



Synapse®

The Value We Deliver

Who We Are:

Synapse is an Internet of Things (IoT) company specializing in providing software, hardware, and networking solutions to develop, deploy, and manage the "Things" in IoT. Synapse enables corporations, product companies, and business partners to make their products smarter, manage products wirelessly, and connect Things to Cloud-based IoT Platforms. By connecting the physical world of Things to the digital world of IoT through SNAP – Synapse’s Things Platform for IoT, customers can monitor, control, optimize, and manage smart products in ways and places never before possible.

The Business Value of IoT:

We like to focus on the business value of IoT. From our perspective, IoT solutions deliver business value by satisfying three conditions: (a) the solution must produce a hard dollar return-on-investment; (b) it has to provide a distinctive value proposition enabling the company to achieve important business outcomes; (c) the solution must be grounded in and satisfy specific use cases. Michael Porter (the godfather of modern business strategy) and Jim Heppelmann (CEO of PTC and ThingWorx) in their seminal Harvard Business Review article on IoT noted: “Smart, connected products offer exponentially expanding opportunities for new functionality, far greater reliability, much higher product utilization, and capabilities that cut across and transcend traditional product boundaries. The changing nature of products is also disrupting value chains, forcing companies to rethink and retool nearly everything they do internally.” (“How Smart, Connected Products Are Transforming Competition,” Harvard Business Review, November, 2014.) The authors maintain that IoT will change the basis of competition, impact value chains, and change the structure of industries. We agree. At Synapse, we help companies create business value by enabling the connection and development of smart Things to transform how work gets done.

What We Do:

We solve the problem of deeply integrating the Things of IoT with Cloud-based IoT Platforms. Our Things Platform works with the internet Platform of your choosing, for example, ThingsWorx, Predix, Amazon Web Services, Azure, IBM’s Watson, Google, Exosite, and others. Synapse is all about the Things that make IoT possible and how to develop, connect, and manage the billions of smart Things that will transform how we work and live.

How We Do It:

IoT solutions begin with connecting the Things in the physical world to the digital world. Our specialty is in the world of the very small: microcomputers, tiny operating systems, and small but powerful radios, all in a package the size of a quarter. Because we are experts in wireless technology, you can "cut the wires" that were required in the 20th century, but are not necessary in the 21st century. Consequently, you can monitor and manage products, equipment, and activities nearby and faraway in ways never before possible. Once in the digital world, we help companies turn their unconnected products into smart, connected products. In short, we provide the tools, software, and networking that make Things smart. Once you have a smart Thing, we make it possible for you to connect your Things to a local server or to a Cloud-based IoT Platform. The Cloud is the world of the very large: big data, advanced analytics, and machine learning. We complete the circuit between Things and the Cloud by providing secure mechanisms to execute workflows and computer-to-computer instructions from the Cloud back to smart Things. This roundtrip capability makes it possible to monitor and, as necessary, change the physical state of a SNAP-enabled smart, connected Thing. For example, through our Things Platform, you can open a valve, close a circuit, or dim a light on a smart, connected product ... anywhere in your building, or across the country, or on another continent.

Who We Serve:

If you have a Thing that you want to make smart and would like to connect it to the internet, you should talk to us. We serve large corporations with broad product portfolios seeking to standardize on a common set of IoT technologies. We also love helping entrepreneurs pioneer new ways to solve complex problems and launch disruptive business models. Our customers span dozens of industries from smart lighting to smart agriculture, from industrial controls monitoring landfills to quality controls monitoring food safety, from keeping Humvees battle-ready to monitoring the comings and goings of rental car fleets, to tracking ride share bikes in cities, and locating forklifts moving around large plants. In a nutshell, what does Synapse do? Quite simply, we put the "T" in IoT.

Smart Lighting – energy savings you can take to the bottom line:

While SNAP is a cross-industry Things Platform, we have firsthand experience using SNAP to build an end-to-end solution for a vertical market. Lights are everywhere and form one of the largest IoT markets. Driven by light-emitting diode technology, LED lights use 50% - 75% less energy while lasting for more than a decade. In industrial settings, lights account for up to 1/3rd of a building's electricity costs. Imagine cutting those costs in half. Lights have two natural states: on and off. Adding smart controls to LED lights increases energy savings by another 20% - 30% through scheduling, occupancy detection, and controlling the level of brightness (seldom do you need LED lights on at 100%). The business value that LEDs with smart controls deliver is a lower energy footprint while improving energy management. The result is a hard dollar return-on-investment with a payback period typically in 2 – 4 years that customers can take to the bottom line for the next decade.

Synapse's Smart Lighting solution takes full advantage of SNAP to add sophisticated controls to LED lights. We turn lights into a lighting system that you control from the palm of your hand. Our specialty is in outdoor lighting, high bay lighting for industrial buildings, lighting solutions for campus settings, and lighting up entire smart cities. If you are interested in monitoring and reducing your energy footprint, you need to talk to us.

Who Owns Us:

Synapse is 100% owned by McWane, Inc., one of the largest privately held, family-owned companies in the U.S. McWane acquired Synapse in 2012 recognizing the impact that IoT technology will have, especially in the manufacturing and industrial IoT sector. McWane is a global company, which gives us world-wide reach and firsthand knowledge of real-world business requirements. While some IoT companies have a lab in the corner of their office, we have a 350,000 square foot factory we use to prove our technology works at production scale. Companies are leveraging the Internet of Things to grow the top line and improve the bottom line. Let's talk about how we can help you move the needle by putting SNAP to work producing business outcomes that scales and drives growth.

Why Choose Synapse:

We have been delivering real-world IoT solutions since 2008. We have a hundred technologists, engineers, and IoT specialists averaging 10-15 years of practical experience. We specialize in embedded software and advanced wireless networking solutions. We have been around the track several times and learned firsthand what works and what does not. The main challenge of IoT is that it is so broad and multifaceted. Sophisticated solutions require integrating multiple systems. Huge advancements are being made in Cloud-based IoT Platforms with several companies investing millions of dollars and a few investing billions. This is the world of the "I" in IoT. But the "I's" depend on the "T's" and this is where Synapse enters the picture. We made the decision to specialize in the Things of IoT and to be the best Things Platform in the world. We just launched our third generation of technology, SNAP 3. Our first generation concentrated on mastering networking protocols specifically tuned to the world of IoT: small, low cost, battery powered devices using tiny radios that work together to form a "mesh network." Our second generation introduced an embedded application platform to make it easier to program devices residing at the "edge of the network" using Python. Our latest generation of SNAP is Synapse's Network and Application Platform, which enables companies to connect, develop, deploy, and manage smart, connected Things that deeply integrate with the leading Cloud-based IoT Platforms. SNAP is a proven technology that has been deployed in thousands of locations delivering business value every day. We are a business-to-business company. We specialize in helping product companies embed our technology into their circuitry so they can turn their current generation of unconnected products into next generation smart, connected products. We also help factories, plants, distribution centers, warehouses, and work sites monitor and manage equipment, workflows, and activities to improve process flow, production uptime, and the health & safety of employees. Our technology manages thousands of Things using a secure interoperable networking backbone connecting smart Things to gateways. Gateways can share an existing IT network or be segregated into an OT network. Depending on the use case, you have the choice to link to the internet, a private intranet, a local area network, or to an independent SNAP network. The biggest reason you should choose Synapse is our employees. Our team members really care about your success and helping you quickly achieve your business outcomes.

We make it easy to **connect, develop, deploy, and manage** *smart Things*.
Our development platform gives you *The Edge*.

