Monetizing New Telecom Digital Opportunities
Next generation revenue management

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Reimaging Operator Business to New Opportunities

Digital business continues to change and disrupt the telecom business. While this presents new monetization opportunities it also brings new challenges. High pressure on profit margins is leading to more digital disruption, operators are finding it harder to keep up with the distinct needs of next-generation consumers and support enterprise requirements for digital business transformation.

Growth of the app economy is only the first step; with the rise of Internet of Things, 5G and other innovation, importance of communication networks is expected to bring new processes and modes of interaction. For instance, 5G is being designed for a variety of new use-cases, which will drive both rise of IoT concepts and increasing network flexibility of NFV and SDN virtualization. Migrating to next-generation network architectures and building software and application capabilities will be high on the list for many CSPs. In addition, over-the-top (OTT) service providers have set benchmarks for agility and flexibility that CSPs have to emulate. There is a need to innovate around new revenues streams, BSS capabilities, as well as maximizing customer experience. Success factors would not only include how deeply operators are invested in digital technologies but also on how they see their relationships developing with customers in the future.

This edition of Mahindra Comviva’s newsletter featuring Gartner research aims to highlight these new age monetization and customer management opportunities CSPs are facing today. It addresses the new digital technology priorities and challenges, whereas the Gartner report on ‘Magic Quadrant for integrated revenues and customer management for CSPs, 2016’ rates vendor solutions for business-critical revenue and customer management business processes such as billing, analytics, customer care, rating, charging, pricing, partner relationship management, policy management, mediation, self-service, and other related functions.

Mao Mohapatra, CEO
Mahindra Comviva recently conducted ‘The Business of Tomorrows’ survey in partnership with Mobile World Live. The report gives an insight into how operators around the globe see the future of their companies, and the impact current and emerging technologies will have on the wider telecom ecosystem. The survey highlights where new revenue opportunities lay and the biggest challenges operators are likely to face.

Customer experience management (CEM) ranked as the highest priority for operators going forward: nearly 27 per cent respondents put CEM ahead of other key metrics like big data, cloud computing, network function virtualization and BSS/OSS transformation.

IoT was identified as a $3 trillion revenue opportunity area by 2025. Nearly 35 per cent respondents said IoT would be the prevailing digital service to generate incremental revenue for operators in developed markets ahead of enterprise cloud, mobile financial services (MFS), infotainment and enterprise mobility.
The report also uncovered some of the broader issues facing operators in their quest to shape their business for future challenges. **Nearly 35 per cent respondents are most concerned about future CAPEX and OPEX related issues, associated with new technology investments and network upgrades.**

A report by PwC identifies that operators could be wasting up to 20 per cent (an equivalent of $65 billion) a year in capex, with the process internally deeply flawed. Nearly 75% of capex is driven by technology, and not commercial business objectives, particularly when investments are straddled between networks, IT and marketing. **Customer retention (31 per cent) was cited as the second major concern** by respondents in our survey, ahead of spectrum availability, issues related to backhaul and front haul networks, and network availability.

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**Which of the following will be an operator’s biggest priority going forward?**

Price of charts: 0% 5% 10% 15% 20% 25% 30%

- BSS/OSS Transformation
- AR/VR
- Customer experience management
- Network Function Virtualisation/Software
- Defined Networking
- Cloud Computing
- Big Data

*Source: Mobile World Live, 2016*

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*Source: Mahindra Comviva*
New monetization Opportunities facing CSPs

Digital disruptions and changing customer expectations are intensifying competition and margins are continuing to compress. Thus, creating new revenue streams is becoming increasingly important. OTT partnerships, growing use of mobile internet and the rise of IoT are opening avenues for new business models and finding new ways of delivering and monetizing services. The challenge is the ability to efficiently transform this demand into revenues and sustain differentiation.

Amongst possibilities, mobile data holds great revenue potential for operators. However, as use cases evolve CSPs must consider new products and service offerings presenting monetization opportunities. Data sponsoring is one such opportunity.

Sponsored Data; a case for growing enterprise business

Sponsored data provides operators with multiple monetization opportunities. In a usage based model, the enterprise is charged on the basis of the data used by the customer. In volume based pricing, the enterprise buys data in bulk and uses it according to its needs. In an engagement model, pricing is based on the basis of a pre-defined activity such as filling a survey, watching a video, downloading an app and more.

For Enterprises sponsored data engagement is available in multiple formats. It can be time based; so it provides visitors with free browsing, audio/video streaming through the website without incurring any data charges. In an event
based scenario; an e-commerce website can provide toll free access on a particular day or in case of a particular event. More complex engagement models are available, for instance; an enterprise setting its website to become toll free for specific users like first time users, premium users etc.

Success factors for enterprise digital engagement using Sponsored Data are dependent upon the right enablers. We therefore, make the following recommendations for building a strong enabling system for sponsored content.

- Sponsored must not go against the spirit of Net Neutrality.
- Usage, customer preferences and requirements will vary in different markets. The platform must be capable of addressing multiple markets and usage cases without leading the inefficiencies or system latency
- Security is paramount. Sponsored data will show increased uptake only when the CSP, content provider/enterprise, as well as the end user are assured of two things: who is charged? And for what?
- Establish a clear and well defined pricing model as well as usage limits. Pricing models can be usage based, volume based or engagement based. There is also a need for strong policies for setting threshold limits on the basis of time, sessions, campaigns, devices.

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**Mahindra Comviva’s Infinity Sponsored Data Platform**

Mahindra Comviva’s data monetization platform, Infinity, combines enterprise requirements along with an operator’s network capabilities and blends the two environments to create a successful business layer. Infinity enables enterprises to leverage the operators’ data channel infrastructure as per specific requirements and create rich and contextual digital engagements with their consumers. The two elements of Infinity Data Monetization Platform are Toll Free Data and Data Gifting services; both have unique use cases and event and time based scenarios of applicability.

**Infinity creates a Win proposition for every stakeholder**

**Telco**

- Faster Time-to-launch leading to faster time-to-revenue
- 2x-5x increase in revenues and profitability. Less network congestion leading to better consumer experience.
- No CAPEX required at the Telco network. Outcome based revenue share model requiring less bandwidth and regulator cost.

**Enterprise/Brand**

- Rapid adoption of digital initiatives, self on-boarding functionality leads to improved Go-to-market.
- Enterprises get control of who, when, how and what service to provide. This enables new business models and digital products.
- Digital engagements can cost 30-50% less in costs incurred for enterprises.

**Customer**

- Ready and anytime access to consumers to enterprise digital engagements
- Customers get to save their monthly data bills
New monetization streams require new billing systems

Flat rate data offers need to evolve into more complex products. The existing BSS platform that has been capable of simple data session charging is facing bigger challenges. The underlying BSS platform must have enough capabilities to process the growing number of diverse data records. It must be able to differentiate the amount of data and the service types that the customer is using for an accurate charging of the service usage. Especially now when flat rate data plans are proving unprofitable, and tiered levels of data quotas per month (including service-specific data quotas) are being introduced.

Real Time Charging and Policy Control

Real-Time Charging unlocks value of real-time billing benefits, both for digital service providers and end-users. Especially for customers who value flexibility and control on their spending, real-time service usage information can be highly valuable. Operators can eliminate unforeseen charges by notifying them before their inclusive allowances are consumed - and offer appropriate upgrade options. This can help build brand loyalty as well as help in tailoring credit management and marketing activities to maximise each customer relationship.

Real time charging combined with policy control can facilitate self-service. Customers show preference to self-service over speaking to customer support; this can make all interactions with customer support more relevant and aimed at more pressing issues a customer might be facing. Thus, enabling self-service is one primary reason why telecom providers are investing heavily in real-time convergent charging and policy-control solutions.

