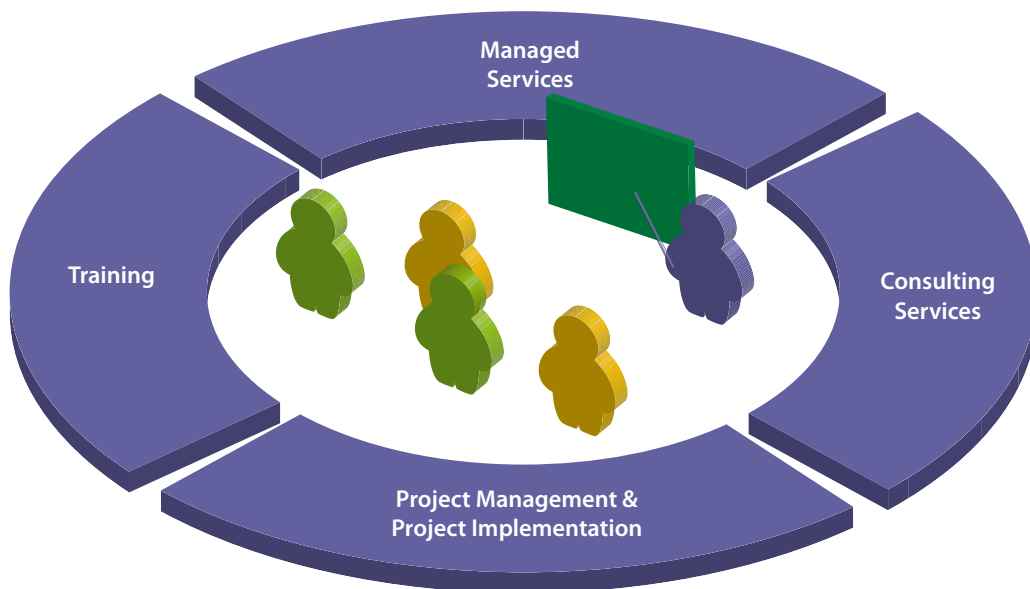




We take load off your shoulders!

Keynote SIGOS provides flexible and customizable services.

The Professional Services





Managed Services

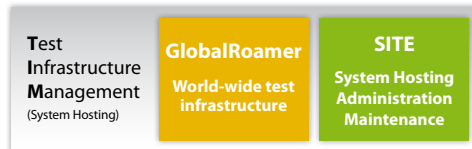
We take the load off your shoulders!

– Flexible and Customizable

Test Infrastructure Management

Reduce your effort in system administration with TIM

- Administration & Management of your SITE test system
- Providing & hosting of GlobalRoamer, Keynote SIGOS world-wide test environment



- Test Operations Management
- Test Infrastructure Management

GlobalRoamer

Keynote SIGOS hosts, maintains and constantly expands the world's extensive test infrastructure, GlobalRoamer. Customers simply log on to the system via web interface and get access to an ever-increasing number of networks and locations for their outbound roaming testing.

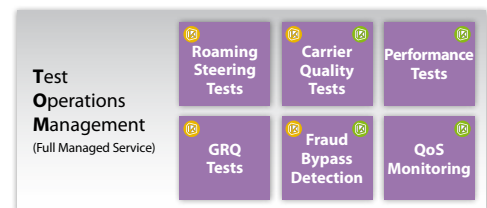
SITE

If you are looking for the benefits of the most comprehensive active end-to-end test system but don't want to look after the infrastructure, let us do the job for you. Keynote SIGOS experts take care of the administration of your SITE testing infrastructure while you can fully concentrate on your business. We offer a fully hosted service at the Keynote SIGOS premises (e.g. hosting and maintaining your SITE Central Unit and other core components).

Test Operations Management

Reduce your effort in test execution with TOM

- Periodic managed services
- Campaign-based managed services



Performance Tests

Ensure end-to-end Quality of Service through delivery of Key Performance Indicators (KPIs) prepared for you by Keynote SIGOS. To reach a "snapshot" like view, a large number of tests in a short period of time (a few days or weeks) is executed and analyzed by Keynote SIGOS. The results are presented as combination of reports, graphs and text documents and can be the foundations for your benchmarks.

QoS Monitoring

With Keynote SIGOS you can easily prepare a long-term testing environment to ensure and monitor your Quality of Service. As an example, many customers constantly monitor the 50 to 100 most important roaming partners. Automatic tests and reports on Key Quality Indicators (KQIs) are prepared according to the customer's wishes. Trained Keynote SIGOS experts manage reports for troubleshooting and provide test results in an easy to read format. SITE Tools like Dashboard and Service Alarm Map give significant data on the actual network performance and functionality. Quality of Service monitoring with Keynote SIGOS is an indispensable way for all departments of an operator to ensure high-class quality at all times.



