Reducing costs and customer churn-rate through converged Service Quality Management

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Area **17 125 187** km²
(the biggest in the world)

85 subjects (states)

Population **146 100 000**
(9th place in the world)

Active internet and telecom services users **59%**
(68.7 mil. People 18-55 years old)

Found in 2010 (first project)

Russian Software Developer

- The most successful SLA monitoring solution, №1 in Russia

(>23K monitoring end-points)

- Team of more than 100 employees

(developers, testing crew, engineers, sales and analysts)

- Over 100 man/years of development service assurance solutions
- Headquarters in Moscow, R&D in Novosibirsk

Main projects:

Rostelecom (>10K), **MTS** (>1k), **Russian Pension Fund** (>2K), **Ministry of Law** (near 2K), **FSO (KGB)** (>300) etc.)

Rostelecom More possibilities

ҚАЗАҚТЕЛЕКОМ

MTS

РОСЭНЕРГОАТОМ **АТОМЭНЕРГОСБЫТ**

HOME CREDIT BANK

А Альфа·Банк

Банк Москвы

Our Basic Customers

IP services monitoring and management customers:

Telecom operators and service providers

Cloud service providers (Data Centers)

Government Institutes, Dept's.

Large Corporate Enterprise (banks, retail, energy holdings)

SME/SOHO

Russian SLM market assessment in 3-5 years

Market segment	Service Access Points (mil.)	Service Cost per end-point (USD)	Size of the market,
IP VPN services	1	300	300
Corporate IT services and	5	150	750
Cloud Services	10	35	350
Internet Access (Broadband, 3G,	50	15	750
M2M services (e-government, etc.)	100	10	1'000
Overall size of Russian SLA management market			3'150

Basic trends:

- Increasing service value for B2B, B2C

- Telecom and IT services demands to be monitored

- Monitoring per service cost value must be decreasing to cover more services and area

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Poor quality services became a stereotype of the business on the telecom market

Most customers noted high operator response time on service problems

Over **50%** of customers are not satisfied with service level provided

Over **60%** of customers do not use helpdesk call-center services

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Rostelecom

Is Russia's largest national telecommunications operator with presence in all Russian regions.

Over **500 000** B2G and B2B customers

10.6 million fixed-line broadband subscribers

Has the largest backbone network in the country with a total length of about 500,000 km.

Rostelecom service quality management strategy

Service Level Management

- Year 2013-2015
- B2B, B2G oriented
- L3/L2 Virtual Private Network services

SLA management, proactive service monitoring, responsibility demarcation, conflict management

Customer Experience Management

- Year 2016-2017
- B2C oriented
- Broadband Internet Access, 3G/4G services

CEM Assessment, Internet, IPTV and VoIP SQM
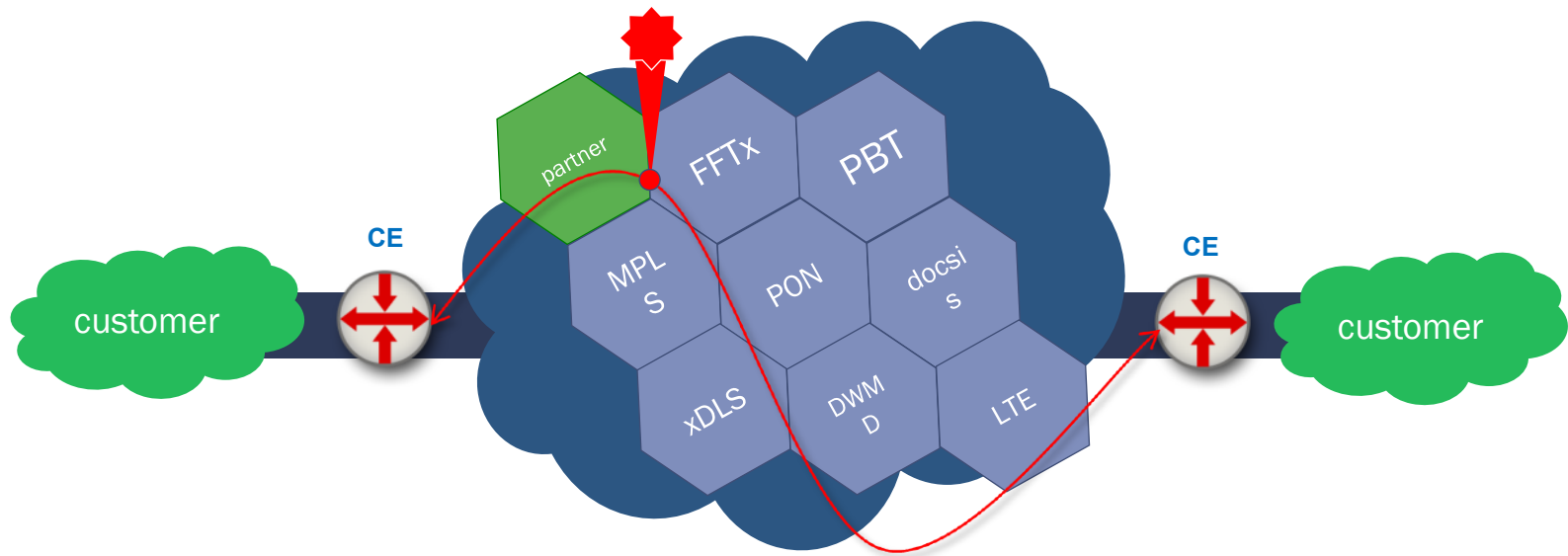
- **Network Complexity**
  - Multi-vendor, multi-technology network

