Lean, Mean, Thin... and Smart

The Big Story about
Cloud Client Computing

START

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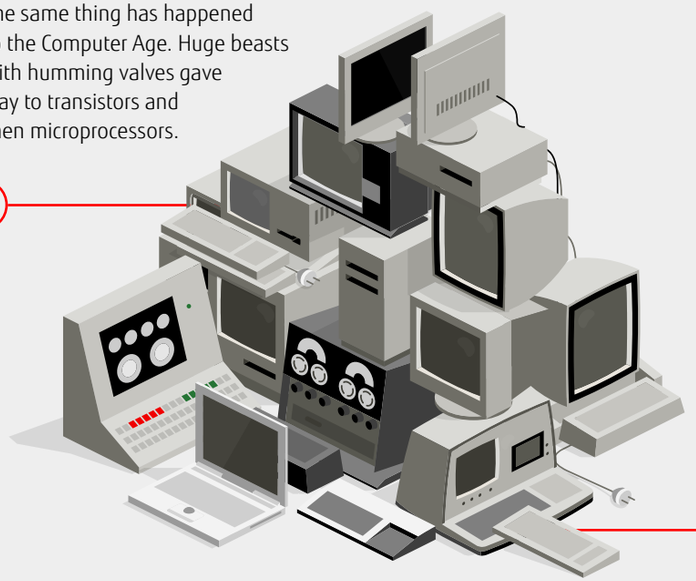
Welcome

Technologies have a habit of getting 'thinner' and more intelligent. Think back to the invention of power generation. During the First Industrial Revolution each factory had to have its own complete power plant. Then innovators like Thomas Edison invented the power grid and we all ended up with power sockets – the ultimate 'thin' of 'Zero' client.

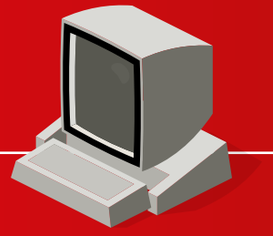
The same thing has happened to the Computer Age. Huge beasts with humming valves gave way to transistors and then microprocessors.



The Internet enabled the birth of the cloud and the creation of Software-as-a-Service. Enterprises went from massive amounts of hardware to hardly any hardware at all. The Cloud has enabled every organization to be lean, mean, thin and smart.

And that's just what Fujitsu, working with Citrix and Unicon Software, want to enable you to achieve. A state of total flexibility, agility, cost-effective operations, seamless, and most of all, an intelligent way of working that's as secure as possible where it counts, at the point where each individual employee does their work and interacts with the network as and when they need to.

That's the BIG story about thin client computing. It's called 'thin' because, back when the concept was first tried in the mid-90s, most computers were bulky. They offered everything the user might need – from storage to applications to databases – all within the single machine. Organizations' IT departments spent a lot of their time monitoring, fixing, patching, replacing individual pieces of hardware. That also meant there was a risk of losing valuable data and work which led to immense frustration amongst the workforce.



Each client needed individual maintenance. Programs would have to be updated machine by machine, or if they were remotely updated it all depended on the administrator applying those updates. IT had a lot to do in terms of maintaining each machine to ensure that it was up to date, running the right versions, applying the right security protocols.

So, the traditional computer spread over various departments (or geographies) of an enterprise needed a big team to maintain it. That meant spending valuable time, effort, and costs on a fragmented inventory of machines that grew year on year. That meant that there was a possibility that vulnerabilities could creep in. Which is why the return of the thin client has come as no surprise to many.

While the thin client is, essentially, a terminal, it is much more: it is also an intelligent and lean way of computing. That's because it is extremely flexible. Thin Client Computing means spending less money on IT supplies and maintenance costs, and investing more in projects that help boost the overall productivity of your people and your business. And it starts right in your IT department.

Just as we take electricity for granted, so we're moving to a world where we do the same with processing power, operating systems, applications, databases, and security. Your work happens on the screen you need to use right now, but the heavy lifting happens far away in a secure data center somewhere that's protected from threats and hackers.

