



# The Benefits of Using a Hosting Service to deploy a Mission Critical System

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A Case Study featuring the Confirm Anywhere Deployment at  
Surrey County Council



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July 2002

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## Introduction

In June 2002 Surrey County Council became the first UK Council to go live with the Confirm Anywhere deployment, a brand new service where Southbank host and manage the entire delivery of the Confirm system on behalf of the client.

This Case Study investigates the key benefits derived through vertical application service provision of a mission critical system, particularly the hosting of the Confirm application by Southbank on behalf of Surrey County Council.

## Surrey County Council - Structure

The county of Surrey is administered by Surrey County Council which is based in Kingston-upon-Thames. County Hall is responsible for the provision of countywide services such as education, social services and highways. The county is divided into 11 districts or Borough Councils, which are responsible for delivering services at a local level.

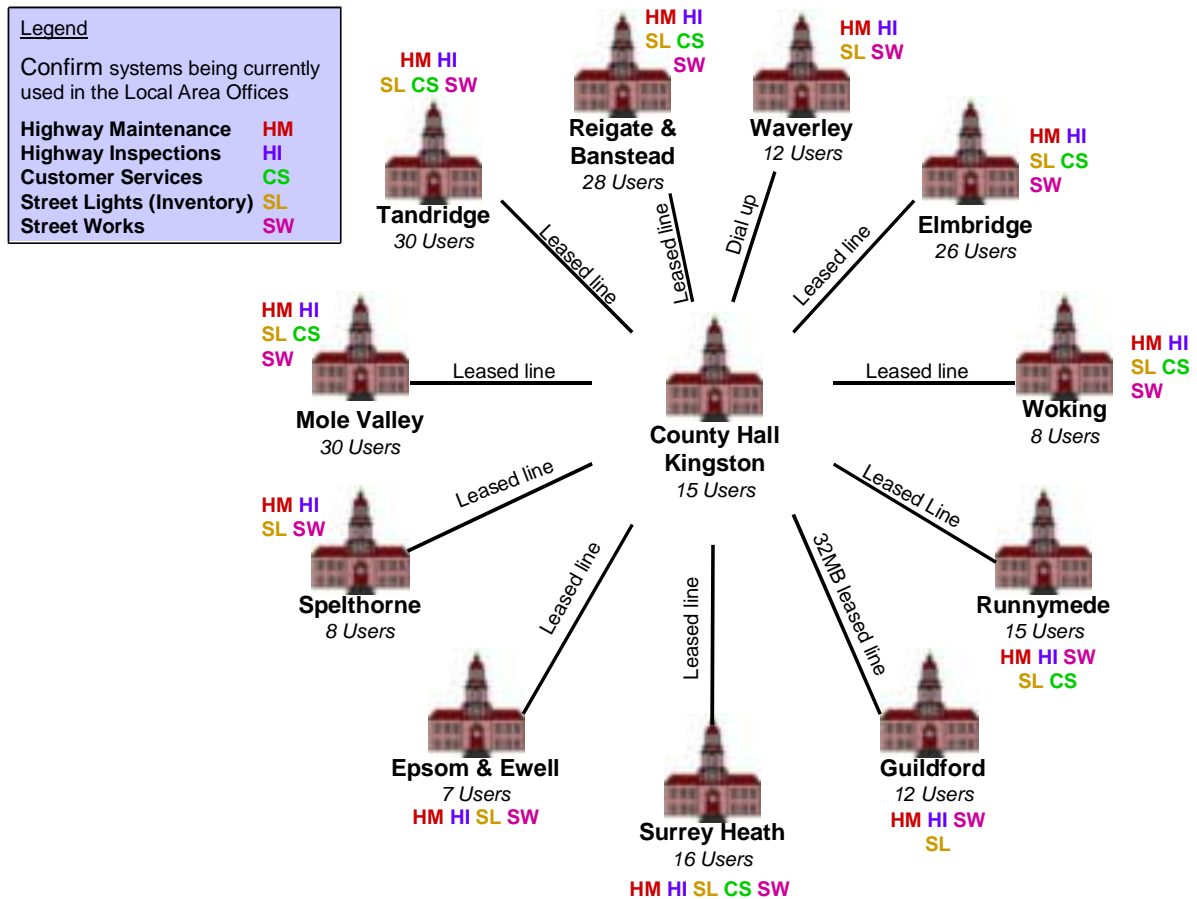


The County Council is the Highways Authority and until recently had an Agency Agreement which devolved the highway functions, such as inspections, maintenance management and customer services to the 11 Borough Councils.

In April 2002, as a result of recommendations in a Best Value review, the Agreements were revoked. Instead, Local Area Offices were created within each district from which Local Transportation Teams working directly for the County Council now operate.

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Confirm is currently used by the Transportation Services sector of the Sustainable Development Division to assist with Highways Management, Inspections, Street Works Management, maintaining the Street Lighting Inventory and logging and tracking Customer Issues. The diagram illustrates the deployment of Confirm together with the functionality and number of users at each Local Area Office.



## Benefits of Confirm Anywhere Deployment

Since 1996 Confirm has performed a mission critical role at the Council with proven success.

Roger Williams is Principal Engineer (Operations) for the services sector covering Transportation and Highways Maintenance and takes overall responsibility for a number of systems, including Confirm. He says, "For a complex system with a vast number of users performing multiple daily transactions Confirm has been incredibly reliable."

However Roger recognised the Council would derive a number of important benefits by moving to a Confirm Anywhere deployment.

### High Availability of Mission Critical System

In a typical Client/Server installation the upgrade procedure requires an Engineer to visit every PC, necessitating a significant amount of system down time. Under the Confirm Anywhere deployment upgrades are instantaneous and are scheduled to cause minimal disruption to users. They can take place over night and Southbank Engineers ensure the changeover is smooth and seamless by taking responsibility for all aspects including testing.

