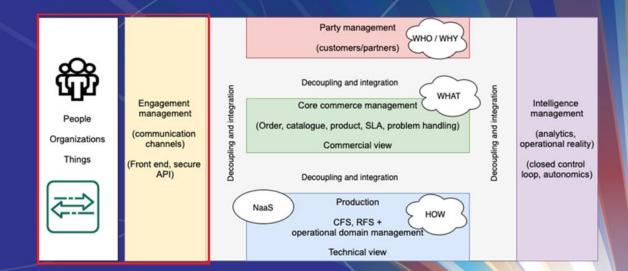


# **Engagement** management



#### Engagement management example boxes

Homepage of the **NREN** 

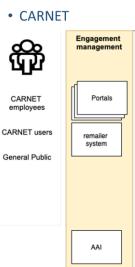
Mail E-mail Phone Chat

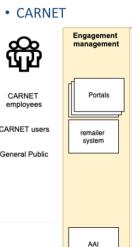
AAI

Frontend of different tools (help desk, services portal, knowledge base index...



You can copy and paste boxes to your slide









for providing

information to

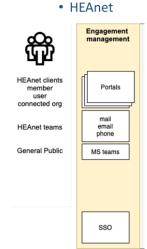
existing and new

customers

CYNET



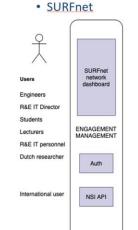
GRNET

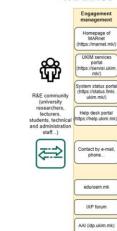




for tickets

publishing









#### **Example of Engagement Management**

#### CARNET



CARNET employees

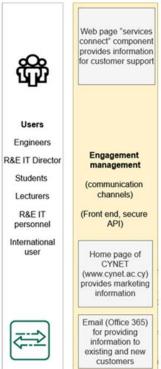
**CARNET** users

General Public

# Engagement management Portals remailer system

AAI

#### CYNET



#### GRNET







Atlassian JIRA

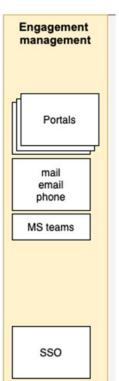
#### HEAnet



HEAnet clients member user connected org

**HEAnet teams** 

General Public



#### **Example of Engagement Management**

PIONIER

Users

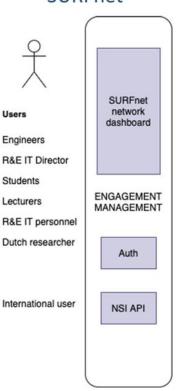
Area

Networks

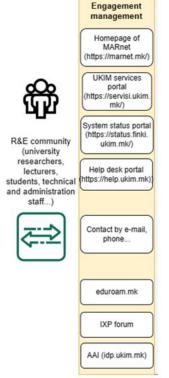
Home page of PIONIER (www.pionier.net.pl) with general information and contact details Home page of PIONIER NOC (https://noc.pcss.pl/ eng/) with general information and contact details for users Metropolitan Engagement management (communication channels) (Front end, secure API) Helpdesk on phonecall E-mail for submitting requests and providing information E-mail, web page for tickets

publishing

SURFnet



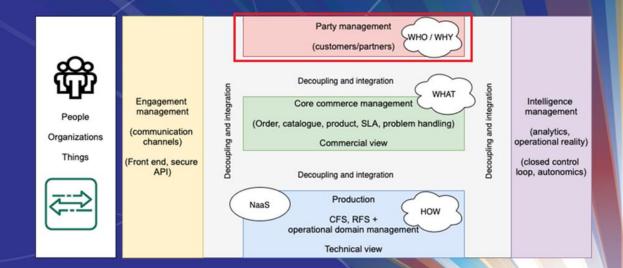
MARnet







Party management



### Party management example boxes

Customer Relatio

Customer Relationship Management (CRM) system

Management of party information, privacy, roles and rights

identity

Billing account management







CYNET



GRNET



HFAnet



PIONIER



SURFnet



MARnet



GEANT



You can copy and paste boxes to your slide

#### **Example of Party Management**

CARNET

Federated Party management management Identity (SRCE) GDPR 360 Users Roles and Membership DB Payment party info Permissions management