That's the basis of a truly intelligent workspace – and it's what Fujitsu, Citrix, and Unicon Software – working together - can help you build. And in this eBook, we are going to show you how.

FUJITSU CITRIX® unicon SOFTWARE

Beyond ‘Thin’

We are a bit skeptical about the use of ‘thin’ to describe what we offer. But, it’s an accepted term across business and industry. Despite that, we believe that what we’re talking about is something that’s smart and lean as well as thin. And it’s a concept that goes beyond the terminal itself.

Back in 2009 TechRepublic reported findings from an IDC paper, which argued that thin client computing could have distinct advantages for the modern workspace. The magazine saw the research as a wake-up call for IT managers to take notice of “one of the least understood hardware options available today”. TechRepublic noted that “Thin clients and, the server-based architecture that they require, create an IT environment that offers security, manageability, and ROI benefits that can surpass tightly monitored PCs.”

Source: Reap the Green IT benefits of thin client computing (TechRepublic)

Here are just some of the benefits TechRepublic reported would be possible with thin client computing.

40% savings
on software and hardware costs

29% cut
in IT operational costs

78% boost
in IT staff productivity

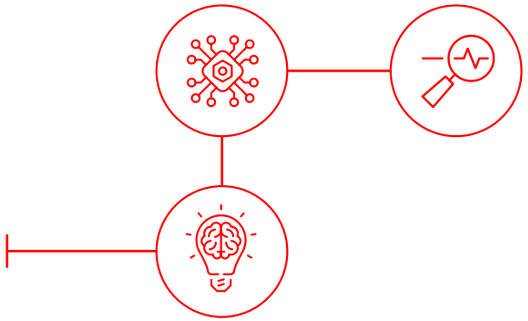
...and an amazing
88% reduction
in worker downtime.

In the decade since that report – which, by the way, has proved to be right about most of its predictions - the move to thinner, leaner world within the modern workplace has been gaining momentum. But it’s still not reached a tipping point which will see every workspace make the most of the concept. At Fujitsu, Citrix, and Unicon Software we believe that we are at the tipping point now. And it’s time to make the most of it.

Think thin, think intelligent

What we are talking about is creating intelligent workspace – the offices of the future right now. That means enabling people to move from device to device, place to place, and never miss a beat when it comes to doing the tasks they need to do and access the data and applications they rely on.

It's 'intelligent' not just because the experience is seamless – though that is vital to worker productivity and wellbeing – but also because the use of machine learning across the programs and processes to which the thin client provides access means that the technology understands how you work and matches the experience to your specific needs.



That's the intelligent thing for an enterprise to offer its people. Especially at a time when the competition for talent is intensifying each passing day. Some call it 'the war for skills' and the fact that the labor pool is increasingly populated by Millennials.

By 2030

it's estimated that there'll be a global shortfall of

85 million qualified workers

means that this is no time to hesitate.

Source: The Future of Work - The Global Talent Crunch (Korn Ferry)

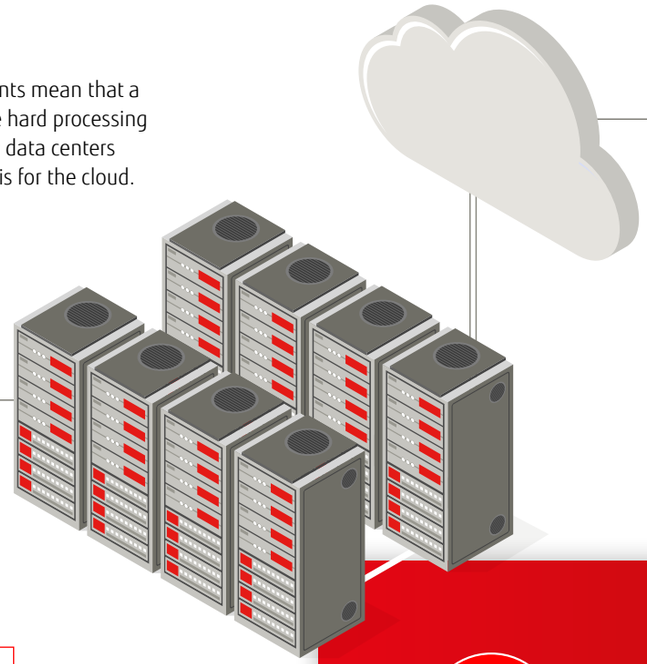
Our focus is to deliver the intelligent workspaces which deliver technologies that empower people and deliver the boost to productivity, innovation, and creativity that comes with greater employee engagement and support.

