YOUR JOURNEY TO THE IOT: ACHIEVE A NEW LEVEL OF CONNECTEDNESS IN 6 WEEKS

Learn how this one step per week IoT approach can deliver valuable results within 6 weeks

Has your organization considered all the benefits that come with the Internet of Things? Simply talking about it and contemplating it will get you nowhere – you need to take action. But how do you get started within a very complex IoT ecosystem? This whitepaper explores how IoT technology can bring about business process improvements and greater productivity, and how your company can get started.

IoT is not as scary as you think

Organizations are often scared by the notion of IoT because they expect to make hefty investments, along with extreme changes, to achieve any kind of tangible results. Our advice to you? Don't be scared. Following this 'six-week journey' approach, you'll be able to deliver real business value within a short period time. When speaking about IoT, we advise businesses to stay away from the hype and instead, focus on the practical implications. Think of IoT as, "a means to pull things into the scope of your business applications." Software and applications are traditionally focused on servicing your people and processes, however, with IoT you can now add your things- your machines, devices, cars, smart switches, and video-feeds (anything equipped with a sensor or RFID tag). This will connect your things to your applications, processes and people and will provide invaluable data. This creates a wide range of possibilities to initiate or accelerate the innovation your business needs.

It's a journey, not a destination

Secondly, don't try to approach innovation as a project. Projects, by definition, have a start and finish. With innovation, this is not the case. In this era of constant change, we feel the urge to move with a general sense of direction, but our desired destination may remain unknown until the very last moment before arrival. Therefore, we believe the most effective way to innovate with IoT is to approach it as a journey. As an industry, we've grown accustomed to defining and implementing projects, but a journey works in a different way. It requires a new mindset and perhaps even a different type of team. It's important to take that into account before setting off on your journey.

Now that we've simplified IoT to make it practically applicable, it's time to take the leap and start your innovation journey. How do we start, and more importantly, in which direction do we go? Understanding IoT concepts and practical potential empowers organizations to define a wish list or roadmap of scenarios. For example: "I want to trace all my machinery in real-time so I am always aware of the exact locations", "I want to get an alert a few days before a device needs maintenance", or "I want to use my …'s readings to forecast workloads and optimize planning".

The direction of your IoT journey is determined by your IoT scenarios. Understanding the general dynamics of an IoT scenario will help you define yours.

Data is of critical importance in any IoT scenario.

A typical IoT scenario will involve things, connectivity, data, analytics and action. These things could be anything, from the clothing hangers in your store (if you are a fashion retailer), to your machinery in the field (if you are a rental company), or your fleet vans (if you're a mobile service organization), to your warehouse buildings, shelves and pickers (if you're a wholesaler). Whatever they are, your things need to be connected in a practical, robust and secure manner. This allows your things to be managed, then integrated into your application landscape to send data into the IoT platform.

Data is of critical importance in any IoT scenario. The type, quality, frequency and reliability of this data is of high importance. You need to take the objectives of your scenario into account, as well as the capabilities of your devices. Typical telemetry data we would collect in IoT scenarios are GPS coordinates, (engine) temperatures, running hours, current state (on/off/failure), alerts, (fuel) levels, movement and other sensor readings and alerts. And depending on the scenario requirements, enhanced with other data, such as thresholds for alerting, references to measure variance or external data, e.g. weather or demographics to seek correlations.

Our team uses the Azure Data Insights stack to process the data over a period of time to provide historical insight and intelligence as well as real time analytics to create alerts and to propose or initiate actions. This could include machine learning, which enables you to use advanced algorithms, e.g. to support complex forecasting or optimization of planning and resource allocations. Finally, there are various options which will make an IoT scenario actionable. Sometimes, a simple dashboard does the trick, but more often than not, we want the action to go all the way back into the line of business by creating alerts, support screens, automatic updates and by planning optimizations directly for the users in their desktop or mobile applications.

Your 6 Week IoT Journey

To help you get started, we've introduced a standardized, six step approach for the design and development of a single IoT scenario. After determining a general direction of where your journey should lead, this one step per week IoT approach can deliver valuable results within 6 weeks.

Week 1: Select and sketch a scenario, define a fitting time-box and budget.

Week 2: Determine things that need to be involved, test their capabilities and select connectivity options and architecture.

Week 3: High level design of the end-to-end scenario. Describing what the end-to-end solution will look like and what it will achieve.

Week 4: Setting up connectivity, deploying the IoT platform and start ingesting and processing telemetry, reference and other data. Optionally, train test and operationalize machine learning models for advanced algorithms.

Week 5: Design and develop dashboards alerts and integrations with your line of business processes and applications (ie. Microsoft Dynamics).

Week 6: Deliver and present the end-to-end scenario solution, evaluate results and the next steps.

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