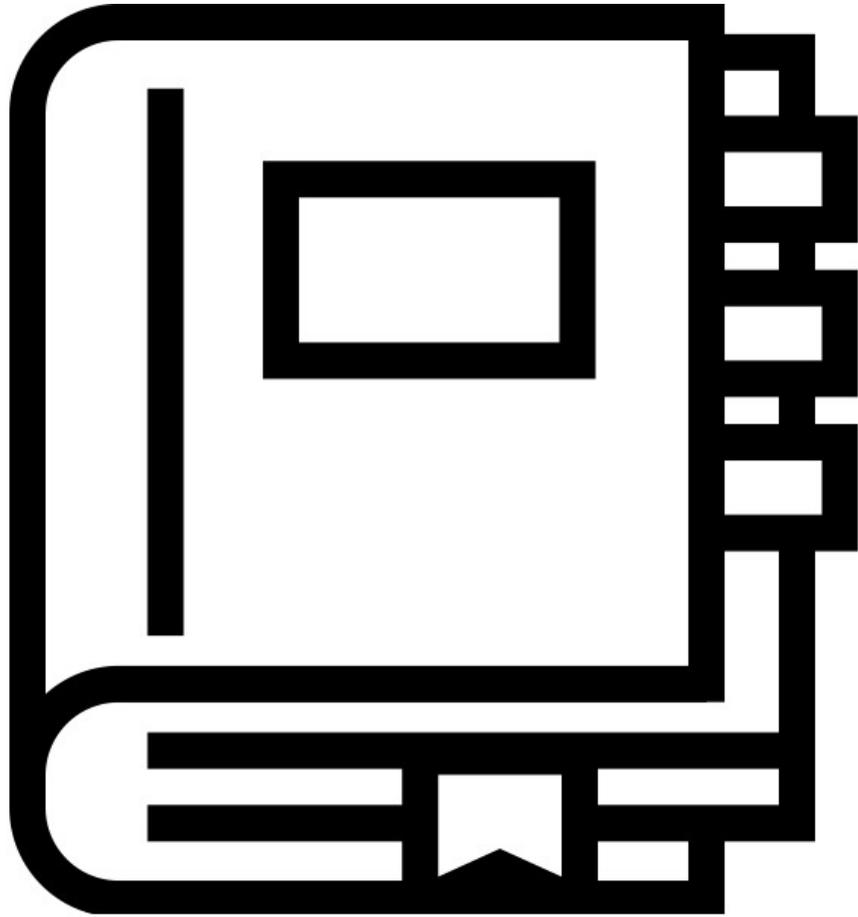




Operational excellence to serve the Belnet community

Dirk Haex - Technical Director
14th of June 2019

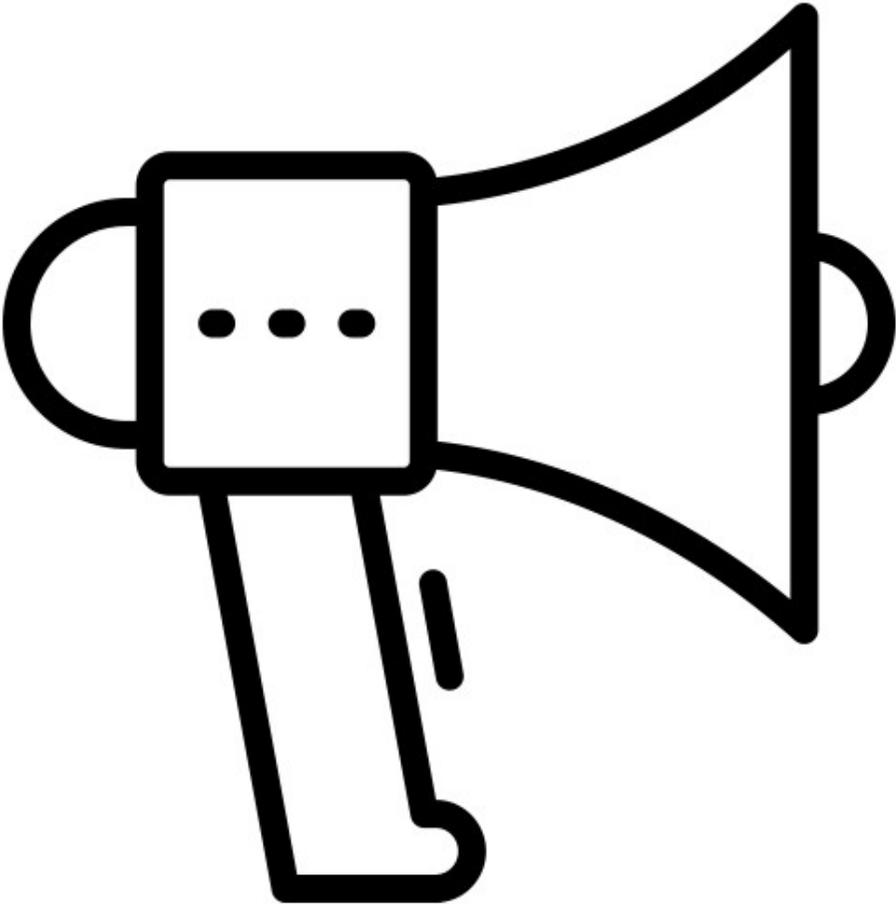




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First things first: lessons learned...

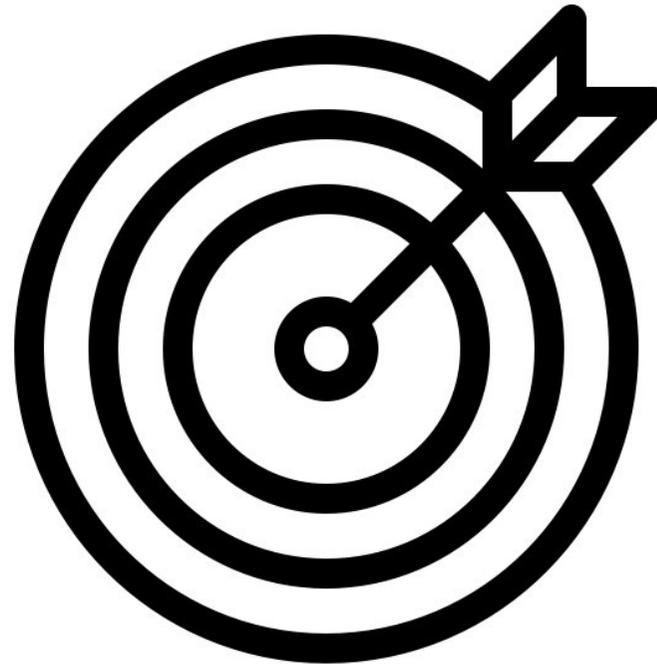


Belnet: Strategic objectives



Operational
excellence

Security



Dedicated
Services

Performing
Organisation

Governance



- Project Management
 - “tailored” PRINCE2 Project Management Methodology
 - Dedicated senior Project Managers
 - Brief / PID / Highlight Reports
 - Project Board
- (IT/Enterprise) Service Management
 - Based on ITILv3 best practices
 - Dedicated Team of process managers
 - KPI dashboards ServiceNow
 - ITSM operations Board
- Product Management
 - See next presentation



Operational Excellence Program



- Current projects part of the Program:
 - Belnet network redesign
 - 24/7 Servicedesk & NOC
 - Transition towards a new monitoring platform
 - Third Datacentre Services Infrastructure

|



Operational Excellence Program



Main objective of this Program:

To make sure that Belnet can guarantee the different Service Levels for the different added-value network and “above the net” services on top of a very stable, performant and redundant national hybrid network.

