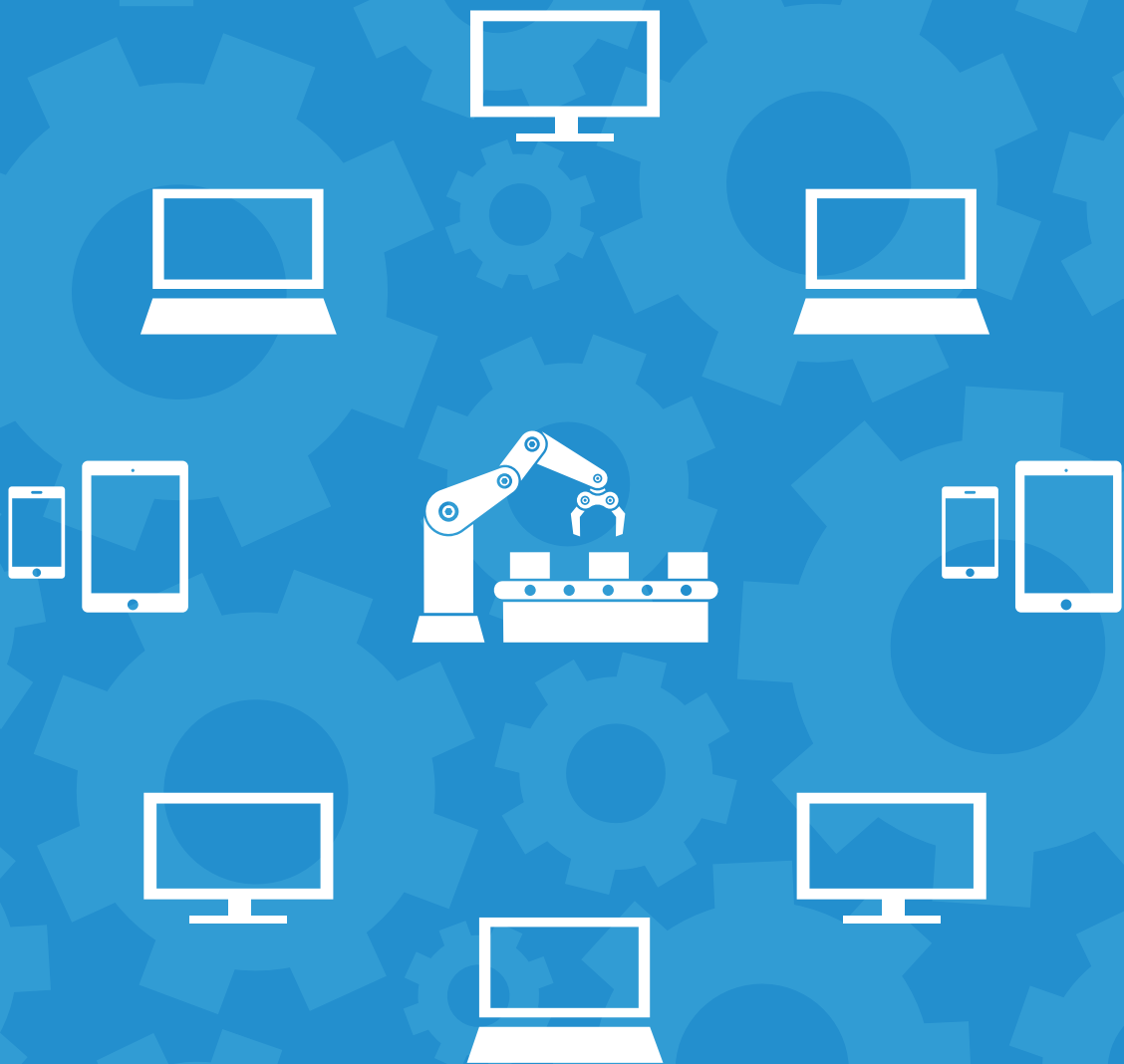


Accelerating business transformation with desktop virtualization

Manufacturing Sector Advisory



Manufacturing moves towards customer-connected products

Digital transformation initiatives come in many shapes and sizes, and if you're a manufacturer, these probably center around 'Industry 4.0', the Internet of Things, and modern enterprise resource planning solutions that can handle huge amounts of data and transactions. You're also likely to be developing new capabilities, service innovations, and business models as you adapt to changes in customer expectations, market demands, and supply chain economics. And then there's ongoing process automation, always a key element of manufacturing, but most effective when it's orchestrated by a highly skilled and educated workforce. With this in mind, let's consider how delivery of the modern digital workspace can help you optimize time-to-market, maximize productivity, and drive down costs.

Industrial revolutions change the nature of existing occupations while creating new ones

Allied to smart production methods and closely-coupled supply chains, technology continues to transform the manufacturing sector. And although real-time decisions and adjustments to processes are routinely handled by machines and sophisticated systems, business growth and success are still very much dependent on those who research, design, engineer, manufacture, market, and service for a living. Moreover, these employees typically represent around a third of your company's workers.

Like you, this segment of the workforce uses a variety of devices, tools, and applications to get work done, so efficiency and efficacy are likely to be hindered if the desktop computing environment isn't up to scratch. No one wants any undue complication or burden when it comes to using IT, but concerns surrounding cyber-security and the protection of intellectual property ought to be addressed.

