

Pipeline

Knowledge Is Power

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Open to Change

By Christopher Couch

It's a Web 2.0 world, but too many telecommunications providers are stuck in the last millennium.

Today, as new interactive applications engage consumers and promise to deliver fresh revenue streams to carriers, there is a growing disconnect between the bright new service possibilities of the digital age and the unwieldy back-office systems of a bygone era.

Telecommunications carriers badly need new revenue sources to drive growth in an era when phone and video services have become commoditized and competitors have put pressure on pricing flexibility. New business models that play to the growing popularity of digital services and interactive applications are the obvious answer. But carriers are stymied from seriously pursuing these opportunities because of built-in cost structures that create huge risk in introducing new business models.

The culprit is easy to identify: Legacy business software that supports modern telecommunications operations hasn't kept up, technologically, with the rest of the world.

The advertisement is enclosed in a blue border. At the top center is the logo for NR GROUP, with 'NR' in large blue letters and 'GROUP' in smaller blue letters below it. Underneath the logo is the text 'NEW PARADIGM RESOURCES' in blue, followed by 'STRATEGIC CONSULTING & RESEARCH FOR COMMUNICATIONS INNOVATORS' in a smaller blue font. Below this text is a photograph of two people in white shirts shaking hands over a table. On the table, there is a white mobile device (possibly a PDA or early smartphone) and a pen. To the right of the photograph, the text 'Looking for the right decision?' is written in red and black. Below this, there is a small circular icon with a right-pointing arrow, followed by the text 'TRUST OUR EXPERIENCE TO GUIDE YOU'.

Retrofitting incumbent back-office environments to support new business models costs too much in both investment capital and time. Try as they may to make the numbers work, carriers are confounded by an economic dilemma: The promise of new business models is outweighed by the risk associated with reworking back-office environments to support the needed billing, application, and service components tied to new business pursuits.

That's unfortunate. In the real world, outside of the big data centers that run the modern telecom sector, innovation is flourishing and interesting things are happening. New ways of doing business are being invented by the week, often with a new model of collaboration that unites multiple parties in a shared instance of commerce.

Consider the enthusiastic 18-year-old who uses her smartphone to sample a new song recommended via text-message by a friend. Her friend learned of the group from an intelligent recommendation agent while searching over a wireless data network for a Google map mash-up displaying customer reviews of nearby coffee shops during a visit to a friend's hometown. Both parties are participants in a new symphony of commerce that borrows from very successful models implemented on the Web. And all of it plays out beautifully over modern telecommunications networks from an external standpoint. But when it comes to sorting out who gets billed what, the legacy business systems that originally were designed largely to manage static monthly services become confused and overwhelmed.

In a world where creativity is thriving, prevailing telecom back-office systems are barriers to innovation. They're tethered to older technology models, rigid and slow to adapt: qualities that are the exact opposite of an active technology ecosystem that's at work in the outside world.



Huge Expense

Modernizing these legacy systems means spending huge amounts of capital over long periods of time just to catch up with current offerings available elsewhere. The proprietary business management systems that run telecommunications operations tend to gobble up capital without yielding the agility demanded by the digital era. Every new demand – for bundled pricing discounts, for e-commerce capability, for multi-party business transactions – requires another bolting on of another proprietary software extension, with the resulting mass demanding constant care and handling by a team of experts who uniquely possess knowledge of its intricacies and characteristics.

It was never an ideal way to go, but it worked well enough in a high-growth, high-margin, rising economic era when competition was limited, if present at all. Not so today. As carriers attempt to coax new revenues from maturing markets and lure consumers with lower-priced brands in a difficult economic environment, they need an economic flexibility legacy business systems can't support.

The telecommunications industry is at an inflection point where a refresh of back-office systems is desperately needed. A sort of creative destruction of old and unyielding systems has to occur in order for carriers to reduce the economic risk of pursuing new business models.

