



# Revenue Management: Competitive Landscape Assessment

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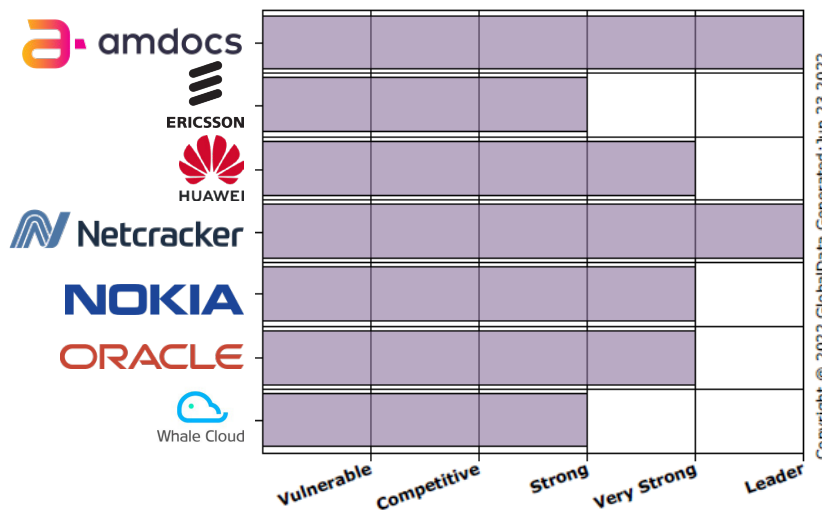
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## COMPETITIVE LANDSCAPE ASSESSMENT - REVENUE MANAGEMENT

### REPORT SUMMARY:

Operators increasingly seek cloud-native revenue management solutions and alliances with multiple public clouds. CSPs are also increasingly looking to their vendors to build developer ecosystems to help create new 5G revenue streams.

### PRODUCT CLASS SCORECARD



## MARKET OVERVIEW

<b>Product Class</b>	Revenue Management		
<b>Market Definition</b>	<p>The revenue management market consists of business support system (BSS) offerings primarily related to mediation, converged rating and charging, online charging systems (OCS), customer billing management, partner billing management, collections management, bill presentment, voucher management, policy and control charging, and monetization.</p> <p>Revenue management solutions increasingly support digital operator business models, including real-time pricing and consumption, as well as overall network and business agility. The accelerated deployment of cloud-native revenue management systems has expanded as operators look to build personalized digital interactivity, customer self-service portals, analytics-driven proactive care, precision marketing, and real-time convergent charging. Revenue management vendors are streamlining services and planning creation, as well as designing customer-driven personalization with a unified and orchestrated billing framework that supports catalog, rating, and policy logic in real-time.</p> <p>The revenue management vendor landscape includes top-tier OSS/BSS suppliers, as well as specialized vendors like Matrixx, Nexign, CSG, Hansen, Cerillion, and Alepo, which may focus more on prepackaged, standardized, cloud-delivered solutions.</p>		
<b>Rated Competitors</b>	<ul style="list-style-type: none"> <li>• Amdocs</li> <li>• Ericsson</li> <li>• Huawei</li> </ul>	<ul style="list-style-type: none"> <li>• Netcracker</li> <li>• Nokia</li> </ul>	<ul style="list-style-type: none"> <li>• Oracle</li> <li>• Whale Cloud</li> </ul>
<b>Additional Competitors</b>	<ul style="list-style-type: none"> <li>• Alepo Technologies</li> <li>• Cerillion</li> <li>• CSG</li> </ul>	<ul style="list-style-type: none"> <li>• Hansen</li> <li>• Matrixx Software</li> <li>• Nexign</li> </ul>	
<b>Changes Since Last Update</b>	<p><b>April 2022:</b> At its annual Huawei Analyst Summit, Huawei showcased its 5G cloud-native convergent billing platform, citing its ability to reduce hardware costs by 35%, improve customer satisfaction by 38%, and dramatically reduce time-to-market for new services.</p> <p><b>March 2022:</b> Whale Cloud achieved TM Forum's Platinum Open API Conformance Certification for its ZSmart BSS/OSS suite. By supporting Open APIs, Whale Cloud hopes to bring the benefits of standardization, innovation, and agility to its customers.</p> <p><b>February 2022:</b> Amdocs introduced Freestyle Billing, which supports preferred payment and business models with intelligent billing and monetization options. The new SaaS offering enables flexible billing across multiple use cases, including OTT services for B2B, B2C, and B2B2X offerings, with minimal upfront investment required.</p> <p><b>February 2022:</b> Netcracker introduced Netcracker Digital Platform (NDP), which features super-granular charging capabilities to support increasingly complex 5G partner ecosystems. Among other features, NDP integrates AI and gamification to help improve customer loyalty and increase communication service providers' (CSPs) relevance to their customers.</p> <p><b>February 2022:</b> Nokia announced two SaaS services to address analytics, security, and monetization for CSPs. Nokia AVA Network Data Analytics Function provides network operations with AI/ML-based closed-loop automation. iSIM Secure Connect enables CSPs to manage M2M and consumer device subscriptions for eSIM and iSIM-enabled devices securely and remotely.</p> <p><b>February 2022:</b> Oracle introduced its updated 5G-ready, cloud-native Converged Charging System, featuring real-time transaction processing using Oracle's Coherence, an in-memory data grid technology. Coherence enables high performance and speed in support of a variety of 5G use cases.</p> <p><b>February 2022:</b> Netcracker extended its BSS and Managed Services partnership with T-Mobile US. Netcracker's complete BSS suite, including Digital BSS, Partner Management, and Managed Services will help T-Mobile leverage BSS capabilities for revenue management and provide reduced bill run times with improved accuracy.</p> <p><b>February 2022:</b> AT&amp;T joined the Ericsson 5G Startup program to assist CSPs with 5G commercialization and monetization.</p>		

