IoT impact of COVID-19: An early view

Omdia view

Summary

This report offers an early view of how COVID-19 is likely to affect the IoT market and, more specifically, IoT demand in various industry verticals. To be clear, the human and societal impact of this pandemic is abundantly more important than how it affects "things." Still, the virus is changing how humans interact and how businesses operate. Supply chains and the labor supply have been negatively disrupted across most industry verticals. While connectivity has helped alleviate some of these issues, especially through remote work, it is becoming clearer that on top of the health ramifications a recession is impending. Among other impacts, this will almost certainly slow IoT investment and deployments. As well as extending timelines for IoT market growth in many sectors, there may be some opportunities for IoT to shine. With major disruptions in global healthcare and supply chains, governments, hospitals, insurers, and logistics providers are having to react quickly and rethink how a more connected world could help better address the current crisis and avert or mitigate future ones.

COVID-19 will disrupt IoT adoption across almost every vertical

In response to the virus, governments, businesses, and individuals have taken drastic measures to curtail public movement and gatherings and encourage "social distancing." Fleet and transport companies have been hampered by restricted movement and border closings, and air shipments drastically fell as planes were grounded for fears of further spreading the virus. These shutdowns have given rise not only to labor shortages but also to major disruptions in supply chains. While the short-term impact is undeniably negative, it may eventually drive greater interest in autonomous trucking/fleets. This could spur both the efforts of and investment in companies like Daimler, Tesla, TuSimple, and Waymo.

Automotive OEMs have struggled with production, as parts previously sourced in China could not be delivered to production centers across the world. OEMs are also recognizing that that a virus-induced recession will lead to drastically declining sales in the short term and potentially beyond. GM, Fiat Chrysler Automotive (FCA), and Ford have shut down plants in North America as well as some in Europe. The situation is likely to bring a temporary halt to the growth in IoT investment by OEMs that Omdia observed in 2019 and the beginning of 2020, such as Toyota's $400m commitment to autonomous driving start-up Pony.AI in February 2020. Given slowing vehicle sales, OEMs are likely to protect their cash positions rather than commit to new major investments. On a brighter note, General Motors has responded to the crisis by extending free OnStar services to GM vehicle owners, including free Wi-Fi. This may lead to more consumers electing to pay for Wi-Fi once there is a return to normalcy.

IoT adoption may slow in some verticals but accelerate in others

Government reactions to the virus and the restrictions imposed on the public have varied greatly from country to country. While cities are becoming increasingly "smart," this has done little to hamper the spread of the virus. as governments ask people to avoid public transportation and businesses ask

many employees to work from home. For all of the talk about the race to ride sharing (whether in person-driven or autonomous vehicles), shared vehicles present a risk and need to be sanitized, and public interest in using such services is likely to take a significant hit in the wake of the crisis. Waymo has already voluntarily put its ride-hailing service on hold.

Other IoT use cases may see a boost. Some public security forces, including those in China, the UK, and Spain, have used drones to surveil areas where restrictions on movement are in place, or to broadcast updates and warnings. Drones fitted with thermal sensors and high definition cameras are capable of detecting a person's temperature from as far as 100ft away and can also be fitted with jets to spray disinfectant.

Enabling citizens to gain access to necessary food and medicines under quarantine conditions also presents opportunities for IoT. Drones can be a potential means for delivery of critical goods in places where movement and contact restrictions are in place, although such solutions are likely to be niche rather than deployed at scale. In February 2020, Nuro, an autonomous vehicle company with a focus on delivery, received approval from the US Department of Transportation and NHTSA for road testing its next generation self-driving delivery vehicle, the R2. While the solution is unlikely to be ready in time for the current crisis, the need for it will have been clearly demonstrated. We expect to see such initiatives accelerate.

Many markets have been extremely slow to embrace telemedicine, often due to consumer preference, but also due to regulation and the sway that some insurance companies and other stakeholders have influencing legislation. While a quick pivot to widespread use of telemedicine is unlikely given the extraordinary demands now being put on medical professionals to support the immediate needs of very ill patients, the value of broader use of telemedicine will certainly be clear in the wake of the crisis, and this is likely to give a boost to development and adoption.

Slowed investment, delayed deployments, but pockets of potential

Currently, the largest effect of the virus on IoT markets will be a slowing of investments and delayed deployments. The need to maintain cash reserves for everyday operations like payroll, and difficulty sourcing onsite labor, will see many companies pause IoT projects. This is especially true of labor-intensive efforts such as installing smart metering. The tightening of capital markets will be challenging for start-ups in need of new rounds of funding but could actually prove an opportunity for well capitalized companies to acquire companies and IP inexpensively.

Capital-intensive sectors such as manufacturing may pull back on IoT investment or delay deployments for fear of recession. Automotive OEMs will likely see slower vehicle production and sales, but most major OEMs have already invested heavily in autonomous vehicle development, so we expect them to continue to pursue development, though this too will likely be stalled in the short-term due to workers having to remain remote. Brick and mortar retailers are moving quickly to a cashless approach in a bid to avoid spreading germs but need to consider the impact of leaving out the unbanked and those without adequate access/understanding of technology.

The virus will force governments, hospitals, and insurers to rethink business-as-usual with regards to healthcare. Remote monitoring systems for patients believed to be infected could reduce risk for healthcare professionals. As 5G rolls out it can potentially become a very powerful technology for allowing doctors to remotely monitor patients in real-time. More use of IoT data from connected

healthcare and other devices could enable scientists to better model contagion and help proactively slow the spread of disease.

IoT can also be an important tool for governments monitoring quarantines. For example, 5G cameras with facial recognition could be used to recognize those who have been mandated to quarantine entering public space, with smartphone tracking used to identify others who have come in contact with that person. There will be limited willingness to use such systems in many countries, but in times of crisis they could be considered a necessary evil.

Appendix

Further reading

"Recent world events highlight the need for a robust approach to business continuity and remote working, " ENS001-000100 (March 2020)

"Coronavirus could impact 5G deployment and standard schedule," SPT002-000304 (February 2020)

"Spectrum can be an ally to immediately increase broadband capacity in the COVID-19 crisis," GLB007-000361 (March 2020)

IoT Investments Tracker: 1Q20, IOT002-000032 (February 2020)

IoT Service Provider Contract Tracker: 1Q20, IOT004-000020 (March 2020)

2020 Trends to Watch – IoT, IOT002-000029 (January 2020)

IoT Enterprise Survey 2019/2020 – Summary Report, IOT002-000028 (December 2019)

Author

John Canali, Senior Analyst, IoT

john.canali@omdia.com

Omdia Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help you. For more information about Omdia's consulting capabilities, please contact us directly at consulting@omdia.com.

Copyright notice and disclaimer

Omdia Materials are delivered on an "as-is" and "as-available" basis. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in Omdia Materials.

To the maximum extent permitted by law, Informa Tech and its affiliates, officers, directors, employees and agents, disclaim any liability (including, without limitation, any liability arising from fault or negligence) as to the accuracy or completeness or use of the Omdia Materials. Informa Tech will not, under any circumstance whatsoever, be liable for any trading, investment, commercial or other decisions based on or made in reliance of the Omdia Materials.