

SOLUTION OVERVIEW

THE SMART DIGITAL WORKPLACE

Transforming your network foundation to evolve the future of work

THE EVOLUTION OF THE DIGITAL WORKPLACE

The global workplace is shifting to an environment that fosters an interactive and collaborative relationship with its stakeholders. This new “active facility” design is quickly replacing the existing passive workplace.

New technology trends such as Internet of Things (IoT), cloud computing, smart building systems and user-owned mobile devices – along with changes in worker preferences, demographics and digitalized work processes – create a new demand for a significantly updated physical workplace. Research predicts that 11.2 billion IoT devices will be in smart buildings by 2021, and 34% of those IoT devices will be installed in commercial general office spaces.¹ IT professionals and business managers are now seeking solutions that facilitate a smarter digital workplace, without increasing the complexity or cost of their technology environment.

20.8 IoT devices
BILLION by 2020²

11.2 IoT devices will be for
BILLION smart buildings by 2021¹

This new workplace environment contains numerous interconnected sensors and gateways which generate large volumes of data. Most of these systems interoperate in real time, providing sophisticated data analytics and improved user experiences to workers, building managers, IT professionals, and other stakeholders.

Aruba, a Hewlett Packard Enterprise company, calls this new phenomenon the “Smart Digital Workplace.” We believe that by 2020, the smart digital workplace will be the de facto approach to next generation building management, safety, security, and end-user technology for an enterprise, industrial facility, educational institution, or government entity.



MOVING AT THE SPEED OF INNOVATION

Today’s workplaces are rapidly adopting new solutions to satisfy the demands of increasingly tech-savvy users. The desire for consumer-in workflows and support for an open, multi-vendor environment are placing new requirements on the edge network.

The smart digital workplace requires a network foundation that provides more than just traditional connectivity. It requires sophisticated policy and monitoring tools for a diverse environment of wired and wireless end-user and building IoT devices. IT infrastructure and applications are rapidly shifting from traditional data centers to the cloud, and this requires new standards of network performance and reliability – including non-stop Wi-Fi, securing and simplifying edge traffic flows, support for cloud-based performance-stringent apps and a strong ecosystem of partners.

¹ Memoori Research, “The Internet of Things in Smart Buildings 2016 to 2021,” published Q3 2016.

² Gartner, “Forecast: Internet of Things — Endpoints and Associated Services, Worldwide, 2017”

TRENDS AND CATALYSTS CREATE NEW REQUIREMENTS

The growth of the smart digital workplace is being driven by multiple trends, which we believe will intensify because of the benefits delivered and requirements met. These trends include:

- **Mobile everything.** Mobile devices are now ubiquitous. These devices connect to enterprise applications as well as the Internet. Fixed office PCs and telephones are being supplanted by laptops and smartphones with mobile unified communications and collaboration (UCC) tools. New types of connected things are rapidly being adopted, such as connected furniture to personalize workspaces and smart lighting to reduce energy costs. These connected devices, along with IoT sensors and gateways, will require individual endpoint policy orchestration and enforcement versus group endpoint segmentation through routing, VLANs and other common approaches.
- **IoT avalanche.** Gartner forecasts 20.8 billion IoT devices world-wide by 2020. All of these devices must be individually connected, secured, and managed. The network must scale to support the flood of new devices and data, at affordable incremental cost per new device or byte. The demand for lower incremental cost of deployment and operation is the reason why we believe that most newer IoT devices will favor mobile first connections.
- **Cloud everywhere.** IT infrastructure is increasingly migrating to the cloud to provide flexibility, efficiency, and simplicity. The migration extends across all layers of the technology stack, from core infrastructure to business apps. The network must support various models of public and private cloud connectivity at all levels. This requires functionality that can flexibly manage devices and connections without complex datacenter-like orchestration.
- **Tighter security requirements,** mandated by ever-growing threat surface and accompanying set of risks. Increased regulations and compliance are key drivers for greater security and control. Sophisticated denial-of-service attacks can force a company out of business.

A SMARTER NETWORK FOUNDATION FOR A SMART DIGITAL WORKPLACE

The future of work will be defined by smart work experiences enabled by the right technologies. And the best workspace designs will enable creativity, collaboration, speed, and freedom. Designed for rapid innovation in the mobile, IoT, and cloud era, Aruba provides a secure, non-stop networking experience on a single software defined infrastructure – designed to be mobile first and deliver a network that is open, secure, and autonomous. It embodies an edge-in versus core-out approach, where users and devices drive the behavior of the underlying network to provide better reliability, security, and analytics than its predecessors.

- **Mobile First** – Purpose-built to deliver nonstop Wi-Fi and wired connectivity for environments where mobile, IoT, and cloud connections are mission critical. This allows people to move while connected, and enterprises to innovate without being tied to a wired infrastructure or fixed physical space.
- **Secure** – Advanced controls and analytics provide granular management and monitoring for both inside and outside threats, with security embedded at all levels of the network.
- **Open** – Offers a rich array of APIs, user interfaces, and accessible data that maximizes integration and automation with IT and line-of-business environments, and supports a multi-vendor strategy – no vendor lock-in.
- **Autonomous** – Provides contextual analytics through machine learning to fine tune performance or enable automated attack response in real time, to proactively identify and pre-empt network and security issues before the business is impacted.

