Spatineo

Quality Assurance & Usage Analytics

for INSPIRE Services

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27th February 2018

Inspirujme se

QUALITY ASSURANCE & USAGE ANALYTICS FOR INSPIRE SERVICES

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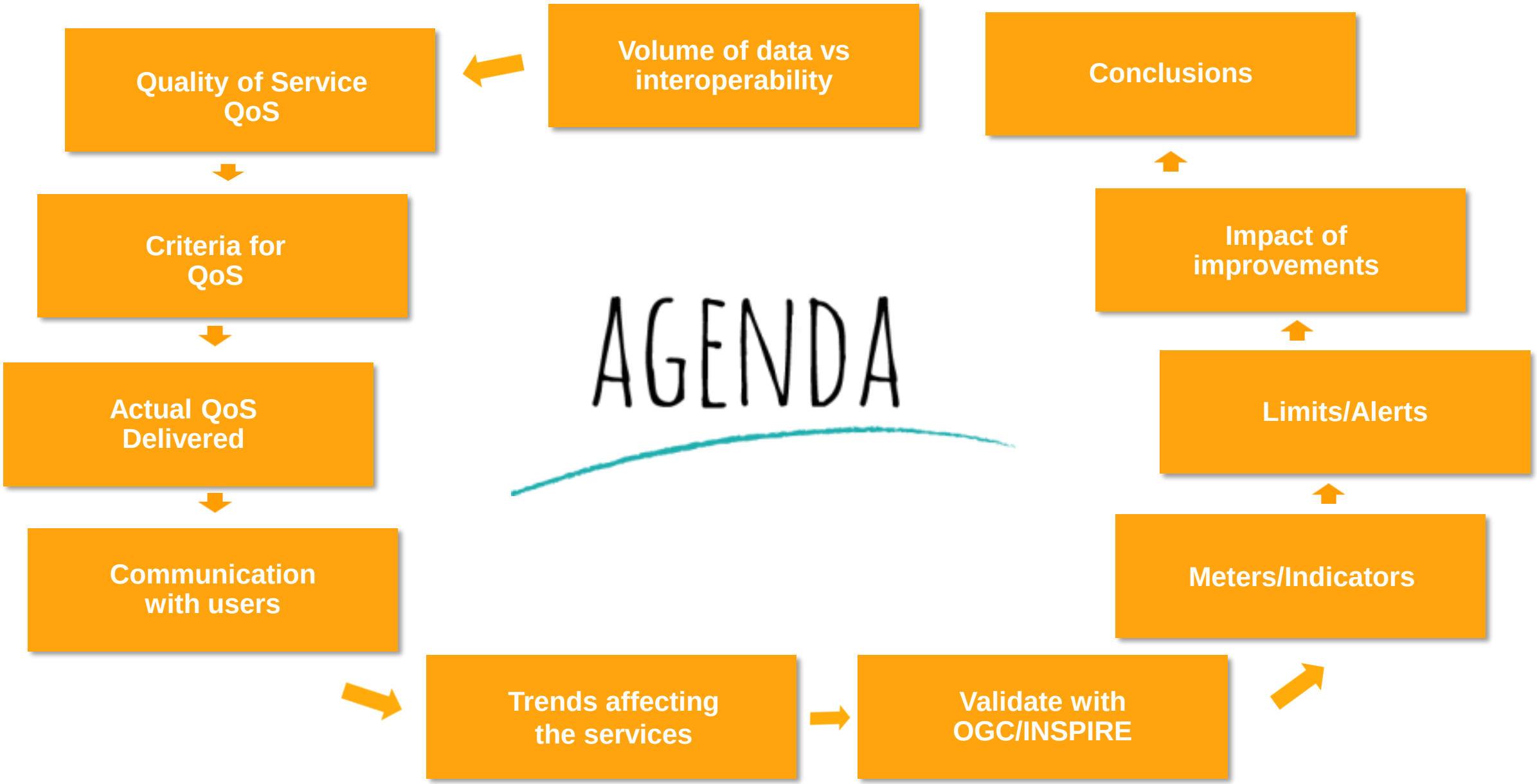
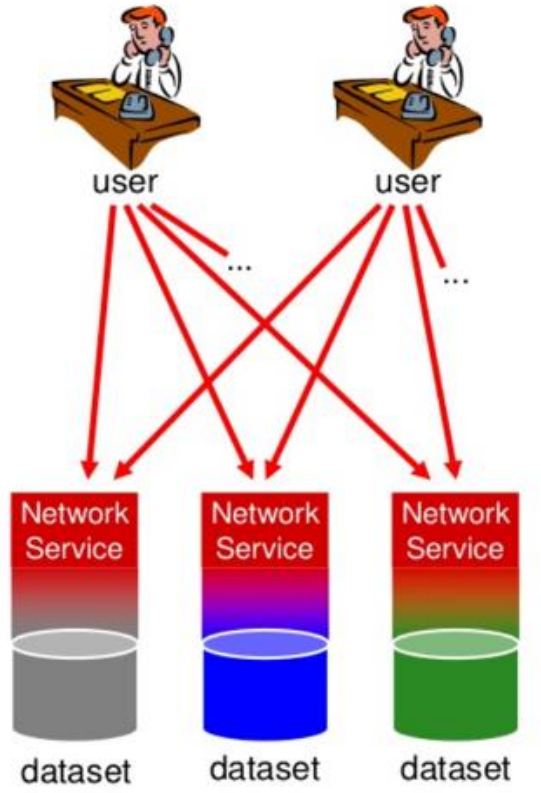


VOLUME OF DATA VS INTEROPERABILITY



The volume of spatial data collected increases rapidly with ever more powerful ways to simulate the environ and human behavior

A good SDI allows you to find, filter, acquire and interact with spatial data required for a particular use in a reliable, efficient and easy-to-use manner

A good example of this is INSPIRE

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QUALITY OF SERVICE

CENIA/cenia_koupaci_vody_2006_2010

http://geoportal.gov.cz/arcgis/services/CENIA/cenia_koupaci_vody_2006_2010/MapServer/WmsServer

