RESEARCH

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Automated assurance systems: worldwide forecast 2018–2022

Anil Rao

About this report

This report provides forecasts for communications service provider (CSP) spending on telecoms-specific automated assurance (AA) software systems. It provides details of how spending will vary by delivery type, service type and region across different sub-segments. The report also provides recommendations for how vendors and CSPs can approach the changing demands of telecoms service assurance software. The report is based on several sources, including:

- Analysys Mason's strategy reports and other analysis developed during the past year.
- interviews with CSPs and vendors worldwide.

KEY QUESTIONS ANSWERED IN THIS REPORT

- What is the overall size of the telecoms automated assurance software market and what will be the key drivers of growth in the next 5 years?
- How will spending vary across different sub-segments of the automated assurance market?
- How will spending vary across different regions and service type?
- What are the major drivers and inhibitors that will affect the CSP spending on assurance systems?

GEOGRAPHICAL COVERAGE

- Worldwide
- Central and Eastern Europe
- Developed Asia–Pacific
- Emerging Asia–Pacific
- Latin America
- Middle East and North Africa
- North America
- Sub-Saharan Africa
- Western Europe

SUB-SEGMENT COVERAGE

- Probe systems (PS)
- Service management (SM)
- Fault and event management (FM)
- Performance monitoring (PM)
- Workforce automation (WA)

WHO SHOULD READ THIS REPORT

- Vendor strategy teams that need to understand where growth is slowing and where it is increasing – according to different sub-segment categories.
- Product management teams responsible for feature functionality and geographical focus, and product marketing teams responsible for growth.
- Professional service vendors that want to understand the growth opportunities for the next 5 years.
- CSPs that are planning digital transformation journeys and want to understand key areas that they should focus on.

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Three key trends expected during 2018–2022

1

Automation of assurance processes using deep learning analytics, machine learning and AI will drive CSP spend during the forecast period.

CSPs will apply advanced paradigms such as machine learning and AI to supercharge existing operations and automate assurance processes. The primary goal is to significantly reduce operational costs, and build the foundation for autonomous operations. Furthermore, automated assurance will be an essential building block for achieving closed-loop automation.

2

Demand for new-age automated assurance solutions for NFV/SDN and hybrid networks, including 5G, will increase.

NFV/SDN-enabled networks will require new assurance approaches, such as monitoring and assurance of virtual infrastructure and services delivered over a hybrid and virtual network. New capabilities such as virtual probes for testing and operational assurance will be deployed. Services such as SD-WAN and others delivered over uCPE platforms will require unified application and network performance assurance. 5G will be a long-term driver for automated assurance.

3

Demand for professional services will continue to focus on NOC consolidation, SOC implementation, and systems integration for NFV.

NOC consolidation and managed services will continue to be in demand for traditional networks and services as CSPs attempt to control costs. Implementation of SOC and related process automation will require consulting, custom development and business process reengineering services. Early assurance deployments for NFV require significant systems integration work.

Recommendations for CSPs

1

CSPs should accelerate assurance automation initiatives to achieve zero-touch operations as they prepare to roll out 5G.

Assurance automation based on anlaytics technologies such as machine ML and AI will be critical for the success of achieving extreme operations automation. As CSPs prepare to scale up NFV and SDN for 5G, the traditional assurance operational model is going to be unsustainable. The success of virtualisation and 5G will depend on highly efficient and lean operations, in which automated assurance will play a crucial role.

2

CSPs should consider virtual and cloud-native service assurance solutions for the operation of physical networks and NFV/SDN based virtual networks.

The agility of cloud-based NFV and SDN networks must be matched by dynamic automated assurance. To this end, CSPs must demand new-age assurance solutions that are rearchitected for the telco cloud, using microservices technologies. The solutions must be fully backward compatible – that is, they must support today's physical networks too – which will protect the investments they make today as they migrate their networks to the cloud.

3

CSPs should explore solutions by start-ups and non-traditional companies in the automated assurance domain, that are disrupting the market with innovative ML and AI led solutions.

The demand for automated assurance solutions is increasing. These solutions cover a broad spectrum of automations including incident management automation, runbook automation, intelligent process automation, closed-loop automations and so on. Assurance-led intent-based network and service orchestration solutions are promising to address end-to-end service design and lifecycle management in hybrid and NFV networks.

