



Flexible Working

White Paper

Abstract

This paper examines the trend towards flexible working practices and looks at how these can be delivered in enterprises of all sizes by building on the latest voice and data integration capabilities and using a mix of on premises and hosted services to support the new flexible workstyles.

The market/need for flexible working

Flexible Work programs, initially implemented in the mid 1990's, are rapidly becoming a vital part of 'how we do business'. Home based and remote workers have never been better served, with regard to voice and data services, than they are now. Web front-ended business systems have opened the door to business information and processes to provide remote workers with secure, 24/7 access, regardless of location. Such access, coupled with intelligent telephony applications, allow organisations to make great strides towards achieving a healthy work/life balance for their workers while still reaping the benefits that a true, comprehensive flexible work program can deliver.

However, surprisingly most facilities managers are still using a 1:1 planning metric when modelling their office space needs. This strongly suggests that most organisations are failing to recognise those benefits. The other major contrary indicator is that business travel, with all its attendant problems of cost, time and environmental impact, has grown in the last decade just as fast as in previous decades. We are now losing 1.4 million hours per day sitting in traffic. Much of this is work related travel (commuters and people attending business meetings). The trains are full and growth in regional airlines is, in large, part driven by the needs of business travellers.

We now have 2.1 million home based workers and another 8 million who regularly work 1 or 2 days per week at home, but a recent survey, sponsored by the Department of Work and Pensions in the UK, found that, whilst 25% of those surveyed expressed a preference for home based work, only 13% had an employer with a home working program.

Clearly, significant progress has been made but there is a great deal still to do.

The business benefits flexible working can deliver

There are now many case studies which document the business benefits of flexible working and these can be summarised as:

- Reduced costs
- Increased productivity
- Increased customer service levels
- Improved employee moral

In the UK, each office desk saved (14 m²) is currently valued, on average, at £12 K. Whilst improvements in productivity range quite widely, a recent report from a major international company put the benefit at 1.2 hours per day and valued this at £90 per worker per day.

Without flexible work, each office employee requires a fully serviced desk and that cost can range from £5K to £20K. A flexible work program will reduce the 1:1 planning metric to 1:n planning metric ($n < 1$). For example, if you were to achieve a 10% reduction in work space cost ($n=0.9$) then, for each 100 employees, you would expect to return £120,000 in cost savings and £180,000 per annum in improved productivity.

However, to achieve these benefits requires:

- Management support
- An appropriate implementation strategy

- Good planning
- Effective transition management and training
- Appropriate technology platform and services

Flexible Working Styles

As in many aspects of modern work, care must be taken when planning flexible work programs that we match them to the organisation needs. It is not always appropriate to have significant workers home based. For example, this has been true for many call centre staff. Modern telephony and ubiquitous broadband access are rapidly changing this. The biggest impact and benefit is still for customer facing workers and professionals. The criteria to look for are areas where work is measured on outcomes and not necessarily on attendance (Sales, Projects, Field Service) and where tasks can be delivered and executed or supported by modern computer and telephony systems.

Flexible work programs are called by many names and in large organisations many or most will be in use throughout the business. They are now well accepted in large and small commercial and public sector organisations. They include:

- Hot desking
- Mobile Working
- Sales Force Automation
- Field Force Automation
- Home working
- Site based working

Most professional and administrative office workers will have exposure to some or all of these.

What they have in common is that the worker may often have no permanent assignment of a desk in a company's office. As a consequence, the worker is likely to have data and voice needs as follows:

- A single phone number (that will find them at home, on the mobile, at the hot desk or will pass the call to a colleague or to their messaging service)
- Tele and Video Conferencing
- Web Conferencing (data and application sharing plus messaging and audio conferencing)
- Easy access to all messages types (email, voice mail and fax)
- Easy access to organizational information and applications (Intranet)
- Seamless working between office, road and home
- Be able to use any device from any network

Modern CTI applications, running on a Windows Server can be installed to provide these capabilities, the applications involved are

- Single Number/personal number
- Voice mail
- SMS messaging
- Automatic Call Distribution (ACD-group working)

- Interactive Voice Response (IVR)
- Teleconferencing

Because these applications can be server based they are PBX independent and CTI server can be integrated with any of the standard PBXs so that the functions are provided in a seamless manner. It is also possible to provide these functions using a hosted service and today this can be either TDM (circuit switch) based or IP based.

A wide variety of hosted services are now available to provide Web based conferencing for a very modest monthly outlay. These services range in price and scale and can include both video and audio links and the ability to host very large audiences in the many hundreds or thousands for large marketing events. Alternatively, a number of telephony, messaging and conferencing applications are available for purchase and installation into the enterprise infrastructure.