Operational Excellence Program



2017-044: Belnet network redesign

Project Brief: 13/12/2017

PID: 09/03/2018

|



Project Belnet network redesign



- Main project triggers: “Vendor issue”
 - G.8032 bug
 - Measures taken as workaround had an impact on recovery and convergence times
 - LAG algorithm incompatibility
- High priority and time consuming project
 - Business case / design exercises and scenarios (8!)
 - Important budget: approval and ordering process
 - Intensive test and validation process
 - Phased implementation – change management



Project Belnet network redesign



- Investigate, describe and decide redesign scenario(s)
(done, stage 1)
- High and low level design selected scenario + BoM
(done, stage 1)
- Phased roll-out redesign national Belnet network
(almost done, stage 2)
- Implementation of additional improvements
(start foreseen July 2019, stage 3)



Project Belnet network redesign



1	Fri 27-04-18	Fri 25-01-19
High level Design	Fri 27-04-18	Fri 25-05-18
Capacity Management	Mon 28-05-18	Fri 01-06-18
Quality Check Ciena	Mon 04-06-18	Fri 08-06-18
Quality Check Securelink	Tue 26-06-18	Tue 26-06-18
Bill of Material	Mon 04-06-18	Fri 15-06-18
Internal Budget	Fri 29-06-18	Thu 05-07-18
Offer Ciena/Nokia/SecureLink	Mon 09-07-18	Fri 13-07-18
Approval IF	Mon 23-07-18	Tue 31-07-18
Approval Minister Budget	Wed 01-08-18	Mon 27-08-18
Order Process (Belnet)	Sun 02-09-18	Thu 06-09-18
Delivery Ciena	Mon 13-08-18	Thu 01-11-18
Delivery Securelink	Fri 07-09-18	Thu 18-10-18
Delivery Nokia	Wed 08-08-18	Mon 26-11-18
Detailed config and script development	Mon 17-09-18	Fri 02-11-18
Control commit script (DTA)	Mon 05-11-18	Fri 25-01-19
Migration strategy	Mon 19-11-18	Fri 30-11-18
Training plan	Mon 03-12-18	Fri 21-12-18
Work instructions & documentation	Mon 03-12-18	Fri 21-12-18

Schedule stage 1



Project Belnet network redesign



- Phased roll-out redesign national Belnet network
 - Scope
 - Phased implementation of the new design via the Change Management Process (CAB, customer communication,...)
 - Purpose
 - More robust and resilient network
 - Simplified design
 - Fast recovery and fast convergence
 - Better managed network for capacity management
 - Schedule
 - See next slide

|



Project Belnet network redesign



2	23/11/2018	31/07/2019
2.1: Reorganisation cabling DC central ring	23/11/2018	15/12/2018
2.2: HW provisioning	07/01/2018	13/01/2018
2.3: Capacity Upgrade	07/01/2018	13/01/2018
2.4: Redesign per zone	14/01/2019	28/02/2019
2.4: BXL (zone 1)	14/01/2019	04/03/2019
2.4: NW (zone 2)	05/03/2019	11/03/2019
2.4: NE (zone 3)	05/03/2019	11/03/2019
2.4: SW (zone 4)	12/03/2019	18/03/2019
2.4: SE (zone 5)	12/03/2019	18/03/2019
2.5: Redesign FedMAN (zone 6)	05/03/2019	14/04/2019
2.5.1: HW Provisioning	05/03/2019	11/03/2019
2.5.2: Nokia OTN services	12/03/2019	20/03/2019
2.5.3: Decoupling FedMAN from Ciena	21/03/2019	16/04/2019
2.5.4: Upgrade FedMAN full capacity	17/04/2019	30/04/2019
2.6: Provisioning new lambda ZAV-DIE	14/01/2019	15/07/2019
2.7: Bypass f5 for FedMAN protected customers	11/04/2019	30/06/2019

|

Schedule stage 2



Project Belnet network redesign



- Implementation of additional improvements
 - Scope
 - Redistribution of external connectivity over the network
 - Increase the external capacity
 - Study and implementation of new traffic engineering policy
 - Optimization of configurations
 - Purpose
 - Make the network easier to read by standardization
 - Avoid saturation on backbone and on entry points in degraded situations
 - Schedule
 - Project Board 05/07/2019 (Stage 3)



