



I D C T E C H N O L O G Y S P O T L I G H T

Ecosystems Empower the Path to New Possibilities for CSPs

February 2013

Adapted from *OSS/BSS Enhancement — A Top Priority That Can't Wait* by Debra Osswald, IDC #235633

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Unprecedented levels of competition combined with continuous shifts in subscriber tastes for inventive applications, content, and services, along with evolving business models, changing pricing preferences, product sourcing complexity, and the user's desire for attractive product bundles and flexible consumption plans coalesce to create new and more difficult operational challenges for communications service providers (CSPs).

IDC believes that today's architecturally advanced and more functionally robust operational support systems and business support systems (OSSs/BSSs) can go a long way toward giving CSPs the competitive advantages they need to thrive, not just survive, in today's dynamic marketplace. Accordingly, now more than ever, CSPs need to capitalize on every avenue possible to find the best vendor solutions available to help them address today's unprecedented business challenges.

This Technology Spotlight examines the tremendous value that can be provided to communications and media industry participants by leading industry ecosystems. This paper also discusses how CSPs and media companies can better address the many diverse and complex business and operational challenges they face by tapping into the latent value of industry ecosystems established and maintained by leading players such as Microsoft.

Many Challenges Face Today's Communications, Media, and Entertainment Companies as They Pursue Growth Opportunities

In today's dynamic and fast-paced communications and media services marketplace, CSPs must be able to quickly and easily develop and launch innovative new offerings in order to attract and retain customers, monetize their assets, and grow revenue. To do so, CSPs need to derive and deliver the maximum business value from every client communication and interaction, and from all goods or services provided.

By being able to offer a diverse array of information, communications, and entertainment content, applications, and services from a wide variety of ever-changing third parties, CSPs can offer their customers the relevant services and compelling experiences they seek. However, in order to do so, a CSP's business and operational infrastructure needs to be equipped to quickly and cost-effectively tap into this broad universe of application and content providers, developers, and other partners that can bring this rich assortment of offerings to the CSP's back office.

From that point forward, the CSP must be able to quickly and easily deliver highly desirable applications, content, and services to the end user, and also present the end user with a continuously refreshed selection of relevant and personalized offerings from which to choose. In addition, the CSP must provide each customer with the level of care and support the customer prefers at a cost that is commensurate with the customer's value to the organization. To be successful in the long run, the CSP must simplify the process by which an individual user can find, buy, and access the digital goods and services the user desires whenever and wherever the user likes, and be able to support the

customer throughout the customer's life cycle in an appropriate manner. To do all this is quite feasible, but it requires industry-leading BSS and OSS (B/OSS) solutions.

So How Does a CSP Find the Right Set of B/OSS Solution Providers?

Unquestionably, each type of service provider operating in the broadly defined communications, media, and entertainment industries has more on its plate than it is capable of addressing, given today's typically resource-constrained operating environment. Any way to get things done in a manner that saves time and money should be exploited. Accordingly, *IDC believes that communications industry participants of all types should tap into leading industry partner ecosystems to quickly find suitable B/OSS solution providers to help enrich and enhance their business and operational effectiveness.* By doing so, a service provider, for example, can better equip its organization to benefit from the many advantages of important new capabilities such as real-time charging, policy management, more personalized and targeted promotions, and complete life cycle self-service.

Whether you represent a basic network service provider or an advanced multiservice communications provider, a cable or satellite provider, a hoster or an Internet service provider, a network equipment manufacturer, or perhaps an advertising agency, a broadcaster, a film or motion picture studio, or a publishing house, *a market-leading industry ecosystem offers a CSP the ability to quickly and easily tap into a vital, vetted roster of business support system vendors whose solutions can assist you in achieving your business objectives.*

Furthermore, regardless of whether you are responsible for developing, launching, or billing for innovative applications or digital goods and services, or helping ensure a consistent and positive customer experience, IDC believes that industry-leading partner ecosystems afford communications service providers a host of benefits if they capitalize on the many opportunities to leverage them. Also, it's easy to get started; a CSP needs merely to look to the few market-leading industry vendors, such as Accenture, IBM, and Microsoft, that offer top-notch partner ecosystems for communications and media companies.