- **Third parties involved**
  - a complex structure of partnerships, it is difficult to determine where is the problem and who is responsible

- **No standards**
  - Absence of unified standards and methods for quality control of packet network

SLA implementation can fix the situation

SLM Gap Analysis

AS-IS

- No customer experience view, no tools to measure and monitor customer service quality

- A lot of monopoly regional operators, partner service level is poor, no tools to demark responsibilities with partner

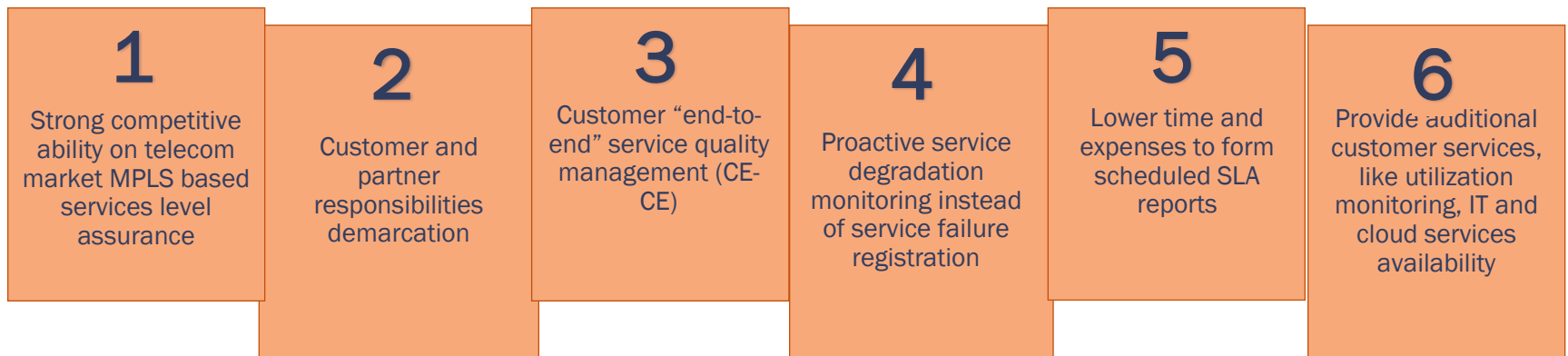- Large regional department branch, no transparency across end-to-end regional customer services

TO-BE

- Customer experience based on service quality is being measured and proactively monitored

- Partner responsibility boundaries are defined and UC agreements are signed

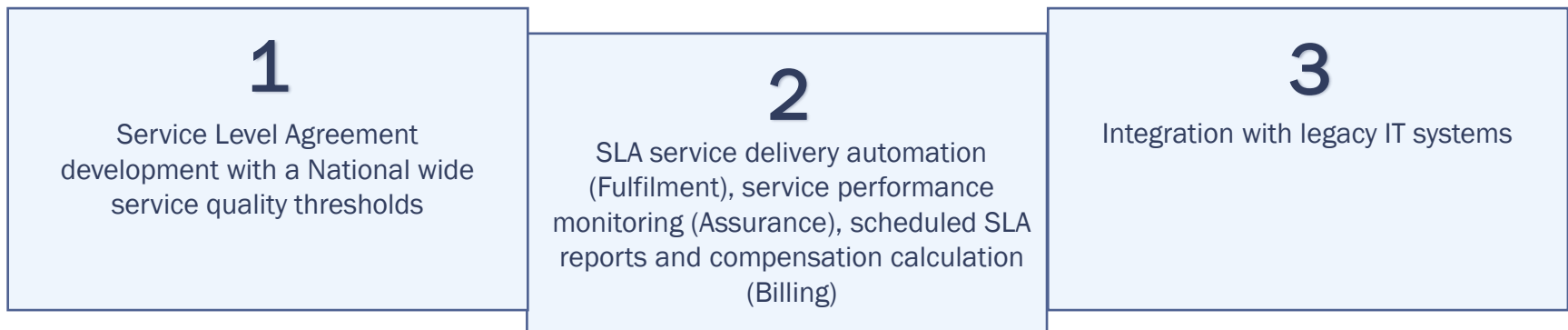- Transport network are monitored and demarcated, department OLA`s are implemented