Privacy

OpenIdap for Customer Management

Party management

(customers/partners)

Excel Worksheets for customers information

GRNET



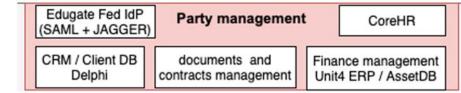
HEAnet

CYNET

Microsoft Azure Active

Directory services for

**Customer Management** 



#### **Example of Party Management**

PIONIER

Atlassian Confluence for customers information

Party management (customers/partners)

Excel Worksheet for contracts information

eXpertis financial and accounting system for billing and invoicing

SURFnet



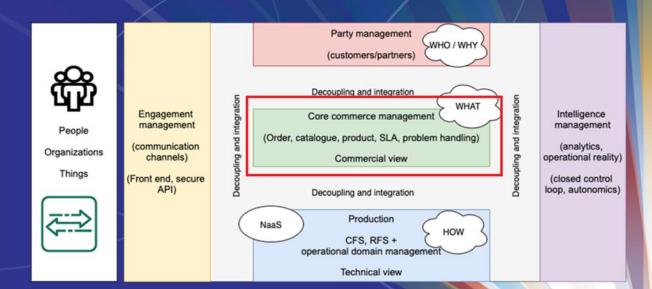
MARnet







Core commerce management



# Core commerce management example boxes

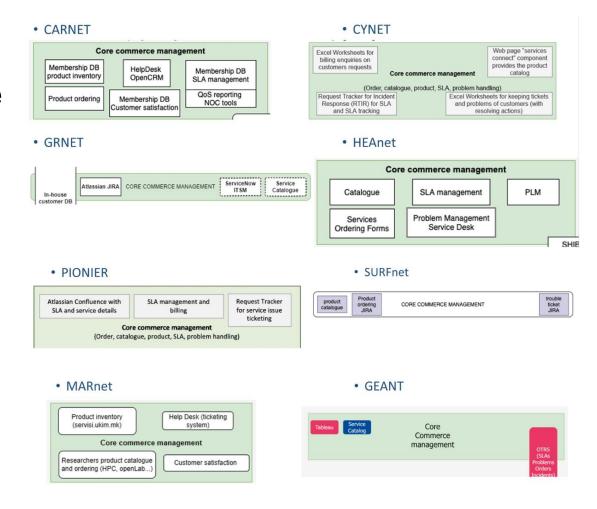
Product catalogue and offers

Product ordering

SLA management

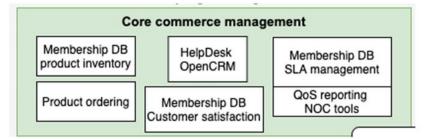
Help desk system (for example, ticketing system)





#### **Example of Core Commerce Management**

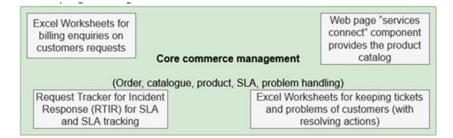
#### CARNET



#### GRNET



#### CYNET

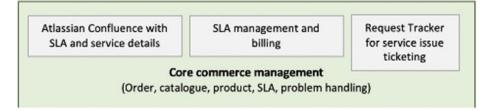


#### HEAnet



#### **Example of Core Commerce Management**

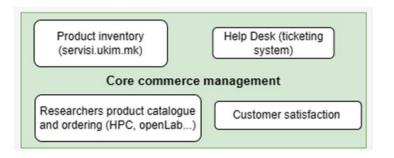
PIONIER



SURFnet



MARnet







#### Production



People

Organizations

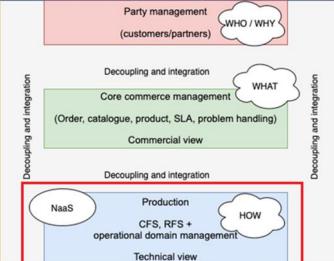
Things



Engagement management (communication

channels)

(Front end, secure API)

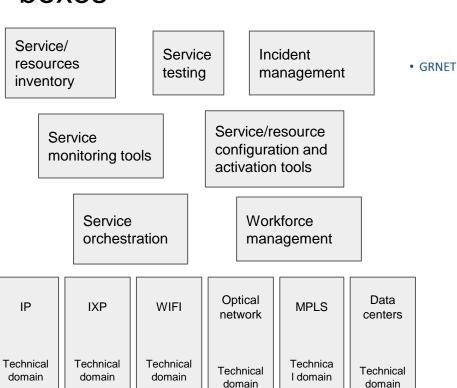


Intelligence management

(analytics, operational reality)

