



**5TH GENERATION END-TO-END NETWORK, EXPERIMENTATION,
SYSTEM INTEGRATION, AND SHOWCASING**

[H2020 - Grant Agreement No. 815178]

Deliverable D7.2

Dissemination, communication and ecosystem engagement activities report (Release A)

Editor Vaios Koumaras (INF)

Contributors All project partners

Version 1.0

Date 30 June 2019

Distribution PUBLIC (PU)



List of Authors

All project partners

Disclaimer

The information, documentation and figures available in this deliverable are written by the 5GENESIS Consortium partners under EC co-financing (project H2020-ICT-815178) and do not necessarily reflect the view of the European Commission.

The information in this document is provided “as is”, and no guarantee or warranty is given that the information is fit for any particular purpose. The reader uses the information at his/her sole risk and liability.

Copyright

Copyright © 2019 the 5GENESIS Consortium. All rights reserved.

The 5GENESIS Consortium consists of:

NATIONAL CENTER FOR SCIENTIFIC RESEARCH “DEMOKRITOS”	Greece
AIRBUS DS SLC	France
ATHONET SRL	Italy
ATOS SPAIN SA	Spain
AVANTI HYLAS 2 CYPRUS LIMITED	Cyprus
AYUNTAMIENTO DE MALAGA	Spain
COSMOTE KINITES TILEPIKOINONIES AE	Greece
EURECOM	France
FOGUS INNOVATIONS & SERVICES P.C.	Greece
FON TECHNOLOGY S.L.	Spain
FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	Germany
IHP GMBH – INNOVATIONS FOR HIGH PERFORMANCE MICROELECTRONICS/LEIBNIZ-INSTITUT FUER INNOVATIVE MIKROELEKTRONIK	Germany
INFOLYSIS P.C.	Greece
INSTITUTO DE TELECOMUNICACOES	Portugal
INTEL DEUTSCHLAND GMBH	Germany
KARLSTADS UNIVERSITET	Sweden
L.M. ERICSSON LIMITED	Ireland
MARAN (UK) LIMITED	UK
MUNICIPALITY OF EGALEO	Greece
NEMERGENT SOLUTIONS S.L.	Spain
ONEACCESS	France
PRIMETEL PLC	Cyprus
RUNEL NGMT LTD	Israel
SIMULA RESEARCH LABORATORY AS	Norway
SPACE HELLAS (CYPRUS) LTD	Cyprus
TELEFONICA INVESTIGACION Y DESARROLLO SA	Spain
UNIVERSIDAD DE MALAGA	Spain
UNIVERSITAT POLITECNICA DE VALENCIA	Spain
UNIVERSITY OF SURREY	UK

This document may not be copied, reproduced or modified in whole or in part for any purpose without written permission from the 5GENESIS Consortium. In addition to such written permission to copy, reproduce or modify this document in whole or part, an acknowledgement of the authors of the document and all applicable portions of the copyright notice must be clearly referenced.

Version History

Rev. N	Description	Author	Date
1.0	Full version	Vaios Koumaras (INF)	30-06-2019

LIST OF ACRONYMS

Acronym	Meaning
3GPP	Third Generation Partnership Project
5G PPP	5G Infrastructure Public Private Partnership
CfP	Call for Papers
GA	General Assembly
KoM	Kick off Meeting
KPI	Key Performance Indicators
WG	Working Group

EXECUTIVE SUMMARY

This deliverable documents 5GENESIS dissemination and communication activities, demonstrations and project's interaction with the 5G-PPP and the rest 5G-PPP research projects during the first year of 5GENESIS (July 2018-June 2019).

All communication channels and performed activities are described in detail and evaluated against the goals that had been set by the 5GENESIS communication and activities plan. Statistics, results and impact are analyzed and plans for next period's activities (Year 2: July 2019-June 2020) are presented.

Table of Contents

LIST OF ACRONYMS.....	6
EXECUTIVE SUMMARY	7
LIST OF FIGURES	12
LIST OF TABLES.....	17
1. INTRODUCTION.....	18
1.1. Purpose of the Document	18
1.2. Structure of the Document.....	18
1.3. Target Audience	18
2. DISSEMINATION AND COMMUNICATION ACTIVITIES	20
2.1. Purpose and Objectives	20
2.2. Dissemination and Communication Channels of Year 1	20
2.2.1. 5GENESIS Logo	20
2.2.2. 5GENESIS Website	21
2.2.3. 5GENESIS Social Media Channels.....	35
2.2.4. 5GENESIS Newsletter.....	39
2.2.5. 5GENESIS Publications	40
2.2.5.1. Publications in Conferences, Journals and Workshops	40
2.2.5.2. Other Publications	41
2.2.6. 5GENESIS Workshops, Special Sessions, Panels, Invited Talks	41
2.2.7. 5GENESIS Presentations	41
2.2.8. Other Means and Channels.....	41
2.2.8.1. Flyers and Leaflets	42
2.2.8.2. Banners and Posters.....	46
2.2.8.3. 5GENESIS Handbook.....	49
2.2.9. Means for Coordinating, Monitoring and Controlling Activities	50
2.2.9.1. BSCW file sharing portal.....	50
2.2.9.2. WP7 activities and impact tracking file	51
2.2.9.3. 5GENESIS Social Media and Website Statistical Dashboards.....	52
2.2.9.4. WP7 telcos	52
2.2.9.5. WP7 mailing list/emails	52
2.2.9.6. GA Meetings	53
2.3. Dissemination and Communication Performance of Year 1.....	57

2.3.1. Dissemination and Communication Goals of Year 1	57
2.3.2. Summary of Dissemination and Communication Achievements of Year 1	58
2.3.2.1. Publications in Conferences and Journals – Year 1	59
2.3.2.2. Publications in Workshops and Special Sessions of Conferences– Year 1	61
2.3.2.3. General Publications in Magazines, Books, Newspapers, Websites – Year 1 ..	62
2.3.2.4. Workshops and Special Sessions organized/co-organized by 5GENESIS – Year 1	64
2.3.2.5. Presentations (in Conferences, Workshops, InfoDays, Forums).....	68
2.3.2.6. Participation in Conference Panels and Invited Talks.....	81
2.3.2.7. Other Activities-Events (Exhibitions, Business Days, Booths in Conferences, Sponsorships, Interviews, Webinars, Poster Sessions, Awards).....	83
2.4. Evaluation, Statistics and Impact of Year 1 Activities.....	92
2.4.1. Quantitative Results and Evaluation of Activities	92
2.4.2. Website Performance Statistics and Dashboards	93
2.4.3. Social Media Performance Statistics and Dashboards.....	94
2.4.3.1. 5GENESIS Twitter Annual Dashboards	94
2.4.3.2. 5GENESIS LinkedIn Annual Dashboards	97
2.4.3.3. 5GENESIS Facebook Annual Dashboards	99
2.4.3.4. 5GENESIS Instagram Annual Dashboards.....	101
2.4.4. Dissemination and Communication Plan and Goals for Year 2	102
3. 5GENESIS DEMONSTRATIONS.....	104
3.1. Purpose and Objectives	104
3.2. Demonstration Activities of Year 1	104
3.3. Activities Evaluation and Impact	109
3.3.1. Demonstration Strategy/Plan Update	109
3.3.2. Demonstration Plan and Goals for Year 2	110
4. 5GENESIS ACTIVITIES: 5GPPP PROGRAMME AND COLLABORATION WITH ICT-17 PROJECTS.....	112
4.1. Purpose and Objectives	112
4.2. Activities of Year 1.....	112
4.3. Evaluation and Impact of Year 1 Activities	120
4.3.1. Evaluation of Activities and Results	120
4.3.2. Strategy/Plan Update and goals for Year 2	125
5. CONCLUSION	127
6. ANNEX 1 – MONTHLY 5GENESIS SOCIAL MEDIA STATISTICAL DASHBOARDS.....	128
6.1. Twitter Monthly Statistical Dashboards.....	128

6.1.1. Twitter Statistical Dashboards June 2018	129
6.1.2. Twitter Statistical Dashboards July 2018	130
6.1.3. Twitter Statistical Dashboards August 2018	131
6.1.4. Twitter Statistical Dashboards September 2018.....	132
6.1.5. Twitter Statistical Dashboards October 2018	133
6.1.6. Twitter Statistical Dashboards November 2018	134
6.1.7. Twitter Statistical Dashboards December 2018.....	135
6.1.8. Twitter Statistical Dashboards January 2019	136
6.1.9. Twitter Statistical Dashboards February 2019	137
6.1.10. Twitter Statistical Dashboards March 2019	138
6.1.11. Twitter Statistical Dashboards April 2019	139
6.1.12. Twitter Statistical Dashboards May 2019.....	140
6.1.13. Twitter Statistical Dashboards June 2019 (up to 20 June 2019).....	141
6.2. LinkedIn Monthly Statistical Dashboards.....	142
6.2.1. LinkedIn Statistical Dashboards July 2018	143
6.2.2. LinkedIn Statistical Dashboards August 2018.....	144
6.2.3. LinkedIn Statistical Dashboards September 2018.....	145
6.2.4. LinkedIn Statistical Dashboards October 2018	146
6.2.5. LinkedIn Statistical Dashboards November 2018	147
6.2.6. LinkedIn Statistical Dashboards December 2018.....	148
6.2.7. LinkedIn Statistical Dashboards January 2019	149
6.2.8. LinkedIn Statistical Dashboards February 2019	150
6.2.9. LinkedIn Statistical Dashboards March 2019	151
6.2.10. LinkedIn Statistical Dashboards April 2019	152
6.2.11. LinkedIn Statistical Dashboards May 2019.....	153
6.2.12. LinkedIn Statistical Dashboards June 2019 (up to 20 June 2019)	154
6.3. Facebook Monthly Statistical Dashboards.....	155
6.3.1. Facebook Statistical Dashboards June-July 2018	156
6.3.2. Facebook Statistical Dashboards August 2018.....	157
6.3.3. Facebook Statistical Dashboards September 2018.....	158
6.3.4. Facebook Statistical Dashboards October 2018	159
6.3.5. Facebook Statistical Dashboards November 2018	160
6.3.6. Facebook Statistical Dashboards December 2018.....	161
6.3.7. Facebook Statistical Dashboards January 2019	162
6.3.8. Facebook Statistical Dashboards February 2019	163

6.3.9. Facebook Statistical Dashboards March 2019	164
6.3.10. Facebook Statistical Dashboards April 2019	165
6.3.11. Facebook Statistical Dashboards May 2019.....	166
6.3.12. Facebook Statistical Dashboards June 2019 (up to 20 June 2019)	167
6.4. Instagram Monthly Statistical Dashboards	168
6.4.1. Instagram Statistical Dashboards July 2018	168
6.4.2. Instagram Statistical Dashboards August 2018	169
6.4.3. Instagram Statistical Dashboards September 2018	170
6.4.4. Instagram Statistical Dashboards October 2018.....	171
6.4.5. Instagram Statistical Dashboards November 2018	172
6.4.6. Instagram Statistical Dashboards December 2018	173
6.4.7. Instagram Statistical Dashboards January 2019.....	174
6.4.8. Instagram Statistical Dashboards February 2019	175
6.4.9. Instagram Statistical Dashboards March 2019.....	176
6.4.10. Instagram Statistical Dashboards April 2019	177
6.4.11. Instagram Statistical Dashboards May 2019	178
6.4.12. Instagram Statistical Dashboards June 2019 (up to 20 June 2019)	179
7. ANNEX 2 – MONTHLY 5GENESIS WEBSITE STATISTICAL DASHBOARDS	180
7.1. Website Statistical Dashboards	180
7.1.1. Website Statistical Dashboards August 2018.....	180
7.1.2. Website Statistical Dashboards September 2018	181
7.1.3. Website Statistical Dashboards October 2018.....	182
7.1.4. Website Statistical Dashboards November 2018.....	183
7.1.5. Website Statistical Dashboards December 2018	184
7.1.6. Website Statistical Dashboards January 2019	185
7.1.7. Website Statistical Dashboards February 2019	186
7.1.8. Website Statistical Dashboards March 2019	187
7.1.9. Website Statistical Dashboards April 2019.....	188
7.1.10. Website Statistical Dashboards May 2019	189
7.1.11. Website Statistical Dashboards June 2019 (up to 20 June 2019)	190
8. ANNEX 3 – QUARTERLY ISSUES OF 5GENESIS NEWSLETTER.....	191
8.1. Newsletter Issue 1 (July – September 2018)	191
8.2. Newsletter Issue 2 (October – December 2018).....	195
8.3. Newsletter Issue 3 (January – March 2019)	201

LIST OF FIGURES

Figure 1. 5GENESIS Proposal logo	21
Figure 2. 5GENESIS logo.....	21
Figure 3. 5GENESIS various logo versions	21
Figure 4. 5GENESIS website: Main Menu, Search tool, Social Media links.....	22
Figure 5. 5GENESIS website: Homepage	22
Figure 6. 5GENESIS website: Homepage footer	23
Figure 7. 5GENESIS website: Platforms Menu.....	23
Figure 8. 5GENESIS website: Athens Platform page	24
Figure 9. 5GENESIS website: Athens Platform page details.....	26
Figure 10. 5GENESIS website: Consortium page	26
Figure 11. 5GENESIS website: Objectives page	28
Figure 12. 5GENESIS website: News page	28
Figure 13. 5GENESIS website Publications-Dissemination menu.....	29
Figure 14. 5GENESIS website: Research Papers page	29
Figure 15. 5GENESIS website: Published Articles page	30
Figure 16. 5GENESIS website: Presentations page	31
Figure 17. 5GENESIS website: Press Releases page.....	31
Figure 18. 5GENESIS website: Deliverables page	32
Figure 19. 5GENESIS website: Newsletter page	32
Figure 20. 5GENESIS website: Workshops page and CfP page.....	33
Figure 21. 5GENESIS website: Events page	34
Figure 22. 5GENESIS website: Contact page.....	34
Figure 23. 5GENESIS Twitter Channel	37
Figure 24. 5GENESIS LinkedIn Account.....	37
Figure 25. 5GENESIS Facebook Page	38
Figure 26. 5GENESIS Instagram Account	38
Figure 27. 5GENESIS YouTube Channel	39
Figure 28. 5GENESIS newsletter issue 1 – cover page	40
Figure 29. 5GENESIS Main Leaflet (front side)	42
Figure 30. 5GENESIS Main Leaflet (back side)	43
Figure 31. Athens Platform Leaflet.....	44
Figure 32. Limassol Platform Leaflet.....	44
Figure 33. Berlin Platform Leaflet.....	45
Figure 34. Surrey Platform Leaflet	45
Figure 35. Malaga Platform Leaflet	46
Figure 36. 5GENESIS General Poster	47
Figure 37. 5GENESIS Malaga Platform Poster.....	48

Figure 38. 5GENESIS Handbook	49
Figure 39. BSCW portal.....	50
Figure 40: Structure of 5GENESIS project repository (BSCW).....	51
Figure 41: 5GENESIS WP7 Activities tracking file	52
Figure 42. 5GENESIS partners in the first GA Meeting (Athens, Greece)	54
Figure 43. 5GENESIS partners in the second GA Meeting (Munich, Germany)	54
Figure 44. 5GENESIS partners in third GA meeting (Surrey, UK)	55
Figure 45. 5GENESIS partners in fourth GA meeting (Malaga, Spain)	55
Figure 46. 5GENESIS partners in the fifth GA meeting (Valencia, Spain).....	56
Figure 47. 5GENESIS at FUSECO Fokus Event	65
Figure 48. 5GENESIS at WCNC 2019	66
Figure 49. 5GENESIS at TMA Conference 2019	66
Figure 50. 5GENESIS in EuCNC 2019 and 7th Global 5G event	67
Figure 51. 5GENESIS workshop in IEEE NetSoft 2019.....	67
Figure 52. Dr. Harilaos Koumaras (NCSR Demokritos) presenting 5GENESIS in EUCNC 2018	71
Figure 53. 5GENESIS in 5G-PPP ICT-19 INFO DAY	71
Figure 54. Dr. Harilaos Koumaras (NCSR Demokritos) presenting 5GENESIS in IEEE CAMAD 2018	72
Figure 55. ITU 2018.....	72
Figure 56. Dr. Zion Hadad (RunEL) presenting 5GENESIS in FUSECO Fokus Event	73
Figure 57. Dr. Valerio Frascolla (INTEL) presenting 5GENESIS in FUSECO Fokus Event.....	73
Figure 58. 5GENESIS presentation in 20th INFOCOM WORLD 2018 CONFERENCE	74
Figure 59. 5GENESIS presentation in Conference of Big Cities.....	74
Figure 60. 5GENESIS in INFODAY on 5G Advances.....	75
Figure 61. 5GENESIS presentation in ONF Connect session	75
Figure 62. 5GENESIS presentation in EFUS	76
Figure 63. Dr. Anastasios Kourtis (NCSR Demokritos) presenting 5GENESIS in EGALEO Smart City	76
Figure 64. 5GENESIS UMA and MoM teams at Spanish 5G Observatory.....	77
Figure 65. Prof. Pedro Merino (UMA) in 5G Forum	77
Figure 66. INFOCOM 2019 opening session	78
Figure 67. EMPOWER/PAWR workshop at IEEE INFOCOM.....	78
Figure 68. 5GENESIS paper presentation at IEEE WoWMoM 2019.....	79
Figure 69. 5GENESIS presentation in 5G Global event 2019	79
Figure 70. 5GENESIS presentations at EuCNC 2019	80
Figure 71. UMA presentations at JCSD 2019	81
Figure 72. Dr.Valerio Frascolla (INTEL) in DySPAN 2018.....	82
Figure 73. NETWORKLIFE 2020.....	82
Figure 74. INFOLYSIS in the Athens Innovation Festival	84
Figure 75. 5GENESIS presented at Ericsson Ireland Tech Day.....	85

Figure 76. Nemergent Solutions in MWC 2019.....	86
Figure 77. UPV participation in E-world 2019	86
Figure 78. Nemergent Solutions in BAPCO 2019 and CCE 2019	87
Figure 79. EGALEO Smart City 2020-2030	87
Figure 80. 5GENESIS Spanish partners in 5G FORUM	88
Figure 81. 5GENESIS TM Prof. Pedro Merino Gomez with the Mayor of Malaga in 5G FORUM.....	88
Figure 82. 5GENESIS Silver Bite Award 2019.....	89
Figure 83. 5GENESIS poster session in TMA 2019	89
Figure 84. 5GENESIS booth at EuCNC 2019	90
Figure 85. Poster session at EuCNC 2019	91
Figure 86. 5GENESIS partners' booths in CCW2019.....	91
Figure 87. 5GENESIS website Annual Dashboard – Year 1	93
Figure 88. 5GENESIS website's sessions per device and country.....	94
Figure 89. 5GENESIS Twitter 12-month period graphs	95
Figure 90. Twitter Annual Dashboard – Year 1	96
Figure 91. 5GENESIS LinkedIn 12-month period graphs	97
Figure 92. LinkedIn Annual Dashboard – Year 1	98
Figure 93. 5GENESIS Facebook 12-month period graphs	99
Figure 94. Facebook Annual Dashboard – Year 1.....	100
Figure 95. 5GENESIS Instagram 12-month period graphs.....	101
Figure 96. Instagram Annual Dashboard – Year 1.....	102
Figure 97. 5GENESIS partners in MWC 2019	105
Figure 98. RunEL stand at MWC 2019	106
Figure 99. Sparq-2020 5G Distributed Architecture demonstrated at MWC 2019.....	107
Figure 100. Nemergent Solutions in BAPCO-CCE 2019	107
Figure 101. 5GENESIS in 5G Forum	108
Figure 102. 5GENESIS in EuCNC 2019 in Valencia	109
Figure 103. 5G testbeds online information	123
Figure 104. Twitter Statistics for June 2018.....	129
Figure 105. Twitter Statistics for July 2018	130
Figure 106. Twitter Statistics for August 2018.....	131
Figure 107. Twitter Statistics for September 2018	132
Figure 108. Twitter Statistics for October 2018	133
Figure 109. Twitter Statistics for November 2018	134
Figure 110. Twitter Statistics for December 2018	135
Figure 111. Twitter Statistics for January 2019	136
Figure 112. Twitter Statistics for February 2019	137
Figure 113. Twitter Statistics for March 2019.....	138
Figure 114. Twitter Statistics for April 2019.....	139

Figure 115. Twitter Statistics for May 2019	140
Figure 116. Twitter Statistics for June 2019	141
Figure 117. LinkedIn Statistics for July 2018.....	143
Figure 118. LinkedIn Statistics for August 2018.....	144
Figure 119. LinkedIn Statistics for September 2018	145
Figure 120. LinkedIn Statistics for October 2018	146
Figure 121. LinkedIn Statistics for November 2018	147
Figure 122. LinkedIn Statistics for December 2018	148
Figure 123. LinkedIn Statistics for January 2019	149
Figure 124. LinkedIn Statistics for February 2019	150
Figure 125. LinkedIn Statistics for March 2019	151
Figure 126. LinkedIn Statistics for April 2019.....	152
Figure 127. LinkedIn Statistics for May 2019	153
Figure 128. LinkedIn Statistics for June 2019	154
Figure 129. Facebook Statistics for June and July 2018	156
Figure 130. Facebook Statistics for August 2018	157
Figure 131. Facebook Statistics for September 2018	158
Figure 132. Facebook Statistics for October 2018.....	159
Figure 133. Facebook Statistics for November 2018	160
Figure 134. Facebook Statistics for December 2018	161
Figure 135. Facebook Statistics for January 2019.....	162
Figure 136. Facebook Statistics for February 2019	163
Figure 137. Facebook Statistics for March 2019.....	164
Figure 138. Facebook Statistics for April 2019	165
Figure 139. Facebook Statistics for May 2019.....	166
Figure 140. Facebook Statistics for June 2019.....	167
Figure 141. Instagram Statistics for July 2018	168
Figure 142. Instagram Statistics for August 2018	169
Figure 143. Instagram Statistics for September 2018.....	170
Figure 144. Instagram Statistics for October 2018.....	171
Figure 145. Instagram Statistics for November 2018.....	172
Figure 146. Instagram Statistics for December 2018.....	173
Figure 147. Instagram Statistics for January 2019.....	174
Figure 148. Instagram Statistics for February 2019	175
Figure 149. Instagram Statistics for March 2019.....	176
Figure 150. Instagram Statistics for April 2019	177
Figure 151. Instagram Statistics for May 2019.....	178
Figure 152. Instagram Statistics for June 2019.....	179
Figure 153. Website Statistics for August 2018	180

Figure 154. Website Statistics for September 2018.....	181
Figure 155. Website Statistics for October 2018.....	182
Figure 156. Website Statistics for November 2018.....	183
Figure 157. Website Statistics for December 2018.....	184
Figure 158. Website Statistics for January 2019.....	185
Figure 159. Website Statistics for February 2019.....	186
Figure 160. Website Statistics for March 2019.....	187
Figure 161. Website Statistics for April 2019.....	188
Figure 162. Website Statistics for May 2019.....	189
Figure 163. Website Statistics for June 2019.....	190
Figure 164. 5GENESIS Newsletter Issue 1.....	194
Figure 165. 5GENESIS Newsletter Issue 2.....	200
Figure 166. 5GENESIS Newsletter Issue 3.....	206

LIST OF TABLES

Table 1. 5GENESIS GA meetings during Year 1	53
Table 2. 5GENESIS Overall Dissemination and Communication Goals.....	57
Table 3. 5GENESIS Dissemination and Communication Goals of the first year	58
Table 4. Year 1 Dissemination and Communication activities	58
Table 5. Publications in Conferences and Journals	61
Table 6. Publications in Workshops and Special Sessions of Conferences	62
Table 7. Papers/Articles in magazines/newspapers/websites	64
Table 8. Workshops and Special Sessions organized/co-organized by 5GENESIS	65
Table 9. Presentations in Conferences, Workshops, InfoDays, Events.....	70
Table 10. Participation in Panels and Invited Talks	81
Table 11. Participation in various Events	84
Table 12. Dissemination and Communication activities and Y1 goals.....	92
Table 13. Twitter 12-month period information.....	95
Table 14. LinkedIn: 12-month period activity.....	97
Table 15. Facebook 12-month period information.	99
Table 16. Instagram 12-month period information	101
Table 17. 5GENESIS communication and dissemination goals for Year 2	103
Table 18. 5GENESIS upcoming activities	103
Table 19. 5GENESIS representatives per 5G-PPP Working Group	113

1. INTRODUCTION

1.1. Purpose of the Document

The scope of D7.2 is to present, analyse and evaluate the dissemination and communication activities, demonstrations, interactions and collaborations with 5GPPP Programme and ICT-17 projects, of the 5GENESIS project, during the first year of its lifetime (July 2018 – June 2019).

1.2. Structure of the Document

The document is structured into 4 main sections as follows:

Section 1 introduces to the reader the purpose of this document, its structure and its target audience.

Section 2 presents the Year 1 dissemination and communication activities of 5GENESIS. The analysis is made on the channels used, activities performed, achievements made and results achieved. Results and performance are statistically evaluated against the Year 1 plan and updates are proposed and applied to the set up of Year 2 plan.

Section 3 presents the demonstrations of the partners with respect to the 5GENESIS platforms during the respective period. These demos include components that will be integrated into the complete platform facilities of 5GENESIS.

Section 4 summarizes the activities which have been performed by 5GENESIS consortium partners in the 5G-PPP Working Groups (WG) and the collaboration details with the projects of ICT-17.

Finally, Annexes 1-3 are used in order to present in detail the monthly statistical dashboards of the 5GENESIS social media and the websites, as well as the 3 issues of the 5GENESIS newsletter.

1.3. Target Audience

Dissemination, demonstration and collaboration activities are performed by all the partners and differ in regard to the nature of the partner as well as the target audience. The industrial partners will approach industry sectors and their distributors as well as client networks, whereas the academic and research partners will target relevant research institutes and universities. Furthermore, an additional number of activities are targeted to organizations, communities, industry, academia and research institutions, as well as the general public.

In specific, the target audience of D7.2 is the following:

- ***The broadest possible technical and non-technical audience:*** This category covers the potential end users of the 5G products and services as well as the general public.
- ***All 5GENESIS partners, collaborators and stakeholders:*** This document is addressed to the entire 5GENESIS consortium and serves as initial documentation of the performed

dissemination and communication activities, demonstrations and collaborations in which 5GENESIS partners, collaborators and stakeholders are involved and/or affected.

- **Industry:** It refers to any group which has an industrial professional background, technical knowledge and expertise and is working on 5G-related areas. In this group producers, suppliers, vendors and SMEs will be involved.
- **Academia and research institutions:** This category covers institutions from the ICT sector, higher education institutions like universities and educational centres as well as national, public and private research institutes.
- **Public and private service providers:** This category focuses on any 4G services, verticals, network operators which will have to make adaptations and switch to 5G systems.

2. DISSEMINATION AND COMMUNICATION ACTIVITIES

2.1. Purpose and Objectives

A core objective of the 5GENESIS is to disseminate and communicate information regarding the project via its various means/channels and its website, in a clear and concise manner. The dissemination and communication activities are an important part of the project as they raise awareness and promote the project to a wider audience. The main dissemination activities focus on the diffusion of the project's information such as scientific and technological results which will be in the format of publications, presentations in conferences, organization of workshops and demonstrations. The main communication activities of the project focus on raising awareness of it via various electronic and non-electronic means such as for example newsletter, leaflets, flyers, posters, website and social media channels. Dissemination and Communication activities both aim at a wider spectrum of users/audience which is part of academic, research and industrial communities as well as stakeholders and the general public.

2.2. Dissemination and Communication Channels of Year 1

5GENESIS dissemination and communication activities during the first year have been performed through a rich network of communication channels and means such as:

- 5GENESIS logo
- 5GENESIS website
- 5GENESIS social media channels
- 5GENESIS newsletter
- Publications in journals, conferences, workshops and other media
- 5GENESIS workshops, special sessions, panels, invited talks
- 5GENESIS presentations
- Other means and channels such as flyers, leaflets, posters, interviews, innovation workshops, webinars, Info Days, booths, poster sessions, award ceremonies etc
- 5GENESIS demonstrations

Please note that 5GENESIS demonstrations, as a core part of project's communication and dissemination activities, are separately monitored (Task 7.2) and documented in detail at Section 3 5GENESIS Demonstrations in this report.

2.2.1. 5GENESIS Logo

The 5GENESIS logo has been altered since its first release in the project proposal in order to provide a strong image and brand recognition during the project lifetime and even after it. Figure 1 depicts the initial logo that was used in the proposal phase.



Figure 1. 5GENESIS Proposal logo

At the KoM, the 5GENESIS consortium decided to update the initially used logo and adapt as official project logo the one shown in Figure 2.



Figure 2. 5GENESIS logo

The new logo has been released in various versions in order to cover a variety of needs, dimensions and shapes such as round image, square image, with/without borders, transparent image, with without caption, etc. In Figure 3, the majority of 5GENESIS logo versions are shown.

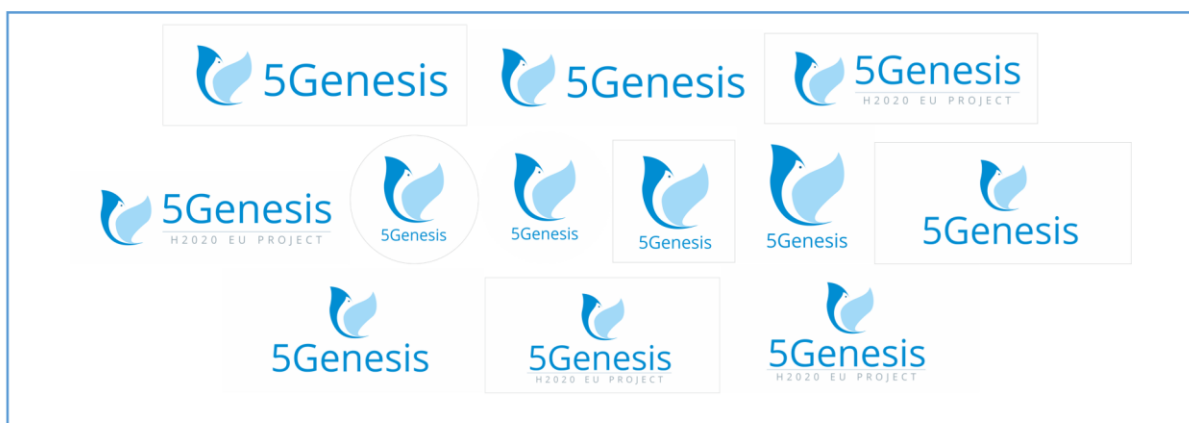


Figure 3. 5GENESIS various logo versions

2.2.2. 5GENESIS Website

The 5GENESIS website (www.5genesis.eu) is the main means of disseminating and communicating the project's activities, news and achievements. The development of the website was initiated before the project's KoM, and it was made public at the end of June 2018.

The 5GENESIS website is supported by all partners and it hosts focused news in regards to the project, deliverables, as well as various activities and events in which project partners are involved. The lifespan of the website is to run until the end of the project's cycle plus two additional years after its completion.

The 5GENESIS website has been developed in WordPress and its menu leads to seven main pages. In specific, the menu of the website offers the following 7 navigations options: Home, Platforms, Consortium, Objectives, News, Publications-Dissemination and Contact. Moreover, next to the header menu is located the search option where the users can search for keywords in order to find relevant results. Also, on the upper right corner, the social media icon links are placed which redirect the visitors to the respective 5GENESIS social media channel pages (Figure 4).

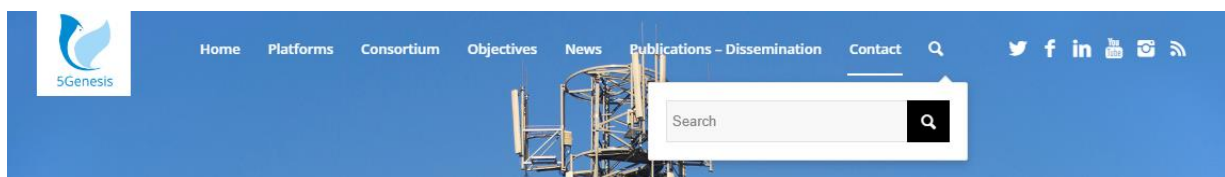


Figure 4. 5GENESIS website: Main Menu, Search tool, Social Media links.

- **Home:** The homepage of the website has been designed in a modern and functional way, containing the abstract of the project, the project logo, the main menu, all partners names/logos, as well as a footer with the project EU details, tags, latest news and sitemap. (Figure 5 and Figure 6).