Benefits of Tapping into a Market-Leading Partner Ecosystem

By tapping into a partner ecosystem offered by a market-leading vendor, CSPs are able to connect with start-ups and well-established vendors that offer market-leading B/OSS solutions capable of addressing some of the CSP's most pressing business and operational challenges. The many benefits a CSP can derive by tapping into a market-leading B/OSS partner ecosystem include:

- **Best-of-breed vendor identification, easy evaluation, and connection.** Well-capitalized vendors that offer B/OSS solution ecosystem partners can quickly and easily help large organizations get connected to innovative start-ups and well-established solution providers. The vendors that are ultimately allowed to join the partner ecosystems are typically highly scrutinized and vetted by the industry entity that has established the partner ecosystem, which effectively saves the CSP from having to blindly search for appropriate vendors that can meet its needs. Many of the solutions from independent software vendors (ISVs) are often deployed in a lab hosted and operated by the ecosystem provider, thus allowing the CSP's IT personnel to see live demos of multiple solutions in one place and be able to "kick the tires" and compare solutions and ask questions about multiple solutions during a single site visit.
- **Risk mitigation.** Similarly, the vetting process described is performed by the alliance experts of some of the world's largest leading industry participants and, as such, they have invested extensively in the selection of partners worthy of inclusion in their vendor ecosystem. For example, because a poor-performing partner connection can destroy a client relationship, market-leading vendors wouldn't risk their reputations or client relationships by letting just anyone into

"the club." By working closely with the industry partner, the ecosystem provider helps weed out unstable or unscrupulous third parties so they are not brought into the ecosystem, thus mitigating much of the risk of the vendor selection process and saving the CSP from having to expend its own resources to examine each vendor with which it may want to do business. CSPs that leverage leading industry ecosystems are better able to mitigate the risk of working with inappropriate or unsuitable vendors and can take advantage of the time, scrutiny, and financial investment undertaken by the trusted ecosystem provider.

- **Faster solution deployment with lower integration costs.** In many cases, a CSP will elect to deploy multiple applications from an ISV within a single vendor ecosystem because the vendor that established and manages the ecosystem has already invested in pre-integration with its own platform and/or applications with its ecosystem partner solutions as well as with many (if not all) of the ISV's applications with one another's systems, and possibly with other market-leading solutions. Accordingly, a CSP will benefit from not only being able to quickly find a good selection of market-leading B/OSS solutions to consider deploying but also the pre-integration investments made by the ecosystem provider. Thus a CSP can benefit from not only a faster solution deployment but also potentially lower integration costs.
- **Rapid time to market.** By working with a leading partner ecosystem provider, CSPs can capitalize on more rapid time to market for new services resulting from the reduced deployment time of an approved B/OSS ecosystem solution partner, as explained in the previous point.
- **Industry standards body collaboration.** Selected B/OSS partner ecosystem providers will often require their ISV solution partners to get their solutions certified and/or comply with prevalent industry standards and/or guidelines such as those developed and managed by the following organizations: 3GPP, CableLabs, CTIA, HTML5, IETF, ITIL, ITU, ISO, MPEG, the TeleManagement Forum (TMF), UltraViolet, and W3C. In the case of the TMF, CSPs can see catalyst projects that demonstrate the functionality of particular vendor solutions for specific use cases that are likely to resonate with the CSPs' needs. These live demos are available at major industry conferences held in various locations around the world at multiple times throughout the year.
- **Reference architectures.** Oftentimes, the vendor that maintains the partner ecosystem will have had a reference architecture developed that the CSP can take advantage of to speed deployment time, lower solution deployment complexity as well as cost and risk, and facilitate the integration with preexisting legacy systems and/or other applications that may be getting installed concurrently.
- **Common application programming interfaces (APIs) and/or user interfaces (UIs).** In some cases, the ecosystem provider will have invested in the development of a common set of APIs, or spurred the B/OSS solution vendor's investment in them. If so, these APIs can speed and simplify integration with common vendor systems that may be preexisting or will be deployed concurrently. A set of common APIs for each vendor's solution in the ecosystem offers CSPs the important benefit of potentially speeding and simplifying deployment and integration and reducing the project's overall time, cost, and risk. Additionally, in some cases, the ecosystem vendor may have worked closely with each of its partners so that the user interface or other aspect of the vendor's application may be common to all of the ISVs in the ecosystem. This situation has the potential to greatly simplify and reduce any end-user training the CSP may need to conduct for its personnel that will be using the new system(s).
- **Joint go to market.** From a CSP perspective, only a few vendors in the industry are willing to invest in helping you be successful. That is, only a very few select vendors will spend considerable sums of money to help you reach your target audience, whether small and medium-sized businesses, consumers, or large enterprises. It behooves a CSP to seek out vendors like Microsoft that are willing to do so. From a small B/OSS vendor perspective, it is tremendously

helpful when a large, well-capitalized global market leader is willing to invest in joint go-to-market campaigns and is willing to provide support and collaboration in the field and at industry trade shows and other key events like its own user conferences.