Kvalita koupacích vod v koupací sezóně v letech 2006-2010

Available map layers (80)

koupací vody 15.5. - 25.5.2006 (1)

koupací vody 15.5. - 25.5.2006

Layer metadata (xml)

koupací vody 19.5. - 1.6.2006 (2)

koupací vody 19.5. - 1.6.2006

Layer metadata (xml)

0

Follow in Spatineo Monitor

Service health	Now:	Last 7 days	Year 2018
Availability		100%	99.9%
Total downtime		0.1 hours	1.1 hours
Pre-announced service interruptions		0 hours	0 hours
Unexpected downtime		**0.1 hours**	**1.1 hours**

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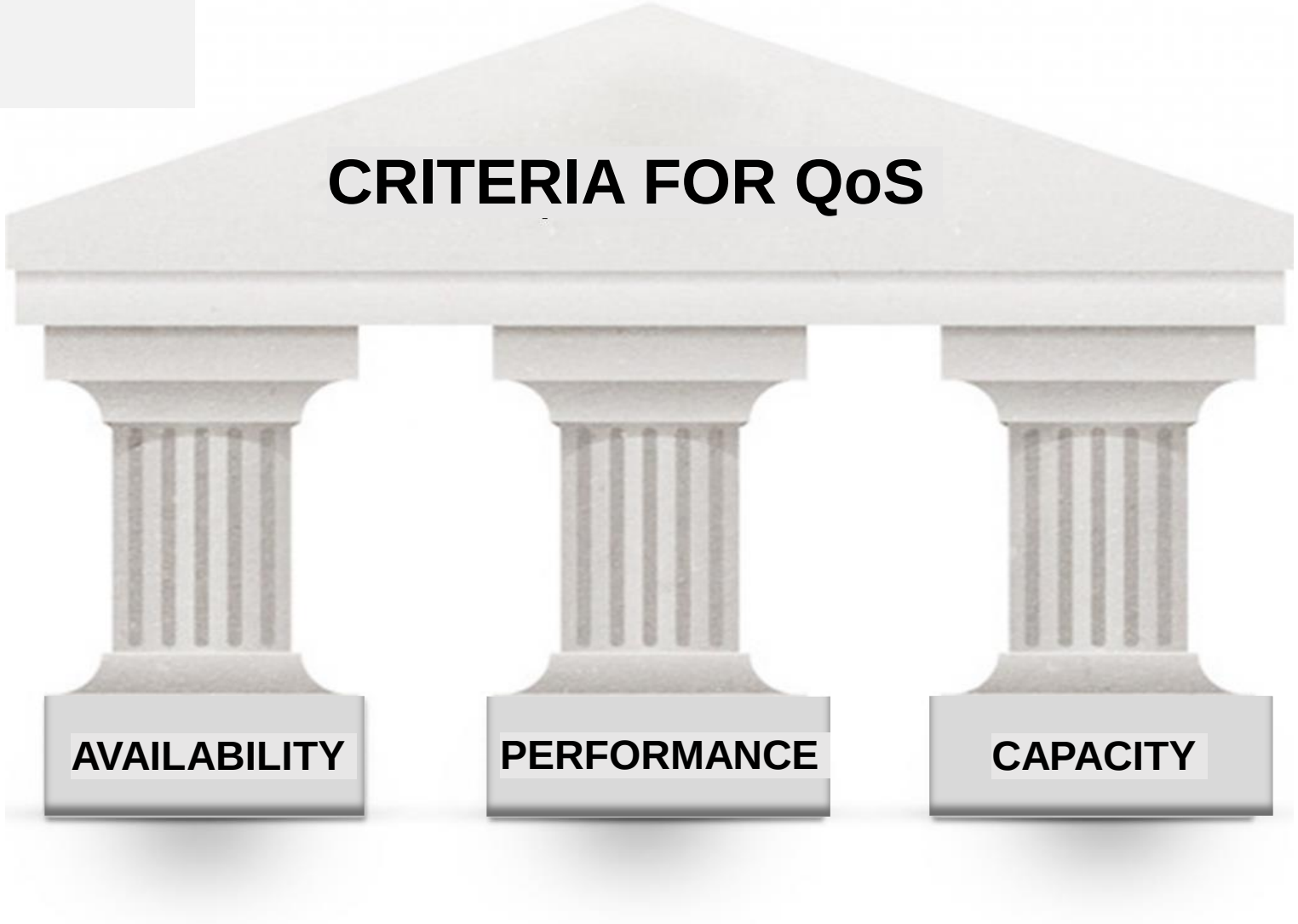
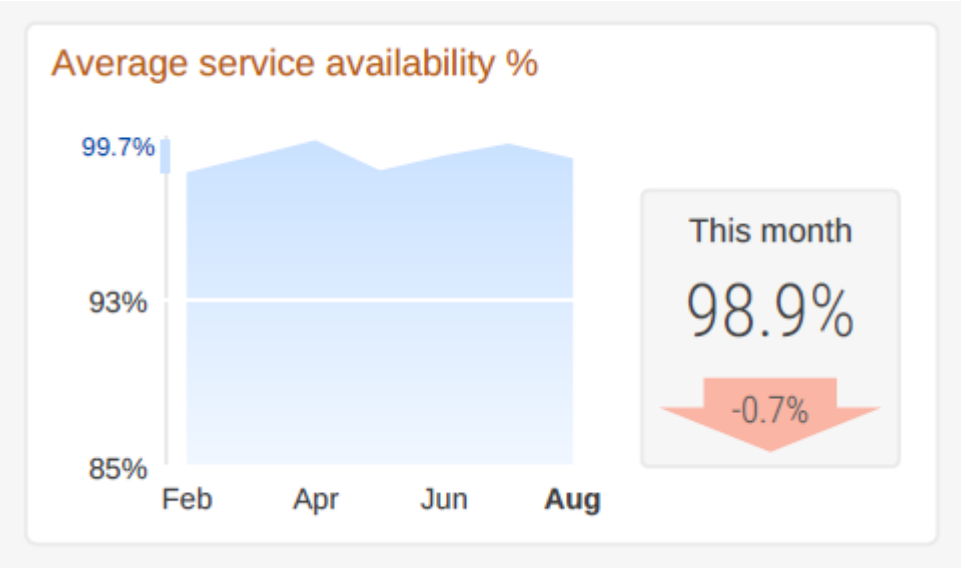
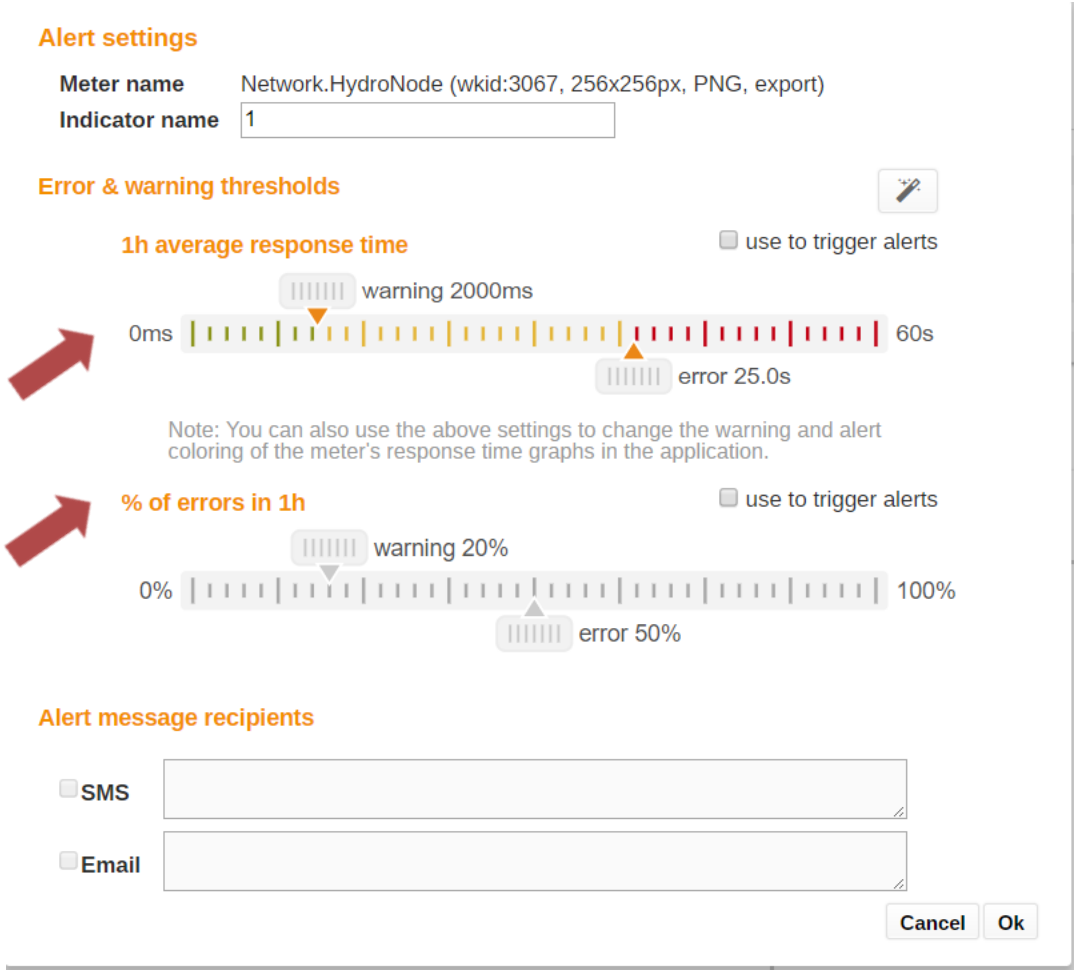
CRITERIA FOR QUALITY OF SERVICE



