



Q4Health



**Quality of Service and prioritisation
for emergency services in the LTE RAN stack**

Project number: 688624

Deliverable D4.3 First Version of Dissemination Plan

Abstract:

This deliverable presents the results for the dissemination, communication and standardization activities defined for the first year of Q4Health project, and describes the plans for the second period of the project, with the aim of ensuring wide impact of Q4Health outcomes in the most relevant European and worldwide communities.

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CONTENTS

LIST OF FIGURES	4
LIST OF TABLES	5
1. INTRODUCTION	7
1.1. Overview of the document.....	7
2. MEDICAL AND ICT SYSTEM	8
2.1. Introduction.....	8
2.2. BlueEye for Hospital Emergency Departments	8
2.2.1. BlueEye Product Features	8
2.2.2. BlueEye for Hospitals - Product Description.....	9
2.2.3. BlueEye for Hospitals – Benefits to Hospitals and Emergency Departments	10
2.3. Other Potential markets for BlueEye	10
2.3.1. BlueEye for Police, Firefighters and Public Safety – Product Description.....	10
2.3.2. BlueEye benefits for Police and Firefighters	11
2.3.3. BlueEye for Telemaintenance – Product Description	12
2.3.4. BlueEye benefits for Tele-maintenance	12
3. Q4HEALTH PUBLICATION PLAN AND CURRENT ACTIVITIES	13
3.1. Dissemination Channels.....	13
3.2. Journals/Conferences/Workshops	13
3.3. Publications and submissions in Year 1	16
3.3.1. Accepted Publications.....	16
3.3.2. Work Submitted	16
Technical Journals:	16
3.1. Dissemination Activities	17
3.1.1. Project Website	17
3.1.2. Project Poster	17
3.1.3. Project Fact Sheet.....	17
3.1.4. Project Slide Deck.....	17
3.1.5. Project Videos	17
3.1.6. Reference white paper.....	17
3.1.7. Summary Dissemination Plan	17
4. SDN DEVELOPMENT AND EVALUATION KITSS: AN EXAMPLE DISSEMINATION ACTIVITY	19
4.1. Introduction.....	19
4.2. Use of slicing in SDN to prioritise video in backhaul network traffic congestion	19
A software defined network (or SDN) can be used to prioritise video in backhaul network traffic congestion through the use of network slicing and virtualisation.	19
4.3. SDN Kit for Evaluation.....	20
5. CONCLUSIONS	21

LIST OF FIGURES

Figure 1 Experiment B and F high Level View 8
Figure 2 Blue-Eye Wearable LTE/5G Wireless Video and Audio 9
Figure 3 Paramedic Wearable Video Equipment..... 10
Figure 4 BlueEye for Police and Firefighting 11
Figure 5 BlueEye for Tele-maintenance 12
Figure 6 Connected eHealth Slice..... 20

LIST OF TABLES

Table 1: Publication opportunities 15
Table 2: targeted dissemination activities 17
Table 3: SDN Evaluation kit for Connected eHealth Slice 20

GLOSSARY

ACM	Association for Computing Machinery
API	Application Programming Interface
CCNC	Consumer Communications & Networking Conference
CEO	Chief Executive Officer
CFO	Chief Financial Officer
COPD	Chronic obstructive pulmonary disease
CORDIS	Community Research and Development Information Service
DSCP	Differentiated Services Code Point
EIT	European Institute of Innovation & Technology
EPC	Evolved Packet Core
ETT	European Transactions on Telecommunications
EUCNC	European Conferences on Networks and Communications
FDD	Frequency Division Duplex
FI	Future Internet
FIRE	Future Internet Research & Experimentation
FMEC	Fog and Mobile Edge Computing
GBR	Guaranteed Bit Rate
GDP	Gross Domestic Product
GPS	Global Positioning System
HO	Handover Overview
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol
ISSN	International Standard Serial Number
IEEE	Institute of Electrical and Electronics Engineers
LTE	Long Term Evolution
MIPS	Microprocessor without Interlocked Pipeline Stages
NGN	Next Generation Networking
ONOS	Open Network Operating System
QoE	Quality of Experience
QoS	Quality of Service
SDN	Software Defined Network
SIM	Subscriber Identity Module
UE	User Equipment
VLAN	Virtual Local Area Network

1. INTRODUCTION

1.1. Overview of the document

In this document we describe the dissemination activities as planned in the DoW, extended according to the current technological status and refined according to the partner's activities. In more detail and in order to enhance the dissemination activities we provide an updated publication plan that covers all the aspects of the Q4Health and promotes its results, even in an early stage.