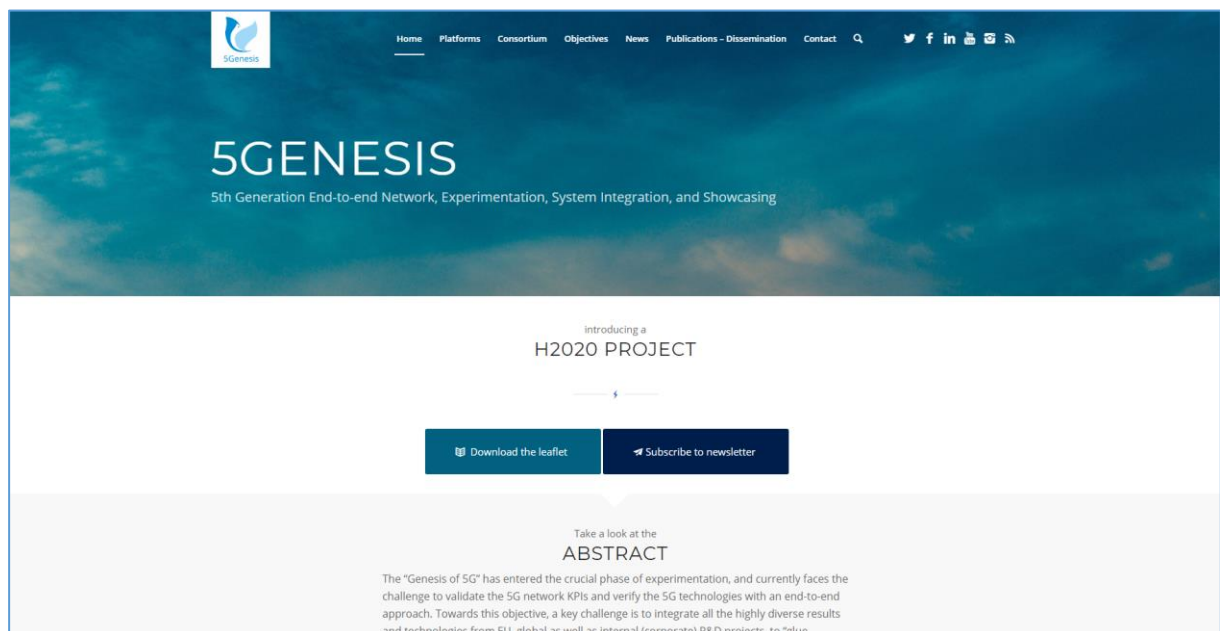


Figure 5. 5GENESIS website: Homepage

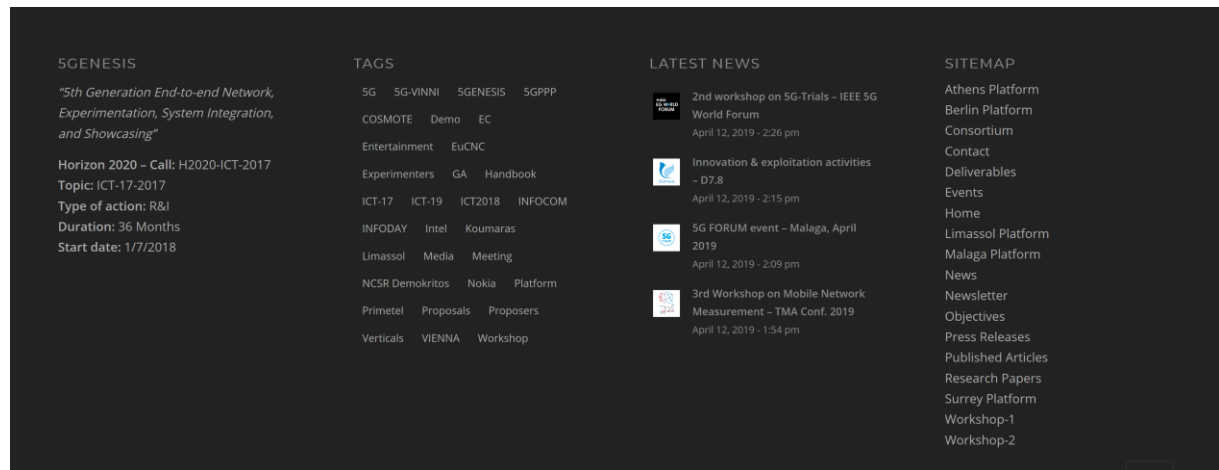


Figure 6. 5GENESIS website: Homepage footer

Moreover, it features additional sections with button options prompting the users to “Download the 5GENESIS leaflet” and “Subscribe to the newsletter.” At the end of the abstract section, there is a “Get in Touch” option which when clicked leads the users to the contact page/form in order to send a message to the project coordinator team.

- **Platforms:** In this page of the website, the 5GENESIS platforms are presented with each one of the them having its own dedicated page. The submenu entitled with the name of the respective platform (Figure 7), offers detailed information regarding that selected platform.

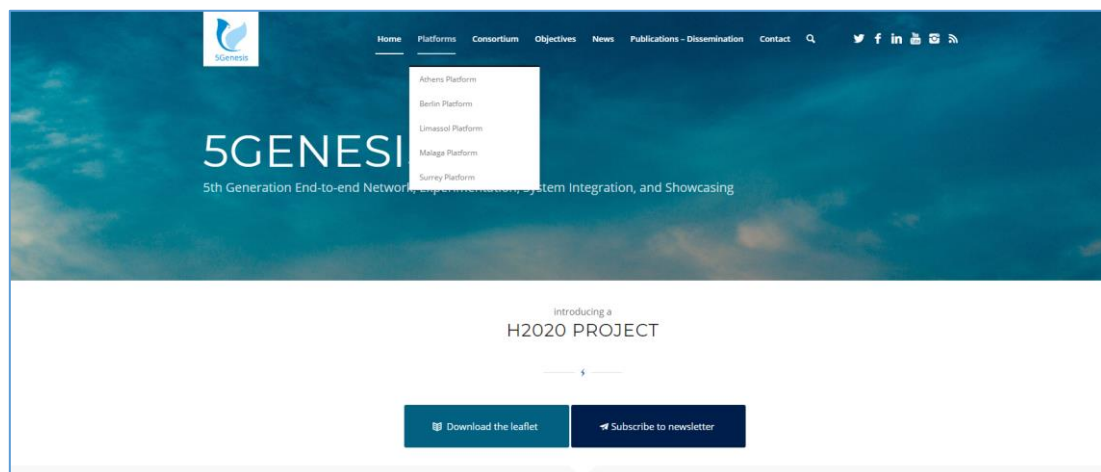


Figure 7. 5GENESIS website: Platforms Menu

At the top of each platform page, there is a Contact Info section prompting visitors to contact the partners involved in that particular platform. Next to the Contact Info, there is a section indicating the countries involved in this platform.

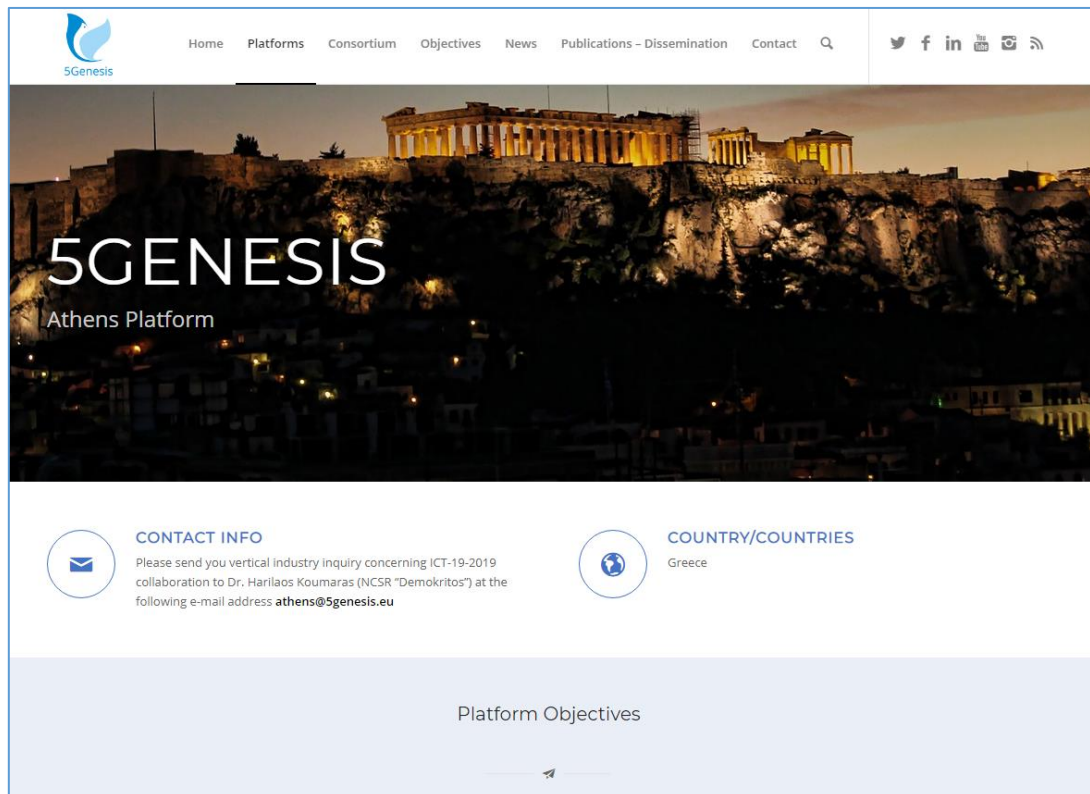


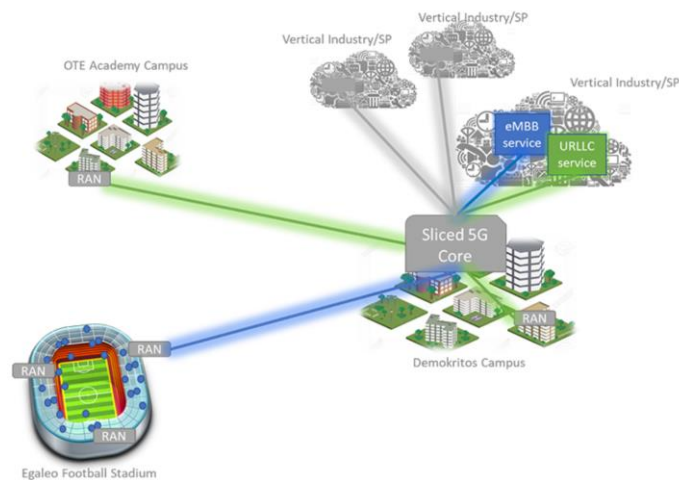
Figure 8. 5GENESIS website: Athens Platform page

Further below on the webpage, the visitors can read the platform-specific objectives, a short description of the platform (its features and the different site deployments), the use cases, the technologies used, vertical support, connectivity requirements and additional technical and non-technical information (Figure 9).

Platform Objectives

The Athens platform will be implemented on the Athens.5Glink (www.athens5glink.eu) testbed. Athens.5Glink is an open 5G testbed being built, set up in the city of Athens. The testbed is going to be extended so to offer the telecommunication ecosystem an E2E experimental 5G platform, showcasing features of next generation networks, with particular focus on software network technologies (NFV/SDN) and edge computing for small cell infrastructures.

Short Description



Use cases

Use Case 1: Big event Use case

- Content creation – demonstrate adaptive upstream content transmission
- Low-latency AR applications – edge computing infrastructure will be used to host part of the AR application and serve the associated content

Use Case 2: UAV Use Case – “Eye in the sky” applications

- Control the drone over a low-latency 5G slice and transmit HD and 4K real-time video to the ground control station

Use Case 3: Security-as-a-Service (SecaaS) at the edge

- Deployment and automated configuration of security VNFs for the identification and mitigation of security incidents

Technologies available

SDN/NFV-based Management and Orchestration (MANO) with supported NFV MANO platforms: OSM, OpenBaton and TeNOR, End-to-End Network Slicing with predictable performance isolation, Network Functions Virtualization (NFV) of 5G Networks, NFVI based on OpenStack (supporting VMs or Containers) and OpenDaylight, 5G (core + NR + UEs) Networks across multiple administrative network domains

Support of Verticals

The coordinating organization (NCSRDI) acts as the single point of contact for the vertical user/experimenter, negotiating the terms of use/SLA as well as the compensation for the human and technical resources, which will be employed for the support of the experiment.

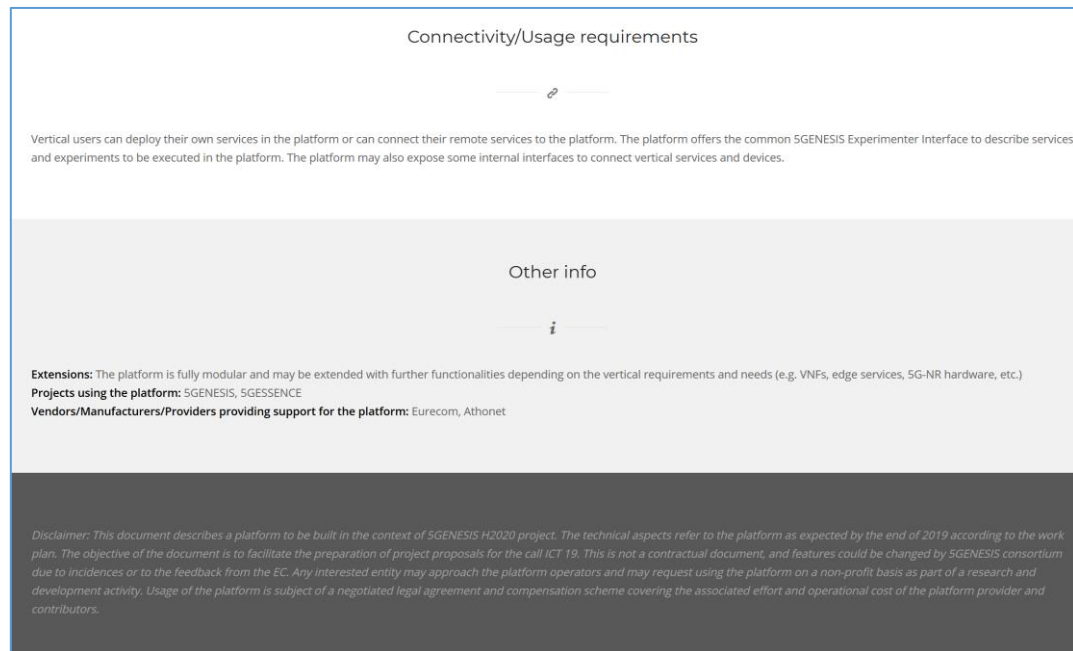


Figure 9. 5GENESIS website: Athens Platform page details

- **Consortium:** The consortium page aims to present all partners (29 partners) involved in the 5GENESIS Project, their company logo and their country of origin. Moreover, each partner's logo is a clickable/hyperlink tile which redirects the users to the partners' corresponding websites in order to obtain additional information on the company profile, business activities and research/achievements performed (Figure 10).

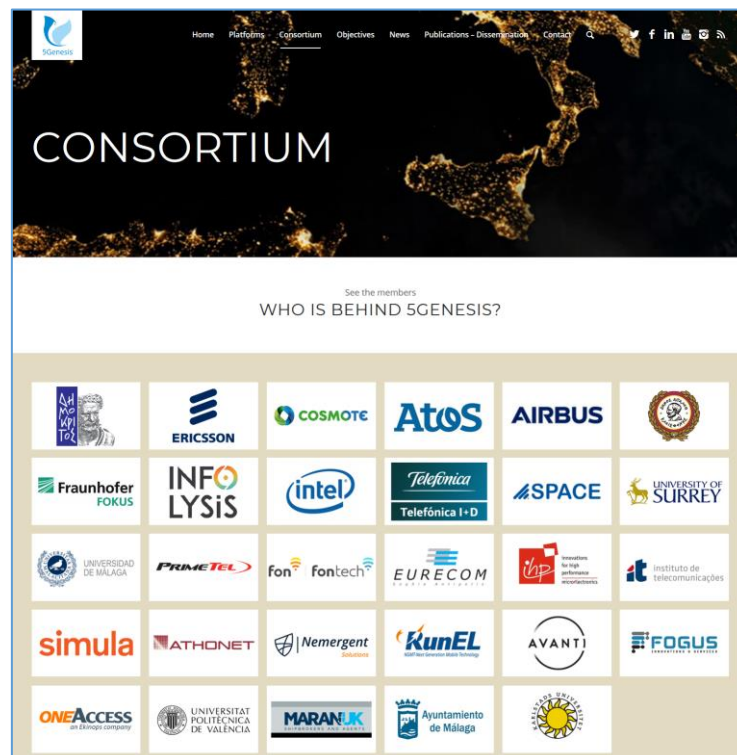


Figure 10. 5GENESIS website: Consortium page

- **Objectives:** This section offers a brief description of the motivation and scope of the project, a presentation of the five platforms, a blueprint of the 5G experimentation facility, project's objectives, metrics and 5G-PPP target KPIs.

OBJECTIVES

MOTIVATION & SCOPE

The fifth generation of mobile technology (5G) is positioned to address the demands and business contexts of IMT 2020 and beyond. Standards Development Organizations (SDOs), industry fora and research projects have identified as common ground the need to i) enhance the network architecture, in view of emerging technologies and features, and ii) push the envelope of performance, from network and user perspective, towards ultimate capabilities far beyond 4G, in support of a wide range of innovative use cases for various types of verticals. In this direction, under the 5G PPP Programme, Phase 1 projects have mapped the 5G requirements to specific Key Performance Indicators (KPIs) and formulated the overall 5G architecture that will achieve these KPIs. The ongoing 5G PPP Phase 2 projects are extending the work done in Phase 1 projects, by contributing to a selective experimentation of different technologies needed for the validation of the 5G architecture. With significant contribution from the research work of 5G PPP projects, 3GPP released recently early versions of the 5G standard incorporating end-to-end advances for the mobile network. In addition, the 5G Infrastructure Association (5G-IA), has already defined the roadmap towards the 5G Pan-European trials.

Irrefutably, the "Genesis of 5G" has entered the crucial phase of experimentation, and currently faces the challenge to validate the 5G network KPIs and verify the 5G technologies with an end-to-end approach. Towards this objective, a key challenge is to integrate all the highly diverse results and technologies from EU, global as well as internal (corporate) R&D projects, to "glue together" the 5G picture and unveil the potential of a truly full-stack, end-to-end 5G platform, able to meet the defined KPI targets.

Adopting the early releases of the 5G Architecture, the 5GENESIS will define a **5G experimentation blueprint**, that will serve as a common architectural reference. This blueprint will also include an openness framework, with APIs for exposing the facility to verticals for experimentation. By realising/instantiating this blueprint, 5GENESIS platforms will build its Facility on built on five diverse in terms of capabilities -yet fully interoperable- experimentation platforms distributed across Europe and interconnected (Figure 1). The platforms will emerge as the evolution of existing testbeds, already owned and operated by the 5GENESIS partners, suitable for large-scale field experimentation. Most of them are located in cities already identified by the 5G-PPP as "5G Trials Cities".

The five platforms of the 5GENESIS Facility, and their main features/orientation, are:

- **The Athens Platform.** An edge-computing-enabled shared radio infrastructure (gNBs and small cells), with different ranges and overlapping coverage that are supported by an SDN/NFV enabled core, to showcase secure content delivery and low latency applications in large public-events.
- **The Málaga Platform.** Automated orchestration and management of different network slices over multiple domains, on top of the 5G NR and fully virtualised core network to showcase mission critical services in the lab and in outdoor deployments.
- **The Limassol Platform.** Radio interfaces of different characteristics and capabilities, combining terrestrial and satellite communications, integrated to showcase service continuity and ubiquitous access in underserved areas.
- **The Surrey Platform.** Multiple radio access technologies that can support massive Machine Type Communications (mMTC), including 5G NR and NB-IoT, combined under a flexible Radio Resource Management (RRM) and spectrum sharing platform to showcase massive IoT services.
- **The Berlin platform.** Ultra dense areas covered by various network deployments, ranging from indoor nodes to nomadic outdoor clusters, coordinated via advanced backhauling technologies to showcase immersive service provisioning.

Key results and lessons learned from the experimentation in the platforms will be used in the project to develop and release a Portable 5G Demonstrator for live demonstration of the 5G PPP KPIs' feasibility in multiple dissemination and communication events.

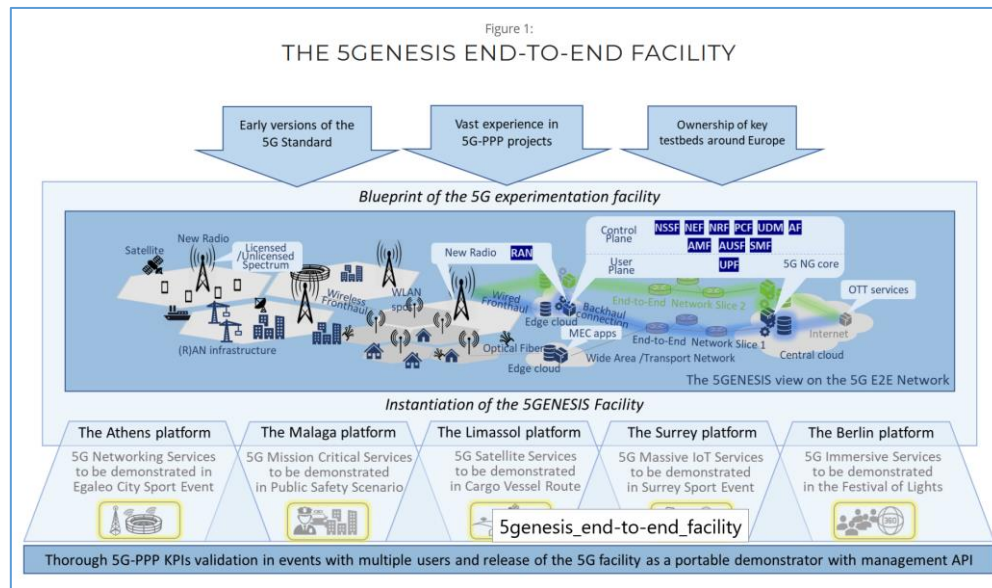


Figure 11. 5GENESIS website: Objectives page

- News:** The News section offers regular news updates in regards to the project activities and achievements in which project partners have participated such as publications, workshops, presentations, conferences, etc. By clicking on each post, the visitor is redirected to a new page where the full text/article is available for reading. In addition, the news page provides the option to subscribe to the 5GENESIS newsletter as well as to read the latest twitter feeds (Figure 12). Moreover, at the right side of the News section, the recent posts, archives of previous months as well as categories/tags can be found.

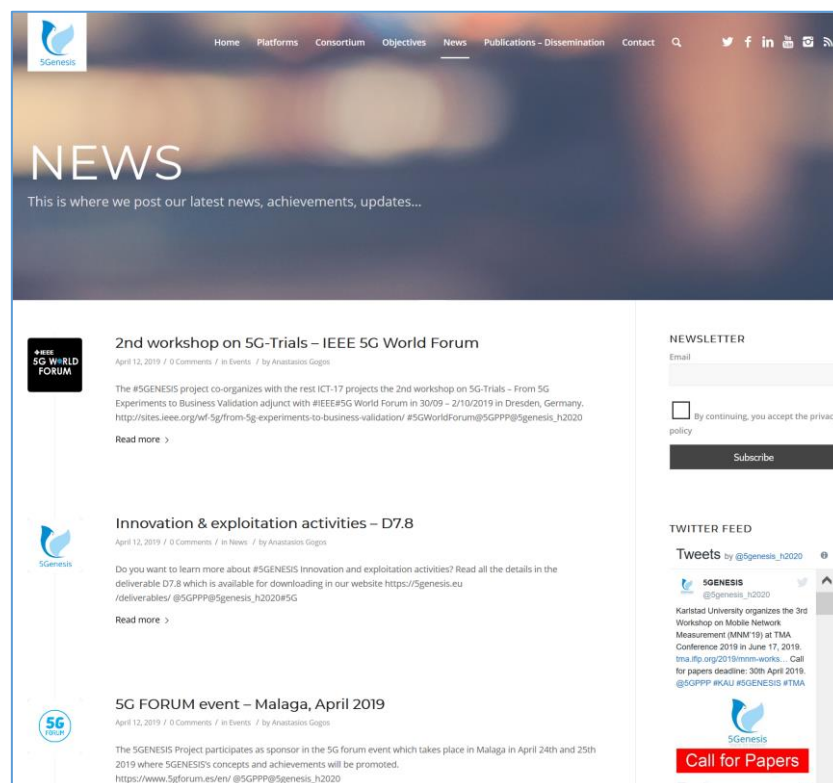


Figure 12. 5GENESIS website: News page

- **Publications-Dissemination:** This section has various subsections which focus on the project's activities such as research papers, published articles, presentations, press releases, the project's deliverables and newsletter, workshops and various other events.

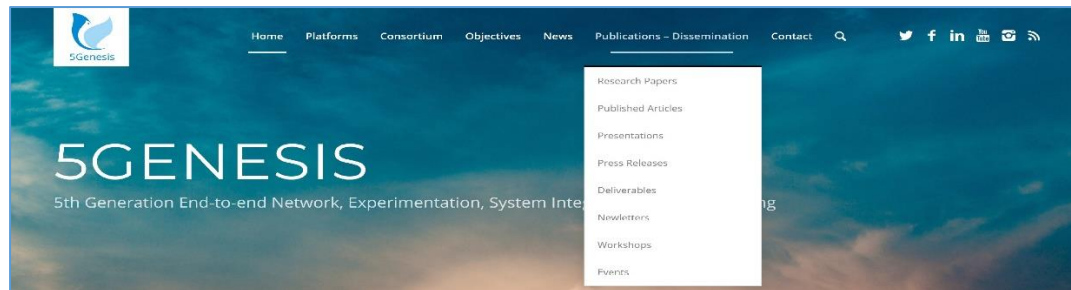


Figure 13. 5GENESIS website Publications-Dissemination menu

- **Research Papers:** This page contains the 5GENESIS research papers which have been published in journals, conferences and workshops along with their respective links in order to download the full paper/publication.



Figure 14. 5GENESIS website: Research Papers page

- **Published Articles:** This page aims at presenting articles published in less technical media such as newspapers, magazines or online news/information sites. The website visitors can access them by clicking on their respective titles and download the full article in pdf format or be redirected to the article's corresponding page/website (Figure 15).

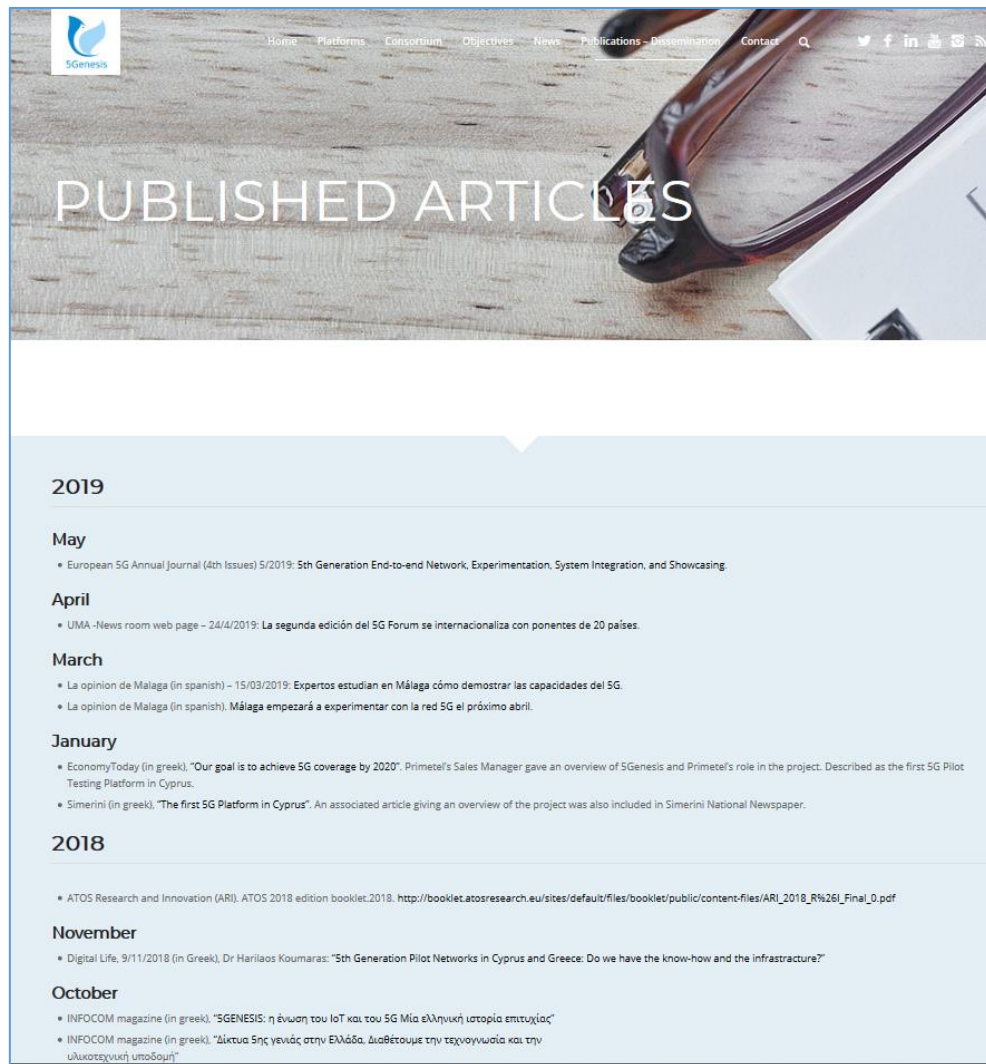
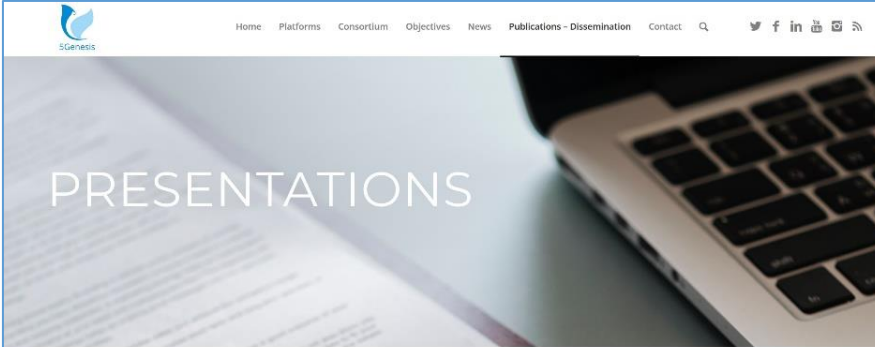


Figure 15. 5GENESIS website: Published Articles page

- **Presentations:** Several presentations of 5GENESIS are taking place on a regular basis in conferences, workshops, special sessions and various events. This page lists all 5GENESIS presentations per event, location, date and presentation title.



EVENT	DATE/LOCATION	TITLE
1. EuCNC 2018	18-21/06/2018, Ljubljana, Slovenia	5GENESIS presentation
2. EuCNC 2018	18-21/06/2018, Ljubljana, Slovenia	Presentation of economic aspects of 5GENESIS
3. 5G PPP ICT-19 INFO DAY	14/9/2018, BRUSSELS	Presentation of 5GENESIS project and platforms
4. CAMAD-2018	17-19/09/2018 - Barcelona, Spain	5GENESIS: The Genesis of a flexible 5G Facility

Figure 16. 5GENESIS website: Presentations page

- **Press Releases:** Press releases referring to the project achievements and activities are published on this page and are available for downloading (Figure 17). “Press releases” is an activity mainly starting for Y2 of the project and will be continued till its end.

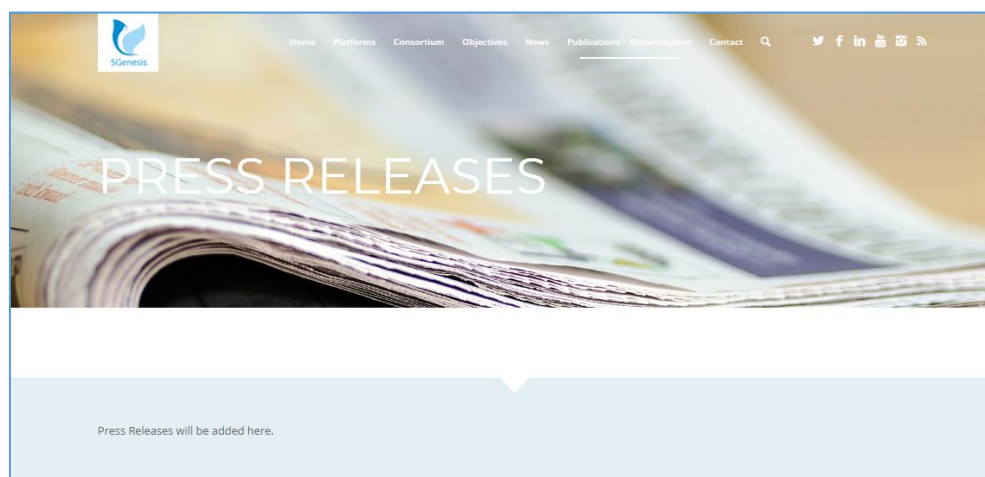
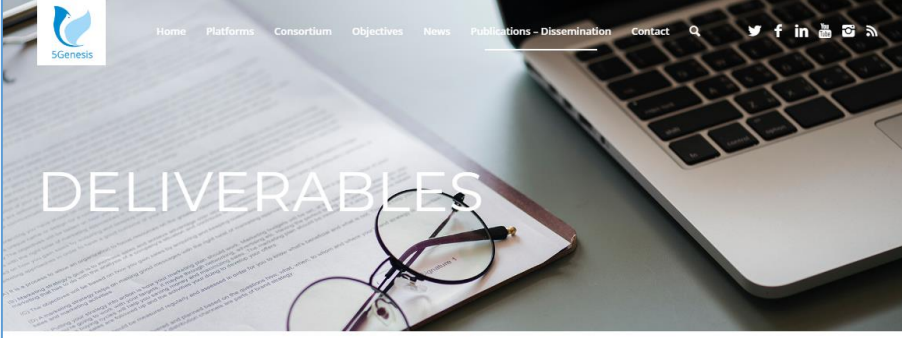


Figure 17. 5GENESIS website: Press Releases page

- **Deliverables:** The deliverables page aims at presenting all the deliverables of the project along with their delivery date as well as a download link whenever permitted by the dissemination level (e.g. Public). In specific, each deliverable has type and dissemination level registered to it referring to whether it is report or demonstrator, confidential or public. In addition, the partner acting as the deliverable’s leader/editor is noted next to each one.



Del. No	Deliverable name	WP	Leader	Type	Dissem. level	Delivery date	Download
D1.1	Project management handbook	1	NCSRD	R[1]	C[2]	M3	
D1.2/1.3/1.4	Legal aspects and data management	1	INF	R	C/C/C	M3/18/30	
D1.5/1.6/1.7	Report on Project cumulative Expenditure	1	NCSRD	R	C/C/C	M12/M24/M36	
D2.1	Requirements of the facility	2	COS	R	P[3]	M3	PDF
D2.2	Initial overall facility design and specifications	2	LMI	R	P	M5	PDF

Figure 18. 5GENESIS website: Deliverables page

- **Newsletters:** the Newsletters page hosts all the 5GENESIS newsletters released so far. There is a preview of each of the newsletters as well a download option in a pdf format. Please note that 5GENESIS newsletters are issued quarterly.

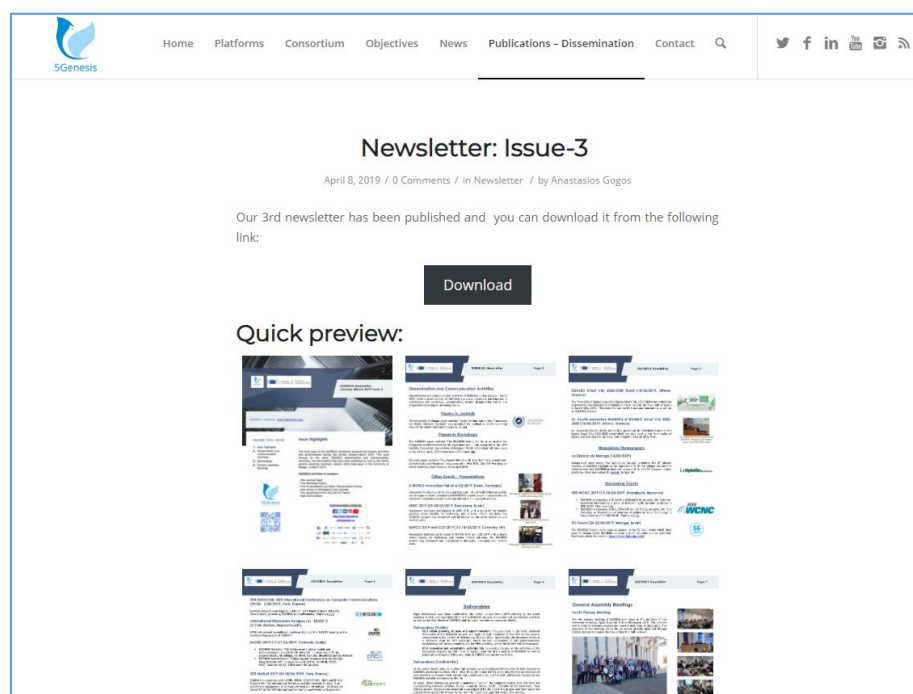


Figure 19. 5GENESIS website: Newsletter page

- **Workshops:** This page (and its two subpages) is used for the provision of additional information on specific workshops in which 5GENESIS participates, organizes or co-organizes with other projects and their CfP information that is

hosted in the 5GENESIS website pages (Figure 20). In most cases, 5GENESIS workshops are intensively promoted through the News page of the website and through the 5GENESIS social media channels in which a direct link for the specific workshop/event webpage is provided.