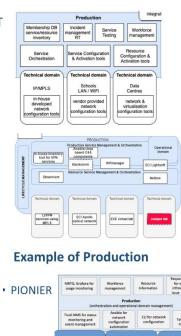
(closed control loop, autonomics)

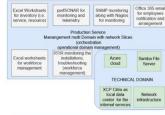
#### Production example boxes



#### **Example of Production**

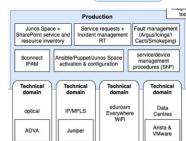
CARNET





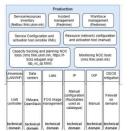
HFAnet

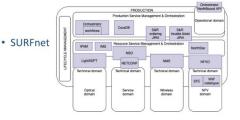
CYNFT





MARnet





GEANT



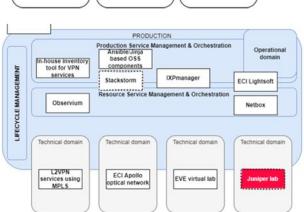
You can copy and paste boxes to your slide

#### **Example of Production**

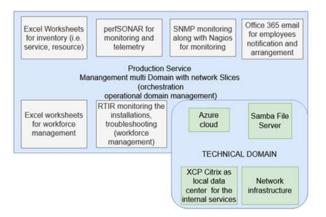
CARNET

integrat Production Membership DB Incident Service Workforce service/resource management Testing management inventory RT Resource Service Service Configuration Configuration & Orchestration & Activation tools Activation tools Technical domain Technical domain Technical domain Schools Data IP/MPLS LAN / WiFi Centres in-house vendor provided network & developed virtualisation network network configuration tools configuration tools configuration tools

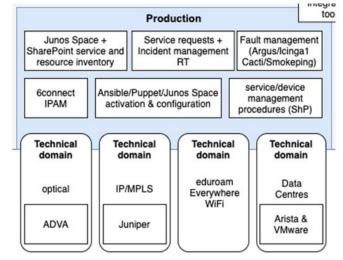
GRNET



CYNET

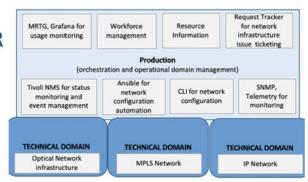


HEAnet

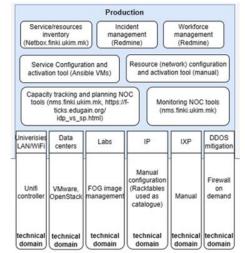


#### **Example of Production**

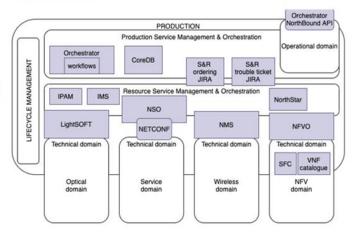
PIONIER

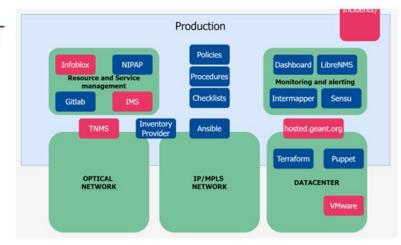


MARnet



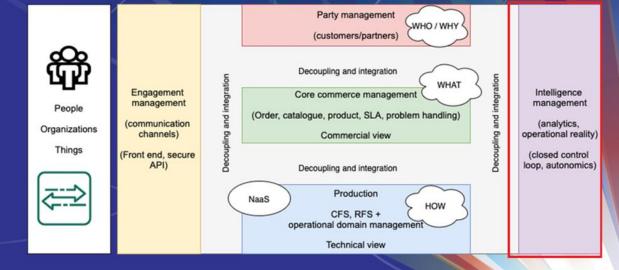
SURFnet







# Intelligence management



#### Intelligence management example boxes

Performance monitoring tools

Capacity tracking and planning tool

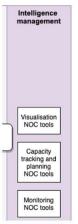
Performance visualization tools

Al-based Anomaly Detection

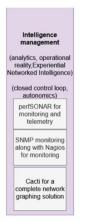
> Log analysis



CARNET



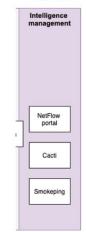
CYNET



GRNET



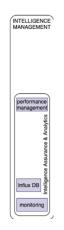
HEAnet



PIONIER



SURFnet



MARnet



GEANT



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#### **Example of Intelligence Management**