Some benefits of real time charging and policy control:

- Based on usage statistics, customers can select a plan least likely to result in bill shock
- Customers can create their own plan, such as setting their own data caps
- Can be used to enable customers to transfer spending across multiple services

Mahindra Comviva launches Data Revenue Booster (DRB) for OTT Monetization

Data Revenue booster combines self-serve real time charging with OTT monetization. It allows CSPs additional revenue opportunities delivering innovative services to users and enhancing customer in-app experience. Based on Comviva’s subscription management engine, the DRB Solution enables apps such as YouTube to trigger customized real-time in-app data offers, leading to a seamless content viewing experience.

The Solution bridges the gap between operator networks and content services by exposing the OSS and BSS capabilities of operators to OTT application providers and vice versa. This collaboration makes it possible to offer personalized application-specific features based on to end users for a better experience. Built on Google Mobile Data Plan APIs, DRB will seamlessly support future Google use cases and other digital content providers.

Google is one of the first partners to get on-boarded on our mobile data API platform.
**Contribution of Carrier Billing towards the App Economy**

Purchasing online is still a challenge in many regions, as a large part of the global population remains under/unbanked. To tackle this challenge enterprises, especially OTTs, have started partnering with operators to offer an option to pay directly through the service provider. Direct carrier billing (DCB) is poised to emerge as a significant medium for customers to make micro-payments for music, paid applications as well as in-app purchases.

So far operators and aggregators have received the most carrier billing traction by Google Play and other big-brand app stores. In October 2015, Apple also jumped in with an initial rollout in Germany with carrier O2 Telefonica. As Apple further expands into emerging markets, it seems to be looking to fill a gap in territories where credit/debit card ownership is low with DCB.

Benefits of carrier billing constitute growth in paid downloads and in-app purchases, as carrier billing is the easiest way to pay over a cellular connection, and is deemed as less risky than card payments. Also, it is seen to better support micropayments than other means as there is no fixed transaction fee involved.

Emerging markets present a big opportunity; South America, Africa, China, Russia, India and Indonesia are anticipated to lead the global direct carrier billing economy by 2019. According to some estimates, DCB is anticipated to bring the telecom service providers revenue worth $12 billion, a significant mark in an emerging mobile payment scenario.

Comviva offers an end to end solution for direct carrier billing. Its Direct Carrier Billing & Subscription Management is the next generation digital platform for rating, charging, provisioning, and subscription management. The platform provides a single interface for complete billing & management for VAS, OTT & any other digital services. Packed with most relevant and futuristic features our solution ensures a competitive edge in the changing business environment.

**Enabling monetization with NFV and SDN**

The proliferation of network function virtualization (NFV) and software defined networking (SDN) will fundamentally transform the telecommunications industry. New monetization opportunities come with a need for flexible, cost effective and faster way of offering these services. NFV and SDN can enable CSPs to make the transition to become true digital infrastructure providers.

NFV can help reduce carrier OPEX costs based on simpler centralized infrastructure and service management and faster time to market for the new revenue generating services. Deployed together, SDN and NFV provide exceptional service capabilities. SDN provides the network automation required to deliver services on distributed infrastructure. This makes it a key enabler for NFV to support larger deployments that maximise the cost and efficiency benefits on offer. The biggest impact is the level of automation and consolidation that these technologies enable.

Services that will make the transition first are; virtual customer premises equipment (vCPE), on-demand connectivity-based services, and QoS-assured virtual services provided in a pay-as-you-go pricing model.

Adoption of cloud-computing technologies will also be a major trend. New cloud solutions can be used as another, more flexible, layer to the existing infrastructure. While cloud computing offers major opportunities, it requires service providers to be service oriented rather than domain oriented and separately manage network services, infrastructure, applications and more.
The real capability SDN and NFV bring is reducing cost pressures and maximise profitability when voice and data revenues are declining rapidly. These are key technologies in supporting new revenue streams and improving time to market. This will help service providers compete more effectively with OTT players, reduce service delivery costs, and increase per-user revenues.

**Next Generation Digital Service Delivery Platforms (SDP)**

The rapid growth of digital services today is driven by growing consumption of digital content, emergence of IoT/ M2M, new API-enabled digital services, and emerging business models. Operators are increasingly looking at digital services as a monetization opportunity that can offset revenue pressures from declining voice services and even data in some regions. However the success of next-generation services will be decided by how services are created and sustained in this new environment. Offering digital services requires more than spending on infrastructure and hardware, it requires end-to-end service lifecycle management provided by a service delivery platform (SDP).

SDP enables creation of next generation offerings and seamless interaction between the operator, content/application providers, and the user. It integrates the operator’s network capabilities with third parties and provides self-service features to developers and partners. Also, virtualization of service delivery platforms has begun for next-generation communications and video services. Virtualization help operators to simplify the service life cycle management functions that include service creation, service provisioning, service assurance, revenue assurance and billing functions, BI, operations administrations and maintenance (OAM) by hosting it in the cloud and providing APIs/Web interface to client to access services in a hosted environment.

SDP integrates seamlessly into a mixed hardware-virtualized environment to pave the way from traditional networking to NFV/SDN environments. Next generation software-based SDPs can allow operators to create differentiated, yet agile services creation and deployment. The consumer opportunity continues to drive service delivery platform spending in emerging regions, while more developed markets are focusing investments on enterprise and SMB services, including the burgeoning M2M opportunity.

**Real time analytics for better customer experience Management**

Better customer experience is key to winning the digital race for CSPs. This extends to multichannel customer management, product and customer life cycle management, subscription management, digital payments, and more. CSPs need to embed data analytics into many aspects of their activities to uncover market and customer insights that will lead to sustained competitive advantage.

Subscribers have high expectations of receiving enhanced experience with every interaction. Lack of an enterprise view of a customer can lead to frustration of service-call transfers, irrelevant retail experiences, and poorly timed offers with no personalization. Moreover, long processing times to get access to new customer information or launch new promotions or offers backed with conflicting customer data is leading to data latency limiting the ability to react while an issue is still relevant to the customer. Real-time analytics can shorten the feedback-response loop and reduce time-to-market.
Real time marketing uses behavioral analytics to provide customers with timely relevant offers. By fostering an understanding of real-time and contextual relevance, telcos can uncover opportunities with niche segments. The key lies in being proactive based on predictions which are derived instantaneously from advanced analytical models and tools.

Scenarios like unprecedented call drops need to be captured, analyzed and followed up by an apt offer recommendation to enhance subscriber experience. Basing marketing campaigns on these contextually-relevant areas can help reduce churn, create loyalty and in help in up-selling and cross selling services.

As operators battle for customer loyalty, another factor is the ability to provide subscribers with consistent experiences across the various touch points and interaction channels they use. Personalized triggers and notifications can transform marketing campaigns to become data driven, more targeted and cost effective, moving beyond traditional marketing focus with television and the web into the growing realm of mobile. Moreover, heavy competition is forcing operators to shorten the time-to-market for new services. The operator should be able to provide any combination of services in a bundle in real time. Thus, the billing platform should be data driven creating these convergent offers and personalized services.

The Business of Tomorrows study found that 63 per cent of Mobile World Live, 2016 respondents are likely to invest in proactive customer experience management in the next five years, due to the rise of predictive, descriptive and prescriptive analytics.

IRIS: Deployed in a Fast Growing Asian Opco of an European Telecom Giant

‘Incremental Revenues through Incremental Sales (IRIS) is one of the newest additions to Comviva’s Mobilityx Suite– a CSP customer analytics solution that helps tecos in Multi-Channel Campaign Management, rolling out next best offer, and in data driven real time marketing.

IRIS addresses a unique need in prepaid heavy markets and unifies retailer and subscriber recharge process. Subscribers are segmented across various categories and provided with an interactive best fit offer. IRIS gives the flexibility of treating each customer and retailer differently and rewards their unique behaviour at various levels of the upgrade. It is an integrated channel management solution embedded with work force automation, which encompasses various functions like retailer incentives, retailer self-help and channel self-help. Further, it aids customers in service discovery through its customer self-help feature. Channel self-help one of the key features of IRIS enables telcos in broadcasting real time relevant sales and distribution related information to the entire field force.