Operational Excellence Program



2017-011: 24/7 Servicedesk & NOC

Project Brief: 16/03/2017

PID: 11/05/2017

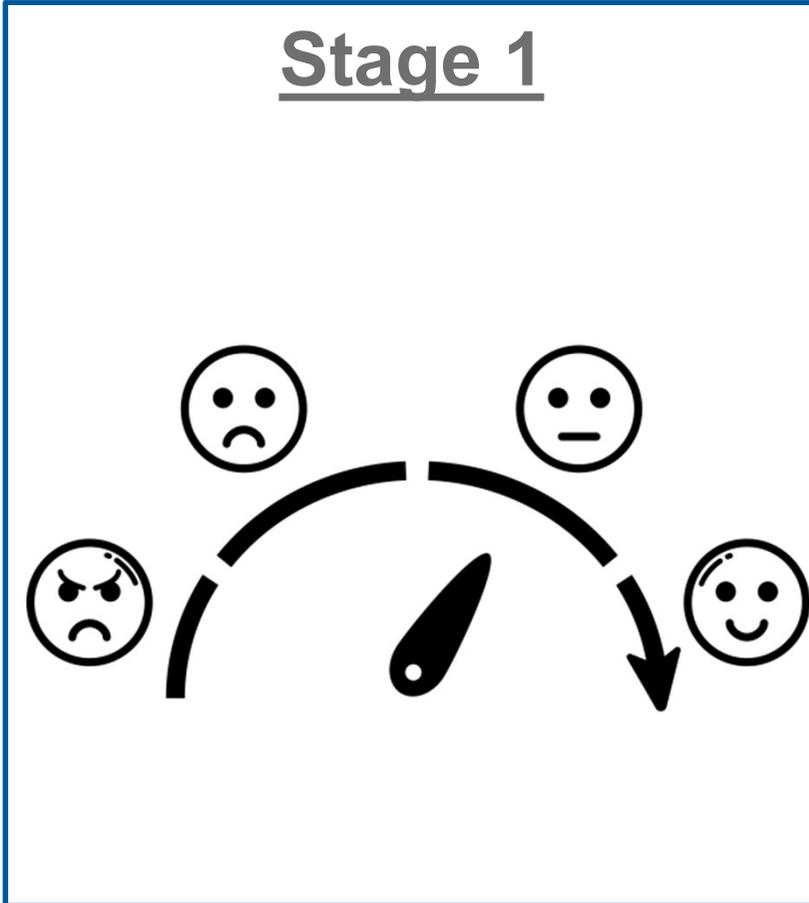
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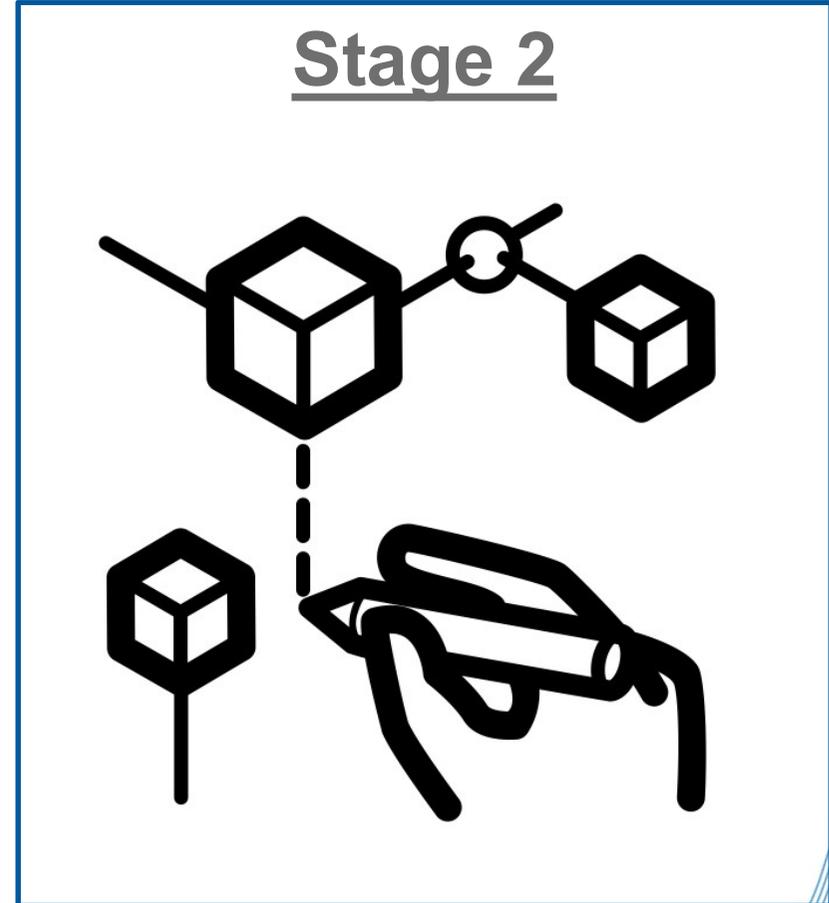
Project 24/7 Servicedesk & NOC



