Vendor Services Review: Amdocs

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Executive summary

Catalyst

This report provides an overview of Amdocs' service offerings. The report identifies the strengths and weaknesses of Amdocs' service business and the opportunities and threats that it faces. Omdia details Amdocs' portfolio of services and examines its positioning in services, comparing with other operations support system (OSS)/business support system (BSS) software vendors, network equipment suppliers, and IT services companies.

Omdia view

Understanding that CSPs face multiple challenges regarding digital transformation and cloud migration, Amdocs has evolved its strategy in recent years by:

- Repositioning itself to lead engagements with consulting and governance services which can lead to implementation, operations, or integration services (or a combination thereof). Each of these offerings can be supported by data management and/or cybersecurity services. By taking this step, Amdocs presents itself as a strategic partner to support CSPs' digital transformation agenda end to end.

- Making acquisitions, including DevOpsGroup, Sourced Group, ADK, Clearbridge, Kenzan, Projekt202, and Openet, which expand Amdocs' product, cloud, and UI/UX capabilities.

- Developing strategic partnerships with public cloud providers, including AWS, Google Cloud, and Microsoft Azure.

Amdocs faces strong competition from IT service providers such as Accenture and IBM. In order to change CSPs' perception of the company from an SI and managed services provider to a more strategic partner in their digital transformation, Amdocs has made multiple acquisitions, as highlighted above.

While cloud migration and cloud operations (CloudOps) are the key focal points for Amdocs' future customer engagements, the company will continue to pursue other opportunities, including 5G monetization, customer experience, operational efficiency, and financial services.

Despite the growth challenges the telecom industry faces, Amdocs' own services business is growing. In the fiscal year ending September 2021, revenue grew 7.0% (excluding the impact of disposals and on a constant currency basis). For fiscal 2022, Amdocs has guided for 6.0–10.0% revenue growth on the same basis.

Amdocs' managed services engagements and the increased demand from CSPs to move and modernize applications on the cloud are expected to be a key driver for this growth. Managed services accounted for 59% of revenue in the fiscal year ending September 2021.

However, Amdocs faces some headwinds. CSPs are increasingly turning to public cloud providers for IT services, and many are trying to insource more of their software development activities in order to differentiate. By continuing to evolve its service offerings—through partnerships and acquisitions—Amdocs should be able to maintain its growth trend.

SWOT Assessment

Strengths

- Amdocs has over 35 years of experience operating in the telecommunications market and consequently has developed deep domain expertise in delivering, operating, and managing CSP IT environments.

- Its customers include Tier 1 operators in developed markets such as AT&T, Deutsche Telekom, Telefónica, and Vodafone, as well as those in the developing world such as Airtel, America Móvil, Globe Telecom, PLDT, and TIM Brazil.

- Amdocs has continued to extend deals and make new wins with these customers, especially with respect to cloud and modernizing their enterprise businesses.

- Amdocs is one of the top-two IT services companies by revenue in the telco vertical, according to Omdia estimates and its revenue has grown over the last five years with further growth expected in the coming year. Managed services is a key driver for growth, accounting for around 60% of group revenue.

Weaknesses

- Amdocs relies on a limited number of key customers, the top ten of which accounted for approximately 65% of its revenue in fiscal 2020 and one of which (AT&T) accounted for 26%.

- It is heavily dependent on North America, which accounted for 65% of its revenue in fiscal 2020. Amdocs is attempting to address this by extending its activities in the rest of the world, including Asia & Oceania.

- Amdocs was late to the consultancy and advisory services market in telecoms, hence it is perceived, by some, to be relatively weak compared with players such as Accenture and IBM. To address this, Amdocs has been investing, especially through acquisitions, to increase its consulting capabilities.

Opportunities

- Amdocs can play a significant role in helping CSPs migrate their IT and networks to the cloud. CSPs require vendor support to transition not only applications to the cloud but make the shift in operational practices to manage applications within cloud-based environments.

- Amdocs' acquisitions of Sourced Group, DevOpsGroup, and Kenzan should enhance its consulting practice. Amdocs is now emphasizing a more consultative approach with its customers rather than leading with its systems integration and operations capabilities.

- Other recent Amdocs acquisitions—Openet and TTS Wireless—takes the company into high-growth technology areas and enhance its ability to deliver digital transformation, cloud, and 5G projects.

- Amdocs' strategic partnerships with the top three public cloud service providers (AWS, Azure, and Google Cloud Platform (GCP)) will strengthen its cloud services offering as CSPs look to deploy workloads across hybrid and multicloud environments.

- Recent wins reflect Amdocs' capabilities in new domains such as cybersecurity, network-related services, and FinOps. Contracts awarded by T-Mobile US, Altice, and Globe Telecom show the company's evolving capabilities.

Threats

- The telecoms IT services market is hotly contested by companies such as Accenture, Huawei, IBM, and NEC/Netcracker. Public cloud providers might also pose a threat.

- Insourcing of application development and management by some of the top-tier CSPs could impact on Amdocs' future revenue.

- Consolidation among CSPs could threaten Amdocs' growth potential. However, Amdocs' recent win with T-Mobile US (following its merger with Sprint) and Altice (following its merger with Service Electric Cable TV), suggest they may withstand such headwinds better than their competitors.

Company background

Organization

Amdocs provides software and services to communications and media service providers. Its core software products sit within the operations and business support systems (BSS/OSS), network control, and management domains. Most of its contracts include professional services, such as application development, deployment and maintenance, systems integration (SI), and managed services. The company is banking on CSPs' digital transformation, cloud, and 5G migration trends (both in the customer and network domains) to grow its business.

Amdocs was established in 1982 as an automated telephone directories business. In 1995 it developed a Unix-based billing and care offering called Ensemble which it grew into a broader BSS portfolio. After becoming a public company in 1998 it acquired Nortel's Clarify (and its CRM solution) in 2001 and Cramer Systems' OSS solution in 2006. These, plus the other recent acquisitions detailed in Table 1, form the current Amdocs portfolio.

Table 1: Companies acquired by Amdocs since 2007

Company acquired	Specialization	Date
DevOpsGroup	Cloud consulting with strong expertise in Agile, DevOps, cloud, cloud migration, and training skills.	November 2021
Sourced Group	Cloud consulting with strong cloud migration capabilities for large enterprises, including financial services and healthcare.	May 2021
Clearbridge Mobile	Mobile app development company which provides user-centric design and engineering service for CSPs.	April 2021
ADK	User-experience and application development company to complement capabilities provided by projekt202.	March 2021
BI Telecom	Systems integration provides development, testing, and operations in Russia.	September 2020
Openet	5G charging and policy management solutions.	August 2020
Big Nerd Ranch	Training services in application design and development. Acquired via project202.	June 2020
Telecom Technology Services Wireless	Network planning, optimization, and software-enabled solutions.	August 2019
UXP	Digital identity for user lifecycle management.	February 2018
Vubiquity	Premium content services and technology solutions.	February 2018
projekt202	Experience-driven software design and development.	November 2017
Kenzan	Customized solutions focused on delivering digital transformation, platform-as-a-service, and cloud-native application development using DevOps and microservices. They also have capabilities in change management when migrating to the cloud.	July 2017
BriteBill	Personalized billing communications delivered over multiple channels (e.g., social, on-device, retail).	September 2016
Pontis	Personalized and contextual customer engagement solutions.	September

		2016
Vindicia	Software-as-a-service (SaaS) subscription management and payment solutions to generate new revenue streams and business models.	September 2016
cVidya	Revenue assurance and fraud management solutions.	January 2016
Comverse BSS assets	Converged, prepaid, postpaid, and Kenan billing assets.	July 2015
Utiba	Mobile financial services	March 2014
Celcite Management Solutions	Network management and self-optimizing networks services.	November 2013
Actix	Radio access network analytics and optimization	September 2013
Bridgewater Systems	Service controller, policy controller, and home subscriber server, anchored by a common identity and device management system.	June 2011
Streamezzo	Application development	June 2010
MX Telecom	Mobile payments	March 2010
jNetX	Service delivery platform	October 2009
ChangingWorlds	Personalization and intelligent portal solutions for mobile service providers.	November 2008
Jacobs Rimell	Service fulfillment	April 2008
SigValue Technologies	Prepaid billing for mobile operators	January 2007

Source: Amdocs and Omdia

Acquisitions have played a critical role in bolstering Amdocs' position and expertise in the CSP and media markets. The company has acquired 26 businesses spanning digital transformation and cloud migration (in consulting, design, and development), billing, revenue assurance, TV, and media capabilities. While some of these assets are integrated into the broader Amdocs business, others such as Sourced, Openet, Vindicia, Vubiquity, and projekt202 are run as separate businesses to leverage brand equity and ensure business continuity.

