your CMMS (computerized maintenance management system), it could automatically trigger corrective action through a work order – all without human intervention.

Think of the time and hassle that could save your team – not to mention the downtime you could save.

Trends in IoT: From a subject matter expert

"Imagine if our assets and facilities could tell us if they need help – automated, 24 hours a day. IoT is a phrase we see in articles and reports all of the time, but most have a hard time understanding where the practical use – and more important – value derives. "IoT" as a simplified technical term means that billions of devices, sensors, networks, assets, software and people can share information. In the manufacturing world, this democratized the ability to inexpensively and efficiently share information from the factory floor. IoT, especially combined with artificial intelligence and machine learning, leveraged by modern cloud-based software is making our manufacturing operations more streamlined and efficient ("lean"). Ultimately this will promote more uptime, keep our teams optimized and ultimately improve profitability."

That IoT data is getting into operators' hands through things like artificial intelligence (AI), machine learning (ML) and IoT platforms. IoT also helps fuel predictive (PdM) and prescriptive (RxM) maintenance.

"IoT is a conduit to get us data. AI, ML, platforms, PdM/RxM is the intelligent use of this data. This intelligence will make our operations software smarter, furthering a lean and efficient organization with maximum uptime."

PAUL LACHANCE, Senior Manufacturing Advisor

Artificial intelligence

Speaking of artificial intelligence or AI, how can it act as a technological advancement that impacts your organization?

What is AI?

AI is classified as intelligence through machines, or the ability for a computer to complete tasks normally done by humans. AI is just another step in the move to improve efficiency and exactness with the help of non-human intelligence.

AI can be broken down further into three types based on capabilities:

1. **Artificial narrow intelligence (ANI):** Sometimes referred to as weak AI, artificial narrow intelligence is AI that specializes in one area. There's AI that can read faster than the average human, but that's the only thing it does. Ask it to do something else, and it'll look at you blankly.
2. **Artificial general intelligence (AGI):** Sometimes referred to as strong AI, or human-level AI, artificial general intelligence refers to a computer that is as smart as a human across the board. Society has yet to fully accomplish AGI on any level, so, at this point, it is theoretical.
3. **Artificial superintelligence (ASI):** Artificial superintelligence ranges from a computer that's just a little smarter than a human to one that's trillions of times smarter—across the board.

Article

Read more about the types of AI

Learn more

And the four types of AI based on functionality, including reactive, limited memory, theory of mind and self-aware.

Why does AI matter?

While you may or may not have AI helping with your maintenance and operations tasks (likely not yet), with more advanced analytics in today's systems, AI can allow you to make better decisions operationally based on data.

An example of this is having auto-trigger part reorder points for inventory based off changing market and supply chains – allowing organizations to switch from reactionary to strategic. These use big data to calculate accurate failure thresholds and help you keep inventory stocked for exactly what you need, without lifting a finger.

Blog

Read about other exponential technologies impacting operations today

Learn more

Trends in AI: from a subject matter expert

"Where organizations manually make decisions to optimize their programs, AI will soon learn what criteria lead to optimal outcomes and apply them automatically. We are already starting to see organizations become more intuitive and adaptive to meet the rapidly changing needs of communities.

Australia, for example, is applying AI to detect road maintenance, pipe serviceability and facility maintenance. In China, where complex road conditions present a significant safety issue, they are looking to AI in the form of training robots. In Redwood, CA they are piloting multiple sensor-based technologies.

We are able to embed AI along with existing data analysis tools in order to become much more informed about our resources and capabilities, but humans still provide a key intervention point in order to filter out good data from bad, and in order to spot game-changing linkages that defy logic. Together, humans and AI will build and maintain more agile, sustainable cities and systems."

Ashay Prabhu, VP, Strategic Asset Management, Brightly

Strategic asset management

Strategic asset management is all about making future-based decisions to improve the way assets are managed and utilized – and it's paying big dividends for organizations utilizing it.

What is SAM?

Strategic asset management (SAM) is an established approach to asset management for long-term planning for maintenance and operations.

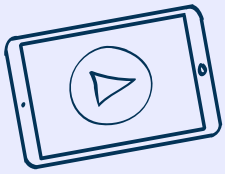
Strategic asset management is a framework that can be used to understand and visualize asset management needs today and 5, 10 and 20+ years into the future. It is an approach that delivers solid, integrated long-term capital works and financial plans that powerfully demonstrate the consequences of today's decisions on tomorrow's infrastructure and facilities.