Deployed with a European telecom giant in a 9 player market, the telco has 0.5Mn Retailers and 35% market share. IRIS helped the operator increase massive average gross recharge gain of 53% & average net recharge gain of 50% within first 120 days of deployment.

What do you view as the most essential feature of your company’s CEM strategy?

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<th>Feature</th>
<th>Percentage</th>
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<tr>
<td>Customer behaviour monitoring</td>
<td>35%</td>
</tr>
<tr>
<td>Network performance management</td>
<td>30%</td>
</tr>
<tr>
<td>Customer centre experience</td>
<td>25%</td>
</tr>
<tr>
<td>Application stability</td>
<td>15%</td>
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Source: Mobile World Live, 2016
IOT offers a new revenue mix

Offering Value-added services, beyond CSPs’ core business of connectivity, is the way forward. This stands true for the evolving M2M Market as well, which is transitioning from connectivity toward service based IoT solutions. IoT is incredibly diverse, spanning numerous applications. Fleet management and industrial monitoring are already use cases where CSPs are actively offering IoT solutions. Other use cases that CSPs are increasingly offering are; geo-location services, smart grid, logistics, smart metering, remote monitoring and smart homes.

A big IoT opportunity for operators globally is device management. “Gartner, Inc. forecasts that 8.4 billion connected things will be in use worldwide in 2017, up 31 percent from 2016, and will reach 20.4 billion by 2020. Total spending on endpoints and services will reach almost $2 trillion in 2017.” Downtime attributed to a single device in an IoT deployment can add significantly to costs, creating a need for device lifecycle management. The fundamental device management consists of: provisioning and authentication, configuration and control, monitoring and diagnostics, and updates and maintenance.

Billing is another IoT opportunity facing CSPs. Combined with analytics and Big Data, the revenue opportunity further intensifies. However, BSS/OSS systems needed to commercialize IOT applications are lagging behind in their ability to support the existing and future models. The humongous amounts of data generated needs to be delivered with near zero latency to be of any value. To ensure near zero latency, operators need to expose real time rating and billing platforms to their clients, which allows flexibility in pricing and user engagement. For instance, a smart vending machine can be enabled to instantly download user information from the cloud; this information can be used to drive personalized engagement in real time. Similarly, the speed with which new services have to be provisioned requires operators to provide a virtualization layer to speed up deployment as well as optimize networks resources.

Finally, operator’s IOT monetization should be future proofed to absorb future shocks arising out of new and innovative use cases that are sure to emerge. Nonetheless, telcos are in a good position to take the lead, with capabilities such as close relationships with consumers. They are a trusted vendor and they have relatively strong IT capabilities.

IoT will also drive 5G as a game changer for future business opportunities.

Data monetization in the future will come hand in hand with the potential future growth of IoT. The Business of Tomorrows survey found the following 5G services have the greatest monetization potential.

Which of these touted 5G services do you think has the greatest potential?

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<th>Service</th>
<th>Percentage</th>
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<tr>
<td>Internet and surveillance video</td>
<td>35%</td>
</tr>
<tr>
<td>Autonomous driving</td>
<td>30%</td>
</tr>
<tr>
<td>Virtual reality applications</td>
<td>25%</td>
</tr>
<tr>
<td>Smart city deployment</td>
<td>20%</td>
</tr>
<tr>
<td>4K streaming</td>
<td>15%</td>
</tr>
<tr>
<td>Remote healthcare applications</td>
<td>10%</td>
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Source: Mahindra Comviva

Source: Mobile World Live, 2016

Beyond Buzz

**Mahindra Comviva targets 250% growth in Latin America in the next three years**

With the recent appointment of Rafael Olivares as the CEO for Latin American operations, Comviva is targeting a 250 per cent growth in revenue over the next three years. This includes a strong focus on innovation, development and deployment of mobile financial, big data analytics, innovative content solutions and enterprise-centric solutions e.g. data monetization and messaging. This will help the company to support digital transformation of the region across Telcos, BFSI and Retail businesses.

Mahindra Comviva acquired a controlling stake in Advanced Technology Solutions (ATS) in January 2016. Today, Mahindra Comviva is serving over 25 telecom operators across 15 countries in the Latin American region: Argentina, Brazil, Mexico, Colombia, Chile, Peru, Ecuador, Guatemala, Honduras, El Salvador, Bolivia, Paraguay, Dominican Republic, Guyana and Curacao, with over 65 deployments. These solutions have enabled operators to differentiate their brand, create sustained new revenue streams, and drive-up mobile subscribers’ ARPU.
MobiLytix™ Centralized Communication Manager launched to improve customer engagements and revenues

Due to increasing complexity in the telecom space operators are opting for a number of customer facing communication tools and service alerts.

However, until now these tools operated in a silo-ed structure and lacked actual integration, which sometimes lead to patchy and irrelevant engagement with customers. MobiLytix™ Centralized Communication Manager provides a unified, intelligent and analytically driven communication platform that helps operators to manage real time life cycle triggers and ensure their engagement with their customer is relevant, holistic and multi-channel.

Comviva’s Customer Value Solutions has over 40 deployments in 25 countries globally empowering over 250 million customers. Its MobiLytix™ Suite enables data-driven and highly contextual marketing messages across multiple channels and devices. It delivers 800 million digital marketing messages per day and provides over 60% accuracy for churn prediction.

mobiquity® Wallet launches Chatbot for digital wallets

With the new version of mobiquity® Wallet, comes an embedded chatbot to assist wallet consumers through their digital payments journey. The mobile application provides an intuitive and intelligent conversational interface that provides customers an interactive and personalized experience.

Chatbot will make transactions on the digital wallet as simple and seamless as conversing with friends on the social channels, removing complexities in registering for a digital wallet or making payments. Moreover, chatbots will help to improve banking ROIs by automating repeat value transactions as it replaces manned helpdesk.

Source: Mahindra Comviva
Comviva Perspective

**Mahindra Comviva touted as one of the best companies in 2016, by CEO magazine**

Our CEO Mr. Mao Mohapatra, in an interview with the CEO magazine talks about how Comviva constantly innovates to stay relevant, and aims to touch people’s lives. [Read more]

**Real Time Marketing Is the New Buzz-Word for Telecom, BusinessWorld**

Amit Sanyal, VP of Consumer Value Solutions at Comviva writes about how new disruptive entrants like Reliance Jio in India are redefining the telecom age. He highlights the importance of real-time marketing to combat increased competition, changing business models and rapidly shifting customer expectations. [Read more]

**Fuelling the digital lifestyle, CommsMEA**

Atul Madan, senior vice president digital service, speaks to CommsMEA on innovative ways to monetise content in an era of massive digital disruption. [Read more]

**Mahindra Comviva’s RADAR can drive QoE at telecoms, Voice & Data**

Anurag Srivastava, Senior VP and unit head Managed Services at Comviva in a tete-a-tete with Voice&Data talks about how his business unit is going after Managed Customer Experience Services and where its Rapid Auto Detection and Advanced Reporting, referred to as RADAR, fits in the scheme of things. [Read more]

**Making digital assets sweat to boost ARPU – Mahindra Comviva, Telecoms.com**

Amit Sanyal, VP of Consumer Value Solutions at Comviva, explains how customer value management and making existing digital assets sweat can help drive ARPU and reduce churn in the next generation of telecoms. In conversation with Tim Skinner at AfricaCom 2016. [View here]
Key Recent Awards and Recognition

**Mahindra Comviva Positioned in Gartner Magic Quadrant for Integrated Revenue and Customer Management for CSPs for 2016**

Gartner has been recognized as a Niche player in the Gartner Magic Quadrant for Integrated Revenue and Customer Management (IRCM) for CSPs, 2016.*

Gartner’s Magic Quadrant for IRCM reviews the integrated revenue and customer management (IRCM) market (which) is composed of communications service providers (CSPs) looking for commercial off-the-shelf software packages that address business-critical revenue and customer management business processes. The report rates solutions that provide billing, customer care, rating, charging, pricing, partner relationship management, policy management, mediation, self-service, analytics and other related functions.