The figure consists of two screenshots of the 5GENESIS website. The top screenshot shows the 'Workshops & Special Sessions' page, which features a table listing upcoming events. The bottom screenshot shows the 'IEEE WCNC 2019 Workshop' page, which includes a call for papers (CFP) and details about the workshop's focus on satellite-terrestrial interworking.

EVENT	DATE/LOCATION	WORKSHOP/SPECIAL SESSION NAME
1. FUSECO Fokus	14-15/11/2018, Berlin	Workshop on "Architectures and Radio Technologies for 5G Transport- and Access Networks."
2. FUSECO Fokus	14-15/11/2018, Berlin	Architectures and Radio Technologies for 5G Transport- and Access Networks
3. WCNC 2019	15 /04/2019, Marrakech, Morocco	Satellite-terrestrial interworking: a pillar of forthcoming 5G

IEEE WCNC 2019 Workshop

SATELLITE-TERRESTRIAL INTERWORKING: A PILLAR OF FORTHCOMING 5G SYSTEMS

This workshop is co-organized by the EU-funded projects 5GENESIS and SaTSG, & by the EU-Korea co-funded project SGALLSTAR.

Figure 20. 5GENESIS website: Workshops page and Cfp page

- **Events:** This page aims at presenting various communication and dissemination events where 5GENESIS Project partners have been involved. The title of the event alongside the date and place in which they were organized, are presented.

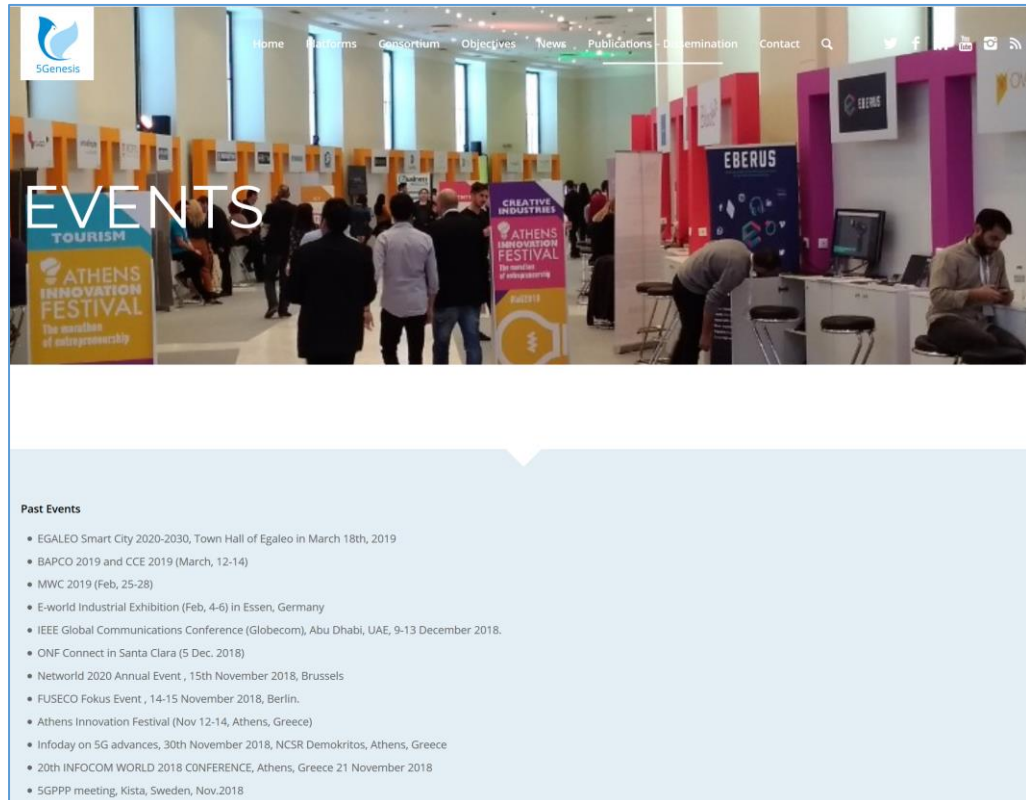


Figure 21. 5GENESIS website: Events page

- **Contact:** The contact page provides a contact form which the visitors can fill in with information such as name, e-mail and the message that they would like to communicate to the 5GENESIS project team (Figure 22).

Figure 22. 5GENESIS website: Contact page

Alternative, the following dedicated email accounts have been created (also included in the project leaflet) for direct communication with the leading team of the project and each platform respectively:

- General info: info@5genesis.eu
- 5GENESIS Athens facility: athens@5genesis.eu
- 5GENESIS Malaga facility: malaga@5genesis.eu
- 5GENESIS Limassol facility: limassol@5genesis.eu
- 5GENESIS Surrey facility: surrey@5genesis.eu
- 5GENESIS Berlin facility: berlin@5genesis.eu

2.2.3. 5GENESIS Social Media Channels

Social media allow people or companies to create, share or exchange information with a broader public. 5GENESIS project has created accounts in the most commonly used social media channels such as Twitter, LinkedIn, Facebook, Instagram and YouTube. These social media channels were created in the mid of June 2018 and they are actively running since then following the 5GENESIS social media strategy already described in D7.1.

As per the 5GENESIS social media strategy, each of these channels is used in order to communicate the different type of content to the public in regard to their scope. For example, Twitter and LinkedIn are business/academic oriented channels thus more technical content is presented targeting a technical and scientific oriented audience, whereas Facebook and Instagram are more generic, targeting a wider public (such as people with no technical background) who would like to get informed about the project and 5G in general. Consequently, Facebook and Instagram are channels used for communicating non-technical information about 5GENESIS such as technological/innovation events, 5G relate articles of general interest, 5GENESIS newsletter, communication activities, etc. Finally, the YouTube account is used in order to communicate multimedia content and at later stages promote the project's demonstrations and 5GENESIS core partners interviews.

Social media channels are an important part of the 5GENESIS dissemination and communication activities as they allow the promotion of the project's activities to the public. The content of the social media channels covers various aspects and types such as project-related news, activities, conferences, workshops, newsletter issues, deliverables as well as Call for papers, publications and scientific papers. In addition, news of general interest, articles and achievements related to 5G are regularly addressed to the public mainly through the Facebook and Instagram media channels.

Finally, it worth mentioning that links of the social media channels can be found at the 5GENESIS official website (www.5genesis.eu), located at the header and footer, as well as in all 5GENESIS dissemination and communication material (electronic version of newsletter, leaflets, flyers, posters, etc).

As per the 5GENESIS communication plan, already analysed in D7.1, during the first two months of the 5GENESIS social media channels operation, the core objective was the attraction/accumulation, at a fast pace, a broad range of followers. Topics such as 5G advances, events, as well as, the information in regards to 5GENESIS initial activities were communicated by all 5GENESIS channels. After the initial two-month period, the plan on how and what to

communicate over the social media channels was further enhanced in order to become more focused on the promotion of the project's dissemination and communication activities towards the 5GENESIS audience. Thus, since September 2018 and onwards, most of the project specific posts bared the hashtag title “**#LearnAbout5GENESIS**” in order to promote the activities of the project and differentiate them from posts of general interest. The “**#LearnAbout5GENESIS**” series of posts will accompany 5GENESIS through its entire lifetime.

Furthermore, the 5GENESIS project since its initiation and as part of its communication plan/strategy aims at providing constant weekly information and updates to the public via its four core social media channels (Twitter, LinkedIn, Facebook, Instagram). The posting rate during the first three months of the project was high, aiming at communicating information intensively over the social media (e.g. an average of 3-4 weekly posts, in order to make an intense presence and acquire fast a great number of followers), whereas since September-October 2018, the posting rate of the social media changed to an average of 2-3 weekly posts, a rate that will be maintained till the end of the project (providing news and updates at a constant pace). It is worth pointing out, that in times of major events such as conferences/presentations, workshops or plenary meetings, the use of the social media channels is intensified in order to adequately promote the particular events and as a result, the weekly number of posts increases temporarily. The YouTube channel, as mentioned previously, focuses on promoting multimedia content thus it does not have constantly an active role like the rest of the social media channels. YouTube is used only when videos from various activities such as presentations, demos, webinars and interviews are available. As per 5GENESIS communication plan/strategy, the YouTube channel will be used more intensively during years 2 and 3 of the project.

The 5GENESIS social media posts focus on the following topics and activities:

- News and updates on the project's progress, activities, achievements and meetings
- Submission of papers and organization/co-organization of workshops
- Project's presentations at workshops, conferences and info days
- Call for Papers, research papers and articles published along with their respective URLs
- Demos and showcases of the project in various events and exhibitions
- Conferences, events and meetings that consortium members are involved. Relevant text, dates, information and pictures are provided prior to and during these meetings.
- Articles and news of general interest related to 5G, addressing the general public/audience/followers.

The links to the aforementioned 5GENESIS social media channels are the following:

- 5GENESIS Twitter account “@5genesis_h2020”: www.twitter.com/5genesis_h2020



Figure 23. 5GENESIS Twitter Channel

- 5GENESIS LinkedIn account “5GENESIS Project”: www.linkedin.com/in/5genesis-h2020/

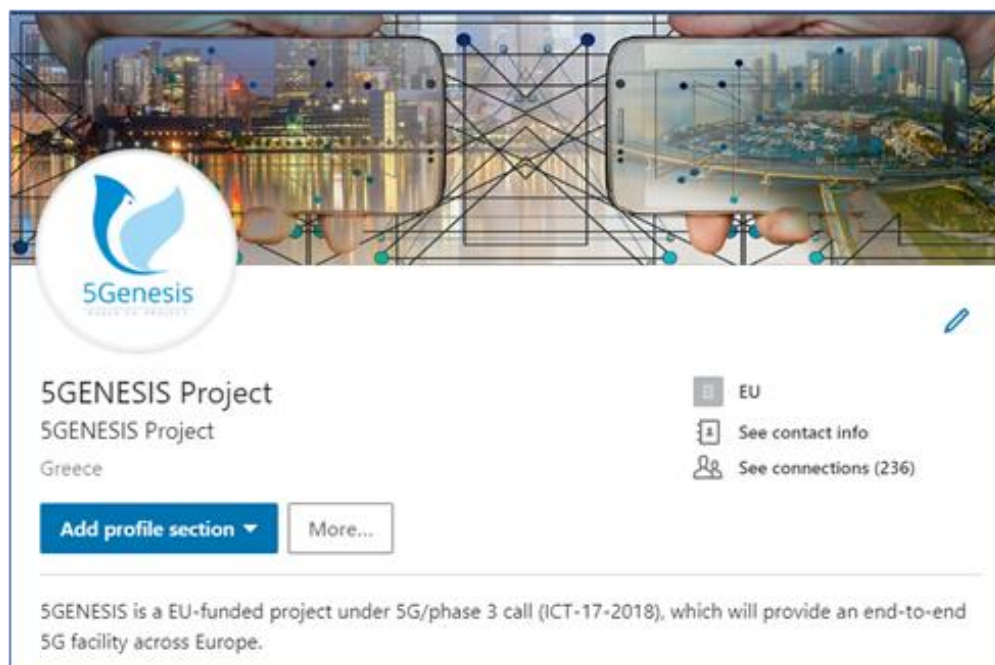


Figure 24. 5GENESIS LinkedIn Account

- 5GENESIS Facebook account “@5genesis”: www.facebook.com/5genesis



Figure 25. 5GENESIS Facebook Page

- 5GENESIS Instagram account “5genesis_h2020”: www.instagram.com/5genesis_h2020



Figure 26. 5GENESIS Instagram Account

- 5GENESIS YouTube Channel: www.youtube.com/channel/UCrT3GgwTi3nGiHLWmKUkxug

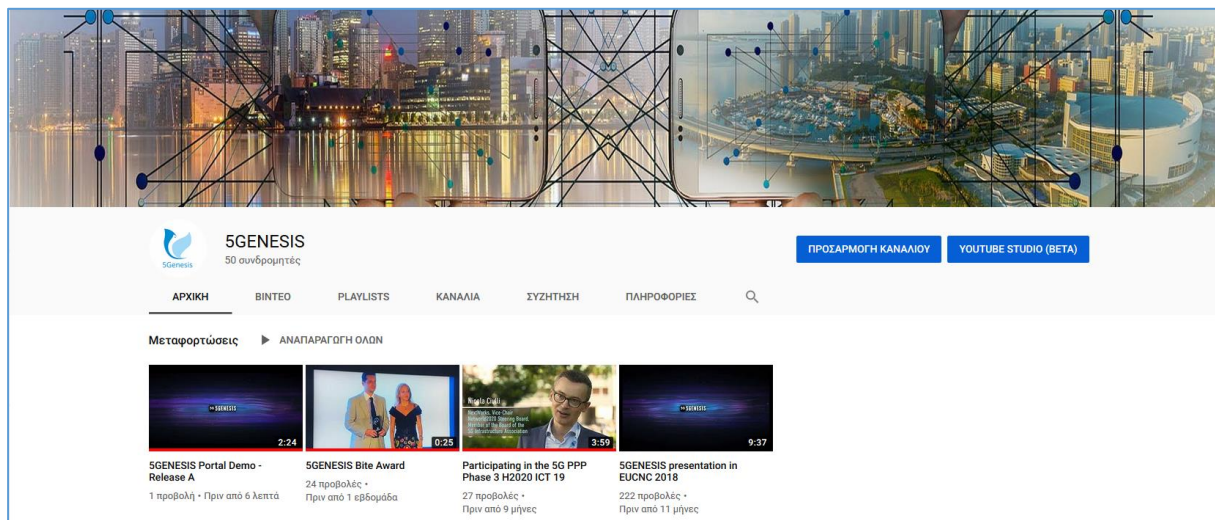


Figure 27. 5GENESIS YouTube Channel

2.2.4. 5GENESIS Newsletter

The 5GENESIS newsletter is issued quarterly and right away is communicated via e-mail to the project's partners. In addition, it is communicated to the public via the newsletter mailing list (to all enrolled subscribers), the official website and the social media channels. Any interested in 5GENESIS can subscribe himself to the newsletter mailing list, through 5GENESIS website, and be regularly notified about the news of the project directly to his registered email. In addition, the social media channels promote the latest newsletter issues via their social platforms encouraging the wider public to subscribe and be notified of the latest news and activities.

The newsletter content is constantly adapted to the needs of each period/issue but there are permanent sections/columns that exist in every issue such as dissemination and communication events, publications, plenary meetings, deliverables etc. In addition, in order to facilitate the process of locating past issues, there is a dedicated newsletter page at the 5GENESIS website (<https://5genesis.eu/category/newsletter/>), where all published newsletter issues can be found and downloaded.

The first newsletter issue was released at the beginning of October 2018 reflecting the first three months of the project (July-September 2018). During the first year of the project (June 2018 – June 2019), three newsletter issues have already been issued and the fourth one (referring to the quarter April-June 2019) is under publication (planned to be released during the first half of July 2019).



Figure 28. 5GENESIS newsletter issue 1 – cover page

In specific, Figure 28 provides an overview of 5GENESIS newsletter template (layout, structure, content format). This is the template in its initial format as used for the first issue which was released at the beginning of October 2018 and highlighted all the major activities and events that took place during July – September 2018. Since then the template has been further evolved including additional sections/pages based on the content/events that need to be documented per period.

2.2.5. 5GENESIS Publications

This section presents the various types of publications where 5GENESIS project has been involved during Year 1 and has been used as core means of project's dissemination and communication activities.

2.2.5.1. Publications in Conferences, Journals and Workshops

5GENESIS publications/papers have been made in conferences, journals and workshops during the first project year. In total, seven (7) papers have been published in conferences, four (4) papers in journals and three (3) papers in workshops where 5GENESIS partners have participated. More details are provided in Section 2.3.2

2.2.5.2. Other Publications

Additional publications have been made by 5GENESIS partners addressing the general public interest. Through such publications, 5GENESIS aims at presenting the project in a wider less technical/scientific/academic audience, through means of general attention such as newspapers, online media/websites as well as magazines. Currently, eleven (11) articles have been published by various 5GENESIS partners in a number of print and online media. More details are provided in Section 2.3.2.3.

2.2.6. 5GENESIS Workshops, Special Sessions, Panels, Invited Talks

5GENESIS partners have participated and have organized/co-organized numerous workshops, special sessions, panel discussions and invited talks since the beginning of the project.

Currently, 5GENESIS has participated/organized in 9 workshops and special session, 3 panels and invited talks, and in 13 other events such as Exhibitions, Business Days, Booths in Conferences, Sponsorships, Interviews etc. More details on the above activities are provided in Sections 2.3.2.4. , 2.3.2.6. and 2.3.2.7.

2.2.7. 5GENESIS Presentations

During the first year of the project, 5GENESIS partners have made several presentations of 5GENESIS in conferences, workshops and events, at various countries, addressing a versatile audience with the characteristics, advances and achievements of 5GENESIS. Currently, the 5GENESIS project's partners, have participated in 27 presentations promoting the project in various events. Detailed analysis of the presentations is given in Section 2.3.2.5.

2.2.8. Other Means and Channels

5GENESIS dissemination and communication activities also use additional means and channels that assist in raising public awareness about the project. During the first year of the project the following means and channels have been also used, mainly for supplementing the means and channels already mentioned in the previous sections:

- Flyers and Leaflets
- Banners and Posters
- 5GENESIS Handbook
- Participation in Info Days, Innovation, Poster sessions, Business events, sponsorship of events and innovation workshops (for the project's members)

In the following sections, a high level analysis of the current versions of flyers, leaflets, banners, posters and 5GENESIS handbook is presented. The rest activities are presented in Section 2.3.2.

2.2.8.1. Flyers and Leaflets

From the kick-off meeting of the project, core decisions were taken on the printed means that will be used during the lifetime of the project for communicating the project details, objectives and use cases. 5GENESIS flyers and leaflets were designed and printed during M2 and since then various versions of them are made available by 5GENESIS consortium at any participating event.

In specific, a general leaflet referring to 5GENESIS project was developed for promoting the vision, the roadmap and the five 5GENESIS facilities/platforms that will be used for experimentation (Figure 29 and Figure 30).



Figure 29. 5GENESIS Main Leaflet (front side)

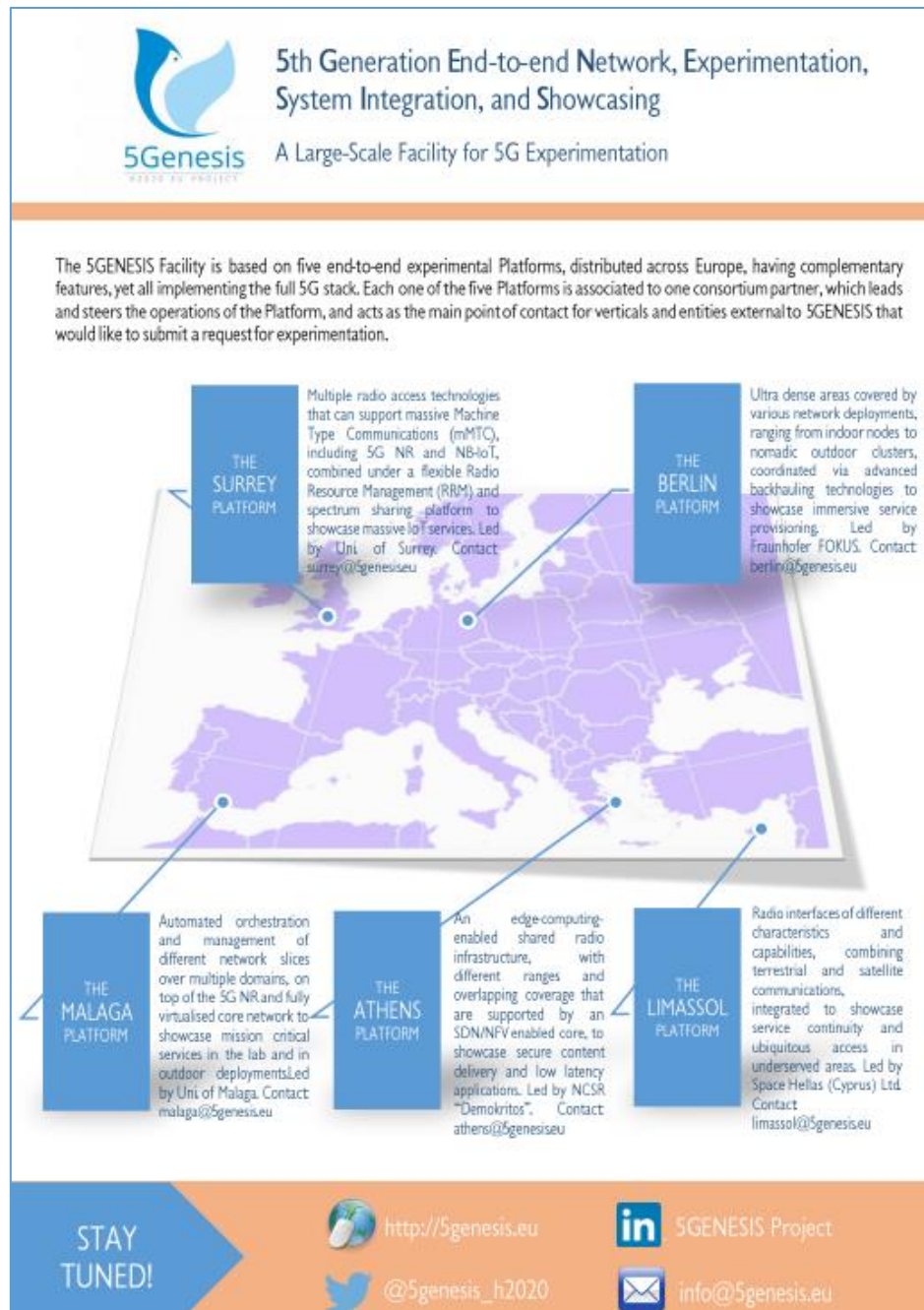


Figure 30. 5GENESIS Main Leaflet (back side)

In parallel, for being able to communicate and promote more effectively and efficiently the different characteristics, specifications, objectives and use cases of each facility/platform, five additional leaflets were developed, each one focused on a single platform (refer to Figure 31 up to Figure 35)

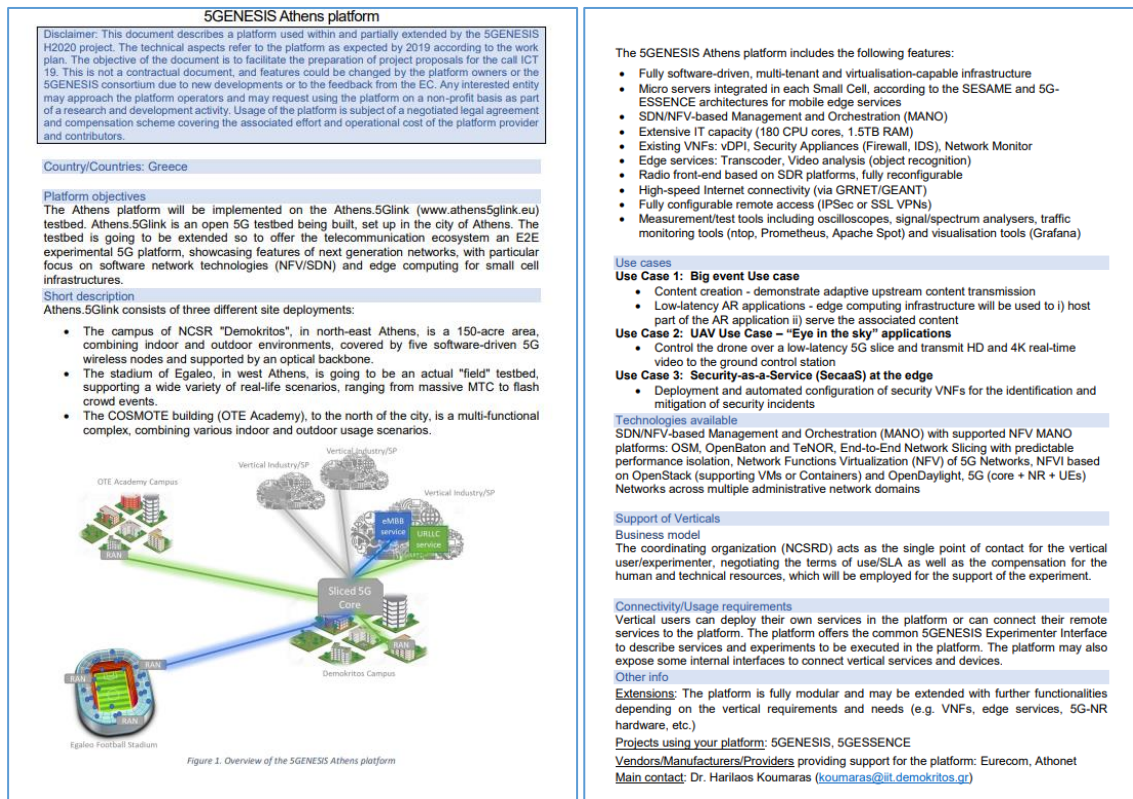


Figure 31. Athens Platform Leaflet

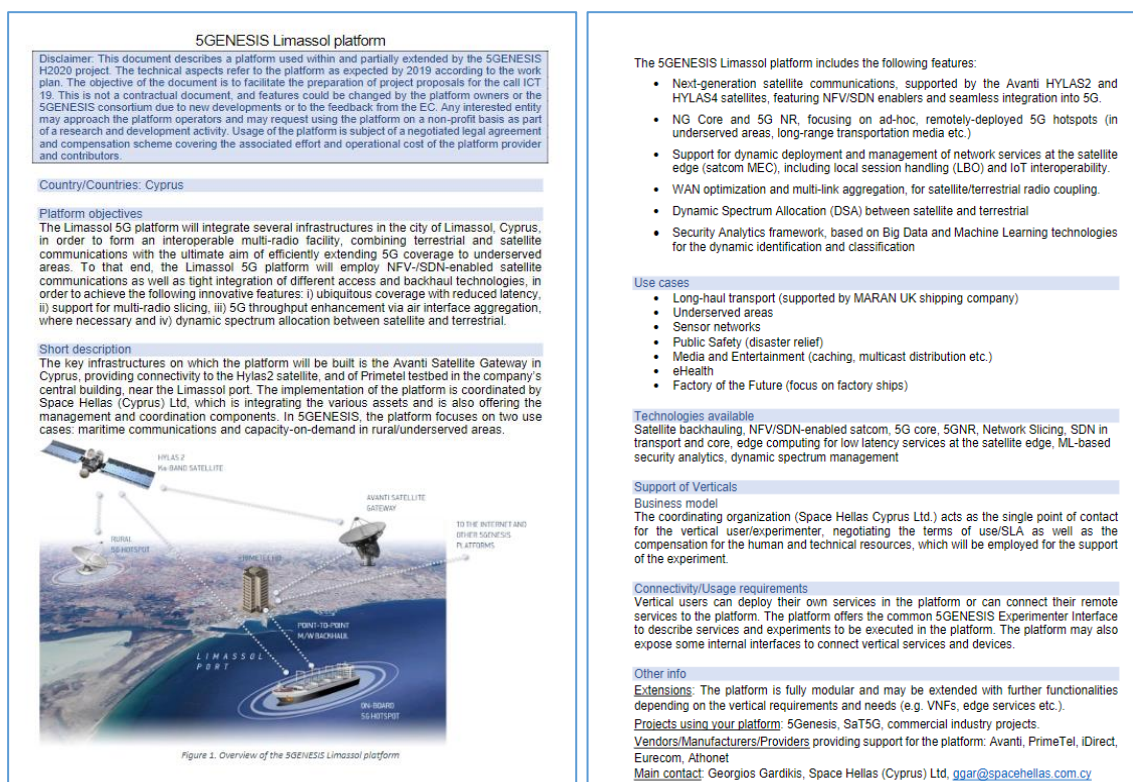


Figure 32. Limassol Platform Leaflet



Figure 33. Berlin Platform Leaflet

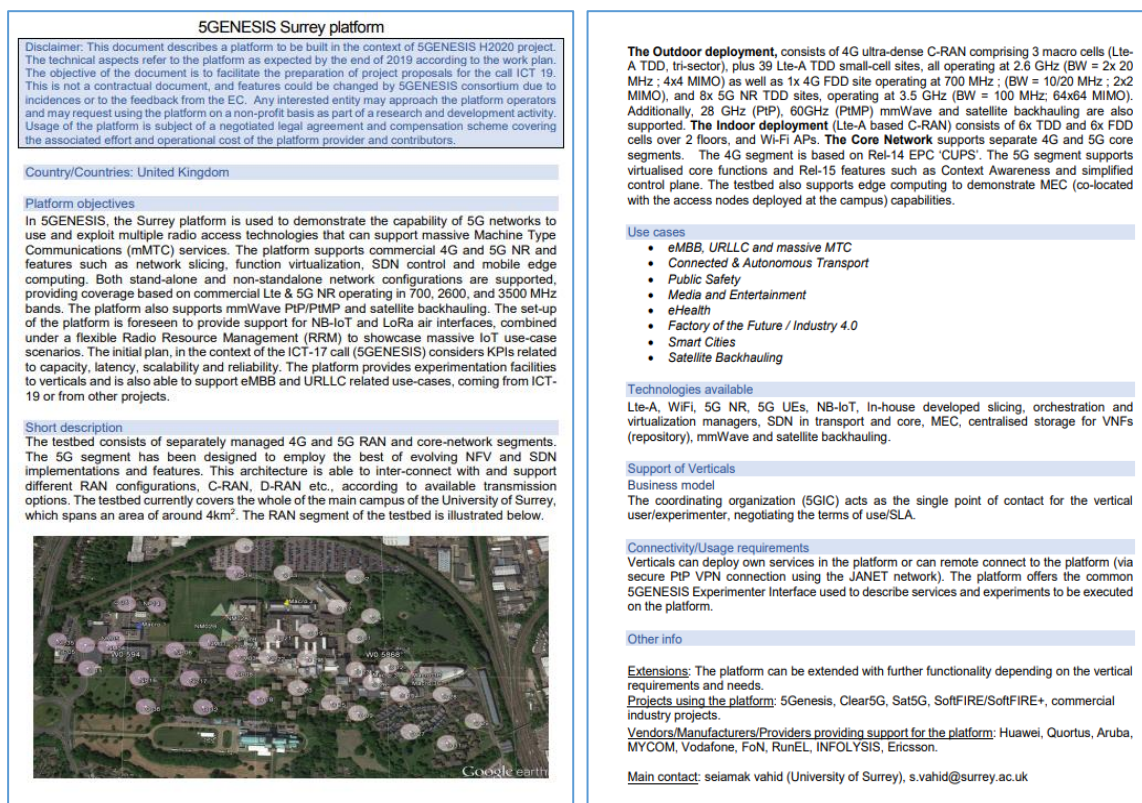


Figure 34. Surrey Platform Leaflet

5GENESIS Malaga platform

Disclaimer: This document describes a platform to be built in the context of 5GENESIS H2020 project. The technical aspects refer to the platform as expected by the end of 2019 according to the work plan. This is not a contractual document, and features could be changed by 5GENESIS consortium due to incidences or to the feedback from the EC. Any interested entity may approach the platform operators and may request using the platform on a non-profit basis as part of a research and development activity. Usage of the platform is subject of a negotiated legal agreement and compensation scheme covering the associated effort and operational cost of the platform provider and contributors.

Country/Countries: Spain

Platform objectives
5GENESIS Malaga platform aims the validation of selected 5G KPIs in indoor and outdoor 5G scenarios. Technologies in the platform are focussed on integrating 5G with other access technologies (4G, WiFi, fiber, ...) with great automation capabilities to execute experiments both unattended and with real users. The initial plan, in the context of the project funded in ICT-17 call (5GENESIS), considers KPIs related to capacity, speed, latency, reliability, density of users, location accuracy, service creation time and network management (CAPEX/OPEX). The use cases to validate the KPIs are related to Mission Critical Services. Once the platform has been validated as a 5G environment, it will support other use cases and KPIs coming from ICT-19 or from other projects. Expected use cases should require features related to eMBB and/or URLLC.

Short description
The physical infrastructure is mainly hosted and operated by University of Malaga (UMA), Malaga city (Police Department) and Telefonica. It is composed by 4 big areas:

- indoor fully automated UMA lab for initial testing of technologies and services and for identification of baseline values for KPIs
- outdoor UMA deployment for first testing of use cases in a controlled environment with and without real users
- outdoor Malaga city center deployment for testing with real users, including the possibility of large scale events
- edge computing platform at Telefonica premises in Malaga city (close to the access nodes deployed at the city center) to demonstrate the advantages of MEC capabilities

What can be supported:

- Lab indoor/building outdoor/large area in campus and city
- Extensible to cover vertical premises in the area
- 4-5 cells at UMA and 15-20 cells at Malaga city center
- 1-2 users (UE) in the lab, large community of users outdoor
- Different mobility scenarios: static, pedestrian and vehicular in outdoor deployments, static, pedestrian, vehicular and high speed emulated in lab
- Experimental and commercial UE and gNB (as far as they become available)

Use cases

- Automotive and road transport
- Transport
- Public Safety
- Media and Entertainment
- eHealth
- Factory of the Future / Industry 4.0
- Smart Cities
- Energy
- FinTech
- Smart Buildings

Technologies available
Fully software-automated, 5G NR, LTE-A, NB-IoT, LTE-WiFi aggregation, GPS emulation, Slice Manager, NFV (Openstack, OpenNebula, MANO orchestrator,) and SDN in transport and core, edge computing for low latency services.