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## Unified Empathy for IT and Application Support

Support issues often require a combination of system, database and application expertise. Under a traditional deployment these areas of expertise are supplied by two or more organisations; application support by Southbank and IT support by an internal Database Administrator. Problems such as sporadic demand, securing scarce IT resource, communication and differing organisation structures can lead to unnecessary delay and complications. To create the most favourable conditions for issue resolution and reduce the potential for divided empathy, this expertise needs to be delivered from a single point of reference.

## High Performance over Low Bandwidth

In terms of speed of data retrieval and transfer, Confirm Anywhere comprehensively outperforms the system in a traditional deployment. Confirm operates significantly faster over a low Bandwidth, which allows the organisation to enjoy vastly improved performance without upgrading the system infrastructure.

## Enhanced Application Support

The Confirm Anywhere deployment allows for far speedier issue resolution. Southbank Support Services Consultants are able to access the client database directly so the user need not resort to lengthy explanations over the phone or email. Where necessary they can take control of the application and guide the user around the system. Therefore there is reduced potential for delay and disruption caused by the traditional method of issue resolution where the Consultant first attempts to re-create the problem on an unrelated dataset or requiring an export of the client database.

## Easily scaleable architecture, performance and costs

The architecture of the Confirm Anywhere facility is one that is based on ease of growth in terms of numbers of users. It is extremely easy and cost effective for Southbank to add further application servers providing a smooth investment / cost profile, where a systems use is likely to grow.

Southbank can also 'pool' costs in terms of Failover and Disaster Recover situations. The configuration of Application and Database Servers has been standardised such that hot spares are configured and running for immediate substitution in the unlikely event of a complete Server failure.

## Stable Costs – Lowering overall Cost of Ownership

Although the cost of infrastructure is often unclear or indeed unknown for systems that are operational, it is likely that as a system grows or continues to be used over a long period of time, investment or reinvestment in Hardware, Operating Systems and Networking equipment are an inevitability. Southbank understand precisely the appropriate equipment to purchase, can purchase aggressively by pooling costs across multiple clients and as mentioned above, pool spares and the management of the facility across multiple clients, giving tangible economies of scale.