Modern manufacturing generates a huge amount of data. So, to avoid information overload, IT systems should be tailored to meet specific employee needs. This means presenting information in a usable format as well as being relevant to time, location, device and task. With 'blue-collar workers' accounting for around half your employees, integration of human skills with what machines are good at is an important factor, which means extending the customer-connected digital workspace enterprise-wide.

Virtualizing Windows desktops and applications to help manufacturers adapt and scale

The design goal of a modern digital workspace is to provide employees with an easy-to-use, secure, and cost-effective desktop experience that can deliver the personalized applications and data they are likely to need, on any device they are likely to use, from any location they need to be. You're probably familiar with remote desktops and virtualization technology, as manufacturers have used it in a variety of ways, but the technology is evolving fast, bringing new benefits to more use cases. Here are just three examples that highlight the business value of modern desktop virtualization technology:

- ◆ **Advanced manufacturing:** Using new graphics virtualization technologies, specialized processors can be dedicated to virtual Windows desktops, enabling engineers, technicians, and analysts to run workstation-grade visualization and computational applications on-demand, on any device.
- ◆ **Access systems from anywhere:** Multifactor authentication, resource authorization policies, and connection authorization policies control employees access to resources and information located within your business environment, enhancing security, compliance, and mobility.
- ◆ **Pre-configured, pre-integrated and pre-tested:** Vendors and system integrators are taking the pain away from deploying the servers, storage, network connectivity and software required for on-premise desktop virtualization deployments. And when cloud services make sense, modern remote desktop infrastructure is available here too, including Desktop as a Service (DaaS).

Server session-based desktops continue to offer the most cost-effective route to a Windows PC, but with Windows Server 2016, Remote Desktop Services can also be configured to provide personal and pooled virtual desktops, or a combination of the two models. Within these virtualization environments, IT has the flexibility of giving users a modern, fully managed desktop experience, complete with applications and productivity tools. Alternatively, users can access specific applications that are hosted/run on a virtualized system but appear as if they're running on their desktop like local applications. By combining these approaches, manufacturers can develop more adaptive, more creative working environments, optimized for specific employees, roles, and activities.

Desktop virtualization offers a range of new benefits to manufacturing companies

Intellectual property theft is a growing concern within the manufacturing sector, so there's a need to mitigate threats and safeguard designs and data. Company directors and production managers are likely to be targets, but so too are financial managers, as criminals target specific roles with 'spear phishing' attacks and malware payloads. Desktop virtualization might not be the primary means of protecting the company's 'crown jewels', but new offline working features and sophisticated access authorization policies provide an additional layer of security while still promoting mobility.

Engineers, scientists, analysts, and other technical roles place heavy demands on desktop computing environments and those that support them. Modern centralized desktop virtualization technologies can help reduce this burden while accelerating the deployment and adoption of new business applications, computational tools, and desktop operating systems. The ability to assign dedicated graphics processing units to virtual desktops means that CAD, CAM, and other CAX applications can be fully utilized in the design, analysis, and manufacture of products, using any suitable device.

Products are becoming more connected and, in some cases, being offered to customers on a 'pay-as-you-go' basis. This 'product-as-a-service' approach presents a range of opportunities, especially if you engage with the customer in ongoing development and operational services. These new customer engagement models and ways of working clearly require a flexible, adaptive, secure working environment, and this is where modern virtual desktop infrastructure and application virtualization technologies can play an important role. So, how might the matrix below look for your own business?

Modern Desktop Virtualization Benefits and Opportunities	Productivity and Business Continuity	Governance, Risk and Compliance	IT Efficiency & Efficacy	Digital Transformation Opportunity
Engineering Director, Technical Director, Fabrication Manager, Plant Manager	✓	✓	✓	✓
Research Engineer, Engineer, Scientific Officer, Works Engineer	✓	✓	✓	✓
Data Analyst, IT Project Analyst, Software Architect, Applications Developer	✓	✓	✓	✓
Technical Adviser, Engineering Coordinator, Electrical Engineer	✓	✓	✓	✓
Sales Account Manager, Area Manager, Client Manager, Export Manager	✓	✓	✓	✓
Service Engineer, Fabricator, Machine Operator	✓	✓	✓	✓

The bigger the tick, the more positive the impact

Implementation considerations

Business transformation initiatives can be accelerated when business and IT leaders co-create solutions with experts in the field. System integrators and technology providers have already developed a range of offerings that span every aspect of desktop delivery strategy, from initial assessment right the way through to Desktop-as-a-Service (DaaS), so it's time for manufacturing to add its own layer of business value. Desktop virtualization isn't a panacea, but delivering a modern digital workspace across the enterprise is likely to be a whole lot harder without it.

Further Reading

The full paper 'Desktop virtualization as an accelerator of digital transformation: Fast-track creation of a modern digital workspace' can be downloaded from the Freeform Dynamics website [here](#).

About Freeform Dynamics

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Fujitsu provides desktop virtualization solutions based on best-in-class virtualization technologies, proven infrastructure products, and end-to-end lifecycle services from a single source. Customers benefit from rapid implementation and reduced risk resulting from Fujitsu's extensive project experience. Especially for VDI, several integrated Fujitsu systems give customers the choice of making a fast and easy move to virtual workspaces according to specific business needs, including applications and digital workspaces delivered as a service from the Fujitsu Cloud.

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