Support of Verticals
Business model

- Business model restrictions (With agreement for use)

Connectivity/Usage requirements
Vertical can deploy their own services in the platform or can connect their remote services to the platform
The platform offers the common 5GENESIS Experimenter Interface to describe services and experiments to be executed in the platforms
The platform also expose some internal interfaces to connect vertical services and devices (most of them are 3GPP interfaces)

Other info
Projects using your platform
The starting point for 5GENESIS Malaga platform is the instance of TRIANGLE testbed hosted at UMA. This platform is (was) already used in the projects FLEX, Fed4FIRE, Fed4Fire+, Q4Health and TRIANGLE.

Vendors/Manufacturers/Providers supporting your platform
The platform (including TRIANGLE and new contributions by 5GENESIS partners) will integrate equipment and software coming from Keysight Technologies, Polaris Networks, Nokia, ATOS, Runel, Althonet, Eurecom, Airbus, Nemergent... (TBC)


Main contact: Pedro Merino (University of Malaga), pedro@icc.uma.es

Figure 35. Malaga Platform Leaflet

All platform leaflets are constantly updated and new versions are released for communicating the latest information and achievements to the public.

2.2.8.2. Banners and Posters

For enriching the participation/activities of 5GENESIS in conferences, workshops, booths and communication/dissemination events overall, means of posters, banners and rollups are used for better supporting and visualising the project's achievements. During Year 1, both general purpose and platform-specific posters/banners have been used (Figure 36 and Figure 37).



5Genesis

5th Generation End-to-end Network, Experimentation,
System Integration, and Showcasing

5Genesis aim is to validate the 5G network KPIs and verify the 5G technologies with an end-to-end approach. Towards this objective, a key challenge is to integrate all the highly diverse results and technologies from EU, global as well as internal (corporate) R&D projects, to 'glue together' the 5G picture and unveil the potential of a truly full-stack, end-to-end 5G platform, able to meet the defined KPI targets.

In this context, the main goal of 5GENESIS will be to validate 5G KPIs for various 5G use cases, in both controlled set-ups and large-scale events. This will be achieved by bringing together results from a considerable number of EU projects as well as the partners' internal R&D activities in order to realise an integrated End-to-end 5G Facility.

Objectives:

1. Design and establish a 5G experimentation blueprint that unifies diverse 5G components to support verticals over an end-to-end virtualised and sliced network.
2. Develop a 5G Facility that instantiates the identified experimentation blueprint in 5 interoperable end-to-end platforms.
3. Qualitatively assess and quantitatively validate business, performance, and societal 5G PPP KPIs in representative 5G use cases.
4. Continuously align with –and contribute to– the evolution of 5G standards, by adopting an iterative integration and upgrade development methodology.
5. Release a portable 5G Demonstrator to maximise visibility and facilitate dissemination and communication activities.

Large Scale Facility for 5G experimentation

Limassol Platform
Radio interfaces of different characteristics and capabilities, combining terrestrial and satellite communications, integrated to showcase service continuity and ubiquitous access in underserved areas.

Athens Platform
An edge-computing-enabled shared radio infrastructure (gNBs and small cells), with different ranges and overlapping coverage that are supported by an SDN/NFV enabled core, to showcase secure content delivery and low latency applications in large public events.

Málaga Platform
Automated orchestration and management of different network slices over multiple domains, on top of the 5G NR and fully virtualised core network to showcase mission critical services in the lab and in outdoor deployments.


Berlin Platform
Ultra dense areas covered by various network deployments, ranging from indoor nodes to nomadic outdoor clusters, coordinated via advanced backhauling technologies to showcase immersive service provisioning.

Surrey Platform
Multiple radio access technologies that can support massive Machine Type Communications (mMTC), including 5G NR and NB-IoT, combined under a flexible Radio Resource Management (RRM) and spectrum sharing platform to showcase massive IoT services.


5Genesis facility will provide the following features:

- Implement and verify all evolutions of the 5G standard, via an iterative integration and testing procedure;
- Engage a wide diversity of technologies and chain innovations that span over all domains, achieving full-stack coverage of the 5G landscape;
- Unify heterogeneous physical and virtual network elements under a common coordination and openness framework exposed to experimenters from the vertical industries and enabling end-to-end slicing and experiment automation; and
- Support further experimentation projects, in particular those focused on vertical markets

- 5GENESIS Athens Platform: athens@5genesis.eu
- 5GENESIS Málaga Platform: malaga@5genesis.eu
- 5GENESIS Limassol Platform: limassol@5genesis.eu
- 5GENESIS Berlin Platform: berlin@5genesis.eu
- 5GENESIS Surrey Platform: surrey@5genesis.eu



Find us at:



[@5genesis_5GPP](#) [@5genesis_5GPP](#)

The research conducted under the 5GPPP project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement Number 101017724

Figure 36. 5GENESIS General Poster

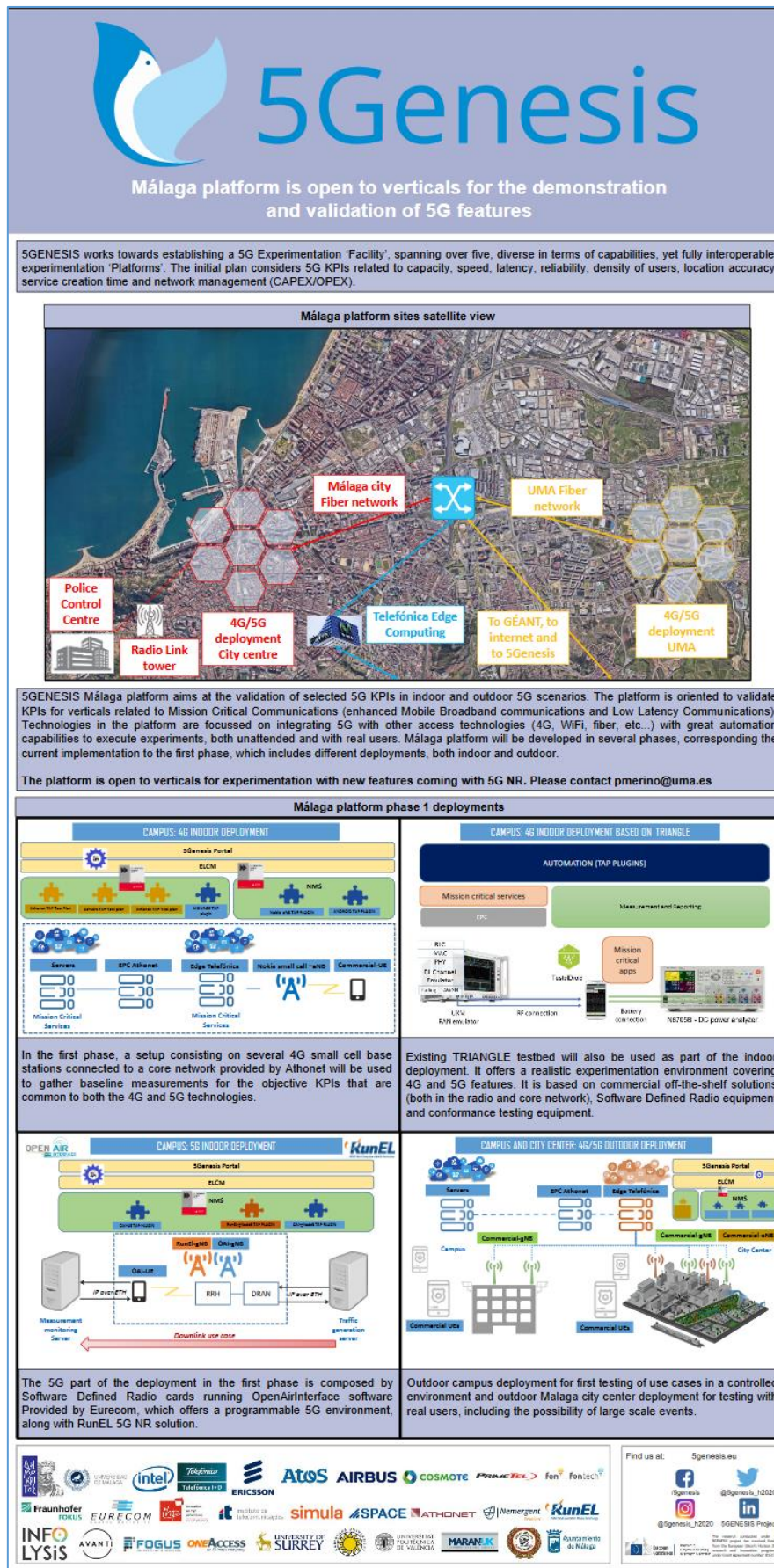


Figure 37. 5GENESIS Malaga Platform Poster

2.2.8.3. 5GENESIS Handbook

5GENESIS released the “5GENESIS Handbook for ICT-19-2019 proposers” in September 2018, which provides an overview of the 5GENESIS platforms (Athens, Malaga, Limassol, Berlin and Surrey). In addition, this handbook provides details regarding the procedure of submitting requests to 5GENESIS platforms in the framework of ICT-19-2019 proposals experimentation. The handbook is available for downloading at the 5GENESIS website (<https://5genesis.eu/wp-content/uploads/2018/09/5GENESIS-Handbook.pdf>).

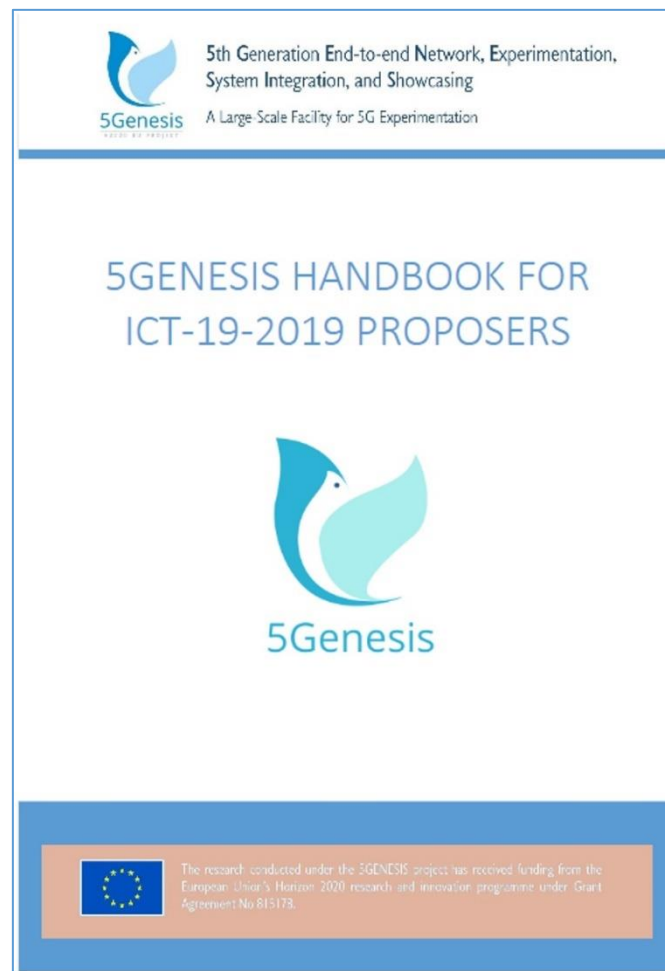


Figure 38. 5GENESIS Handbook

As per planned activities, the 5GENESIS Handbook will be updated during July 2019 in order to provide all the necessary guidelines to potential experimenters/ICT-19 projects that want to use the 5GENESIS facilities/portal for their experiments.

2.2.9. Means for Coordinating, Monitoring and Controlling Activities

In order for the consortium to closely monitor all planned and performed dissemination and communication activities, and ensure that the appropriate progress is made and goals are met, specific tracking, monitoring and evaluating tools and methods are applied in order to spot easily and promptly any deviations/weaknesses compared to the set plan.

2.2.9.1. BSCW file sharing portal

5GENESIS partners use an online file sharing portal in order to share files and collaborate with each other. This file sharing portal is the **Basic Support for Cooperative Work (BSCW) portal repository** and has been developed by the Fraunhofer Society. The link used for accessing the online sharing portal (username/password required) is: <https://bscw.fokus.fraunhofer.de>

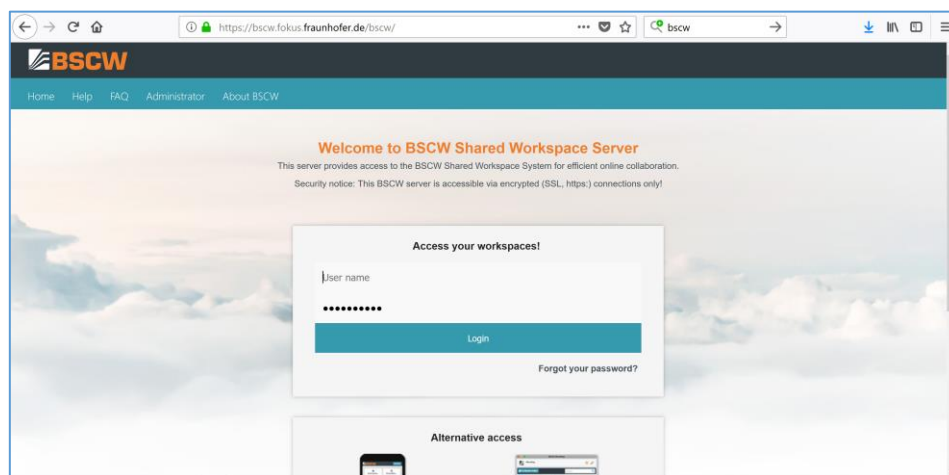


Figure 39. BSCW portal

Currently, the project repository has the following folders (Figure 40) and numerous subfolders which are updated constantly throughout project's lifetime in order to address new needs and requirements:

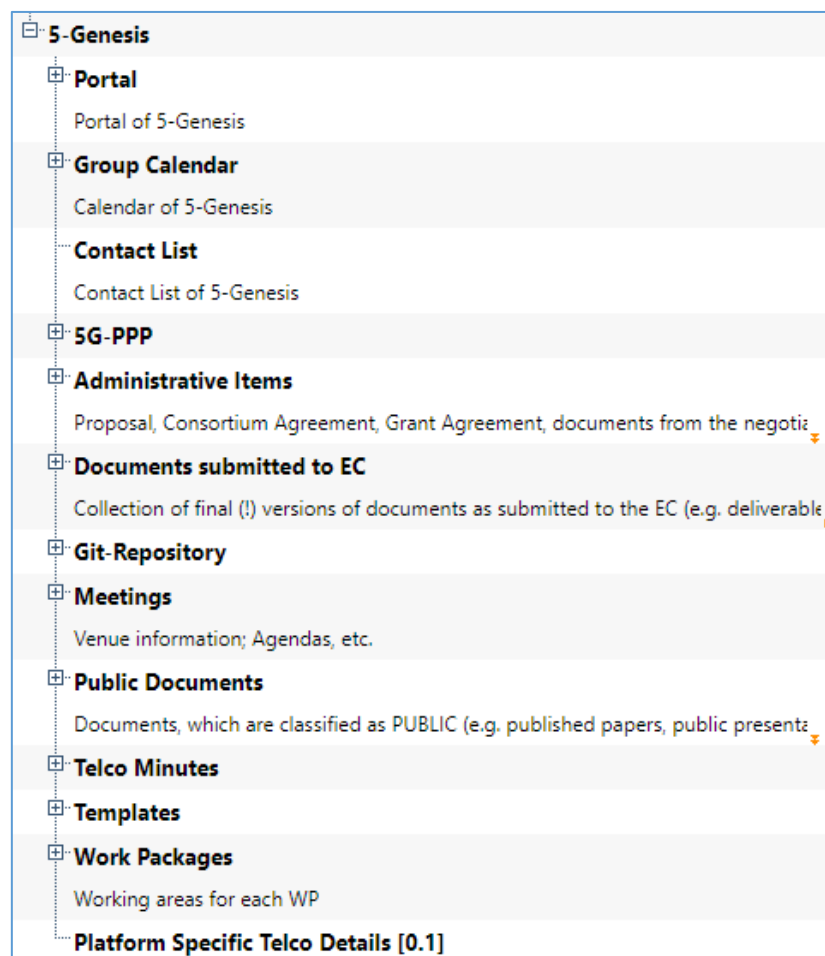


Figure 40: Structure of 5GENESIS project repository (BSCW)

2.2.9.2. WP7 activities and impact tracking file

All the activities that the 5GENESIS partners have performed or plan to perform, are documented in an excel file in the BSCW online sharing portal. The file is entitled “WP7 Activities”. In this commonly shared file, all partners have access and they can add the details of presentations/conferences/workshops/events and publications they have participated. Besides the activities that the partners have been involved in, can also be added activities which will be performed in the near future (Figure 41). The WP7 Activities tracking file contains various information on the activity such as the title of the activity, the event (if any) where it takes place, the partners involved, a small description of the activity, the date and location in which will take place as well as information regarding whether is an already performed event, an upcoming/finalized event (written in red colour) or if it is a publication submitted and pending acceptance or already accepted and published.

A	B	C	D	E	F																R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	JJ	JK	JL	JM	JN	JO	JP	JQ	JR	JS	JT	JU	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XQ	XR	XS	XT	XU	XV	XW	XX	XY	XZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ
					Ref	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 |<

Figure 41: 5GENESIS WP7 Activities tracking file

2.2.9.3. 5GENESIS Social Media and Website Statistical Dashboards

INFOLYSIS, as task leader of T7.1, collects, processes and visualizes on a monthly basis the 5GENESIS social media data and web site activity via the use of Google Data Studio interactive Dashboards exclusively developed for presenting and visualizing performance statistics of 5GENESIS social media channels and website. 5GENESIS Dashboards are issued and distributed internally on a monthly basis to all the WP7 consortium members, via the WP7 mailing list (provision of URL links via email for accessing the corresponding monthly dashboards), and form the mechanism for monitoring social media/website monthly performance and impact to the public.

All the monthly links are also maintained in the project's BSCW portal repository and every partner can easily access them at any time. Depending on the ongoing needs of the project dashboards can be released on-demand, referring to longer periods of time (e.g. quarterly, semiannually, and annually).

More details on annual and monthly 5GENESIS social media and website dashboards are provided in Sections 2.4.2 and 2.4.3, as well as in Annexes - Sections 6 and 7.

2.2.9.4. WP7 telcos

Another monitoring method of the 5GENESIS activities is the weekly/biweekly and monthly telcos that are organized at several levels (GA, WP or task). Each of the workpackages has its respective telco meeting. The telco meetings of the WP7 activities take place each month and the partners discuss the activities in which they were involved, actions to be taken into account as well as upcoming steps.

2.2.9.5. WP7 mailing list/emails

The 5GENESIS consortium has created dedicated mailing lists in order for all the partners to be kept informed of the project's status and activities. For each work package, a dedicated mailing

list has been created so that specific information can be communicated amongst partners. In addition, general mailing lists are used for addressing general topics to all partners. Through the use of the general and WP specific mailing lists, better coordination and diffusion of information is achieved among the consortium members. WP7 mailing list is considered as one of the main mechanisms of coordinating WP7 involved partners and their activities during the first year of the project.

2.2.9.6. GA Meetings

The 5GENESIS project's partners, since the project's initiation, have organized five (5) General Assembly (GA) Meetings. The GA Meetings of the first year have been organized in: Athens, Munich, Surrey, Malaga and Valencia. The GA meetings serve as an opportunity to meet with the rest of the partners, discuss the project's current and upcoming activities as well as the action plans that need to be taken and their performance evaluation. In specific, Table 1 summarizes all Year 1 5GENESIS GA meetings and further below each one is briefly analyzed:

GA Meetings		
Meeting	Location	Date
Kickoff Meeting	Egaleo Town Hall, Athens, Greece	10-11/07/2018
Second GA Meeting	Intel/Infineon Campeon Headquarters, Munich, Germany	29-31/08/2018
Third GA Meeting	5G Innovation Centre, University of Surrey, Surrey, UK	12-14/12/2018
Fourth GA Meeting	University of Malaga, Malaga, Spain	13-15/03/2019
Fifth GA Meeting	University of Valencia (Universitat Politècnica de València), Valencia, Spain	24-26/06/2019

Table 1. 5GENESIS GA meetings during Year 1

- **Athens Kick-off Meeting (10-11 July 2018)**

The kick-off meeting was successfully organized in the Municipality of Egaleo in Athens, Greece in the 10th and 11th of July 2018. All 29 partners participated and worked together to set the initial plans and actions. The main scope of this meeting was to discuss about the first phase of the project, its objectives and the upcoming actions that had to be taken along with the setup of Y1 dissemination and communication plan.



Figure 42. 5GENESIS partners in the first GA Meeting (Athens, Greece)

- **Second GA Meeting in Munich (29-31 August 2018)**

The second plenary meeting took place at Intel/Infineon Campeon headquarters in Munich, Germany, from 29th to 31st of August 2018. In this 3-day meeting, the progress of the first months was evaluated, action plans were revised and additional targets were set. First deliverables were under editing and the first milestones had been met at that time.



Figure 43. 5GENESIS partners in the second GA Meeting (Munich, Germany)

- **Third GA Meeting in Surrey (12-14 December 2018)**

The 5GENESIS third plenary meeting took place at the premises of 5G Innovation Centre, University of Surrey, UK, from 12th to 14th of December 2018. 5GENESIS partners had the chance to meet altogether for a third time and work together in order to evaluate the current project's progress. The main objective of this meeting was to

discuss and evaluate the actions already taken and the milestones that have been met while deciding on the activities that will follow and the goals to be met.



Figure 44. 5GENESIS partners in third GA meeting (Surrey, UK)

- **Fourth GA Meeting in Malaga (13-15 March 2019)**

The 4th plenary meeting of 5GENESIS took place at the premises of the University of Malaga, Spain, from the 13th to 15th March 2019. The partners met in order to evaluate progress, especially on platform level (phase 1) and plan the next steps of the project (first experimentation phase). The objective of this meeting was to discuss actions already taken per platform and through fruitful discussions to plan the actions that will be taken during the period April-June concluding in this way the first year of 5GENESIS activities and achievements.



Figure 45. 5GENESIS partners in fourth GA meeting (Malaga, Spain)

- **Fifth GA Meeting in Valencia (24-26 June 2019)**

The 5th plenary meeting of 5GENESIS took place at the premises of the Universitat Politècnica de València (UPV), Valencia, Spain, from the 24th to 26th June 2019. All partners met in order to evaluate progress and achievements of year 1, especially on trials level (first experimentation phase) and plan the next steps of the project (phase 2) as well as the readiness status of the five platforms.



Figure 46. 5GENESIS partners in the fifth GA meeting (Valencia, Spain)

2.3. Dissemination and Communication Performance of Year 1

This section focuses on Year 1 performance and statistics of 5GENESIS communication and dissemination activities, what has been achieved overall during the first year and evaluation of the achievements compared to the goals that had been set for Year 1.

2.3.1. Dissemination and Communication Goals of Year 1

As per 5GENESIS communication and dissemination plan (refer to D7.1), specific dissemination and communication goals had been set for year 1. The goals set provide an indicative number of publication of scientific results and of practical experiences to the largest scientific and industrial communities, conferences and journals, demonstrations in industrial exhibitions and scientific events. The quantitative goals of Table 2 form the baseline of dissemination and communication activities for the entire lifespan of the project (already set at the 5GENESIS proposal).

Activity	Metrics to measure impact	Goal	Timing
Publications	Number of publications	>50 in total (>25 in journals conferences, workshops)	Workshops: Year 1-3 Conferences: Year 1-3 Journals: Years 2-3 (and after the end of the project)
Demonstrations in industrial/exhibitions and scientific events	Number of presentations	>10	5GENESIS demonstrations at the end of each integration cycle

Table 2. 5GENESIS Overall Dissemination and Communication Goals

As already stated in D7.1, 5GENESIS dissemination activities will differ in intensity based on the time evolution of the project. In order to better monitor the intensity and set the corresponding goals per time period, the dissemination activities will be divided and carried out in three main annual phases:

- Phase 1: M1-M12.
- Phase 2: M13-M24.
- Phase 3: M25-M36 and after project end.

The intensity will differ per phase and the set goals should reflect this differentiation. As a result, a split ratio percentage of 20/35/45, approximately, has been used for setting the minimum planned goals per phase (based on the total quantitative figures and the timeline already set in Table 2 for the entire project lifetime). Following the above split ratio, Table 3, summarizes the Year 1 goals for 5GENESIS dissemination and communication activities.

Activity	Year 1 Goals
Publications (in Journals/Conferences)	>5 in journals/conferences/workshops (>10 in total)
Publications (in Workshops)	
General Publications (Magazines, Books, Websites, Newspapers)	
Workshops (organized by 5GENESIS, co-organized with other projects, participation)	>5
Presentations (in Conferences, Workshops, InfoDays, Events)	>5
Participation in Conference Panels and Invited Talks	>2
Others (Exhibitions, Business Days, Booths in Conferences, Poster Sessions, Awards)	>5
Demonstrations in industrial/exhibitions and scientific events	2
TOTAL	>29

Table 3. 5GENESIS Dissemination and Communication Goals of the first year

Of course, potential deviations between phases will be acceptable given the progress and achievements of the project but the final minimum targets shall be met

2.3.2. Summary of Dissemination and Communication Achievements of Year 1

This section focuses on 5GENESIS communication and dissemination activities performed during the first year per type of activity. Table 4 summarizes the Year 1 successfully performed 5GENESIS dissemination and communication activities (per type of activity).

Activity	Y1 Achievements
Publications (in Conferences /Journals)	11
Publications (in Workshops)	3
General Publications in Magazines, Books, Websites, Newspapers	11
Workshops (organized by 5GENESIS, co-organized with other projects, participation)	9
Presentations (in Conferences, Workshops, InfoDays, Events)	27
Participation in Conference Panels and Invited Talks	3
Others (Exhibitions, Business Days, Booths in Conferences, Poster Sessions, Awards)	13
Year 1 Total number of activities	77

Table 4. Year 1 Dissemination and Communication activities

2.3.2.1. Publications in Conferences and Journals – Year 1

During Year 1, 5GENESIS partners submitted various papers for publication to conferences and journals. All Year 1 publications in conferences and journals are summarized in Table 5 where information on the title of the paper, the event/journal date, the location/Issue number as well as a link for downloading the papers in pdf format is provided.

Publications in Conferences				
	Title	Event	Date/Location	Accepted preprint version Download Link and DOI
1	5GENESIS: The Genesis of a flexible 5G Facility	CAMAD-2018 IEEE International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks	17-19 September 2018 – Barcelona, Spain	https://5genesis.eu/wp-content/uploads/2018/12/5GENESIS_Koumar_as_CAMAD_2018.pdf (doi: 10.1109/CAMAD.2018.8514956)
2	Adaptive Resource Allocation for Energy-Efficient Millimeter-Wave Massive MIMO Networks	IEEE Global Communications Conference (Globecom)	9-13 December 2018, Abu Dhabi, UAE	https://5genesis.eu/wp-content/uploads/2018/12/Paper-1-Sherif.pdf (doi: 10.1109/GLOCOM.2018.8647877)
3	Impact of 3D Channel Modelling for Ultra-High Speed Beyond-5G Networks	IEEE Global Communications Conference (Globecom)	9-13 December 2018, Abu Dhabi, UAE	https://5genesis.eu/wp-content/uploads/2018/12/Paper-2-Sherif.pdf (doi: 10.1109/GLOCOMW.2018.8644286)
4	Estimating Downlink Throughput from End-User Measurements in Mobile Broadband Networks	IEEE World of Wireless, Mobile and Multimedia Networks	9-12 June, Washington DC, USA	https://5genesis.eu/wp-content/uploads/2019/06/wowmom19.pdf (doi: Not Yet Available)

		(WoWMoM) 2019		
5	Ultra Reliable Low Latency Communications: A state of the art review	JCSD 2019 (XXVI Conference on Concurrency and Distributed Systems)	19-21/6/2019, Zaragoza, Spain	https://5genesis.eu/wp-content/uploads/2019/06/Ultra-Reliable-Low-Latency-Communications.pdf (doi: Not Yet Available)
6	Optimizing the deployment of Virtual Network Functions in 5G networks with Model Based Testing	JCSD 2019 (XXVI Conference on Concurrency and Distributed Systems)	19-21/6/2019, Zaragoza, Spain	https://5genesis.eu/wp-content/uploads/2019/06/Optimizing-the-deployment-of-Virtual-Network-Functions-in-5G-networks.pdf (doi: Not Yet Available)
7	Modelling Software-Defined Networks with Alloy	JCSD 2019 (XXVI Conference on Concurrency and Distributed Systems)	19-21/6/2019, Zaragoza, Spain	https://5genesis.eu/wp-content/uploads/2019/06/Modelling-Software-Defined-Networks-with-Alloy.pdf (doi: Not Yet Available)

Publications in Journals

	Title	Journal	Issue/ Volume	Publication Date	Accepted preprint version Download Link and DOI
1	An End-to-End Automation Framework for Mobile Network Testbeds	Mobile Information Systems	vol. 2019, pp. 1-8	4/2019	https://5genesis.eu/wp-content/uploads/2019/06/An-end-to-end-automation-framework.pdf (doi: 10.1155/2019/2563917)
2	Computation Resource Allocation and Task Assignment	IEEE Transactions on Vehicular Technology	vol. 68, no. 4, pp. 3113-3125	4/2019	https://5genesis.eu/wp-content/uploads/2019/06/Computation-Resource-Allocation-and-Task-Assignment.pdf

	Optimization in Vehicular Fog Computing: A Contract-Matching Approach				Assignment-Optimization-in-Vehicular-Fog-Computing-A-Contract-Matching-Approach.pdf (doi: 10.1109/TVT.2019.2894851)
3	Multi-Carrier M-ary DCSK System with Code Index Modulation: An Efficient Solution for Chaotic Communications	IEEE Journal of Selected Topics in Signal Processing	Early Access	5/2019	https://5genesis.eu/wp-content/uploads/2019/06/Multi-Carrier-M-ary-DCSK-System-with-Code-Index-Modulation-An-Efficient-Solution-for-Chaotic-Communications.pdf (doi: 10.1109/JSTSP.2019.2913944)
4	Generalized Hybrid Beamforming for Vehicular Connectivity using THz Massive MIMO	IEEE Transactions on Vehicular Technology	Early Access	6/2019	https://5genesis.eu/wp-content/uploads/2019/06/Generalized-Hybrid-Beamforming-for-Vehicular-Connectivity-using-THz-Massive-MIMO.pdf (doi: 10.1109/TVT.2019.2921563)

Table 5. Publications in Conferences and Journals

2.3.2.2. Publications in Workshops and Special Sessions of Conferences– Year 1

5GENESIS publications in workshops and special sessions of conferences during Year 1 are summarised in Table 6. Information on the workshop name, the title of the paper, the date of the event along with a link for downloading the papers in pdf format is given.

Publications in Workshops/Special Sessions of Conferences					
	Title	Workshop	Event	Date/Location	Accepted preprint version Download Link
1	The 5GENESIS testing facility as an enabler for integrated satellite/terrestrial 5G experimentation	Satellite-Terrestrial Interworking Workshop	WCNC 2019	15/04/2019, Marrakech	https://5genesis.eu/wp-content/uploads/2019/04/The-5GENESIS-testing-facility-as-an-enabler.pdf

2	The OpenAirInterface 5G New Radio Implementation: Current Status and Roadmap	23rd ITG Workshop on Smart Antennas, Demo Session	WSA 2019	24-26/04/2019, Vienna Austria	https://5genesis.eu/wp-content/uploads/2019/04/The-OpenAirInterface-5G-New-Radio-Implementation-Current-status-and-roadmap.pdf
3	5G Experimentation Facility Supporting Satellite-Terrestrial Integration: The 5GENESIS approach	EuCNC 2019 Special Session "Validating and Demonstrating the Satellite Integration into 5G"	EuCNC 2019	17-21/06/2019, Valencia	https://5genesis.eu/wp-content/uploads/2019/06/PID5922463.pdf

Table 6. Publications in Workshops and Special Sessions of Conferences

2.3.2.3. General Publications in Magazines, Books, Newspapers, Websites – Year 1

5GENESIS Year 1 publication of papers and articles in media of general interest such as newspapers, magazines/journals, books and websites/online journals are summarized in Table 7. A link for either visiting the electronic version of the media that hosted the publication or for downloading the publication in pdf format is provided.

Papers/Articles (in magazines/books/newspapers/websites)				
	Title	Media	Date	Link
1	Málaga, pionera del 5G en Europa	La opinion de Malaga	6/2018	https://www.laopiniondemalaga.es/malaga/2018/06/03/malaga-pionera-5g-europa/1011159.html
2	Our goal is to achieve 5G coverage by 2020	EconomyToday	15/09/2018	https://economytoday.sigmalive.com/synteyxeis/3220-dieythytis-poliseon-primetel-stohos-2020-na-yiothetisoyme-5g
2	The first 5G Platform in Cyprus by Primetel	Simerini	21/09/2018	http://www.sigmalive.com/simerini/business/527064/i-proti-platforma-5g-apo-primetel-stin-kypro

3	5GENESIS: A connection of IoT and	INFOCOM magazine	10/2018	https://5genesis.eu/wp-content/uploads/2018/10/iot.pdf
4	5G networks in Greece	INFOCOM magazine	10/2018	https://5genesis.eu/wp-content/uploads/2018/10/socitech.pdf
5	5th Generation Pilot Networks in Cyprus and Greece: Do we have the know-how and the infrastructure?	Digital Life	9/11/2018	https://www.digitallife.gr/pilotika-diktya-5is-genias-se-kypro-kai-ellada-diathetoume-tin-technognosia-kai-tin-ylitekotechniki-ypodomi-91488
6	ATOS Research and Innovation (ARI)	ATOS 2018 edition booklet	2018	http://booklet.atosresearch.eu/sites/default/files/booklet/public/content-files/ARI_2018_R%26I_Final_0.pdf
7	Málaga empezará a experimentar con la red 5G el próximo abril (in Spanish)	La opinion de Malaga	13/03/2019	https://5genesis.eu/wp-content/uploads/2019/04/M%C3%A1laga-empezar%C3%A1-a-experimentar-con-la-red-5G-el-pr%C3%B3ximo-abril-La-Opini%C3%B3n-de-M%C3%A1laga.pdf
8	Expertos estudian en Málaga cómo demostrar las capacidades del 5G	La opinion de Malaga	15/03/2019	https://www.laopiniondemalaga.es/malaga/2019/03/15/expertos-estudian-malaga-demostrar-capacidades/1074951.html
9	5GENESIS article	Atos Sales Service Portal	2019	Internal company business portal
10	La segunda edición del 5G Forum se internacionaliza con ponentes de 20 países	UMA -News room web page	24/4/2019	https://www.uma.es/sala-de-prensa/noticias/el-ii-5g-se-internacionaliza-con-ponentes-de-20-paises/?set_language=en

11	5th Generation End-to-end Network, Experimentation, System Integration, and Showcasing	European 5G Annual Journal (4 th Issues)	5/2019	https://bscw.5g-ppp.eu/pub/bscw.cgi/d300752/Euro%205G%20PPP%20Annual%20Journal%202019.pdf
----	--	---	--------	---

Table 7. Papers/Articles in magazines/newspapers/websites

2.3.2.4. Workshops and Special Sessions organized/co-organized by 5GENESIS – Year 1

5GENESIS partners, during the first 12 months of the project lifetime, have organized and co-organized with other EU funded projects several workshops and a special session in conferences and other events. Table 8 summarizes the above-mentioned activities and then each activity is described in more details.