**Changes Since Last Update (cont.)**

**October 2021:** Amdocs announced the launch of its Digital Brands Suite as a Service powered by Amazon Web Services. The cloud-based SaaS suite enables digital brands to introduce streamlined care, commerce, ordering, and monetization capabilities with minimal upfront costs.

**October 2021:** Ooredoo Group and Ericsson signed a five-year agreement to deploy Ericsson BSS solutions across Ooredoo Group operating companies. Ericsson's BSS will enable Ooredoo to enhance its digital transformation strategy, improve operational efficiency, and enhance customer experience.

**MARKET ASSESSMENT**

The revenue management market is rapidly evolving thanks to increasing operator investment in cloud-based billing platforms aimed at facilitating more targeted user experiences and a much shorter time-to-market in emerging 5G/digital environments. Operators of all stripes are on a path toward cloud-native revenue management capabilities that can flexibly meet their customers' personalized and customized service demands by using self-service interfaces to shorten time-to-market. However, with all vendors in this space claiming cloud-native capabilities, the true proof of capabilities is increasingly being measured by success in landing actual operator customers with multi-year, cloud-native deployments.

Operators are dealing with the challenges of unifying rating, billing, and integrated online charging and policy control onto a single platform. Operators require converged billing systems to capitalize on the economic benefits of network convergence across fixed, mobile, and IP services, as well as multiservice convergence across voice, data, SMS, and content. Equally important, converged platforms unify prepaid, postpaid, and hybrid payment models and integrate a variety of third-party integration capabilities. Complicating this picture further is the gradual transition from the 4G evolved packet core's combined policy and charging rules function to the 5G core's policy control function and charging function. As the first wave of 5G standalone (SA) core deployments slowly materializes, vendors in this space will come under increasing pressure to show how new 5G capabilities can help power innovative new use cases and help support new ecosystems.

Increasingly, operators are concerned with their inability to monetize current and planned 5G investment. This growing unease means that revenue management vendors are under pressure to show how real-time charging, unified catalogs, and innovative bill presentment capabilities can help drive revenue. On the enterprise/B2B side in particular, revenue management providers are building in a more proactive approach to network-as-a-service (NaaS) offerings, as well as a migration path to dynamic network slicing.

**MARKET ASSESSMENT**

**Cloud-Native Capabilities are Table Stakes:** While vendors have always utilized traditional revenue management capabilities to boost customer experience (CX) outcomes, the role that revenue management plays in CX is greater than ever. However, the challenges continue to become more complex. New network capabilities enable new user experiences and services for consumers and enterprises; revenue management solutions must have the agility and flexibility to deliver and monetize those services.

**Transform Customer Experience:** Vendors will need to increasingly integrate people-focused analytics that can enable individualized customer journeys, while simultaneously ensuring that customer data remains protected, both to ensure compliance with regulations, such as the General Data Protection Regulation, and to avoid alienating loyal customers.