Our goal is to increase exploitation opportunities and business opportunities by active dissemination activities, while also to foster brainstorming with people from products and business in order to promote the Q4HEALTH ideas and developments.

In one hand Q4HEALTH external dissemination will be achieved through the production of deliverables. Each deliverable will have a public version and will be made available via the Q4HEALTH web site. In the other hand, public reports will be published in highly reputed international journals and transactions, presented at conferences and workshops and offered as input to standardization bodies. Partners will use their involvement and status in the research community to impact major scientific events by organizing Q4Health related panels, tutorials, and special sessions.

All consortium members have already indicated their interest, involvement, and determination to host, organize or participate in the external dissemination activities. Note that all three partners have an outstanding record of publications and impact on both the academic and industrial scientific communities.

2. MEDICAL AND ICT SYSTEM

2.1. Introduction

Q4Health consortium has identified hospitals as a major market for the use of the BlueEye system and proposes the following points to be addressed to the hospital employees, CFO, CEO, emergency doctors, paramedics and ambulance personnel.

2.2. BlueEye for Hospital Emergency Departments

In Q4HEALTH we will carry out a set of six experiment campaigns to improve the BlueEye product as follows. Three experiments are focused on the EPC; two experiments are focused on the access network and one final experiment integrates everything.

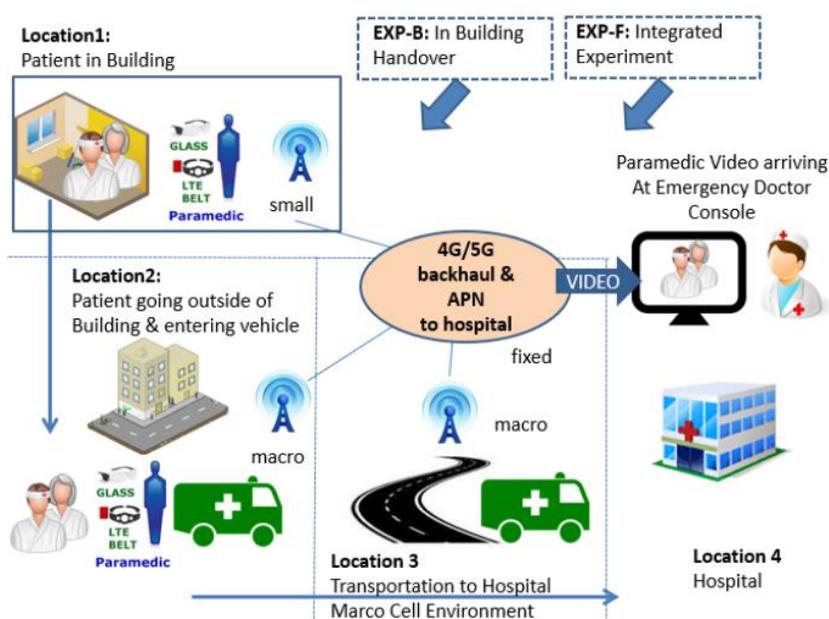


Figure 1: Experiment B and F high Level View

Figure 1 depicts experiments B and F. Experiment B is focused on the provision of heterogeneous handover, which is useful to improve the connectivity on indoor scenarios (for instance when the paramedic has to attend a patient inside a building). Experiment F is the integrated experiment, which will include all the developments of the projects and could be showcased to other companies interested in the experiments of the project.

2.2.1. BlueEye Product Features

The features of the BlueEye application are as follows:

- Simplex video and duplex audio enabling live remote video to be seen at the data centre
- Belt mounted wearable Intel Edison processor with 4G LTE wireless modem with high capacity battery
- Optimizes real time video for emergency services over LTE/4G/emerging 5G networks

<p>Camera</p> <ul style="list-style-type: none"> • Safety Glasses Mounted • 1/2.7-inch sensor size • 1080p/720p HD Colour CMOS Image Diagonal 110 +/-5 degree wide angle • H.264 Codec • Internal Microphone • Up to 1080p @ 30 fps (depending on uplink bandwidth) <p>Processor</p> <ul style="list-style-type: none"> • Low Power Intel® Edison • Dual core • Wearable Processor <p>Measurement UE Based LTE Capacity Probe</p> <ul style="list-style-type: none"> • In Line Video Throughput Probe • Dashboard with pre call measurements, in call measurements and location information (option on request) 	<p>LTE & Wireless</p> <ul style="list-style-type: none"> • 3GPP Release Baseline 9 • LTE FDD Category 4 • LTE Bands 1, 3, 5, 7, 8, 20 (Euro) • American LTE Bands on Request • 802.11abgn • Dual SIM • GPS option <p>Battery</p> <ul style="list-style-type: none"> • Replaceable Lithium Ion • 49Watt Hour <p>Video & Audio Connectivity</p> <ul style="list-style-type: none"> • Live Streaming to Hot Desk or Hub • Encrypted Video and Audio • Simplex Video • Duplex Audio <p>Indicators</p> <ul style="list-style-type: none"> • Power, Active, • Camera, Connect • Wireless, Notify
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2.2.2. BlueEye for Hospitals - Product Description

