Intelligent IT support for a digital world



Digital Workplace Services

shaping tomorrow with you

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Intelligent Engineering – Predictive IT Support A Vision for the Future

The workplace continues to develop at a dramatic pace. People demand more of the services they consume. And they expect things to work first time, every time.

We're in an era where value comes from connectivity. But the technology that delivers it does not necessarily matter to a user. ICT is indistinguishable between product, service, process and infrastructure; and the way we provide value through services has changed too.

Technology is amplifying people's determination to reach their goals; whether that's improving quality of life or how effective they are at work.

With four generations in the workplace, the way we provide services is changing. People expect choice in how they engage with services. And they want those services to be smart enough to know who they are and what they need.

In this world, insight turns data into value. If organizations want to create a good value support service, they'll have to use creative intelligence to build knowledge and insight into their support environment. This will allow them to sense, analyze and respond to the users in a proactive and personalized way. Several innovations, including augmented reality (AR) and virtual agents, have emerged to help give people the option of fixing issues themselves, while keeping work disruption to a minimum. This both improves service levels and makes them more predictable.

If engineering services want to keep up with the evolution of the workplace, the way we deliver them has to completely change. They need to be proactive rather than reactive. And we need to see them as a business enabler, not a cost of failure.

These shifts are just around the corner. Which is why we've shaped our vision of The Digital Workplace of the Future around them. Our vision is one of a simplified, intelligent workplace where everything just works. This workplace is powered by data, providing personalized, contextual and analytics-based artificial intelligence.

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Smarter Services. Empowered Users.

Standard reactive and generic 'break fix' services have become a thing of the past. Focus is shifting from resolving problems to predicting and preventing them, using service intelligence. And that relies on the analytical insight that you can gain from data.

Cognitive technologies now exist that can learn from data as well as process it. This makes autonomic preventive services a possibility. Rather than a manual task, problem-solving becomes an automatic one.

For the support services of the near future, user choice will be key. People will have the option of getting their support by walking up to a consumer-style Connect IT Bar. Or they could fix the issue themselves using AR. Or, if they want to go down the traditional route, they can get an engineer to attend at a convenient time, identified using intelligence.

Intelligent services converge data to understand the story behind each service failure. Then it uses that data to deliver an impact assessment and response. And it's not just about devices. It's about putting the user's context at the heart of the service, giving them support designed around when and how they want to consume it.

The service will be seamless, happening behind simple interfaces, real-time visualizations for a transparent view and automated processes. It won't distinguish between hardware and software problems. Instead, it will focus on helping people be as productive as possible, and giving them choice on how they receive support.

In many cases, people won't even be aware of the IT support that is keeping them working. If you know when and where problems will strike, you can get there first – creating invisible support.

And we're moving closer and closer to making that service borderless. Eventually, it will be delivered in the same way, anywhere in the world. Combined with information shared as a single view, this will help companies continuously improve their services. It will support mobility and growth that is aligned to organizational change.

Ultimately, the need for the traditional engineers will diminish. Future generations with new tools will have a new view of what the role is. Tomorrow's engineers will give proactive advice to end users. And they'll give premium support for critical equipment such as wearable devices and virtual services.

Automated fix and predictive analytics will help businesses know where to invest and improve their services. And we won't measure our performance on time to respond. It will be based on availability and user experience.

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Key Trends

As well as contextual and empowered services, there are several significant trends that will affect us all. Some are so-called 'megatrends'. Some are sociological. Some are purely technology-based. In the next section, we consider some of the most important ones.



75% of the workforce will be millennials by 2025 Today's user is more informed, more knowledgeable and more empowered than ever before. And expectation is a powerful force. Younger and future generations demand 'always on' connectivity. They need the tools to support their role and access to multiple channels, so they can get problems resolved at a convenient time.



72% of organizations say customer experience is their top priority It clearly supports growth and employee retention. Low disruption as well as informed, simple engagement is key to a positive service experience.

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92% of Service Executives say change is needed Nearly all Service Executives said they need to transform their service models to keep up **OOD** with consumer needs.



50bn 'things' will be connected to the Internet by 2022 All these things will need to be supported. And we'll need to understand how they impact our ability to deliver value to our business and users.

