Technology Brief...

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Research, Analysis, Strategy, Insight

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Actionable Intelligence: 7 Requirements for EoT

The Enterprise of Things (EoT) will dramatically alter the way many companies do business in the next 2-3 years. However, few enterprises currently have a strategy for dealing with the coming deluge of EoT. Indeed, we expect most organizations to deal with EoT the same way they did with mobile; wait and react to end user demands rather than proactively manage the resources.

We believe that enterprises must get ahead of the curve to maximize benefits and create a compelling business advantage. To this end, we believe the most advantageous thing that enterprise can focus on in the near term is the ability of EoT to provide actionable intelligence that can improve overall operations of the organizations. While that may vary based on the industry and type of company, it nevertheless offers tangible and often immediate benefits. Acquiring data and effectively analyzing the intelligence provided can lead to many important insights any organization can leverage.

While each organization will have unique requirements, below we offer 7 general EoT requirements that most enterprises can follow and benefit from.

1. EoT creates large amounts of data that must be analyzed. Rule of thumb: Don't capture and store it if you can't properly analyze it. Indeed, we see this issue as one of the key impediments to enterprises gaining real benefits from EoT.
2. EoT without actionable intelligence is a wasted opportunity. But many companies simply don't know what data is most important to capture and analyze. The lack of data modeling expertise in most organizations is causing wasted insights.
3. Less than 10% of EoT data is currently used effectively. The trick is how to get value from the other 90%. In fact, it's often the case that organizations store data they ultimately never analyze due to lack of tools, capability to know what to look for, and capacity constraints.
4. EoT devices and data must be secured from the design phase. Since many "things" stay in service for years and are not able to be updated, security is critical. Breaches of EoT devices can be costly, and in certain cases may lead to damage or even worker causalities.
5. Most organizations have a wrongheaded perception of what EoT costs. Cost of EoT is 10% devices and 90% enabling those devices to effectively interact with corporate systems. Most companies think it's the other way around, causing major resource issues.
6. BYOD coupled with the advent of user initiated IoT will eclipse the pain

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most organization felt from mobile BYOD. In fact we expect that user supplied "things" will greatly outnumber the quantity of smartphones and tablets in many organizations. If enterprises don't plan accordingly they will be inundated and unable to cope with the sheer volumes, and trying to prevent BYOD simply won't work (just as it didn't work in mobile).

7. Not all EoT will be wireless, but all need to be data sharers in some fashion. And many devices will be two-way, requiring not only the capture of data, but also the need for apps running on the devices that interface in some fashion with users. Thinking of EoT devices as dumb sensors offering up data is a strategy that will ultimately mean failure.

Bottom Line: Enterprises must look at EoT not only as deployment of devices. That represents only the tip of the iceberg. Organizations must look at EoT as a total ecosystem requiring investments in secure infrastructure, capable data capture and analytics, and purpose built apps that empower devices to aid the workforce. This is no small task and will take at least 3-4 years to be realized. In fact, it may never be fully realized as we expect the need for continuous investments in upgrading the components to be an ongoing challenge.

Verizon and Boston – Not So Strange Bedfellows

Recently, Verizon and the city of Boston announced a six year, $300 million project to deploy fiber optic cable throughout the city. This will ultimately help increase Internet connection speeds in the city and make Boston a more competitive housing and business location. But why would Verizon partner with Boston on such an expensive project? There are a number of good reasons that we expect will also be copied in other locations around the country. Below we offer our analysis.

First, Verizon needs to replace its aging copper infrastructure, much of it left over from the wireline telephone days. And these days, it makes much more economic sense to run fiber than to upgrade copper lines. Long term it's cheaper to run and maintain, and on a bandwidth available basis, there is no comparison.

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Second, Verizon has to compete with aggressive AT&T and Comcast initiatives. In the past, when Verizon entered new markets, it found its FIOS message resonated well with customers. Even if the roll out is slow and not complete, Verizon will still get lots of marketing points for doing this, so there is minimal downside.

Third, Verizon needs to create a faster access network that is available nearly everywhere for future growth in smart cities initiatives, where it can generate significant revenues. This will take 3-4 years to gain momentum, and will likely be slower than most people think to take hold. But it will take them several years to roll out the FIOS network anyway so any negative impact should be small. Verizon did say it would roll out on a neighborhood by neighborhood basis – and this is based on Verizon deploying to the highest demand areas first so it can generate revenues as soon as possible.