Decision:
To deploy an SLA management solution

Targets and goals of SLM project

Increase key customers loyalty and B2B/B2G services differentiation by providing a guaranteed service level

External goals:

1 Strong competitive ability on telecom market MPLS based services level assurance

2 Customer and partner responsibilities demarcation

3 Customer "end-to-end" service quality management (CE-CE)

4 Proactive service degradation monitoring instead of service failure registration

5 Lower time and expenses to form scheduled SLA reports

6 Provide additional customer services, like utilization monitoring, IT and cloud services availability

Internal goals:

1 Service Level Agreement development with a National wide service quality thresholds

2 SLA service delivery automation (Fulfilment), service performance monitoring (Assurance), scheduled SLA reports and compensation calculation (Billing)

3 Integration with legacy IT systems

1

Service quality management and Assurance SLA process automation platform – an innovative solution for telecom, IT and cloud services
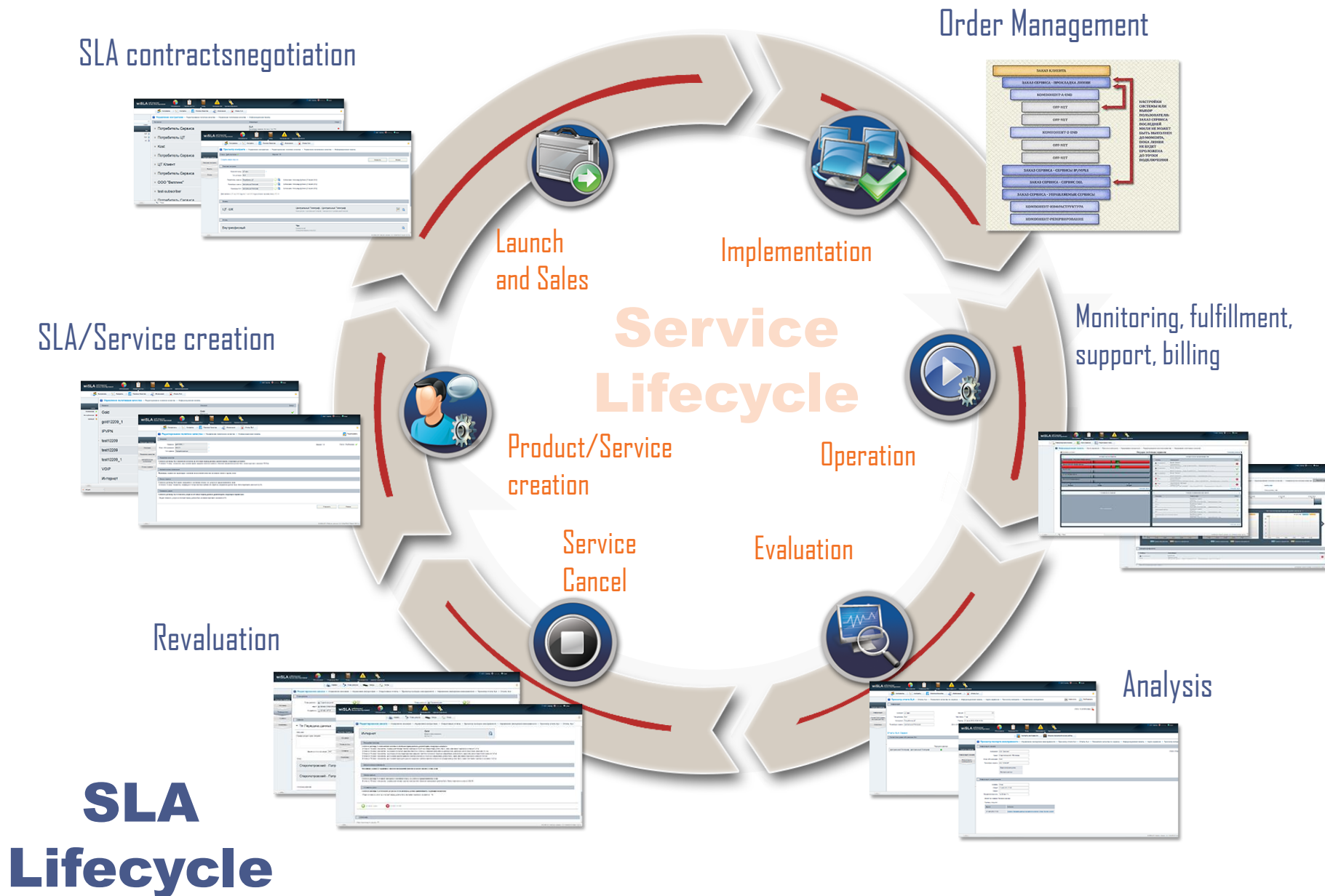
2