> 83% of organizations will work with a partner The vast majority of organizations will work with a partner to lay the foundations for a more compelling and personalized workplace experience



84% of millennial consumers use self-service

Most millennial consumers have used a self-service portal for customer service. The immersive nature of AR/VR apps makes it the ultimate self-service experience.

These are just a few of the global shifts that are transforming how we live and work. At the same time, the global population will rise, putting greater demands on dwindling resources. We'll also see more people moving to our cities. Technology will be crucial to how we respond to the challenges these trends will present, such as providing sustainable energy and data-led healthcare.

By understanding the impact these changes will have on society, we can predict how our working lives will evolve. With a clear image of the Workplace of the Future, we can then shape IT support so that it helps people be as productive as possible.

What will Support Services look like in the future?

In this section, we'll look at the key features of Intelligent Support and how it works in a little more detail.

From resolution to prevention

The focus of engineering services is shifting from problem resolution to predictive and preventative support underpinned by data analytics. Today, technical maintenances services are often perceived as a 'cost of failure'. But tomorrow, they will be seen as an 'intelligent business enabler'.



Less disruption for your staff

As engineering services move to being more preventative and predictive, engineering activities are managed at a time to suit users and cause minimum disruption but can also be batched to make sure that the services are effective and cost-efficient.

Take a look at the key improvements Intelligent Engineering brings

business insight

Real-time dashboards and

- Improved Capacity and Demand Management
- Service Improvement Plans underpinned by data (e.g. when to refresh)
- Calls moved back to next day with business justification from analysis
- More intuitive reports for Service Delivery Managers and less reliance on spreadsheets
- Improved stock management and logistics arising from better call diagnosis and 'shift left' support

- Flexible commercial models based on reducing call volumes, callouts, refreshes and alternative delivery approaches
- Reduced end-user downtime through more remote and automated responses
- Better SLA compliance based on understanding and proactive warning of issues
- Increased automation of monitoring and fixing and increased remote fixing to avoid any disruption as an end-user receives a remote fix; proactive maintenance means calls can be bundled and visits batched
- A Blueprint for Digital Innovation

How Intelligent Engineering works

Intelligent Engineering is all about predicting when issues are likely to occur, and knowing the fastest, least disruptive ways to stop them.

Let's look at some key features.

Turning intelligence into improvements

Intelligent support doesn't just fix current problems with things like logistics, customer service, and delivery. It also presents other ways of increasing the availability of IT. This technology allows us to use innovations in service delivery, closing the loop between the customer and traditional service operations.

Service intelligence can be shown on simple dashboards to give clear information about the user experience and accelerated service improvement.

A transparent view

Real-time operational intelligence gives managers insight into their whole service operation. Meanwhile, end-to-end field service management (FSM) automates the entire service supply chain. This gives organizations a transparent view of availability and all service incidents in progress.

Faster service times

When you combine automation, IoT technology and intelligent FSM software, you can automatically dispatch engineers when an asset needs a service. This improves the customer experience and saves costs on wasted visits.

Accurate demand forecasting

With big data technology, we can predict demand. Through real-time data and advanced forecasting algorithms we are able to choose the best window for maintenance or service visits. For example, in retail, we can avoid peak trading times. This is a better approach than relying on historical information or regression modeling. It means less money needs to be spent on spares, and you can target fixes based on business impact.

Using this insight, we can also choose the optimal time to complete upgrades, make proactive changes or refresh estates. In the case of retail, for example, we can choose a time to refresh POS devices that keeps downtime to a minimum and availability as high as possible.

With intelligent support, issues are caught before they're problems. Data is turned into insights. And routine work just happens (without slowing down your business). It's a far more efficient service, based on the latest technologies.

Experiencing Intelligent Engineering Empowering users to fix problems

Employee expectations are changing. They want the support they get at work to mirror the support they get as a consumer. They want to choose how they engage with support, and get it at a time that suits them. Making this kind of support available is key to a more productive workforce.

How personalized IT support will work

What can you expect from a future where support services understand you and your preferences? Here are some examples:

■ When an engineer is called out, an app will tell people their name, where they are, and when they'll arrive, personalizing the service.

■ Analytics will show how each person has used the service – so they don't have to keep repeating key information. They also ensure that we can fix issues first time, and at minimal cost.