The argument for cloud client computing is a very substantial one. Not just from an end user perspective, but also for people who run, manage, and maintain many devices which deliver the computing an enterprise needs to compete effectively and efficiently in an ever more competitive landscape.

Intelligent, rich, substantial – a new set of adjectives

So, the concept of cloud client computing is a very substantial one. It offers a rich array of features (including multimedia) augmented by ubiquitous connectivity and ever-increasing bandwidth speeds. And, of course, we are seeing the rapid rise of the cloud and various other SaaS delivery models which thin clients can enable seamless access to.

These developments mean that a large chunk of the hard processing work gets done in data centers which are the basis for the cloud.



The cloud is very real – despite the imagery that is always used to promote it. In truth, it's the muscle, bone, brain, and nervous system of 21st century computing carried out in carefully controlled and secure conditions far from the vulnerable terminal.

That terminal is thin because it is just a pane of glass with a keyboard and mouse attached (if that!). It might have some storage capacity, or it might have none (in which case it's a 'zero' client).

It makes no difference to the user because they get immense power wherever they are working, while the 'guts' of the technology is safely behind secure walls and fences in hyper-controlled conditions.

The benefits are simple but powerful: updates happen simultaneously and swiftly, maintenance efforts are drastically reduced, terminals are standardized in terms of user experience, secure, easy to use, and a lot cheaper to buy. Licenses cost less, and security has many fewer points of potential failure than many machines dispersed across many locations (and when it comes to laptops, anywhere and everywhere).

Cloud client computing is also greener and contributes significantly to ever more pressing sustainability targets.

Thin is green

As the University of Pennsylvania Information Systems and Computing Faculty pointed out not so long ago, 'thin' means 'green.' They compared the energy consumption of the traditional PC to the 'thin' client and found that the former is a 'power hog' and the latter consumes power 'like a bird.'

The calculated that replacing 10,000 PCs with thin clients can cut carbon emissions by almost

3000

metric tons per year. Listed below are some of the outcomes that can be achieved with a move to a cloud client computing approach:

Power Savings

The use of thin clients delivered a reduction of

66%-73%

in overall power consumption

Cost Savings

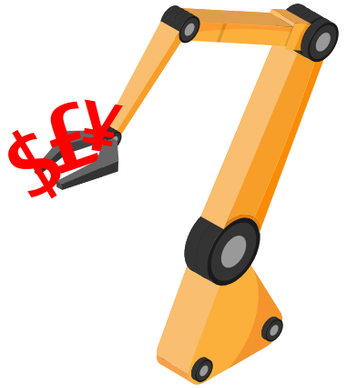
That cut energy use led to a

$240,000

annual saving on the energy bill

Savings in the supply chain

Production of thin client computing hardware cuts energy, carbon emissions, transport related emissions because they're smaller and lighter.



Less Waste

Thin clients have much smaller environmental footprint because they use far fewer harmful metals and chemicals which means less damaging waste effects.[2]

Source: The Green Benefits of Thin Client Computing (The University of Pennsylvania)

Opportunity Costs

On average , if you deploy

10,000

clients, the electricity saved is equivalent to the annual usage of around

102 homes

Near Zero maintenance

Thin clients need less maintenance and can last almost

twice as long

as the typical PC

Centralizing, rationalizing, and securing IT is a priority

Thin clients at the core of a business are a driver for a more rational and centralized approach to IT. You save costs and boost efficiencies while ensuring that you are in control of applications, security, software upgrades, patches, and version control. It's a move from the local to the cloud which means you are more in touch with the local, wherever that happens to be.