A comprehensive customer service quality vision. A tool to project it onto company business-processes

3

Efficient conflict management solution based on responsibility demarcation and real-time monitoring

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- **Multiportal architecture** – customer and partner self-care access

- **Big Data inside** - handle a huge amount of probe data (>1M)

- **Process-oriented architecture and SOA principles** – easy operation and integration

- **Business Process Engine Inside** – easy manage and customize SLA management processes

SLA contractsnegotiation

Order Management

SLA/Service creation

Monitoring, fulfillment, support, billing

Revaluation

Analysis

Service Lifecycle

Launch and Sales

Implementation

Product/Service creation

Operation

Service Cancel

Evaluation

SLA Lifecycle

Business SLA model

- **Increase revenue pre customer due to value added SLA services**
- **Lowers churn-ration due to increasing customer loyalty**

Customer SLA
(Service Level Agreement - SLA)

- **Lower the risks of customer SLA violation**
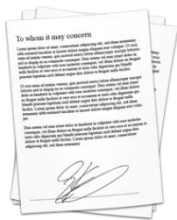
Internal SLA
(Operational Level Agreement – OLA)

- **Customer SLA service internal assurance**
- **Increasing corporate business process efficiency**

Partner SLA
(Underpinning Contract - UC)

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wiSLA solution

Probe management and data collection

Probe

Management VPN

Moscow Region

South Region

Internal OLA

Internal OLA

Partner UC

Last mile

Last mile

Customer SLA (E2E)
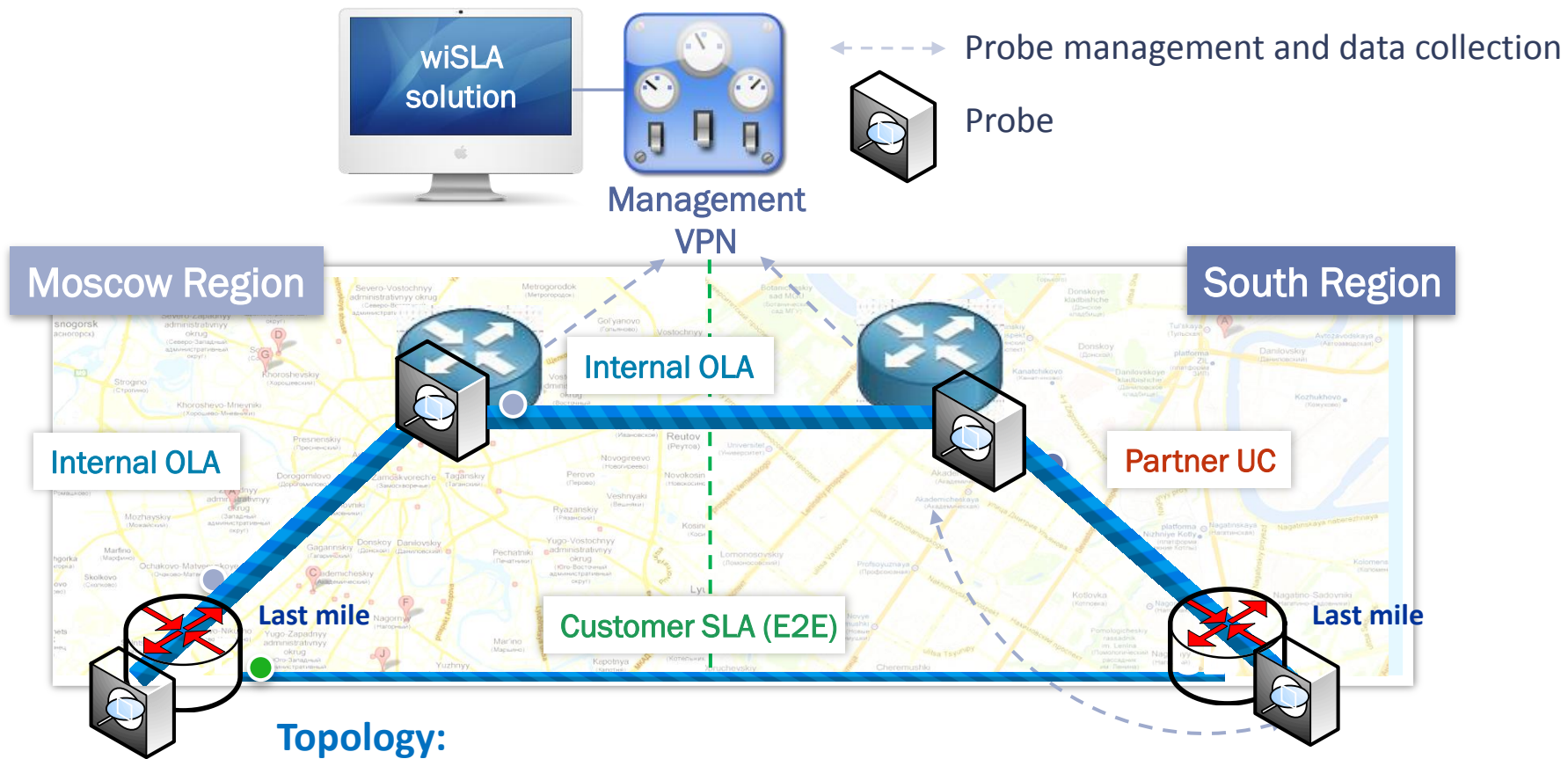
Topology:
«Star» with no access points limit
«Star-in-Star»
«Full-mesh»