• On a wider organizational level, companies will have a clear view of their facilities and real time information, such as trading patterns and customer behaviour. And they'll use this information to see exactly how support services will impact their business.

■ Transparency and keeping users informed will be the expected norm. Using visualization tools, users' service incidents and progress will be tracked at a user, region and global level to show disruption and the progress to resolution as it happens.

A new, user-centric world for support services

The days of waiting for an engineer to come to you are over. With the Connect IT Bar, you can get support at a time that's convenient for you. It provides the personal, flexible, highquality IT support that many expect today, and will become the standard for the future.

The 'bar' moves away from the traditional break fix model to offer an enhanced, consumer-style face-to-face professional service, which converges several services. It's designed with the user in mind. Engineers greet people on arrival, triage problems, then offer a set of solutions. These could be anything from an instant fix to a replacement device.

Other services from the bar include inductions for new joiners, training, and guaranteeing all connected devices are ready for users. This avoids wasted time, and enables employees to be productive from day one. 'Bar' staff training ensures they have a good balance of customer service skills and technical ability. So, they can help people in a friendly and professional manner.

The Connect IT Bar keeps everything running smoothly. It helps people stay productive and ensures operations are always on, in a way that exceeds user expectations.





The rise of augmented reality (AR)

In the coming years, we're likely to see a lot more of AR in the field service industry. The technology industry, of which field service is a subset, is already seen as the biggest economic driver of AR. And industry forecasters anticipate that spending on AR technology will exceed \$100 million by 2020.

While we're likely to continue to see new developments in AR/VR, companies will generally use this technology in one of two ways:

- Supporting an existing installed base of equipment
- Embedded in the design of new products

We're also likely to find different versions of AR deployed in the field. For example, in certain service environments, like oil and gas or utilities, companies might be integrating AR applications with rugged wearable devices to deliver a hands-free environment.

As technology improves, it is very likely that consumers will buy AR to use in their business in much the same way they purchase their own business laptops and smartphones.

This will completely change service support. It will trigger the move from engineer to self-fix for the kit which is critical to customer experience.

Understanding the user with Intelligent Engineering

Tooling and technology allow the support team to understand more about the user. This includes who the user is, the environment they are working in, the equipment they are using and other specific insights. These insights could range from the hours they're working, access requirements, and any blackout windows to be observed (i.e. busy times in a retailer or hospitality environment). With this information, engineers can ensure a quality service experience, achieve a fix first time and minimize disruption and downtime. Service is in tune with individual requirements.

A consumer experience in the workplace

Personalization will be key to supporting generational diversity. Al will enhance support services by building a better understanding of people's needs and working patterns. This enables a 'push' service, with proactive recommendations on convenient times for appointments, fixes or support.

Predictive support is all about building knowledge through data collected from multiple sources. This includes ticket, user, product and repair data and where appropriate, industry specific data, such as trading or productivity data. This allows us to provide insight into targeted fixes, user education and proactive maintenance. Ultimately, this reduces reactive ticket data and disruptive down time.



Tomorrow's IT support will know you better

Future-gazing can be entertaining but it's much more than a diversion. It is also essential to enable organizations to plan for what is on the horizon and for what is waiting to appear. However, understanding the impact of the future once you have seen or predicted it, becomes the key towards building your support vision. Understanding where technologies will be influential, what their value or disruptive properties might be and then gauging the behaviors of people in relation to these trends, enables your vision to take shape.

A one-size-fits-all approach to IT will soon be a thing of the past. The support experience of the future will be driven by choice. It will give people the freedom to engage with it how they want – wherever they are in the world.

More companies will need the insight to predict when incidents will happen and the impact they'll have. And technology will be vital to achieving this vision. You'll need to use analytics, predictive technology and tools such as AR.

Cognitive intelligence presents a chance to prevent problems from happening in the first place. This will both enhance service levels and make them more dependable. It's the only way to act ahead of time and meet the 'always on' expectations of customers. The need to reduce downtime, improve availability and give people new channels to stay informed or self-serve is nothing new.

But Intelligent Engineering gives you a powerful way to make your service more proactive, drive faster continuous service improvement, and help people be as productive as possible.

With the right tools in place, support can start to add value instead of simply being a cost to a business.



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