CRITERIA FOR QoS - AVAILABILITY





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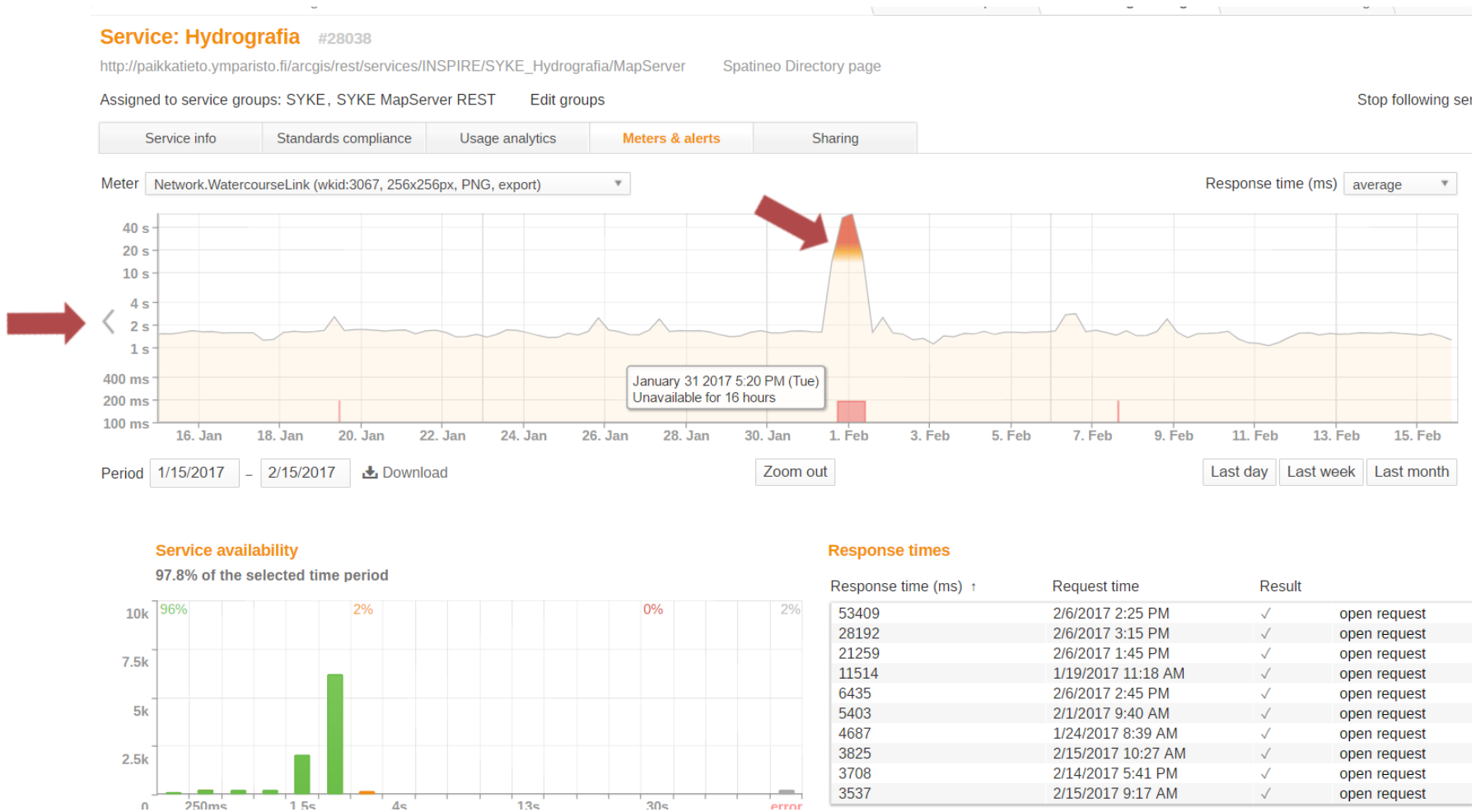
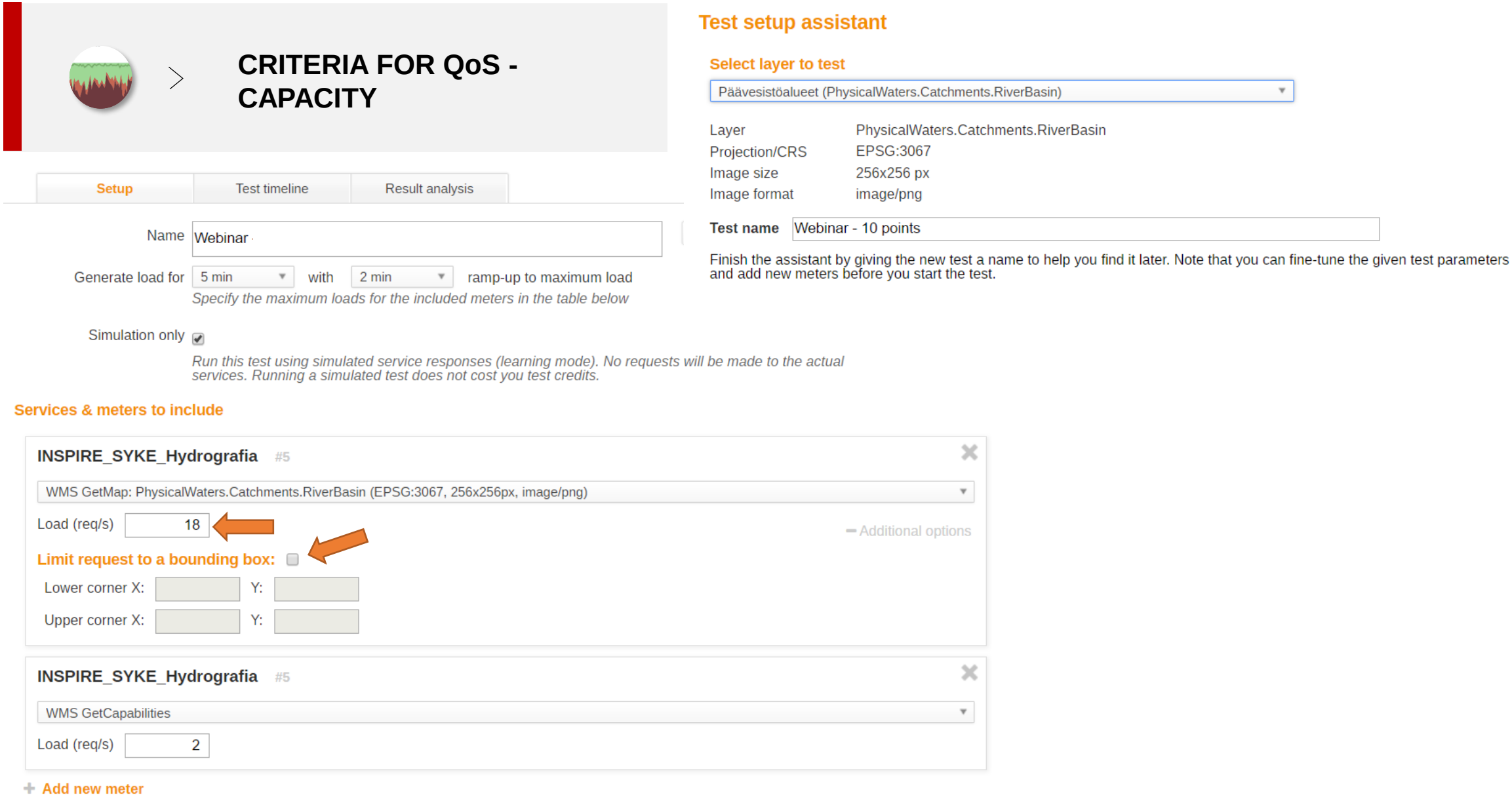
CRITERIA FOR QoS - PERFORMANCE