BlueEye is a wearable video technology for paramedics and emergency scene attendants which permits a hospital specialist to see patients remotely, enabling critical pre-hospital treatment. The benefits of this live, point of view video are life-saving, cost-saving specialist support in acute situations.



Figure 2Blue-Eye Wearable LTE/5G Wireless Video and Audio

The cost of healthcare delivery continues to rise, with the growth rate of health expenditure outstripping that of GDP, coupled with the challenges of an ageing population, means that traditional healthcare is not sustainable and eHealth solutions are needed to save costs as well as lives.¹

Emergency doctors are seeking to use video to support acute pre-hospital patients. Some potential examples of this support:

1. Heart attack and stroke: provide expertise to the responding paramedic who only has a few minutes to restart the heart in a case of cardiac arrest.
2. Trauma: remotely provide specialist support to the scene of a car crash in the case of trauma.

¹ <https://5g-ppp.eu/wp-content/uploads/2014/02/5G-PPP-White-Paper-on-eHealth-Vertical-Sector.pdf>

3. Childbirth and small children: support paramedics providing immediate visual assessment, reassurance to parents and medical advice in the case of childbirth or severely ill children, who can deteriorate rapidly and be difficult to diagnose.
4. Home treatment: stabilize patients in their home rather than via a short stay in hospital in the case of chronic obstructive pulmonary disease (COPD) patients.

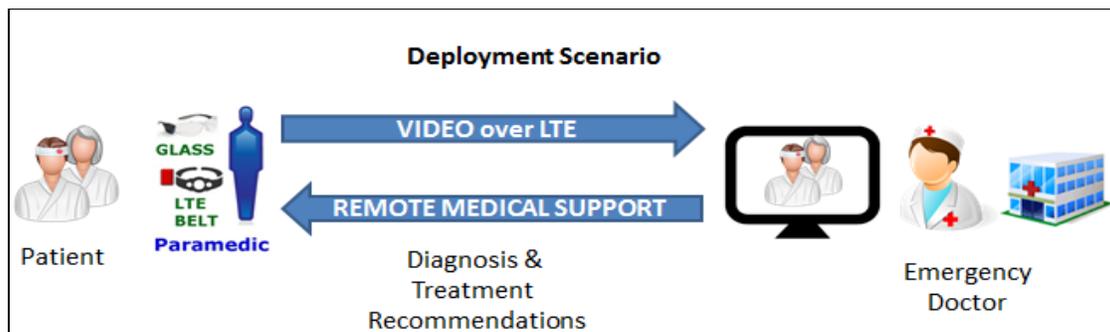


Figure 3 Paramedic Wearable Video Equipment

2.2.3. BlueEye for Hospitals – Benefits to Hospitals and Emergency Departments

The benefits of the BlueEye wearable video technology to hospitals and emergency departments are:

- BlueEye improves patient outcome in pre-hospital emergencies by helping provide oversight, diagnosis and treatment via wireless video link
- Wearable video camera mountable on safety glasses enables medical specialist to see remotely and in real-time point of view streaming
- Belt mounted 4G wearable module with long life battery for a long work shift in the field
- The use of live video can provide admission and overnight stay cost savings, enhanced operational efficiency based on pre-hospital diagnosis and improved patient outcomes.

2.3. Other Potential markets for BlueEye

2.3.1. BlueEye for Police, Firefighters and Public Safety – Product Description

A second market for BlueEye is the police and public safety such as the fire departments.

BlueEye can be used by police and fire departments to get support for incidents such as fires, public safety issues, crime scenes, law enforcement scenarios, traffic incidents etc. Police are seeking to enhance support at incidents, using video/data streaming to their Command Centre.

BlueEye is a wearable wireless video technology for the on-site first responder allowing them to live video stream the scene to their command centre and get expert advice. The benefits of this live, point of view video are cost saving, resource efficiency and potentially life-saving in ‘hot’ isolated situations.