Recent acquisitions are positioned to strengthen the company's services to provide non-product-related capabilities such as cloud migration and mobile development. The Sourced Group, as a specialist cloud consulting company supporting large-scale cloud migration for large enterprises, should bolster Amdocs' cloud consulting capabilities. Sourced's experience and expertise in supporting the cloud migration of large enterprises such as financial services should support Amdocs' ambitions in these industries. ADK and Clearbridge, both acquired in early 2021, will further strengthen Amdocs' expertise in user experience and application development, respectively.

Financial overview

In its 2021 financial year (ending September), Amdocs reported revenue of $4.3bn, up 7% on a pro forma basis in constant currency. Amdocs expects revenue to grow a further 6–10% in the current fiscal year on the same basis.

A key growth driver has been the company's managed services offerings which have grown by 7% (considering year-on-year quarterly performance for the first three quarters in 2021). By our estimates (based on information shared by Amdocs in quarterly reports), managed services account for about 60% of overall revenue.

We believe managed and professional services account for about 95% of Amdocs' revenue with the remaining 5% attributed to software licenses for on-premises and cloud-based products. The company sells few standalone products, with most customers purchasing a service or maintenance contract with the software.

North America remains by far its largest region, accounting for 65% of its revenue in fiscal 2020 (up from 63% in fiscal 2019). The region is also home to one of its largest accounts, AT&T, with the CSP accounting for 26% of Amdocs' fiscal 2020 revenue. Engagements in this region have been driven by 5G customer experience. Amdocs clinched a multiyear managed services deal with T-Mobile US and Altice USA following the merger with Sprint and Service Electric Cable TV, respectively. These are significant wins in our view. Other customers in this region include Altice, Comcast, and Verizon.

Europe is the company's second-largest region, accounting for 15% of its fiscal 2020 revenue (same as fiscal 2019). The company's operations in the rest of the world (around 20% of the total) are growing but at a slightly slower rate than in North America and Europe. 2020 annual revenue for rest of world (RoW) declined (dropping to 20%; 2pp from 22.1% in 2019).
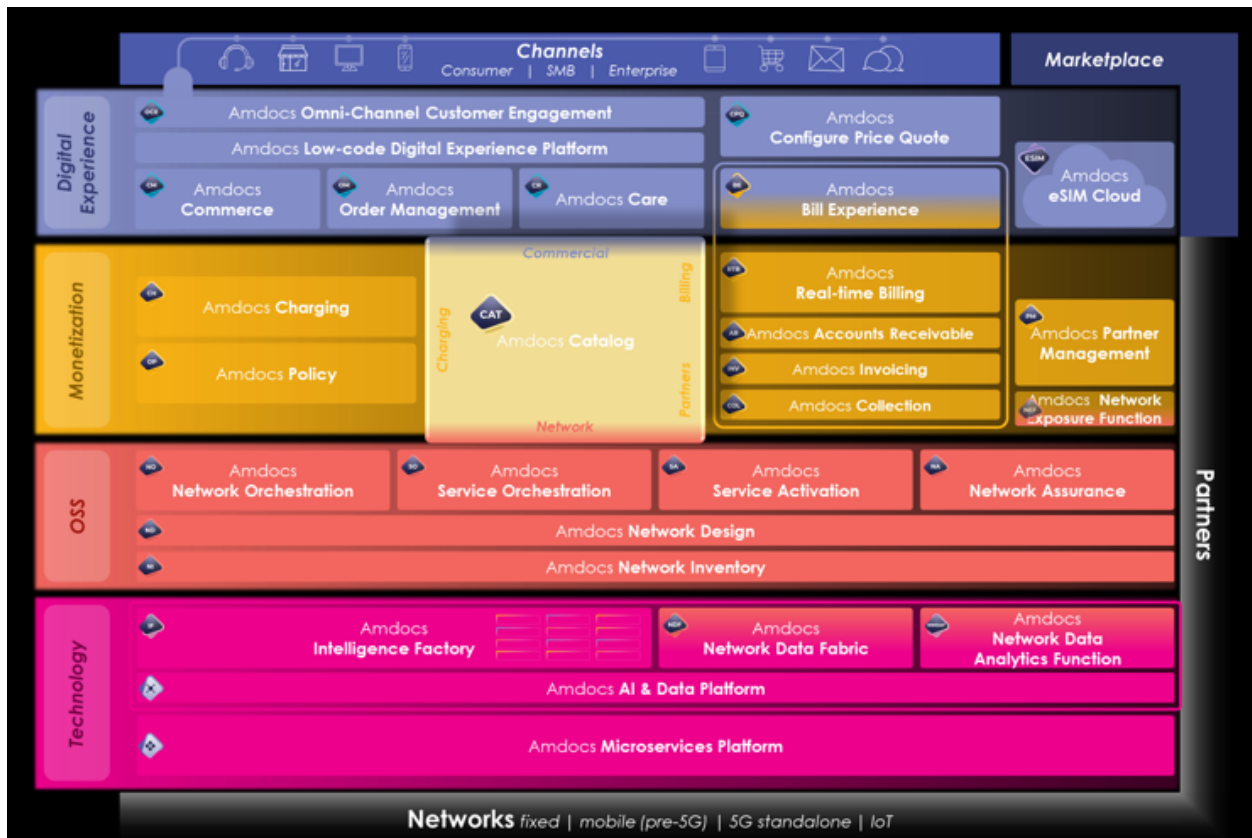
Positioning in services

Current positioning

Amdocs has grown out of traditional billing, customer care, and OSS products. Its core strength is BSS, but, with assets in OSS, Network Control Plane, DevOps, microservices, AI, analytics, automation, and integration and cloud migration solutions, it offers an extended set of solutions. Amdocs' offerings enable the company to support service providers in the communications and media markets as they become digital service providers (DSPs).

Amdocs' portfolio encompasses products and services that address service providers' critical business needs using a suite of open and modular business solutions. It also leverages cloud-native microservice

technologies for fast time-to-market for its products and services. Most of Amdocs products are included within Amdocs Customer Experience Suite (CES)—its 5G-native BSS/OSS integrated suite shown in **Figure 1**.

1. Figure 1: CES21 portfolio

Source: Amdocs

CES products run on the Amdocs Microservices platform, which centrally packages, tests, manages, and deploys its cloud-native products to any cloud or on-premise environment. Amdocs Microservices platform is used together with DevSecOps and Site Reliability Engineering (SRE), to help speed new products and services to market with a fast code-to-production cycle. It is an enabler for Amdocs' customers to fully adopt microservices and continuous integration/continuous delivery (CI/CD) to gain IT agility and flexibility.
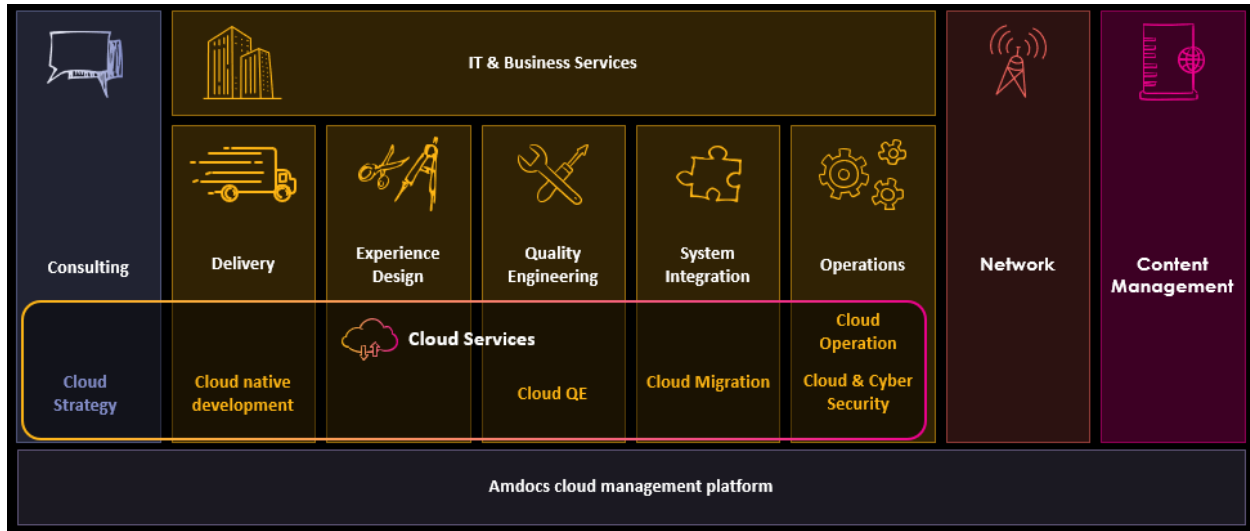
Services portfolio

Amdocs formed what is now Amdocs Global Services in 2013 to encompass its entire Business & IT services and operations portfolio. These services ensure that customers can launch new services quickly and easily while ensuring that existing operations can support these initiatives and provide a seamless end-customer experience.