AN ECOSYSTEM OF PARTNERS HELPS ACCELERATE ADOPTION

The promise of the smart digital workplace requires a new ecosystem of partners who can work together to meet the needs of a shared customer base. Collectively, we are committed to provide the optimum workplace experience through new innovations in technology, real estate and other fields.



Aruba is partnering with key innovators for the Smart Digital Workplace

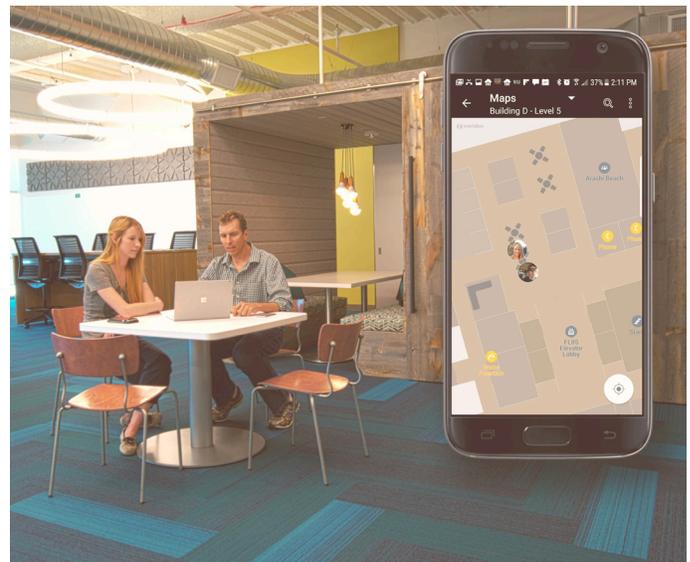
ARUBA'S APPROACH TO THE SMART DIGITAL WORKPLACE

Our approach to the smart digital workplace comprises two fundamental pillars:

1. The Mobile First Architecture and suite of Aruba products, which are purpose-built to supply the communications and sensory platform for the smart digital workplace's technology stack; and
2. An ecosystem approach to building out the smart digital workplace beyond the networking platform.

Highlights of the Aruba Mobile First Architecture and ecosystem include:

- Single architecture for high-capacity wireless and wired networks
- Comprehensive policy management and segmentation of connected devices, users, and services
- End-to-end Aruba 360 Secure Fabric, including AI-powered detection of threats and attacks
- Application-level services for location, asset detection, and more
- Rich and flexible APIs for integration and management
- AI-driven analytic tools, dashboards, and advanced UIs to manage the network
- An ecosystem of partners across UCC, real estate, security and safety, building IoT, technology services, and end user applications



Enabling new experiences through mobility (e.g., finding flexible workspaces, locating fellow co-workers)

EXPERIENCES IN THE SMART DIGITAL WORKPLACE

Enhanced experiences can add value to an organization and its stakeholders, with numerous benefits, tangible and intangible. Aruba's Mobile First Architecture is designed to support these use cases:

- **Workers** can use smart personal devices, augmented with building IoT sensors, to register for flexible space, find available conference rooms, navigate the campus, follow safety protocols, locate visitors, adjust climate and lighting and control smart furniture. High quality wireless UCC tools enhance productivity and flexibility.
- **Remote workers** can access secure enterprise connectivity in the same consistent fashion as they do in the office.
- **Visitors** can enter a building, automatically notify their hosts, navigate to their destination, use a personalized, secure Wi-Fi connection and connect to AV facilities through a single building registration workflow.

- **Building management and security personnel** can monitor and optimize environmental conditions in real time, receive alerts from multiple systems in a coordinated stream, respond more quickly to indoor emergencies, manage space utilization, and fine-tune building systems to best meet the needs of the occupants.
- **IT Managers and network engineers** can use advanced, machine learning networking tools to lower deployment and operating costs. The integration of analytics and automated response with in-house and external systems ease the overhead of monitoring the network and managing security or performance issues.

SUMMARY

The smart digital workplace is an inevitable evolutionary transition, driven by strong forces of supply and demand. The growth of the smart digital workplace will have a profound effect on organizations, workers, owners, managers, and investors.

Aruba's technologies and roadmap are designed for the smart digital workplace. Aruba's Mobile First Architecture provides a strategic foundation to deliver winning experiences and improve worker productivity, while reducing risk. Traditional networks, even with add-on complexity, cannot support the smart digital workplace effectively, since they are built upon last generation assumptions such as protected space, wired-centric connections, and IT's centralized control of the technology environment.

Other vendors have attempted to broaden their network technologies, and the result has been a patchwork of acquired architectures, incompatible UIs, and inconsistent experiences. Their approach towards easing this tangle has been to add even more proprietary layers to mask the orchestration, security, and other functions not originally built in. This approach cannot scale or meet customers' needs.

Aruba is jointly innovating with our partners to promote the growth of open, interconnected solutions at all levels of technology and user experience. This approach benefits both customers and partners – with rapid innovation leveraging best-of-breed solutions.

Finally, Aruba's "Customer First, Customer Last" commitment has been the guiding light of our journey from a wireless LAN pioneer to a comprehensive edge solutions provider and leader in the networking industry – dedicated to helping customers realize the potential of the smart digital workplace.

For more information about the Aruba Networks Mobile First Architecture, go to arubanetworks.com/MFA. To learn more about the Smart Digital Workplace, go to arubanetworks.com/digital-workplace.



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