Workshops and Special Sessions			
	Event	Date/Location	Workshop/Special Session Name
1	FUSECO Fokus	14-15/11/2018, Berlin	Workshop on "Architectures and Radio Technologies for 5G Transport- and Access Networks"
2	WCNC 2019	15 /04/2019, Marrakech, Morocco	Satellite-terrestrial interworking: a pillar of forthcoming 5G systems
3	WCNC 2019	15 /04/2019, Marrakech, Morocco	2nd Workshop on Economics and Adoption of Millimeter Wave Technology in Future Networks
4	TMA Conference 2019	17/06/2019, Paris, France	3rd Workshop on Mobile Network Measurement (MNM'19)
5	EUCNC 2019	17-21.06.2019, Valencia	Business models and techno-economic analysis for 5G networks
6	EUCNC 2019	17-21.06.2019, Valencia	Validating and demonstrating the Satellite Integration into 5G
7	EUCNC 2019	17-21/06/2019, Valencia	Pan-European end-to-end site facilities and vertical trials for 5G

8	EUCNC 2019	17-21/06/2019, Valencia	Empowering Transatlantic Platforms for Advanced Wireless Research
9	IEEE NetSoft 2019	24/06/2019, Paris, France	1st International Workshop on Cyber- Security Threats, Trust and Privacy management in Software-defined and Virtualized Infrastructures

Table 8. Workshops and Special Sessions organized/co-organized by 5GENESIS

Hereby, each activity is presented in details:

- **FUSECO Fokus Event** ¹

Professor Eckhard Grass and Dr. Valerio Frascolla organized and drove a workshop entitled “Architectures and Radio Technologies for 5G Transport- and Access Networks”.



Figure 47. 5GENESIS at FUSECO Fokus Event

- **WCNC 2019** ²

Two activities of 5GENESIS in WCNC:

- 5GENESIS co-organized with Sat5G and 5GALLSTAR projects, the “Satellite terrestrial interworking: a pillar of forthcoming 5G systems” workshop in IEEE WCNC. Additional information: <https://5genesis.eu/workshop-1/>
- 5GENESIS co-organized with ULTRAWAVE and 5G-MiEdge projects, the “2nd Workshop on Economics and Adoption of Millimeter Wave Technology in Future Networks” in IEEE WCNC. Additional information: <https://5genesis.eu/workshop-2/>

¹ https://www.fokus.fraunhofer.de/ngni/events/fuseco_forum_2018

² <https://wcnc2019.ieee-wcnc.org/>



Figure 48. 5GENESIS at WCNC 2019

- TMA Conference 2019³

Karlstad University organized the 3rd Workshop on Mobile Network Measurement (MNM'19) at TMA Conference 2019 on June 17, 2019, in Paris, where 5GENESIS aspects were presented. More details concerning the workshop are available at <https://tma.ifip.org/2019/mnm-workshop/>



Figure 49. 5GENESIS at TMA Conference 2019

³ <https://tma.ifip.org/2019/mnm-workshop/>

- EUCNC 2019⁴ and 7th Global 5G Event⁵

5GENESIS participated/co-organized with other EU projects 4 workshops in which round table discussions and 5GENESIS presentations took place with focus on the 5GENESIS platforms advances and experimentation portal.



Figure 50. 5GENESIS in EUCNC 2019 and 7th Global 5G event

- IEEE NetSoft 2019⁶

5GENESIS co-organised with ASTRID, SPEAR, CYBER-TRUST, REAC and SHIELD projects the “1st International Workshop on Cyber-Security Threats, Trust and Privacy Management in Software-defined and Virtualized Infrastructures (SecSoft)” at 5th IEEE International Conference on Network Softwarization (NetSoft 2019, 24/6/2019, Paris). More details concerning the workshop are available at <https://www.astrid-project.eu/secsoft/>



Figure 51. 5GENESIS workshop in IEEE NetSoft 2019

⁴ <https://www.eucnc.eu/>

⁵ <https://www.7thglobal5gevent.eu/>
<https://www.7thglobal5gevent.eu/harilaos-koumaras>

⁶ <https://netsoft2019.ieee-netsoft.org/>

2.3.2.5. Presentations (in Conferences, Workshops, InfoDays, Forums)

During Year 1, 5GENESIS partners made several presentations for promoting the objectives and achievements of 5GENESIS. The presentations were made in several events such as conferences, special sessions, workshops, info days and forums. All Year 1 presentations are summarized in Table 9 and then are analysed separately (grouped per event).

5GENESIS Presentations			
	Event	Date/Location	Title
1	EuCNC 2018	18-21/06/2018, Ljubljana, Slovenia	5GENESIS presentation
2	EuCNC 2018	18-21/06/2018, Ljubljana, Slovenia	Presentation of economic aspects of 5GENESIS
3	5G-PPP ICT-19 INFO DAY	14/9/2018, BRUSSELS	Presentation of 5GENESIS project and platforms
4	CAMAD-2018	17-19/09/2018 – Barcelona, Spain	5GENESIS: The Genesis of a flexible 5G Facility
5	ITU Forum (International Telecommunication Union)	11/10/2018, Athens, Greece	Towards 5G Enabled Gigabit Society
6	FUSECO Fokus Event	14-15/11/2018, Berlin	Design considerations for an Ultra Reliable Low Latency Communication (URLLC) 5G Network
7	FUSECO Fokus Event	14-15/11/2018, Berlin	5G Standardization Status
8	20th INFOCOM WORLD 2018 CONFERENCE	21/11/ 2018, Athens, Greece	5th Generation End-to-End Network, Experimentation, System Integration and Showcasing: The case of the 5GENESIS Project
9	EFUS (European Forum for Urban Security)	29/11/2018, Malaga	5GENESIS presentation
10	Infoday on 5G advances	30/11/2018, NCSR Demokritos, Athens, Greece	5GENESIS Project and 5G advances
11	ONF Connect	5/12/2018, ONF Connect in Santa Clara	5Genesis Malaga platform

12	EFUS (European Forum for Urban Security)	10/12/2018, Eindhoven, Netherlands	5GENESIS Malaga platform presentation
13	Conference on Big Cities	24/01/2019, Seville, Spain	5GENESIS presentation
14	EGALEO Smart City 2020-2030	18/03/2019, Town Hall of Egaleo	5GENESIS Project and platforms
15	Spanish 5G Observatory	Spanish 5G observatory director, 23/04/2019	5GENESIS Malaga platform presentation
16	5G Forum	24-25/04/2019, Malaga	5GENESIS Malaga platform
17	INFOCOM	29/04-02/05/2019, Paris	5GENESIS project
18	EMPOWER/PAWR	29/04/2019, Paris	5GENESIS project
19	IEEE World of Wireless, Mobile and Multimedia Networks (WoWMoM) 2019	9-12 June 2019, Washington DC, USA	Estimating Downlink Throughput from End-User Measurements in Mobile Broadband Networks
20	7 th Global 5G event ("5G KPIs measurement session")	18/06/2019, Valencia	5GENESIS Experimentation Framework
21	EuCNC 2019 ("Pan-European end-to-end site facilities and vertical trials for 5G" workshop)	18/06/2019, Valencia	5GENESIS Experimentation Framework
22	EuCNC 2019 ("Empowering Transatlantic Platforms for Advanced Wireless Research" workshop)	18/06/2019, Valencia	5GENESIS Experimentation Framework
23	EuCNC 2019 ("Business models and techno-economic analysis)	19/06/2019, Valencia	Merging MEC and mmWave in 5G & beyond use cases

	for 5G networks” workshop)		
24	EuCNC 2019 (“Validating and Demonstrating the Satellite Integration into 5G” special session)	19/06/2019, Valencia	5G Experimentation Facility Supporting Satellite-Terrestrial Integration: The 5GENESIS approach
25	JCSD 2019 (XXVI Conference on Concurrency and Distributed Systems)	19-21/6/2019, Zaragoza, Spain	Ultra Reliable Low Latency Communications: A state of the art review
26	JCSD 2019 (XXVI Conference on Concurrency and Distributed Systems)	19-21/6/2019, Zaragoza, Spain	Optimizing the deployment of Virtual Network Functions in 5G networks with Model Based Testing
27	JCSD 2019 (XXVI Conference on Concurrency and Distributed Systems)	19-21/6/2019, Zaragoza, Spain	Modelling Software-Defined Networks with Alloy

Table 9. Presentations in Conferences, Workshops, InfoDays, Events

Hereby, each event is presented in detail:

- **EuCNC 2018**⁷

The first conference which introduced the 5GENESIS project took place from 18th to 21st of June 2018 in Ljubljana, Slovenia. Dr. Harilaos Koumaras (NCSR Demokritos), was among the conference’s speakers and had the chance to present 5GENESIS project and discuss opportunities for experimentation by vertical industries.

(video available at 5GENESIS YouTube channel

<https://www.youtube.com/watch?v=HW5eyO1A6FE&t=2s>)

⁷ <https://www.eucnc.eu/2018/www.eucnc.eu/index.html>



Figure 52. Dr. Harilaos Koumaras (NCSR Demokritos) presenting 5GENESIS in EUCNC 2018

In addition, Dr. Valerio Frascolla (INTEL) presented the economic aspects of 5GENESIS in the presentation entitled “Techno-economic aspects of mmwaves and MEC, two key enablers for 5G networks” in EuCNC special session.

- **5G-PPP ICT-19 INFO DAY⁸**

5GENESIS project was presented in the 5G PPP ICT-19 INFO Day which took place in the 14th of September in Brussels. Dr. Harilaos Koumaras, from NCSR Demokritos (Athens, Greece), was the project’s representative and explained the opportunities for ICT-19 proposers in using the five 5GENESIS Platforms. Several 5GENESIS partners attended this event.



Figure 53. 5GENESIS in 5G-PPP ICT-19 INFO DAY

⁸ <https://5g-ppp.eu/5g-ppp-ict-19-info-day-14th-september-2018-brussels/>

- **CAMAD-2018⁹**

The 5GENESIS paper with title "5GENESIS: The Genesis of a flexible 5G Facility" was presented by Dr. Harilaos Koumaras (NCSR Demokritos) in IEEE CAMAD 2018 International workshop, on Tuesday 17 September 2018, in Barcelona, Spain.



Figure 54. Dr. Harilaos Koumaras (NCSR Demokritos) presenting 5GENESIS in IEEE CAMAD 2018

- **ITU Forum (International Telecommunication Union)¹⁰**

A presentation entitled "Towards 5G Enabled Gigabit Society" took place in the ITU FORUM (International Telecommunication Union) in 11/10/2018 in Athens, Greece. In that event, the presentation of 5GENESIS as a 5G EU-funded project also took place.



Figure 55. ITU 2018

⁹ <http://camad2018.ieee-camad.org/program/>

¹⁰ <https://telecomworld.itu.int/http://www.mindigital.gr/index.php/24-grafeio-typou/%CE%B4%CE%B5%CE%BB%CF%84%CE%AF%CE%B1-%CF%84%CF%8D%CF%80%CE%BF%CF%85/3066-itu>

- **FUSECO Fokus Event¹¹**

Dr. Zion Hadad (RunEL) presented in the Workshop “Architectures and Radio Technologies for 5G Transport and Access Networks” of FUSECO Fokus Event in 14th -15th November 2018 in Berlin, design techniques for URLLC Networks and their association with 5GENESIS project.



Figure 56. Dr. Zion Hadad (RunEL) presenting 5GENESIS in FUSECO Fokus Event

In parallel, Dr. Valerio Frasca (INTEL) presented the latest news from standardization bodies dealing with 5G topics. The talk is a collaboration between the 5GENESIS and the 5G-MiEdge projects.



Figure 57. Dr. Valerio Frasca (INTEL) presenting 5GENESIS in FUSECO Fokus Event

¹¹ https://www.fokus.fraunhofer.de/ngni/events/fuseco_forum_2018

- **20th INFOCOM WORLD 2018 CONFERENCE¹²**

Dr Anastasios Kourtis (NCSR) presented "5th Generation End-to-End Network, Experimentation, System Integration and Showcasing: The case of the 5GENESIS Project" in the 20th INFOCOM World Conference, in 21st November 2018 in Athens.



Figure 58. 5GENESIS presentation in 20th INFOCOM WORLD 2018 CONFERENCE

- **EFUS¹³**

Municipality of Malaga (MoM) participated in European Forum for Urban Security (EFUS) with in the framework of PREPARE project (Preventing Radicalisation through Probation and Release), in Malaga (29/11/2018), and presented 5GENESIS objectives.

- **Conference on Big Cities**

Mr. Mario Cortes, deputy mayor of Malaga (MoM), presented 5GENESIS with focus on the Malaga city and 5G advances thanks to 5GENESIS Malaga platform at the Big Cities conference in Seville (24/01/2019)



Figure 59. 5GENESIS presentation in Conference of Big Cities

¹² <https://www.infocomworld.gr>

¹³ <http://efus-network.eu/efus/en/>

- **INFODAY on 5G Advances**¹⁴

On 30th November 2018, NCSR D organised an INFODAY on 5G advances, where Nokia Greece from 5G-VINNI was invited in order to present and share with 5GENESIS its view on 5G strategy, both commercially and in the 5G-VINNI work plan.

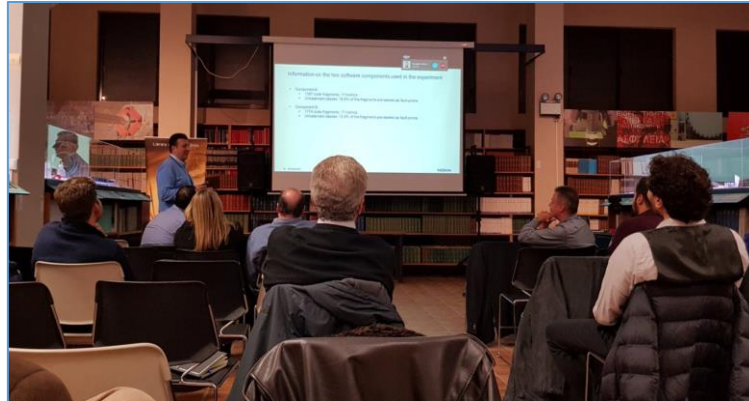


Figure 60. 5GENESIS in INFODAY on 5G Advances

- **ONF Connect**¹⁵

David Artunedo Guillen (Telefonica) participated on ONF Connect in Santa Clara in the 5th of December where he talked about use cases running on edge computing and presented 5GENESIS Malaga platform.



Figure 61. 5GENESIS presentation in ONF Connect session

- **EFUS**¹⁶

Municipality of Malaga (MoM) participated in European Forum for Urban Security (EFUS), in Eindhoven (10/12/2018), within the framework of PREPARE project (Preventing Radicalisation

¹⁴ <https://5genesis.eu/infoday-at-ncsr-demokritos-with-nokia-greece-5g-vinni/>

¹⁵ <https://www.opennetworking.org/wp-content/uploads/2018/12/OnLife-Networks-Learnings-from-CORD-.pdf>

<https://vimeo.com/307529947/f3e03cfb11>

¹⁶ <http://efus-network.eu/efus/en/>

through Probation and Release), and presented 5GENESIS platforms with special focus on Malaga 5G platform and experimentation.



Figure 62. 5GENESIS presentation in EFUS

- **EGALEO Smart City 2020-2030¹⁷**

Dr. Anastasios Kourtis (NCSR_Demokritos) presented the 5GENESIS Project in the Egaleo Smart City 2020-2030 event which was organized by the Municipality of Egaleo and took place in the Town Hall of Egaleo on March 18th, 2019.



Figure 63. Dr. Anastasios Kourtis (NCSR Demokritos) presenting 5GENESIS in EGaleo Smart City

- **Spanish 5G Observatory¹⁸**

Professor Pedro Merino (UMA) and Ricardo Fernandez (MoM) participated in the Spanish 5G Observatory meeting and presented the 5GENESIS Malaga platform and use cases.

¹⁷ <https://www.aigaleo.gr/>

¹⁸ <https://5gobservatory.eu/>



Figure 64. 5GENESIS UMA and MoM teams at Spanish 5G Observatory

- 5G Forum¹⁹

Professor Pedro Merino (University of Malaga) explains 5GENESIS project objectives, use-cases and achievements with a focus on the Malaga 5G experimental platform while stating: "We want to make a full 5G deployment in the city of Malaga".



Figure 65. Prof. Pedro Merino (UMA) in 5G Forum

- INFOCOM 2019²⁰

Karlstad University (KAU) participated in Infocom 2019 Panel A: Smart Networks: What is Next?, promoting 5GENESIS accomplishments through a detailed presentation.

¹⁹ <https://www.5gforum.es/en/>

²⁰ <https://infocom2019.ieee-infocom.org/>



Figure 66. INFOCOM 2019 opening session

- **EMPOWER/PAWR**

A joint workshop between the European Union H2020 EMPOWER project and the US-based PAWR program was organized in Paris on 29/4/2019, in parallel with IEEE International Conference on Computer Communications (IEEE INFOCOM). 5GENESIS was represented by Airbus (ADS) and a presentation of the 5GENESIS project was made.



Figure 67. EMPOWER/PAWR workshop at IEEE INFOCOM

- **IEEE WoWMoM 2019²¹**

SIMULA presented the 5GENESIS paper entitled “Estimating Downlink Throughput from End-User Measurements in Mobile Broadband Networks” at the IEEE World of Wireless, Mobile and Multimedia Networks (WoWMoM) 2019 in Washington DC, USA, in 11th of June 2019.

²¹ <http://cs.ucf.edu/wowmom2019/>



Figure 68. 5GENESIS paper presentation at IEEE WoWMoM 2019

- 7th Global 5G event²²

Dr. Harilaos Koumaras, project coordinator of 5GENESIS, presented the “5G KPI measurement - Measuring 5G KPIs in real environments” at the G5GE Session "A formalization framework of 5G Vertical Experiment Description used in 5G-PPP projects" at G5GE in Valencia during the EuCNC week. The video of the presentation is available at the EuCNC YouTube channel:

<https://www.youtube.com/watch?v=12OV4mQkANc>



Figure 69. 5GENESIS presentation in 5G Global event 2019

²² <https://www.7thglobal5gevent.eu>

- **EuCNC 2019²³**

In total 4 presentations were given during the EuCNC in Valencia, at workshops and special sessions in which 5GENESIS participated/co-organized together with other projects.



Figure 70. 5GENESIS presentations at EuCNC 2019

- **JCSD 2019²⁴**

University of Malaga (UMA) participated in the JCSD 2019 representing 5GENESIS and presenting 3 5GENESIS papers.

²³ <https://www.eucnc.eu/>

²⁴ <http://jcsd2019.unizar.es/>



Figure 71. UMA presentations at JCSD 2019

2.3.2.6. Participation in Conference Panels and Invited Talks

5GENESIS Year 1 participation in conference panels, invited talks of conferences and workshops is summarized in Table 10, followed by a detailed analysis per activity.

Conference Panels and Invited Talks			
	Title	Event	Date/Location
1	Dynamic spectrum management: the 5G verticals view	DySPAN 2018 conference	23/10/2019, Seoul
2	The role of SMEs in the new 5G ecosystem	Networld 2020 Annual Event	15/11/2018, Brussels
3	Panel A: Smart Networks: What is Next?	Infocom 2019	30/04/2019, Paris

Table 10. Participation in Panels and Invited Talks

- **Dynamic spectrum management: the 5G verticals view, DySPAN 2018 conference²⁵**

Dr.Valerio Frasca (INTEL) from 5GENESIS co-organized with 5G-MiEdge and led the panel entitled “Dynamic spectrum management: the 5G verticals view” at the DySPAN 2018 conference in Seoul in October 23rd, 2018 and described the importance of spectrum dynamicity for the forthcoming evolution of 5G systems.



Figure 72. Dr.Valerio Frasca (INTEL) in DySPAN 2018.

- **The role of SMEs in the new 5G ecosystem, Networld 2020 Annual Event²⁶**

RunEL participated in a panel of the event and described the 5GENESIS project as a contribution to the 5G ecosystem (15/11/2018, Brussels).



Figure 73. NETWORLD 2020

²⁵ <https://dyspan2018.ieee-dyspan.org/>

²⁶ <https://www.networld2020.eu>

- **Panel A: Smart Networks: What is Next?, Infocom 2019²⁷**

5GENESIS participated in Infocom 2019 Panel A: Smart Networks: What is Next?, which took place the 30th of April 2019 in Paris, France.

2.3.2.7. Other Activities-Events (Exhibitions, Business Days, Booths in Conferences, Sponsorships, Interviews, Webinars, Poster Sessions, Awards)

During Year 1. 5GENESIS organized and/or participated in various events such as exhibitions, forums, tech days while in many of them booths and poster sessions were used for further enhancing and promoting 5GENESIS presence. All related activities are summarized in Table 11 and then analysed individually.

Other Activities - Events (Exhibitions, Business Days, Booths, Sponsorships, Interviews, Webinars, Poster Session, Awards)			
	Activity	Event	Date/Location
1	Partner Booth	Athens Innovation Festival	12 – 14/11/2018, Athens, Greece
2	Event organizer	Ericsson Ireland Tech Day	11/2018, Ireland
3	Partner Booth	MWC 2019	25-28/02/2019, Barcelona
4	Partner Booth	E-world Industrial Exhibition	4-6/02/2019, Essen, Germany
5	Partner Booth	BAPCO 2019 and CCE 2019	12-14/03/2019, UK
6	Event organizer	EGALEO Smart City 2020-2030	18/03/2019, Town Hall of Egaleo
7	Partner Booth	5G Forum	24-25/04/2019, Malaga
8	Bite Award 2019 for 5G Innovation	Bite Awards 2019	28/05/2019, Athens
9	5GENESIS Poster Session	3rd Workshop on Mobile Network Measurement (MNM'19)	17/06/2019, Paris, France
10	5GENESIS Booth	EuCNC 2019	18-21/06/2019, Valencia

²⁷ <https://infocom2019.ieee-infocom.org/>
<https://infocom2019.ieee-infocom.org/panels>

11	5GENESIS Poster Session	EuCNC 2019	18-21/06/2019, Valencia
12	Partner Booth	Critical Communication World 2019 (CCW 2019)	18-20/06/2019, Kuala Lumpur
13	Partner Booth	Critical Communication World 2019 (CCW 2019)	18-20/06/2019, Kuala Lumpur

Table 11. Participation in various Events

Hereafter, each event is presented in detail:

- **Athens Innovation Festival**²⁸

INFOLYSIS participated in the Athens Innovation Festival from 12th to 14th November 2018, where it had the chance to describe and communicate 5GENESIS project, its objectives and characteristics, as part of the 5G ecosystem, through INFOLYSIS booth.



Figure 74. INFOLYSIS in the Athens Innovation Festival

²⁸ <https://www.athensinnovation.gr>

- **Ericsson Ireland Tech Day**²⁹

On the 4th of October 2018, as part of Ericsson Ireland Tech Day, an overview of 5GENESIS was presented, including project goals, underlying platforms, structure, as well as expected contributions to the 5G landscape.

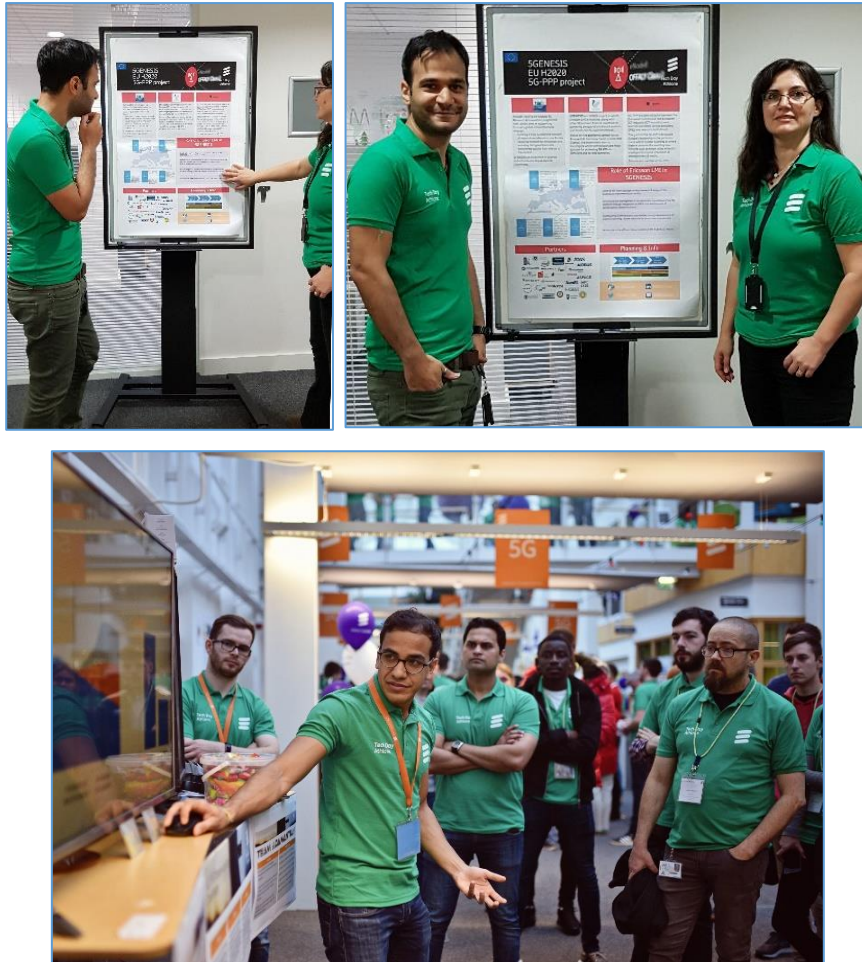


Figure 75. 5GENESIS presented at Ericsson Ireland Tech Day

- **MWC 2019**³⁰

Nemergent Solutions participated in MWC 2019 with a booth in the Spanish pavilion where besides its technology and mission-critical solutions, the 5GENESIS project was presented and introduced to interested customers and vertical users.

²⁹ <https://www.ericsson.com/en/blog/2018/10/ericsson-athlone-technology-day-4th-october-2018>

³⁰ <https://www.mwcbarcelona.com>



Figure 76. Nemergent Solutions in MWC 2019.

- **E-world Industrial Exhibition³¹**

Universitat Politècnica de València (UPV) participated in the E-world Innovation Fair (Essen, Germany) and through its booth communicated 5GENESIS objectives and characteristics to industrial companies related to energy and water management services.



Figure 77. UPV participation in E-world 2019

- **BAPCO 2019 and CCE 2019³²**

Nemergent Solutions participated in BAPCO 2019 and CCE 2019 with a booth where besides its technology and mission-critical solutions, the 5GENESIS project was presented and introduced to interested customers and vertical users.

³¹ <https://www.e-world-essen.com/en/>

³² <https://www.bapco-show.co.uk/>



Figure 78. Nemergent Solutions in BAPCO 2019 and CCE 2019

- **EGALEO Smart City 2020-2030³³**

The Town Hall of Egaleo hosted the Egaleo Smart City 2020-2030 event which was organized by the 5GENESIS partner Municipality of Egaleo in March 18th, 2019. This event focused on 5G future and innovations as well as on 5GENESIS project.



Figure 79. EGALEO Smart City 2020-2030

- **5G Forum³⁴**

5GENESIS participated as sponsor to the 5G Forum where 5GENESIS Spanish partners, through the Malaga partners booth, promoted the 5GENESIS project and the 5GENESIS Malaga platform. In addition, the Mayor of Malaga, who attended the 5G Forum, met and discussed with the 5GENESIS Malaga partners (Figure 81).

³³ <https://www.aigaleo.gr/>

³⁴ <https://www.5gforum.es/en/en-malaga>



Figure 80. 5GENESIS Spanish partners in 5G FORUM



Figure 81. 5GENESIS TM Prof. Pedro Merino Gomez with the Mayor of Malaga in 5G FORUM

- Bite Awards 2019³⁵

5GENESIS received the Silver Bite Award 2019 for 5G Innovation at the Bite Awards ceremony in Athens, 28 May 2019. (video available at 5GENESIS YouTube channel https://www.youtube.com/watch?v=SgXc_3gObwo)

³⁵<https://www.businessitawards.gr/>



Figure 82. 5GENESIS Silver Bite Award 2019

- **TMA Conference 2019** ³⁶

Karlstad University as part of the 3rd Workshop on Mobile Network Measurement (MNM'19) that organized at TMA Conference 2019 in Paris, also participated with a 5GENESIS poster at the poster session of the event.

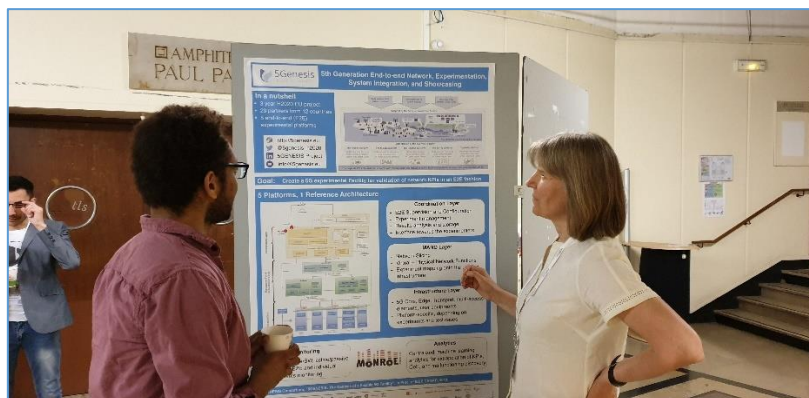


Figure 83. 5GENESIS poster session in TMA 2019

- **EuCNC 2019** ³⁷

5GENESIS had a booth (shared with EuWireless EU project) at EuCNC 2019 where the project team had the chance to inform the visitors about the latest project achievements and perform several demos of the 5GENESIS experimentation portal.

³⁶ <https://tma.ifip.org/2019/mnm-workshop/>

³⁷ <https://www.eucnc.eu/>



Figure 84. 5GENESIS booth at EuCNC 2019

In parallel, on the third day of EuCNC, Jara Suárez de Puga García (UPV) represented 5GENESIS at the EuCNC Poster Session #2 with the poster entitled "Architecture Proposal for SD-IoT Deployments with a Decoupling of Gateway Functionalities".

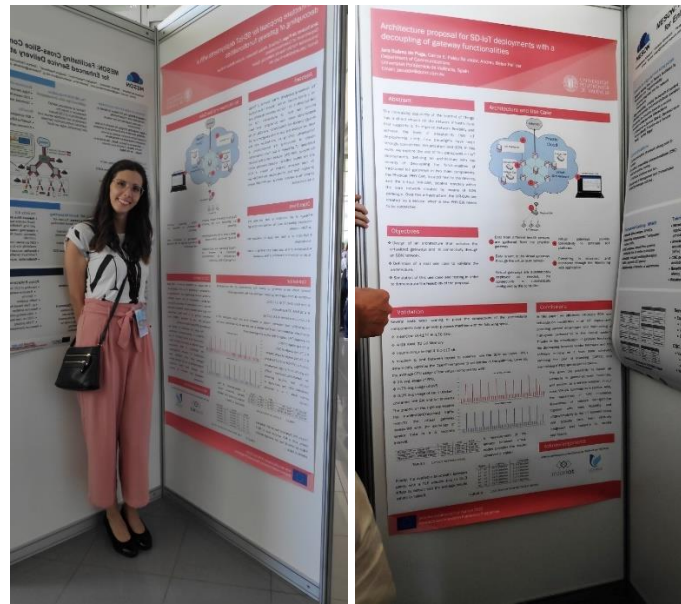


Figure 85. Poster session at EuCNC 2019

- Critical Communication World 2019 (CCW 2019)³⁸

5GENESIS was present in Critical Communication World 2019 (CCW2019) in Kuala Lumpur, Malaysia, through Nemergent and Athonet's booths, that promoted 5GENESIS activities and achievements.



Figure 86. 5GENESIS partners' booths in CCW2019

³⁸ <https://www.critical-communications-world.com/world>

2.4. Evaluation, Statistics and Impact of Year 1 Activities

This section provides a high level evaluation of the Year 1 dissemination and communication activities and verifies whether the set goals for the first 12-months of the project lifetime have been met successfully. In addition, the communication plan of the project is updated and the goals for the second year are set.

2.4.1. Quantitative Results and Evaluation of Activities

In Section 2.3, a detailed analysis of all communication and dissemination activities and means during year 1 has been presented with all activities been grouped per type of action as defined in the communication plan of D7.1.

Table 12 summarizes all performed activities and compares them against the set goals for year 1. Overall, the first year results are very satisfactory since all goals have been met without any deviation. Even for activities such as Publications, that as per the initial timeline (proposal timeline) were expected to be officially initiated in year 2, we have already recorded activities during year one as per the goals that were decided and set as part of the D7.1 plan. In all the categories, the recorded activities are higher than the minimum expected goals and in many cases the recorded figures are double or even higher. **In total, the 5GENESIS year 1 communication and dissemination achievements count 77 activities and 4 demonstrations**, while the baseline was set to more than 27 activities (excluding the demonstrations that are presented in detail in Section 3).

Activity	Year 1 Goals	Y1 Achievements
Publications (in Journals/Conferences)	>5 in journals/conferences/workshops (>10 in total)	11
Publications (in Workshops)		3
General Publications in Magazines, Books, Websites, Newspapers		11
Workshops (organized by 5GENESIS, co-organized with other projects, participation)	>5	9
Presentations (in Conferences, Workshops, InfoDays, Events)	>5	27
Participation in Conference Panels and invited Talks	>2	3
Others (Exhibitions, Business Days, Booths in Conferences, Poster Sessions, Awards)	>5	13
TOTAL	>27	77

Table 12. Dissemination and Communication activities and Y1 goals

Similarly, 5GENESIS website and social media channels have performed well with a constant increase in the number of followers and visitors respectively. Detailed analysis of the performance and statistics of these channels is provided through the annual Statistical Dashboards which are presented in Sections 2.4.2 and 2.4.3.

2.4.2. Website Performance Statistics and Dashboards

The 5GENESIS website statistical dashboards are created, processed and visualized by INFOLYSiS on a monthly basis, with the use of Google Data Studio, for evaluating and controlling the website performance. The website statistical dashboards were initially developed in August 2018, based on the Google analytics data of the 5GENESIS website, and since then they are issued and communicated internally to all WP7 partners of the project, via the WP7 mailing list, every month. In specific, besides the use of Google Data Studio in order to represent graphically the statistical performance of 5GENESIS website and issue the monthly dashboards, Google Analytics data is also used in order to exploit additional statistical information concerning the website operation and impact.