## Deployment Options

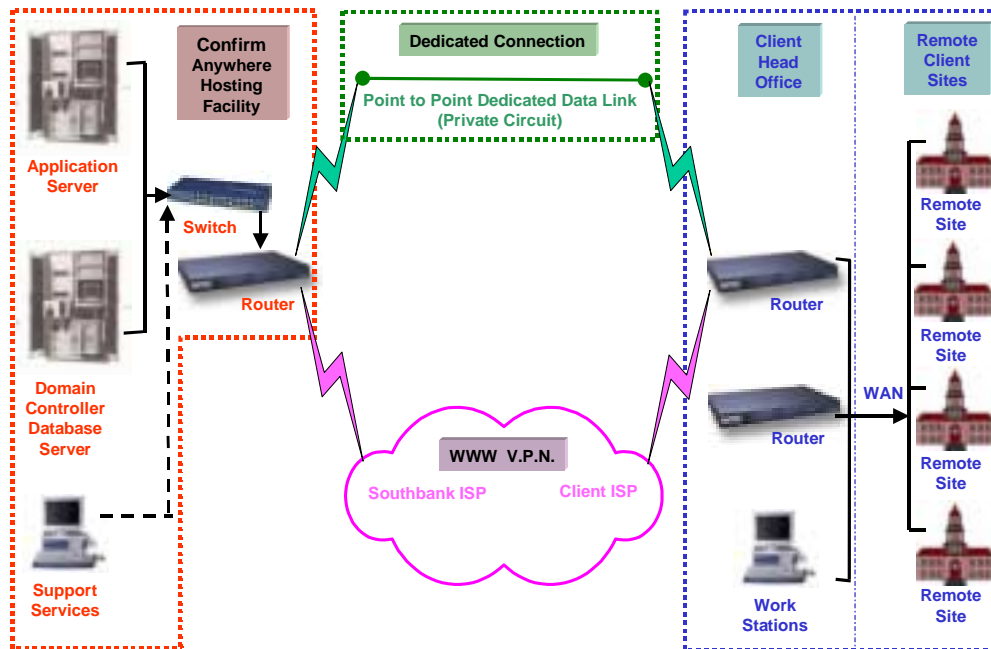
As with a standard network configuration, the Southbank data centre contains servers that host the Confirm application and the database. Utilising the latest in thin client deployment technology the application containing the configuration and data are broadcast via a telecommunications network. End users at Surrey sitting at their PCs utilise Citrix technology to connect to the Southbank data centre and access the application.

There are two distinct deployment options designed to meet varying security and flexibility requirements.

- In the first option a dedicated communication link provides a dedicated server in the Southbank data centre. Communication is via a point-to-point data link and ensures complete security and performance reliability.
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- In the second option communication is via a Virtual Private Network (VPN), a partitioned section of the internet set aside for accessing Confirm. In some cases this is more cost effective than leasing a dedicated telecommunications network as it utilises the connection to the existing Internet Service Provider.

Both options are illustrated in the following diagram:



Convinced of need for the increased security and performance offered by Option 1, Surrey opted for deployment via the Dedicated Connection.

## Confirm Anywhere – Live

At the time of writing Confirm Anywhere has been operating live for over a month. Even at this early stage there is evidence to show that the problems caused by the previous deployment have been dramatically alleviated and Surrey are beginning to reap business benefit from the system.

Front-line support is provided by Emma Chambers the Project Manager at County Hall who takes responsibility for the day-to-day running of the system and internal training, as well as looking at future initiatives and roll-outs. She remembers a specific example when she called on the Support Team. "We had a discrepancy where the payment value was different from the value in the actual spend. Once I had given a brief description to the Help Desk, Southbank simply looked at our data, saw the problem themselves and resolved it by writing some SQL. The real beauty of it was that Southbank administered the fix and it did not affect any of the users here in Surrey. I didn't have to get involved in applying the fix. All that is now Southbank's responsibility and they managed to resolve the issue quickly and painlessly."