And, of course, the operating system you need must be hardware independent, which is where Unicon Software comes in. Their eLux® offering has been created to run cloud computing environments and is based on write protected file system which means it's secure against malware or viruses. eLux is a flexible and easy to use operating system which works on any x86 clients like thin clients as well as stationary conventional PC hardware or notebooks.

You get a central point of control and visibility. That is vital if you are going to ensure you achieve complete transparency across your IT estate as well as all operations which it supports. And because you only need to obtain one license per device you benefit from unlimited usage.

That fact helps you migrate to a thin client ecosystem in stages. When you use Unicon Software's Scout Enterprise Management Suite® you are able to migrate at the pace that suits you. You can ensure that every thin client is part of your ecosystem and is under license. That also means that every client gets necessary upgrades in a simple and seamless way. New updates and upgrades are always modular which reduces complexity and ensures that whenever a machine needs one, it gets it, day and night.

eLux can run on any x86 platform. It's modular and easily scalable and can be controlled via Scout Enterprise Management Suite.

Bold strategic thinking

The point is to think thin based on a sound strategy which delivers substantial benefits – such as a leaner IT operation that saves money, creates efficiencies, and boosts security for your vital data and processes.

It's also about empowering your people to do more with the ability to do it faster without the hassle of dealing with complexity at the desktop (or on any device they choose to use).

Fujitsu, Citrix, and Unicon Software believe in making the right alliances to enable you to formulate your specific strategy and then implement it with the right hardware, software, connectivity, and applications. And make sure that you can evolve at the speed that suits you to ensure that your entire ecosystem works.

So, what's the strategy?

It's a simple, step-by-step process.

1: Examine your organization as it is now. Are there too many traditional client computing devices – such as older generation Mobile PCs, PCs or workstations – that are slowing people down and burdening your IT team with routine maintenance issues? Are the devices you're using now as secure as they can be?

2: Examine how your people work each day. Do they need to have powerful machines with large amounts of internal storage for single- or limited multi-use application scenarios? What are the current benefits of staying with existing desktops and non-cloud-based services / applications? Understand where your people do their best work and how mobile they are right now, and how mobile they want and need to be in the future.

3: Outline the downsides of your current traditional PC sprawl: Have licensing complexity, the cost of maintaining and managing old systems, and potential gaps and issue regarding security, crept into your existing IT sprawl? What about updates, fragmentation of programs, duplication of data (compliance dangers), unresponsive systems that inhibit collaboration and so on?

4: Itemize the costs associated with the current situation: ensure that your IT department makes the most of its potential in an efficient way instead of spending too much (expensive) time maintaining, updating, provisioning, and firefighting. List the costs of licenses, and those potential costs associated with the risk of data breaches and privacy non-compliance.

5: Investigate the cost savings associated with a move to a cloud client computing ecosystem. How much would you save with thin clients and SaaS? How would thin clients improve agility and employee satisfaction? How much easier would it be to roll out the right applications and virtual apps to empower your people?

Once you have the information from each of those steps, you can make a decision that is best for your organization.

Thin and secure where it counts the most

Thin Client Computing balances software, hardware, and the easy and secure management of both out in the cloud so that your organization is as agile as possible and delivers a consistent and standardized user experience to drive productivity, cost-control, and innovation.

As we've seen, it's also more sustainable. That's a vital part of any organization's corporate citizenship: do more with less and make the most of technologies which enhance wellbeing of both people and the planet.

For instance, Citrix Workspace enables your people to make the most of any cloud-based productivity suite on the market. They get the experience and the functionality they need wherever they are and whenever they want to work, and you benefit from the SaaS model that expands or contracts as you need it. Citrix's SD-WAN reacts dynamically to the ever-changing needs of your distributed workforce. So, if you're running an important video conference it manages latency so that a specific branch office or site gets the bandwidth needed for the best quality collaboration.

