SELFNET is driven by use cases designed to address major network management problems through innovative mechanisms for:



SELF-PROTECTION Capabilities against distributed cyber-attacks



SELF-HEALING Capabilities against network failures



SELF-OPTIMIZATION Capabilities to dynamically improve the performance of the network and the

QoE of the users.



AT THE MACRO LEVEL

// Enlarged market share for European network
operators and equipment vendors
// Strengthen the competitiveness of European
service providers

AT THE OPERATIONAL LEVEL

// Improved scalability and extensibility // Reduced deployment time to less than 90 minutes // Reduced OPEX and CAPEX

AT THE SOCIETAL LEVEL

// More secured and resilient network and services
// Enhanced QoE of the end users, bandwidth
usage and support for video applications
// Reduced energy consumption

C O N T A C T S

PROJECT COORDINATOR Dr. Maria Barros Weiss, Eurescom GmbH

TECHNICAL PROJECT MANAGERS Prof. Jose Alcaraz Calero, University of the West of Scotland Prof. Qi Wang, University of the West of Scotland

EMAIL contact@selfnet-5g.eu

SITE http://selfnet-5g.eu



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55 PPP

SELFNET is one of the first phase projects of the 5G Infrastructure Public Private Partnership (5G-PPP) website: **https://5g-ppp.eu/**

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Creative Systems

Engineering









FRAMEWORK FOR SELF-ORGANIZED NETWORK MANAGEMENT IN VIRTUALIZED AND SOFTWARE DEFINED NETWORKS

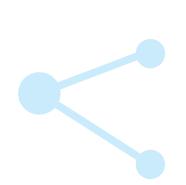




SELFNET is a 36 month project of the 1st Phase of 5G-PPP programme which address the Network Management strand.

START DATE July 2015

SELFNET will investigate innovative schemes to achieve advanced automation of complex **NETWORK MANAGEMENT** operations, providing a network infrastructures with new intelligence to automatization of different functionalities such as: network monitoring, network maintenance, deployment of network management tools and network service provisioning.



MANAGEMENT

INFRASTRUCTURE

MANAGED INFRASTRUCTURE

SELFNET EXPLORES A SMART **INTEGRATION OF STATE-OF-THE-ART TECHNOLOGIES IN:** // Software-Defined Networks (SDN) // Network Function Virtualization (NFV) // Self-Organizing Networks (SON) // Cloud computing // Artificial intelligence // Quality of Experience (QoE) PROPOSED SELFNET FRAMEWORK EXTERNAL USER SYSTEMS SON ACCESS SELFNET API BROKER LAYER VNF/APP ANALYZER SON AUTONOMIC MANAGEMENT AGREGATOR ONBOARDING AUTONOMIC LAYER MONITOR ORCHESTRATOR (NFVO+) ORCHESTRATION & MANAGEMENT LAYER SON CONTROL PLANE (VNF CONTROL) CONTROL LAYER SDN CONTROLLERS VNF/APP MANAGER (VNFM+) SERVICE VIRTUALIZED NETWORK SON VNF DATA PLANE (VNF DATA + CONTROL) NFRASTRUCTURE MANAGER LAYER VIRTUALIZED INFRASTRUCTURE & MEC (NFVI) INFRASTRUCTURE INFRASTRUCTURE LAYER NETWORK PHYSICAL INFRASTRUCTURE (NFPI)