- **Intra-ecosystem partner synergies.** In some cases, the best ecosystem providers work to cultivate strong relationships and innovation among their ecosystem partners so $1+1 = 3$. In this way, the CSP can benefit from the inter-partner collaboration/innovation and synergies that were fostered by the time, energy, and investment the ecosystem vendor provided to its partners. Vendor ecosystems foster collaboration between different sorts of partners as well (e.g., between ISVs and between SIs and ISVs).
- **Platform innovation.** Whether it's unified communications, messaging, collaboration applications, or other cloud-based productivity tools, communities of business users across the globe are bringing their own devices and expecting their enterprise IT shop and CSP to support all corporate and personal applications and their delivery to an increasingly diverse assortment of devices (smartphones, tablets, etc.). It is essential from a CSP and an enterprise perspective that data, applications, and content get securely delivered to the user's device and that corporate data is securely accessed and managed throughout the entire process. Accordingly, CSPs have the opportunity to host an assortment of platforms (for devices, on-premise or cloud-delivered productivity capabilities, security and management services, application development, etc.) on behalf of their customers and can create new value by doing so. One of the many important benefits CSPs can derive from working with a market-leading ecosystem provider is to avail themselves of such platform-hosting capabilities in order to deliver useful new services that create new value for customers while driving new revenue streams for their organization.

The Many Forces of Today's Dynamic Digital Marketplace

Digital goods and services providers of all types struggle to achieve true competitive differentiation in today's Web-centric services marketplace. More specifically, CSPs, cable and satellite operators, and media/content/entertainment companies are continuously challenged by increasingly savvy and demanding customers as well as new and inventive Internet-based over-the-top (OTT) competitors — so much so that it has become increasingly difficult to innovate and create new value for customers. At the same time, management and shareholders are requiring these organizations to grow revenue, improve market share, and increase profitability. Throughout the organization, employees know they must quickly and cost-effectively improve their business and operational flexibility and agility if they can even hope to survive.

Given these significant challenges, companies in the broadly defined communications industry must better equip their organizations with best-of-breed B/OSS systems to perform with peak business and operational efficiency and effectiveness. They must also ensure that the organization benefits from insights that can be gleaned from the vast amounts of customer data they have at their disposal. Accordingly, business analytics applications, tools, and technologies must be deployed and optimally leveraged throughout the organization by completely integrating these systems and their capabilities into the business processes of the service provider.

In addition, with the increasingly rapid adoption of cloud-based services, mobile enterprise and social business tools and applications, and hordes of big data rampant in so many CSP organizations, trying to support all the new business models, services, and devices that customers are demanding has become unusually complex and difficult. For many, the cloud presents tremendous potential but also a host of new challenges, both operational and business model related. However, the vendors that provide the industry-leading ecosystems we're speaking of are typically the same vendors that can help demystify the cloud and provide the infrastructure, service management applications, and support required to successfully capitalize on cloud-based service delivery models. IDC believes that

the cloud — with its hugely attractive economies of scale and operational cost and flexibility benefits and, of course, its ability to drive new revenue streams — holds virtually unlimited potential for CSPs.

We are witnessing unprecedented demand for applications, content, and services to be delivered from the cloud, and IDC believes that while the business models continue to evolve, the consumerization of IT is coalescing with the growing success of cloud-based service delivery. Together, these independent phenomena have become a singularly positive and lucrative opportunity upon which CSPs are well positioned to successfully capitalize. One could easily assert that no type of company in any other industry is better equipped than a CSP to leverage its network connectivity and reach to deliver a broad range of services to more individuals and devices in more places around the globe.