Citrix also offer access control to enhance security as well as endpoint management with Micro-VPN technology and secure browser services that filter web content continuously.

The whole picture

Fujitsu, Citrix, and Unicon Software work seamlessly together to deliver the right outcomes for customers. It's an approach that's focused on your specific objectives and it's founded on the best technologies.

Citrix is renowned for its focus on weaving enabling desktop virtualization to forge a truly digital and intelligent workspace which knows no boundaries. Citrix's data center pedigree and its best-in-class protocols which take up the least bandwidth means that you get far more productive usage from your connectivity and the servers which serve you in the data center. You can make use of the services any provider that suits your approach: from AWS to Microsoft Azure to Google.

As we mentioned before, the foundations of an intelligent workspace are important. They are what attract the right people to work for you, and they have what they need to do their best work. That benefits them as individuals and your organization as a whole.

The hardware

The thin clients themselves are key to delivering the benefits we have been outlining in this eBook. Fujitsu has been pioneering the design of devices which deliver a better, far simpler, user experience which increases personal flexibility and ease of working.

The thinner and less complex a machine is, the more people can focus on their tasks and objectives. The device itself does not distract attention from work. As mentioned before, thin clients can greatly reduce work interruptions: the updates happen out in the data center, the device is less prone to problems, there are no tasks related to software or hardware that the user has to do. It just works.

And that's the key to the success of Fujitsu's FUTRO range. They enable access to any cloud service (and configuration) you want. They are lean, ultra-compact, and deliver leading performance. FUTRO is designed specifically for the Cloud Client Computing ecosystem. They are the physical gateway to the flexible, cloud-based world that's at the heart of any digital transformation. Ultimately, the point is to fast-track the creation of an intelligent workspace which benefits its employees and its business performance.

FUTRO thin clients deliver all the green benefits we saw highlighted by the University of Pennsylvania: low energy usage, longer working life cycle, less e-waste and much more. Thin Clients by design also enable you to provide minimalist, clean desks scenarios to improve comfort and free up space for your employees to work the way they want to.

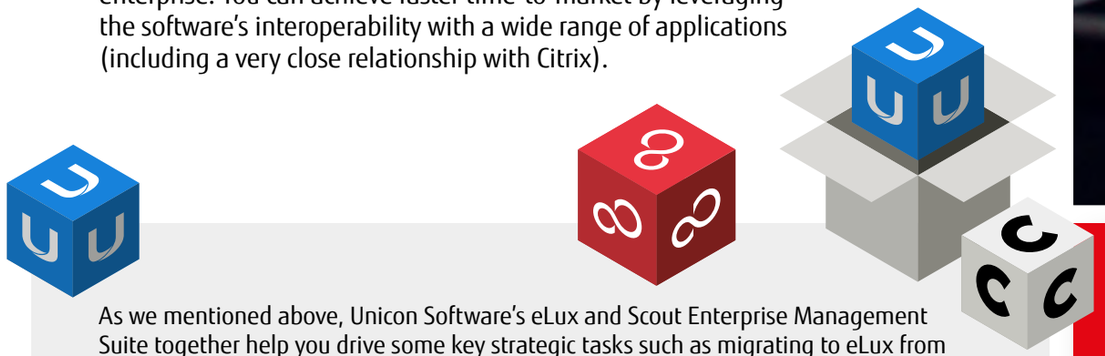
The FUTRO range offers a device for every need. From the ultracompact and powerful FUTRO S5- and S7-series through to the FUTRO S9 series. FUTRO thin clients are fanless hence quieter in addition to being easily expandable and configurable to meet your changing needs. It also helps you achieve a balance between people working on their own and working with others to boost collaboration.

