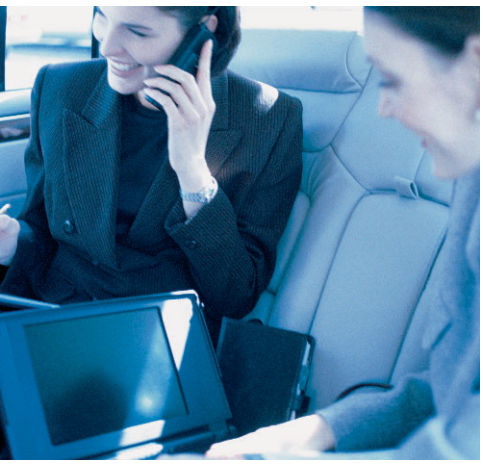
3G High-Speed Data for Enterprise

customer Testimonial

SanData IT group shares the business benefits it experienced during a pilot UMTS Network deployment in Germany

Lucent Technologies
Bell Labs Innovations





Background

This paper documents the SanData IT group, one of five companies engaged in piloting 3G services on a pre-commercial network in Europe.

Executive Summary

High-speed secure data access for employees on the road is increasingly acknowledged as the major advantage of 3G technology to enterprises. As a result, major 3G infrastructure vendors and network operators have a pressing need to:

- Identify those market segments that have most to gain from 3G technology
- Develop a clear business case for High-Speed Data for Enterprises (HSDe) that addresses the target markets
- Increase understanding of how 3G will be used in order to develop suites of products and services appropriate to each market segment

In preparation for a pilot 3G network build and in co-operation with T-Mobile, Lucent Technologies conducted an intensive research programme to assess these issues.

The research comprised two separate but linked aspects. Traditional questionnaires combined with face-to-face interviews and ROI modelling tools pioneered by Bell Labs were used to determine the value HSDe brings to the enterprises and how the operator needs to sell into this market segment. The outcome was used to inform the decision as to which types of companies would be the most likely to benefit from 3G services and in due course, five enterprises were invited to participate in the pilot.

This paper discusses the background and subsequent experience of one of the enterprises that took part.

SanData, a medium sized IT company, was one of the first to join the pilot and from the outset, its attitude towards HSDe was ambivalent. Wireless technology was perceived as a purely technical issue that, at best, would be an unnecessary disruption.

During the course of the pilot, the company's attitude shifted. Its employees became aware that 3G was not merely a technical issue but was a technology that could:

- Impact costs
- Improve technical and sales force effectiveness
- Provide a competitive advantage
- Create new opportunities, perhaps even new markets
- Free up customer facing expertise
- Create a better work/life balance for its employees

For both Lucent and T-Mobile the pilot has been invaluable as a learning exercise. The most important lesson highlights the need for continual focus upon the business case for the enterprise community. Like IT itself, HSDe doesn't only help enterprises improve what they already do - it opens up new possibilities. Accurately identifying these possibilities and then demonstrating them effectively to enterprises will reinforce the case for HSDe.

Company Profile

The subject of this paper is SanData, a medium-sized IT company with six offices regionally dispersed. Its core business is the supply, shipment and lifetime support of hardware and network systems.

The hardware supply sector is under severe price pressure from its competitors. The company has responded by widening its offering to include higher margin IT security services and eShops (electronic procurement), with the result that its ratio of hardware to services has shifted from 90:10 to 70:30.

SanData's "road warriors' comprise technicians and 11 systems sales consultants. The customer base is not widely dispersed and travel is limited, in the main, to the areas local to each company office.

The Sales Function

None of the sales consultants use wireless solutions presently but ISDN is available into the company offices.

On average a salesman spends:

- Ten hours per week preparing customer meetings
- Ten hours per week travelling to and from customer meetings and the home office of which 25 per cent might be saved using a wireless solution
- Eight hours per week on administrative work
- Eight hours per week with customers. The aim would be to increase this through time-savings elsewhere using wireless services
- One hour per week waiting for customers.
- €223 per month on travel of which 20-30 per cent might be saved
- 18 hours per week in the company office of which 60-70 per cent might be saved

The main benefit to a sales consultant of HSDe was perceived to be time gained from reduced travel. This reclaimed time would be spent improving customer relationships and developing higher margin sales opportunities.

Customers' close proximity to company offices was also cited as a factor in being able to process orders more rapidly.

The Technical Function

The following charts plot NPV and productivity gain against the start-up and variable costs of deploying HSDe services in the pilot company. The figures illustrating the value benefits of HSDe to the company have been drawn from entering the results of the interviews conducted during the research phase into the ROI tool developed by Bell Labs.

SanData employs both network and hardware technicians. Around a quarter are itinerant, operating from company offices, while the rest are based in the premises of large customers. None use wireless data today.