Roaming Steering Tests

Test the functionality of steering programs. A number of location update tests in steered countries/networks are performed. The tests are examined by Keynote SIGOS to discover whether the steering works as expected. From the distribution of tests over different networks it is determined whether the planned steering ratios between different networks are fulfilled.

(page 24)

Carrier Quality Tests

It is of primary importance that Operators and Carriers offer high quality transmission services. Operators can use Keynote SIGOS to help ensure that their end customers enjoy the best possible quality services. By constantly monitoring the transmission quality of all connected carriers, traffic can be routed intelligently to the best available. Carriers are interested to manage their SLAs with the Operators and to maximise the volume of traffic coming from each operator. Since Operators may well route traffic away from any carrier delivering poor quality transmission then the carriers have a vested interest in measuring their transmission quality. Keynote SIGOS can support carriers in understanding and monitoring the transmission quality of traffic to more than 500 operator networks world-wide.

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GRQ Tests

Based on general experience of the outbound roaming market 80% of outbound roaming revenue comes from the top 20 roaming partners. For this reason the GSM Association recommends regular monitoring of service quality during outbound roaming with these top roaming partners. Keynote SIGOS has implemented a world-wide test system capable of measuring, reporting and alarming all aspects of roaming service quality using standard prepared test scenarios which can be used to regularly test, monitor and report on service quality in these top roaming partner networks using the SIM cards of the interested operators.

Keynote SIGOS supported several operators during the GRQ trial phase and has successfully proven to be fully compliant to the GRQ framework.

(page 22)

Fraud Bypass Detection

The internationally installed Keynote SIGOS Test Systems can be used for Interconnect Fraud Bypass detection services. Access to alerts and detailed trace information is possible in real time allowing blocking of SIM Box numbers rapidly. All tests are provided as a fully managed service. Powerful reporting techniques allow benchmarking of SIM Box issues against historical values.

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- Test Operations Management
- Test Infrastructure Management

Benefits of Managed Services

- Get the benefit of the know-how of our experienced engineers in the testing area.
 - Low or no resources from customer side required.
 - Our customers can focus energy on using the results to perform network troubleshooting and other meaningful tasks.
 - The biggest attraction for operators is Cost Savings. A Managed Services contract can take upfront CAPEX out of the budget as well as cut OPEX in the long run.
 - Increase your 'time to market' and benefit from the intangibles and the innovation that Keynote SIGOS Managed Services is performed for multiple Operators and Carriers.
 - We have the in-house skills, experience and staff to tackle dedicated projects.
-



Consulting Services

Customized for all your specific needs!

Strategic Consulting

With two decades of experience in the field of telecommunications testing we can provide you with the unique service of high-level strategic consulting. Our Senior Telecommunications Experts are available for strategic assessments and solutions development workshops to provide thorough and comprehensive answers to the question like:

- „How does end-to-end testing fit into our service quality assurance procedures?“

Book this service as an approximately 2-day workshop.

Senior Consulting

Get the most out of your Keynote SIGOS test system right from the start. With our Engineering Consulting services, our system experts assist your team during the introduction phase of your Keynote SIGOS solution. Our system experts share their knowledge with your team 'on the job' especially for a question like:

- „How to implement service testing or fraud testing into our business processes?“

Book Senior Consulting service for the duration of weeks or months, depending on the suitable concept.

Support

- SITE Warranty
- E-mail Support - A fast and reliable way to get clear answers and step-by-step instructions should you experience problems
- Support Hotline – direct communication with Keynote SIGOS professionals (Monday – Friday during business hours (CET); 24/7 for premium service subscribers)

Engineering Consulting

If you have the concept and the right tools, you need an efficient implementation for your business. Therefore Keynote SIGOS offers:

Support of customers for the OPERATION of SITE or GlobalRoamer

- scheduling of periodic & ad hoc tests according to customer regulations
- scheduling of periodic & ad hoc reports
- analyses of failures
- analyses of trends
- preparation of specific reports (e.g. test campaigns, management reports, department specific reports)

Support of customers for the ADMINISTRATION of SITE *)

- administration of the SITE system
- data base management
- alarm management
- hard- and software maintenance
- backup and software-updates

**) For GlobalRoamer, engineering consulting in administration is not required since GlobalRoamer is fully hosted and administered by Keynote SIGOS.*



- Test Operations Management
- Test Infrastructure Management



Project Management & Implementation

Always flexible and customizable!

Once the right solution for your situation has been identified during the counseling phase, the actual project begins.

To minimize our customers' efforts, our experienced Project Management team takes on responsibility of the organization, execution, control and reporting of the project, from the beginning to the end.

With our expertise gained over two decades in the implementation of large-scale as well as niche projects we will help you find the optimal solution for efficient and successful project realization.

