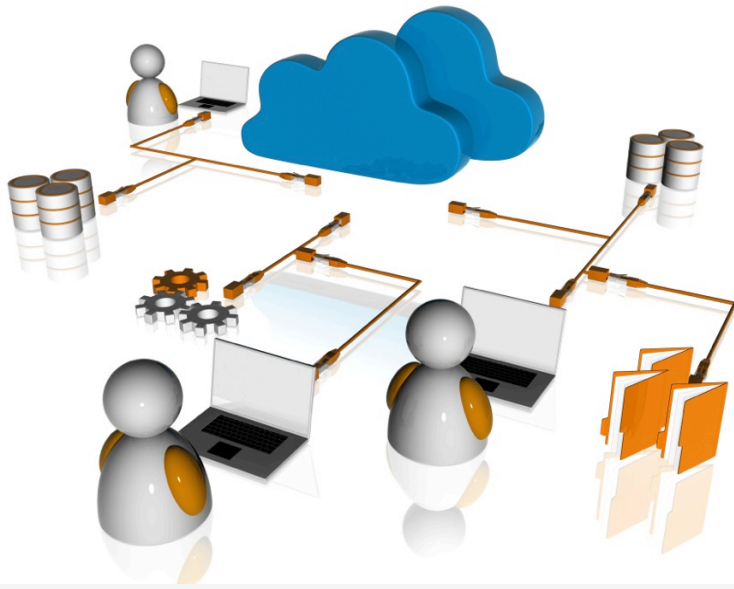




A Ten Point Guide for
Using the Internet of Things
to Change the Game
for Your Business

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The New Product Development Imperative



With intense global competition, many of today's product companies struggle to set themselves apart from their competition. The Internet of Things (IoT) offers exciting options for innovation through new business models and services that create new revenue opportunities.

Companies that successfully take advantage of this disruption have a chance to create a competitive advantage and bound ahead of their competition. The challenge is knowing where to start. Businesses may even need to rethink their business aspirations and how they create revenue. To be successful, businesses must consider how they transform their business model, the infrastructure they need, and the impact on engineering. Tech-Clarity offers the following ten tips to help companies transform their business to take advantage of this opportunity and prepare for growth and profitability:



Rethink Products

Question the very definition of what a product is. Do not limit the product definition to what is physically delivered, but also consider extended services that boost profitability. Consider how engineering and IT roles need to merge to enable these advanced services. Apply agile practices across product development activities.



Consider Delivery Models

Think about the innovations, features and applications that are made possible through the cloud - and the ability to dynamically update products during their service life.

Improve Customer Experiences

Analyze social platforms to identify customer needs. Tap into this unstructured data with Big Data and Analytics tools that can decipher the nuances of human language to discover actionable insight. Engage and interact with customers using mobile technologies to provide them with a richer experience. Use mobile technologies to offer innovative ways for customers to interact with your products.



Keep it Secure

Understand the business risks of potential security vulnerabilities created by connectivity. Mitigate risk and protect products and customers from hackers by designing for security and continuously looking for weaknesses from the earliest stages of the design lifecycle.

Support Standards

Look for industry standards to improve interoperability and take advantage of proven and established best practices. Use standards to grow the potential partner ecosystem for delivering extended apps and additional services to customers.



Identify and Manage Requirements

Consider not only known market and product requirements, but also potential services the IoT makes possible. Determine the data architecture to support these new services through collaboration with operations, field technicians, fleets, and service providers.

Derive Insight with Analytics

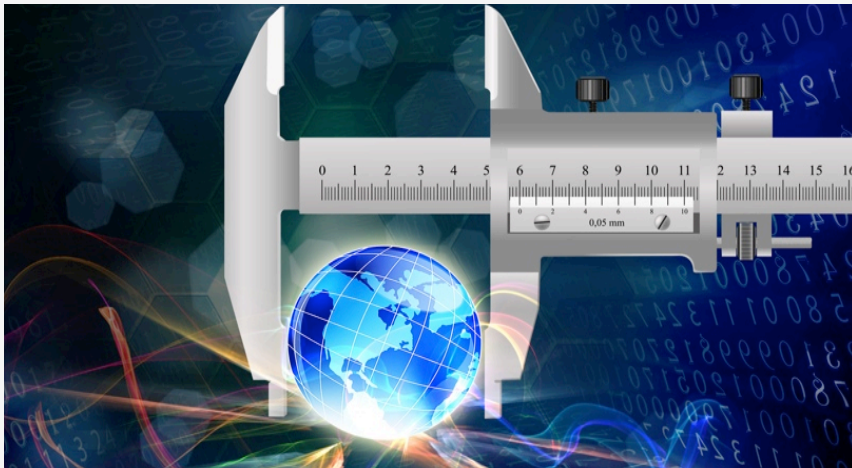
Collect data from product operation. Use analytics to unlock the potential of this “big data” to predict maintenance needs and empower engineers to improve product performance and capabilities.



Enable Reuse

Avoid reinventing the wheel and save time by reusing what's been proven and tested. Empower engineers to reuse design knowledge efficiently. Support Product Line Engineering to meet varying customer needs and regional preferences. Simplify the complexity of varying products and services while driving reuse by creating configurations based on features.





Continuously Verify and Validate

Avoid the business costs of late stage problems by continuously verifying requirements. Use model-based design, simulation, virtual tests, automated testing, and test management to manage complexity and enable continuous verification and validation.

Plan for Future Revenue

Future-proof products with adaptable designs that can incorporate future changes, even if those changes are unforeseen. Plan for an ever-changing ecosystem and the flexibility to accommodate it. Do not think of products as static, but entities that must evolve as market trends and new technologies shape customer expectations.



Key Takeaways

The IoT offers exciting opportunities for innovative products and services. Companies preparing for this now will create unique value propositions for their customers. However, taking advantage of this opportunity requires changing how products are conceived and developed. Those who successfully transform their products and processes will be well positioned to win over customer loyalty, acquire new customers, and improve profitability.





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About the Author

Michelle Boucher is the Vice President of Research for Engineering Software for research firm Tech-Clarity, an independent research and consulting firm that specializes in analyzing the business value of software technology and services. Michelle has spent over 20 years in various roles in engineering, marketing, management, and as an analyst.

Michelle has broad experience with topics such as product design, simulation, systems engineering, mechatronics, embedded systems, PCB design, improving product performance, process improvement, and mass customization. She graduated magna cum laude with an MBA from Babson College and earned a BS in Mechanical Engineering, with distinction, from Worcester Polytechnic Institute.

Michelle is an experienced researcher and author. She has benchmarked over 7000 product development professionals and published over 90 reports on product development best practices. She focuses on helping companies manage the complexity of today's products, markets, design environments, and value chains to achieve higher profitability.

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