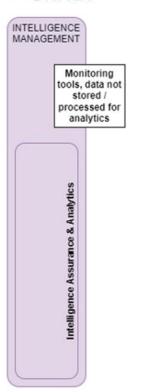
CARNET

Intelligence management Visualisation NOC tools Capacity tracking and planning NOC tools Monitoring NOC tools

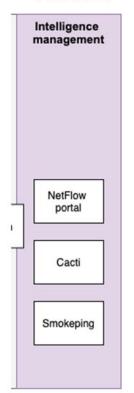
CYNET

Intelligence management (analytics, operational reality, Experiential Networked Intelligence) (closed control loop. autonomics) perfSONAR for monitoring and telemetry SNMP monitoring along with Nagios for monitoring Cacti for a complete network graphing solution

GRNET



HEAnet



#### **Example of Intelligence Management**

PIONIER

Intelligence management (analytics, operational reality, Experiental Networked Intelligence) (closed control loop, autonomics)

MRTG, Grafana

SNMP monitoring data storage SURFnet

INTELLIGENCE MANAGEMENT performance management Influx DB monitoring

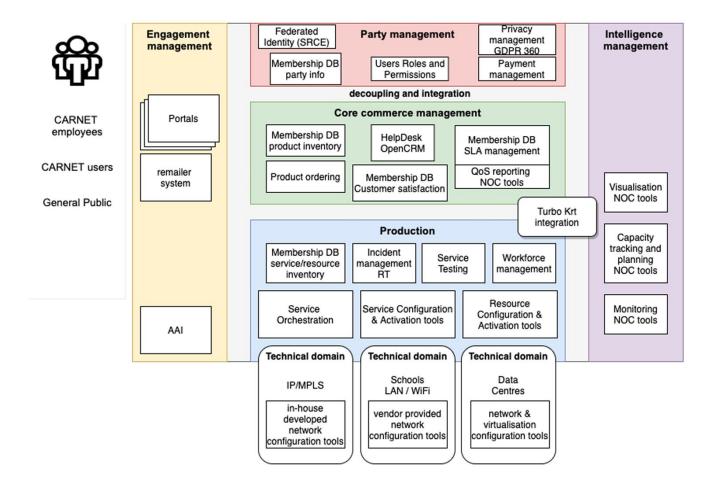
MARnet

Intelligence management Visualization NOC tool (eSight management system) Intelligent monitoring NOC tools (nms.finki.ukim.mk) `-----