**Glomo award for ‘Best Mobile Payment Service’ award 2017 at Mobile World Congress**

Comviva won the Mobile World Live GLOMO Awards 2017 in the “Best Mobile Payment Solution” category for EcoCash service powered by mobiquity® Money platform. This win is especially significant, as it coincides with our mobiquity® Money’s ten-year milestone. It recognizes our technology leadership in mobility and digital payments as well as our continuous effort to innovate and make an impact towards the overall betterment of the society.

**Mahindra Comviva won prestigious AfricaCom awards 2016 for “Tap-Tap” NFC Payments Service**

Mahindra Comviva and Airtel Tanzania have jointly won the AfricaCom awards for Airtel Money “Tap Tap” NFC payments service in the “Best Mobile Financial Services” category. The service allows customers to make fast and seamless payments at merchant POS. Airtel Money “Tap Tap” NFC payments is a closed-loop NFC payments service that provides a digital medium for paying at merchants and local stores. By facilitating digital payments Airtel Money is helping Tanzania to move towards a cashless economy.

* Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner’s research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

Source: Mahindra Comviva
Research from Gartner

Magic Quadrant for Integrated Revenue and Customer Management for CSPs

We rate solutions that provide billing, customer care, rating, charging, pricing, partner relationship management, policy management, mediation, self-service, analytics and other related functions. Target buyers are communications service provider CIOs.

Market Definition/Description

The integrated revenue and customer management (IRCM) market is composed of communications service providers (CSPs) looking for commercial off-the-shelf software packages that address business-critical revenue and customer management business processes.

IRCM meets all transaction-charging processing requirements, regardless of product, service, delivery network, customer type or payment method for a particular CSP. It includes a set of integrated customer and network-facing solutions that support customer acquisition, retention and monetization functions.

Functional Footprint

The IRCM functional footprint extends into two areas:

- **Core functionality** is related mainly to traditional billing, charging and customer care features. Its features are a must-have for any IRCM suite and are provided usually in-house by the IRCM vendor.

- **Adjunct functionality** is nice to have, but it is not essential. Its features can be provided in-house or through partners.
Core Functionality

Core functionality includes the following:

- Analytics and reporting
- Balance management
- Billing and account management
- Customer self-care
- Dynamic discounting
- Multichannel support
- Partner relationship management
- Policy management (policy and charging rules function [PCRF])
- Product catalog
- Real-time rating or charging

Adjunct Functionality

- Customer/service product life cycle management
- Electronic bill presentment and payment (EBPP)
- Interconnect/wholesale billing
- Mediation

IRCM unites these functions in a single solution and process that simplify and expedite the order-to-cash process.

Magic Quadrant

Magic Quadrants provide a snapshot in time based on a specific set of evaluation criteria and corresponding weights.

Gartner advises readers not to compare this year’s placements of vendors with those of previous years because:

- The market is changing, and the criteria for selecting and ranking vendors continue to evolve.
- Scores are relative, rather than absolute, reflecting the advancement of all vendor solutions’ Completeness of Vision and Ability to Execute.

Gartner advises CSP CIOs against simply selecting vendors that appear in the Leaders quadrant because:

- All selections should be buyer-specific.
- Vendors from the Challengers, Niche Players or Visionaries quadrants may be better matches for these CIOs’ business goals and solution requirements.

The sliders in the interactive Magic Quadrants allow decision makers to adjust the evaluation criteria according to their preferences.

This Magic Quadrant will help CIOs who are developing IRCM strategies to assess which vendors to include in their RFIs and RFPs.
Figure 1. Magic Quadrant for Integrated Revenue and Customer Management for CSPs

Source: Gartner (October 2016)
Vendor Strengths and Cautions

Amdocs

Amdocs is a global software provider and outsourcer. Its IRCM revenue accounted for around $3 billion in 2015, according to Gartner estimates. Amdocs’ IRCM product portfolio is branded “Customer Experience Solutions (CES).” IRCM-related acquisitions since January 2015 include Comverse’s business support system (BSS) assets, cVidya, Brite:Bill, Vindicia and Pontis.

Strengths

■ Amdocs has a comprehensive and preintegrated IRCM portfolio, including associated services for fixed, mobile, prepaid and postpaid offerings.

■ Amdocs has the scalability, resources and viability to prime complex large-scale consolidation and transformation projects for the world’s largest CSPs.

■ The company’s large R&D budget allows innovation in and beyond IRCM along multiple fronts, including BSS and operations support system (OSS) integration, analytics, digital care, commerce and retail, the Internet of Things (IoT), and service orchestration engines.

Cautions

■ Amdocs is bureaucratic and often rigid in contract negotiations, leading to a long and complex agreement process.

■ The price point for Amdocs’ IRCM products and services can be high for many prospects and customers.

■ Amdocs prefers to deploy its own software rather than working with system integrators. This practice limits CSP choices and can result in friction in situations where CSPs work with multiple system integrators.

AsiaInfo

AsiaInfo’s core business is IRCM. Its IRCM revenue was about $775 million in 2015, according to Gartner estimates. AsiaInfo’s IRCM product portfolio is branded “Veris BSS Product Suite.” AsiaInfo has made no IRCM-related acquisitions since January 2015.

Strengths

■ AsiaInfo continues to grow IRCM revenue and workforce profitably, and it invests more than $100 million annually in R&D to advance its capabilities around innovations related to, for example, real-time intelligence and ecosystem enablement.

■ The company has a comprehensive IRCM portfolio with flexible business and delivery models, as well as a new purpose-built cloud-based version of its stack.

■ The company has experience with large, high-growth IT transformation projects in China that include enhancements to its core product capability.

Cautions

■ AsiaInfo’s mind share and system integration (SI) partner ecosystem remain narrow outside of China.

■ The company has only a few clients in emerging Asia/Pacific, and referenceable European clients remain limited to two Telenor properties.

■ AsiaInfo’s best reference customers are not English speaking.

Cerillion

Cerillion’s core business is IRCM. Its IRCM revenue amounted to about $21 million in 2015, according to Gartner estimates. Cerillion’s IRCM product portfolio is branded “Cerillion Enterprise,” which comprises a
set of preintegrated modules, including CRM Plus, Convergent Charging System and Revenue Manager. The company also offers a SaaS billing platform, Cerillion Skyline. IRCM-related acquisitions since January 2015 include netSolutions (from Ubisense).

Strengths

- Cerillion provides a broad, off-the-shelf IRCM suite built in-house rather than through acquisitions, including CRM and self-service. The suite is service-agnostic, supporting mobile, fixed-line, cable and Terrestrial Trunked Radio (TETRA) services, across prepaid and postpaid offerings.

- Skyline, Cerillion’s SaaS billing suite, is more scalable and feature-rich than small and midsize business (SMB) “subscription billing” solutions and has been available since 2014.

- The solution’s user-friendliness and preintegration result in high client satisfaction.

Cautions

- Cerillion supports mainly small to midsize CSPs. Large projects may pose challenges for company resources and product scalability.

- The company’s software partner ecosystem is limited.

- Cerillion’s SI program is new, and so far includes only Nokia, Huawei and IBM.

Comarch

Comarch is an SI and software provider. Its IRCM revenue amounted to about $40 million in 2015, according to Gartner estimates. Comarch’s IRCM product portfolio is branded “Comarch BSS Suite.” Comarch has made no IRCM-related acquisitions since January 2015.