CRITERIA FOR QoS - CAPACITY
Setup
Test timeline
Result analysis
Name
Webinar
Generate load for
5 min
with
2 min
ramp-up to maximum load
Specify the maximum loads for the included meters in the table below
Simulation only
Run this test using simulated service responses (learning mode). No requests will be made to the actual services. Running a simulated test does not cost you test credits.
Services & meters to include
INSPIRE_SYKE_Hydrografia #5
WMS GetMap: PhysicalWaters.Catchments.RiverBasin (EPSG:3067, 256x256px, image/png)
Load (req/s)
18
Additional options
Limit request to a bounding box:
Lower corner X:
Y:
Upper corner X:
Y:
INSPIRE_SYKE_Hydrografia #5
WMS GetCapabilities
Load (req/s)
2
Add new meter
Test setup assistant
Select layer to test
Päävesistöalueet (PhysicalWaters.Catchments.RiverBasin)
Layer
PhysicalWaters.Catchments.RiverBasin
Projection/CRS
EPSG:3067
Image size
256x256 px
Image format
image/png
Test name
Webinar - 10 points
Finish the assistant by giving the new test a name to help you find it later. Note that you can fine-tune the given test parameters and add new meters before you start the test.

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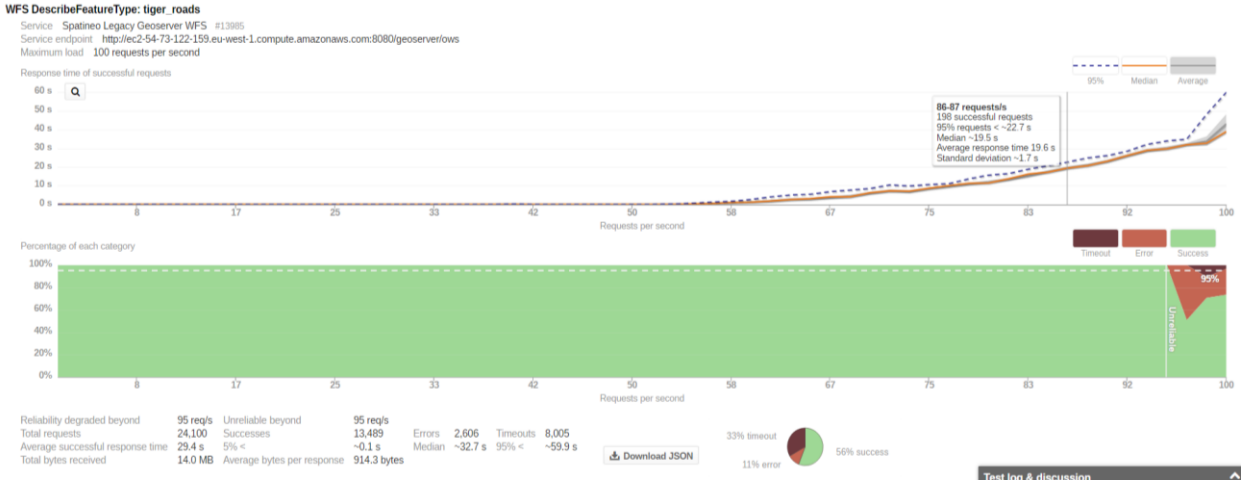
CRITERIA FOR QoS - CAPACITY



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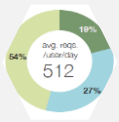
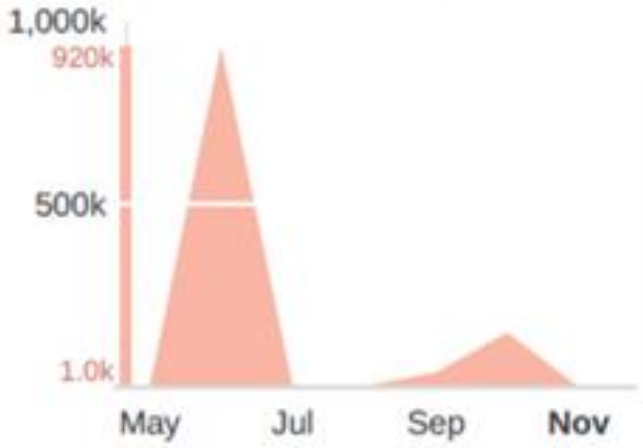


Actual QoS DELIVERED

Est. requests hindered by service interruptions



This month

~1.3k

-99%

Longest service interruptions

Date	Service title	Time
11/8	WMS Basemap service	2.5 h
11/20 ×	Ortophoto service (WMTS)	1.1 h
11/20	WMS Basemap service	18 min
11/7	WMS Basemap service	6 min

× marks announced interruptions

5 service interruptions with a combined duration of 12 hours, out of which 12 hours were unannounced

Monitoring the availability based both on the interruption records and the blocked requests due to service interruptions, shed some light on what is the level of service actually delivered to users

QUALITY ASSURANCE & USAGE ANALYTICS FOR INSPIRE SERVICES

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COMMUNICATION WITH USERS

Service info | Standards compliance | Usage analytics | Meters & alerts | Sharing

Availability widgets

Example Widget ▾ **Create new**

Name: Example Widget

☑ Widget enabled

Time period: Last 30 days ▾

Language: English ▾

Color theme: Light ▾

Background color: ▾

Allowed only on domains: *

Separate domains with a comma (.mydomain.com, another.domain.info)*

Delete **Revert** **Apply**

Preview

Status now **Up**

Availability last 30 days

99%

✓ No recent notifications

Monitored by Spatineo

Widget loader snippet

```
<script type="text/javascript"
src="https://monitor.spatineo.com/widgets/bootstrap.js">
</script>
```

Copy this piece of code in the head e more Spatineo widgets. Note that Jav order to display the widget.

Widget element snippet

```
<div class="spatineo-widget" data-widgetid="200-125-
5450fec54e36fd5f1cea8b82"></div>
```

Add this code inside the content part appear. Note that you don't have to u above.