Key technologies to deliver flexible working

There are a number of technology drivers which directly support Flexible Working infrastructures as follows:

- Ubiquitous broadband connection (Voice, Business Application access and Conferencing for home based workers)
- Wireless Networks (simplify office and home networking)
- Mobile Networks (GPRS¹ and 3G² for easy access at home or on the move)
- IP Telephony (low cost audio conferencing and telephony applications access)
- Hosted services (a service delivered via your internet connection)

Broadband services are now available to 95% of UK homes and, to date, the UK has 4 million broadband users (Q4 2004) and reports say this is growing at 75,000 per week. By the end of 2005 the standard service will be 2Mb/second. Low cost wireless routers mean that home based LANs are now quite common. Many home offices are now fully equipped and are, therefore, able to offer home based workers data and voice infrastructure as good or better that they will have in the office.

For the mobile workers and the roaming professionals such as sales, service delivery and logistics staff, GPRS and 3G data services now mean that Laptop, Handheld and Cab based computers now have network coverage in all but the most remote and hilly areas. 3G is already emerging as the main standard here and the GPRS services are expected to be phased out in the near term.

Historically, larger organisations with existing telephone networks could easily add advanced telephony applications by adding Telephony Servers which bridge their voice and data networks. The users could then interact to manage their inbound phone calls from either a phone handset or from a browser. The only problem with this technology was that the cost of the system was generally beyond most small and mid sized organisations. This potential problem has been resolved by the operation cost based model provided by hosted services today.

¹ GPRS is the GSM mobile data standard which offers connections speeds typically to 28Kb/sec

² 3G is the third generation mobile standard that offers data speed between ISDN and ADSL broadband

Exciting new developments in IP Telephony³ (IPT) mean that new buildings and smaller organisations which have no or very little conventional telephony infrastructure (PBXs and Telephone Circuits) can skip directly to the new generation of IPT technology which is SIP⁴ based. This means that all telephone calls can be connected over the same network that carries an organisation's data traffic.

An IP telephone set can plug directly into the office LAN. A service provider can switch calls to and from the PSTN and provide least cost routing, making calls at a fraction of the cost of the traditional telecoms vendors. Voice traffic arrives down the IP pipe just like any other Internet traffic. It is already routed to the IP phone so there is no need for PABX equipment, or the expensive circuits to connect to the PSTN.

The new generation of IPT services can also supply the necessary telephony applications which are now essential to the implementation of effective Flexible Work programmes.

IP Telephony based services and applications are now available on an ASP⁵ basis and provisioned per employee per month per service. This move towards a hosted service environment has many advantages:

- No start-up investment
- No technology risks
- Instantly deployable
- Scalable up and down
- Affordable by all

In short, we now have technology to affordably deliver all the necessary voice and data services for flexible workstyles, including home working or mobile working to large groups, small groups or individuals.

Key Applications

Key applications to enable flexible working include:

- Browser based applications
- Intelligent Telephony Applications (Single Number/Personal Number, Call Handling, Messaging, Voice Mail)
- Conferencing applications (Audio and Video, Application Sharing, Demos and Presentations)

Enterprise applications have generally moved from Client/Server to Web based and this has dramatically affected the accessibility and usability of such applications by 'remote' users to the extent that, if such applications are designed properly, they can be used via slower dial-up connections. From a browser on a broadband connection they will work as well or better than from an office LAN. So we do not have to be in the 'back office' to work on the back office applications. The other great advantage is that there is no need to support many hundreds of

³ Internet Protocol which is used to transport data traffic over the office networks and over the Internet

⁴ Session Initiation Protocol which is now the key Internet standard for telephony. Replaces H323.

⁵ ASP- Application Service Provider is a company which hosts applications and offers them on a monthly subscription basis.

remote client applications with all the attendant costs and problems. The application is maintained and updated centrally and the user gets the benefit of the latest software each time they 'visit' the application.

When we are on the road, the 'front office' applications are much more accessible via Laptops/Smart Phones/PDAs (using 3G or GPRS data connections).

Customers calling the business card 'single number' will be routed to whatever phone service the subscriber is presently available on. If he or she is in a meeting then calls will route to a messaging application, help desk or other team member.

Inbound calls to a contact or call centre can be managed and distributed to 'in house' agents or agents working from home (on a broadband connection).

Call distribution applications can manage and route calls to people working in mobile and distributed teams with similar ease and based on whatever business rules apply.

Audio and video conferencing has been around and popular for over 10 years. However, in the last few years a number of very good Web based tools have arrived which have tremendous impact on flexible working by providing:

- Web based meeting and conferencing (remote users can join a shared session)
- Support for presentation graphics (we can present our slides remotely)
- Application sharing (we can demo our products remotely)
- Shared session (we can share an application such as a whiteboard or spreadsheet)
- We can manage audience participation (remote participants can raise an 'electronic hand' and ask a question)
- We can talk across an integrated or companion IP Telephony audio channel and or Video channel
- We can pass control of a shared application
- We can take control of a remote PC

These new Web tools will have a very profound effect in the way most of us work and a couple of examples will help make the point.

At the core of most sales visits we need to talk, present and demo. All of this can now be done very professionally without the need to spend many hours per week getting to a customer site. Moreover, the prospective customer group don't have to get to an agreed common location. All meeting participants can stay where they normally work. They can see and hear each other, the presenter, the slides and the demo. The other benefit is the easier diary synchronisation – its easier for people to find an hour or perhaps two 'at their desk' for a common session. Face to face meetings will, in the longer term, be reserved and targeted for important events, networking, customer information gathering, and the establishment of trust.