Following a recent review of its Amdocs Global Services offerings, Amdocs' key service offerings have evolved to include integration and cybersecurity. Amdocs' services offerings now cover the key areas as shown in **Figure 2**, spanning consulting, IT & Business Operations, network services, and content management (the last two are not a focus of this report).

All of Amdocs' services are powered by the Amdocs Cloud Management Platform; a collection of third-party and Amdocs tools designed to provide a consistent, repeatable service experience. The foundation contains tools for specific functions (e.g., test automation) along with common tools supporting AI, automation, CI/CD, microservices, and more. It also contains repositories of best practices and automations.

2. Figure 2: Amdocs Services Portfolio

Source: Amdocs

Amdocs Consulting Services

In July 2019, Amdocs announced that it would create new practices, distinct from systems integration, to pursue new strategic opportunities, especially around the cloud.
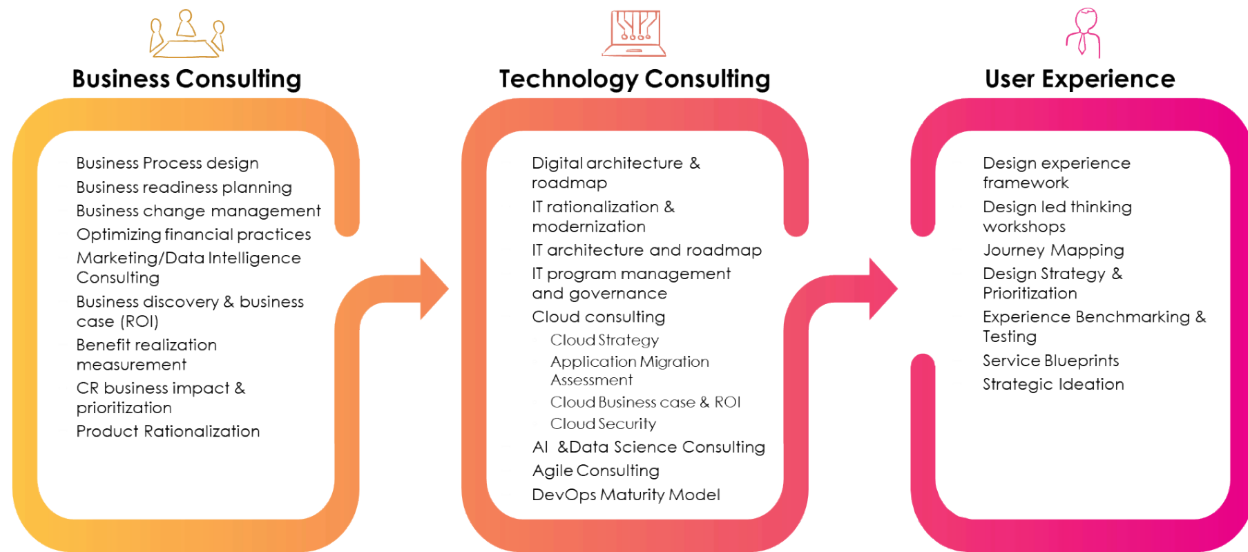
As a follow up to this announcement, Amdocs formed the Amdocs Consulting Services practice. This integrated Kenzan (acquired in 2017) into the Amdocs Services offering to differentiate from its IT services peers. Kenzan's cloud (consulting and migration), cloud-native development and technology offering formed the foundation of the Amdocs Consulting Services capabilities. The acquisitions of Sourced Group and DevOpsGroup further enhanced Amdocs' consulting services. Kenzan, Sourced, and DevOpsGroup today form the backbone of Amdocs' newly-formed Professional Services Organization (PSO).

According to Amdocs, services engagements often start with its consulting/advisory offer, which covers several domains such as risk management, financial controls, customer experience, customer care, and digital transformation. The governance services provided include organizational and technological change management and the monitoring of these changes to ensure the success of any transformational project.

For each of Amdocs' key service lines (implementation, operations, and integration services) it works with its customer to define a strategy that would support each service.

As shown in Figure 3, Amdocs provides three key services under Amdocs Consulting Services: business, technology, and user experience design consulting.

3. Figure 3: Amdocs' key consulting capabilities

Business Consulting

- Business Process design
- Business readiness planning
- Business change management
- Optimizing financial practices
- Marketing/Data Intelligence Consulting
- Business discovery & business case (ROI)
- Benefit realization measurement
- CR business impact & prioritization
- Product Rationalization

Technology Consulting

- Digital architecture & roadmap
- IT rationalization & modernization
- IT architecture and roadmap
- IT program management and governance
- Cloud consulting
  - Cloud Strategy
  - Application Migration Assessment
  - Cloud Business case & ROI
  - Cloud Security
- AI &Data Science Consulting
- Agile Consulting
- DevOps Maturity Model

User Experience

- Design experience framework
- Design led thinking workshops
- Journey Mapping
- Design Strategy & Prioritization
- Experience Benchmarking & Testing
- Service Blueprints
- Strategic Ideation

Source: Amdocs Services

A single consulting engagement can include one or all of the three types of consulting services shown in **Figure 3**. For example, following the creation of a strategy for the transformation of a business process, the technology consulting team can define a strategy that may include the cloud. Amdocs can draw on its cloud consulting capabilities to perform several tasks, including:

- Defining a migration strategy
- Defining the cloud business case and ROI
- Assessing cloud security
- CI/CD pipelines
- DevSecOps
- Ways of working
- Organization enablement
- Migration execution
- Cloud Centre of Excellence.

The user experience (UX) consulting may then work on ensuring a good UX is delivered and that it aligns with the proposed business and technology strategy. On other occasions, the UX consulting service could be sold as a discrete engagement.

There is no single go-to-market approach for the Amdocs Consulting Practice. The company now takes a more consultative approach to its engagement than in the past. Transitioning from its historic role as an implementation and operations IT services provider may be a challenge, but one that Amdocs is committed to achieving. This is evident in the investments Amdocs continues to make in strengthening the consulting practice and PSO.

Amdocs IT and business services

Amdocs offers services such as development and deployment services, including lifecycle management, cloud migration, and quality engineering.

IT Delivery Services

These services are focused on creating new capabilities for CSPs using Amdocs and third-party products. This service type utilizes Amdocs' DevSecOps approach to development. One development team with a large pool of expertise is involved in the lifecycle of every customer account. This team assumes end-to-end accountability for the entire code.

Amdocs provides services to develop new features and customizations on top of its own product set as well as on top of third-party applications. Services include both UI/UX development as well as backend systems, leveraging the latest in microservices and DevOps approaches to development.

Amdocs Quality Engineering Services

These services have been one of the biggest growth engines for Amdocs, especially with 5G monetization and IoT. Amdocs Quality Engineering Services covers a range of specialized and automated testing services. It leverages Amdocs' DevTestOps approach, which shifts testing into the development and operations activities and completes the loop by feeding production data back into testing.

These services are defined for four quality testing domains:

- **Quality of processes**—helping customers modernize their quality engineering practice through consulting and upskilling of the workforce.

- **Quality of experience**—end-to-end testing services to ensure an optimized user experience, testing both the user experience itself and all functional and non-functional (e.g., performance, security) aspects of the application.

- **Quality of next-gen technology testing**—services to support new technologies including network virtualization and AI-driven testing.

- **Quality of operations**—driving efficiencies across all aspects of the quality engineering operations, including automated test data management, test environment management, and service virtualization.

Amdocs Quality Engineering Services is driven by the Amdocs Quality platform, which is built on a foundation of AI-driven automation and includes multiple automation and analytics tools that support continuous quality assurance (QA) processes including:

- **Ginger**—an open-source tool for automating Unix, mobile, Java, web services, and other platform application tests and flows, enabling continuous testing across the software delivery lifecycle.

- **A cloud-based testing framework**—serves as a repository of the company's testing methodologies, tools, and best practices.

- **A quality intelligence engine**—uses AI to determine which test scenarios need to be run based on a variety of data inputs, including production data, business requirements, and code complexity.

- **A cloud-based testing environment**—allows CSPs to test new mobile offerings remotely on a wide variety of devices and operating systems.

The company has realigned its testing processes with the Agile DevOps process flow. For every development project (internal or external), the company creates the minimal testing variable (MTV). With this approach, development can be scheduled to follow an iterative process that is testable. The testing process can then be automated and set up to occur immediately after each development phase. With this approach, testing processes are conducted efficiently and at pace, enabling the faster rollout of new capabilities.

System Integration Services

Amdocs offers a full suite of SI Services to facilitate the execution of larger IT projects. They provide governance, program management, and company management services to coordinate across multi-company projects. Some of the specific services within the SI services are discussed below.