Strengths

- Comarch has a cost-efficient, comprehensive and integrated product portfolio built in-house rather than through acquisitions.

- Comarch will be supplying its IRCM solution to the Next Generation Enterprise Network Alliance (ngen), enabling the company to augment its product to a global, multitenant, multicountry and multiservice environment.

- A strong client focus and the vendor’s flexibility in customizing the product quickly to suit client requirements account for the success of IRCM projects.

Cautions

- Comarch relies heavily on its own internal service capabilities, rather than working with system integrators. This practice can result in less advanced project management and support services and a less clear statement of work (SOW) than provided by system integrators with CSP expertise.

- Comarch’s ambitious plan to expand into Tier 1 CSPs and its geographic expansion have dampened the company’s sales momentum and innovation during the past year.

- User satisfaction with Comarch’s product and implementation is not uniform across all CSPs.

CSG International

CSG International is a global software provider and outsourcer. Its IRCM revenue was more than $400 million in 2015, according to Gartner estimates. CSG’s IRCM product portfolio is branded “Ascendon” and “Singleview.” CSG has made no IRCM-related acquisitions since January 2015.
Strengths

- CSG’s Ascendon e-commerce platform globalizes the company’s expertise of delivering IRCM for North American cable providers, media companies, multiplay CSPs and enterprises.

- CSG’s IRCM solutions provide a high degree of flexibility. The solutions are relatively configurable and require limited integration work.

- CSG offers strong support for wholesale billing for Tier 1 CSPs.

Cautions

- Outside North America and Australia, the company has low mind share among prospects.

- Singleview 9’s usability is somewhat hampered by interface, documentation and training issues.

- Prospects see little differentiation from Singleview. CSG has been conservative in its approach to managing its Singleview convergent billing system, although its Ascendon platform demonstrates CSG’s ability to innovate.

Ericsson

Ericsson is a global network equipment provider (NEP), software provider, system integrator and outsourcer. Its IRCM revenue amounted to over $1 billion in 2015, according to Gartner estimates. Ericsson’s IRCM product portfolio is branded “Digital BSS,” “Ericsson Charging System,” “Ericsson BSCS iX,” “Ericsson Charging and Billing in One (CBIO)” and “Ericsson Revenue Manager.” Revenue Manager is the latest addition to its product portfolio for enabling new services and operational and commercial models. IRCM-related acquisitions since January 2015 include TimelessMIND, Sunrise Technology, Icon Americas, and Ericpol’s operations in Poland and Ukraine.

Strengths

- Ericsson has a fully integrated IRCM solution, which includes charging, billing and product catalog. The addition of Revenue Manager enables newer commercial and operating models for digital services.

- The company has the scalability, resources and viability to prime complex large-scale, multiplay consolidation and transformation projects for the world’s largest CSPs.

- Ericsson has been focusing its IRCM activities as a portfolio strategy that includes cloud enablement, integrated operational technologies, machine-to-machine (M2M) and vertical-industry-specific strategies.

Cautions

- Ericsson’s initial high prices are a frequent reason why prospects do not select the company for IRCM projects.

- Ericsson’s partner ecosystem for adjacent solutions is narrow.

- Ericsson’s extensive IRCM portfolio remains fragmented across a number of different products. Its integrated IRCM platform called “Revenue Manager” is new in the market and is still evolving.

FTS

FTS is a subsidiary of Magic Software Enterprises – a global provider of software platforms for enterprise mobility, cloud applications and business integration. FTS’s core business is IRCM. Its IRCM revenue amounted to about $10 million in 2015, according to Gartner estimates. FTS’s IRCM product portfolio is branded “Leap Billing,” “Leap Policy Control” and “FTS express.” It includes mobile money solutions as well. FTS has made no IRCM-related acquisitions since January 2015.
Strengths

- FTS has a comprehensive and fully integrated IRCM product portfolio, including PCRF and mobile money solutions, and supports multitenancy for business models such as MVNOs and mobile virtual network enablers (MVNEs).

- Its billing solution for M2M and the IoT allows flexible configurations across partner settlement, charging and dynamic business rules supporting multiple verticals.

- Customers of FTS are satisfied with its product and implementation support.

Cautions

- The company has little visibility and mind share among CSPs looking for a new IRCM solution.

- FTS does not map to common architecture models, such as those by the TM Forum. It is yet to communicate its approach to enabling service orchestration with network function virtualization (NFV)/software-defined networking (SDN) adoption.

- Local support is limited outside of the company's target geographies of Western and Eastern Europe, Israel, the Americas and sub-Saharan Africa, given the company's size and relatively narrow partnership ecosystem.

Huawei

Huawei is a global NEP and software provider. Its IRCM revenue exceeded $1.7 billion in 2015, according to Gartner estimates. Huawei's IRCM product portfolio is branded “Convergent Billing Solution (CBS)” and “Customer Engagement System (CES).” Looking at digitalization requirements, it has consolidated BSS components as a new platform called “Business Enabling System (BES).” Huawei has made no IRCM-related acquisitions since January 2015.

Strengths

- Huawei has a broad product portfolio, covering core IRCM, with ongoing investments in capabilities around the IoT, M2M, NFV, SDN, mobile money and analytics.

- Its focus on cloud enablement for CSPs has led to augmenting all IRCM components to be offered as a service (BES SaaS), for varying needs of different types of CSPs.

- Huawei’s IRCM solution supports some of the largest CSPs in multiple geographies.

Cautions

- Huawei prefers to use its own SI resources and will use system integrators only when the client stipulates it.

- Huawei remains dependent on its Chinese headquarters for major decisions related to integration, customization and development. Local communication and decisions can take a long time.

- Customers’ feedback on Huawei’s products and services and their overall experience with the company are inconsistent.

Infonova

Infonova is a subsidiary of BearingPoint – a global management and technology consulting firm. Infonova’s core business is IRCM. Its IRCM revenue amounted to about $55 million in 2015, according to Gartner estimates. Infonova’s IRCM product portfolio is branded “Infonova R6.” Infonova has made no IRCM-related acquisitions since January 2015.

Strengths

- Infonova provides a compelling IRCM suite with support for digital ecosystem management (DEM) and complementary consulting offerings from its parent company, BearingPoint.
It continues to differentiate itself with large global CSPs using Infonova R6 multitenant architecture, supporting their enterprise business and extending platform components to their customers.

Customers find Infonova innovative in its product functionalities and are satisfied with its support services.

Cautions

Despite improvements in recent years, Infonova’s mind share remains limited, and so is its differentiation beyond platform features.

Infonova’s main geographic focus is Western Europe and Asia/Pacific. Its presence in other regions is limited.

CSPs using Infonova’s platform often need a combination of services from Infonova and from third-party system integrators (other than BearingPoint) for implementation.

Mahindra Comviva

Mahindra Comviva is a subsidiary of Tech Mahindra – a global provider of IT, networking and marketing solutions. Its IRCM revenue was $70 million in 2015, according to Gartner estimates. Mahindra Comviva’s IRCM product portfolio is branded “iPACS,” “mBAS” and “MobiLytix” (customer analytics suite). Mahindra Comviva acquired a controlling stake in Argentina-based company ATS in January 2016 to expand its footprint in the region.

Strengths

- Comviva’s IRCM solutions are easy to configure and implement, and they provide a low total cost of ownership (TCO).
- Comviva’s product portfolio combines digital service monetization with value-added services.

Comviva benefits from the global reach and SI capabilities of Tech Mahindra.

Cautions

- Comviva has limited CSP mind share as an IRCM supplier.
- Most of its deployments are in emerging markets. This makes Comviva relatively inexperienced with user requirements in developed regions.
- Comviva prefers to do its own SI work and does not have a formal SI partner ecosystem.

Matrixx Software

Matrixx Software is a software vendor for IRCM systems packaged and branded “Matrixx Digital Commerce.” Its IRCM revenue amounted to around $10 million in 2015, according to Gartner estimates. Matrixx has made no IRCM-related acquisitions since January 2015.