While FUTRO Thin Clients are secure to begin with, there is another device in the FUTRO portfolio that takes security to the next level. The FUTRO Q9-series PalmSecure Appliance offers advanced biometrics that read palm vein patterns with near-zero errors for employees to securely gain access to their workspaces without bothering to remember their passwords. The biometric system is also fool proof and completely contactless.

Learn more about the
FUJITSU Thin Client FUTRO portfolio here

The software

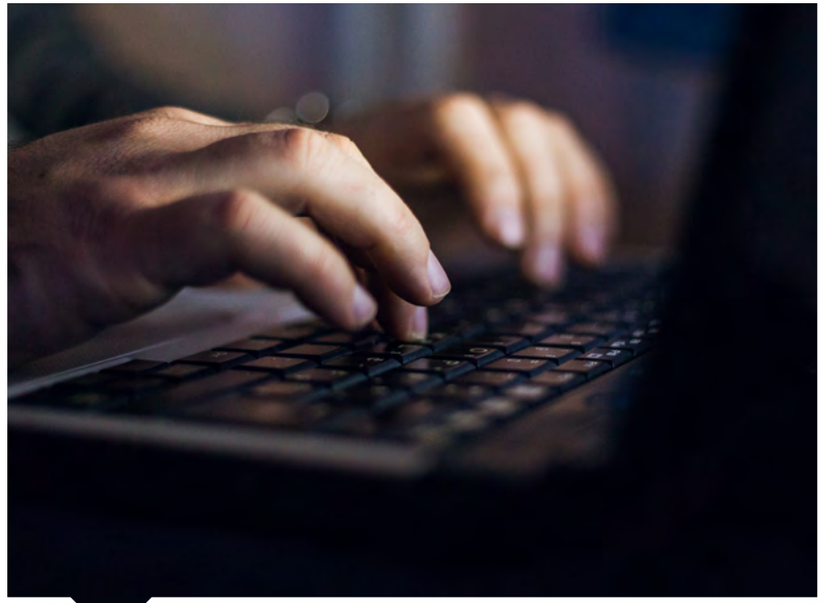
Unicon Software adds market leading thin client software to mix which looks after the entire operating system and gives you the ability to centrally manage a wide range of heterogeneous thin client infrastructures. It's modular and represents a small footprint within your enterprise. You can achieve faster time-to-market by leveraging the software's interoperability with a wide range of applications (including a very close relationship with Citrix).



As we mentioned above, Unicon Software's eLux and Scout Enterprise Management Suite together help you drive some key strategic tasks such as migrating to eLux from Windows-based platforms, rolling out updates and upgrades, deploying configurations with your customers, through to offering remote support to managing assets as varied as devices, peripherals, and licenses.

Because eLux is hardware independent, it doesn't matter which brand of technology you choose to deploy as you move into the cloud. It's based on a write protected file system that enables you not only to manage a cloud computing environment efficiently, but also securely. eLux has been constantly been evolving and is developed to stay out in front of rapidly changing attack profiles. That means you don't have to pay for a separate anti-virus product to protect your enterprise. The cost savings can, therefore, be significant.

Scout Enterprise Management Suite excels in terms of scalability – it's a management tool which can literally support hundreds of thousands of thin clients in many branch offices. And each of them gets the same set of enterprise functionalities. It's platform agnostic which means you can support multiple hardware platforms and operating systems. It's always secure and easy to manage because updates and upgrades are consistent, and integrated automation and a range of helpdesk features mean you can remotely configure anything you need to and mirror desktops for instance. You can comprehensively manage your assets for everything including peripherals too.



More than a million thin clients across 65 countries are benefiting from eLux. Unicon Software's experience in enabling organizations of all shapes and sizes to take advantage of thin client computing is well documented. It's clear that the fact that you only need to acquire an "eLux & Scout Enterprise Management Suite"-license once and then can make unlimited use and even transfer it to newly acquired devices it is a big attraction.

