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Understanding your business As ever, the devil is in the data...

The telecommunications industry today seems dangerously close to drowning in its own data. Here, telecoms consultant and writer, Alun Lewis reports on how to better understand your business.

On one hand, customers interact with their communications service providers in far more ways than ever before, leaving data-heavy trails for all their broadband, mobile, VoIP, content, email and web transactions. On the other, the service providers themselves, driven by the constant and urgent need to differentiate themselves, improve profitability and guarantee service quality, increasingly seek to make better sense of this never-ending flood of information.

Retail experience

This is not a unique problem. The retail sector, for example, has spent more than two decades and millions of dollars trying to gather, model and map consumer behaviours, initially through Executive Information Systems. Despite all this activity and its impressive impact on our own individual shopping behaviours, most new product launches eventually fail. ►

The telco sector, however, does present some unique problems, especially given the 'virtual' and transitory nature of many of the relationships and interactions that service providers are trying to capture and understand. On top of this, the increasingly multi-dimensional, multi-directional nature of many transactions and identities – post vs pre-paid, fixed vs mobile, enterprise vs personal, etc, etc – makes for an occasionally bewildering matrix to analyse in order to get the optimum business and subscriber intelligence.

For Martin Creaner, president and CTO at the **TM Forum**, 'You have to approach this problem from a number of different angles. There's the key role of business intelligence (BI) in benchmarking your own operations and putting them into an industry-wide context – an area we at the TM Forum have been very active in. Increasingly, there's also the part that subscriber information can play in generating additional advertising-led revenues or supporting relationships with customers. On top of this, intelligence has to be fed back into the wider management processes to provide a valid and realistic basis for Service Level Agreements – these have to be manageable, measurable and meaningful.'

BI's key is interpretation
 Humans after all are very good at seeing meaningful patterns in random events – even when they're not really there. As Hugh Roberts, senior strategist at **Patni Telecoms**, highlights, "The real secret of BI is the interpretation of results into meaningful actions. When it comes to customers and their behaviours, it's very easy to misunderstand the significance of the data gathered and to undertake expensive projects which – in reality – have no hope of improving either revenues or competitive differentiation."

Even without this inherent uncertainty of what and how to measure, just doing the necessary number crunching can present problems, given the scale of the data involved and, in many cases in these days of consolidation, the issue of combining apparently incompatible systems. **Virgin Media** – formed through the merger of **Virgin Mobile, ntl and TeleWest** – had exactly these issues as Howard Watson, CTIO there, explains, "Our project started at TeleWest where we had a data warehouse to capture CDRs for regulatory compliance, network routing and telephony high usage analysis. But, owing to performance issues with older architectures, we were restricted in the searches we could perform."

Virgin Media resolved this aspect of the BI problem with data warehouse technology from **Netezza** and, in the words of Moly McMillan, head of Revenue Assurance at Virgin, "Before this new system, we could never be sure how long a query would take. Now, no matter how much data is there to be analysed – be it three, six, or nine months' worth – the time frame for results is fast and entirely predictable."

Speed plus understanding

But technology speed and capacity are only one part of the problem. At the end of the day, much of the value that you get from BI will depend on how you understand and apply the business rules that make up the commercial fabric of the business. Simon Marwood, CEO of telecoms BI specialist **Scorecard Systems** explains, "Many service providers face losing out on substantial revenue savings because of an inability to properly get to grips with how business rules and relationships impact in the real world. Very often they'll have an existing system of some sort in place that's becoming unable to cope with the complexity of today's operating environment – or is a generic BI system that fails to capture the subtlety of telecommunications transactions. We've identified many situations among our own customers where substantial sums were going missing or failing to be collected – such as through dealer fraud or post-paid/pre-paid switchovers to avoid historic debts. It's only with systems like ours in place that service providers can drill down in sufficient detail to identify and eliminate these problems."

Data sharing?

In theory at least – according to what is now an old argument – service providers should be the best placed in the value chain to gather all this information and leverage it to retain their strategic position. For **Oracle's** VP of marketing and alliances, David Sharpley, this should "involve a Customer Data Hub, if we're to provide a real 360 degree view of the business – and keep data accurate and synchronised and available in the right form to all the different departments involved. There is an issue here, however, in terms of what the service provider then chooses to share with other parties – such as content providers and advertisers."

This is a vision – along with performance issues – emphasised by **Nokia Siemens Networks** who recently acquired subscriber database specialist **Apertio**. Andrew Wyatt, its head of solutions, Subscriber Data Management, said, "Service providers need to be able to access this data in real time if they hope to stay agile in a fast-moving market. Subscriber data is also key to opening up new revenue streams and giving service providers the means to embrace the Telco 2.0 business model."

For a final caveat to all – and one based on years of experience in this area, Patni's Roberts warns, "Whilst 'rubbish in – rubbish out' remains a valid mantra, much that is meaningful, pragmatic and profitable can be done with 'rubbish' data – as long as the claims made do not exceed the limits of tolerance and the costs of exploitation remain within the same order of magnitude as the anticipated benefits. Unfortunately, telcos have a bad habit of believing their own hype – not least when it comes to effective IT implementations and the capability to think 'customer-centrally'."

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 – David Sharpley, Oracle



Hugh Roberts:
 New devices may be a challenge



Martin Creaner:
 Key role of BI in benchmarking



David Sharpley:
 Real 360 degree view of the business