Rewriting the software stacks that manages legacy back-office environments isn't the answer. No matter how ingenious the updates may be, they will continue to demand inordinate amounts of capital to support incumbent providers that have grown up around a concept of proprietary development. The internal economics of legacy telecommunications software are out of whack with what the market demands today: powerful, flexible, efficient and affordable back-office systems.

Retrofitting expensive and proprietary legacy platforms will only extend the current problem. What the industry needs is a way to dramatically reduce the entire range of back-office costs while accommodating innovative new business models.

Reducing Risk

Instead, the industry has a window now to move toward a new, innovative approach for back-office systems that brings the revenue possibilities of new digital applications in line with the underlying cost structures of the telecommunications business.

Rather than managing stacks of separately designed software modules, carriers have a new opportunity to embrace the power of open-source approaches that reduce the cost of back-office systems by magnitudes of order. A carrier-grade, open source back-office environment can replicate all the functionality of legacy applications – billing, order management, customer care and the like – while supporting new business models, for a fraction of the cost of prevailing proprietary systems in similar implementations.

That's exactly what the telecommunications industry needs – to be released from the economic weight of proprietary systems that discourage risk-taking by demanding huge investments for the barest of incremental agility.

Open source software at large is estimated to have saved businesses more than \$60 billion since the concept of collaborative software development began to gather serious momentum in the 1990s. In an open source deployment, source code is provided to users with no license fee – a concept that's shocking to traditional software companies that are accustomed to collecting big payments for systems only they understand. Users then have an open invitation to add, test, and perfect additional features that produce increasingly valuable iterations of the software. In some models, customers can choose whether to openly publish their enhancements – contributing to a steady improvement in performance that others can leverage – or pay a fee to keep them for themselves.

Over time, the process has worked to produce some of the most stable, scalable, innovation-embracing applications driving enterprise-level operations worldwide. Linux is one well-known creation of the open source movement, and there are thousands of others across all sectors of the economy, including the popular suite of customer-relationship management applications from Salesforce.com, whose slogan – "Success, not software" – dramatizes the new approach to application development.

New Capabilities

Open source development environments empower a new breed of providers with a fundamentally different cost model than the model adopted by legacy software developers. That translates to enormous reductions in the cost of back-office environments. But open source approaches also provide a faster roadmap to innovative new business models that involve a complex series of relationships between customers, third-party providers, advertisers, and e-commerce participants.

That's where the disconnection with current platforms occurs. Legacy systems presume a simple, one-to-one relationship of provider to customer: You count the minutes used or track the TV channels offered, and send out a corresponding bill.

Orchestrating that sort of classic billing relationship remains a "must" for any new back-office system, to be sure. But the new models for doing business demand that telecommunications providers also must be able to calculate and address third-party collaborations in which subscribers pay nothing at all to participate in a new application. The sort of targeted-messaging approaches that have transformed the Internet into a multi-billion dollar advertising platform also are well-suited for the broader telecommunications world, if participants can adequately orchestrate the interplay among participants. But doing so demands business and operational support systems that are far more agile, accommodating, and nimble than the hulking, expensive incumbents that stifle innovation.

The good news is that it's possible, by leveraging open-source development approaches, to seize the collective innovation and creativity of many developers who together represent a deeper talent base than any single provider can muster – at an extremely affordable cost.

Already, several innovative telecommunications companies have embraced open source software environments for back-office systems. Within the next 12 months, their lead will be followed by at least one major carrier, and the race will be on. The telecom providers that are swiftest and smartest in retooling back-office BSS and OSS systems to embrace the power of open-source approaches will capture the early market lead in developing new revenue implementations that deliver impressive growth, while sharply reducing operating expenses.

Inflection points happen in industries when a confluence of forces drives the need for change. The telecommunications industry is at one of those points now. Old software cost models are overdue for replacement, and open source systems are poised as successor. The only question now is who will get there first.