Enterprise Mobility 2022 Predictions

VDC|VIEW

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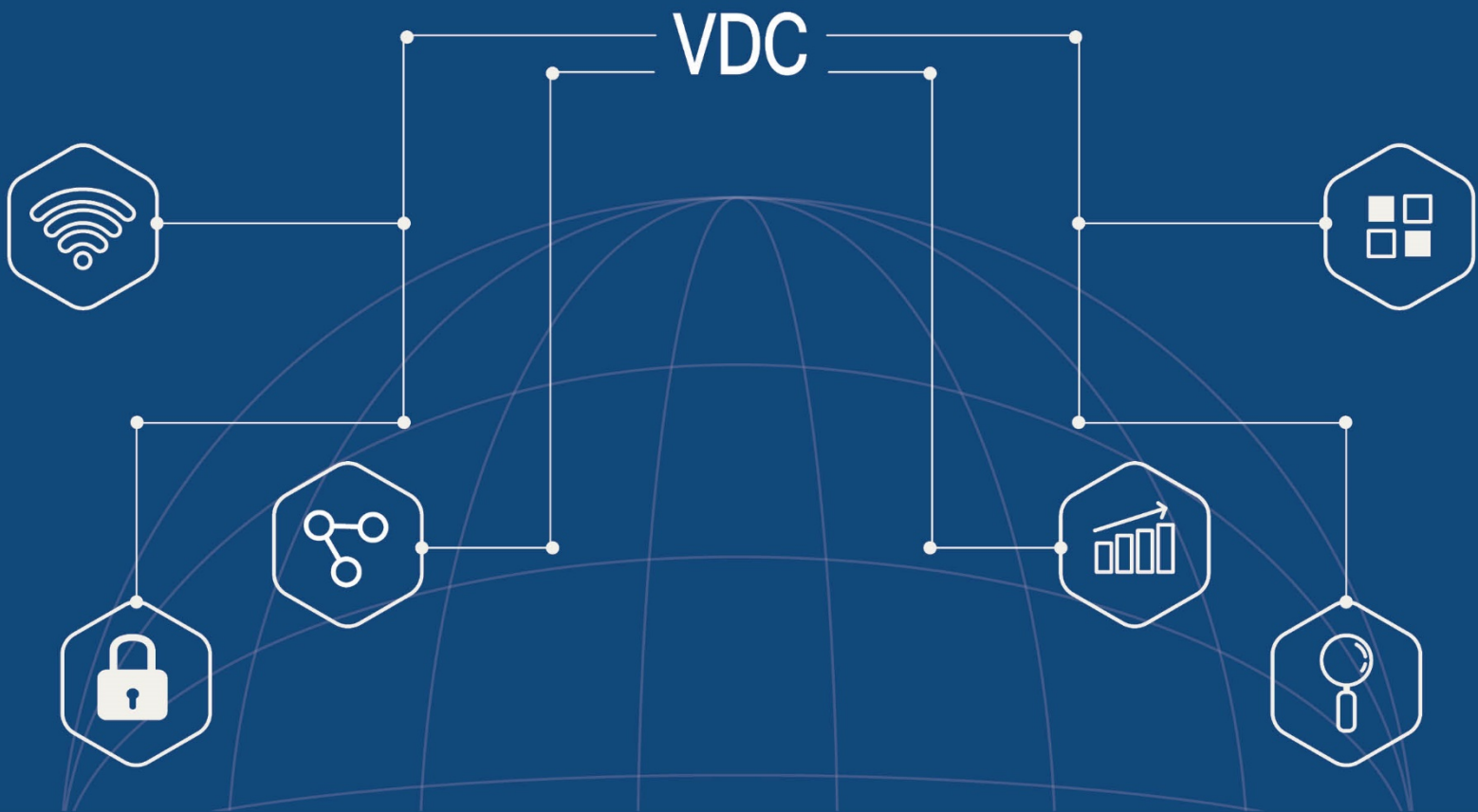VDC|Research

Sustainability and green initiatives in enterprise decision-making

In an age of growing climate concern and government pledges to reduce carbon footprints worldwide, enterprises are taking their own actions to 'go green.' Mobile device OEMs are releasing statements that they will recycle more of their products and use recycled materials in the development of future devices. For example, Dell Technologies has said that by 2030, the company plans to recycle/reuse a product for every product it sells and to use recycled materials for half of products manufactured. However, according to our research, from a product and service sourcing perspective, sustainability ranks low when compared against other factors. While this is not expected to change substantially in 2022, the inclusion of sustainability measures on substantial RFPs – spanning hardware manufacturing and service delivery – will become more prominent.

Mobile healthcare workers will gain greater visibility into operations

Traditionally, healthcare organizations have not been supply-chain minded and have typically lagged behind other sectors in mobile technology and automatic identification technology adoption. The COVID-19 pandemic and accompanying exodus of healthcare workers shed a light on the technological and operational inefficiencies in many healthcare organizations. This realization has opened the door for the mobile healthcare worker (RNs, Nurses) to have more say in decision-making. As a result, we expect to see an increased adoption of mobile devices, wearables and tools that will give mobile healthcare workers greater visibility into operations and assets.