Why does SAM matter?

Strategic asset management helps give your organization the answers to important questions like:

- How much funding do you need for specific assets?
- Where should you spend your budget?
- Which assets are likely to fail?

Industry-specific algorithms help accurately predict the future condition and service state of an asset portfolio and create powerful visualizations that show how different funding strategies would impact assets and service to inform and align stakeholders across roles.



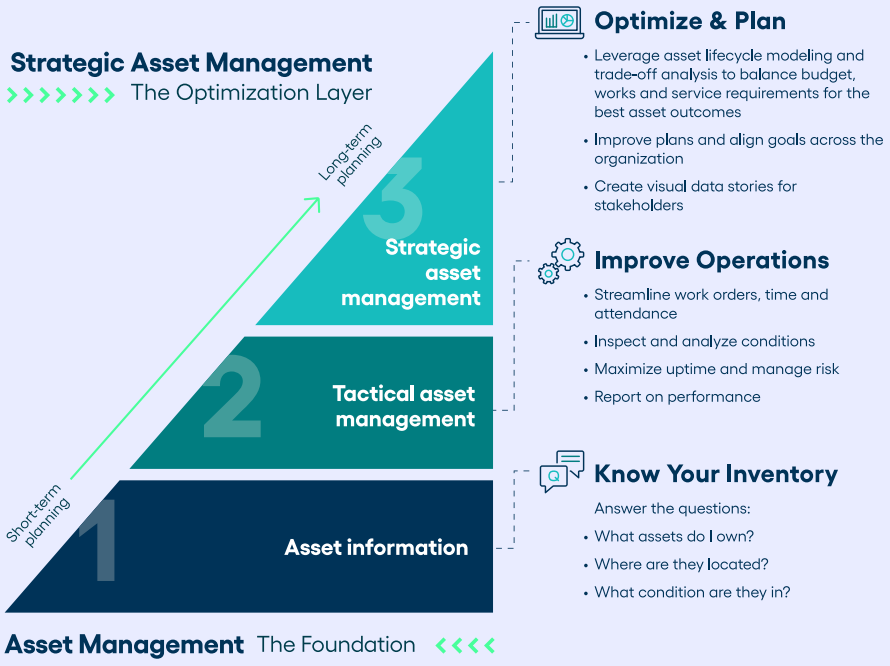
Video

See how strategic asset management software works

See more

SAM is an interactive way to model the future to make data-based decisions to stretch your budget and asset lifecycle.

The SAM framework



Trends in SAM: from a subject matter expert

"We're moving into a world of unparalleled technological pace using cloud analytics, true platform-driven approaches, open integration APIs and software with ever-more subject matter expertise built in. Today, a new SAM practitioner has emerged – no longer one who develops a capital works program or populates a register or configures a CMMS; the practitioner of today owns the skill of telling a story about the future. We are in an era now where the best story, backed by evidence and choices, will be the one that gets funding, stimulus or rate cap reviews.

We're moving to a world where the following game changing predictions are within reach:

- **2025:** Asset inspections, above and below ground or underwater, will be totally drone and robot operated with AI that determines asset health
- Mechanical, electrical and structural assets will be self-diagnosing, completely eliminating time-based maintenance
- Data is available on an hourly, nightly and daily basis from IoT, and asset management plans are a live dashboard in central control rooms
- **2030:** The reality of future-proofed build – gender sensitive design, adaptive facilities, driverless transport compliance and climate resilient infrastructure"

Ashay Prabhu, VP, Strategic Asset Management, Brightly

The engine & partner you need to power this technology

Any change in technology requires three things:

1. The right technology
2. The right team
3. The right partner

Each of these elements is critical to your success. You need a software platform that empowers you to utilize these new technologies to discover efficiencies and data that transform your organization for the better.

Ready to get started using our data-driven engine to power yours? We're ready to take the next steps with you.

ABOUT BRIGHTLY SOFTWARE

Brightly, the global leader in intelligent asset management solutions, enables organizations to transform the performance of their assets. Brightly's sophisticated cloud-based platform leverages more than 20 years of data to deliver predictive insights that help users through the key phases of the entire asset lifecycle. More than 12,000 clients of every size worldwide depend on Brightly's complete suite of intuitive software – including CMMS, EAM, Strategic Asset Management, IoT Remote Monitoring, Sustainability and Community Engagement. Paired with award-winning training, support and consulting services, Brightly helps light the way to a bright future with smarter assets and sustainable communities. For more information, visit brightlysoftware.com

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