Recommendations for vendors

1

Develop assurance solutions that make extensive use of ML and AI technologies to enable extreme automation for existing networks and the emerging NFV/SDN and 5G networks.

ML and AI are set to become primary enabling technologies for the next wave of innovation in enterprise software worldwide. Vendors should take advantage of the innovations, especially those emerging in the open-source ecosystems, and should apply deep domain expertise to develop new-age assurance solutions to drive extreme automation.

2

Vendors must prioritise the wide ranging requirements emanating from industry bodies, open-source organisations and various CSP and vendor initiatives.

The Linux Foundation and ETSI are proposing pseudo-standards-based automation frameworks, such as ONAP and OSM. TM Forum and MEF are creating specifications with initiatives such as Zoom and LSO, respectively. Vendors such as Amdocs, Ericsson, Nokia, and more, have created ecosystems based on their own platforms, and CSPs such as AT&T, Telefónica and Vodafone are executing their own operation transformation strategies.

3

New vendors should focus on specialist areas of assurance and develop strategic partnerships with large prime systems integrators.

New vendors may find it difficult to break through the highly bureaucratic and cumbersome procurement processes. To circumvent these roadblocks, vendors should engage closely with large incumbent providers that have an ongoing relationship with the CSPs. The prime systems integrator usually leads the CSP engagement, but works with partners to deliver the end-to-end solution.

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About the author

Anil Rao (Principal Analyst) is the lead analyst for the Automated Assurance and Service Design and Orchestration research programmes, covering a range of topics on the existing and new-age operational systems that will power operators' digital transformations. His main areas of focus include service creation, provisioning and service operations in NFV/SDN-based networks, 5G, IoT and edge clouds; the use of analytics, ML and AI to increase operations efficiency and agility; and the broader imperatives around operations automation and zero touch networks. He produces quantitative and qualitative research for both programmes, and works with clients on a range of consulting engagements such as strategy assessment and advisory, market sizing, competitive analysis and market positioning, and marketing support through thought leadership collateral. He holds a BEng in Computer Science from the University of Mysore and an MBA from Lancaster University Management School, UK.

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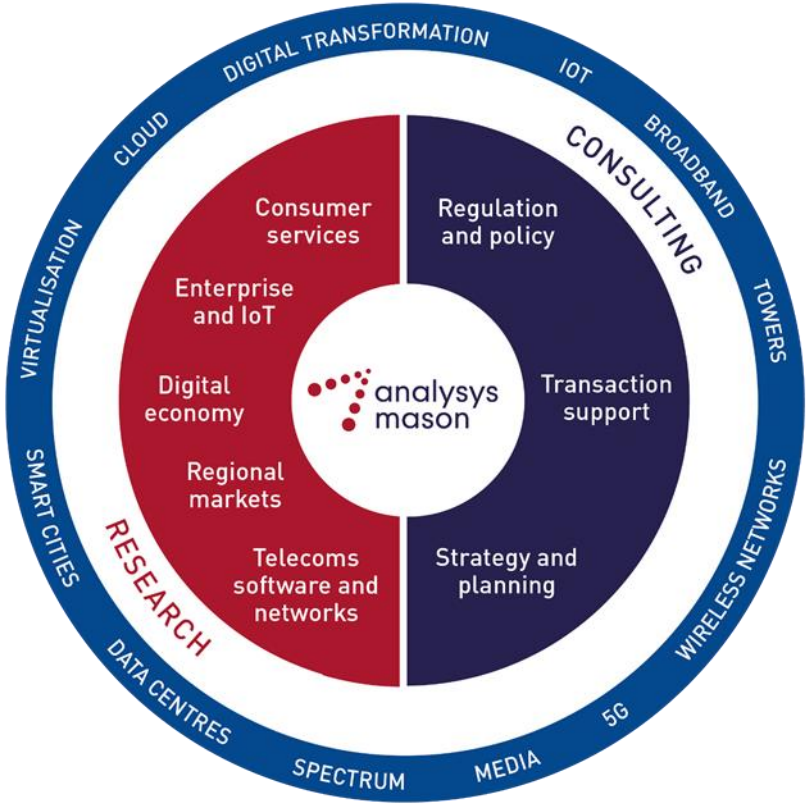

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