Amdocs Integration Services

These connect CSP applications (Amdocs and non-Amdocs, on-premises and in the cloud) in a seamless manner, making it easy for customers to use these assets to support activities such as monitoring and scheduling. These processes include an order to activation and billing. Integration services also support cloud migration services. For example, a CSP moving a CRM application to the cloud will leverage Amdocs' integration services to create a bridge between on-premises and cloud applications.

Amdocs Integration Services leverages its integration platform as a service (iPaaS) to bridge on-premise, cloud applications, and other legacy or partner systems that would interconnect with the applications. The Amdocs iPaaS supports a variety of use cases, including cloud migration, partner integrations, and data migration.

Cloud migration

This is a full suite of services to move applications from on-premises to the cloud. This includes the rehosting, refactoring, or re-platforming of the applications and the creation of an ecosystem to enable the application in the cloud. More information on Amdocs' Cloud Services is provided further on.

Data services

Amdocs' Data Management Services includes offerings designed to help CSPs become data-driven. It ensures that data generated from the cloud environment is available for analysis to derive insights that can be used to optimize operations, networks, and customer interactions.

Amdocs utilizes its IP, industry expertise, and proprietary TM Forum-certified logical data model to provide an end-to-end service solution (including consulting, implementation, integration, and operations) across the most important stages of CSPs' data and intelligence lifecycle. These include:

- Cloud data architecture

- Data modelling

- Data migration implementation

- Operationalizing ML & AI with MLOps

- Intelligent & actionable business insights

- Managed services

- Data testing services

- Amdocs AI Foundation

- IntelligenceONE solution.

Amdocs IT and business operations services

These are Amdocs' managed services offerings delivered via Amdocs Operations, which accounts for the largest proportion of revenue in the Amdocs Services business. These services are offered across any environment—on-premises and/or cloud and include:

- **Application development and maintenance**—implemented in DevSecOps methodologies, for example, Level 3 support, applicative infra, CI/CD pipeline.

- **Application monitoring, scheduling, and operation**—for example, service desk Level 1 and 2 and business process operations.

- **Cloud operation services**—FinOps (see description on Amdocs Cloud Services section), cloud infra management, and Cloud CoE.

- **IT infrastructure and data center** (for on-prem environment only)—include the management or decommissioning of data centers (e.g., hardware and software maintenance, system admin, and DBA services).

- **Business process services**—handles and optimizes processes such as order-to-activation and request-to-solution. These services are delivered regardless of the underlying IT infrastructure.

- **Business assurance services**—includes a suite of solutions such as revenue assurance, and fraud management that are supported by AI to predict and mitigate risks while optimizing customer experience. These services cover the business assurance lifecycle, including acquisition, usage, and care.

Amdocs Operations leverages AI/ML in its monitoring, predictive analysis tools, and self-healing engines. This set of tools—that are part of the Amdocs cloud management platform—give CSPs an end-to-end view of the entire operations and how these relate to business metrics. Amdocs Operations also makes extensive use of automation in various business processes, error and bug fixing, auto ticket resolution, application, and infra updates. These automated processes eliminate repeatable, manual tasks, prevent human errors, and provide continuous business-value improvement. Through the Amdocs collaborative automation platform, automations that were already created and tested in the field are available for reuse by other operation teams.

Amdocs Cybersecurity Services

This service line is focused on enhancing customers' security posture from an application and infrastructure perspective, especially with migrations to multicloud environments. It provides a holistic cybersecurity strategy that considers on-premise and cloud.
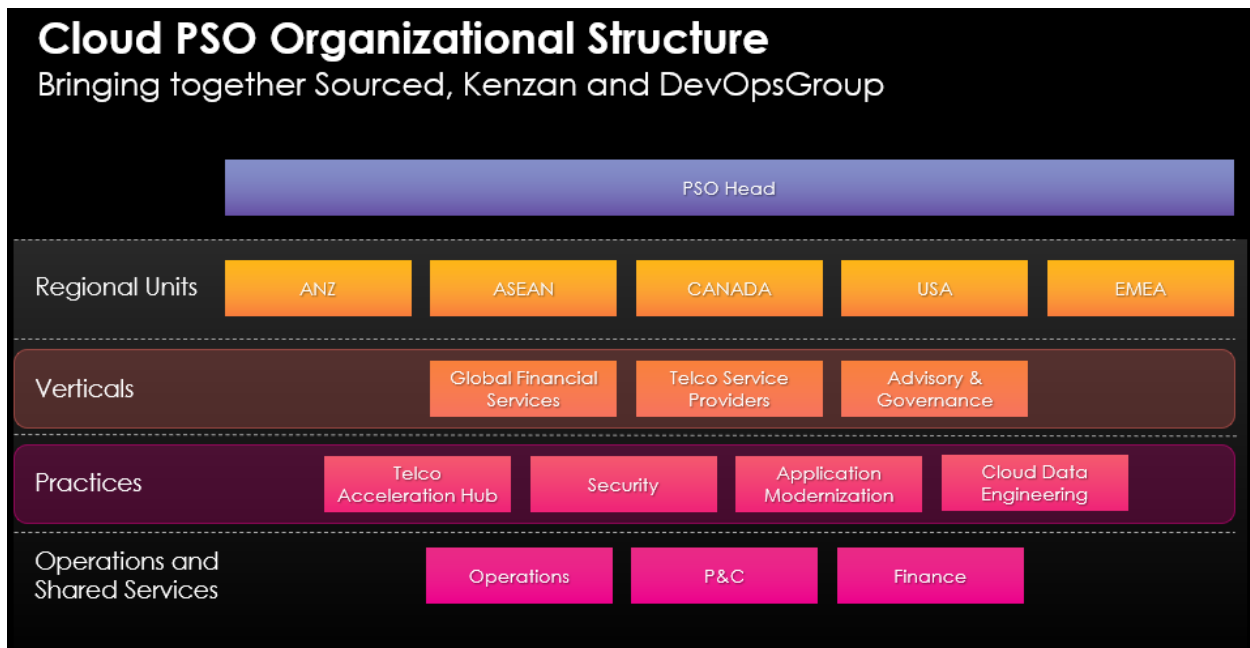
The acquisition of Sourced Group greatly expanded Amdocs' security offerings. Sourced's customers are from highly regulated, security-conscious industries such as financial services, telecoms, government, and

healthcare. The acquisition brought extensive resources, expertise, best practices, and services such as cloud security assessments, identity, and access management.

Amdocs Cloud Services

The Amdocs Cloud services offering combines services from across the Amdocs portfolio. It is led by the Cloud Professional Services Organization (Amdocs Cloud PSO) and is based on merged assets from Kenzan, Sourced Group, and DevOpsGroup. The Cloud PSO was recently introduced to the Amdocs Services portfolio to support service providers' cloud migration and operations. **Figure 4** provides an overview of the organizational structure.

4. Figure 4: Amdocs Cloud PSO offering

Source: Amdocs Services

Amdocs Cloud PSO provides consulting, implementation, and operations of cloud migration and cloud optimization engagements for both Amdocs and non-Amdocs products (including custom-built applications). Sourced's "Cloud at scale" methodology is being adopted by the Amdocs Cloud PSO for large-scale cloud migration projects. Amdocs and Sourced are evolving the "Cloud at scale" methodology leveraging:

- **A common foundation infrastructure** which is adopted by all organizations within the organization as a common base for all migrations. This ensures ease of management during the cloud migration process.

- **A common opinionated platform approach** using platforms such as Sourced's "Skyrise," Amdocs' Microservices platform, and Amdocs Cloud Management Platform to provide a consistent control plane across applications. These platforms are "opinionated" meaning they already incorporate necessary processes and third-party tools etc., which saves time and effort during the migration process.

Cloud Consulting Services

These services prepare Amdocs' customers to migrate to the cloud. The journey begins by identifying applications that can be migrated to the cloud, and how and when to migrate them. These services consider the inter-relationship between applications and the value that migrating them to the cloud would bring to the customer. Examples of services delivered include:

- **Cloud Strategy:** building an end-to-end strategy including assessing systems and architecture, creating a cloud migration roadmap—looking at each application, and training and upskilling of staff to operate systems in the cloud.

- **Enablement services:** technology enablement, employee enablement, and organizational enablement to prepare the people, organization, and processes for cloud adoption.

- **Assessment services**: assessing architecture, infrastructure, application, and security readiness for cloud.

Amdocs Cloud Migration Services

With a cloud migration strategy in place, Amdocs leverages its systems integration expertise to implement the plan. This includes deploying new cloud-based applications (Amdocs and non-Amdocs products), integrating partner solutions, and migrating existing applications to the cloud (including redesign, re-platforming, or simply a lift and shift to the cloud). Examples of migration services delivered include:

- **Migration Services**—deployment of infrastructure and foundations needed for the cloud platform. Includes setting up a landing zone, proof of concept, application migration services, change management etc.