The year of 5G in the enterprise is here, finally

The rollout of 5G technology has undergone steady progression and testing over the past several years. With the anticipated R17 in 2022, 5G technology adoption in the enterprise will see real deployments. Use cases include: autonomous vehicles/robots, M2M communication, remote control/teleoperation of machines, real-time system monitoring and faster data transfers. 5G-enabled enterprise focused mobile devices – such as rugged mobile computers – will gain critical mass in 2022. However, the current component shortage is impacting the availability of 5G end-user devices; this shortage will likely persist through much of 2022 and subside in early 2023. The emergence of private networks and CBRS in the US will further drive the adoption of 5G in the enterprise. The success of CBRS in the US is creating discussion in regions around the globe for similar spectrum-sharing options that will give more enterprises the ability to deploy their own private 5G networks.

Reverse logistics challenges reach critical mass in 2022

The recent e-Commerce revenue boom was dwarfed by the significantly larger increase in e-Commerce returns. Venture funds flowing to the supply chain in recent years have focused intensely on autonomous trucks, drones, and especially last mile delivery. In 2022 we will see a shift toward financing reverse logistics services and platforms as organizations seek to minimize the costs, both financial and environmental, associated with high returns volumes.

Nationwide same day delivery networks emerge

Same-day delivery in 2022 will continue to be an expensive and inefficient shipment option with limited range and poor unit-economics. The lack of lead-time on shipments limits the ability to plan and optimize from a high level; this means delivery vehicles depart with less-than-full capacity wasting resources like fuel and driver time. Same-day delivery will be nothing more than an expensive option for the least budget-conscious shoppers until and unless delivery infrastructure undergoes major innovations such as the deployment of autonomous drones enabling small parcel last mile delivery. Last mile delivery drones would carry just one order, thus eliminating the need to plan from a high level and enabling more efficient on-demand and same-day delivery. One of the challenges has been the lack of a nation-wide same day service provider with scale as most same day services are offered by local/regional players. This will begin to change in 2022, albeit slowly.

Metaverse in the enterprise

With the recent rebrand of Facebook to Meta Company, the Metaverse and its prospective applications have been a massive topic of discussion. The Metaverse holds promise for organizations from retail to first responders to logistics providers and in the coming years the technology will be applied in various ways. One potential use case is the training of first responders; Virtual Reality (VR) has been applied in military training for years, so this case seems likely and could transform first responder training, especially for public safety workers. The technology holds promise in training other types of workers, as well, including warehouse operators, truck drivers, and more. In retail, e-Commerce apparel sellers may offer virtual dressing rooms for online shoppers to mix and match outfits and assess their look prior to purchasing – this use case could alleviate the issue of e-Commerce returns volume.

Breaking down the monotony in warehouse environments

In the pursuit of maximum efficiency in warehousing and fulfillment environments, the worker experience has suffered. This pursuit has brought about ambitious quota systems and uniform workflows which force workers to sacrifice the relative freedom of moving throughout the warehouse performing a variety of workflows in favor of locking into one position to repeat the same highly efficient but monotonous workflow. As a result, organizations are likely to experience higher labor turnover - meaning increased recruiting and training costs which call in to question just how much the drive for efficiency is actually translating into real cost-savings. In light of today's constrained labor environment, organizations that operate warehouses will not necessarily take a step back on efficiency programs, but will explore and create initiatives to improve the worker experience.

Shift in mobile architecture for frontline workers

Mobile workers will continue to migrate towards lightweight/browser-first mobile devices as cloud infrastructure continues to strengthen and connectivity via 5G and Private Wireless LTE becomes more and more reliable. This opens the door for greater flexibility in BYOD models, a trend that has been gaining traction in the wake of the pandemic to enable more mobility to frontline workers. Samsung DeX is one example of a browser-based solution that utilizes a Samsung phone to add mobility to frontline workers while still allowing for a browser-based emulation of a laptop or tablet experience. Primary targets for these configurations have been as low-cost alternatives to PCs mounted in vehicles. Conversely in environments such as warehouses – where terminal emulation has been the primary interface for mobile solutions – a shift towards hybrid native client solutions will continue to gain momentum in 2022.

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David Krebs has more than ten years experience covering the markets for enterprise and government mobility solutions, wireless data communication technologies and automatic data-capture research and consulting. David focuses on identifying the key drivers and enablers in the adoption of mobile and wireless solutions among mobile workers in the extended enterprise. David's consulting and strategic advisory experience is far reaching and includes technology and market opportunity assessments, technology penetration and adoption enablers, partner profiling and development, new product development and M&A due diligence support. David has extensive primary market research management and execution experience to support market sizing and forecasting, total cost of ownership (TCO), comparative product performance evaluation, competitive benchmarking and end user requirements analysis. David is a graduate of Boston University (BSBA).

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