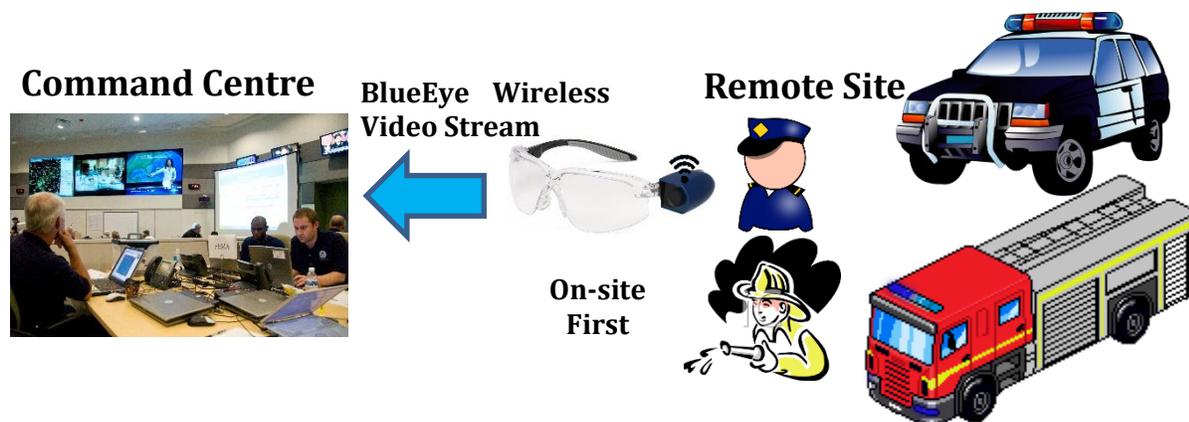


Figure 4BlueEye for Police and Firefighting

Fires, crime scenes and public safety situations can easily get out of hand and cause problems for the first responders as well as the public. With the BlueEye wireless video connection, an on-site police officer or firefighter can stream live video footage of the scene to their command centre to get immediate expert advice, targeted back up and incident recording if required. Some examples of situations where BlueEye can help with live video:

- Petty crimes scene: share video & data with command centre and arriving units.
- Traffic incidents: share video & data between traffic units and command centre to facilitate better traffic and incident control.
- Forest/Bush/Building fires: assessment of the extent and direction of the fire can be guided from a remote command centre

2.3.2. BlueEye benefits for Police and Firefighters

The benefits of the BlueEye wearable video technology to police and firefighters are:

- BlueEye helps police and firefighters to troubleshoot incidents by streaming live video from the site back to the command centre
- BlueEye can enable an ‘emergency video999’ call to provide on scene video information of a new incident.
- BlueEye can enable sharing of video and data via the first responder between fire/ambulance/police operations in a combined response incident.
- Providing live help via oversight, diagnosis and management to the site of a problem increases response time and enables more efficient work processes manner in any ‘hot’ situation.
- Recording of incidents can protect the first responder and the public in cases of dispute.
- Wearable video camera mountable on safety glasses enables technical expert to see remotely and in real-time point of view streaming
- Belt mounted 4G wearable module with long life battery for a long work shift on site

2.3.3. BlueEye for Telemaintenance – Product Description

A third potential market for BlueEye is telemaintenance.

BlueEye can be used to help assess machines or equipment remotely, so technicians can get expert help to carry out troubleshooting, repair, or maintenance. A remote ‘hotdesk’ can provide support to a local general maintenance engineer. BlueEye is a wearable video technology for on-site technicians allowing them to get expert advice, by displaying the faulty equipment remotely using live wireless video. The benefits of this live, point of view video are cost savings and resource efficiency in situations requiring expert help.



Figure 5 BlueEye for Tele-maintenance

Operational cost, in particular the cost of technical support, is an issue for any company who has equipment that needs maintenance or troubleshooting such as computers, routers, vehicles, manufacturing equipment etc. With the BlueEye wireless video connection, an on-site general technician can show the problem to a specialist at a data centre or ‘hotdesk’ and get immediate expert advice. Some examples of situations where BlueEye can allay costs by providing live video are:

1. Factories: expensive manufacturing equipment needing expensive expert resources on site in case of downtime.
2. Retail equipment: companies needing expert technicians in all equipment to attend vehicle breakdowns, machine breakdowns etc.
3. Substations: technicians on site needing expert advice in hazardous situations to provide maintenance and troubleshooting
4. Oil rigs: engineers on site needing expert advice in hazardous and isolated situations.