Stage 1



Stage 2



Operational Excellence Program



2018-007: Transition towards a new monitoring
platform

Project Brief: 26/02/2018

PID: 23/04/2018

|



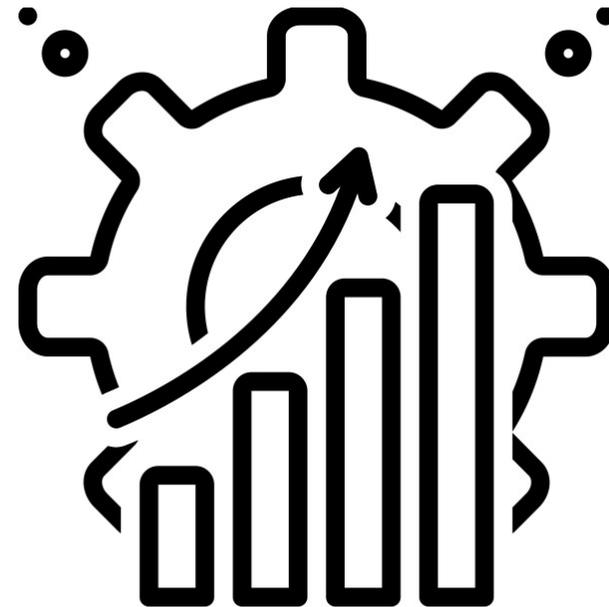
Project New monitoring platform



•Scope



High-availability in-house platform
24/7 monitoring Configuration items



Data for capacity management
Data for Service Level Reporting

Project New monitoring platform



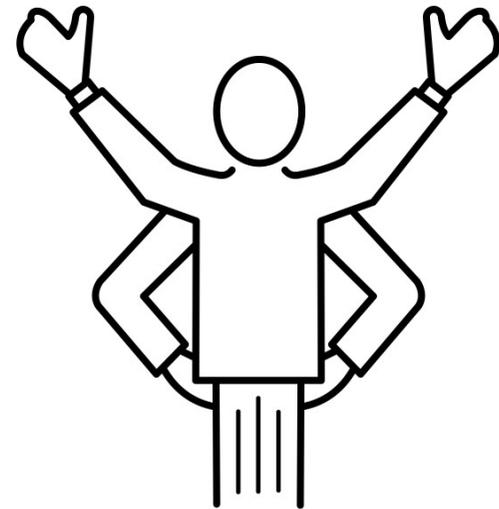
- Purpose



Faster interaction
Better correlation
Reduce human error



Increased customer satisfaction



From reactive to proactive



Project New monitoring platform



Roadmap: implementation of additional features (extended proactive monitoring “make before break”)