wiSLA supported devices

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⭐ - Major Release   🟢 - Minor Release

wiSLA 1.0	wiSLA 1.7	wiSLA 2.0	wiSLA 3.0	wiSLA 3.2	wiSLA 3.3	wiSLA 3.4
December 2008		September 2009	May 2012	March 2013	December 2013	September 2014

- **Metrotek**
  - BERcut ETL
- **Accedian**
  - EtherNID/MetroNID

- **Wellink wiProbe**
  - ETL.Mini
  - ETL.Micra
  - ETL.SW
- **Accedian**
  - MetroNODE
- **Cisco IP SLA**
  - 891 Series (firmware 15,1(3)T1 NPE)
  - 1841 Series (firmware 12.4(15)T)
  - 2600 (firmware 14.T5)

- **RAD Data Communications***
  - ETX203A (firmware 4.3 or higher)
- **OneAccess***
  - 1645 Series

- **RAD** MiNID
- **Juniper RPM**
- **Huawei**
  - ATN905
- **Omnitron**
  - iConverter G4

- **Wellink**
  - wiProbe2.0
- **Raisecom**
  - RAX711
  - MSG1200
  - Gazelle S1112i-PWR
- **Albis**
  - Acceed 1416

Metrotek   **JUNIPER** NETWORKS   **ACCEDIAN** NETWORKS — HIGH PERFORMANCE SERVICE ASSURANCE™   HUAWEI   **CISCO**   **RAISECOM**   **RAD**   ФАКТОР   **ONEACCESS** NETWORKS
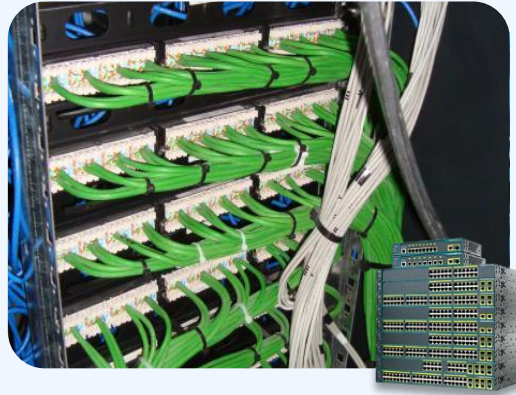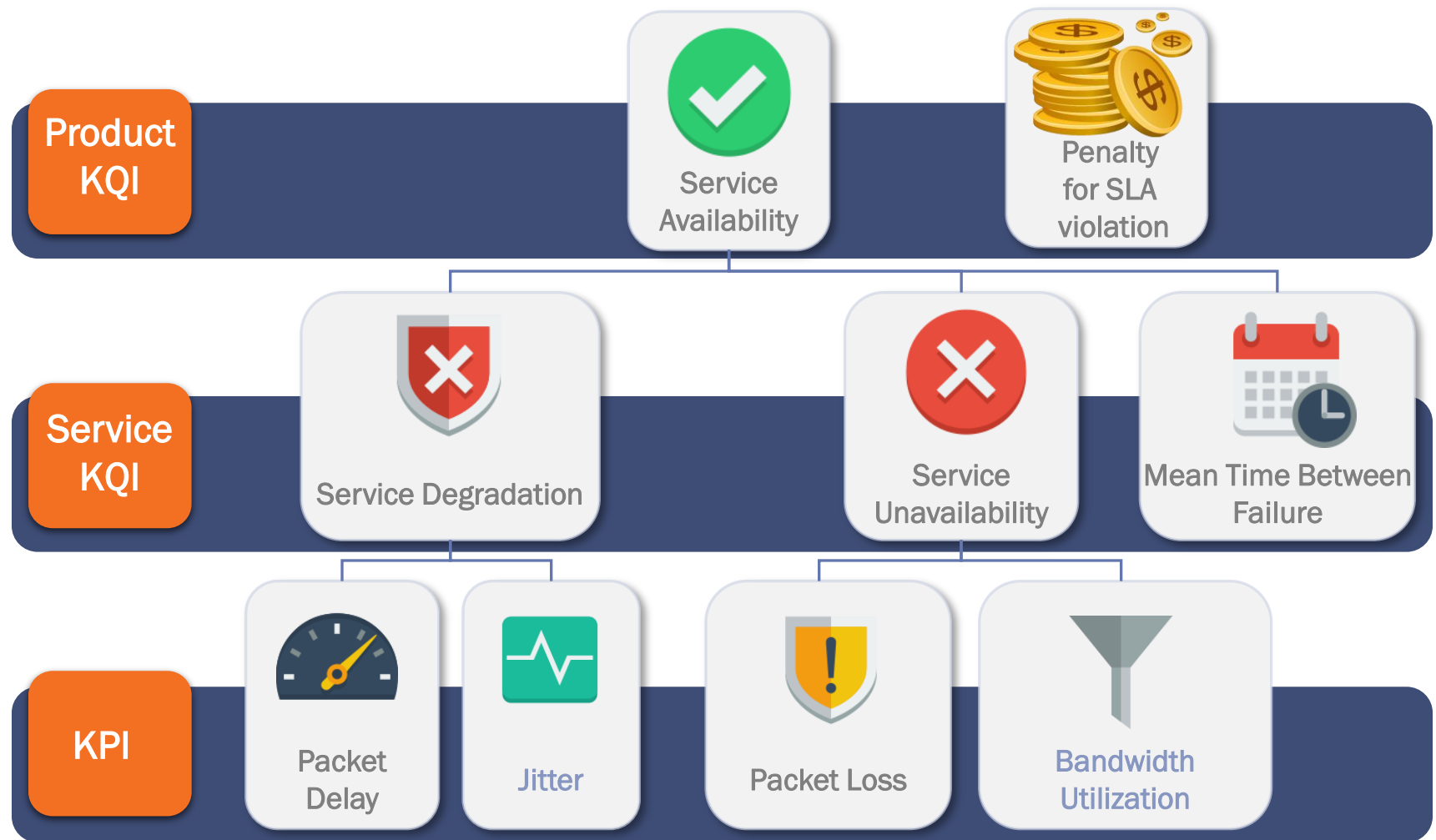
Customer SLA