2.3.4. BlueEye benefits for Tele-maintenance

The benefits of the BlueEye wearable video technology to maintenance technicians are:

- BlueEye enables telemaintenance and troubleshooting by streaming live video from the site of faulty equipment to an expert
- Providing live help via oversight, diagnosis and management to the site of a problem saves on-site specialist costs, increases response time and enables more efficient work processes manner in any ‘hot’ situation.
- Wearable video camera mountable on safety glasses enables technical expert to see remotely and in real-time point of view streaming
- Belt mounted 4G wearable module with long life battery for a long work shift on site

3. Q4HEALTH PUBLICATION PLAN AND CURRENT ACTIVITIES

3.1. Dissemination Channels

The Q4HEALTH WEB site (<http://www.q4health.eu/>) is an excellent instrument for addressing the general public, industrial audience and the general public. It includes up-dates of the consortium activities in all the relevant areas. We will make use of specialized European websites, such as CORDIS, to inform interested parties of Q4HEALTH activities.

Our goal is using Internet for creating public awareness and opinion. We will take steps, consistent with our budget, to publish in the media, while we will produce videos about our principal results (demos).

We highlight that EURECOM has a rich experience in successfully carrying out demo presentations in large venues (e.g. SIGMOBILE, WWW Congress, etc.). Gaining from such experience, demo presentations using the OAI and the algorithmic solutions proposed in the context of Q4HEALTH will be also presented.

Furthermore, direct communication channels will be also established for the project results, through active engagement and cross-fertilization of approaches and results with:

- Final users, like hospitals or government agencies managing the health systems.
- EURECOM's and UMA's student communities interested in the concepts of Q4Health.
- The research community around the globe, through targeted publications and demonstrations at key scientific events.
- The industry through a possible push of project outcome to standardization bodies and dissemination activities (e.g demonstration of results to summits and events of industrial interest and targeted material like white papers).
- Wider public and non-technical experts through material that has been prepared for broader consumption. Using non-technical language our goal is to foster research at the interface between technology and public on the issues covered by Q4HEALTH.

3.2. Journals/Conferences/Workshops

In the following we provide a list with Health related publications (conferences/workshops/journals) that the consortium has carefully identified as important and closely related to the project's dissemination goals. The areas which can be made into publications are related to the SDN, testbed integration, BlueEye functionalities and healthcare use case:

- IEEE ICC - Workshop on Quality of Experience-based Management for Future Internet Applications and Services (QoE-FI),
- MIPS - Medical Image Perception Conference
- Wireless Networks, Springer journal
- IEEE Journal on Selected Areas in Communications
- IEEE Consumer Communications & Networking Conference (CCNC)
- IEEE Transactions on Vehicular Technology
- IEEE Healthcom - Workshop on Service Science for e-Health
- International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet) - Workshop on Wireless Solutions for Healthcare Applications.
- IEEE International conference on Telecommunications and Multimedia (TEMU),
- IEEE/IFIP International Workshop on Quality of Experience Centric Management (QCMan)
- IEEE Transactions on Multimedia
- IEEE Wireless Communications and Networking Conference (WCNC)
- Fourth International Conference on Selected Topics in Mobile & Wireless Networking (MoWNet)
- IEEE Journal of Biomedical and Health Informatics (J-BHI).

- Resource Management in Mobile Computing Environments. Springer.
- IEEE HEALTHCOM
- IEEE Engineering in Medicine and Biology Conference (EMBC),
- Wireless and Mobile Computing, Networking and Communications (WiMob),
- International Conference on Wireless Mobile Communication and Healthcare (MobiHealth)

An indicative list of reputed conferences and workshops where research results of Q4Health we will also consider to publish are:

- IEEE INFOCOM
- ACM SIGCOMM Conference
- IEEE Transactions on Networking etc.
- IEEE Transactions on Wireless Communications etc.
- IEEE Transactions on Mobile Communications etc.
- Elsevier Computer networks
- Elsevier Computer Communications
- Internet Measurement Conference
- IEEE GLOBECOM & Workshops
- IEEE ICC
- Computer Communications
- Annual International Conference on Mobile computing and networking
- ACM Conext
- IEEE NOMS/IM
- ACM Mobihoc
- ACM Mobicom
- IEEE Cloud

In the following table a more focused list with the relevant publication opportunities that we considered for Year 1 of the project is presented.