Figure 87 represents the annual 5GENESIS website dashboard. The exact period covering this figure is from August 2018 to June 2019 (up to 20/6/2019). Each graph has its representative title in order to distinguish its information. In addition, the pie chart at the bottom right shows the access points that the website's visitors have used in order to access the website.

The annual 5GENESIS website dashboard might be accessed through the following link:

https://datastudio.google.com/reporting/1MQZZE-SnSBAKKVB_1TM6dzFhokn3oopG/page/EP7X

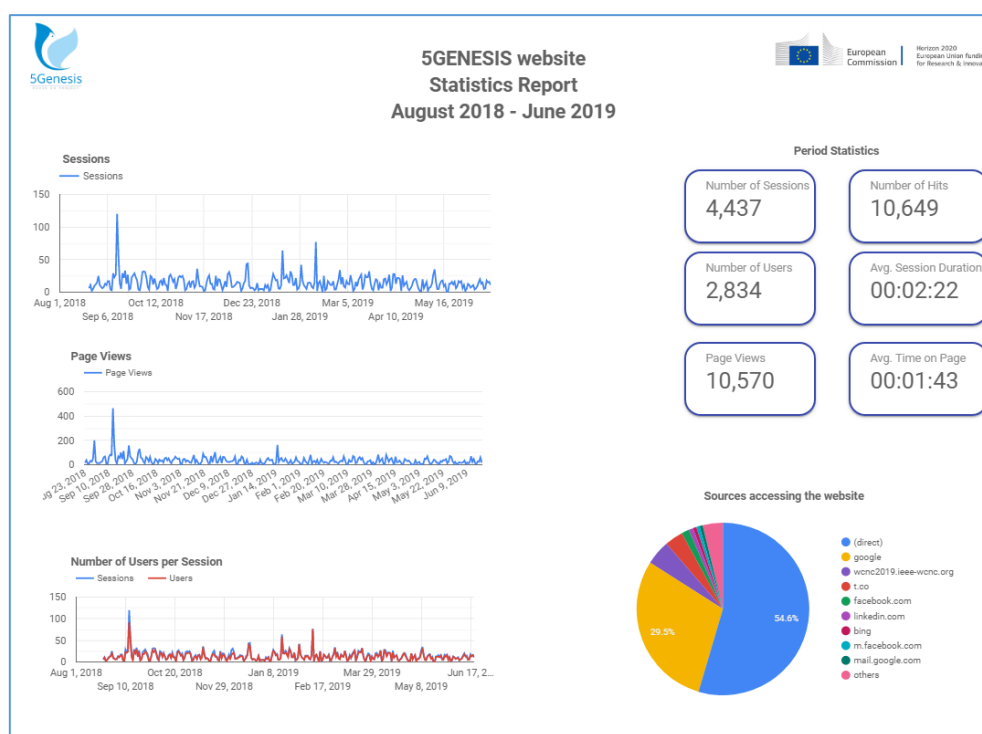


Figure 87. 5GENESIS website Annual Dashboard – Year 1

Google analytics have been enabled for the 5GENESIS website since August 2018. The statistical recordings of the website provide a valuable insight to the website performance, degree of penetration and accessibility impact to the public (Figure 88).

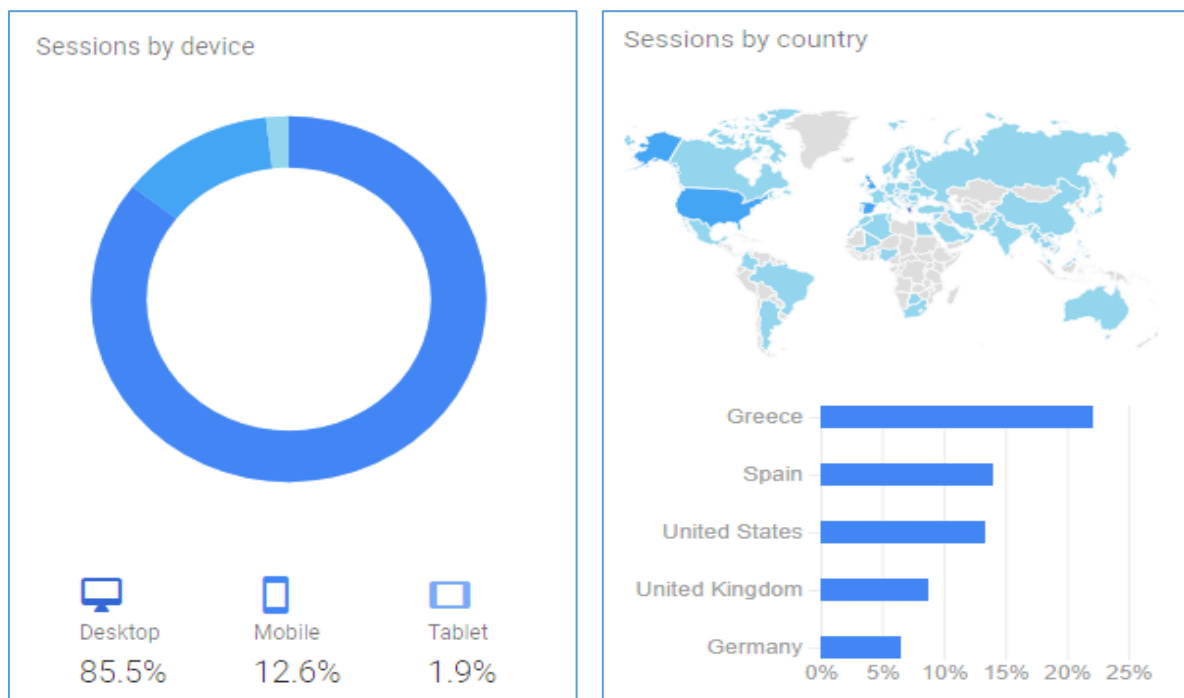


Figure 88. 5GENESIS website's sessions per device and country

A high level analysis of results, confirms the high number of visits at the 5GENESIS web site where 2834 visitors, 4437 sessions, 10649 hits and more than 10500 page views have been recorded with average duration more than 2.5 minutes. Most sessions are from Greece and Spain, followed by United States. In majority, more desktop devices have been used (>85%) followed by mobiles (>12%).

2.4.3. Social Media Performance Statistics and Dashboards

Similarly, the Social Media Statistical Dashboards are created on a monthly basis with the use of Google Data Studio and communicated internally to WP7 partners through the WP7 mailing list (provision of URL links via email for accessing the corresponding monthly dashboards). Moreover, based on the phase/needs of the project, the statistical dashboards can be issued for longer periods e.g. 3 months, 6 months. So far, for the needs of the project, they have been already issued for an 8-month period (for the needs of the 4th plenary meeting in Malaga), as well as, for a 12-month period (01/07/2018 up to 20/06/2019) for the needs of this annual reporting.

2.4.3.1. 5GENESIS Twitter Annual Dashboards

The exact period covering the Twitter annual dashboard is from June 2018 to June 2019 (Twitter channel started running since June 2018 – a few weeks before the launch of the project – in order to communicate the EuCNC 2018 activities of 5GENESIS). Table 13 and Figure 89

show in detail the constant increase that 5GENESIS Twitter account has in the total number of followers on monthly basis (starting from 90 followers at M1 and reaching more than 485 by the end of the first year). Similarly, the number of posts per month remains constant with a min average of 2 weekly posts (8-9 monthly posts) and higher figures (25-26 posts) in months with intensive dissemination activities (e.g. conferences, workshops etc), fact which confirms the success of the communication strategy followed during Y1.

Twitter												
12-month period (July 2018 – June 2019)												
	1	2	3	4	5	6	7	8	9	10	11	12
Total Followers	90	120	155	174	196	213	232	245	314	423	457	489
Posts per Month	25	11	26	9	12	17	7	9	15	22	12	16

Table 13. Twitter 12-month period information

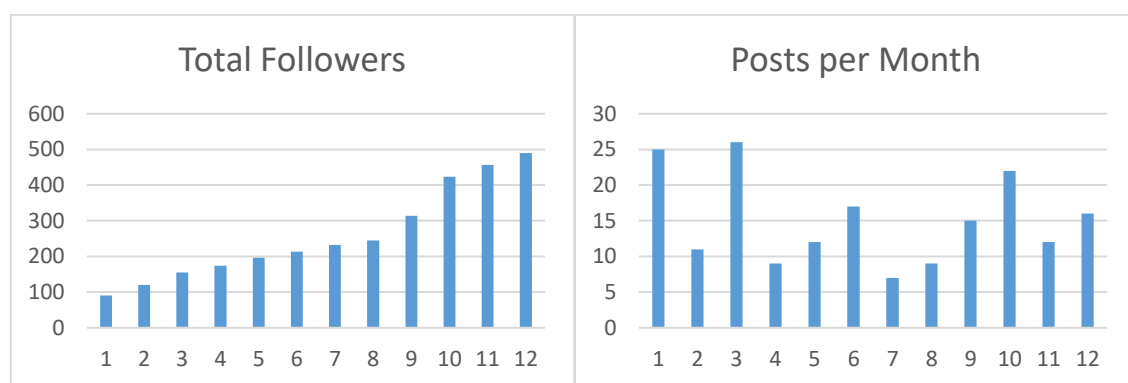


Figure 89. 5GENESIS Twitter 12-month period graphs

The annual Twitter dashboard of Figure 90 summarizes all the activity of 5GENESIS Twitter account for the period June 2018-June 2019 (up to 20 June 2019). For viewing the Twitter annual dashboard click on the following link:

https://datastudio.google.com/reporting/18_iyzJVWrzLuMaAJMcBcT-gK67iyE7Iy/page/PGMW

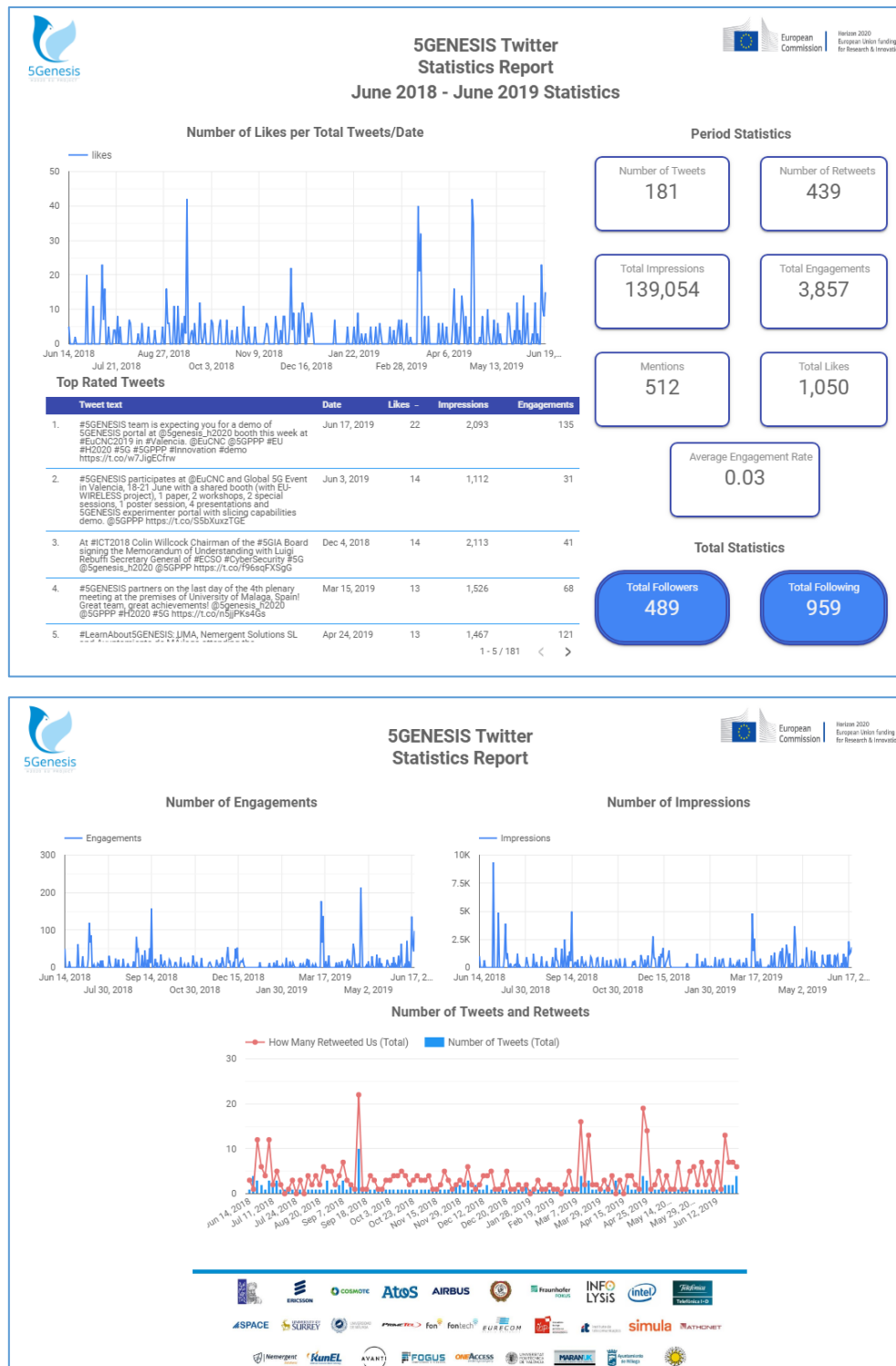


Figure 90. Twitter Annual Dashboard – Year 1

In total, during the first 12 months of 5GENESIS, the Twitter channel has been used for communicating 181 tweets and achieving 439 retweets of 5GENESIS tweets, more than 139000 impressions, with 1050 likes, 512 mentions and 3857 engagements. Similarly the engagement rate of 3% confirms the active involvement of the 489 followers to the channel's activities.

2.4.3.2. 5GENESIS LinkedIn Annual Dashboards

The LinkedIn annual dashboard has been developed in order to evaluate the project's activities through the 5GENESIS LinkedIn channel from July 2018 to June 2019. As per Table 14 and Figure 91, it is well addressed that the number of followers is constantly increasing on a monthly basis starting from 50 at end of July and reaching more than 330 by the end of the first reporting period. Similarly, a constant range of monthly posts is maintained with an average of 10-11 posts per month. During periods of events/meetings, the activity of LinkedIn channel is intensified by raising the frequency of posting activity.

LinkedIn												
12-month period (July 2018 – June 2019)												
	1	2	3	4	5	6	7	8	9	10	11	12
Total Followers	50	80	104	141	164	178	193	205	247	273	306	333
Posts per Month	9	10	26	10	12	15	8	10	15	19	11	11

Table 14. LinkedIn: 12-month period activity

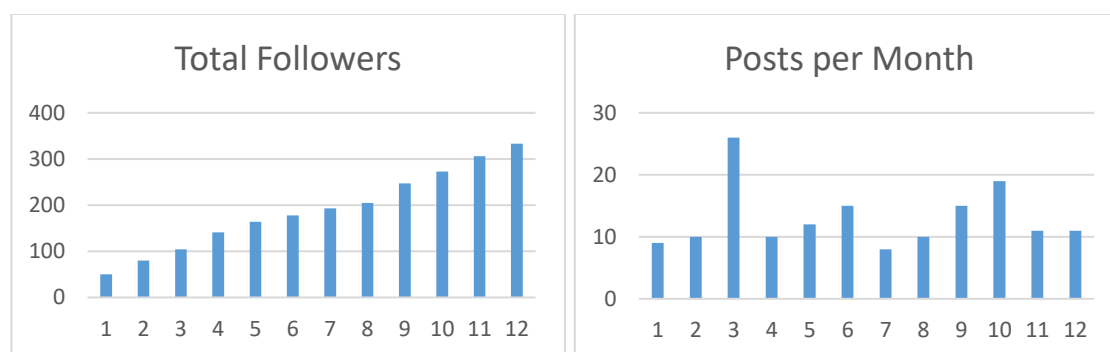


Figure 91. 5GENESIS LinkedIn 12-month period graphs

The annual LinkedIn dashboard of Figure 92 summarizes all the activities of 5GENESIS LinkedIn account for the period July 2018-June 2019 (up to 20 June 2019). For viewing the LinkedIn annual dashboard one may use the following link:

<https://datastudio.google.com/reporting/1Fjhse1uD1KdFqQgH9FbM3JUAX6wL9wVv/page/QHMW>

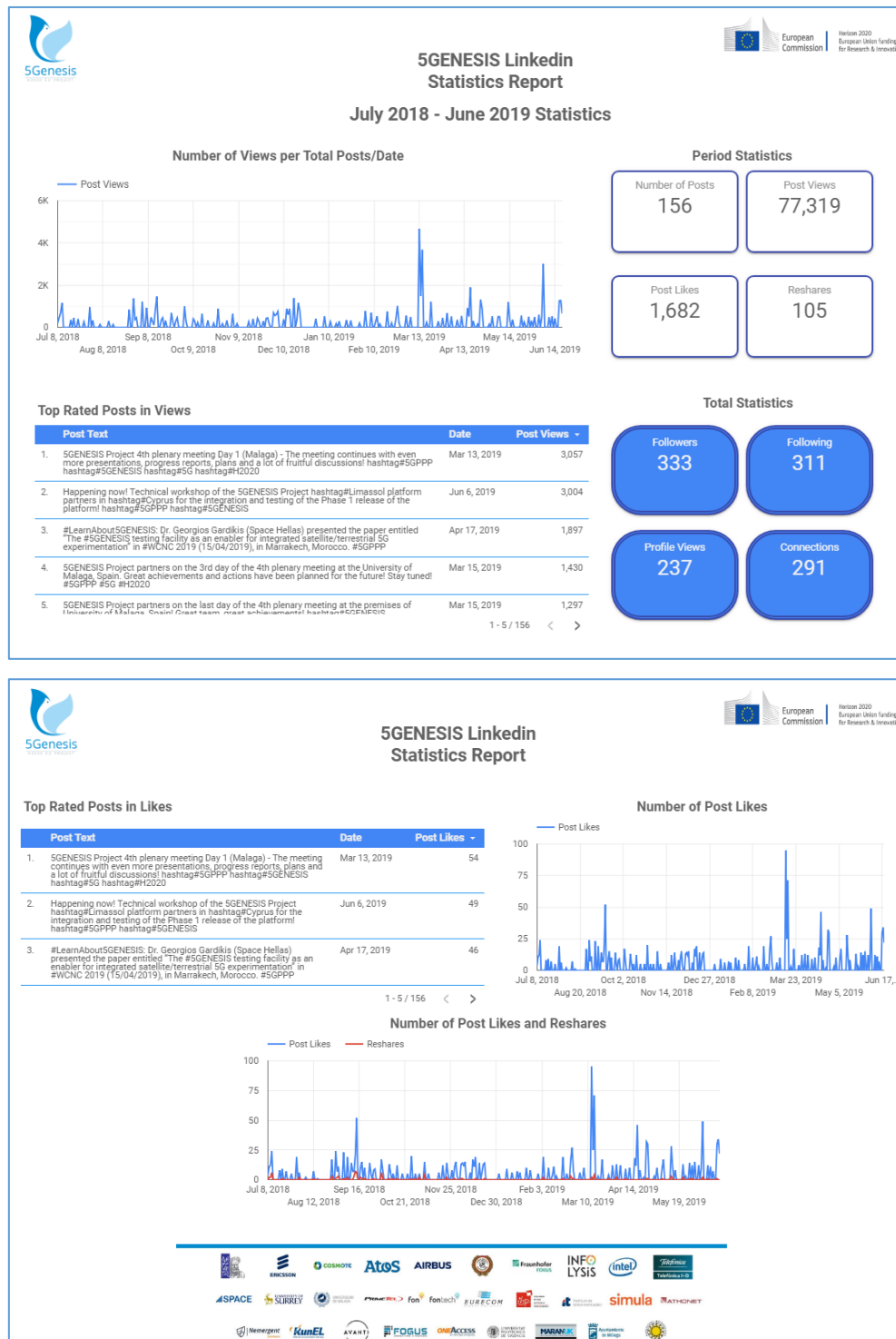


Figure 92. LinkedIn Annual Dashboard – Year 1

As per the annual dashboard, during the first 12 months of 5GENESIS, the LinkedIn channel has been used for communicating 156 posts and achieving 105 reshares with a total of more than 77300 views and 1682 likes, providing up to date information of the project's activities to a network of more than 330 followers.

2.4.3.3. 5GENESIS Facebook Annual Dashboards

The period covering the Facebook annual dashboard is from June 2018 to June 2019 (Facebook channel, like Twitter account initiated earlier its operation in order to promptly communicate the EuCNC 2018 activities of 5GENESIS). As summarized in Table 15 and Figure 93, 5GENESIS Facebook account has reached a number of followers starting from 109 followers at M1 and reaching more than 160 by the end of the first year). Similarly, the number of posts per month remains constant at an average of 10-11 monthly posts) and at more than 15 posts in periods with many dissemination activities (e.g. meetings, conferences, workshops etc).

Facebook												
12-month period (July 2018 – June 2019)												
	1	2	3	4	5	6	7	8	9	10	11	12
Total Followers	109	150	150	150	136	139	141	150	150	141	158	161
Posts per Month	24	11	27	13	10	13	8	9	17	17	11	16

Table 15. Facebook 12-month period information.

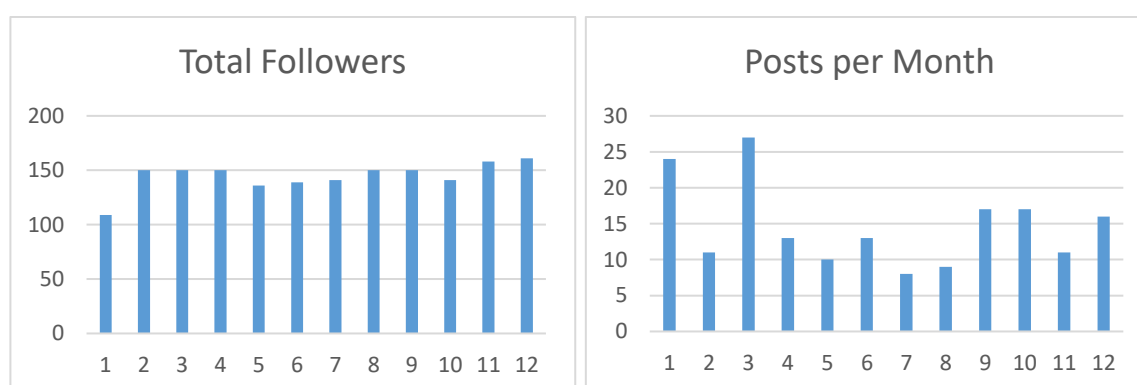


Figure 93. 5GENESIS Facebook 12-month period graphs

The annual Facebook dashboard of Figure 94 summarizes all the activities of 5GENESIS FB account for the period June 2018-June 2019 (up to 20 June 2019). The FB annual dashboard might be accessed through the following link:

https://datastudio.google.com/reporting/1albK9b22S2cpw9DhCVdjm2kIA1wo_j0Y/page/yFMW

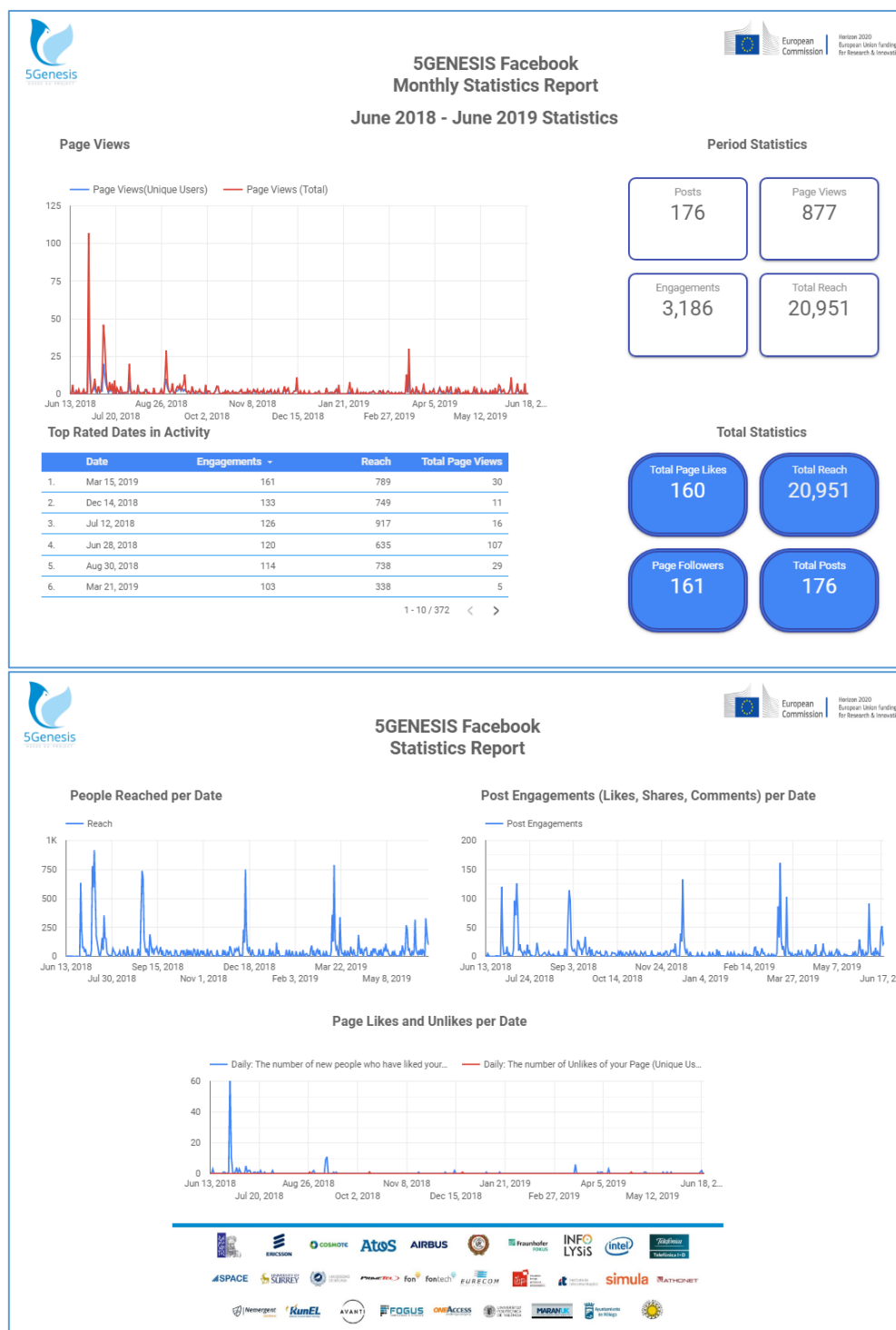


Figure 94. Facebook Annual Dashboard – Year 1

By analysing the numbers and graphs of the Facebook annual dashboard, we notice that in 12 months 176 posts have been made with more than 20900 users been totally reached, achieving 3186 engagements and 877 page views. Given that Facebook channel is used for communicating the project's activities and achievements to a non technical audience, not familiar to R&D projects, it is worth mentioning the high figures of engagement and total reach, confirming that Facebook posts are written in a way comprehensive enough to address a broader non technical audience.

2.4.3.4. 5GENESIS Instagram Annual Dashboards

The Instagram annual dashboard has been used in order to evaluate the channel's performance and monitoring for the period July 2018 to June 2019. Actually Instagram is a channel based mainly on photos communication and less on text. For that reason it was a challenge to run and maintain at good standing such a social media channel, given that on the first months of the project there was limited visual material available for dissemination. As per Table 16 and Figure 95, it is well addressed that the number of followers accumulated over this period has been stabilized and forms a basis of 50-60 followers which is considered a great success given the nature of Instagram. Similarly, by project side, a constant range of monthly posts has been used as a strategy for maintaining an average of 9-10 posts per month and keeping the followers constantly informed. As already explained for the other social media channels, during periods of events/meetings, the activity of Instagram channel is intensified by raising the frequency of posting activity on that specific period/month (e.g. M3 – September 2018: 26 photos posted).

Instagram												
12-month period (July 2018 – June 2019)												
	1	2	3	4	5	6	7	8	9	10	11	12
Total Followers	20	52	41	42	45	49	50	52	56	58	59	61
Posts per Month	9	8	26	10	9	11	6	9	14	13	10	11

Table 16. Instagram 12-month period information

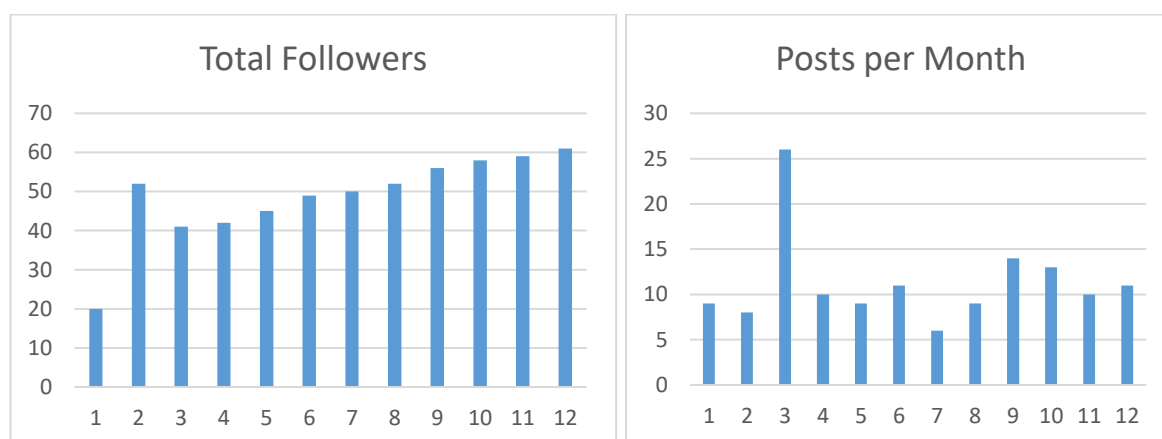


Figure 95. 5GENESIS Instagram 12-month period graphs

The annual Instagram dashboard of Figure 96 summarizes all the activity of 5GENESIS Instagram account for the period July 2018-June 2019 (up to 20 June 2019). For accessing the Instagram annual dashboard one may click on the following link:

<https://datastudio.google.com/reporting/1l-VVv4moOSRP7X7VFuFRFpv1ka8OUP1a/page/qGMW>

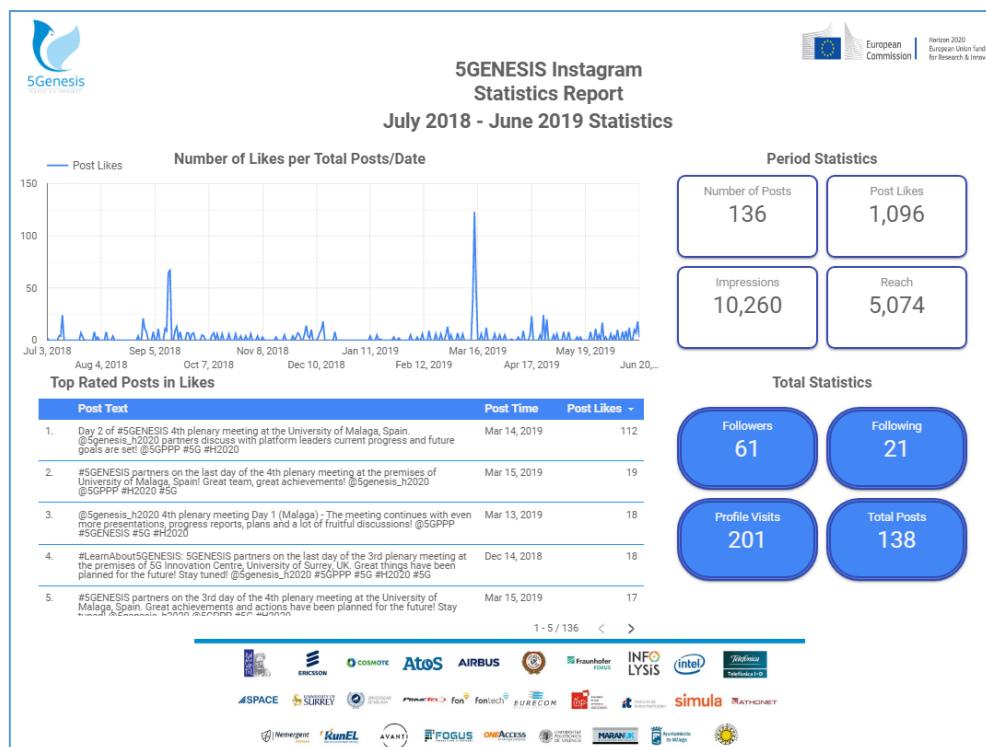


Figure 96. Instagram Annual Dashboard – Year 1

In total, during the first 12 months of 5GENESIS, the Instagram channel has been used for communicating 136 posts and achieving 1096 likes, more than 10200 impressions and reaching 5074 users, statistics confirming the success of our initial decision and strategy for communicating through Instagram photos related to activities and events of 5GENESIS to a wider audience, with non technical background, like the users of Instagram.

2.4.4. Dissemination and Communication Plan and Goals for Year 2

Following the completion of the first period of the project, and according to the communication strategy and plan already defined at D7.1, we summarize the quantitative goals for the period July 2019-June 2020 based on the split ratio percentage of 20/35/45 that is used for setting the minimum planned goals per phase (based on the total quantitative figures and the timeline already set in Table 2 for the entire project lifetime). Following the above split ratio, Table 17, summarizes the Year 2 goals for 5GENESIS dissemination and communication activities.

Activity	Year 2 Goals
Publications (in Journals/Conferences)	>8 in journals/conferences/workshops (>17 in total)
Publications (in Workshops)	
General Publications (Magazines, Books, Websites, Newspapers)	
Workshops (organized by 5GENESIS, co-organized with other projects, participation)	>8

Presentations (in Conferences, Workshops, InfoDays, Events)	>8
Participation in Conference Panels and Invited Talks	>4
Others (Exhibitions, Business Days, Booths in Conferences, Poster Sessions, Awards)	>8
Demonstrations in industrial/exhibitions and scientific events	>4

Table 17. 5GENESIS communication and dissemination goals for Year 2

Based on the successful results achieved during Year 1, without any deviations or problems, there is no need to modify the already presented communication-dissemination plan and strategy of 5GENESIS. However, worth mentioning is the need for increasing the project's publication activities since more project achievements will be available for formal documentation and dissemination to the stakeholders and 5G business, academic and scientific target audiences. In addition, 5GENESIS presence in conferences will become more intense with more participants, booths, workshops, presentations and demonstrations.