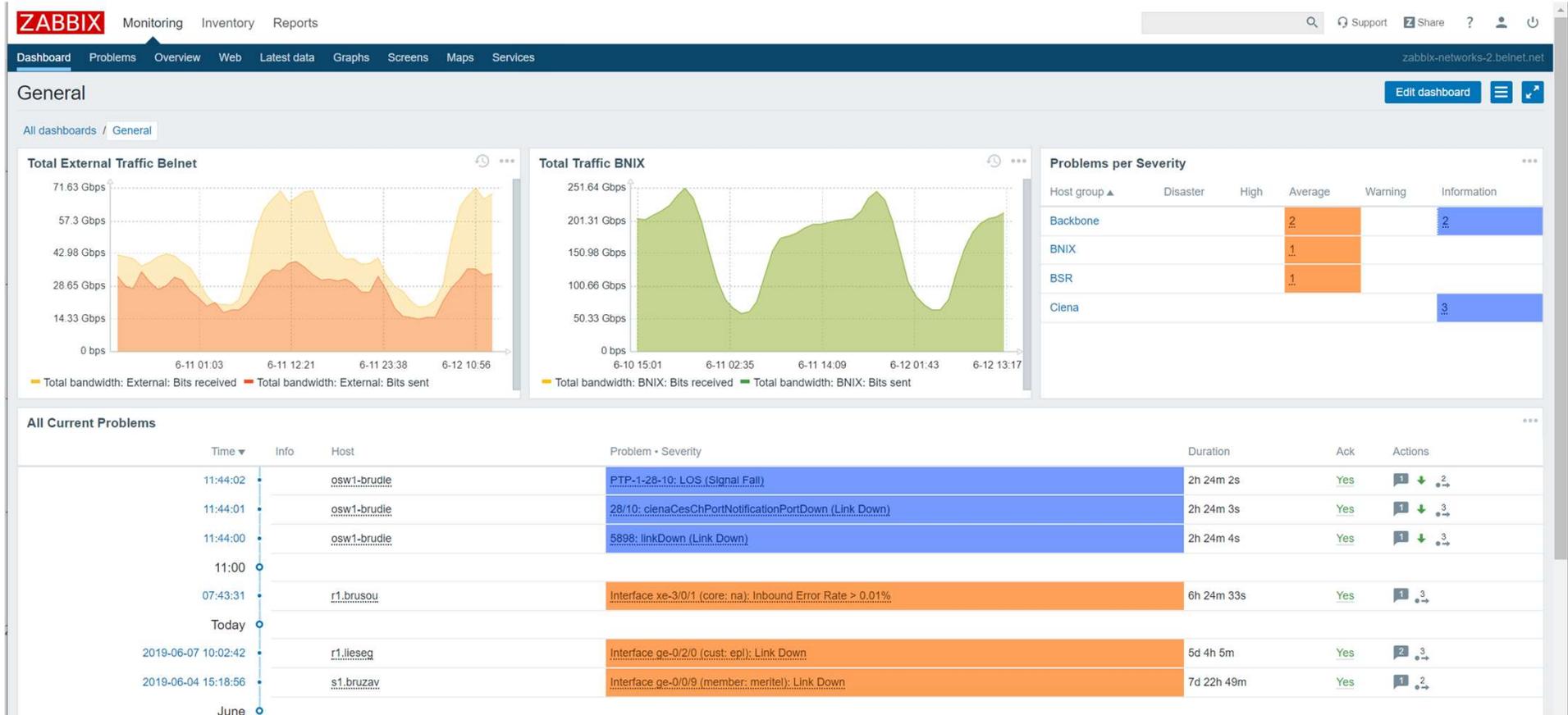


Stage 2:

- Fine tuning of performance and alarm correlation
- Increase availability with set-up of third node in the cloud.



Project New monitoring platform



In production since 18/03/2019

Operational Excellence Program



2018-010: 3rd Datacentre Services Infrastructure

Project Brief: 10/05/2019

PID: Ongoing

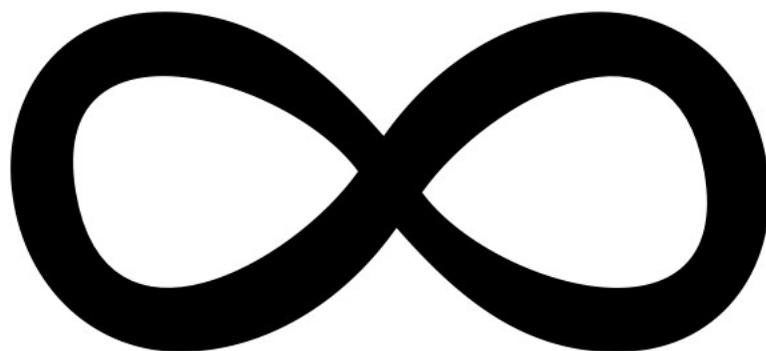
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Project 3rd datacentre services infrastructure