Fourth, Verizon really wants you to be able to buy ALL of your services in one basket – wireless, FIOS, media, etc., including add-on services (e.g.,

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burglar/fire/security monitoring). If it doesn't have a competitive or superior network to AT&T primarily, who wants to do the same, it will have a tough time competing.

Fifth, 5G is on the horizon, although not for a few years yet (not until 2020/21), and Verizon will need a quality backhaul to make 5G work well. So Verizon can build a lot of capacity into a fiber backbone that it really couldn't do that well with copper and then leverage it for 5G.

Sixth, As Verizon turns more into a media company (after acquiring AOL, and now rumors about acquiring Yahoo), it helps if it has a readymade outlet for content, which FIOS subscriptions gives it. So having connections plus content gets Verizon leverage it won't have by getting placement on other service providers.

Finally, we shouldn't underestimate the "good will" Verizon will get from the government by doing this, especially if it "lights up" neighborhoods currently underserved. And with all the regulations facing service providers generally, a little good will can go a long way.

Bottom Line: Verizon has initiated both a marketing and product strategy in Boston that will likely be the model for other places it serves. If this works as expected, it will be a great way for Verizon to accomplish both increased revenues and needed good will from its constituencies.

The Legacy App Gap

The role of legacy apps in enterprises is one that often doesn't get enough exposure. Indeed, while most talk is about building out new apps especially for mobile devices, the fact is that most organizations are running their business on apps that were created years or even decades ago. And despite the focus on deploying apps for all the new technology like mobile devices and 2 in 1 PCs running Windows 10, the fact is these apps are unlikely to be replaced anytime soon, both because they are often incredibly hard to recreate in newer software platforms, and because few companies have resources in place to accomplish it.

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The industry has been trying for some time to get around this challenge. At the Microsoft Build conference, Microsoft announced a converter to create legacy to modern app compatibility so that the modern interface of Windows 10 could directly interact with these apps, and the apps not have to be run in compatibility mode. Of course, this was an attempt by Microsoft to stimulate the uptake of new systems, and hopefully revitalize sales in a moribund PC and tablet market.

No matter what the reason, this is a positive step by Microsoft, helping many organizations to become compatible with newer generation technology, although the jury is still out on how well the converter will work with the majority of legacy apps. But the legacy app challenge is greater than Microsoft providing its converter to enable modern apps for its universal platform. What about all the web apps that aren't yet compatible? And a big part of the challenge for most enterprises is a lack of ability to get enough resources deployed to address this problem.

The problem with legacy apps is very visible to mobile users. But it's often just as bad in desktop environments where some apps haven't been updated in 5-7 years and still use nearly obsolete user interfaces from operating systems of old. Indeed,

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we estimate 75%-80% of enterprise apps, once deployed, are never updated/replaced (expect for minor platform upgrades or security updates). This causes a monumental problem for those companies who may have thousands of apps deployed, many that are only used occasionally but still critical to keeping the company functioning. It's not possible to simply turn these off, nor is it attractive to spend scarce resources on updates/migrations.

A strategy for app updating is critical, especially with the growth of mobile users. Unlike at the desktop where apps can have a lifetime of 7+ years in use, in the mobile space the life of an app can be as little as 6-12 months. So if a mobile app strategy doesn't incorporate a critical need to allow rapid deployments on a regular basis, the mobile app is not only legacy, it's a dinosaur.

Some have pointed to the cloud and SaaS models as a way to get around this problem. But the truth is many companies run their businesses on apps that can't easily be ported to the cloud and in any event the companies can't stop production long enough to make that happen even if it's possible. So, even with the growth of the cloud, many legacy apps will be with us for a very long time!

This has created an industry of rapid application deployment products that attempt to convert existing legacy apps with little or no programming (See *"Most companies have the wrong approach to enterprise mobile apps"*, J.Gold Associates, LLC. Technology Brief, December 2015). While not perfect, many of these products offer companies the benefit of getting good enough capability to users to make them productive without having to expend massive resources on rebuilding/recreating the legacy apps running the business.

Bottom Line: We estimate that to covert legacy apps to modern apps would take hundreds of millions of dollars (if not billions), and that most companies will suffer through using legacy apps for a very long time. Some relief is in site with many of the rapid application conversion/deployment programs now available. While not a complete solution, it does offer a way for companies to provide good enough apps for a variety of new technology platforms without a massive resource investment. Many companies would do well to explore these products.

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