

Wi-SUN Alliance report shows investment in IoT is critical to remain competitive as organisations face fresh challenges in 2022

Submitted by: Origin Comms Ltd

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The Internet of Things (IoT) is a top IT priority for global organisations for the next 12 months. But while the vast majority (92%) agree that they need to invest in IoT technologies in order to remain competitive, IT complexity and proven ROI are creating challenges. Delays and budget cuts due to the global pandemic have also had a more recent impact on project implementation.

These are the findings of a new report – The Journey to IoT Maturity (<https://wi-sun.org/iot-maturity-model/>) – launched today by Wi-SUN Alliance (<https://wi-sun.org/>), a global member-based association made up of industry leading companies driving the adoption of interoperable wireless solutions for use in smart cities, smart utilities and other IoT and industrial IoT applications. The report, based on interviews with IT decision makers (mostly c-suite and senior management) at UK and US organisations across a range of industries, including energy, utilities, government, construction, technology and telecoms, is the follow-up to Wi-SUN's 2017 IoT study.

Overall, plans to roll out smart initiatives have grown in the last five years. Security and surveillance is the most likely IoT use case to be rolled out, with 87% of respondents very likely or definitely planning to deploy the technology in the next 12-18 months, up from 77% in 2017. This is followed by distribution automation (82% up from 74% in 2017) and advanced meter infrastructure (80% up from 68% in 2017).

Smart parking (77%) has seen the biggest rise since 2017 (up from 57%), along with traffic lights and controls (76% up from 58%), noise and air sensors (79% up from 62%) and electric vehicle charging (79% up from 66%). Streetlighting, which enables smart cities to control energy use and costs while maintaining citizen safety and security, grew 72% up from 61% in 2017.

“Five years ago the market was less mature with many smart city and smart utility projects still in their infancy. Our latest research shows that organisations are becoming more ambitious and sophisticated in their thinking – IoT is now a bigger priority than ever across all sectors, and the scale of what is being planned over the next few years is encouraging,” comments Phil Beecher, President and CEO, Wi-SUN Alliance (<https://wi-sun.org/>). “But what’s clear is that the journey to IoT maturity isn’t without its stumbling blocks. Obstacles still remain and organisations, supported by IoT services and solutions providers and the industry as a whole, must work to overcome a mixture of technical and non-technical barriers.”

Shift in drivers for IoT implementation:

The report highlights a change in top drivers for implementing IoT initiatives, although investment in IoT remains as crucial as it was in 2017. The need to gain a competitive advantage increased to 29% from 20% in 2017, but the need to reduce operational costs (27% vs. 38% in 2017) and create business efficiencies (25% vs. 42% in 2017) declined. This suggests a shift from using IoT to improve internal processes and operations to seeing it as an opportunity to stand out in the marketplace. There is also an increase in those saying it is driven by ‘everyone doing it or thinking of doing it’.

Challenges to IoT success:

Almost half (47%) of all organisations have managed to fully implement their IoT strategy, lower than in 2017 (55%), possibly due to a growing understanding of what a 'fully implemented strategy' is and what it involves. This is also lower among respondents in the UK than in the US (39% compared to 51%) despite the UK being more likely to see IoT enablement as a top three IT priority for the next 12 months.

Overall, the number of respondents facing challenges to implementation has fallen – although not dramatically given the five-year time span between the two studies – but there is a rise in those admitting it is 'extremely difficult' to implement IoT (17% vs. 14% in 2017). This suggests that they understand the IoT (and its uses cases) better, but have higher expectations of what it can achieve.

A quarter (24%) of all respondents still believe security is one of the top three barriers to IoT adoption, but this is down from 58% five years ago. However, security and safety remains the most common technical challenge among respondents (42%). In addition, there are growing concerns over the complexity of IT infrastructure (34% up from 24% in 2017) and the need to see proven ROI (27% up from 17% in 2017).

Notably, Covid-19 has had an impact on project rollouts, with more than a third (37%) having to reprioritise spending, and 35% seeing budgets cut due to loss of revenue during the pandemic.

Evolving IoT technical requirements:

The biggest change for IoT adopters when considering a smart cities solution has been the importance of industry-wide open standards for IoT deployments. In the report, 86% of respondents feel that this is either very important or absolutely crucial, up from 78% five years ago, while 84% (up from 79% in 2017) believe the same when considering a smart utilities solution.

More respondents are demanding a lack of vendor lock-in as a specific feature in 2022 (78% up from 66% in 2017) reinforcing the need for open standards, which make it easier to integrate new IoT solutions, devices and software with existing infrastructure.

Another notable trend in the last five years has been an increased focus on mesh networking. IoT adopters are migrating away from exclusive use of star topologies (down to 12% from 21% in 2017) to hybrid networks (68% up from 58% in 2017) that include both star and more reliable mesh networks. This reflects an increased technical awareness of the technology options available and a maturing approach to IoT network planning.

Download the Wi-SUN Alliance State of the Nation report – The Journey to IoT Maturity – from:
<https://wi-sun.org/iot-maturity-model/>

Notes for editors:

US vs. UK highlights below – the team can also provide historical data (2022 vs. 2017) and data by industry sector and company size. Infographic also available.

- IoT enablement is a top three IT priority for 55% of UK respondents compared to 47% in the US.
- More than half (51%) of US respondents have a fully implemented IoT strategy vs. 39% in the UK, however more US respondents (19%) than UK (14%) have found it 'extremely difficult'.
- More US respondents (44%) encounter security and safety (technical) challenges than UK (37%).
- When it comes to IoT strategies, security is more of a focus in the UK, with more than half (53%) acknowledging that 'the data we collect is secure' compared to a third (34%) in the US.
- When listing the three top drivers for implementing IoT, lowering customer bills is more important in the US (25% vs. 17%) while government mandates are more important in the UK (28% vs. 21%).

Research methodology

Using online and telephone questionnaires, Vanson Bourne (<https://www.vansonbourne.com/>) interviewed 300 IT decision-makers in the US (200) and UK (100), during January and February 2022. It screened respondents to ensure they were personally involved in their organisation's IoT initiatives, and currently implementing at least one IoT project. Sectors included: Business and Professional Consultancy, Construction (not inc. in 2017), Technology, Energy and Utilities, Telecoms, State and Local Government, Agriculture and Logistics.

About Wi-SUN Alliance

Wi-SUN Alliance is a global non-profit member-based association made up of industry leading companies. Its mission is to drive the global proliferation of interoperable wireless solutions for use in smart cities, smart grids and other Internet of Things (IoT) applications using open global standards from organizations, such as IEEE, IETF, TIA, TTC and ETSI. With 300 members worldwide, membership of the Wi-SUN Alliance is open to all industry stakeholders and includes silicon vendors, product vendors, services providers, utilities, universities, enterprises and municipalities and local government organisations. For more information, visit: www.wi-sun.org.

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