Preview

Status now **Up**

Availability last 30 days

99%

✓ No recent notifications

Monitored by Spatineo

Anouncements of maintenance or interruptions

QUALITY ASSURANCE & USAGE ANALYTICS FOR INSPIRE SERVICES

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COMMUNICATION WITH USERS

Liikennevirasto

Service status

Availability last 30 days

Liikennevirasto avoin WMS
Status now Up
Availability last 30 days
98%
No recent notifications
Monitored by Spatineo

Liikennevirasto avoin WFS
Status now Up
Availability last 30 days
98%
No recent notifications
Monitored by Spatineo

Liikennevirasto rajoitettu WMS
Status now Up
Availability last 30 days
98%
No recent notifications
Monitored by Spatineo

Liikennevirasto rajoitettu WFS
Status now Up
Availability last 30 days
98%
No recent notifications
Monitored by Spatineo

FTA INSPIRE - View Service (WMS) for Transport Networks
Status now Up
Availability last 30 days
98%
No recent notifications
Monitored by Spatineo

FTA INSPIRE - Download Service (WFS) for Transport Networks
Status now Up
Availability last 30 days
98%
No recent notifications
Monitored by Spatineo

Liikennevirasto WMTS
Status now Up
Availability last 30 days
100%
No recent notifications
Monitored by Spatineo

Liikennevirasto Primar WMS
Status now Up
Availability last 30 days
99%
No recent notifications
Monitored by Spatineo

Availability last 12 months

Liikennevirasto avoin WMS
Status now Up
Availability last 12 months
96%
No recent notifications
Monitored by Spatineo

Liikennevirasto avoin WFS
Status now Up
Availability last 12 months
98%
No recent notifications
Monitored by Spatineo

Liikennevirasto rajoitettu WMS
Status now Up
Availability last 12 months
97%
No recent notifications
Monitored by Spatineo

Liikennevirasto rajoitettu WFS
Status now Up
Availability last 12 months
98%
No recent notifications
Monitored by Spatineo

FTA INSPIRE - View Service (WMS) for Transport Networks
Status now Up
Availability last 12 months
96%
No recent notifications
Monitored by Spatineo

FTA INSPIRE - Download Service (WFS) for Transport Networks
Status now Up
Availability last 12 months
96%
No recent notifications
Monitored by Spatineo

Liikennevirasto WMTS
Status now Up
Availability last 12 months
98%
No recent notifications
Monitored by Spatineo

Liikennevirasto Primar WMS
Status now Up
Availability last 12 months
98%
No recent notifications
Monitored by Spatineo

TRENDS AFFECTING THE SERVICES

Most used services

Service title	Requests	Users	Transfer	Type	Service ID
National Mapping Agency basemaps	22M	62k	51 GiB	WMTS	#1
NMA Ortophoto service	1.5M	5.1k	2.4 GiB	WMS	#2
NWA combined for mobile access	251k	1.3k	431 MiB	WFS	#3

Services with the biggest speed changes

Compared to Oct 2015

Service title	Response time		No. of users	
NMA Ortophoto service	460 ms	-7.5%	41k	+5.4%
National Mapping Agency basemaps	2 sec	-6.1%	16k	-2.1%
NWA combined for mobile access	252 ms	-1.1%	16k	+10%

Combining the information of the most popular services with those with biggest changes in speed in the same period, let us do correlations that help making more effective decisions by identifying the most likely origin of the performance issues

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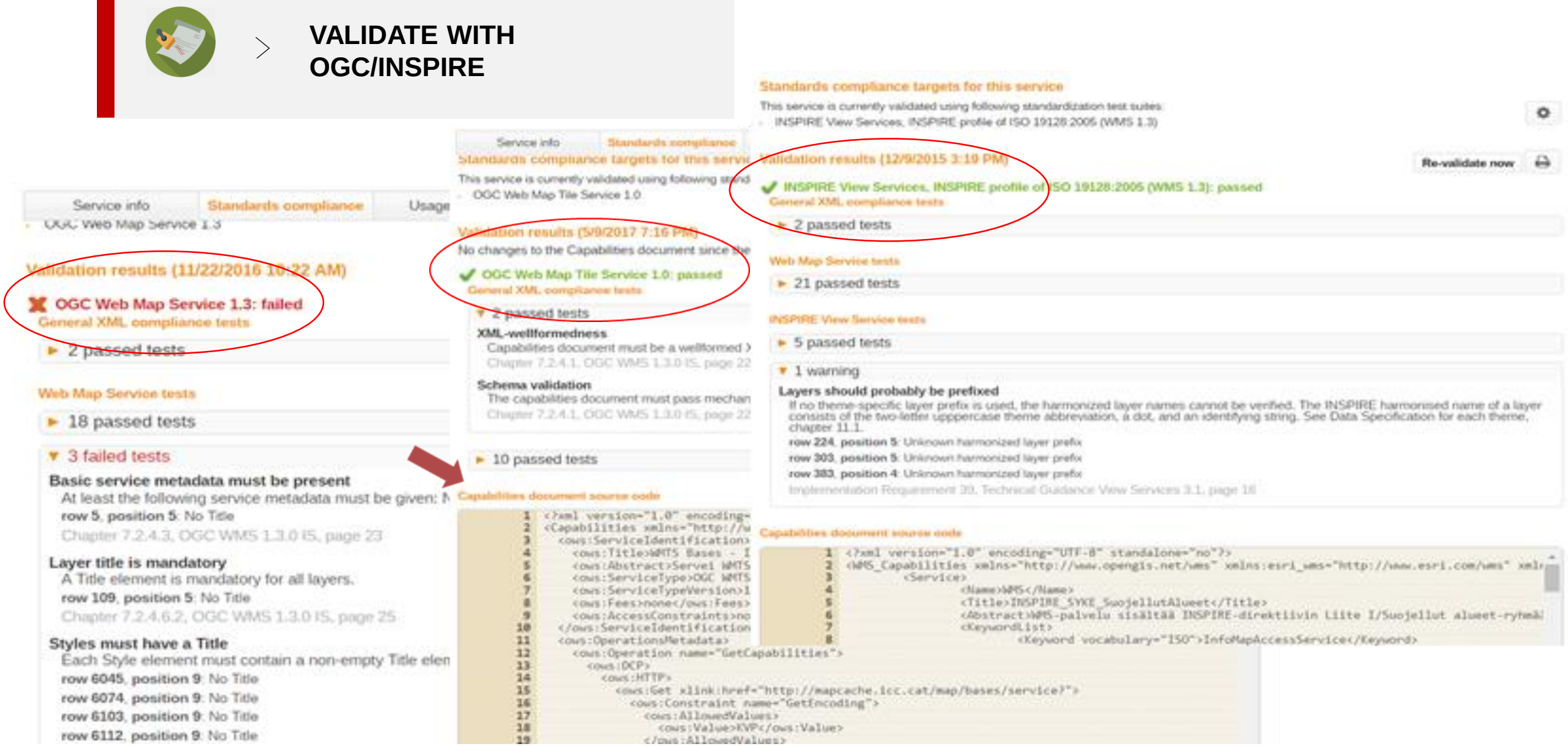
VALIDATE WITH OGC/INSPIRE