- **Application Modernization**—this service modernizes apps with microservices, containers, serverless, etc., to gain operational efficiencies and leverage the benefits of the cloud.

- **Integration and Testing Services**—includes the integration of applications, infrastructure, and operations as well as automated cloud testing services to ensure migrated applications function as expected, and security testing to identify new vulnerabilities.

Figure 5 summarizes the scope of Amdocs Cloud implementation services.

Amdocs Cloud Operations Services

Amdocs Operations take full responsibility and accountability for service providers' hybrid IT environments. Amdocs utilizes an automation platform as well as DevOps tools and governance layers to help customers gain visibility into application performance. Amdocs understands the cultural challenges that will exist in the CSP organization as they move to a new mode of working. Subsequently, the company has also developed a change management strategy to address organizational challenges that impact the move to the cloud. Services offered cover four areas:

- **Cloud Management**—running public or cloud accounts while constantly optimizing cost and compliance. Services include cloud FinOps, cloud infra management, cloud security and compliance, landing zone and Infra as Code, and cloud CoE.

- **Cloud-native/hybrid Application Development**—includes application Level 3 support, applicative Infrastructure, DevOps implementation (CI/CD pipeline), and application security.

- Cloud **Application Operations**—including application monitoring, scheduling, service desk (Level 1, 2), and Business Process Operations.

- **Service Delivery & Governance**—includes Consulting, Service Level Management, Change Management, and Integration Management.

A further breakout of these services is included in **Figure 5**.

5. Figure 5: Amdocs Cloud Operations Services portfolio

Source: Amdocs Services

Amdocs' CloudOps Service capabilities include:

- **CloudOps Center of Excellence (CoE)**. This is a centralized team of cloud experts that creates a standardized set of requirements for all cloud-related activities, working closely with business units, developers, and cloud providers.

- **Cloud Admin**—acts as a liaison between the cloud vendor and a CSP's internal teams. They are responsible for managing incidents, including prioritizing and coordinating activities between teams from the inception of the incident to resolution. The Cloud Admin also monitors cloud platform services to ensure SLAs and KPIs are met.

- **Cloud Security**—This is a dedicated group within the Cloud CoE service with the responsibility for ensuring end-to-end security across on-premises and cloud domains. This team assesses the security of the cloud environment, identifying and remediating potential vulnerabilities and developing risk mitigation strategies. They also provide security guidance, best practices, and recommendations to the DevOps team to protect information and systems infrastructure.

- **FinOps**—This practice provides tools and a set of policies and procedures for tracking cloud spend, analyzing historical spending patterns, and predicting future spending requirements. FinOps works with business units to drive and optimize budget requirements for existing business needs, but also acts in identifying new requirements in architecture that will enable business change. Their core responsibility at this stage is to recommend an architecture that allows the business to run within or below budget.
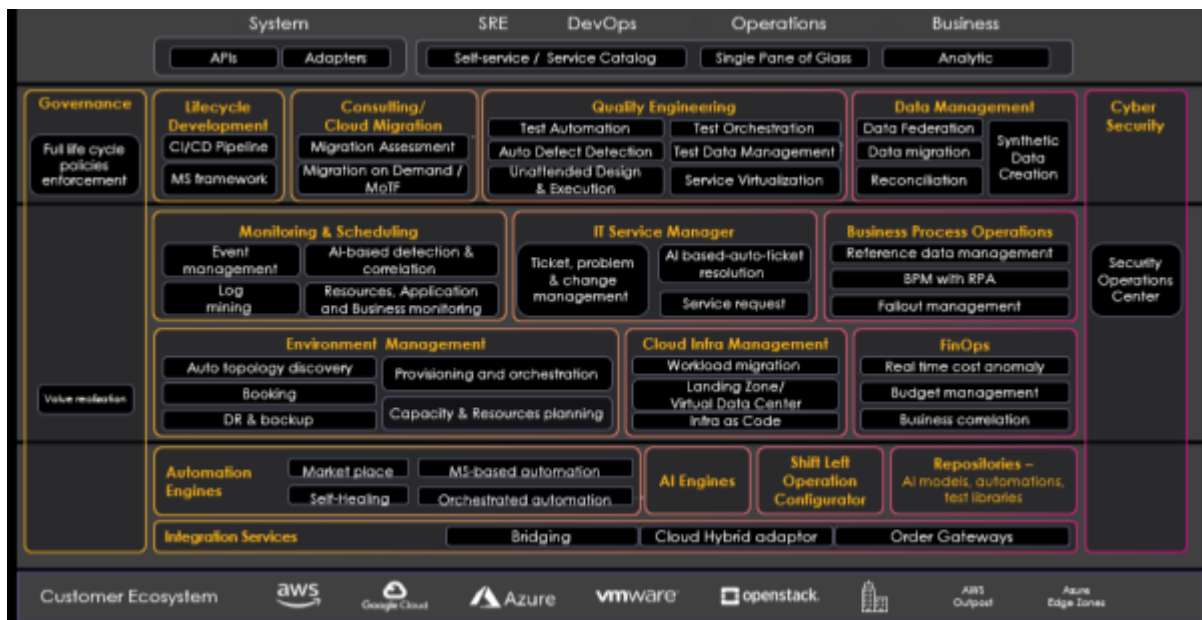
- **DevOps**—This provides the guidelines best practices, and tight integration with other CloudOps practices to incorporate cost, security, reliability, quality, and Agility concerns into the DevOps process.

- **Change management**—Realizing that culture change is one of the most challenging aspects of any transformation, Amdocs has set up the change management practice to conduct a thorough assessment of a CSP's skill set to identify areas of change needed to support a successful transformation. This is an important effort to perform early in the development of a CSP's cloud transformation strategy. Much like the CloudOps practices, the change management strategy focuses on technologies, tools, processes, and skills needed for a new working model. Areas that the change management strategy focuses on include:

  - Bridging silos to create an environment for cross-functional collaboration.

  - Changing processes to enable end-to-end visibility across processes.

  - Enabling a cultural shift and change in mindset through reskilling/upskilling IT staff with new capabilities that broaden their responsibilities and expand their roles. Focus areas include developing extreme automation skills, the use of DevOps tools, and site reliability engineering (SRE) for continuously improving reliability.

Business process services (same as those defined under Amdocs Operations Services) are also delivered to optimize business processes such as order to activate and request to resolution with the cloud or hybrid IT environment.

Amdocs Cloud Management Platform

The Amdocs Cloud Management Platform (as shown in **Figure 6**) hosts tools and technology provided by Amdocs and its partners.

6. Figure 6: Amdocs Cloud Management Platform

Source: Amdocs

Global service delivery

Amdocs' global service delivery and support model is a network with centers worldwide that support and manage its customers' mission-critical high-volume systems, infrastructure, and processes. The centers offer 24x7 support and guaranteed business continuity, leveraging Amdocs' best practices and industry standards such as eTOM and ITIL. The centers use monitoring tools to manage Amdocs, legacy, and third-party vendor systems.

Amdocs has seven global centers that are interconnected and work on a central, unified platform, sharing and exchanging best practices. In addition to its global hubs, Amdocs has seven regional service delivery and operational centers. All centers, global and regional, offer Level 1 and Level 2 support, and some offer Level 3 support, depending on their location. **Table 2** provides further information on Amdocs' service delivery centers.

Table 2: Amdocs' services business: scope and scale

Scope	Scale
Countries with presence	85
Regional centers of excellence/competence	Champaign, US; Pune, India; Galilee, Israel
Location of global service delivery/operational centers	Pune, India; Galilee, Israel; Champaign, US; Montreal, Canada; Sao Carlos, Brazil; Manila, Philippines; Guadalajara, Mexico
Location of regional service delivery/operational centers	Melbourne, Australia; Santiago, Chile; Seattle, US; Maastricht, Netherlands; Moscow and Penza, Russia; Vietnam; London, UK; Cyprus
Total service employees	17,000
Subscribers under management	Over 650 million
Professional services projects	2,500, including multivendor projects

Source: Omdia

Some of these global and regional delivery/operational centers include specific functions and assets:

- **Development centers**—located in India, Brazil, Israel, Cyprus, Ireland, and the Czech Republic
- **Operations and data centers**—located in the US, India, Canada, and Australia.
- **Amdocs Managed Services Center of Excellence (CoE)**—located in the US and India. These CoEs support a significant number of managed services projects.
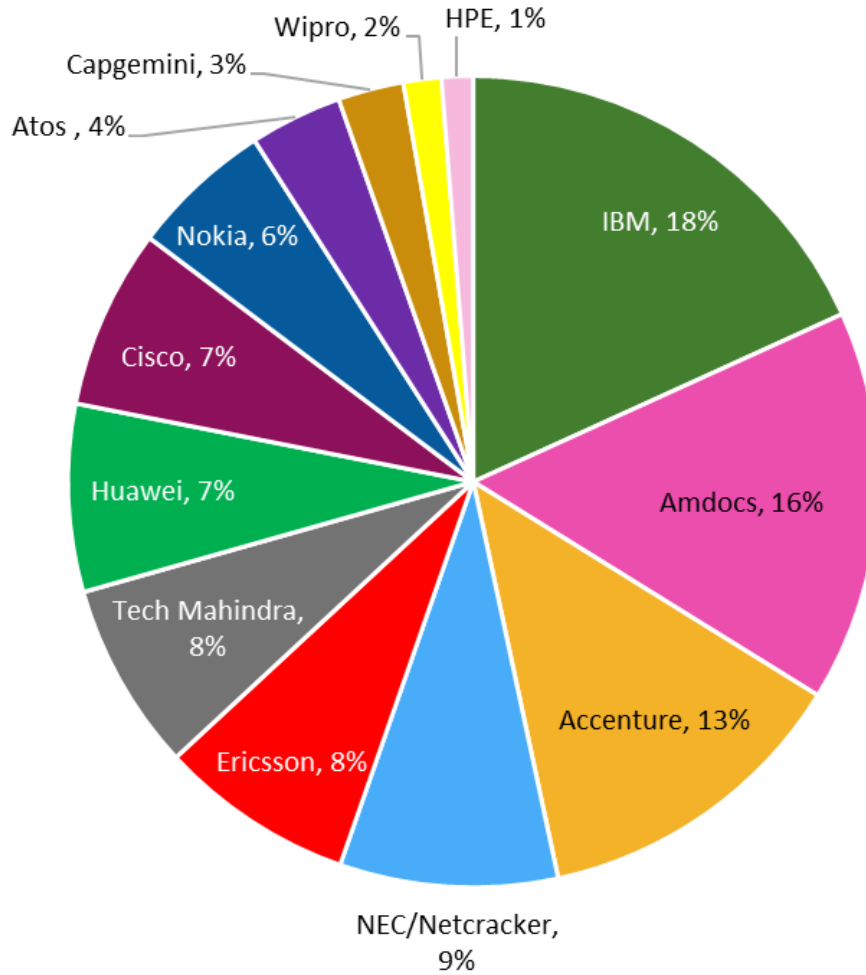
Positioning relative to the competition

Amdocs' competition comes from several sources, including:

- **IT service providers** (providing services such as consulting, SI, and managed services) such as Accenture, Atos, Cap Gemini, Cognizant, HPE, IBM, Infosys, Tech Mahindra, and Wipro.

- **Network equipment providers** such as Cisco, Ericsson, Huawei, NEC/Netcracker, Nokia, and ZTE. These players all see BSS, OSS, big data analytics, consulting, SI, and professional services as natural extensions of their networking portfolios.

- **Enterprise software vendors** entering the telecoms vertical such as Oracle, Salesforce, and SAP.

- **CSPs' in-house IT and network departments**. Many operators, especially the top-tier CSPs, are looking to insource capabilities such as application development and management.

- **Open-source product providers**. CSPs are attracted to open source, though it has primarily been adopted in the IT domain, not networking.

Figure 7 shows that Amdocs was the second-largest provider of IT services to CSPs in 2020 (based on the vendors that are included in Omdia's Telecoms Vendor Services Revenue Tracker) behind IBM. Amdocs has maintained this position since 2015, and its market share has increased over this period. In 2019, the company had a 15% market share, and this grew to 16% in 2020. Omdia expects Amdocs to hold or improve this position over the next 12–18 months, given the continuous evolution of its services portfolio and growing momentum in customer engagements.

7. Figure 7: IT services vendors' revenue market share in the telecoms vertical, 2020
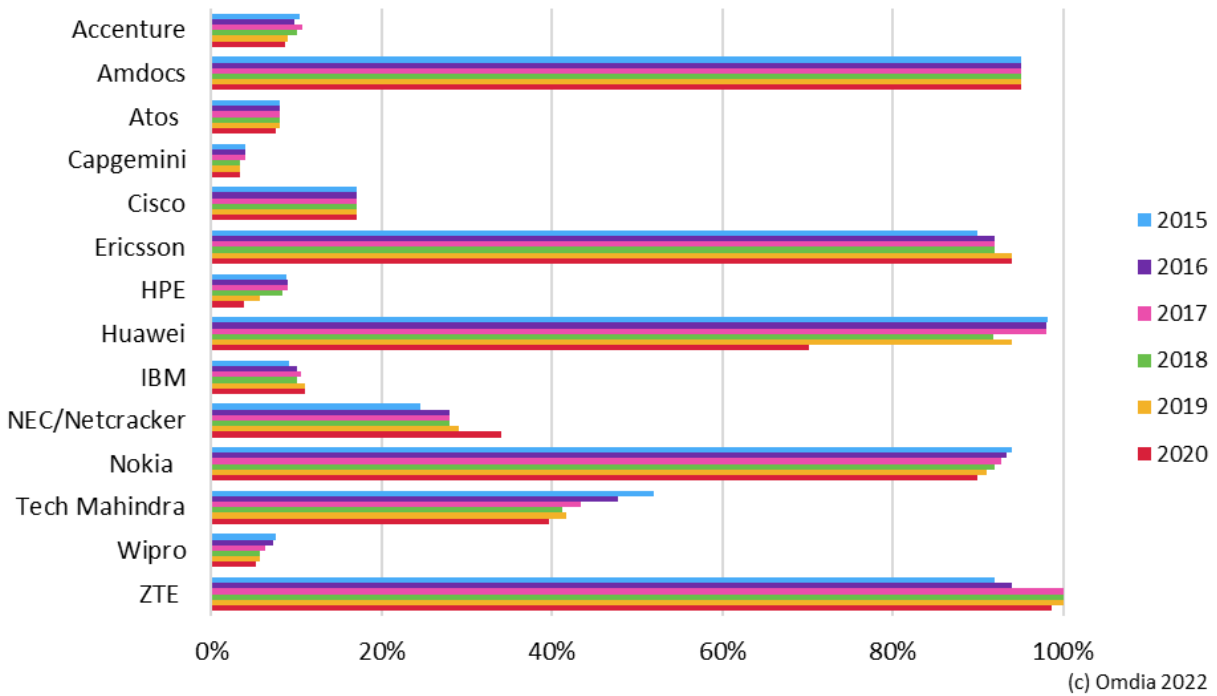

Source: Telecoms Vendor Services Market Share Spreadsheet – 2020

Figure 8 indicates that 95% of Amdocs' total services revenue comes from the telecoms vertical. In the last five years, Amdocs has consistently recorded this proportion of revenue for services, although the company strategy also addresses other industries such as media and finance.
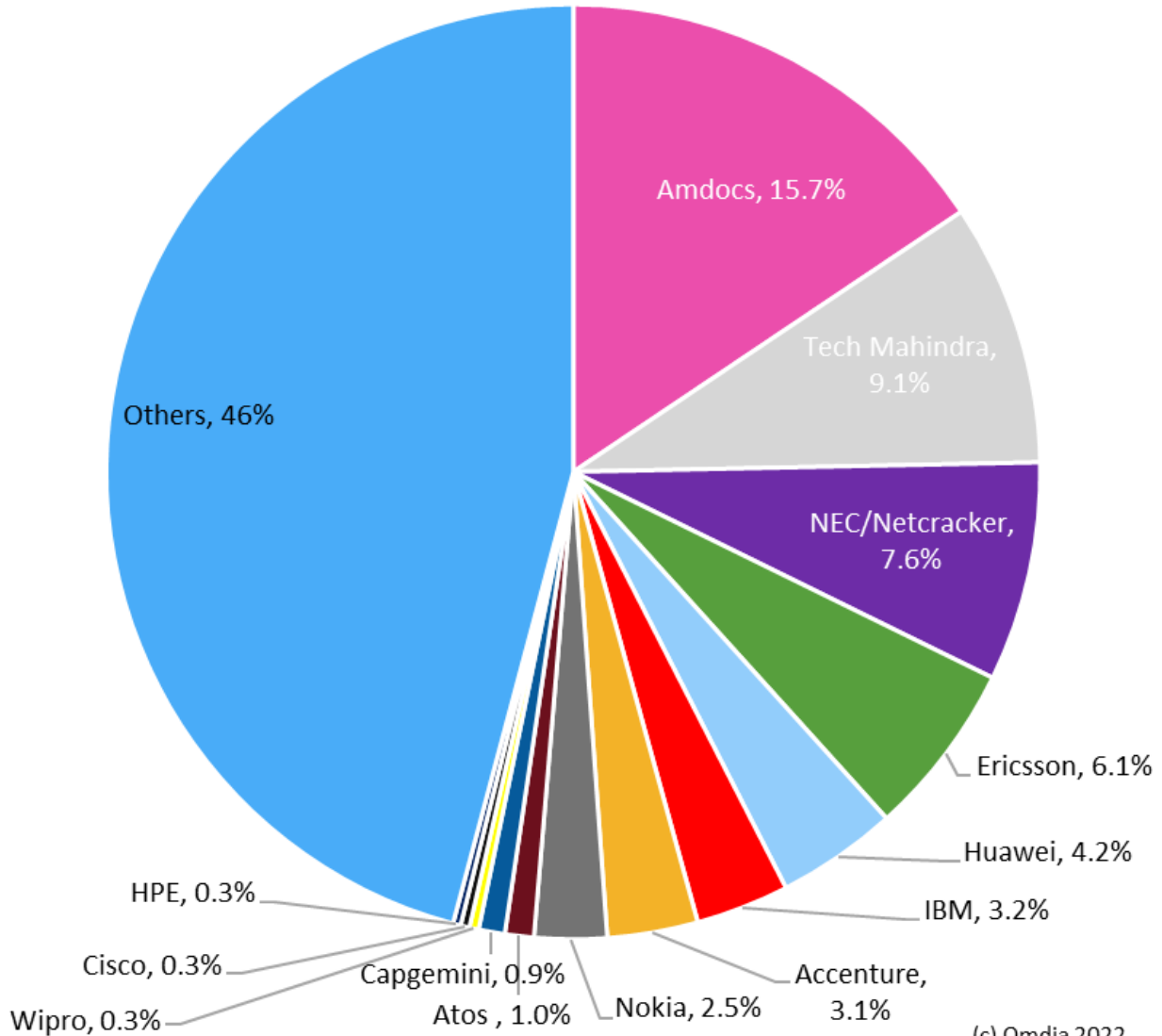
8. Figure 8: Proportion of vendors overall services revenue that telecoms vertical accounts for 2015–20