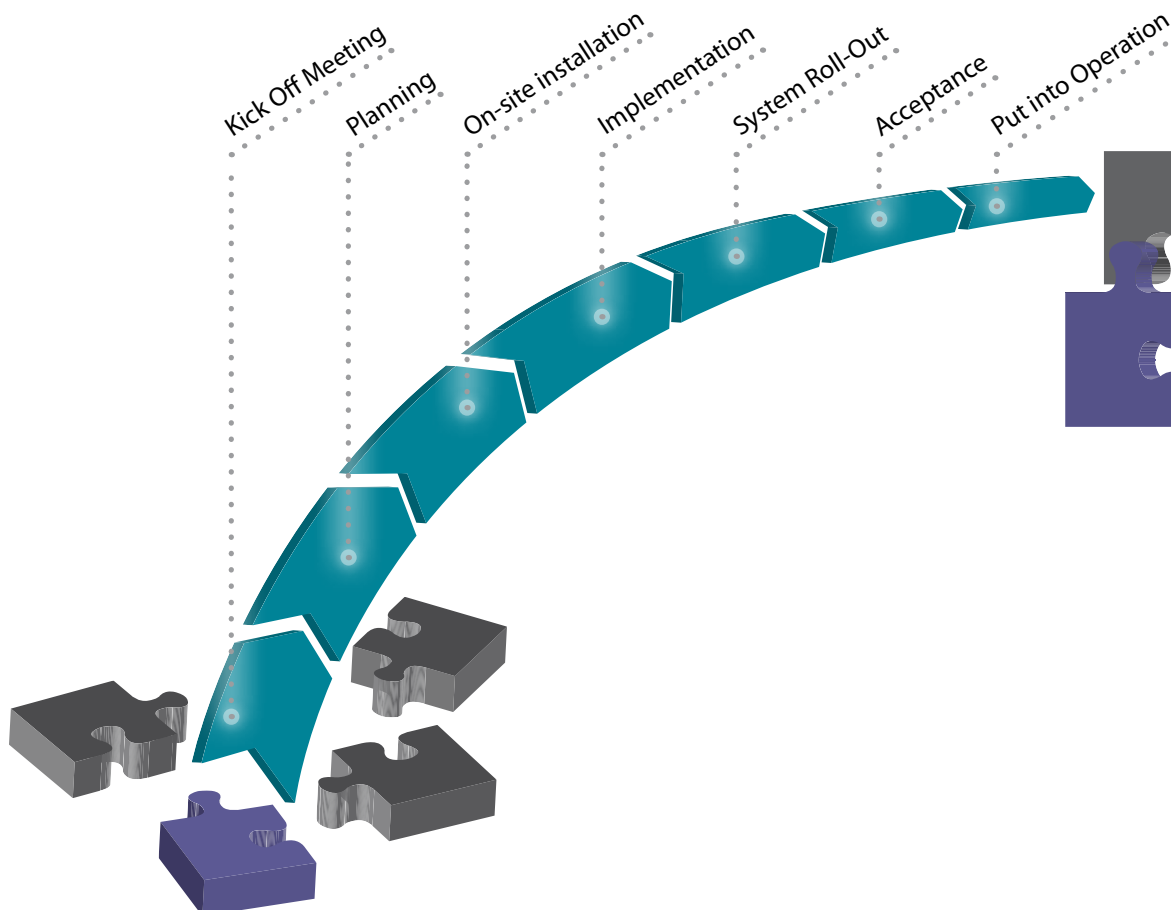
Regular tests are therefore required to maintain a high standard of quality and to improve customer satisfaction.

Included Services:

- Project management
- Project engineering
- Commissioning and installation of soft- and hardware components
- System implementation and network integration
- Coordination and roll-out of system components
- Project controlling
- Project reporting



Typical Keynote SIGOS Project Management Process



- Test Operations Management
- Test Infrastructure Management





Training

Wherever you want, with specially trained experts!

Training

On-site at your locations or at our training center!

Keynote SIGOS offers a comprehensive range of training to users of SITE and GlobalRoamer. Training can be scheduled on demand on your own site or at the Keynote SIGOS training center in Nuremberg, Germany. Keynote SIGOS training is designed for maximum efficiency. That's why we limit the seats for each session.

Public Training

The new cost-effective alternative to on-site training!

The Keynote SIGOS Public Training Program is the cost-effective alternative to private on-site training. Benefit from our trainers' hands-on expertise being brought to various world-wide locations in a modular concept. Book your public training seat today!



- Training
- Public Training

	Reporting & Diagnosis - Advanced		
	User Training - Advanced		
Reporting & Diagnosis - Base		Administrator Training	Test Case Editor Training
User Training - Base			
Users	Strategic Users	Administrator	Test Case Developer
Scheduling tests (ad hoc)	Scheduling tests Scheduling reports Defining alarms	Administrator of infrastructure, access rights management	Developer of test cases