VALIDATE WITH OGC/INSPIRE

Open Geospatial Consortium Inc.

Date: 2006-03-15

Reference number of this document: OGC® 06-042

Version: 1.3.0

Category: OpenGIS® Implementation Specification

Editor: Jeff de la Beaujardiere

OpenGIS® Web Map Server Implementation Specification

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VALIDATE WITH OGC/INSPIRE

Capabilities document source code

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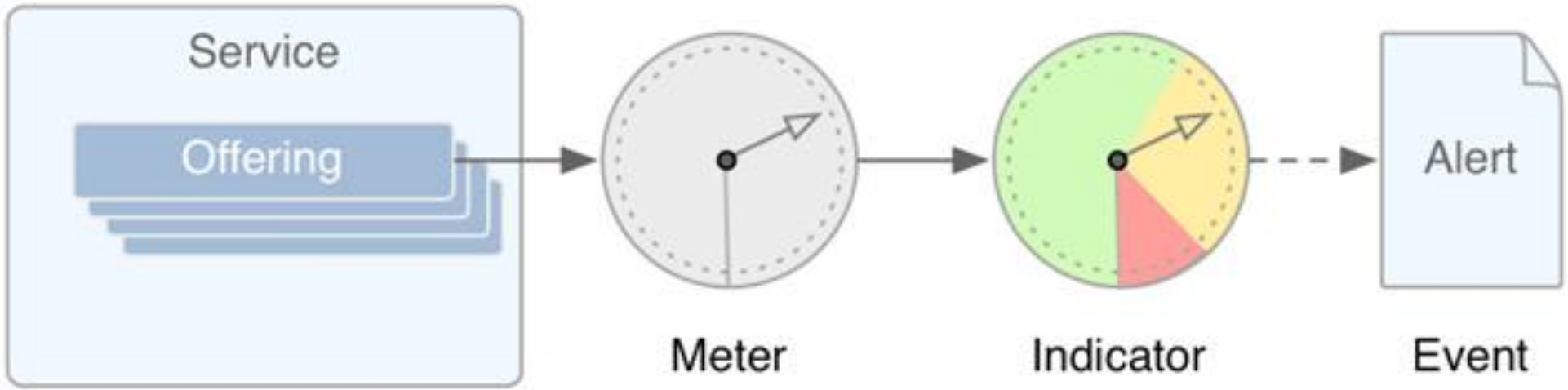
METERS/INDICATORS



The limit values of error % and response time for a service are shown through an indicator. The indicators take the information produced by a meter and and aufere the value of the current status of QoS for a service, based on the results of the monitoring produced by the meter