On average a technician spends:

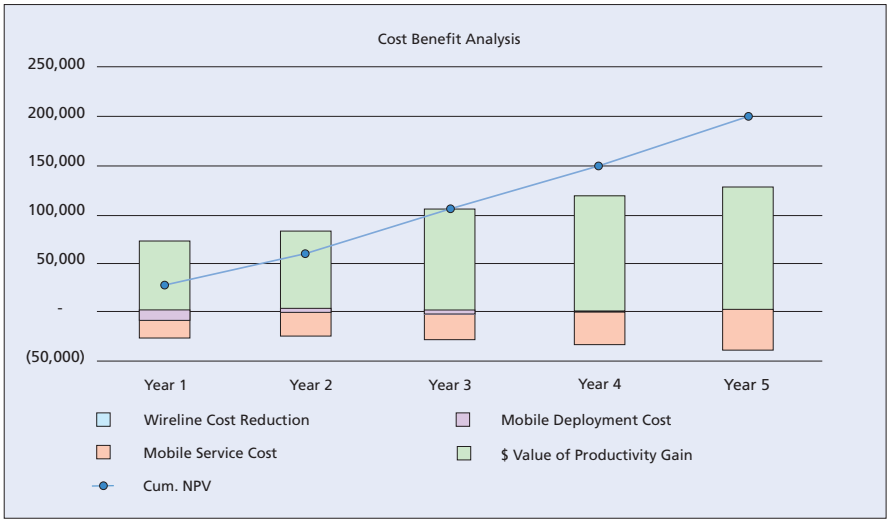
- Five hours per week talking with the dispatch centre from the field of which a wireless solution might save 30 minutes
- Ten hours travelling to and from job sites and to and from the company office
- 3.25 hours per week doing administrative work, most of which could be done from the field using a wireless solution
- 3.25 hours coping with not having the correct tools, software or documentation to hand. 50-75 per cent of this might be saved using a wireless solution
- €25 per week using ISDN where available and all of this could be saved
- €25 per week on mobile phone charges. A wireless solution might actually increase this due to more time being spent away from the office
- €128 in travel. The elimination of return visits to customers (through having access to drivers, documentation etc.) might save five - ten per cent of this
- €10 per week on printing costs of which 50 per cent might be saved
- Ten hours per week in the company office of which 50 per cent might be saved

A Wireless solution was not expected to bring additional benefits to the billing cycle or to revenues bought in by field technicians in the first phase of adoption.

Those technicians based in customer premises have no remote method of accessing their own enterprise data other than through hardware and software provided by their customers. Access and a common billing record are important to them.

Total monetary value of improvements in productivity and cost of operations due to MHSD					
	Year 1	Year 2	Year 3	Year 4	Years 5
Total number of MHSD users	11	13	16	19	20
Total productivity improvements value accross all job functions	67,236	83,347	104,025	117,726	126,860

Net value of adding MHSD					
	Year 1	Year 2	Year 3	Year 4	Years 5
Wireline cost reduction	1,874	2,333	2,952	3,430	3,748
Mobile Deployment Cost	(8,862)	(1,776)	(2,172)	(1,188)	(792)
Mobile service cost	(18,120)	(22,572)	(28,320)	(32,208)	(34,800)
$ Value of productivity Gain	67,236	83,347	104,025	117,726	126,860
Cum. NPV	26,079	62,239	105,185	152,115	200,506



Sales Person Assumptions

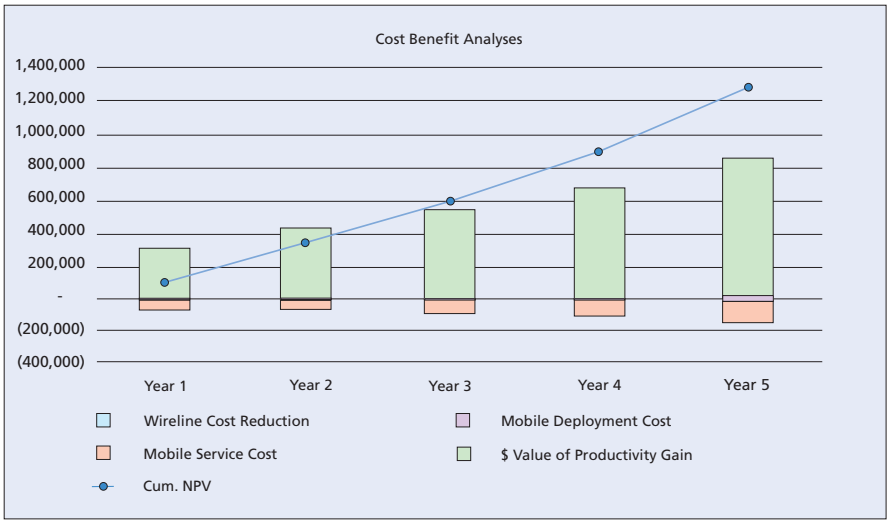
- Based on 20% proportion of the 100 assumed users after five years
- There is a growth rate of approx two staff every year
- Only a proportion of laptop costs can be attributed solely to wireless broadband needs (two out of nine necessary)
- Coverage at least covers the enterprise's customer base
- Unit of measurement for cost reduction and productivity is the more effective usage of time
- Monthly HSDe service cost of €150 with an activation cost of €100
- The Salesman uses the time saved constructively & to the benefit of the company