•Purpose



Trust & Security Solutions

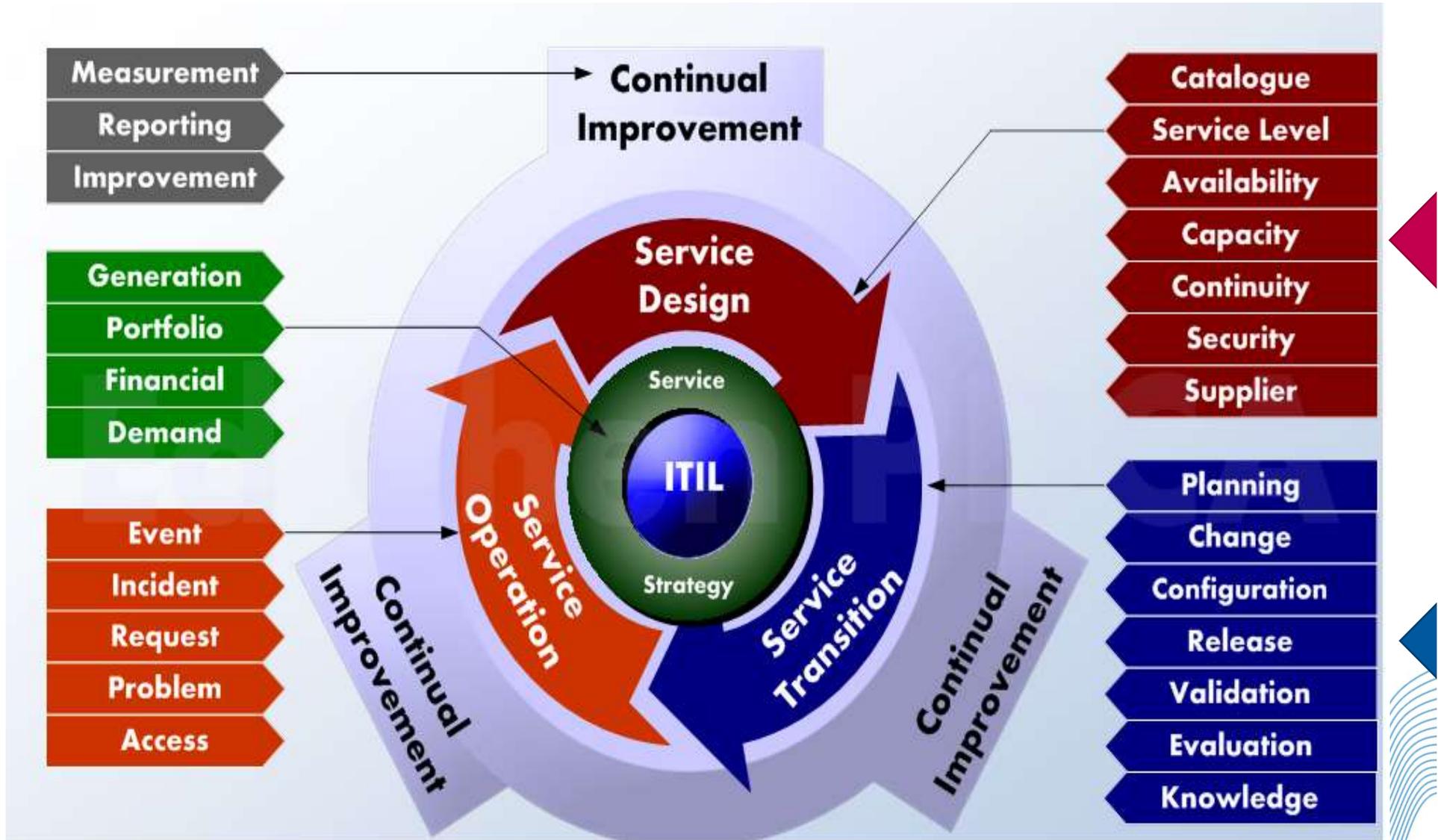
Identity, Mobility & Federation

Cloud Services

Community Support Services

Belnet
dedicated connectivity

Operational Excellence: other initiatives



Roadmap ServiceNow platform



BEL - Dashboard Open Incidents Count
17

Incidents Opened Today
6

Critical Open Incidents
0

BEL - Dashboard Open Incidents

Number	Opened	Short description	Priority	State	Acronym	Assignment group	Assigned to	Updated	Updated by	Caller [Incident]	Task type
INC0011938	12/06/2019 14:38:27	Inloggen op cloud.belnet.be en my.belnet.be	4 - Low	In Progress	ITG	Services	(empty)	12/06/2019 15:07:41	philippe	Davy Hendriks	Incident
INC0011927	11/06/2019 10:44:15	fmechdou is isolated	3 - Moderate	In Progress	FODFIN	CR	Tharcisse Mulumba	12/06/2019 15:03:31	orange-makolob	FODFIN Incident Notification	Incident
INC0011830	27/05/2019 16:04:58	Errors on the conection between IGN and OMA	4 - Low	On Hold	IGN-NGI	NOC	Guido Zwinen	12/06/2019 14:38:55	system	OMA TCP	Incident
INC0011922	10/06/2019 07:23:41	Vérification ligne c1.gentcro.fodfin et c2.gentcro.fodfin	4 - Low	On Hold	MINFIN	ServiceDesk	Joren De Bode	12/06/2019 14:25:50	system	Julien Dandoy	Incident