Updates are automatic, continuous and discreet and the subscription-based model helps planning cost independently from the hardware. Your people can just keep working and focusing on what they do best rather than on version control or any technology-based tasks. That's an important factor in the smooth running of a truly intelligent workspace.

You also get the central control, total transparency, and ultimate flexibility, all vital factors as you migrate to the thin client future.

Unicon Software also offers comprehensive support that enables you to focus on your key business objectives

Unicon Software recently released their Scout Enterprise Cloud Gateway to enable organizations to manage remote offices or devices which are not on their enterprise's intranet network. **That's a real benefit because for devices deployed in both home office or mobile scenarios because they can be conveniently connected to existing infrastructures without the need for a VPN backend.** For each device, the system creates a certificate for client authentication, which the administrator can view, revoke or renew at any time.

The migration

The benefits of moving to Cloud Computing based scenario are well known, which is why many organizations are seriously working to transform the way they work. But there are fears that this will consume both time and resources. The truth is that moving to a thin client computing ecosystem is NOT labor intensive. In fact, the transition can be done in a relatively short period of time.

Your people get their new FUTRO devices and all the software, service, processes, data, and applications are managed in the data center. Suddenly, a whole lot of IT management time is freed up to focus on innovation and user experience improvements rather than firefighting problems. Everything is managed – from software to security – in the background and in one place via one operating system. It's Fujitsu, Citrix, and Unicon Software working together.

What you need to do is to focus on your specific needs. Assess different delivery models and decide which can meet your core objectives. Fujitsu will work with you look at all the options and match them to work-styles and IT needs.

Then pilot thin client computing in areas of your organization where you can achieve both quick-wins and important learning. It's important to understand how your people want to work as well as work best. That means integrating the new thin client approach with mobile devices which you either supply or your people bring to work.

Your people need to buy-in to the new ecosystem. There will be some resistance. People are used to the machine in front of them being a complex point where everything is available – from software to apps to storage – and it takes time for them to understand that by moving all of that functionality into the cloud and cutting the hardware down to a leaner, meaner, but thinner device actually benefits them. They must use it to prove it. So, piloting means you can prove the point and let your people spread the word.

Build the implementation from back to front – so ensure you have the right cloud, the right data center facilities, and the right connectivity and bandwidth. The same goes for security. This is why it's important to work with Citrix and Unicon from the start. A thin client is only as good as what's behind it out in the cloud.

Ensure that your current infrastructure and your IT team are prepared for change. Again, pilots are useful. They prove to your IT people that thin cloud computing is beneficial to their careers – it frees them to do more creative, technical work. And, naturally, plan for the delivery and installation of the thin clients. They are, after all, still physical bits of technology.