However, with all the capabilities that CSPs have, they still collectively need to invest in harnessing the latent value present in the huge stores of customer and service data that is available to them. Accordingly, business intelligence (BI) and business analytics applications, tools, and technologies must be fully leveraged to extract all the value possible from the volume of data that is processed by the CSP's BSS systems. This data can be used to:

- Develop more granular customer segmentation models that will enable more targeted and effective campaigns and promotions (to a market of one)
- Create new offerings based on predictive service adoption rates, customer preferences, and anticipated receptivity to various product bundles, pricing plans, and so forth
- Leverage multichannel communications and CSP customer interactions to upsell and cross-sell relevant new offerings to deliver new value to the user and new revenue for the CSP
- Identify and prevent fraud and perform other revenue assurance, risk management, or compliance-related functions
- Assess network performance for selected services and inform operations personnel of where in the network they may be able to make changes that will optimize utilization and service quality
- Identify customers when they call in so they can be treated in accordance with their value and loyalty to the organization
- Calculate commissions for retailers and salespeople and use that information to perform compensation-related analytics that can predict the CSP margin implications of changing the commission plan and much more

While CSPs must optimize operations, improve business agility and flexibility, develop innovative offerings with more nimble and attractive business models, and provide seamless and consistently positive service experiences and customer interactions, B/OSS vendors and market-leading industry ecosystem providers can help. Whether by deploying a best-of-breed BSS system that can proactively direct a new promotion to a market of one at the right time and via the best communication channel for the customer or enhancing a CSP's Web portal with full life cycle customer self-service capabilities, market-leading B/OSS vendor solutions can be more quickly and easily identified and evaluated through the use of a leading industry ecosystem provider.

Ecosystem Provider Profile

Microsoft's Worldwide Communications and Media Sector's mission is to ensure communications and media customers and their partners realize the most business value from their relationship with Microsoft.

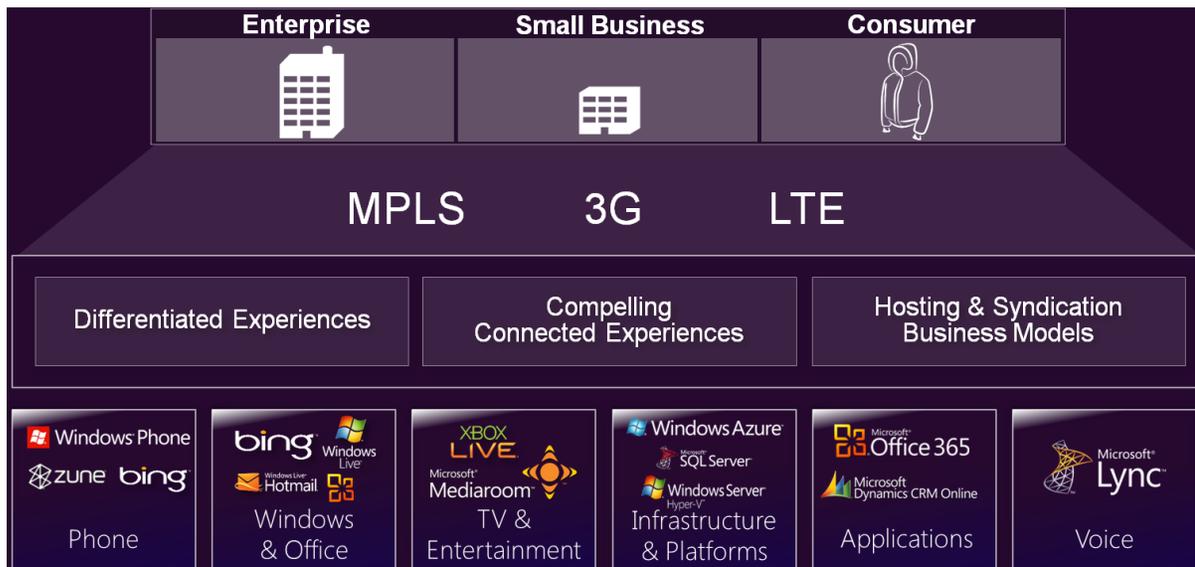
Microsoft is embracing such megatrends as mobility and ubiquitous connectivity, big data, social business, cloud-delivered applications, and content and services delivered to a wide range of devices — and the amalgamation of these capabilities as they come together to present new opportunities and challenges for communications and media companies. Microsoft recognizes the potential of M2M as an important new revenue opportunity for CSPs because of its utility not only for large enterprises but for small and medium-sized businesses. In addition, it is evident from several of its recent acquisitions and the many partnerships that Microsoft has formed that the company realizes that the consumerization of IT and the increased use of advanced communication, collaboration, and personalization tools by users of all types is a global phenomenon that CSPs must not only support but also capitalize upon.