Table 1: Publication opportunities

Name	Special Issue	Link	Deadline
EUCNC 2016	-	http://www.eucnc.eu/	March 2016
IEEE Software Magazine	Internet of Things	https://www.computer.org/web/computingnow/swcfp1	1 June 2016
IEEE International Conference on Fog and Mobile Edge Computing	-	http://emergingtechnet.org/FMEC2016/index.php	10 June 2016
Pervasive computing	Special Issue on Internet of Things for Personalised Healthcare System	http://www.journals.elsevier.com/pervasive-and-mobile-computing/call-for-papers/special-issue-on-internet-of-things-for-personalised-healthc	31st August 2016
IEEE Communications Magazine	Fog Computing and Networking	http://www.comsoc.org/commag/cfp/fog-computing-and-networking	1 September 2016
Computer Networks and Communications	Experimental Studies and Real-World Applications of Internet of Things	http://www.hindawi.com/journals/jcnc/si/384989/cfp/	9th September 2016
Computer Networks	Softwarization and Caching in NGN	http://www.journals.elsevier.com/computer-networks/call-for-papers/special-issue-on-softwarization-and-caching-in-ngn	15th September 2016
IEEE Wireless Communication Magazine	IOT: PROTOCOL STACK, CROSS-LAYER, AND POWER CONSUMPTION ISSUES	http://www.comsoc.org/commag/cfp/iot-protocol-stack-cross-layer-and-power-consumption-issues	1st October 2016
IEEE Wireless Communication Magazine	Special issue on 5G Vehicular communications	http://www.comsoc.org/commag/cfp/emerging-technology-5g-enabled-vehicular-networks	31st October 2016
Wiley Transactions on Emerging Telecommunications Technologies	Special issue on Recent Advances in Fog and Mobile Edge Computing	http://onlinelibrary.wiley.com/store/10.1002/(ISSN)2161-3915/asset/homepages/FMEC_SI_CFP_updated.pdf?v=1&s=ba474974a95b977812f76d0e5148f1bd8284841f&isAguDoi=false	15th November 2016
Mobile Information Systems	Special issue on Multimedia Broadcast/Multicast towards 5G Mobile Networks	https://www.hindawi.com/journals/misy/si/286279/cfp/	2nd December 2016
FMEC 2017	-	http://emergingtechnet.org/FMEC2017/call-for-papers.php	Jan 6th 2017
IEEE Internet Computing	Special Issue on 5G	https://www.computer.org/web/computingnow/iccfp5	12nd January 2017

Wiley Transactions on Emerging Telecommunications Technologies Computer Communications	Special Issue on Public Safety in the 5G Era	on http://onlinelibrary.wiley.com/store/10.1002/(ISSN)2161-3915/asset/homepages/ETT-CFP-The_Future_of_PS_communications_in_5G_Era_-_extended.pdf?v=1&s=95826989e3d346ab0333ef037c6005432b58b5ba&isAguDoi=false	15th January 2016
	Special Issue on Mobile Video in the 5G/IoT Era	on http://www.journals.elsevier.com/computer-communications/call-for-papers/special-issue-on-mobile-video-in-the-5giot-era	28th Februar y 2017
IEEE Software	Special Issue on Software for Context-Aware and Smart Healthcare	on https://www.computer.org/software-magazine/2016/10/12/software-for-context-aware-and-smart-healthcare-call-for-papers/	1st April 2017

Note that all partners participate in various IEEE and ACM conferences and workshops that are specialized in experimentation. The Q4HEALTH consortium will also demonstrate the operational facility in demo sessions of the same conferences. In parallel to conducting research, the Q4Health consortium will take actions towards actively spreading awareness and knowledge about new challenges and research opportunities in incorporating optimization-driven designs in envisioned networking scenarios.

Participation in IoT Week, 2017

Our goal is also to participate in the IoT Week, Geneva, from 6 to 9 of June, 2017. This will be a major conference on the Internet of Things (IoT) co-organized by the IoT Forum, the International Telecommunication Union, the HES-SO and Mandat International. The conference will gather top experts, innovators and stakeholders in the Internet of Things. It is the place where emerging IoT technologies, strategies and policies are discussed, and partnerships developed. You can find more information on the IoT Forum (www.iotforum.org) and conference (www.iot-week.eu) websites.

3.3. Publications and submissions in Year 1

In this section we provide a list with accepted and submitted publications

3.3.1. Accepted Publications

Conferences:

- Garcia-Perez CA, Rios A, Merino P, Katsalis K, Nikaein N, Figueiredo R, Morris D, O'Callaghan T. "Q4health: Quality of service and prioritisation for emergency services in the LTE RAN stack". Networks and Communications (EuCNC), 2016 European Conference on, 2016.
- Garcia-Perez C.A., Merino P. "Enabling low latency services in standard LTE networks". Foundations and Applications of Self-* Systems (FAS*), 2016 IEEE 1st International Workshops, 2016; 248–255, doi:10.1109/FAS-W.2016.59.