Results

- Average time saving per sales is 6.5%
- Total productivity improvements in the first year equal €67,236
- After five years the culmative NPV is over €200,000

Total monetary value of improvements in productivity and cost of operations due to MHSD					
	Year 1	Year 2	Year 3	Year 4	Years 5
Total number of MHSD users	29	40	51	64	80
Total productivity improvements value accross all job functions	300,339	416,632	532,924	674,161	842,701

Net value of adding MHSD					
	Year 1	Year 2	Year 3	Year 4	Years 5
Wireline cost reduction	6,027	7,751	9,476	11,995	14,993
Mobile Deployment Cost	(15,682)	(10,620)	(10,620)	(10,406)	(11,832)
Mobile service cost	(51,322)	(69,754)	(88,186)	(111,360)	(139,200)
$ Value of productivity Gain	300,339	416,632	532,924	674,161	842,701
Cum. NPV	148,177	350,994	600,070	901,881	1,261,779



Technician Assumptions

- Based on 80% proportion of the 100 assumed users after five years
- There is an adoption rate of approx 10-15% staff every year
- Only a proportion of laptop costs can be attributed solely to wireless broadband needs (eight out of 60 necessary)
- Coverage at least covers the enterprise's customer base
- Unit of measurement for cost reduction and productivity is the more effective usage of time
- Monthly HSDe service cost of €150 with an activation cost of €100
- The Salesman uses the time saved constructively & to the benefit of the company

Results

- Average time saving per technician is 12.4%
- Total productivity improvements in the first year is over €300,000
- After five years the culmative NPV is over €1.25m

Both Groups Assumptions

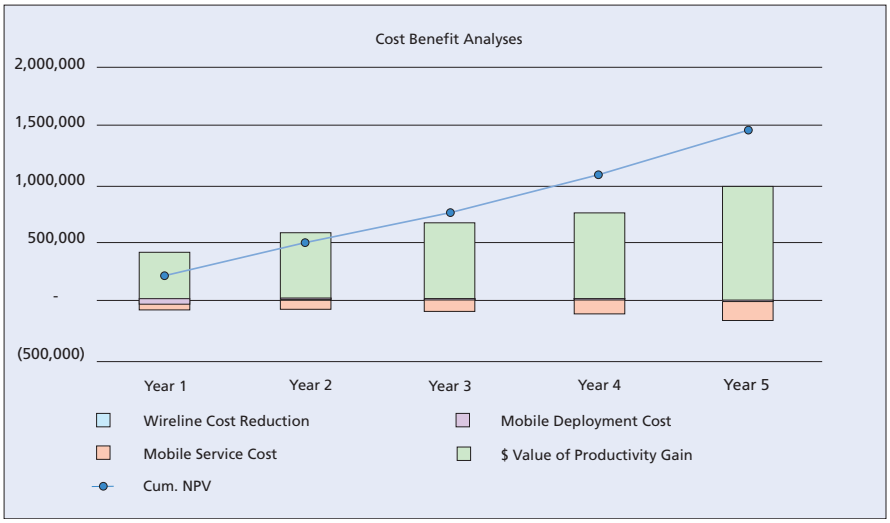
- Based on 50% of the organisation will be enabled by the end of year five
- Only and all of the sample population will be enabled in the first year
- Coverage at least covers the enterprise's customer base
- Unit of measurement for cost reduction and productivity is the more effective usage of time
- Monthly HSDe service cost of €150 with an activation cost of €100
- They use the time saved constructively & to the benefit of the company

Results

- Average time saving per employee is 11.3%
- Total productivity improvements in the first year are more than €375,000
- After five years the culmative NPV is nearly €1,500,000

Total monetary value of improvements in productivity and cost of operations due to MHSD					
	Year 1	Year 2	Year 3	Year 4	Years 5
Total number of MHSD users	39	55	68	80	100
Total productivity improvements value accross all job functions	378,905	537,913	662,017	775,649	969,561