Source: Telecoms Vendor Services Market Share Spreadsheet – 2020

According to Omdia's *Telecoms Vendor Services Market Share Spreadsheet: Network and IT Services – 2020*, the largest proportion of Amdocs' services revenue come from telecom IT applications services, which includes managed services. The company also takes the largest share of revenue in the entire telecoms IT application services segment, at 16% as of 2020 (see **Figure 9**), unchanged from the prior year.

9. Figure 9: IT services vendors' revenue market share in the telecom IT application services segment, 2020

Source: Telecoms Vendor Services Market Share Spreadsheet – 2020

Projects and clients

Key to Amdocs' business strategy is extending engagements with existing customers and growing engagements in adjacent areas. In 2020 and 2021, the focus was on cloud migration. By 2022, in addition to cloud adoption, there will be a new focus on growing engagements in areas such as data management, cybersecurity, and 5G monetization. Amdocs' recent contract wins demonstrate how the company is executing on this strategy.

In fiscal year 2021, Amdocs signed several multiyear services agreements across the globe, including with A1 Telekom, Altice, AT&T, BT, Charter, Globe Telecom, Orange, Three, T-Mobile US, Vodafone, and Telefónica. These contracts reflect two key trends:

- **New wins**—including new customers (e.g., Wind Tre) and wins with customers in new markets, including Three and Vodafone Groups.

- **Extension of existing engagements**—including wins with customers such as AT&T, BT, and Deutsche Telekom. These wins reflect the growing value that Amdocs' engagements bring to these customers as they award deals to Amdocs for new domain areas and renew or extend existing deals.

Thanks to the global pandemic and the increased demand to monetize 5G using cloud capabilities, Amdocs has won and is executing several projects, including AT&T, T-Mobile US, and Verizon, that are migrating applications to the public cloud to support digital transformation and 5G related projects.

Recent acquisitions are also generating wins for the company, including project202 and Sourced Group. Openet, for example, has won deals with CSPs such as A1 Telekom Austria Group that is implementing its suite of policy and charging products across multiple operating companies within the group.

Another key trend in Amdocs' contract wins in the last two years is the number of deals associated with transforming CSPs' enterprise services business units. As more enterprise customers move to the cloud and increase their use of digital channels, CSPs see a need to transform how they engage with customers to ensure they align with their evolving needs. With more customer activities associated with enterprise service units, Amdocs is demonstrating its capabilities to support CSPs' in monetizing their 5G investments.

Key services announcements made in 2021 are included in **Table 3** in the Appendix. A few of the notable wins include:

- **A1 Telekom Austria Group:** Partnered with Amdocs in a multiyear deal to modernize its charging operations in Bulgaria, Croatia, and North Macedonia, as well as policy functions in Austria, Croatia, and North Macedonia, Serbia, and Slovenia. Amdocs will transform these charging and policy functions using Openet's 5G cloud-native and microservices-based charging and policy products.

- **DISH:** DISH chose Amdocs' cloud-based containerized billing system, Optima, to support enterprise and wholesale customers on its next-generation 5G network. According to the CSP, the Amdocs billing system will offer them multicloud—public or private—deployment flexibility.

- **Globe Telecom:** Amdocs has continued to grow its engagements with Globe Telecom. In 2021, Globe telecom announced two deals with Amdocs:
    - To purchase Amdocs' network and service automation platform to automate and simplify the operations and management of network as a service (NaaS) services, including SD-WAN, security services, and bandwidth on demand and mobile core services.

    - To implement a security platform from a partner, Guardicore. Amdocs will deploy Guardicore's Centra Security Platform to provide software-based segmentation to significantly improve Globe's cloud security environment with superior visibility and transparency into network traffic.

- **T-Mobile US**: The CSP enters a multiyear strategic partnership agreement with Amdocs to support its post-merger (with Sprint) integration activities and unlock its operational synergies. This deal will leverage the Amdocs portfolio to support T-Mobile US's next-generation communication and media services for its consumer and business customers. It will provide extended next-generation hybrid-cloud operations in a multiyear managed services engagement for T-Mobile's digital platforms.
- **WindTre:** The Italy-based CSP selected Amdocs Optima, deployed on the public cloud, to modernize its monetization stack. The project will provide WindTre with a modern 5G-ready billing solution based on open source and cloud technologies for all postpaid consumer and enterprise customers, across all lines of business.

Amdocs partner programs

Amdocs has indicated that it has more than 160 partners, including large software providers such as HPE, IBM, and Oracle; SIs such as Atos and Virtusa; niche software companies such as Q-nomy; and vendors bringing regional or industry-specific skills such as Adobe, Fortinet, and Cloudera.

Amdocs runs a partnership scheme called Align Partners Program to develop and foster its relationships with software and technology companies, systems integrators, and consulting organizations. The program cuts across multiple domains, including consumer experience and monetization, media and digital services, enterprise and connected society, and open cloud networks and cloud (including cloud infrastructure players). These partnerships ensure interoperability among Amdocs' software portfolio, business processes, third-party software applications, and hardware.

The program offers two relationship levels: strategic partners and partners. The partner-level defines the scope of the relationship.

Align strategic partners

These partnerships are with selected industry-leading companies with broad global reach and/or a service or product portfolio that complements and aligns with Amdocs' offerings. They typically involve joint marketing, training certification, and go-to-market initiatives; joint account planning and regional sales workshops with a dedicated sales and business focal point; joint demo and lab integration; and a value-added reseller agreement in place.

In late 2020 to date, Amdocs has established new partnerships, some of which are focused on enabling CSP customers build out new service propositions. Other partnership activities have focused on deepening existing partner relationships, especially with the public cloud service providers. Examples of these partnerships include:

- **Tomorrow Street:** Amdocs announced a strategic partnership with Tomorrow Street, which is a joint venture between Vodafone and Luxembourg's technology incubator, Technoport. Under the partnership, Amdocs will assist Tomorrow Street's portfolio companies to achieve their customers' digital transformation goals, leveraging Amdocs' extensive industry experience and large ecosystem of innovation partners. Furthermore, the two companies will work together to identify innovative technology solutions contributing to Vodafone's development.

- **Amazon Web Services (AWS):** Amdocs and AWS have deepened their partnership with a multiyear strategic agreement (made in November 2020) to deliver integrated, cloud-native BSS offerings for the top-tier CSPs. This agreement expands on existing work between AWS and Amdocs to enable Amdocs' BSS and service automation portfolio to run natively on AWS. As part of the deal, AWS will be Amdocs' preferred cloud provider for Amdocs' internal IT transformation to enable new operating models, reduce operating costs, and help transform their business in the cloud. Amdocs is also expanding its use of AWS's comprehensive portfolio of cloud services (beyond AWS-Amdocs Contact Center and the Amazon Connect cloud-based omnichannel solutions) to provide CSPs with the agility to transform customers' experience. Both companies will work together to promote new services that will help Amdocs' CSP customers migrate and modernize their systems.

