



The IoT Ecosystem

Driving Success Through the Power of Collaboration

An IoT application is part of an ecosystem of hardware, software, and services that turn data into actionable information.

The challenge is that no single organization or technology can go it alone in providing all the essential building blocks that go into an IoT solution, forcing every customer to experience the risk, cost, and delays associated with substantial technology integration projects.

And that means a well-thought-out approach to integrating disparate elements and a high degree of collaboration are crucial: Integration between technologies and systems, and collaboration among the organizations that bring their expertise and solutions to bear on a successful IoT application.

The Three Layers of an IoT Ecosystem

- **Data Collection Layer:**
The data collection layer is the point at which the sensors and/or controllers gather information.
- **Networking and Security Layer:**
The networking and security layer is the physical network that the data collection devices connect to in order to aggregate and transmit data. To protect data, security is typically applied across the layer.



- **Analytics Layer:**

The analytics layer is the point at which the data is run through analytics engines to extract actionable information.

Industry experts stress that adopting an IoT ecosystem approach is critically important to success. That's because as vendors take on projects in that environment, they are able to learn, develop, and share that information with a partner community, which ultimately leads to the ability to scale solutions.

Taking an ecosystem approach is becoming accepted practice for many organizations today. In a recent IoT survey conducted by *IndustryWeek*, 80% of respondents said they plan to leverage the ecosystem, rather than taking a "do-it-yourself" approach for their IoT initiatives. Moreover, nearly one-fourth of organizations said they will specifically partner with an IoT platform provider in order to leverage the full capabilities of that company's ecosystem partners.

- Understand the Business Problem First

"Focus on the business problem; What are you trying to solve? Technology is very cool and you can do so many things with it, but at the end of the day, you need to map back to your business drivers. Is the project going to make you money? Is it going to save you money? Is it going to bring more innovation to the company? Those are some of the key questions to ask before you begin your IoT journey."

Nadeem Asghar Field CTO and Vice President, Global Head of Partner Engineering Hortonworks

While it might be tempting to jump immediately to the technology solution, experts say achieving success with an IoT initiative starts with a deep understanding of the operational problems being addressed.





With that understanding in hand, the organization can then map out the requirements for the IoT architecture, the layers connected to it, and the applications built on top.

Four Steps to IoT Success

- **Step One:**
Understand the issue(s) you need to address.
- **Step Two:**
Consider the type of architecture that will meet your requirements, including possible cloud connectivity and edge computing capabilities.
- **Step Three:**
Make sure the IoT platform you select encompasses all the layers of the IoT ecosystem, including the network, data collection and analytics layers.
- **Step Four:**
Consider how the platform supports new applications and how you will manage and integrate them into your existing IT operating environment.

Getting the right people within the organization involved is important, too. With some initiatives, bringing IT and other internal stakeholders in early to support the initiative may not always be the first thought, and that can undermine the effort with oversights and unnecessary friction points – so be sure to include them.