Many of the 5GENESIS partners have already spotted upcoming events and opportunities for dissemination activities during the next months (Table 18) and have already confirmed their participation (Table 18).

Upcoming Activities			
	Title	Event	Date
1	Invited speech to the IEEE 5G world forum workshop "From Evolution to Revolution, a roadmap for beyond 5G"	5G World forum	Dresden 30.09-02.10.2019
2	2nd workshop on 5G-Trials – From 5G Experiments to Business Validation	5G World forum	Dresden 30.09-02.10.2019
3	Invited talk and presentation	5G Core Summit	Madrid, 24-25.09

Table 18. 5GENESIS upcoming activities

3. 5GENESIS DEMONSTRATIONS

3.1. Purpose and Objectives

A major goal of 5GENESIS is to increase the project's outreach and visibility to potential stakeholders from vertical industries, who would be interested in experimenting with the project platforms. To achieve this objective, 5GENESIS pays particular attention to showcasing the platforms' current status, features, test scenarios, and potential capabilities. In order to raise awareness and reach the maximum visibility and impact possible, 5GENESIS partners are committed to take part in some of the most well-known and attractive demo events held worldwide, such as the Mobile World Congress (MWC) and the European Conference on Networks and Communications (EuCNC). In this way, and by reaching out to telecom operators, technology providers, content providers, service providers and device manufacturers from various verticals, 5GENESIS aspires to become a well-known, de-facto experimentation facility.

3.2. Demonstration Activities of Year 1

As described in Deliverable D7.1, the contribution of the demonstration activities to the 5GENESIS dissemination plan start after M9, where the first integration cycle is completed, and thus, most of the activities are planned to take place during the 2nd and 3rd year of the project. However, 5GENESIS has already been actively present to various demo events, showcasing components of the 5GENESIS facility. Information about the demo events where 5GENESIS has participated is presented below:

- **Mobile World Congress 2019 (25-28/02/2019, Barcelona, Spain)**

The Global System for Mobile Communications Association (GSMA) Mobile World Congress (MWC³⁹) is the world's largest exhibition for the mobile industry, incorporating a thought-leadership conference that features prominent executives representing mobile operators, device manufacturers, technology providers, vendors and content owners from across the world. MWC main event takes place in Barcelona (Spain) every February. 5GENESIS partners participated at MWC 2019, held on 25-28 February 2019, and together with their solutions they exposed parts of the under development 5GENESIS facility.

5GENESIS partner Nemergent Solutions, which has a vast portfolio that includes a complete and fully 3GPP standard Mission Critical Services ecosystem (MCPTT - Mission Critical Push To Talk, MCData & MCVideo), participated in MWC 2019 with a booth in the Spanish pavilion, where among others, the mission critical solutions developed for the Malaga Platform were presented to the audience. This solution involves the IP Multimedia Subsystem (IMS) core, MCPTT/MCS (Mission Critical Solutions) application servers, MCPTT/MCS management servers and control room among other side components in the server field and the MCPTT/MCS application running on top of Android ruggedized devices in the client side. These components are part of the solution that will be fully involved in the Malaga platform. Due to the utilization of virtualized elements, the solution showed the

³⁹ <https://www.mobileworldcongress.com/become-an-exhibitor/>

ability of fully integrating them as all-in-one Virtual Network Function (VNF) of independent VNFs in the 5G-alike orchestrated Malaga platform deployment. Besides, the end-to-end showcasing event demonstrated once again the ability to handle specific mission critical QoS classes and Evolved Multimedia Broadcast Multicast Services (eMBMS). The former would help to appropriately prioritize first-responders' flows over citizens flows in the operator, whereas the latter would help demonstrate use-cases with improved resource utilization.



Figure 97. 5GENESIS partners in MWC 2019

Moreover, Athonet presented components related to the Core network of the 5GENESIS facility. Athonet demonstrated 5G and Multi-Access Edge Computing (MEC)-based functionalities similarly to those provided in 5GENESIS use cases in several bodies' events at the MWC 2019:

- TIP (Telecom Infra Project): Athonet participates in the Edge computing project, and Athonet solutions are used at the TIP home lab at Facebook and at the BT TIP Lab in UK; Athonet has been a featured technology demo partner at TIP in MWC 2019.
- MulteFire: Athonet has taken part at a 5-partners demo exhibited at MWC 2019, where Athonet provided the 4G core network functionalities⁴⁰.

Athonet has also launched the BubbleCloud solution⁴¹, the 4G Evolved Packet Core (EPC) developed for Amazon Web Services (AWS), and available as Software as a service (SaaS) through the AWS marketplace to customers willing to build their 4G private networks using cloud computing facilities. This solution has won a record 4 Global Mobile Awards at MWC 2019, unprecedented in the event's history for a single product. This includes the prestigious CTO's Choice for Outstanding Mobile Technology. The winning categories were:

- Best Innovation for Enterprise
- Best Mobile Technology Breakthrough
- Best Network Software Breakthrough
- The CTO's Choice Award

RunEL was one of the exhibitors at MWC 2019 in Hall-5 stand 5E41-9 as part of the Israel Export Institute Pavilion as depicted in Figure 98.



Figure 98. RunEL stand at MWC 2019

In the RunEL stand, the Sparq-2020 5G Distributed Architecture developed for the 5GENESIS project was demonstrated (Figure 99). The RunEL demonstration included a Distributed Radio Access Network (D-RAN) that was connected to two Remote Radio Heads (RRH) that were connected to two user terminal (UE) emulators at two different frequency bands, one at 3.5GHz and the second at 28GHz at 100MHz and 200MHz bandwidth, respectively. The purpose of the demonstration was to measure the system down-link KPIs such as latency (less than 100 microseconds) and Error Vector Magnitude (EVM) (less than 5% at 64 QAM modulation). A video with a detailed description of the RunEL 5G demo system is also available⁴².

⁴⁰ <https://www.multefire.org/event/mwc-barcelona-2019/>

⁴¹ <https://athonet.cloud/>

⁴² <https://www.youtube.com/watch?v=O1Kxv-XRlg&t=15s>

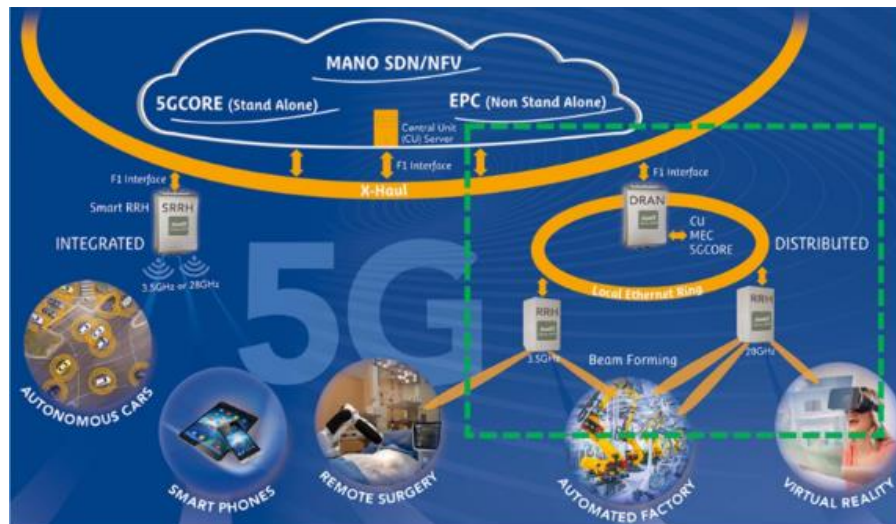


Figure 99. Sparq-2020 5G Distributed Architecture demonstrated at MWC 2019

- **BAPCO-CCE 2019 (12-13/3/2019, Coventry, UK)**

The BAPCO show is the annual event for professionals working to utilise, advance and improve Public Safety Technology. The TCCA CCE event is part of the Critical Communications Series hosted by TCCA across the world. TCCA's Critical Communications Europe (CC Europe) event took place in conjunction with the BAPCO Annual Conference & Exhibition, at the Ricoh Arena, Coventry, UK, on the 12-13 March 2019. Nemergent solutions has presented the same demo, as the one in MWC, in this event as well.



Figure 100. Nemergent Solutions in BAPCO-CCE 2019

- **5G Forum (24-25/4/2019, Malaga, Spain)**

The 5G Forum⁴³ is a multidisciplinary meeting on 5G technology held in Spain. It annually puts the advances of 5G technology on the stage, constituting an opportunity to exchange knowledge of the practical applications of this technology.

⁴³ <https://www.5gforum.es/en/>

5GENESIS has presented the demo “Advanced communications services for Police” at the 5G Forum: Advanced communications services for Police. Emergency networks are currently undergoing a major transformation process. These networks, traditionally based on private technologies, closed and with little capacity for innovation, are giving way to standardised, interoperable technologies that make use of commercial mobile networks and with the capacity to offer other video and data services in parallel with the voice services themselves (MCPTT). 5GENESIS echoes this new trend in relation to MCS and integrates them with the latest advances in mobile networks in their transformation towards the expected fifth generation (5G). The combination of both advances will make it possible for the Mission Critical services for the security forces to be deployed flexibly, dynamically and on demand on radio infrastructure with capacities much higher than the current ones, thus being able to manage the celebration of large events, possible attacks on cities or other critical situations with better communication tools and as quickly and efficiently as possible.



Figure 101. 5GENESIS in 5G Forum

In Q1 2019 and having closed the first integration phase, 5GENESIS presents a prototype of this technology on the 4G mobile network, but running the services on virtual machines, prior to its deployment as VNFs for use in future 5G networks. This demo has shown UEs adapted for MCS executing an MCPTT application through an LTE infrastructure, as an initial version of the MCS deployment of the project.

- **5GENESIS Global 5G Event & EuCNC 2019 Demo (17-21/6/2019, Valencia, Spain)**

5GENESIS attended the Global 5G Event and EuCNC 2019, the European Conference on Networks and Communications, from June 17th to 21st, with a shared booth where a demo with the last developments in one of the project's platforms was shown. The demo prepared for the event demonstrated the different functions available through the 5GENESIS web portal, including the creation and execution of experiments, the debugging of the experiment run thanks to logs from the different components participating in the experiment automation and execution, and finally the results exhibition using a dashboard where the user could see different measurements and statistics.

Moreover, the demo team explained to everyone interested, the details of the project, its roadmap, the different roles of the involved platforms, and the benefits that 5GENESIS can provide to the research community, the industry, SMEs, and verticals.



Figure 102. 5GENESIS in EuCNC 2019 in Valencia

3.3. Activities Evaluation and Impact

3.3.1. Demonstration Strategy/Plan Update

The demonstration plan of the project targets to include all 5 platforms (Athens, Malaga, Berlin, Limassol, Surrey), so that they will all participate at least to one demonstration event. Remote access will be used so that these platforms are reachable from the physical event location. Furthermore, emphasis will be given to the portable demonstrator, as the major driver to run real-life demos in exhibitions and demo events so as to draw the attention of potential vertical industries. Moreover, the portable demonstrator aims at the general audience in order to showcase the advances of 5G, focusing on market-related features, like downloading speed and service provision agility.

3.3.2. Demonstration Plan and Goals for Year 2

Part of the following events are targeted for the second year of the project. Their selection is based on their geographical distribution, number and diversity of attendees, and thus, potential outreach degree:

1. Knekt365 events. *KNect365 is the world's leading provider of live events and digital communities where people share knowledge and make connections to help them grow professionally and commercially.* In the frames of 5GENESIS, the following KNect365 events are targeted:
 - Broadband World Forum⁴⁴ (Next event on 15-17 October 2019 in Amsterdam).
 - MEC Congress⁴⁵ (Next event on 17-19 September 2019 in London).
 - NFV & Carrier SDN⁴⁶. (Next event on 17-19 September 2019 in Dallas, Texas).
 - Network Virtualization Europe⁴⁷. (Latest event on 21 - 23 May 2019, Berlin).
 - 5G World Event⁴⁸. (Latest event on 12 - 13 June 2019, in London).
2. Open Networking Summit (ONS)⁴⁹. *ONS is the industry's premier open networking event, gathering enterprises, service providers and cloud providers across the ecosystem to share learnings, highlight innovation and discuss the future of Open Source Networking, including SDN, NFV, orchestration and the automation of cloud, network, & IoT services.* The Open Networking Summit Europe 2019 will take place on 23-25 September 2019, in Antwerp, Belgium.
3. SDN NFV World Congress⁵⁰. *SDN NFV World Congress is the industry leading debating forum and showcase for the rapidly growing and massively influential, Software-Defined Networking and Network Functions Virtualisation industries.* The SDN NFV World Congress 2019 will take place on 14-17 October 2019, in The Hague, Netherlands.
4. TMForum - Digital Transformation World⁵¹. *The Digital Transformation World Conference, which is organized by TM Forum, is driving collaboration and collective problem-solving to maximize the business success of communication and digital service providers and their ecosystem of suppliers.*
5. Wireless Global Congress: Wireless Broadband Alliance (WBA)⁵². *The Wireless Global Congress is the world's leading event on next generation wireless service opportunities, bringing together the leading players from carriers and connected cities ecosystems' all under one roof.*
6. Smart Mobility World Congress (SMWC)⁵³. *The Smart Mobility Congress (SMC) is a premiere event that gathers multi-sectorial experts and industry practitioners to develop connections and business, discuss case studies and promote network among peers.* The Smart Mobility World Congress 2019 will take place on 19-21 November 2019, in Barcelona, Spain.

⁴⁴ <https://tmt.knect365.com/bbwf/>

⁴⁵ <https://tmt.knect365.com/edge-computing-congress/>

⁴⁶ <https://tmt.knect365.com/nfv-and-carrier-sdn/>

⁴⁷ <https://tmt.knect365.com/virtualization-sdn-europe/>

⁴⁸ <https://tmt.knect365.com/5gworldevent/>

⁴⁹ <https://events.linuxfoundation.org/events/open-networking-summit-europe-2019/>

⁵⁰ <https://www.broadband-forum.org/meetings-and-events/sdn-nfv-world-congress-2019>

⁵¹ <https://dtw.tmforum.org/>

⁵² <https://www.wirelessglobalcongress.com/>

⁵³ <http://www.smartmobilitycongress.com/en/home>

7. Critical Communications World (CCW)⁵⁴, *CCW is TCCA's flagship industry event, driving the development and promotion of open standard mobile critical communications solutions and complementary applications worldwide.*
8. FUSECO Forum⁵⁵, the FUSECO Forum is an industry-focused, annual event bringing together international key experts from various industry sectors to discuss the opportunities and challenges of emerging 5G-related information and communication technologies. The event provides a forum for leading operators, manufacturers, integrators, and solution providers to understand and assess 5G-related technologies, infrastructures, and their use in various business sectors enabling innovative business models, value chains, productivity gains, and new revenue opportunities. The FUSECO Forum 2019 will take place on 7-8 November 2019, in Berlin, Germany.
9. Mobile World Congress (MWC)⁵⁶ *is the largest mobile event in the world, bringing together the latest innovations and leading-edge technology from more than 2,400 leading companies, with a highly-rated conference programme assembling today's visionaries to explore the hottest topics influencing the industry.* MWC 2020 will take place on 24-27 February 2020, in Barcelona, Spain.

⁵⁴ <https://critical-communications-world.com/>

⁵⁵ https://www.fokus.fraunhofer.de/ngni/events/fuseco_forum_2019

⁵⁶ <https://www.mwcbarcelona.com/>

4. 5GENESIS ACTIVITIES: 5GPPP PROGRAMME AND COLLABORATION WITH ICT-17 PROJECTS

4.1. Purpose and Objectives

Most 5GENESIS consortium partners are participating in several 5G-PPP organized activities. The purpose is to align, impact and synergize with the 5G-PPP Working Groups (WG). This stream of activities is very important to ensure that the outcomes of the 5GENESIS project are aligned with what is happening in the surrounding international research ecosystem, and that the main achievements, especially the technical ones, get proper visibility in the research community and impact on the society in the broad sense.

4.2. Activities of Year 1

Since the beginning of the project, most of the 5GENESIS consortium partners have been actively participating (and will continue to do so) in the several 5G-PPP organized activities.

Ongoing monitoring activity is being performed by the partners following the most important 5G-PPP working groups, and – when the case – contributions from the 5GENESIS project are discussed in the telcos or at the face-to-face workshops organized by the 5G-PPP association.

The 5GENESIS project has appointed several partners to contribute to 5G-PPP working groups as described in the table below:

Working Group	Main representative	Main representative Company / Organisation	Second representative	Second representative Company / Organisation
5G-PPP Steering board	Dr. Harilaos Koumaras	NCSR Demokritos	Dr. Anastasios Kourtis	NCSR Demokritos
5G-PPP Technical Board	Prof. Pedro Merino Gomez	University of Malaga	Dr. Dimitris Tsolkas	Fogus
5G-PPP Comms list	Dr. Valerio Frascolla	INTEL	Dr. Jesus Gutierrez Teran	IHP
Pre-Standardization WG	David Artuñedo Guillen	Telefonica	Arthur Lallet	Airbus DS SLC
Spectrum WG	Prof. Eckhard Grass	IHP	Antonio Morgado	IT Portugal

5G Architecture WG	Dr. Jesus Gutierrez Teran	IHP	David Artuñedo Guillen Arthur Lallet	Telefonica Airbus DS SLC
SDN / NFV WG	Ms Jara Suárez de Puga García	Polytechnic University of Valencia	David Artuñedo Guillen	Telefonica
Network Management & QoS WG	Themis Anagnostopoulos	NCSR Demokritos	Eirini Liotou	FOGUS Innovations and Services P.C.
Vision and Societal Challenges WG	Dr. Valerio Frasca	INTEL	Dr. Jesus Gutierrez Teran	IHP
Security WG	Dr. Georgios Gardikis	Space Hellas	Arthur Lallet	Airbus DS SLC
SME WG	Eneko Atxutegi	Nemergent	Vaios Koumaras	INFOLYSiS P.C.
Trials WG	Prof. Pedro Merino Gomez	University of Malaga	David Artuñedo Guillen	Telefonica
5G Automotive WG	Dr. Jimeno, Elisa	ATOS	Prof. Pedro Merino Gomez	University of Malaga
IMT-2020 Evaluation Group	Dr. Fotis Lazarakis	NCSR DEMOKRITOS	Dr. Valerio Frasca	INTEL
Test, Measurement and KPI Validation (TMV)	Alberto Florez Pages	Telefonica	Almudena Diaz Zayas	University of Malaga

Table 19. 5GENESIS representatives per 5G-PPP Working Group

The year 1 activity is detailed below:

- **5G-PPP Steering board**

- The deputy project coordinator Dr. Harilaos Koumaras has participated in the f2f meetings and telco calls of the 5G-PPP steering board, representing 5GENESIS. This activity contributed in the definition of the collaboration between ICT-17 and ICT-19 projects, but also on the formation of new WGs, such as the TMV working group, where 5GENESIS project has actively contributed. Moreover the transition of the WG leadership from phase 2 to phase 3 project representatives was also one of the major issues that addressed during the meetings, where the SB reassured a smooth transmission and continuation of the WGs.

- More specifically, Dr. Harilaos Koumaras attended the f2f meetings in Brussels on 13 September 2018 and 16 May 2019, while he could not attend the f2f meeting on 29 January 2019, due to a serious flu infection.
- Dr. Harilaos Koumaras participated in the SB telcos on 17 July 2018, 12 November 2018, 20 March 2019 and 28 June 2019.
- **5G-PPP Technical Board**
 - 5GENESIS partners attended the 5G-PPP Technical Workshop and TB meeting on the 20-21-22 October in KISTA (Pedro Merino, Dimitris Tsolkas and Alberto Florez represent/report). The main topic was the discussion on how to define and to measure KPIs. TB activities on KPIs synchronized with the TMV WG (Alberto Florez, Almudena Díaz)
 - Pedro Merino attended the 5G PPP meeting in Brussels on the 21st of May 2019.
 - The TB worked on the coordination of the platforms cartography in collaboration with the Trials WG, to be expanded also with a vertical cartography (ICT-17 TMs and DTMs leading)
- **5G-PPP Comms**
 - This WG organizes a conference call each quarter, to share info and align the activities of all the EU-funded projects that are under the 5G PPP umbrella.
 - 5GENESIS representatives (constantly Valerio Frasca, often supported by other consortium partners) have been actively participating to the activities of this WG, by informing and disseminating 5GENESIS project activities and proactively proposing joint collaborations with other funded projects, e.g. the co-organization of workshops and special sessions at international flagship conferences, as detailed in section 2 of this deliverable.
- **Pre-Standardization WG**

5GENESIS has joined this group in Q2 2019. The group is active with projects from Phase 1 and 2, integrating new projects from Phase 3. Some of the activities that 5GENESIS is monitoring include:

 - Continuous tracking of 3GPP study and work items for releases 16 and 17. Mapping of items across 3GPP system and vertical applications; percentage of completion, related WG and documentation.
 - Analysis of inputs related to open items and relevant technical reports.
 - Publish the Verticals Cartography information at Global5G.org.
 - co-organization of workshop with 3GPP and selected market representation partners (Brussels, February 2019): support to 5G-IA Secretary General.
 - Produce the Standardization Tracker information. This information is available in the WG repository but will be published in an Online tool (work in progress).

- **Spectrum WG**

5GENESIS representatives are taking part in Spectrum-WG Telcos, organized by the WG-Chair Giovanna d'Aria (Telecom Italia) on a regular basis. The representatives of 5GENESIS in this WG are António J. Morgado (Instituto de Telecomunicações) and Eckhard Grass (IHP). Besides 5GENESIS, Eckhard Grass also represented the Phase-2 Project 5G-PICTURE in the SPECTRUM-WG. In the context of SPECTRUM-WG, 5GENESIS actively contributed to the following documents which were recently generated:

- 1) WG Spectrum Response to 5G-IA on RSPG 2nd Opinion5G
- 2) Key recommended spectrum areas for FP9 - High-level overview
- 3) 5G IA Response to the Public consultation on the Draft RSPG Opinion on 5G implementation challenges (RSPG 3rd opinion on 5G) – in progress

Since March 2019, three more phone conferences took place, where the main topic was the preparation of the answer to RSPG opinion on 5G. The elaboration of this document is still in progress.

- **Architecture WG**

- 5GENESIS has taken part in the 5G Architecture WG Meeting held in Munich on March 18-20, which involved the preparation of the third release White Paper of the Working Group. The work is ongoing and some small contributions from the Project will be included, to then increase the number of contributions for the next release. A representative of 5GENESIS is Chapter 4 editor of the White Paper and will present the topic: Transport Network Infrastructure at the WG Architecture Workshop to be held at EuCNC 2019 in Valencia.

- **SDN / NFV WG**

Several bi-weekly calls have taken place in order to perform the following activities:

- EUCNC 2019: Organization of the 2nd Workshop “From cloud ready to cloud native transformation”
- Collection of Open Source Contributions outputs from the different projects in which 5GENESIS will include its contributions.
- Creation of a White Paper named “Verticals in the Cloud-Native Era” in which 5GENESIS participate within the Málaga MCPTT use case.

- **Network Management & QoS WG**

- This WG plans to prepare and release a White Paper that discusses the application of Artificial Intelligence (AI) and Machine Learning in service management and service delivery in 5G. It aspires to include topics related to the interests of 5GENESIS, including service-level topics (e.g. personalized services and enhanced user experience, public safety), generic topics contributing to service experience (e.g. predictive analytics and context awareness), as well as network technology-level topics (such as Network Slicing, testing and monitoring). 5GENESIS representatives of this WG have contributed with a description of the 5GENESIS Slice Manager, the workflow for the instantiation and the configuration of a network slice, and a discussion regarding

where AI and Machine Learning can play a role on the Slice Manager functionality.

- **Vision and Societal Challenges WG**

- This WG splits its activities among three different parallel sub-WGs, which are called:
 - *Smartnet*, led by Arturo Azcorra, which focuses on the structure and scope of the successor of FP8, called Horizon Europe (HE).
 - *Pre-structuring Model* (PSM), led by Didier Bourse, which defines the Pre-structuring Model phase III of the forthcoming EU calls of the FP8 programme, to be released by June 2019.
 - *Member State Initiative* (MSI), led by Miquel Pajaro, which focuses on fostering the interaction with the EU member states and their local initiatives.
- 5GENESIS actively attends all three sub-WGs, by leveraging among the support of around five people.
- In the PSM sub-WG 5GENESIS (Pedro Merino, Eneko Atxutegui, Valerio Frascolla) constantly attend the almost monthly calls and is mainly active in the definition of ICT-41, ICT-42, and ICT-52.
- The MSI sub-WG has started its activity on the 10th of May 2019, Valerio Frascolla is the 5GENESIS representative of the work.

- **Security WG**

A plenary meeting was organized in Brussels on the 25th of October 2018. During this meeting the following items were discussed:

- WG status and update on the various activities.
- Update from projects and members
- Review of the landscape Whitepaper version 2 and organization of the way forward for external review and endorsement process.
- Security KPIs inputs from phase 2 and phase 3 projects.
- Vertical Whitepaper: verticals requirements towards 5G infrastructures, security management and monitoring of verticals versus 5G infrastructure, risk matrix coverage by phase 2 & Phase 3 projects and Security WG Security Recommendations
- A special session with ENISA representative on Network Slicing report
- Liaison activities

Several meetings took place to discuss the European Commission Recommendation of 26.3.2019 for Cybersecurity of 5G networks.

- **SME WG**

A general assembly meeting was organized in Brussels in 15/11/2018 under NetWorld2020 umbrella. During the meeting the following topics were covered:

- Steering board selection: due to the breach of the quorum of 10% = 36 members of the Research Group required for a valid election of the members of interested parties in the investigation, the election will be organized via electronic voting that will begin on Monday, the 19th of November, with a term of 3 weeks later.
- Horizon Europe (2021-2027): research and innovation funding program of 100 billion euros for seven years. The aim of strengthening the EU's scientific and technological bases, boosting innovation capacity Europe and sustain the socioeconomic. More than half (52.7%) devoted to industrial competitiveness.
- 5GENESIS: it has been mentioned as one of the achievement examples in supporting vertical pilots with 5GPPP E2E infrastructure. As both partner of 5GENESIS and SME, RunEL (Israel Koffman) has participated in the panel called "The role of SMEs in the new 5G ecosystem". The general opinion is that European projects open gates and new business opportunities for SMEs. However, there is a feeling that the involved SMEs in European projects are always more or less the same. Demonstrating that many SMEs do not see the benefit of European projects participation for their company. Still work to do in this regard.

The sole SME WG telco took place in 01/02/2019 and the approach was the discussion of opportunities to strengthen SMES considering forthcoming events (MWC, EuCNC etc) and their possibilities for SMEs (shared booths, standing single booths), calls and ways to promote them.

In the SME WG framework, 5GENESIS was requested to write a short text with the successful stories of the SMEs inside the project. The text was agreed and delivered and it has been already published (<https://www.networld2020.eu/wp-content/uploads/2019/04/sme-success-story-nemergent-5genesis.pdf>).

The SME WG has also voted for their chairs, resulting (18/04/2019) in the re-election of Jacques Magen (Interinnov) as Chairman and new election of Nicola Ciulli (Nextworks) as Vice-chairman.

- **Trials WG**

- 5Genesis has joined this group in Q2 2019. The group is active with projects from Phase 1 and 2, integrating new projects from Phase 3.
- The WG has been focused in producing the "5G PPP PLATFORMS CARTOGRAPHY" available at <https://5g-ppp.eu/5g-ppp-platforms-cartography/>, where the 5Geneis platforms have been integrated.
- The WG is producing detailed online information of the testbeds available at <https://www.ip45g.de/en/5g-testbeds/>. 5Genesis platforms are already listed in the tool.

- The Working group is producing “Roadmap Version 5.0 - 10 Phase 2 Projects Trials & Pilots.” Targeted objective/approach for the 10 Phase 2 Projects Trials & Pilots to be highlighted in the “Roadmap Version 5.0” document and to be possibly included in the EU 5G Observatory.
 - The WG is participating and tracking several events. Some of them include:
 - EU 5G Observatory:
 - <http://5gobservatory.eu/observatory-overview/observatory-reports/>
 - <http://5gobservatory.eu/wp-content/uploads/2019/04/80082-5G-Observatory-Quarterly-report-3.pdf>
 - IEEE ICC 2019 Workshop “5G-Trials - From 5G Experiments to Business Validation” to be organized on 20.05.19 in Shanghai (<https://www.networld2020.eu/call-for-paper-ieee-icc-2019-workshop-5g-trials-from-5g-experiments-to-business-validation/>).
 - 2nd PPP Verticals Workshop incl. 5G-IA, 5GAA, 5G-ACIA, PSCE... to be organized on 09-10.07.19 in Roma, following the 1st Workshop organized on 12-13.02.19 in Brussels
 - ECC CEPT Workshop organized on 02-03.05.19 in Copenhagen and addressing the new spectrum solutions for Vertical industry sectors/stakeholders
 - EC Proposers Days to be organized on 19-20.09.19 in Helsinki (<https://www.ideal-ist.eu/news/ict-proposers-day-2019>).
 - Mobile Europe and European Communications 5G Survey, addressing among others (1) How important is 5G to network operators’ survival and success?, (2) How ready are operators to deploy 5G commercially?, (3) What are the biggest threats and challenges that 5G poses to operators? And (4) Will 5G networks be harder to secure than other networks? (<https://www.surveymonkey.co.uk/r/MCZBM6Z>).
 - EC stakeholders Workshop "European 5G Observatory – Is Europe ready for 5G?" to be organized on 17.05.19 in Brussels (Borschette) (<https://ec.europa.eu/digital-single-market/en/news/save-date-european-5g-observatory-europe-ready-5g>).
 - The 5G Pan European Trials Roadmap 3.0 , was presented at MWC 2018
 - The 5G Pan European Trials Roadmap 4.0, including a first version of the platforms cartography, was released on Nov. 2018
- **5G Automotive WG**
 - Focuses on connected and automated mobility and serves as a common platform between 5G-PPP projects developing V2X and Vehicle-as-Infrastructure concepts and components.

- The WG delivered the second version of the paper “Business feasibility study for 5G V2X deployment”, focused on including further work and enhancements that targets the description of the 5G V2X ecosystem and stakeholder relationships, different sharing models for network infrastructure, as well as a business setup and finally a techno-economic assessment of the investment.
- Participation on 5G Strategic Deployment Agenda for Connected and Automated Mobility, held in Brussels on 7 February
- 5GENESIS project aims to provide relevant vision on evaluation of KPIs in several experiments based on the performance of the 5G infrastructure developed, although not a specific use case is focused on automotive sector, similar ULRRRC such as Mission Critical services targets low latency and reliable communication.
- **IMT-2020 Evaluation Group**
 - ITU-R WP5D launched an evaluation process for Radio Interface Technologies (RITs), which will be submitted by SDOs (Standards Developing Organisations) to ITU-R to be recognised as member of the IMT family of systems for mobile and wireless communications. Each SDO has to provide a self-evaluation as part of its RIT submission. In addition to the self-evaluation, ITU-R is looking for independent second opinions by independent Evaluation Groups. By January 2018, 11 independent Evaluation Groups have registered at ITU-R.
 - The evaluation of candidate RITs by independent Evaluation Groups is planned between beginning of 2018 and the cut-off date for the submission of the final evaluation report in February 2020. The evaluation process includes the following tasks according to relevant ITU-R documents:
 - To follow evaluation guidelines in the ITU-R document.
 - Additional evaluation methods by Evaluation Groups may be used and shared between Evaluation Groups.
 - Coordination between Evaluation Groups for comparison and consistency of results is envisaged.
 - Evaluation reports to be sent to ITU-R Study Group 5 as input for WP5D and publication.

The evaluation is sub-divided in several “Characteristics for evaluation”, while there are three means of evaluation: analytical, inspection and simulation. Details are given in ITU-R M.2411 “Requirements, evaluation criteria and submission templates for the development of IMT-2020”.
- **Test, Measurement and KPI Validation (TMV)**
 - 5GENESIS has joined this group in Q1 2019. The group is active with all projects from Phase 3, integrating new projects from Phase 2.
 - Define the same methodology on test, measurement and validation of the common KPIs
 - Incorporation of previous projects methods
 - Align KPIs definition between project (phase II and ICT-17)

- Review KPIs document created by the TB Task force (cartography of KPIs and innovation)
- Preparation of cloud native White paper

ICT-17 projects 5GENESIS, 5G-VINNI and 5G-EVE are implemented under complementary grant agreements through the use of the respective options of Article 2, Article 31.6 and Article 41.4 of the Model Grant Agreement. Under this complementary activity. The three projects are collaborating through two different channels: i) Via the 5G-PPP WGs and the ii) Via commonly organized activities. A major requirement from this collaboration is the definition and adoption of a common experimentation framework, which will allow the comparison and benchmarking of the experimental results that are gathered by the execution of experiments across the different platforms.

Towards this, 5GENESIS has developed a KPI formalization framework, which presented also at Global 5G Event at a commonly organized session by the three projects, and has been also used as an input to the newly form TMV group.

Moreover, the three projects have co-organised together different special sessions and workshops at conferences and other events (such as ICT-19 InfoDay in Brussels, EuCNC 2018 and EuCNC 2019) that are listed and presented in this Deliverable (Section 2.3.2).

4.3. Evaluation and Impact of Year 1 Activities

4.3.1. Evaluation of Activities and Results

The 5G-PPP working groups activities evaluation and results for year 1 are detailed below:

- **5G-PPP Steering board**

Dr. Harilaos Koumaras (5GENESIS DPC) has been active in the physical meetings of the 5G-PPP SB in Brussels and also at all the teleconference meetings. Among other topics that were discussed by the SB, the main topics that were related to the 5GENESIS project are: i) The definition of a common testing and validation framework across the ICT-17 projects. Towards covering this need, the 5G-PPP SB decided that this needs cannot be covered by the 5G-PPP KPI WG, which has a different focus. For this reason the creation of the TMV WG took place, where 5GENESIS has been actively involved in proposing as a basis for further developments the experimentation methodology and experimentation tables that 5GENESIS has been defined (used in D6.1). Towards this direction, the preliminary version of this methodology presented by 5GENESIS project coordinator Dr. Harilaos Koumaras at the Global 5G event in June at Valencia, which is the top ranking event of the 5G-IA. Other activities of 5G-PPP SB related to 5GENESIS, were discussions that took place for the collaboration of ICT-17 projects with the ICT-19 projects, where 5GENESIS will support the vertical industries that participate in 5G!Drones, 5G-VICTORI and 5G-HEART.