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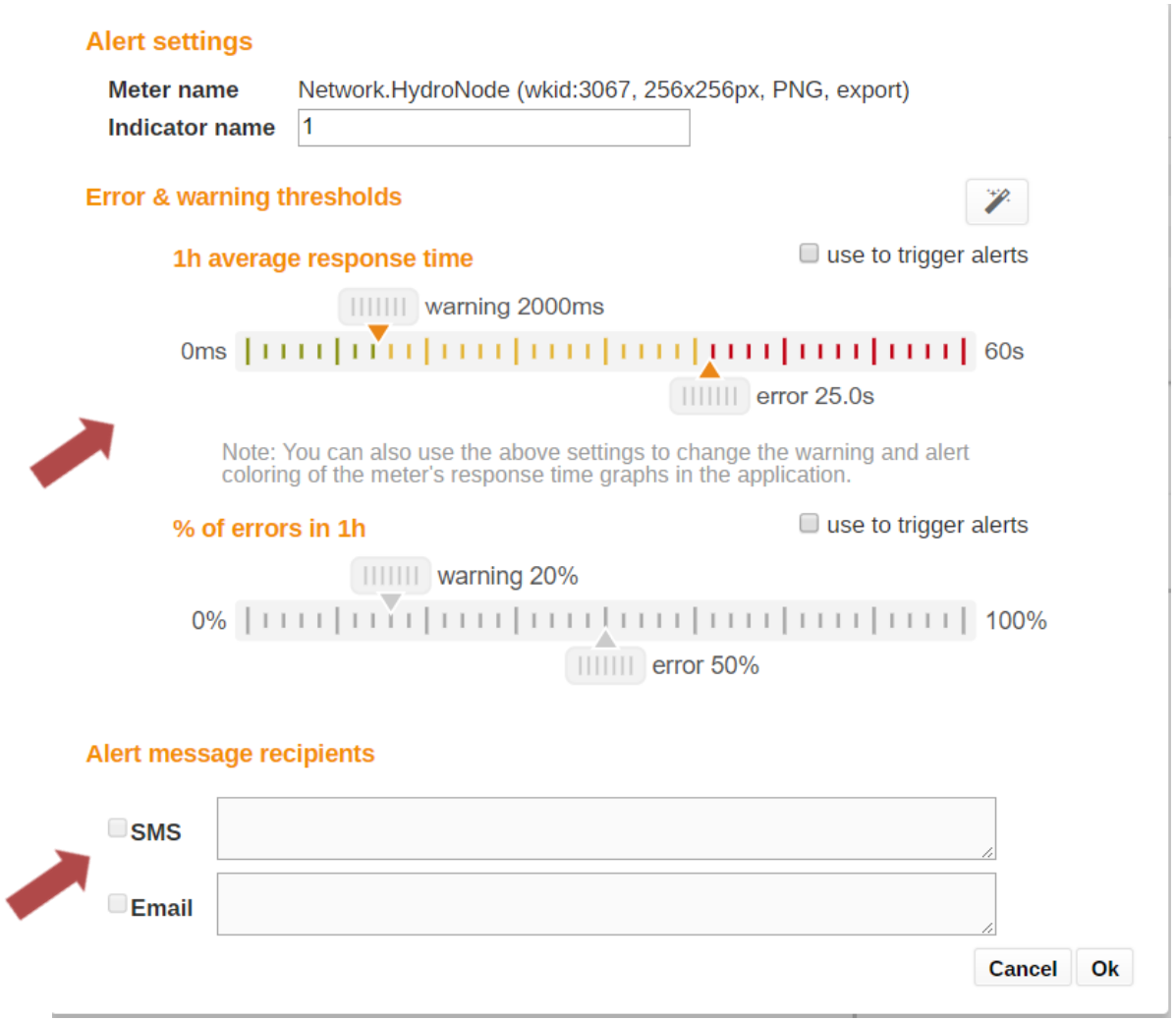
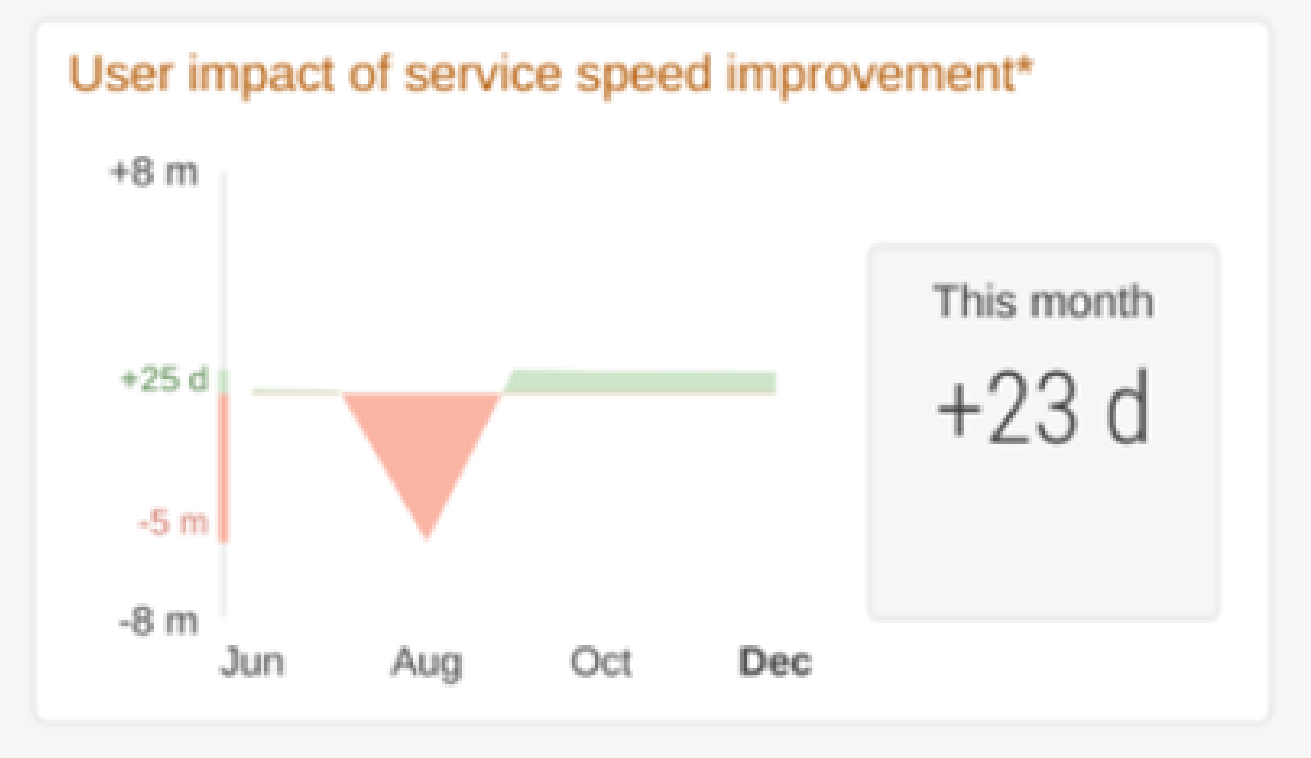
LIMITS/ALERTS

When an indicator change the status of the QoS from Ok to “Warning” or “Error”, it creates an alert and records the alert in the monitoring database



IMPACT OF IMPROVEMENTS



A very useful measurement is the impact of the amount of time saved by users. Graph shows the variation on an specific month against the average over the previous 6 months (based on the response time multiplied by the number of monthly requests)

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CONCLUSIONS

- Without a high level of availability of services, the effort made to build a SDI has low value
- Data driven impact assessment to track the progress reveals how successful the implementation is
- Assure availability, performance and capacity levels, while optimizing investments
- Intelligence analysis with good visualization of indicators aligned with your strategy is key to succeed
- Prove the value of spatial services, promoting development!

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POLAR
POLAR LOOP 2
24-HOUR ACTIVITY TRACKER
#rethinkyourday

Karl Fazer
Karl Fazer

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Děkuji!

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