

Big data is all about getting better answers, much faster, says George Stenitzer. There are five steps telecoms operators must take to find the gold nuggets in their big data

# Five ways telecoms providers can mine gold from their big data

Service providers collect oodles of data on customers and networks. Although they're all positioned to mine big data, few perform the kind of analysis needed to turn it into growth opportunities, revenues and profits.

Giants such as AT&T successfully apply big data concepts in marketing. They target customers and make offers that reflect a deep understanding of markets and buying behaviours.

But that's just scratching the surface of monetisation opportunities. Big data is all about getting better answers, much faster. So what do providers need to do to find the gold nuggets hidden in their big data?

## One: Build trust and avoid the creepy factor

In consumers' mental model of trust, the least-trusted companies maliciously take advantage of them. To build trust, such companies need to prove there's no malicious intent.

Up one level in the trust hierarchy are companies that try to take care of customers. Their systemic failures are accidental — inept rather than malicious. For example, they may sell customer data to a third party that unknowingly used it ham-handedly.

Atop the trust ladder are companies that consumers see taking care of them as they want to be. Jerry Power, executive director of the Institute for Communication Technology Management at the University of Southern California, says: "Companies that

have my back have earned the most trust. Demonstrate to customers that you have their best interests at heart." The good news: many telecoms providers have earned such trust already.

"There's good correlation between the level of trust in a company and its brand value. There are clearly brands people will pay more for. When you're trying to get someone to spend money, trust is key," says Power.

"If people trust the company, an offer to provide a better service is not seen as creepy, but as helpful. Giving that same data to a third party could turn into something creepy." He cites the example of an American retailer that applied big data to market to a pregnant teenager. It turned out that her father was unaware of her pregnancy, until he saw ads in the mail.

"Heading into big data full on, without paying attention to the creepy factor, can have dangerous repercussions," Power says. "Trust is not just a legal definition, it's a compact between you and consumers. To make applications of big data viable, trust policies should be looked at by marketing," he says.

To build trust, tread carefully. For example, consumers routinely receive privacy statements as they buy services. But they almost never read them. Why? "It would take a month per year to read all the privacy statements a consumer receives," Power says.

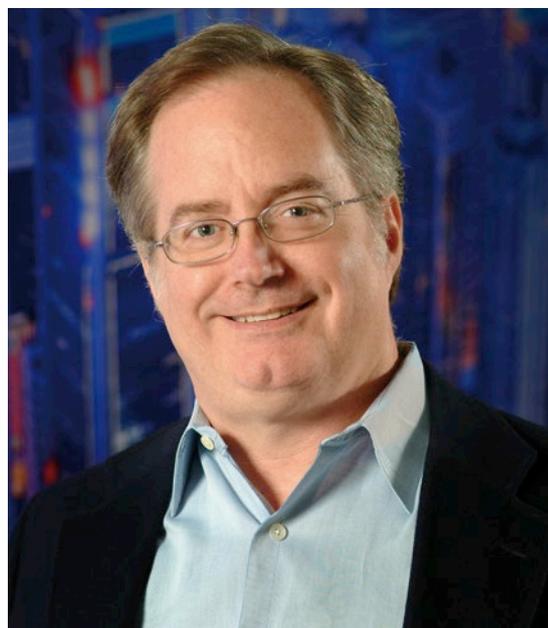
## Two: Overcome organisational boundaries that hold back big data

As providers know, customer satisfaction dips during periods of network congestion. But, since marketing and operations are separate, marketing does not often leverage operations' data on network faults and congestion. Instead, marketing reacts when customers complain or competitors make a new offer.

Big data helps providers proactively preserve customer satisfaction. For example, when there's highway construction, cars back up and people use mobile phones. Big data can identify that situation quickly, enabling cell sites to be reconfigured more quickly.

In IP networks, big data can forecast where and when congestion will occur. That means providers can anticipate demand and reconfigure networks for coming loads, improving users' experience.

Consumers are highly discriminating about mobile quality, and they talk about it. In New York City focus groups, consumers cite which devices work better with which apps. They know that, at 42nd Street and Broadway, one provider is better at street level and another is better in a corner room 30 floors



Jerry Power of CTM: Heading into big data full on, without paying attention to the creepy factor, can have dangerous repercussions

up. Being able to improve service quality is a key to winning customers from competitors.

To consumers, network quality means the service they paid for is available when they need it. Consumers may not know if a problem's root cause is a device, app, network or website. Technically, they may assign blame to the wrong suspect. But, to them, that doesn't matter. What matters is they could not do what they wanted to.