Book Chapter:

- Garcia-Perez C.A., Rios A., Merino P., Katsalis K., Nikaein N., Figueiredo R., Morris D., O'Callaghan T., "Q4Health: Mission critical communications over LTE and future 5G technologies", FIRE Book 2016, TBP

3.3.2. Work Submitted

Technical Journals:

- Garcia-Perez C.A., Diaz-Zayas A., Rios A., Merino P., Katsalis K., Nikaein N., Rodriguez P., Morris D., "Improving the efficiency, reliability and sustainability of wearable based mobile eHealth applications", Submitted to Elsevier Pervasive Mobile Computing (under review).

- Garcia-Perez C., Merino P., "Experimental Evaluation of Fog Computing Techniques to Reduce Latency in LTE networks", submitted to Wiley Transactions on emerging telecommunications technologies (under review).

Book Chapter:

- Garcia-Perez C.A., Diaz-Zayas A., Rios A., Merino P., Katsalis K., Nikaein N., Rodriguez P., Morris D. Wiley book, 2016.

3.1. Dissemination Activities

3.1.1. Project Website

A Q4HEALTH website was created **at the start** of the project to advance the project's visibility. This is in process of being updated at the time of this deliverable (<http://www.q4health.eu/>).

3.1.2. Project Poster

A Q4HEALTH poster was created for the presentation of data in a format which emphasizes key points of Q4HEALTH concisely, for EUCNC 2016 in order to advance the project's visibility.

3.1.3. Project Fact Sheet

A Q4HEALTH fact sheet, is to be created for the presentation of data in a format which emphasizes key points of Q4HEALTH concisely. The project fact-sheet will be distributed in venues like EUCNC that will advance the project's visibility. The fact sheet will be based on the Solution Brief targeting the hospital sector.

3.1.4. Project Slide Deck

A slide deck describing the project can be found on the website.

3.1.5. Project Videos

Two videos are in production, one on the experiments on the project and one on the BlueEye platform, with the first project one targeted for January 2017 in order to demonstrate the project's outcomes, in the case where real demo deployments are not feasible and difficult to achieve.

3.1.6. Reference white paper

A reference white paper detailing the project experiments and outcomes to date is targeted for April 2017.

3.1.7. Summary Dissemination Plan

The targeted dissemination activities for Q4Health and Blue Eye are as follows.

Table 2: targeted dissemination activities

Resource	Target Audience	Activity	Date
Website	EU research community	Website	Early 2016
Poster	EU research community	Website	June 2016
Solution Brief	Police Ambulance Tele-Maintenance	Put on Website Circulate to emergency services Showcase experiments	April to December 2017
Fact Sheet	Q4Health in healthcare	Website	January 2017
Slide Deck	EU research community	Website	December 2016
Video 1 BlueEye	Hospitals	As above	January 2017

Video 2 Project	EU research community and other interested parties	Put on Website	March 2017
White Paper/Technical Paper	Medical community	Website and circulate to hospitals	April 2017
Showcase	Hospital in Malaga EIT in France/Spain (Telefonica) Hospital in Germany (DT)	Hospitals in Malaga, France and/or Germany Malaga Local Police to be invited	Q4 2017

4. SDN DEVELOPMENT AND EVALUATION KITSS: AN EXAMPLE DISSEMINATION ACTIVITY

4.1. Introduction

In this section, we go through what the project has to offer in terms of SDNs, how SDNs are being used in the project and what can be offered to operators in the form of an evaluation kit, as a result of the project work.

The 5G Manifesto², which is planning for the launch of 5G in 2020 identifies slicing and virtualisation as a key use case for 5G. The shift towards virtualisation is underway in fixed and mobile networks and is expected to transform the telecoms business in terms of service creation delivery by allowing new services to be created in a more agile manner.

There are two ways in which SDNs are used with video in 5G, the first way uses SDNs to prioritise video in the backhaul network in traffic congestion and the second way uses SDNs to lower the latency found in video from an unacceptable 1 second to 250ms. In Q4Health, Experiment A uses SDN to prioritise video and to make the connections between the different base stations quicker to reduce the latency. Experiment B is about using wifi handover to get a stronger signal to get better coverage and Experiment C is about reducing latency in group video sharing.

4.2. Use of slicing in SDN to prioritise video in backhaul network traffic congestion

A software defined network (or SDN) can be used to prioritise video in backhaul network traffic congestion through the use of network slicing and virtualisation.