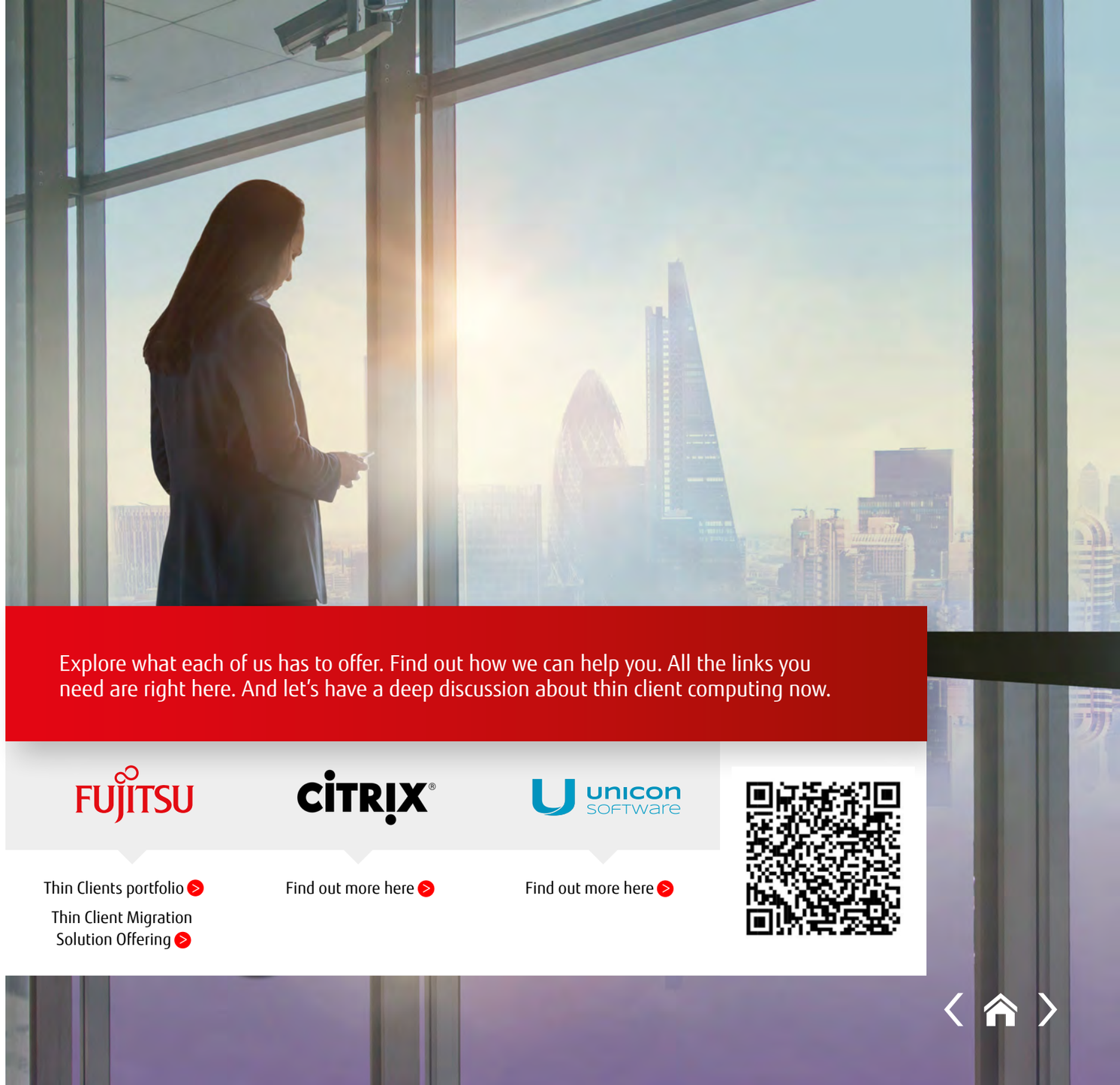
Finally, track user satisfaction. How are people using the thin clients? Do they like them? Are there problems? Do you need to make changes? If you do, make them quickly.

Conclusion: Cloud Client Computing – Back to the Future

Over the last ten years, with the renewed interest in the benefits of thin client computing, IDC recently concluded that the approach is "an effective solution for organizations looking to provide a rapidly scalable, cost-efficient hardware solution with unified management." They then stressed that organizations can achieve "the added benefit of greater security due to sensitive data not being stored on the devices themselves."

We have now come a full circle. The first computers all used so-called 'dumb' terminals connected to massive mainframe computers (usually in the next room). Then came the PC which put (relatively) immense computing power on each desktop. With the coming of the Internet there was no need to burden users with desktop complexity (and the inherent security gaps it created by storing sensitive, enterprise data locally), so the 'dumb' became 'thin' and workspaces became even more intelligent and mobile.

And that's the point: intelligent workspaces that foster collaboration, creativity, productivity and innovation. At scale and with great security. It's the essence of what digital transformation is all about. Fujitsu, Citrix, and Unicon Software have been working together to deliver the potential of that transformation to customers across their organizations.



Explore what each of us has to offer. Find out how we can help you. All the links you need are right here. And let's have a deep discussion about thin client computing now.

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Thin Clients portfolio >

Thin Client Migration Solution Offering >

CITRIX®

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