Net value of adding MHSD					
	Year 1	Year 2	Year 3	Year 4	Years 5
Wireline cost reduction	7,852	10,804	12,960	14,993	18,742
Mobile Deployment Cost	(25,284)	(12,810)	(10,830)	(10,236)	(14,790)
Mobile service cost	(69,144)	(97,464)	(119,304)	(139,200)	(174,000)
$ Value of productivity Gain	378,905	537,913	662,017	775,649	969,561
Cum. NPV	180,965	439,458	745,384	1,088,273	1,495,459



Work Flow

Dispatchers at each office control the movements of technicians on the road. The primary role of dispatchers is to take customer calls and allocate resources. They are able and free to communicate with each other when there are resource or capacity issues to overcome. Technicians return to their local company office after each customer call - usually two to three each day - to complete necessary paperwork and report sales opportunities.

The sales consultants have aggressive targets to meet. Like the technicians, they also return regularly to their local office during the working day. Some of their administrative overhead is carried out by sales assistants who record new business calls, but do not respond directly to them. Instead they document the contact and post it in the 'virtual' inbox of the regional sales consultant. Time to response is therefore both slow and relies on the sales consultant working additional hours to 'catch-up' and respond to new opportunities.

Neither sales staff nor technicians used wireless services before the pilot.

The Pilot

SanData was allocated three data cards for the six-month duration of the pilot. These were used by the Chief Operating Officer (COO) - who was the internal sponsor of the pilot - the Head of Procurement, and a sales consultant.

Limited wireless coverage meant that connections to their local offices were only available for about 20 per cent of the time a user spent on the road. All estimates of costs savings and efficiencies are extrapolations from the experience of using the cards during this window of connected time.

Overall, the company's approach was enthusiastic throughout, although despite being the sponsor, the COO's attitude was the most sceptical. However during the course of the pilot, the COO's reservations were generally transformed as the potential benefits of HSDe to the company became clearer.

From the start, other users were more open to the possibilities presented by HSDe. For example, the possibility was mooted that HSDe could potentially reduce the costs of expanding into new locations.

The idea was raised initially by the technician interviewed as part of the preparatory survey and it is an interesting one. The technician suggested that, with improved communications and remote support, sales consultants and technicians could begin working in new areas without the immediate necessity – and costs - of support from a local office.

For SanData, the cost of setting up a new office is considerable. Office space in the region costs from €10-50 per square metre and, with a minimum sized office of 200m², this represents between €2,000 and €10,000 per month. The minimum staffing comprises administrative and secretarial support, sales and sales support, a dispatcher and a technician.

The technician's proposal is an example of one of the ways in which HSDe services can enable enterprises to achieve significant gains through a fundamental change to existing operating procedures. In this example, SanData could potentially extend its reach, increase its competitiveness and test new markets with a vastly reduced cost commitment.

This internal debate provides excellent insight into how the operator can make an effective sales proposition to companies of this size and nature.

Summary of Findings

SanData and its employees were enthusiastic about the experience of using HSDe during the pilot, and could see the opportunity for improving customer relationships and moving its business further in the direction of higher margin, service sales. Both end users and management were keen to fully implement HSDe immediately.

It was acknowledged that only a wireless solution could enable the company to deliver improved response times and an enhanced user experience. For technicians, through gains in time and efficiency, there are opportunities for operating more pro-actively and so increase customer satisfaction. While for the company as a whole, adopting a fundamentally new approach, presents opportunities to increase market reach and competitiveness.

Conclusions

Enterprises are driven by the imperative to remain competitive and to meet ever more efficiently, their detailed organisational needs. Beyond this, the most ambitious enterprises seek ways to take that next step forward, to differentiate themselves increasingly from the crowd because, in a competitive world, remaining still effectively means moving backwards.

The pilot demonstrates that HSDe can assist enterprises in achieving all of this. More importantly it demonstrates that the central issue in the case for HSDe is not one of strap-on services but high-speed data connections back into enterprise networks providing access to existing resources. Making this globally available to the people who represent the company on a daily basis to customers enables:

- Improved customer relationships and satisfaction
- More time and opportunities for higher margin sales
- New approaches to the development of core business

The pilot offered limited network coverage and thus the effectiveness of HSDe was geographically constrained but in spite of this, the enthusiasm of this company to implement HSDe immediately and in full is a demonstration that demand for even the simplest levels of connectivity exists now. This demand needs to be acknowledged and met.

The chief lesson of the pilot for infrastructure and network providers is that the case for HSDe has to be based on more than a cost reference alone. The analysis is compelling but it is not enough, on its own, to capture what is on offer.

The specific needs of enterprises vary from sector to sector. But the pilot shows that the main message for promoting high-speed data deployment should address what HSDe can make possible for enterprises or even, perhaps, what enterprises never dreamed it might make possible

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