Strengths

- Matrixx Digital Commerce components are scalable and innovative.
- Matrixx’s billing and account management and its real-time rating and charging solutions are rated well above peers by customers.
- The company leverages other leading digital solution partners for adjacent functionalities and value-add to its offerings.

Cautions

- Matrixx’s reach is still confined to a small number of CSPs in a few countries, thereby limiting its visibility to prospects.
- The company’s roadmap and innovation focus are on a limited set of components, which may not meet requirements of large CSPs.
Matrixx’s limited range of partnerships with system integrators can affect transformational programs with Matrixx Digital Commerce.

Netcracker

Netcracker is a division of NEC – a global NEP, software provider and outsourcer. Its IRCM revenue amounted to more than $2 billion in 2015, according to Gartner estimates. Netcracker’s IRCM product portfolio is branded “Netcracker.” IRCM-related acquisitions since January 2015 include CoralTree Systems.

Strengths

- Netcracker has a comprehensive IRCM portfolio, including associated services for M2M, IoT, analytics and others, for fixed, mobile, prepaid and postpaid offerings for CSPs, as well as some of these for enterprises.
- It has augmented its platforms to support NFV, SDN and cloud business models, besides capabilities to prime complex large-scale transformational programs in CSPs.
- Customers rate its platform components, architecture and technical support highly.

Cautions

- The price point for Netcracker’s IRCM products and services can be high for many prospects.
- Netcracker’s mind share remains below that of its major competitors, despite aggressive marketing campaigns.
- Netcracker continues to deploy its IRCM solutions directly to its customers rather than working with SI providers.

Openet

Openet’s core business is IRCM. Its IRCM revenue amounted to about $110 million in 2015, according to Gartner estimates. Openet’s IRCM product portfolio is branded “Policy Manager,” “Evolved Charging” and “Convergent Mediation.” Openet has made no IRCM-related acquisitions since January 2015.

Strengths

- Openet’s charging, policy management, network analytics and usage management solutions provide adjunct options for CSPs that do not want to embark on large-scale transformation projects.
- The company’s software is fully virtualized and in production with Tier 1 CSPs. It provides an NFV manager, called Weaver, free of charge via a community model.
- The solutions’ flexibility, scalability and innovation, along with the technical skills of implementation and support staff, account for high client satisfaction.

Cautions

- The company’s product suite still shows some gaps, particularly in billing and account management, as well as partner relationship management.
- Product prices remain higher than prices of many of Openet’s competitors, and licensing is less transparent than that of other vendors.
- Openet has limited SI partnerships, affecting its implementation services.

Oracle

Oracle is a global hardware and software provider. Its IRCM revenue amounted to about $500 million in 2015, according to Gartner estimates. Oracle’s core IRCM product portfolio is branded “Oracle Communications Billing and Revenue Management” and “Oracle CX for Communications.” Oracle has made no IRCM-related acquisitions since January 2015.
Strengths

Oracle provides a comprehensive set of modular, configurable and standards-based components that cover every aspect of an IRCM solution. Oracle also extends its IRCM solution into the network and customer layers.

The solution portfolio’s scalability, flexibility and functional richness are among the main reasons for selecting Oracle’s IRCM products.

Oracle is leveraging acquisitions such as BigMachines, BlueKai and Maxymiser to address future CSP cloud requirements. In addition, Oracle leverages innovation from other Oracle divisions, including analytics, M2M, IoT, data monetization, cross-channel customer experience, and in-memory distributed data grid and analytics.

Cautions

Despite a rich set of APIs, the integration of IRCM products with other Oracle and third-party products can be complex and result in performance and time-to-market issues.

IRCM projects can suffer from layers of organizational red tape and complex arrangements between Oracle and its delivery partners and distributors.

Product prices remain higher than prices of many of Oracle’s competitors, and licensing is less transparent than that of other vendors.

Redknee

Redknee’s core business is IRCM. Its IRCM revenue amounted to about $210 million in 2015, according to Gartner estimates. Redknee’s IRCM product portfolio is branded “Redknee Unified.” IRCM-related acquisitions since January 2015 include Orga Systems.

Strengths

Redknee’s IRCM portfolio is broad and incorporates all IRCM components for mobile CSPs. Its current investment focuses on any-play service convergence, partner and over-the-top (OTT) monetization, virtualization, voice over Long Term Evolution (VoLTE), real-time marketing, and non-CSP vertical markets.

The company has active clients in nearly every geographic region.

A focus on responsiveness to customer requests and a strong development team account for high client satisfaction.

Cautions

Redknee’s year-over-year revenue has declined since fiscal year (FY) 2014 and, according to company guidance, will continue to do so in FY16. Redknee’s ownership structure is under consideration.

Redknee lacks a clear corporate identity and differentiation.

Redknee has limited exposure to fixed-line CSPs, which constrains its ability to deliver large fixed-mobile convergence projects without partners.

Sterlite Tech (Elitecore)

Elitecore is a software division of Sterlite Technologies, a CSP-focused company that develops and delivers optical communications products, network integration solutions and software services for CSPs globally. Elitecore’s IRCM revenue amounted to about $27 million in 2015, according to Gartner estimates. Elitecore’s IRCM product portfolio is branded “Elitecore Billing and Revenue Management,” “Elitecore Wi-Fi Service Management Platform (SMP)” and “Elitecore CSM” (CSM stands for core session management). Elitecore has made no IRCM-related acquisitions since January 2015.
Strengths

- Elitecore combines a network-centric and Internet Protocol (IP)-centric view of IRCM to address real-time customer experience management and the monetization of next-generation networks.

- The company’s flexible and cost-effective solutions account for its high levels of client satisfaction.

- Its out-of-the-box Wi-Fi Service Management Platform, targeted to a wide variety of enterprises, such as CSPs, mobile virtual network operators (MVNOs) and SMBs, is a differentiator.

Cautions

- Elitecore’s IRCM operations are relatively small. Large projects may pose challenges for company resources and product scalability.

- The awareness of Elitecore’s products remains very low outside of Asia/Pacific, the Middle East, North Africa and sub-Saharan Africa, where the company has existing clients. This limits the company’s ability to expand its client base.

- Sterlite Tech’s value-add to Elitecore as an IRCM company remains to be seen, with Sterlite Tech being in the business of infrastructure components.

SunTec

SunTec Business Solutions’ core business is IRCM. Its IRCM revenue amounted to more than $25 million in 2015, according to Gartner estimates. SunTec’s IRCM product portfolio is branded “Xelerate Digital Services.” SunTec has made no IRCM-related acquisitions since January 2015.

Strengths

- SunTec has a competitively priced, comprehensive IRCM suite, and it places special emphasis on new uses and adjacent markets, including contextual operational analytics, smart energy and smart cities.

- The company’s SaaS-based IRCM solution is now available. It targets CSPs that want to launch digital services.

- SunTec’s IRCM client base includes more than 28 global financial institutions. CSPs that provide services to this industry can leverage the company’s expertise.

Cautions

- SunTec’s exposure to CSPs remains limited to a small number of clients in North America, Western Europe, emerging Asia/Pacific and the Middle East.

- The company has little visibility among CSPs looking for a new IRCM solution.

- SunTec’s value proposition remains vague to CSP prospects, and it has diverted its focus to other industry verticals.

Tecnotree

Tecnotree is a software provider for IRCM and value-added services (VASs). Its IRCM revenue amounted to about $84 million in 2015. Tecnotree’s IRCM product portfolio is branded “Tecnotree Agility Suite.” Tecnotree has made no IRCM-related acquisitions since January 2015.

Strengths

- The product is fully virtualized and provides an adjunct option for CSPs that do not want to embark on large-scale transformation projects.

- Tecnotree provides cost-effective solutions.