**5G Monetization Imperative Growing:** Some vendors were arguably ahead of the market in focusing on 5G monetization several years ago. However, as 5G networks proliferate and mature over the next two years, a critical mass of CSPs will be trying to figure out how to make money from their 5G investments. Revenue management vendors must therefore focus their portfolios- and related services- on building a path that starts with simple 5G use cases, like immersive stadium experiences, but can evolve to increasingly transformative cases based on robust network slicing capabilities.

**Controlling OpEx:** OpEx has continued to increase as operators struggle to keep pace with increasing the uptake of mobile, fixed broadband, and video services, as well as executing digital transformation. Automating billing processes decreases errors, lowers OpEx, and powers overall business agility. Successful revenue management platforms will enable non-engineers (e.g., marketing and promotion teams) to design tariffs, promotions, and services; meanwhile, new pay-as-you-go licensing and cloud operations (private or public) enables greater agility and shorter release cycles, reducing costs to introduce new services.

## BUYING CRITERIA

**Portfolio Capabilities:** Specific criteria included mediation; converged rating and charging; 5G charging function support; OCS capabilities; customer billing and partner billing management capabilities; collections management; bill presentment; voucher/loyalty plan management; analytics integration; policy control and charging portfolio; and enterprise monetization solutions.

**Delivery Models:** Criteria included details about the depth and breadth of their managed services offerings, support for emerging 'as-a-service' models, and flexibility and degree of support for hybrid/multicloud consumption models. GlobalData also asked vendors about their support for waterfall and agile development methodologies, as well as traditional delivery cycles achievable using the latest version of their BSS platforms. Finally, GlobalData asked vendors to identify significant delivery partners.

**Service & Support:** This was analyzed based on total workforce in the relevant focus areas; support in terms of global solution delivery centers; and research and development (R&D) investment in terms of total investment and R&D/innovation focus areas.

**Customer Success & Stability:** Success and stability is assessed by analyzing recent financial performance, including revenue and margin performance, debt profile, and other factors indicating corporate stability. Customer success was analyzed by referencing the number and diversity of revenue management customers, recent momentum with "showcase" customers, new badges, and expanded customer relationships in the past year.

## VENDOR RECOMMENDATIONS

**Cloud-Native Ecosystem:** Revenue management vendors must embrace cloud-native architecture and help their operator customers embrace open application programming interfaces (APIs) and open-source software to improve their agility. Increasingly, this includes a focus on building developer ecosystems that can power new use cases by leveraging the power of robust network APIs.

**Complexity Management:** Operators need solutions to the inevitable complexity coming with hybrid 4G/5G capabilities. 4G/5G core functions will converge and eventually be migrated to full 5G at a very slow pace, and in some places, 3G will proliferate for years. As a result, vendors should work to build solutions that can accommodate platform capabilities over an indefinite period that will vary by device, geography, and many other factors. The slow pace of deployment of 5G SA thus far confirms that this hybrid 4G/5G environment is likely to persist in many markets for some time.

**Emphasize Speed:** A key source of differentiation among revenue management vendors is the balance of speed and customization. Vendors should highlight their use of, for example, configuration-based service and tariff creation, continuous integration and continuous delivery engagement methodology, standardization combined with frequent upgrades, and/or managed and professional service engagements. They should also help quantify the cost benefits of each.

## BUYER RECOMMENDATIONS

**Monetization Ecosystem:** Particularly in 5G, monetization will rely on a robust ecosystem of development partners. This, in turn, requires platforms that can onboard, manage, bill-on-behalf-of, and settle with increasing complex ecosystems that collectively create value. These ecosystems will vary significantly between consumer and enterprise value chains and between different vertical markets.

**Evaluate Public Cloud Options:** Operators of all sizes need to evaluate long-term economic benefits of using the public cloud infrastructure to affordably scale their revenue management platforms. Adopting public cloud-enabled SaaS models, including billing-as-a-service, can provide a viable option to meet core digital transformation objectives, such as avoiding the cost and complexity of deploying a hybrid cloud or on-premises implementation. Pay-as-you-grow licensing models reduce upfront costs and speed time-to-market for rolling out new service billing innovations; this should be attractive to a host of customers, including CSPs establishing new digital brands and greenfield mobile virtual network operators.

**NaaS/Network Slicing Business Models:** Evolving 5G standards are making new NaaS and network slicing use cases possible. Operators should press vendors for a roadmap of how NaaS and network slicing can be implemented over the next few years; operators should also look for vendors that can supplement technical capabilities with a consultative approach to help build new business models and industry ecosystems. Addressing industry-specific use cases are vital in helping operators establish recurring and growing 5G revenue streams.