That's why marketing and operations need to work together to apply big data. Marrying network performance and marketing data can unlock value for providers. "By linking operations and marketing data, instead of being responsive, marketing could become anticipatory," Power says.

Who has the best opportunities with big data? Providers in emerging markets hold the advantage of less-defined markets. For example, in the Philippines, a door-to-door sales model similar to Tupperware is used in telecoms. Prepaid minutes are sold in bulk; resellers can break up minutes to resell. As that data flows in, a provider can gain unique insights on grass-roots distribution.

Small providers hold an advantage over larger players. Since they don't need to overcome huge organizational hurdles, they can move faster. On the other hand, large providers have greater resources. This will make telecom's Big Data gold rush fascinating.

### Three: Apply both science and art

"Big data is just a tool to supply answers to questions. Ultimately, the goal is to speed response time. The quicker you can respond to questions about a changing market, the better the business result. Focus on the big data that holds the greatest value," says Power.

As big data becomes cheaper to store, it's easier to hold it longer. Providers who want to create value start by forming hypotheses, then testing to see what big data supports. Going through data, providers learn new things and discover new hypotheses, which can be tested through an iterative process.

"There's art in this science. How you look at data and figure it out is the creative part. You think out of the box, looking for an improvement over the way we did it before. With the right blend of science and art, we can do a lot better at finding answers," Power says.

"Maybe your first hypothesis fits the data 90%. Further work gives you a 5% improvement and the next iteration gives another 2%. At some point you'll say, 'That's close enough,' sufficiently accurate to answer the question. You also need the right context around the question."

Hiring the right talent is currently a challenge. Demand for big data scientists is growing apace. Universities don't turn out enough graduates to meet demand. So the price of talent is being bid up in telecoms, finance, Hollywood and e-commerce.

"The field of marketing is undergoing a metamorphosis. Marketers need to hire different people and add more data-savvy personnel. The curriculum in marketing will evolve rapidly in the next 5 years," Power says.

### Four: Big data increases the value delivered by marketing

Telecoms consider marketing and big data to be expenses, rather than investments in future revenues and profits. That's a fundamental problem.

In financial statements, marketing gets bundled with sales, general and administrative expenses. But as providers unlock growth potential with big data, they may come around to seeing it as an asset.

"Providers tout research and development spending as a sign of investing in the future. I see marketing investments representing future business results just like R&D," Power says. "I look forward to companies talking about marketing as an investment in the future, a topic that might show up in an annual report. Big data is an asset."

### Five: Telecoms providers must work with others

The interactions of telecoms providers with entertainment, content, technology and device companies will shape the future. Companies are realizing that no one company or industry can shape the future of the market by itself.

That's why USC Marshall's Institute for Communication Technology Management was formed in 1985. It's a think tank to address how telecoms and media markets interact. An industry-funded group of about 20 companies, CTM members include AT&T, Verizon, Telus, PwC, Deloitte, Qualcomm, Cisco, Alcatel-Lucent, Ericsson, Disney, Warner Brothers, CBC and others.

"CTM is not technology-focused but business-focused, taking a business view of how these spheres interact. We do market research and educational sessions, hold open forums and work to represent a collective view," Power says.

CTM focuses on fundamental questions such as:

- What makes a digital house? How much bandwidth needs to go to the house when the ability to comprehend data is relatively stable?
  - How are people using mobile devices?
  - What makes advertising different in a multidevice environment?
  - What actions can be taken to energize the parts of the world that are falling behind the mobile curve?
- "The future of media will be driven by different business models, because of the changing landscape in the way we consume and deliver media. Everyone agrees this world is changing, but no one agrees on where it's going," Powers says.

While TVs remain the number one consumer device, smartphones and tablets now drive more than 50% of content consumption. "Net content consumption is going up. If you look at composite consumption, people who cut the cord [on traditional cable TV] actually consume more media than those who haven't — they just consume it differently. The golden age of TV may still be in front of us."

Since the drivers of change go beyond geographic, demographic and economic issues into education and healthcare, strategies that work in one country or segment may not be replicable elsewhere.

Here's another big data opportunity — telecoms providers could measure broadband bitstreams and produce Nielsen-type ratings for websites and apps. Big data could show content companies and advertisers which websites and apps get used, which bitstreams command attention and where to deliver greater value. There's plenty of gold to mine in telecoms' big data. ■

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