- Wellink wiProbe family devices with L2-L7 service quality measurement

- Cross-IP address network solution
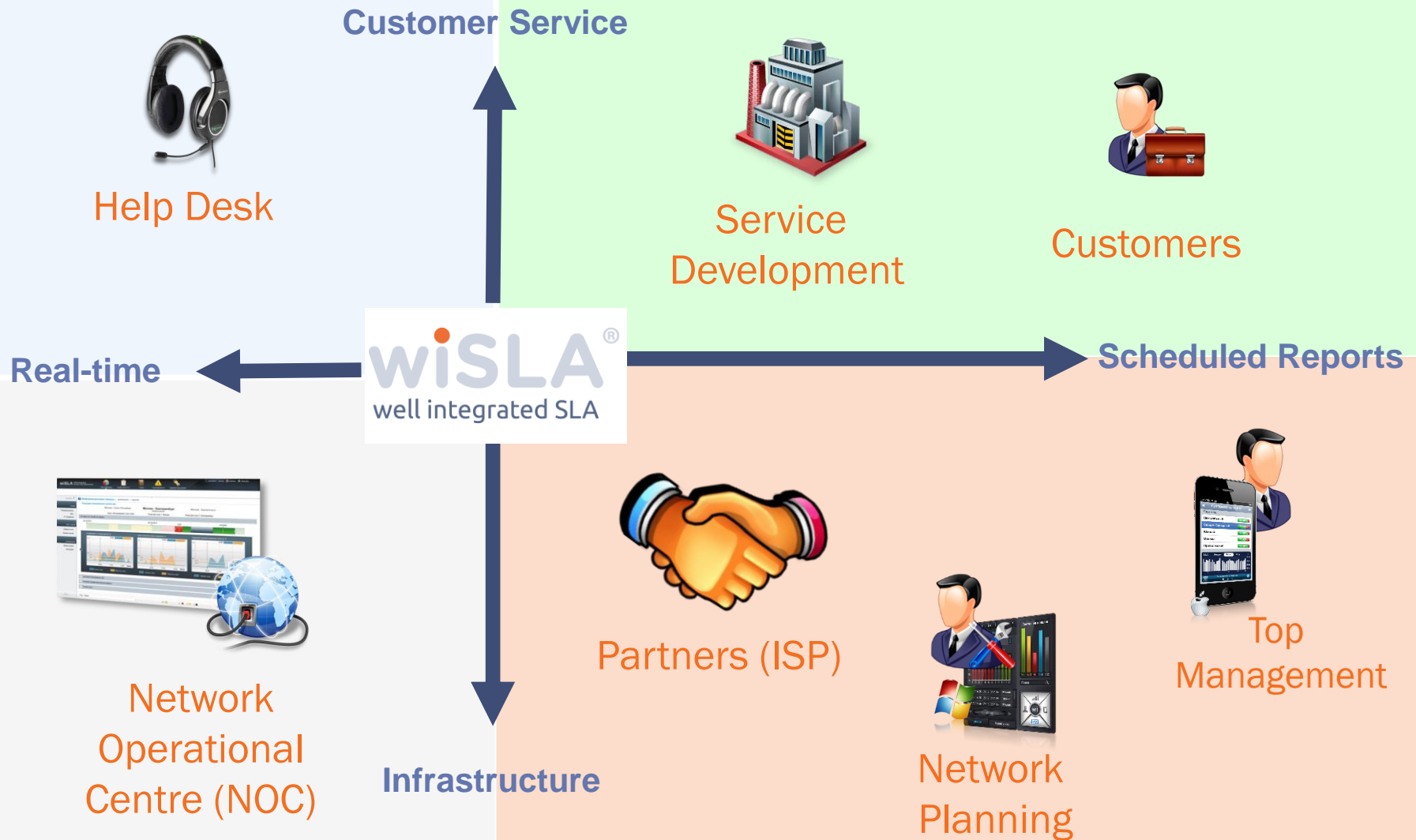
- self-management & configuration

Core Network Monitoring (OLA)

- Network equipment embedded measurement technologies (OAM, Cisco IP SLA, Juniper RPM)

- null-cost solution

- Fast coverage spread across the network

Partner SLA (UC)

- Accedian EtherNID/MetroNID family demarcation devices with 100 Mbit/s – 10 Gbit/s interface support

- high performance and measurement precision

wiSLA KPI&KQIs

Product KQI

Service Availability

Penalty for SLA violation

Service KQI

Service Degradation

Service Unavailability

Mean Time Between Failure

KPI

Packet Delay

Jitter

Packet Loss

Bandwidth Utilization

TM Forum SLA Handbook

wiSLA users in Rostelecom

Customer Service

Help Desk

Service Development

Customers

Real-time

Scheduled Reports

Network Operational Centre (NOC)

Partners (ISP)