INC0011868	31/05/2019 06:29:28	BGP IX peer 194.53.172.76 (BNIX) Down - Openweb	4 - Low	On Hold	OPENWEB	NOC	Guido Zwinen	12/06/2019 12:47:12	system	Juan Sepulveda	Incident
INC0011931	11/06/2019 13:57:29	Digicert interface : cannot validate my organisation	3 - Moderate	In Progress	ULB	Services	Pascal Panneels	12/06/2019 12:12:02	bruno	ULB contact	Incident

Roadmap ServiceNow platform



- Look and feel of notifications
- Enhance operational communication between the various belnet teams
- Better monitoring of services (KPIs) provided by our suppliers

• ...

|



One more thing...



BCM

24/7 MiM

Belnet
dedicated connectivity

This page shows the status of our Belnet Network and Services. Currently these are updated manually.
To report incidents, please contact our Belnet Service Desk at 02 790 33 00 or servicedesk@belnet.be.

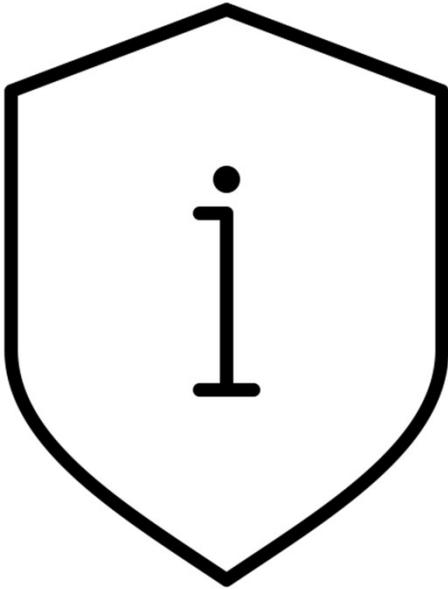
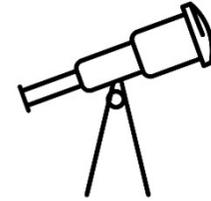
All systems are operational

.bealert)))

|



Strategic objective Security



Belnet
dedicated connectivity



Thank you
for your attention

Beinet
dedicated connectivity



Belnet
dedicated connectivity



.be