- A flexible approach to engagement, including the willingness to customize product capabilities to suit client requirements, provides reasons for choosing Tecnotree over the competition.
Cautions

■ Tecnotree has little visibility among CSPs looking for a new IRCM solution.

■ Most of Tecnotree’s revenue comes from a few clients in two geographies. In 2015, its two largest clients accounted for more than 80% of its total revenue, and more than 90% of its revenue came from Latin America, the Middle East and Africa.

■ The company filed a draft restructuring program in Finland on 30 March 2016. It also started a companywide cost savings plan in August 2016.

Xius

Xius is a subsidiary of Megasoft – a global provider of cloud services, cyber security, IoT solutions and mobile network services. Xius’ IRCM revenue was about $8 million in 2015, according to Gartner estimates. Xius’ IRCM product portfolio is branded “Mobile Services Platform (MSP),” “INfinet” and “Amplio.” Xius has made no IRCM-related acquisitions since January 2015.

Strengths

■ Xius offers a cost-efficient IRCM solution that supports the retail and wholesale operations of mobile network operators and MVNOs. The solution also supports real-time credit and payment management for partners and subscription billing.

■ The company has an established client base with Telefónica holdings in Latin America, which allows it to expand its footprint in this region.

■ Xius can provide CSPs with more individualized services and support than large suppliers.

Cautions

■ Xius software supports mobile CSPs only rather than CSPs trying to offer multiplay services.

■ Xius has low name recognition in the IRCM industry.

■ The company’s geographic expansion has been slow, and its reach remains limited mainly to Latin America (Telefónica operating companies) and some legacy implementations in the U.S.

ZTEsoft

ZTEsoft is a subsidiary of ZTE – a global NEP and software provider. Its IRCM revenue was about $410 million in 2015, according to Gartner estimates. ZTEsoft’s IRCM product portfolio is branded “ZSmart.” ZTEsoft has made no IRCM-related acquisitions since January 2015.

Strengths

■ Product flexibility and scalability, along with reliable product support at competitive costs, account for ZTEsoft’s high level of client satisfaction.

■ ZTEsoft provides comprehensive coverage (including analytics, M2M and IoT) across all IRCM functions with flexible delivery and pricing options.

■ The company is in the process of virtualizing its solutions on a scale that can be used by Tier 1 CSPs.

Cautions

■ ZTEsoft’s mind share remains far below that of its major competitors, despite aggressive marketing campaigns. This limits its ability to expand its client base.

■ ZTEsoft’s SI program is work in progress. Outside of China, ZTEsoft does some work with SI partners and prefers to work with partners in Europe.

■ The company’s program management, including product and process documentation, and English language communication skills are a source of client dissatisfaction.
**Vendors Added and Dropped**

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor’s appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

**Added**
- Mahindra Comviva
- Matrixx Software
- Xius

**Dropped**
- SAP
- NVision Group

**Inclusion and Exclusion Criteria**

Worldwide, more than 200 vendors provide various modules of IRCM for CSPs. Most of these vendors are small in terms of revenue, provide only point solutions or have a small geographic footprint.

During the past two years, a new set of vendors offering SaaS-based solutions has entered this market. These vendors originally addressed small and midsize enterprises. Some of them have now scaled their solutions to meet the requirements of CSPs, but they lack the traction of the vendors covered in this Magic Quadrant report. These vendors are not included in the 2016 iteration of the IRCM Magic Quadrant.

Criteria for inclusion and exclusion in this Magic Quadrant are the following:

- **Independent software vendors (ISVs)** – Only software publishers are included. NEPs that have their own IRCM product portfolios are included in this category, as well.
- **Functionality** – The software suite must provide the full range of core customer and revenue management functions, as shown above in the Functional Footprint section:
  - Real-time rating or charging, as well as billing and account management, *must be provided in-house*.
  - Vendors *must provide* at least six out of the remaining eight core functions in-house.
  - Adjunct functions can be provided in-house or through partners.
- **Geographic reach** – Vendors must have active IRCM CSP customers for the core functionality in at least four geographic regions, as defined in “Market Definitions and Methodology Guide: Communications Service Provider Operational Technology.”

**Evaluation Criteria**

**Ability to Execute**

This axis evaluates vendors on the quality and efficiency of the processes, systems, methods or procedures that enable their performance to be competitive, efficient and effective, and to positively affect revenue, retention and reputation. Ability to Execute is primarily a combination of factors driven by product functionality, architecture and performance, and by the ability to meet customer expectations during product delivery and operation. Vendors are judged on their ability and success in executing their vision. Our evaluation of a vendor’s Ability to Execute is based on the following criteria. Only the criteria most relevant to IRCM vendor selection in today’s market are rated:
Product or service: Core goods and services that compete in or serve the IRCM market. This includes current product and service capabilities, quality, feature sets, and skills. This can be offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall viability: Viability includes an assessment of the organization’s overall financial health, as well as the financial and practical success of the business unit. It views the likelihood of the organization to continue to offer and invest in the product, as well as the product position in the current portfolio.

Market responsiveness/record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor’s history of responsiveness to changing market demands.

Marketing execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization’s message in order to influence the market, promote the brand, increase awareness of products and establish a positive identification in the minds of customers. This “mind share” can be driven by a combination of publicity, promotional, thought leadership, social media, referrals and sales activities.

Table 1 lists the relative weighting of the various criteria in terms of a vendor’s Ability to Execute in this market.

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product or Service</td>
<td>High</td>
</tr>
<tr>
<td>Overall Viability</td>
<td>Medium</td>
</tr>
<tr>
<td>Sales Execution/Pricing</td>
<td>Not Rated</td>
</tr>
<tr>
<td>Market Responsiveness/Record</td>
<td>High</td>
</tr>
<tr>
<td>Marketing Execution</td>
<td>Medium</td>
</tr>
<tr>
<td>Customer Experience</td>
<td>Not Rated</td>
</tr>
<tr>
<td>Operations</td>
<td>Not Rated</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2016)

Completeness of Vision

This axis evaluates vendors on their ability to convincingly communicate their current and future market direction, innovation, customer needs and competitive forces, and on how well those statements map to Gartner research positions. Vendors are rated on their understanding of how they can address market forces to meet and anticipate customer demands. Completeness of Vision is primarily a combination of domain expertise, an appropriate go-to-market strategy, and a focus on innovation in product functionality and enabling technology. Geographic footprint and the ability to cater to industries outside the CSP vertical also play a role. Only the criteria most relevant to IRCM vendor selection in today’s market are rated:

Marketing strategy: Clear, differentiated messaging consistently communicated internally and externalized through social media, advertising, customer programs and positioning statements.

Sales strategy: A sound strategy for selling that uses the appropriate networks, including direct and indirect sales, marketing, service, and communication. Partners that extend the scope and depth of market reach, expertise, technologies, services and their customer base.
- **Offering (product) strategy**: An approach to product development and delivery that emphasizes market differentiation, functionality, methodology and features as they map to current and future requirements.

- **Innovation**: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, and defensive or pre-emptive purposes.

- **Geographic strategy**: The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the “home” or native geography, either directly or through partners, channels and subsidiaries, as appropriate for each geography and market.

They also engage in innovative projects and activities, carefully listening to their customer base and executing projects to their customers’ satisfaction.

They are engaged in understanding the underlying and emerging patterns/trends in revenue and customer management activities, and they direct their R&D resources and investments accordingly.

### Challengers

Challengers perform well in their selected markets or industries:

- They have high capability and performance (in terms of sales and growth).

- They may not be targeting all segments or geographies of the IRCM market.

- They may have a more limited vision of their functionality or technology.

Clients with a conservative approach to business will find lower-risk options in this sector. Challengers can invest in innovative projects driven by their R&D activities. A proactive approach to R&D and innovation in IRCM can move Challengers into the Leaders quadrant.