Network Planning

Top Management

Infrastructure

Service Oriented WEB Interface

Mobile access to service quality info
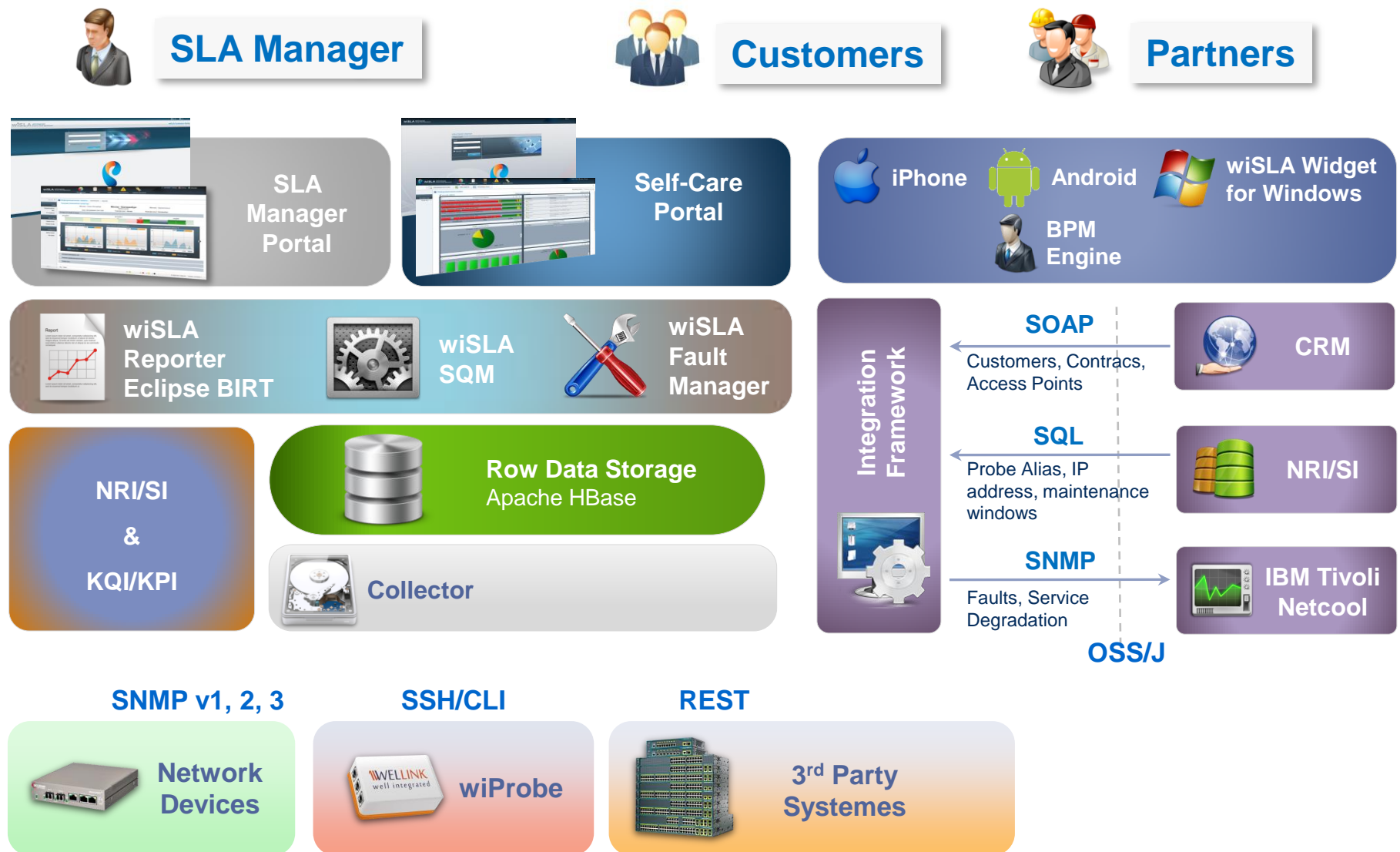
iOS

Windows Gadget

Android

1

SLA management methodology is complied to TM Forum GB917 SLA Management Handbook

2

System integration framework is based on TM Forum NGOSS and OSS/J SOA Enablement APIs

3

Customer SLA concept is based on ITU-T E.860 Framework of Service Level Agreement SLA

Solution architecture and integration

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SLA Manager

Customers

Partners

SLA Manager Portal

Self-Care Portal

iPhone   Android   wiSLA Widget for Windows

BPM Engine

wiSLA Reporter Eclipse BIRT

wiSLA SQM

wiSLA Fault Manager

Integration Framework

SOAP
Customers, Contracs, Access Points

CRM

NRI/SI
&
KQI/KPI

Row Data Storage
Apache HBase

SQL
Probe Alias, IP address, maintenance windows

NRI/SI

Collector

SNMP
Faults, Service Degradation

IBM Tivoli Netcool

OSS/J

SNMP v1, 2, 3

SSH/CLI

REST

Network Devices

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wiProbe

3rd Party Systemes

Thank you!

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Russia Today
www.youtube.com/user/RussiaToday