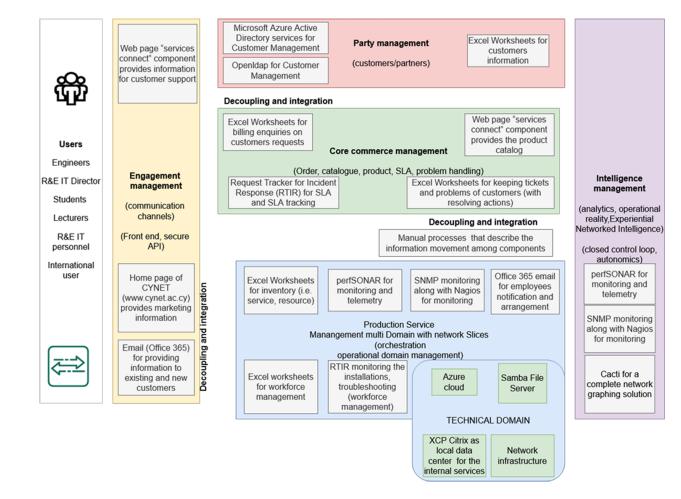


Full architectures mapping examples

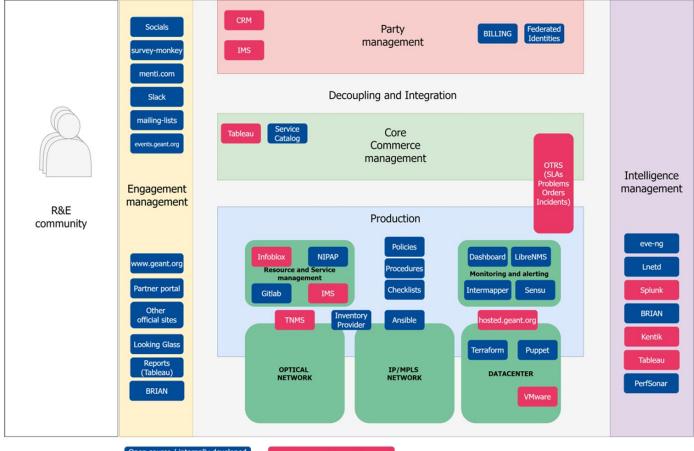
#### **CARnet**



#### **CYNET**



#### **GEANT**



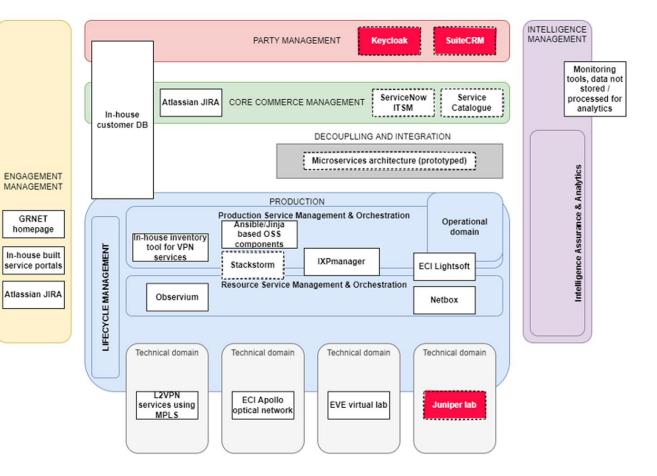
Open source / internally developed services

Commercial products

#### **GRnet**







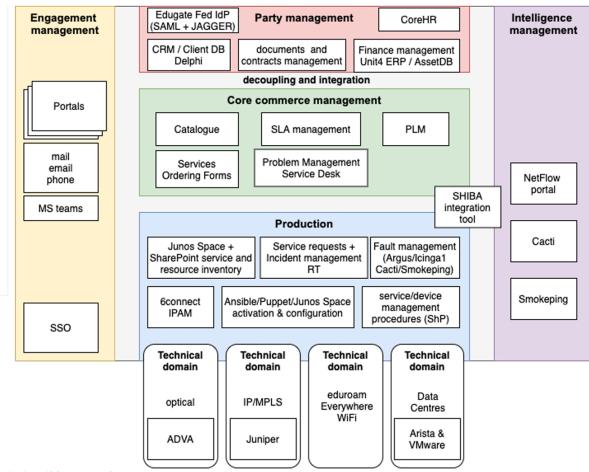
#### **HEAnet**



HEAnet clients member user connected org

**HEAnet teams** 

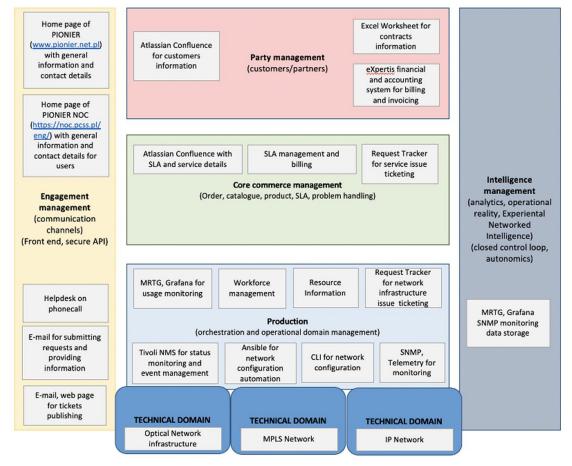
General Public



GN4-3\_White-Paper\_HEAnet-OAV-Architecture-Analysis.pdf (geant.org)

#### **PIONIER**

Users Metropolitan Area Networks



#### **SURFnet**