The idea of slicing can be shown in **Error! No se encuentra el origen de la referencia.** Different industry sectors can have a different slice of the network targeted for different needs. For example, the needs of IoT sensors with low data rates are different to the needs of video for telemedicine with high data rates or supporting use cases for automobiles on public highways. So the idea of slicing is to use the same infrastructure and differentiate the network by slicing and targeting different industry verticals such as factory, media, smart city, public safety, health and others. Slicing can be implemented by IP address, VLAN tags, IMSI, EXP/DSCP QoS or other methods.

² 5G Manifesto for timely deployment of 5G in Europe”
<https://ec.europa.eu/digital-single-market/en/news/commissioner-oettinger-welcomes-5g-manifesto>

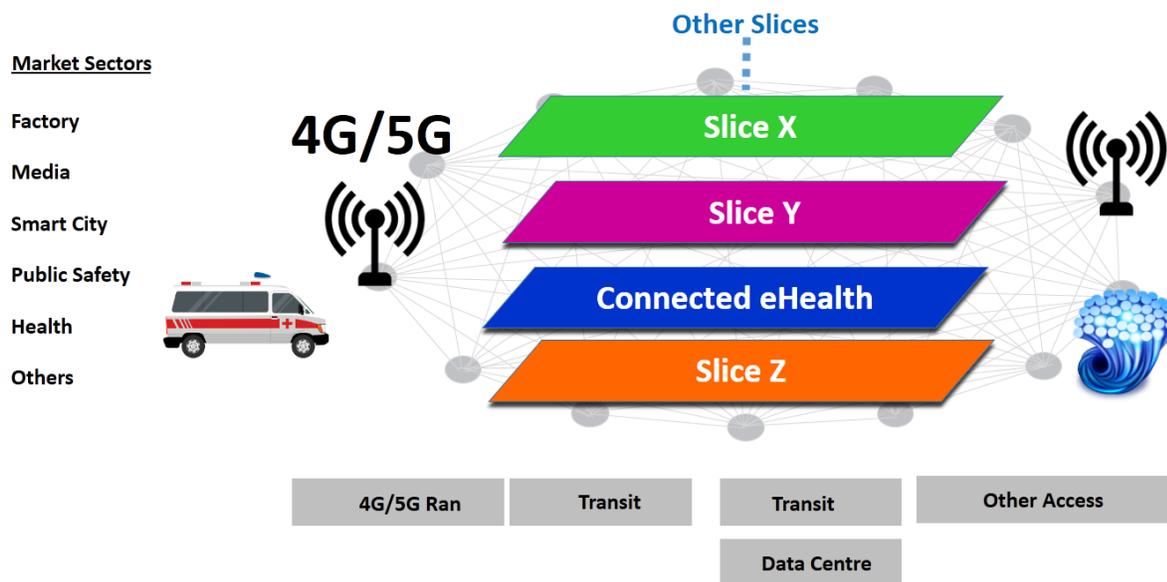


Figure 6: Connected eHealth Slice

4.3. SDN Kit for Evaluation

The Q4Health innovation will be offered to telecoms companies as an SDN evaluation kit for telecoms companies who are supporting field trials with slicing in the connected eHealth sector. Q4HEALTH’s SDN kit integrated to the Redzinc solution is targeted to make a slice of capacity for connected eHealth applications i.e. the blue slice in [\[Error! No se encuentra el origen de la referencia.\]](#). The bill of materials for the evaluation kit are given in [\[Error! No se encuentra el origen de la referencia.\]](#) below.

Table 3: SDN Evaluation kit for Connected eHealth Slice

SDN Evaluation Kit Bill of materials		
Quantity	Item	
1	2	2 Blue Eye units
2	2	VELOX Software Instances (requires ubuntu server)
3	-	Rx Drier to select GBR on EPC for guaranteed bit rate.
4	-	API for third party applications to invoke events
5	1	ONOS OpenVSwitch Queue function
6	5	Days Configuration Support

This SDN kit will be used as a sales and dissemination tool for operators as part of the project.

5. CONCLUSIONS

In this document we described the dissemination activities as planned in the DoW, extended according to the current technological status and refined according to the partner's activities. In more detail and in order to enhance the dissemination activities we provided an updated publication plan that covers all the aspects of the Q4Health and promotes its results.

The second year of the project effort will be given by all the project partners for real testbed demonstrations that on one hand will demonstrate the SDN approach efficiency taken by Q4Health and on the other hand bring the RedZinc system closer to the market and to business maturity.