- **Microsoft:** Amdocs and Microsoft have extended their global business, technology, and services collaboration. This partnership widens the availability of Amdocs' portfolio on Microsoft Azure for Operators (AFO) initiative beyond Amdocs' ONAP solution, Amdocs Data Hub, and self-service visualization and reporting, Amdocs' eSIM solution, and SD-WAN as a service which are hosted on Azure. The integration of Amdocs' suite of BSS/OSS solutions with Microsoft Azure will enable service providers to automate and virtualize their network while looking for opportunities to monetize 5G both for consumers and enterprises. It will also offer CSP enterprise customers private and public edge solutions, such as private enterprise networks (PEN) and multi-access edge computing (MEC).

Partners

These partnerships are with companies where the partner operates within the wider Amdocs ecosystem. Joint business is more opportunistic and based on market demands. These partnerships will typically include joint marketing and go-to-market initiatives and can include commercial relationships. Examples of companies involved in these partnerships include Lightico, Creatio, Panorama, SecuPi, Continual, and Resolve.

Amdocs also has an additional program targeted at seedbed innovation. It draws on an ecosystem of startup companies that complement Amdocs' offerings to help telcos reduce their offer design and delivery times.

Appendix

Table 3: Amdocs contract wins in 2021

CSP name	Description of deal	Date
A1 Telekom Austria Group	Partners with Amdocs in a multiyear deal to modernize its charging operations in Bulgaria, Croatia, and North Macedonia, as well as policy functions in Austria, Croatia, and North Macedonia, Serbia, and Slovenia. Amdocs will transform these charging and policy functions using Openet's 5G cloud-native and microservices-based charging and policy products.	February 2021
Altice USA	Amdocs announced the completion of a new migration for Altice USA following its merger with Service Electric Cable TV. The migration included the consolidation of Service Electric Cable TV's subscriber base to Altice USA's operational and billing support environments, allowing them to streamline services to acquired customers while expanding their footprint and reducing operating costs.	May 2021
AT&T	• Amdocs' Quality Engineering Services, under a multiyear services deal, to provide Agile, scalable, and DevOp's-based quality assurance. Amdocs QES will integrate into every step of the development process for a faster time-to-market with new services and builds on our existing activities supporting the modernization of AT&T's consumer mobility domain.	3Q21
	• Amdocs wins cloud migration project with AT&T, which includes Amdocs and non-Amdocs products	1Q21
BT	This is an extension of a multiyear managed services contract where Amdocs will be implementing Amdocs' and Lightico's real-time digital interaction platform across its contact centers to enable business operations to be conducted digitally and remotely in the cloud. The platform is designed to allow BT's customers to conduct self-care and sign contracts online, alleviating the need for customers to physically visit BT stores, and drive towards a seamless digital society. This project digitizes sales systems, enabling BT to bring greater choice, faster time-to-market, and improved flexibility.	May 2021
Charter Communications Inc.	Amdocs, in a multiyear agreement, will host and operate billing systems in support of its Spectrum Mobile business. Amdocs will utilize advanced automation capabilities and a fully resilient hosting architecture to ensure high-performance, efficient, and reliable systems operations for Charter.	February 2021
DISH	DISH has chosen Amdocs' cloud-based containerized billing system, Optima, to support enterprise and wholesale customers	March

	on its next-generation 5G network. According to the CSP, the Amdocs billing system will offer them multicloud—public or private—deployment flexibility.	2021
Fastweb	Fastweb selected Amdocs to upgrade the CSP's Network Inventory to the next-generation OSS solution, providing inventory, network navigation, reporting, and ongoing maintenance. This is part of its ongoing initiative to transform Fastweb's IT systems into a flexible and 5G-ready platform to grow and differentiate its business.	April 2021
Globe Telecom	• Globe Telecom extends its relationship with Amdocs by signing a deal to purchase Amdocs' network and service automation platform to automate and simplify the operations and management of NaaS services, including SD-WAN, security services, and bandwidth on demand, and mobile core services.	
	• Amdocs will be implementing a security platform from a partner, Guardicore for Globe Telecom. Amdocs will deploy Guardicore's Centra Security platform to provide software-based segmentation to significantly improve Globe's cloud security environment with superior visibility and transparency into network traffic.	September 2021
Maygar Telecom	Amdocs will support the CSP's Future of Billing program by migrating the company's mobile postpaid business onto the Amdocs' modernized platform to deliver a fully convergent postpaid business. As part of the deal, Amdocs will empower Magyar Telekom by streamlining and digitizing its IT systems; strengthening its position as a flexible and Agile communications provider in the Hungarian market.	July 2021
Movistar Perú	The Telefónica subsidiary signed a multiyear agreement that expands on a pre-existing managed services deal signed to include corporate enterprise wireline services. Consequently, Amdocs business and operational support systems will support Movistar Perú's wireless and wireline services for its consumer (including residential) and corporate enterprise customers.	February 2021
Orange	Amdocs is supporting the development of Orange's 5G SA experimental cloud network, which was launched in July in Lannion, France. Amdocs' 5G and digital capabilities in charging, ordering, catalog, and revenue management will be implemented to support this trial which is expected to run for two years. 5G use cases, such as network slicing, will be enabled using Amdocs' 5G slice management as a service offering.	September 2021

SES	Amdocs wins deal with content connectivity solutions provider SES to automate the CSP's end-to-end flow validation process. Under this deal, which expands existing network orchestration engagement to the automated testing realm, Amdocs Quality Engineering framework and related services is being deployed to provide SES with the ability to automate their end-to-end flow validation and build a test automation solution using Amdocs' patented automation framework for continuous integration/continuous deployment (CI/CD) implementations. The objective is to deliver high-quality and top performance across all their applications to provide SES' end-users with a steady stream of new and compelling services.	May 2021
Slovak Telecom	Amdocs, in partnership with Atrinet, a provider of network management solutions, will support the modernization of Slovak Telecom's inventory workflows. Under this deal, Amdocs will have end-to-end responsibility for the delivery of its resource inventory system and Atrinet's discovery and automation solution. This solution will consolidate inventory and discovery platforms to meet the growing demand for more network capacity and business agility.	May 2021
T-Mobile Czech	Amdocs, in partnership with Atrinet, a provider of network management solutions, will support the modernization of T-Mobile Czech's inventory workflows. Under this deal, Amdocs will have end-to-end responsibility for the delivery of its resource inventory system and Atrinet's discovery and automation solution. This solution will consolidate inventory and discovery platforms to meet the growing demand for more network capacity and business agility.	May 2021
T-Mobile US	The CSP enters a multiyear strategic partnership agreement with Amdocs to support its post-merger (with Sprint) integration activities and unlock its operational synergies. This deal will leverage the Amdocs portfolio to support T-Mobile US's next-generation communication and media services for its consumer and business customers, including extended next-generation hybrid-cloud operations in a multiyear managed services engagement for T-Mobile's digital platforms.	February 2021
Three UK	Under a managed services agreement, Amdocs will enable Three UK to launch eSIM-enabled devices and introduce operational efficiencies for existing and emerging services, including 5G, for its individual subscribers. This deal expands the two companies' current collaboration in the business-to-business (B2B) domain to the consumer sector. This deal will leverage Amdocs' cloud-based	August 2021

	omnichannel digital business system.	
Vodafone Spain	Amdocs will modernize the company's CRM and maximize the benefits and return-on-investment from Vodafone's specialized customer management solution. As part of the deal, Amdocs' open and dynamic portfolio will provide the underlying application infrastructure platform to improve the efficiency and performance of its CRM platform. This deal follows the successful unification of the CSP's customer engagement channels (via the Unified Digital Engagement project). Amdocs will work hand-in-hand with Vodafone Spain to manage the CRM modernization project, which is expected to reduce its TCO, improve operational efficiency, automation, and performance, and advance the company along its Tech 2025 modernization journey.	August 2021
WindTre	WindTre has selected Amdocs Optima, deployed on the public cloud, to modernize its monetization stack. The project will provide WindTre with a modern 5G-ready billing solution based on open source and cloud technologies for all postpaid consumer and enterprise customers, across all lines of business.	January 2021

Source: Amdocs and Omdia

Methodology

This report was written following executive briefings with Amdocs in July and September 2021. This engagement included further bespoke briefings, industry events, webinars, and secondary research. The report also utilizes Omdia's ongoing research into the global telecoms vendor services market.

Further reading

Telecoms Vendor Services Market Share Spreadsheet: Network and IT Services – 2020 (September 2021)

Omdia's Communications Provider M&A – 2Q21 Review & Outlook (October 2021)

Vendor Services Review: Nokia (March 2021)

Vendor Services Review: Ericsson (November 2020)

Vendor Services Review: Huawei Technologies (August 2019)

Vendor Services Review: Infosys (November 2016)

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