### Visionaries

Visionaries have unique functional or technical IRCM-related capabilities, but they have constrained capabilities geographically or financially. They are characterized by:

- Their ability to anticipate market transformation, such as increased analytical functionality or integration.

- Their optimization of commodity and service management business processes.

### Table 2. Completeness of Vision Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Understanding</td>
<td>Not Rated</td>
</tr>
<tr>
<td>Marketing Strategy</td>
<td>Medium</td>
</tr>
<tr>
<td>Sales Strategy</td>
<td>High</td>
</tr>
<tr>
<td>Offering (Product) Strategy</td>
<td>High</td>
</tr>
<tr>
<td>Business Model</td>
<td>Not Rated</td>
</tr>
<tr>
<td>Vertical/Industry Strategy</td>
<td>Not Rated</td>
</tr>
<tr>
<td>Innovation</td>
<td>High</td>
</tr>
<tr>
<td>Geographic Strategy</td>
<td>Medium</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2016)

### Quadrant Descriptions

#### Leaders

Leaders are vendors that would normally be included on shortlists for IRCM solutions for large and midsize CSPs worldwide:

- They perform profitably, grow their revenue and have a presence in all major markets.

- Their functionality is above average, and their technology and scalability are leading-edge.

Clients with a conservative approach to business will find lower-risk options in this sector. Challengers can invest in innovative projects driven by their R&D activities. A proactive approach to R&D and innovation in IRCM can move Challengers into the Leaders quadrant.
Clients that have a tolerance for risk and are seeking a differentiating product should consider Visionaries. An increased focus on their IRCM technology and solution delivery can move Visionaries into the Challengers or Leaders quadrant. Visionaries can also develop partnerships that complement their strengths.

Niche Players

Niche Players are still worthy of consideration. Given the fragmentation of the market, buyers should consider that any listing in this Magic Quadrant is a good indication of a vendor’s credibility.

Vendors are situated in the Niche Players quadrant because of:

- A limited geographical presence.
- A narrow or limited focus on marketing strategy, innovation and delivery models, or limited partnerships.
- A lack of financial strength (that is, they have not achieved financial viability compared with the Leaders).
- A failure to match the Leaders in advancing their technologies or functionality.

All of these factors prevent Niche Players from being universally suitable to all customers.

Context

Changes From the 2015 Magic Quadrant

We adjusted the inclusion criteria, weighting and evaluation criteria to account for changes in the market. Highlights are as follows:

- Weightings:
  - Ability to Execute: Marketing Execution
- We increased this weighting from Low to Medium because new customer requirements mean that vendors need to constantly adjust their marketing strategy.
- Inclusion Criteria:
  - We moved analytics from adjunct capabilities to core capabilities.

Key Findings

- Product or Service:
  - The IRCM solution and product portfolios across all vendors rated in this Magic Quadrant are relatively similar. Product differentiation will come from two sides: CRM-related functionality and OSS/network-facing functionality. Only the largest vendors can address both aspects. Smaller vendors specialize in CRM-related or OSS-related features.
  - The IRCM market is likely to fragment, without a clear distinction between core and adjunct functionality.
  - One of the main differentiators is how vendors manage the actual implementation, integration and maintenance.
- Marketing Strategy and Marketing Execution:
  - All vendors invest in the same technologies and use the same industry jargon, including M2M, analytics and IoT.
  - Apart from most of the largest vendors, brand recognition of IRCM solutions by CSPs is relatively low.
  - Continuous solution rebranding by some vendors has been diluting product name recognition.
Market Responsiveness/Record:

- Overall customer satisfaction remains mixed for most vendors.

- Customer satisfaction for large vendors is often polarized, ranging from high satisfaction to high dissatisfaction.

- Some smaller vendors have distinguished themselves by their ability to manage CSPs’ digital ecosystems.

- CSPs would like to see vendors as partners that take the lead in their IRCM projects, rather than merely providing solutions and software.

Sales Strategy:

- Partnerships:

  - Some vendors prefer to provide the entire suite (as well as services) on their own. This includes smaller vendors, although they often lack the resources to stay ahead of technology innovation and service expertise.

  - Only few vendors have elaborate OEM and SI ecosystems in place.

  - Recently, some vendors expanded their product and service partnerships to remain relevant in the changing IRCM market.

- Vertical/Industry Strategy:

  - Many vendors have been expanding their client base beyond CSPs into vertical industries, such as utilities, finance, content/media and others.

  - Most vendors’ vertical strategies remain in their initial stages. There have been few changes since last year.

  - The most promising entry points are currently M2M, telematics, the connected car and the connected home.

Overall Viability:

- The risk of vendor acquisition remains high.

- Many vendors featured in this Magic Quadrant show only modest or no organic growth, or negative net profits.

Market Overview

The IRCM market differs from other software markets:

- Software licenses account for about 20% of the market.

- Services account for about 70%.

- Outsourcing accounts for about 10%.

This peculiarity accounts for the survival of many small vendors.

CSPs selecting IRCM solutions emphasize solution breadth, flexibility and scalability, along with technology innovation. Competitive cost remains another key selection criterion.

Less important selection criteria include having a pre-existing relationship with the supplier, the vendor’s service expertise and the partner ecosystem, among others.

These preferences indicate an overemphasis on software features and a certain neglect of service expertise. This bias might account for many IRCM projects failing to meet their initial objectives in terms of time to market and TCO.

CSP sourcing managers should pay equal attention to a vendor’s ability to take ownership of a project – from initial consulting to integration, maintenance and upgrades.
SaaS-based IRCM solutions will challenge on-premises-based solutions in the medium term. A new set of vendors that initially offered solutions to small and midsize enterprises has entered this market. Some of them have now scaled their solutions to meet the requirements of CSPs, but they lack the traction of the vendors covered in this Magic Quadrant.

Many of the vendors featured in this Magic Quadrant have launched SaaS IRCM solutions to prevent their current clients from switching to another vendor. They have either built such SaaS solutions themselves or made acquisitions. We expect both approaches to continue in 2017. SaaS-based IRCM will become a part of every IRCM vendor’s portfolio.

**Vendors Not In the Magic Quadrant**

Although they don’t meet the inclusion criteria for this Magic Quadrant, there are many viable alternative IRCM vendors. This list includes vendors that operate in more than one region:

- Alepo
- Aria Systems
- BillingPlatform.com
- CBOSS Holding
- Comptel
- goTransverse
- ItsOn
- MDS
- Mind CTI
- Omniware Solutions
- SAP
- Zuora

**Evaluation Criteria Definitions**

**Ability to Execute**

**Product/Service:** Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability:** Viability includes an assessment of the overall organization’s financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization’s portfolio of products.

**Sales Execution/Pricing:** The vendor’s capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness/Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor’s history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization’s message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This “mind share” can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support and service, whether these are on-premises or SaaS-based.
support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

**Completeness of Vision**

**Market Understanding:** Ability of the vendor to understand buyers’ wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers’ wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor’s approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor’s underlying business proposition.

**Vertical/Industry Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the “home” or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

*Source: Gartner Research, G00293491, Norbert J. Scholz, Jouni Forsman, Amresh Nandan, 17 October 2016*
About Mahindra Comviva

Mahindra Comviva is the global leader of mobility solutions catering to The Business of Tomorrows. The company is a subsidiary of Tech Mahindra and a part of the $17.8 billion Mahindra Group. Its extensive portfolio of solutions spans mobile finance, content, infotainment, customer value management, messaging, mobile data and managed VAS services. It enables service providers to enhance customer experience, rationalize costs and accelerate revenue growth. Mahindra Comviva’s solutions are deployed by over 130 mobile service providers and financial institutions in over 95+ countries and enrich the lives of over two billion people to deliver a better future. In January 2016, the company acquired a controlling stake in Advanced Technology Solutions (ATS), a leading provider of mobility solutions to the telecom industry in Latin America to strengthens its in-region presence.

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