Training sessions like sales meetings involve talking, presenting, questioning, demos and discussion. These can be done remotely. The presenter can be remote from the students and the students can also be remote from each other.

Hosted versus Enterprise VoIP and Applications

When companies consider the implementation of IP Telephony, they may be interested in some or all of the components and some or all of the applications. Large enterprises with lots of telephones spread over widely distributed sites will often be interested in developing a strategy to implement the IP components in parts or all of their infrastructure. The main drivers have been convergence and the migration from existing TDM components to equivalent IP components with a target to achieve a fully converged IP network for all their voice traffic. This change in the enterprise is rarely a step change and is more commonly working on a migration within a published time frame which could be anything from 1 to 5 years. This process is now well established and few large organisations will today be unaware of the move towards IP Telephony.

Mid to Small organisations have less sites, smaller numbers of employees and much less cost tied up in existing infrastructure. They are less driven by cost savings and more value added driven. Their starting point is more likely to be with the applications components, although all will of course be interested in saving money on their phone bill. By the same token, large enterprises are also interested in the deployment of the applications components which will improve productivity and service quality.

The large organisation will probably struggle to deliver applications consistently across distributed functions such as sales and service groups, which may work on different manufacturers' switches offering, sometimes, no support or support for a different implementation of the same set of functions. Large enterprises are currently driven by the need to reduce infrastructure cost and are likely to be embarked on a multi-year infrastructure convergence program which, typically, might look like:

- Enable major switch locations with IP trunks
- All new sites will have IP phones (off the Cat 5 wiring)
- Implement single/personal numbers for highly mobile staff and for all hot-desking staff (reduces moves & changes costs)
- Start replacing older TDM switches with new IP switches and application suites
- Voice support groups are merged and or replaced by IT support staff
- Implement IP extensions for home based staff on their broadband IP connections

Smaller companies are likely to move quickly where they need to implement an application for example:

- Sales Automation
- Contact Centre
- Support for home based working
- Tele conferencing

Conclusion

Today, business is under pressure to support the 'Work Life Balance' whilst at the same time exploiting existing investment and advancing technology. There is more regulation: Paternity and Maternity Leave, Working Time Directives, Age Discrimination. Some issues don't get better, such as the working commute and the skills shortages. The work never seems to be where the available people are. The amount of time and money which an organisation spends on travel will continue to be a focus for better ways to work to save cost and be more productive.

All of these will only accelerate the trend to more flexible work patterns:

- part time working
- home based working (part home, part office, part customer site)
- peripatetic working (from office to office)
- distributed working (team working at a distance)
- mobile working (the road warrior)
- remote (Web based) meetings and training

Organisations will continue to need investment in:

- voice services and applications
- web based conferencing
- web interfaces to their enterprise applications for front and back office

Where companies have existing infrastructure, a careful strategy to provide new applications and exploit the benefits inherent in IP Telephony will often be the obvious route forward.

However, large and small organisations are likely to see the benefits for hosted services as apposed to buying, installing and operating which has been the historic norm. Furthermore, hosted services have unique advantages whenever:

- budgets are tight
- things need to be done quickly
- we need to proceed with a pilot or a demonstration of capability

How can TeleWare help?

TeleWare has enabled some of the earliest and most ambitious flexible work programs from their inception going back almost 15 years. Don't take our word for it but simply look at our customer list⁶ which today includes 23% of the FTSE 100. Many of them feature in some the best known flexible work case studies in recent years.

We provide:

- Single/Personal Number Telephony
- Rule based call distribution
- Interactive Voice Reponse
- Audio Conferencing

⁶ www.teleware.com

- Unified Messaging
- IP Telephony (Soft Switch)
- Hosted Services for telephony, messaging, call management and routing
- Graphical applications interface
- Software Development Kit

We support our products and services with a 24x7 support centre at our Thirsk, North Yorkshire HQ. We have a large software engineering group dedicated to keeping our products where they have always been which is at the forefront of voice technology. Our sales team, working with our channel partners, can help in defining solutions appropriate for your organisation.

Our IP service hosting centre, based in London Docklands, can deliver our range of products on a per user, per application per month basis and on a fully resilient, high availability platform. Service deployment is rapid and scaleable, which means we can start pilot projects with very little lead time and scale these to implementations, deploying to thousands of users.

We are ISO9000 certified as well as being a Microsoft Certified Solution Partner.

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Headquarters/Registered Office
TeleWare plc
TeleWare House, York Road, Thirsk,
North Yorkshire, YO7 3BX, UK
T: +44 (0) 1845 526830 F: +44 (0) 1845 522165

Asia Pacific Regional Sales Office
TeleWare NZ Ltd
Level 8, TeRenCo Finance House, 86 Victoria Street,
Wellington, PO Box 1956, New Zealand
T/F: +64 (9) 360 6881

Registered in England No 4756742

E: enquiry@teleware.com

W: www.teleware.com