In fact, Emma can supply few clear-cut examples of issues that have been resolved this way. "Not because there haven't been any", she says, "But because I don't have to get involved in them to the same extent. They get resolved behind the scenes and I don't need to know the detail."

Southbank and Surrey have signed a Service Level Agreement which states that issues will be investigated within 30 minutes of being raised and will be fixed within 8 working hours.

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So what about the divided empathy that caused delay in issue resolution under the old deployment? Roger believes the potential for conflict has been reduced. "There will always be an element of divided empathy as long as we at Surrey manage our own internal network. But generally nothing should slip through the cracks now Southbank have taken on responsibility for the server side of things and, more importantly have all the knowledge and expertise in-house required to deliver a complete solution."

The other issue for Roger was speed. "Some of our depots relied on ISDN lines or dial-up connections and the speed was diabolical. It's not right that somebody whose work necessitates being in the field should be penalised so badly for just doing their job. But the problem extended further than that. There were reports in the system which quite simply we did not dare run and critical reports such as Highway Occupation used to take 15 minutes to produce."

During the testing phase the system exceeded all expectations in terms of performance. "It went like a rocket", he says. "Reports that had previously taken 15 minutes to run now took 15 seconds. I was impressed."

One of Roger's biggest headaches was administering system upgrades at the 11 remote sites. "We had to visit every PC at every site in order to perform the upgrades and this often meant the system was down for up to four days at a time. It was such a nightmare that we would resist doing upgrades until they were absolutely necessary, preferring instead to live with workarounds in the system for months at a time." Now upgrades are timely and painless.

There have been other unanticipated benefits as well. Roger explains, "We migrated from ORACLE to Microsoft SQL Server and supplied Southbank with the copy of our database we wanted to migrate. They ran some tests which revealed a number of database errors which they then went on to correct. Had we not gone through this process those errors would have remained unnoticed for goodness knows how many months or years to come and there could have been serious consequences. Now it's good to know that our data is clean and I take great comfort in the thought that our data is being looked after by the people who wrote the system. It makes perfect sense to me."

## The Future

Surrey has recently received the results of the Best Value review. Roger says, "Confirm is our number one application and it's becoming more and more front-line. Over half of my interview with the Best Value Inspectors was spent discussing Confirm. We were delighted to be awarded a 2/4 which reflects an excellent potential to improve future service delivery." One of the areas Surrey have developed is the facility for members of the public to log issues and complaints via the web which are then automatically streamed into Confirm's works processes.

One key requirement for sustainable future growth is securing the support of the user community. Emma explains, "They need to be consulted and kept informed at each stage. We believed Confirm Anywhere was essentially a back office exercise which we thought would not effect the user community other than that their system would operate faster. However, procedures such as printing, saving and logging in changed under Confirm Anywhere but we weren't able to give them any forewarning of it. We would have increased user trust in the system if we had been able to produce a document outlining the changes prior to go-live. Still, this is something that future users of Confirm Anywhere will benefit from, because we've identified these issues by being the first ones to go through it"

Roger is optimistic about the future. When asked to consider what challenges he thought lay ahead he replied, "There is no doubt in my mind that Confirm Anywhere is going to take off amongst the existing and future Confirm user base. I think the main challenge is that Southbank contains the 'growing pains' and is able to recruit and retain the necessary expertise in-house to run multiple deployments. We have enjoyed a high level of support from Southbank which we are keen not to see diluted."

Roger concluded, "Moving to Confirm Anywhere was a step into the unknown, but we were happy to take the risk due to our trust in Southbank Systems. Taking this leap of faith has reaped its rewards and I would have no hesitation in recommending the benefits of the hosted service to other Southbank clients."

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