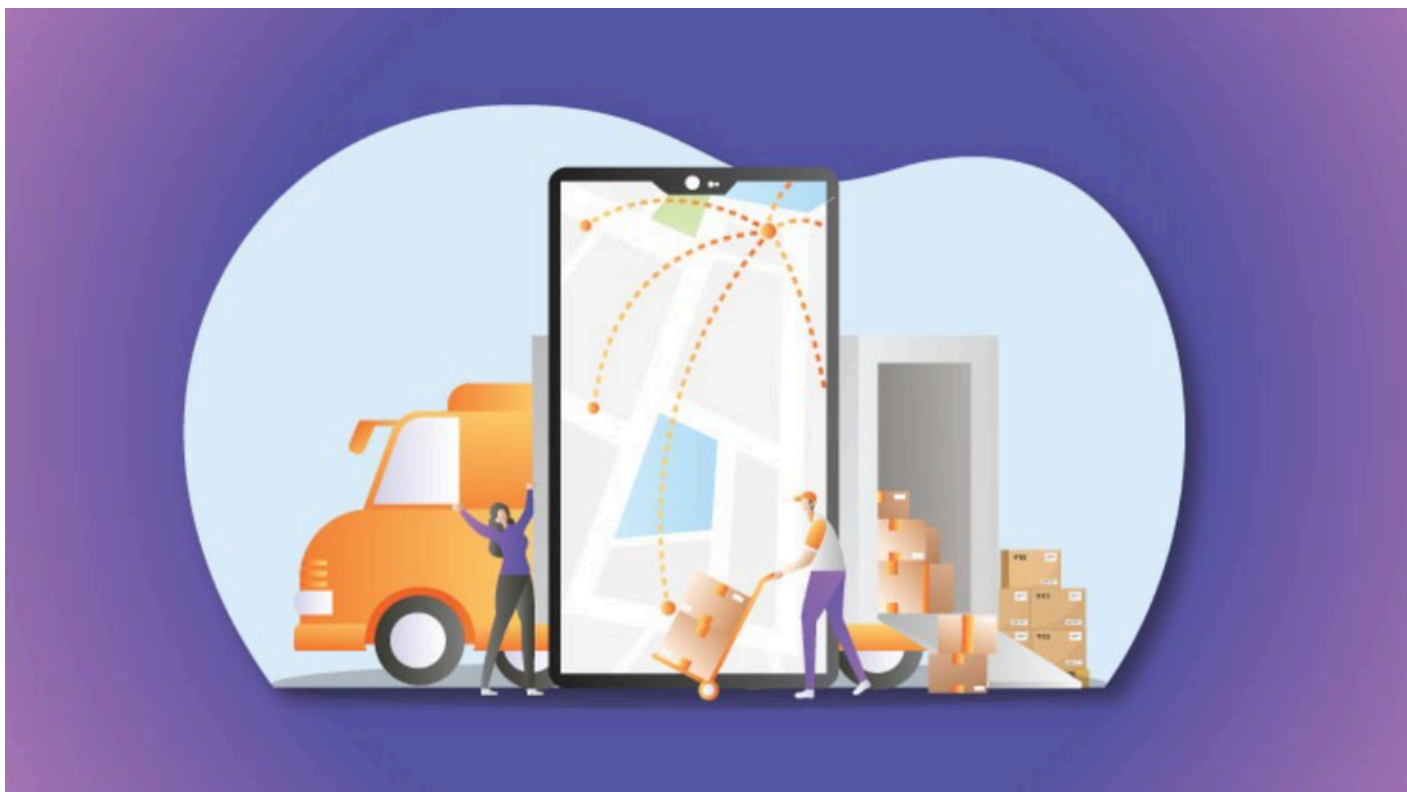# Is Your Delivery Software Intelligent?

As someone who has been involved in technology my entire career, my curiosity is always drawn to new ideas, concepts, and technology. Over the last couple of years, I keep hearing more about the "Internet of Things" (IoT) and how it is impacting today's technology solutions. I thought I would use this writing to explore how it is now offering new frontiers for software developers to enhance their products through utilization of IOT.

For those of you that are not that familiar with IOT, Wikipedia offers a decent explanation. IoT is described as a network of physical objects—"things"—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet. As the concept has evolved, other technologies such as artificial intelligence (AI), real time analytics, embedded sensors, and big data mining, have become building blocks to build a new generation of solutions.

According to Fortune Business Insights, "The global IoT market size stood at 250.72 billion USD in 2019 and is projected to reach 1.4 trillion USD by 2027". The impact has crossed a broad spectrum of industries with a few examples being consumer products, medical, transportation and logistics, manufacturing, and communication.

When NetScore first started development of their Delivery Routing solution, they built in the standard features that allowed you to organize customer orders into delivery routes. The early edition included features such as:

- Manual Route Planning
- Signature capture
- Viewing a map of the route plan
- Re-assigning routes
- Perform PO pickups

As the solution was deployed through the customer base, a common request was the ability to view the location of their trucks in real time. As the development team started exploring solutions, they realized that they could truly take the solution to the next level by incorporating IoT solutions as part of the offering. Leveraging the technology would solve tracking trucks in real time, but also extend to monitoring statistics regarding the vehicle, driver, traffic, and even sensors on the vehicle. The commitment to adding the capability to manage this type of information required revising the infrastructure of the product. While this was not a simple task, the value of enhancing the solution opened broad areas where the application could be expanded.

NetScore decided to partner with Particle who specializes in building sensors that can be leveraged by other developers to bring IoT to their solutions. They produce sensors for a wide variety of applications but offered a product line designed for the fleet management and transportation industry. Figure One shows the relationship of the Particle solution and its integration to NetScore.

Delivery operations are both capital and cost intensive to maintain, so companies are always looking for means to lower their costs and increase efficiency. Optimizing routes using real time traffic information can save fuel, driver time, and help maintain delivery schedules. Sensors that monitor temperature for refrigerated trucks can warn of a possible refrigeration failure that could jeopardize a full load of product. Monitoring vehicle speeds can help management determine whether trucks are being driven safely and help reduce accidents.

The value of the information being gathered increases over time as you now can use AI and Data Analytic tools to analyze the data. This will help spot trends, allow for predictive action, and better manage your assets. You are probably thinking about where all this data can be maintained since storage can be expensive. NetScore is integrating with Google Cloud Storage to provide an affordable option for storing your data. The integration will allow for

seamless management of your data with the full ability to leverage your Data Analytics and reporting tools.

As I mentioned early on, making incremental improvements to how you plan routes, deploy your delivery assets and care for your delivery fleet, will add up over time. Deploying a solution that can leverage IoT technology, AI, and Data Analytics, will result in a quick return on investment. It will also increase your customer satisfaction and build a reputation for delivering your product efficiently and effectively. For more information on how NetScore is leveraging IoT in their [Delivery Routing solution](#), please reach out to NetScore Account Executive.