Accordingly, Microsoft has continued to invest in its communications and media industry partner ecosystem and now has one of the strongest BSS vendor ecosystems in the business. In addition, Microsoft has worked hard to foster and support inter- and intra-industry collaboration among its ecosystem partners and other leading vendors. The company has invested significantly in building a rich BSS ecosystem that offers the sorts of market-leading solutions that are capable of addressing the many challenges CSPs are facing today, as discussed previously. Through its continual investment in the ecosystem, Microsoft is demonstrating its support of its communications and media clients, and these companies can derive tremendous value from tapping into this robust BSS ecosystem.

In addition, companies tapping into Microsoft's BSS ecosystem can benefit from leveraging the pre-integration that Microsoft has funded for many of its BSS ISVs' solutions. As shown in Figure 1, Microsoft technology enables blended solutions. Microsoft technologies that can be combined to form new solutions include SQL Azure, Windows Azure AppFabric, .NET-enabled applications, and SharePoint Services.

Figure 1

Microsoft's Mashable Ecosystem Brings Essential Capabilities to CSP Service Portfolios



Source: Microsoft, 2013

Microsoft also brings a great many market-leading Web conferencing, collaboration, productivity, and entertainment applications, platforms, and infrastructure capabilities to the table that CSPs can use internally — and also offer to customers as they benefit from virtually unmatched go-to-market support from Microsoft and from new revenue streams that can result from rapid customer adoption of these market-leading offerings.

Microsoft not only offers the best of its own technologies to enrich the CSP's service portfolio (and the CSP's employees' productivity) but also, through its mashable ecosystem, brings some of the best B/OSS solutions, technologies, and professional services firms to CSPs, including offerings from the vendors listed below and shown in Figure 2:

- Alcatel-Lucent
- CHR Solutions
- Convergys Information Management (now a part of NEC's NetCracker Technology subsidiary)
- cVidya
- Ericsson (strengthened by its Telcordia and ConceptWave acquisitions)
- Infosys
- Redknee (strengthened by its acquisition of Nokia Siemens Network's BSS assets)
- Tech Mahindra
- Tribold

Figure 2

Microsoft's Mashable Ecosystem Empowers CSPs to Exploit New Market Opportunities



Source: Microsoft, 2013

Microsoft's mashable ecosystem helps CSPs infuse improved agility and flexibility into their business and operations, and it helps prevent vendor lock-in by offering a host of partners within the B/OSS and SI arena that can provide solutions for service providers, large or small, in all regions of the world. In this way and in others, Microsoft is supporting a particular CSP's unique B/OSS architecture by offering a diverse and flexible set of best-of-breed solutions with the potential to reduce system implementation cost, risk, deployment time, and complexity by providing benefits such as reference architectures and extensive investment in pre-integration and testing of ecosystem partner solutions in advance.

In addition, CSPs can benefit by leveraging Microsoft's software-enabled services work with the TMF, one of the leading communications industry associations, and the work Microsoft has done in cultivating innovation among the BSS partners themselves. In 2012, for this and other reasons, Microsoft won Pipeline Publishing's Innovation Award for Best Ecosystem, an award that recognizes partnerships, ecosystems, and programs that drive innovation.

Microsoft brings a good deal of practical business value to its BSS partner ecosystem and is set up to assist CSPs in finding suitable BSS solution partners that can help them address the new challenges their businesses and operations are increasingly being required to support, such as:

- Increased product diversity/complexity, which is driving the need for robust product catalog functionality
- The ability to onboard and deliver applications, content, and services from third parties
- More complex rating/charging/policy management and billing for new services such as cloud and M2M
- The need to support fraud and revenue leakage, evolving risk mitigation and compliance requirements, and so forth

