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## The “Enterprise of Things”

***Enterprise mobility is maturing into a mainstream offering for most organizations. But the next wave of mobility, the “Enterprise of Things”, is about to dramatically alter the way companies think about operations and conduct their business.***

The mobile market is moving on. Traditional smartphones and tablets are maturing. The next phase is coming and it consists of the Internet of Things – a descriptive phrase that includes all manner of smart (and barely smart) devices often connected wirelessly. While smart watches, fitness bands and connected appliances are important, the current focus on consumer products diminishes the fact that the greatest impact this category may have is on the enterprise. Consumer experimentation will lead the market, but enterprise adaptation will not be far behind. For this reason, I use the term “Enterprise of Things” (or EoT) to describe this next wave that enterprises will need to deal with, even as most still try to adequately cope with the more mature mobile devices already impacting their users, networks and applications.

The EoT wave will encompass many different device types, and some that haven’t even been developed yet. While EoT is not a near term phenomenon, taking the next 3-5 years to mature, it nonetheless will impact nearly all corporate systems. If your organization had trouble dealing with user demands for BYOD, this will present an order of magnitude bigger challenge. EoT will have a profound effect on an organization’s infrastructure, including its network connectivity, VPN, identity access management, security infrastructure and management functions. Further, it will have a major impact on mission critical corporate systems like data storage and access, data bases, enterprise back office solutions (e.g., ERP, CRM), data analysis and business information systems and corporate governance, to name but a few. The vast amount of different data types and content created, amplified by the sheer number of transactions will make EoT a massive undertaking.

EoT will necessitate the deployment of “big data” solutions, including big data storage and data analytics, to productively exploit the vast amounts of real time and situationally specific data it will generate. Enterprises not able to deal with the types and amount of data generated, and not able to analyze this information in near real time and act on its intelligence, will face a serious situation that limits productivity, negatively affects customer relationships, and significantly undercuts the operational and competitive nature of its operations and its employees.

We expect the average enterprise to ultimately have tens of thousands corporately connected/deployed EoT devices to interact with. These will include embedded sensors of all types (e.g., automotive, tooling, usage monitors, personal concierge devices, location-based

sensors, worker concierge devices, etc.). Most will focus on supplying data, but many will also require command and control inputs/direction. While each transaction with a device may be small (100s to thousands of Bytes), the sheer number will stretch many corporate systems beyond their current limits. Further, the advent of voice enablement, gesture control via embedded vision, and other enhanced human interface techniques means that things will be far more responsive and easy to use by even untrained and casual users. Effectively implementing such diverse technology will require creative solutions beyond the applications currently empowering most organizations, and creating a new paradigm for how corporate systems are designed and deployed (much like the previous waves of client/server, web and mobile transformed the corporate environment. And while the cloud will be key, it is not the only transformative solution enabler necessary. Internal systems will also be widely affected.

EoT will impact nearly all companies supplying enterprise products, from networking (e.g., Cisco) to large data bases (e.g., SAP, Oracle) to analytics (e.g., IBM) to security (e.g. Symantec) to carriers (e.g., AT&T, Verizon) to devices (e.g., MSFT) to operating systems (e.g., Android, QNX) to component suppliers (e.g., Intel, ARM). Very few enterprise systems will remain untouched by EoT. Be prepared to require major upgrades for your existing infrastructure.

**Bottom Line:** While it's still early in this transformation, enterprises should start planning now for what's to come in the next few years. Formulating a strategy that looks at potential requirements for infrastructure and applications, as well as assessing line of business needs to enhance operations, should be done over the next 12-18 months, with plans for preliminary deployments over the next 1-3 years. Strategies must remain flexible as in any early stage market the outcomes and solutions are yet to be fully defined and are likely to change rapidly. But that should not be used as an excuse for organizations to do nothing. Like web and mobile before it, once the EoT achieves a critical mass, implementation and user needs will explode, so being proactive is imperative.

*Commentary written by Jack Gold, Principal Analyst.  
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