A multitude of synergies that have been fostered by Microsoft's many investments in the company's partner ecosystem, and CSPs stand to gain from exploiting these investments. For example, the Microsoft Dynamics CRM application serves as the user interface for many of these partner systems. In this way, CSPs that deploy more than one of the Microsoft ecosystem partner solutions can benefit from the common look and feel of the user interface and save time and money in training users. In addition, Microsoft has invested significantly in its platforms to ensure they are carrier grade and mission-critical ready. For instance, Redknee's flagship real-time converged billing solution, running on Microsoft SQL Server, has been benchmarked to support 250 million subscribers. When tested at 250 million subscribers, Redknee's converged billing solution processed 9.8 billion call detail records (CDRs) in a single day. On average, this means that 113,400 CDRs were processed per second, demonstrating that this real-time converged billing platform is capable of supporting even a tier 1 CSP's anticipated performance and scalability requirements well into the future.

Additionally, Microsoft is one of the world's largest service providers for office productivity software, cloud services, and the like, giving the company a unique ability to apply its learnings and investments in running large-scale cloud services to its products and its partners' offerings as well. Selected system integrators, such as Alcatel-Lucent and Tech Mahindra, have extensive experience integrating Microsoft's ISV partner solutions, thus further reducing risk while accelerating time to market.

Microsoft collaborates to enable CSPs to envision the future and drive innovation, create solutions to accelerate business processes, and enhance their agility to enable CSPs to transform and compete more effectively. CSP infrastructures need to be able to rapidly and flexibly create, launch, deliver, bill for, and manage complex new service offerings; communicate custom-tailored promotions and personalized offerings to a market of one through the appropriate channel at the appropriate time;

and support user self-service throughout the customer's life cycle. Microsoft has created a partner ecosystem whose offerings can help CSPs do just that — and capitalize on the integration that many of these partner solutions have with one another and with core Microsoft offerings.

Challenges

Microsoft is typically perceived as an enterprise software company with solutions that are not necessarily "carrier grade." However, Microsoft's Outlook and Office suite of applications are most certainly high-performance, scalable offerings, and the Microsoft Office 365 applications offer the convenience of the cloud with the robust features and functionality of the familiar Office suite applications, all of which have been installed in millions of user environments.

Nevertheless, CSPs don't think of Microsoft as a supplier of B/OSS solutions, so they don't typically think to reach out to Microsoft when they are seeking bids on B/OSS RFPs.

While Microsoft has a long and strong history of reselling many of its globally successful productivity applications and tools through CSPs the world over, it continues to experience challenges in being perceived as a company with personnel knowledgeable in a CSP's B/OSS arena. Also, since most tier 1 CSPs' mission-critical applications are traditionally developed in a Unix environment, it can be very difficult to sell a Microsoft platform to the IT shops of many of these dominant tier 1 CSPs.

Given all these things, Microsoft faces several formidable challenges in establishing the deep, trusted partner status it seeks with CSPs. Accordingly, to counter some of the prevailing CSP perceptions it wants to dispel, the company has invested millions of dollars to ensure its platforms are carrier grade and mission-critical ready. To strengthen its credibility in the CSP's B/OSS arena, Microsoft has also heavily invested in its B/OSS partner ecosystem and joint go-to-market campaigns with both CSPs (for Microsoft offerings being resold by the CSP) and B/OSS ISVs.

Conclusion

IDC believes that CSPs will continue to be challenged over the coming years by increased service, operational and business model complexity, ever-changing customer expectations, and a highly competitive and dynamic market climate. Accordingly, CSPs need to lower their risk and expedite ISV selection for key operational initiatives. Tapping into a leading vendor's ecosystem to find capable BSS solution providers is a sensible idea and warrants consideration by CSPs.

IDC believes that today's technologically advanced and more functionally robust customer, operational, and business support systems and business analytics applications, tools, and technologies can go a long way toward improving a CSP's competitiveness. Accordingly, IDC encourages CSPs to seek out these solutions from leading vendors to improve their agility, flexibility, and operational competency so they can better handle the increasingly complex service delivery and support requirements IDC expects them to continue to be faced with over the coming years.

Last, to the extent that Microsoft can address the challenges described in this paper, the company has an opportunity for greater success in penetrating the CSP marketplace with its own applications, platforms, infrastructure, and technologies as well as those of its ISV ecosystem partners.

A B O U T T H I S P U B L I C A T I O N

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Global Headquarters: 5 Speen Street Framingham, MA 01701 USA P.508.872.8200 F.508.935.4015 www.idc.com