- **5G-PPP Technical Board**

5GENESIS TM and DTM have been active in the two physical meetings of the TB in the first year of the project (Kista and Brussels) and also in most of the teleconference

meetings. The two main activities in this period are related to KPI evaluation and European cartography. The activities relate to KPIs initiated in the TB are being transferred to the TMV, where Almudena Díaz and Alberto Florez are leading the activities on behalf of 5GENESIS. The activities to make visible the European 5G platforms are a follow up of the work started in the Trials WG, where Pedro Merino (5GENESIS TM) was previously active in this task, and it is now mainly carried out by the 3 ICT-17 TMs and Didier Bourse as the TB chair. They are defining the way to report the platforms features, the KPIs and the verticals supported. The current output of the cartography is available at <https://5g-ppp.eu/5g-ppp-platforms-cartography/>, and it will be expanded in the next weeks. A third main activity in the TB is the identification of new white papers to be produced by the WGs in a cooperative way.

- **Pre-Standardization WG**

Starting in March this year, 5GENESIS representatives have participated in the monthly calls of the working group, catching up with the activities of the WG.

The WG has identified a set of GAPs with standards that are being analyzed and discussed inside 5Genesis consortium, as a key input to identify contribution areas for the project. The list of gaps includes so far:

- Adding new features incrementally with New Radio (NR) covering all relevant use cases that are commercially viable, e.g. drones and public safety.
- Enhanced NR unlicensed: essential features, with integrated access and backhauling.
- Massive Multiple Input Multiple output (MIMO): increase efficiency in real operations.
- Industrial Internet of Things (IIoT) and URLLC: build on Releases 15 and 16, with IEEE integration and adding missing features (e.g. massive machine type communications, mMTC for terminal energy efficiency).
- NB-IoT and LTE-M: sensor networks and public safety (sidelink, broadcasting, drones, mobile IAB nodes).
- Achieving very low latency and QoS for industrial applications, such as audio-visual media (there are 2 types of broadcast considered; one for media content and one for public safety), critical medical applications.
- Sidelink: network-controlled devices, gaming, media, logistics.
- Current Study Item on relays: indoors, important for blindspots; higher bit rates, lower latency, factories and interconnected devices.
- Continued advancement of non-terrestrial networks, with many 3GPP inputs coming from 5G PPP phase 2 project, SAT5G.

5GENESIS will be attending the “2nd 5G Vertical User Workshop” to celebrate in Rome during 9-10 of July, where verticals like Media, Security and Public Safety, Non-Terrestrial Networks and Aviation/Drones will be analyzed. These verticals match some of the use cases that 5Genesis is building in our platforms at Malaga, Limasol, Berlin and Athens.

- **SDN / NFV WG**

During this first year of collaboration in the WG, 5GENESIS has focused on participating in all calls performed by the group and in collaborating with the White Paper (EUCNC 2019 release). Moreover, as soon as the project obtains the expected outputs described in the GA, the ones related to SDN and NFV functions will be included in the repository of software outputs created by the WG. During this year also, the project has been collected relative information about cloud-native characteristic in order to align the developments performed within the project with the WG trends.

Finally, a 5GENESIS representative will attend as a listener to the Workshop organized by the WG, for the EUCNC 2019 named: "From cloud ready to cloud-native transformation".

- **Spectrum WG**

In March 2019 the WG has finished its working plan, and a call for proposals for future activities on spectrum matters was issued. Discussed and suggested future activities were:

- 1) the determination of spectrum-related actions to Support 5G Action Plan
- 2) commenting spectrum-related issues contained in the RSPG 3rd Opinion on 5G
- 3) address spectrum requirements for verticals
- 4) provide guidance about the most important research topics regarding spectrum management to be addressed by Horizon Europe framework programme
- 5) Harmonized spectrum for wireless transport networks (backhaul/fronthaul) – proposed by 5GENESIS

After discussion among WG members and 5G-IA board members, it was decided that the most relevant topic to be addressed was the elaboration of a document with 5G-PPP comments to the 3rd RSPG Opinion on 5G w.r.t. spectrum issues. Such document should include comments related to spectrum for verticals and eventually the proposal of spectrum-related actions to support the 5G Action Plan. Therefore, the focus will be on option 2, together with options 1 and 3 described above.

Option 4 was not selected because it was already focused in a previous document from WG spectrum.

Option 5 was not selected because it did not get enough support from the remaining members of the WG.

- **Security WG**

During the period, the working group has answered several call-for-paper for the following workshops:

- First Workshop on Security in Softwarized Networks: Prospects and Challenges (SecSoN) held in conjunction with ACM SIGCOMM 2018 in Budapest, Hungary, on August 20-24, 2018.

- Workshop on 5G Networks Security (5G-NS 2018) held in conjunction with the ARES Projects Symposium 2018 at 13th International Conference on Availability, Reliability and Security – ARES 2018 – Hamburg, Germany

Phase 3 projects representatives have enrolled

Work on 5G KPIs for security: the phase 2 projects inputs have been included.

Work on the 5G Security Landscape V2: the v2 revision focuses on revisiting each of the chapters and on providing new content from members of the WG (contributing projects and/or IA members).

• SME WG

During the period the WG has been devoted to promote SMEs and welcome new SMEs' contributions. Even though most of the work is performed through emails, the SMEs under SME WG do not miss opportunities to get involved in activities, open calls, pre-structuring model documents, promotion sites or showcasing events.

In the same way, the SME WG appropriately monitors the success and opinion of participating SMEs in the different calls. This way, during the results of the last calls it is clear that the involvement of SMEs is low as compared with the original estimated threshold.

• Trials WG

- The WG has focused on producing the “5G PPP PLATFORMS CARTOGRAPHY” available at <https://5g-ppp.eu/5g-ppp-platforms-cartography/>, where the 5Genesis platforms have been integrated.
- The WG is producing detailed online information of the testbeds available at <https://www.ip45g.de/en/5g-testbeds/>. 5Genesis platforms are already listed in the tool.

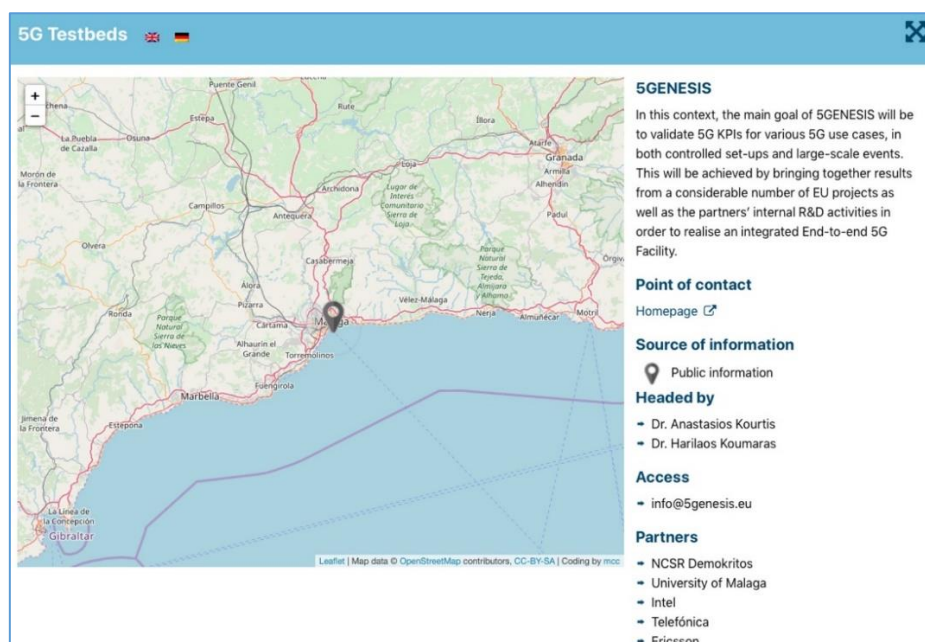


Figure 103. 5G testbeds online information

- 5GENESIS will be attending the “2nd 5G Vertical User Workshop” to celebrate in Rome during 9-10 of July, where verticals like Media, Security and Public Safety, Non-Terrestrial Networks and Aviation/Drones will be analyzed. These verticals match some of the use cases that 5Genesis is building in our platforms at Malaga, Limasol, Berlin and Athens.
- The Working group is producing “Roadmap Version 5.0 - 10 Phase 2 Projects Trials & Pilots.” The goal of this activity is to have an objective/approach for the 10 Phase 2 Projects Trials & Pilots to be highlighted in the "Roadmap Version 5.0" document and to be possibly included in the EU 5G Observatory (Category 3). Evaluation criteria and selection Panel is being addressed to have a 100% transparent selection process. Release before end of September 2019 and possible presentation/communication during IEEE 5G World Summit to be organized on 29.09-02.10.19 in Dresden (<https://sites.ieee.org/wf-5g/>).
- **5G Automotive WG**
 - The 5G Automotive WG White paper v2.0 was handed out during MWC (and highlighted in a presentation in Mobile World Capital on Tuesday February 26).
 - Biweekly meetings are organized to discuss on the related automotive topics and contribute to the PreStructuring model (PSM) for the Future Communication Research.
 - Several physical meetings have been arranged to work on the preparation of the white paper version.
- **IMT-2020 Evaluation Group**
 - At the end of 2016 5G Infrastructure Association in 5G PPP registered as independent Evaluation Group as the organisation with a lifetime beyond the entire evaluation process. It was intended from the beginning that the technical expertise for evaluation activities is provided by 5G PPP projects as a joint effort between several 5G PPP projects in cooperation with 5G Infrastructure Association. The Evaluation Report will be prepared with the support of the 5G PPP CSA.
- **Test, Measurement and KPI Validation (TMV)**
 - 5Genesis participation on the preparation of cloud native White paper
 - 5Genesis will provide the experiment descriptor template that includes especially the definition of the test case, the scenario, and the slice configuration that need to be specified to perform the experiments and validate the KPIs defined. The idea will be that all ICT-17 phase 3 projects follow the same approach.
 - The project will also be in charge of defining UL/DL Peak Throughput KPIs and Maximum Expected Latency, based on monitorization of 3GPP, ITU-R and NGMN work on defining the 5G KPIs. But also following the work done by the 5GPP technology board which is based on the phase 2 projects
 - Participation to the EUCNC event from the TMV WG

4.3.2. Strategy/Plan Update and goals for Year 2

This section describes for the appropriate working groups the strategy, plan and goals updates for year 2:

- **Pre-Standardization WG**
 - Identify Standards GAPS relevant for 5Genesis and identify concrete contributions to relevant SDOs coming from 5Geneesis Platforms.
- **SDN / NFV WG**
 - To finalize and publish the White Paper and to follow the collaboration with the working group in order to provide the relevant project outputs to this team.
- **Vision and Societal Challenges WG**
 - The strategy/plan has not been updated for this WG
- **Security WG**
 - The 5G Security Landscape v2 plan has been updated as it has been cancelled for 2018 but the work will continue in 2019.

Phase 3 projects inputs are expected for the security KPIs.

- **SME WG**

Forthcoming calls also target high participation from SMEs, reaching in some of them desirable thresholds of 50%, which seems unlikely according to the current SMEs involvement and success rate. The job of SME WG is to increase this success rate by involving more SMEs and assisting the involved ones.
- **Trials WG**
 - Promote 5Genesis facilities and Testbed capabilities inside the Working Group. Contribute to the WG with results from Experiments being built on top of the 5Genesis platforms.
- **5G Automotive WG**
 - During the second year we will promote the facilities and the test cases executed during the phase one of the experiments, so the participants in the WG can provide their vision on the trials results and enhance the experiments for the forthcoming cycles.
- **IMT-2020 Evaluation Group**
 - IMT-2020 5G PPP Evaluation Group officially initiated their work in January 2018 based on the cooperation of Phase II 5G projects. Phase III projects have been invited to cover possible gaps beyond July 2019 until the end of the evaluation process. 5GENESIS is currently monitoring the status and the work of the Evaluation Group in order to examine potential contribution of the project.
- **Test, Measurement and KPI Validation (TMV)**
 - Keep the work done to follow the same approach on the definition, testing, measurement and validation of KPIs by the phase 3 projects. Indeed, all the

projects will be aligned and won't unnecessarily develop artifacts that have already been made. For this, the attendance to the biweekly working group and 5GPPP technology board meetings and workshops are being followed by 5GENESIS. The idea will be to make that the work done by the project can be used later on.

5. CONCLUSION

In this deliverable, 5GENESIS dissemination and communication activities, demonstrations and project's interaction with the 5G-PPP and the rest ICT-17 projects, during the first year of 5GENESIS (July 2018-June 2019), have been presented, analyzed and evaluated through the use of statistical dashboards and against the goals set by the 5GENESIS communication plan. In addition, plan and goals for next period's activities (year 2: July 2019-June 2020) have been presented and set, enhancing the existing communication and dissemination plan of the project with the new objectives for the second period of the project.

6. ANNEX 1 – MONTHLY 5GENESIS SOCIAL MEDIA STATISTICAL DASHBOARDS

The 5GENESIS social media statistical dashboards are issued and distributed internally on a monthly basis, via the WP7 mailing list to all the WP7 members, forming a vital mechanism of the project for monitoring their monthly performance and impact to the public.

6.1. Twitter Monthly Statistical Dashboards

In the following sections, the monthly statistical dashboards of Twitter, referring to the first year of the project, are provided.

6.1.1. Twitter Statistical Dashboards June 2018

June 2018 Link:

https://datastudio.google.com/open/1vGAfRG4C_gus8O8f-WMbvMyO4oRgnk6f



Figure 104. Twitter Statistics for June 2018

6.1.2. Twitter Statistical Dashboards July 2018

July 2018 Link:

<https://datastudio.google.com/open/1m5pydU0bSsdsZi8Zk30TeHpQFRBmuR0i>



Figure 105. Twitter Statistics for July 2018

6.1.3. Twitter Statistical Dashboards August 2018

August 2018 Link:

<https://datastudio.google.com/open/1rkArxOZ26Bwd-WAHpaAGGC0rOSg-XMke>

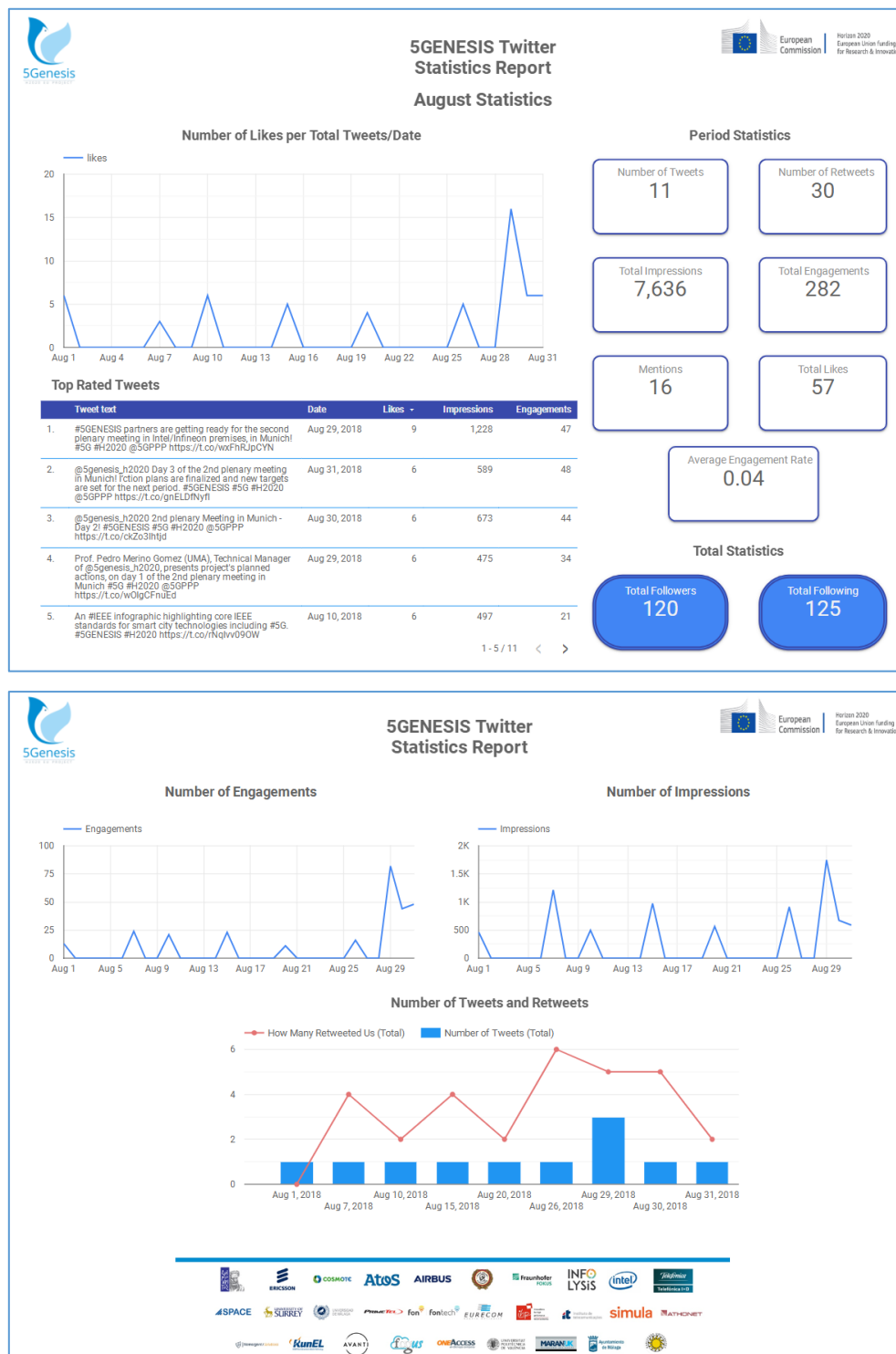


Figure 106. Twitter Statistics for August 2018

6.1.4. Twitter Statistical Dashboards September 2018

September 2018 Link:

https://datastudio.google.com/open/1zUfk-bmndzWwqg2uyg_CdxkkMnr5L8_x

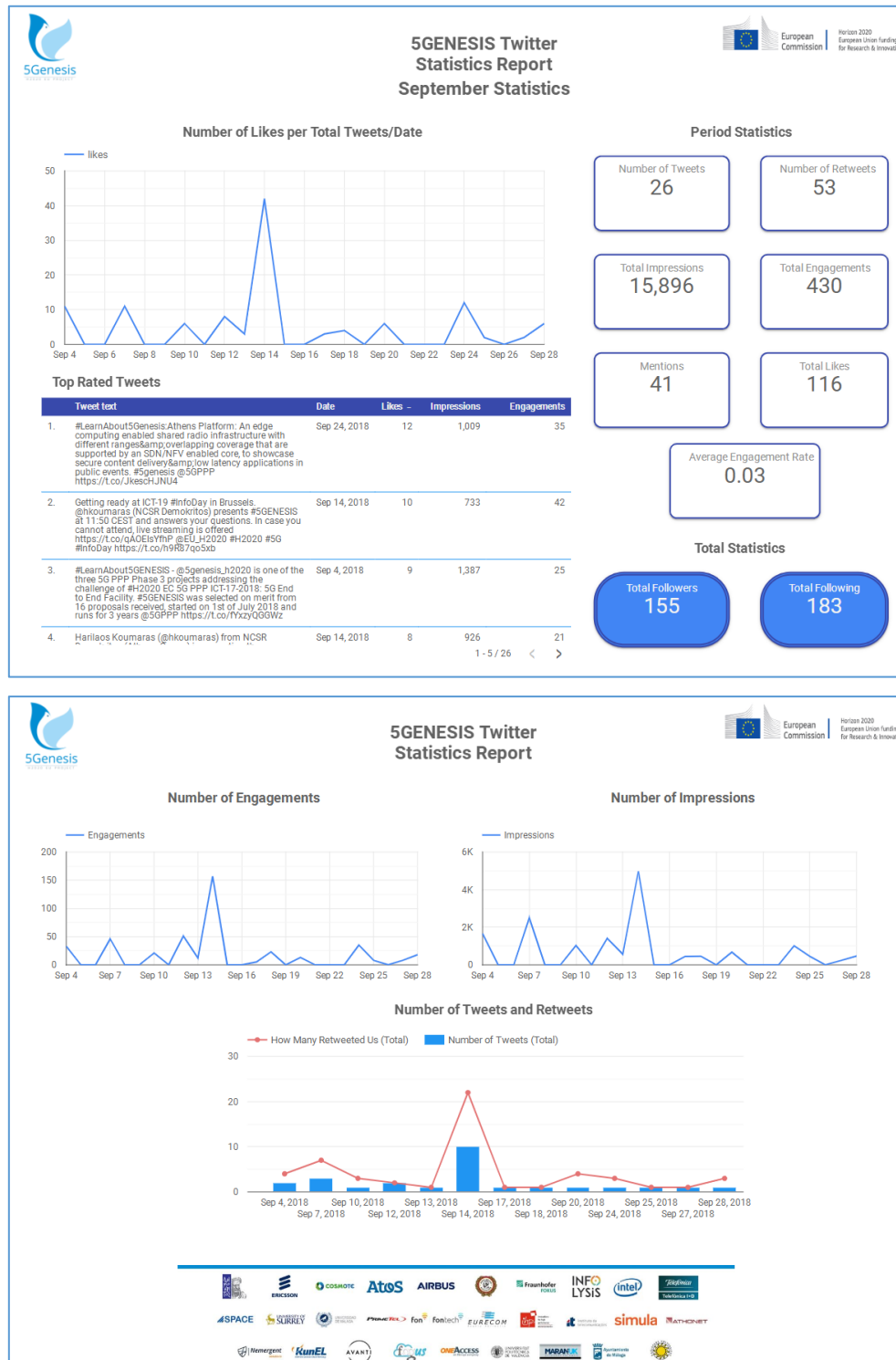


Figure 107. Twitter Statistics for September 2018

6.1.5. Twitter Statistical Dashboards October 2018

October 2018 Link:

<https://datastudio.google.com/open/1RZNNx6NYTCtpQssMWT3t2PcrStS5tARP>

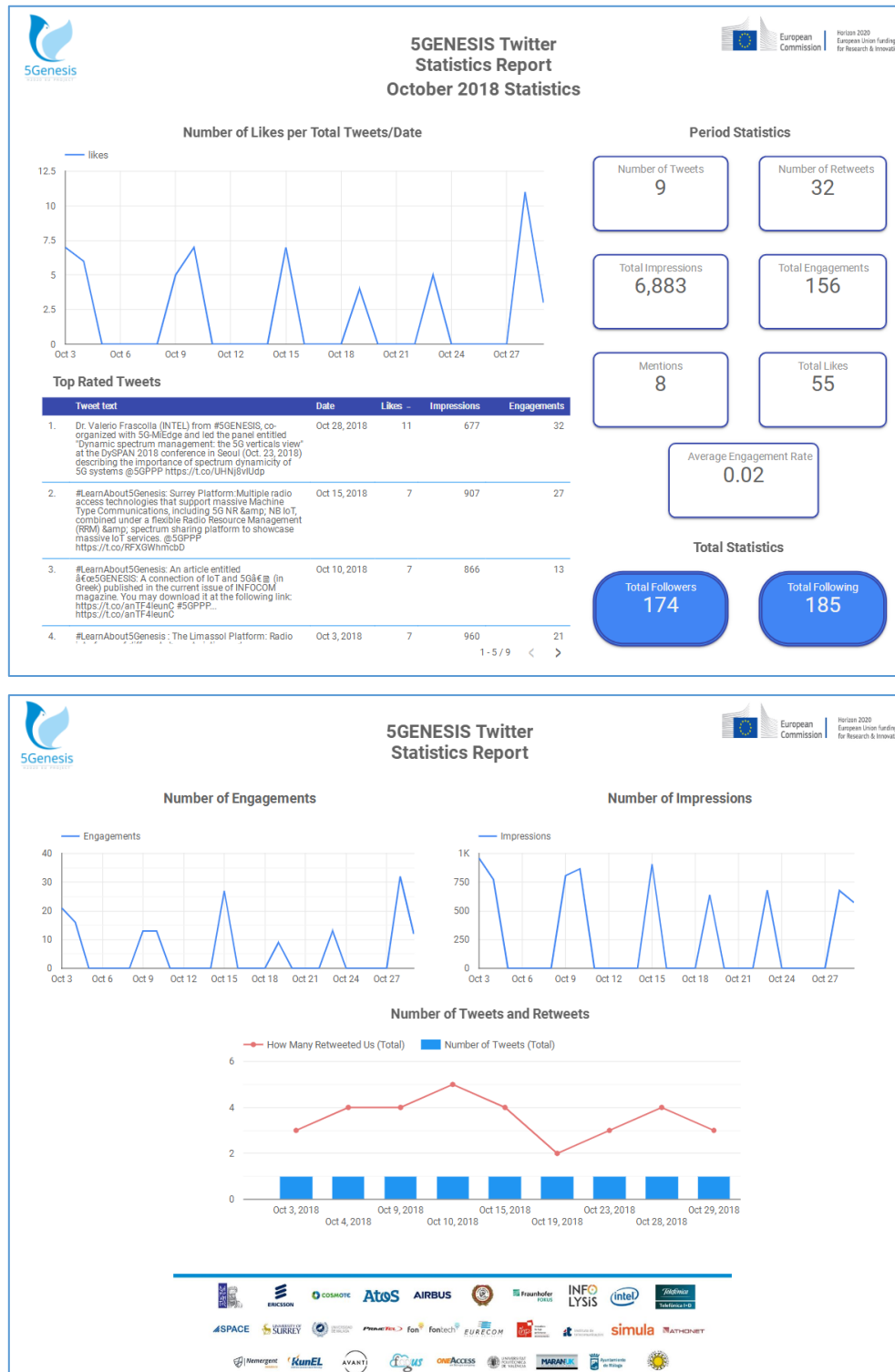


Figure 108. Twitter Statistics for October 2018

6.1.6. Twitter Statistical Dashboards November 2018

November 2018 Link:

https://datastudio.google.com/open/193PkUHy8rPuW39ASj8_Je-KcxSSDsMN



Figure 109. Twitter Statistics for November 2018

6.1.7. Twitter Statistical Dashboards December 2018

December 2018 Link:

<https://datastudio.google.com/open/1ax5AdfQ2jpbssa0rt88THd8NbZK53l9Z>



Figure 110. Twitter Statistics for December 2018

6.1.8. Twitter Statistical Dashboards January 2019

January 2019 Link:

<https://datastudio.google.com/open/13KsNwo4aWtcCHMYmN6u4Jjcl16dWsQZg>

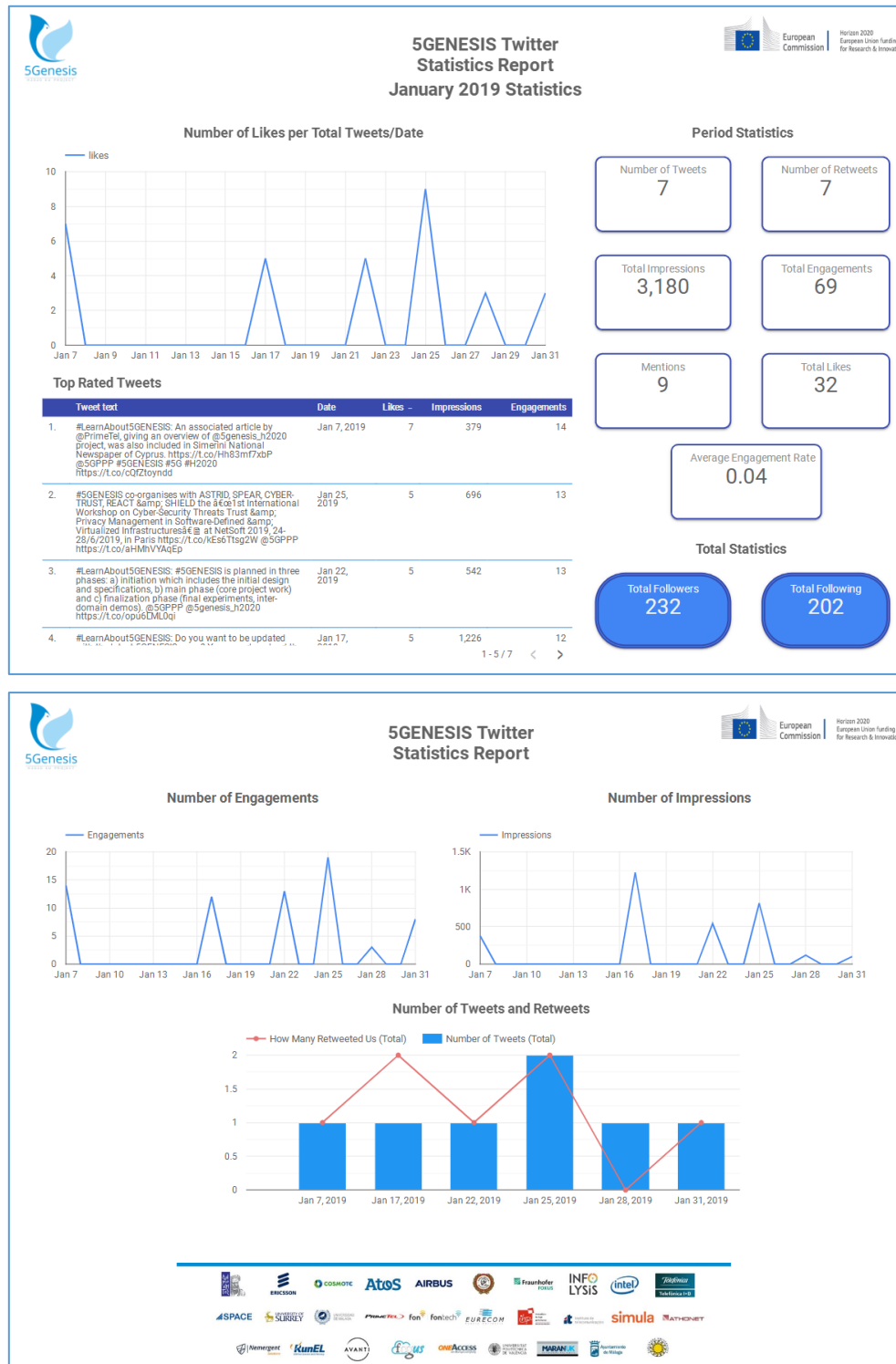


Figure 111. Twitter Statistics for January 2019

6.1.9. Twitter Statistical Dashboards February 2019

February 2019 Link:

<https://datastudio.google.com/open/18cJqtwyN9oCuTDSguk2QLz37cfgOQQ73>

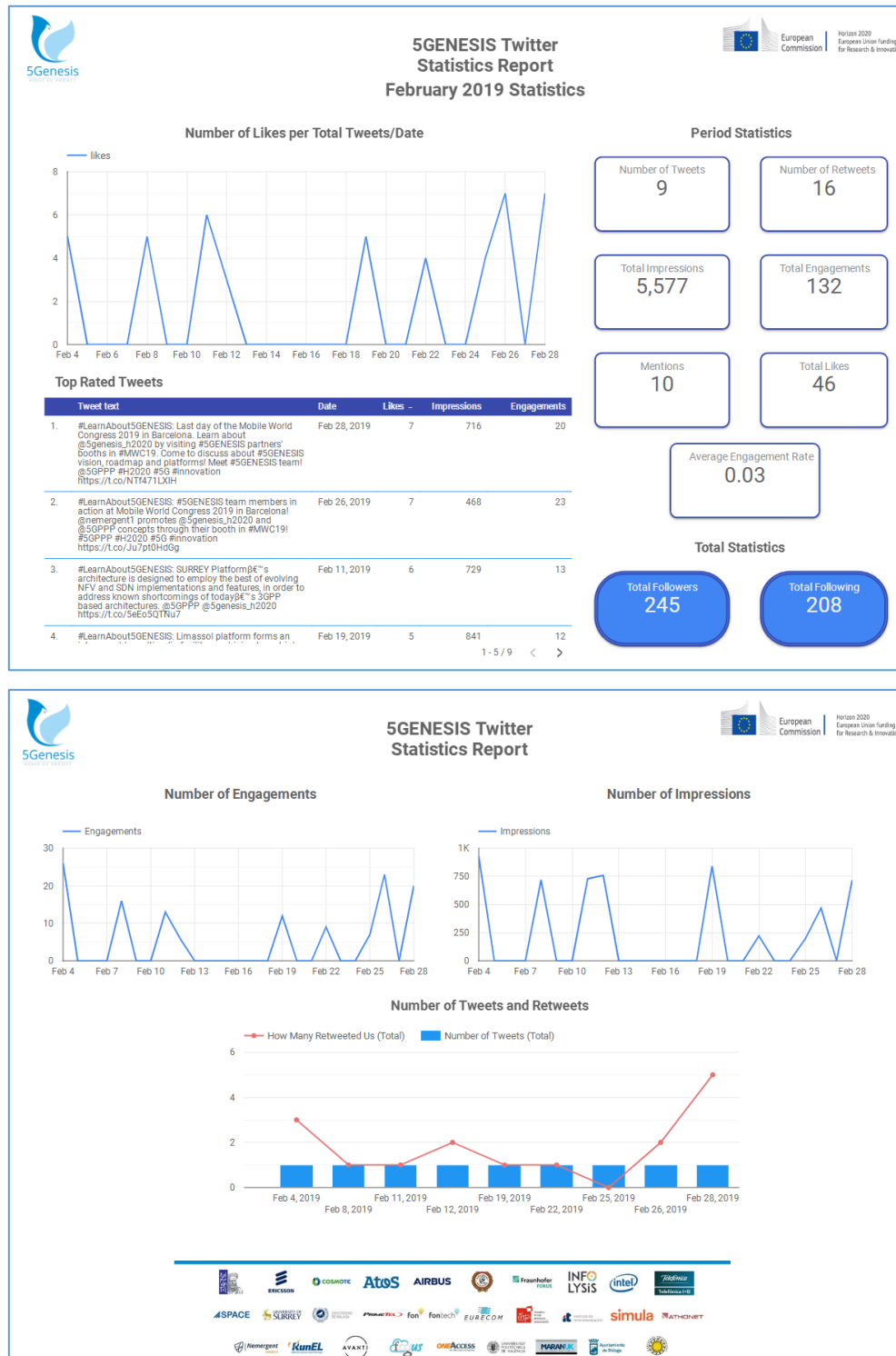


Figure 112. Twitter Statistics for February 2019

6.1.10. Twitter Statistical Dashboards March 2019

March 2019 Link:

https://datastudio.google.com/open/10gdYUqVmvCKI3OqAYy0_jlaLX42LlhMm



Figure 113. Twitter Statistics for March 2019

6.1.11. Twitter Statistical Dashboards April 2019

April 2019 Link:

<https://datastudio.google.com/open/1AG-cq0tDUbuiU9m4uwesB2KsQF4gxzUU>



Figure 114. Twitter Statistics for April 2019

6.1.12. Twitter Statistical Dashboards May 2019

May 2019 Link:

https://datastudio.google.com/reporting/1cO5r6gyu0l1tgX0pauR9pjrd-ixlYMz_/page/PGMW

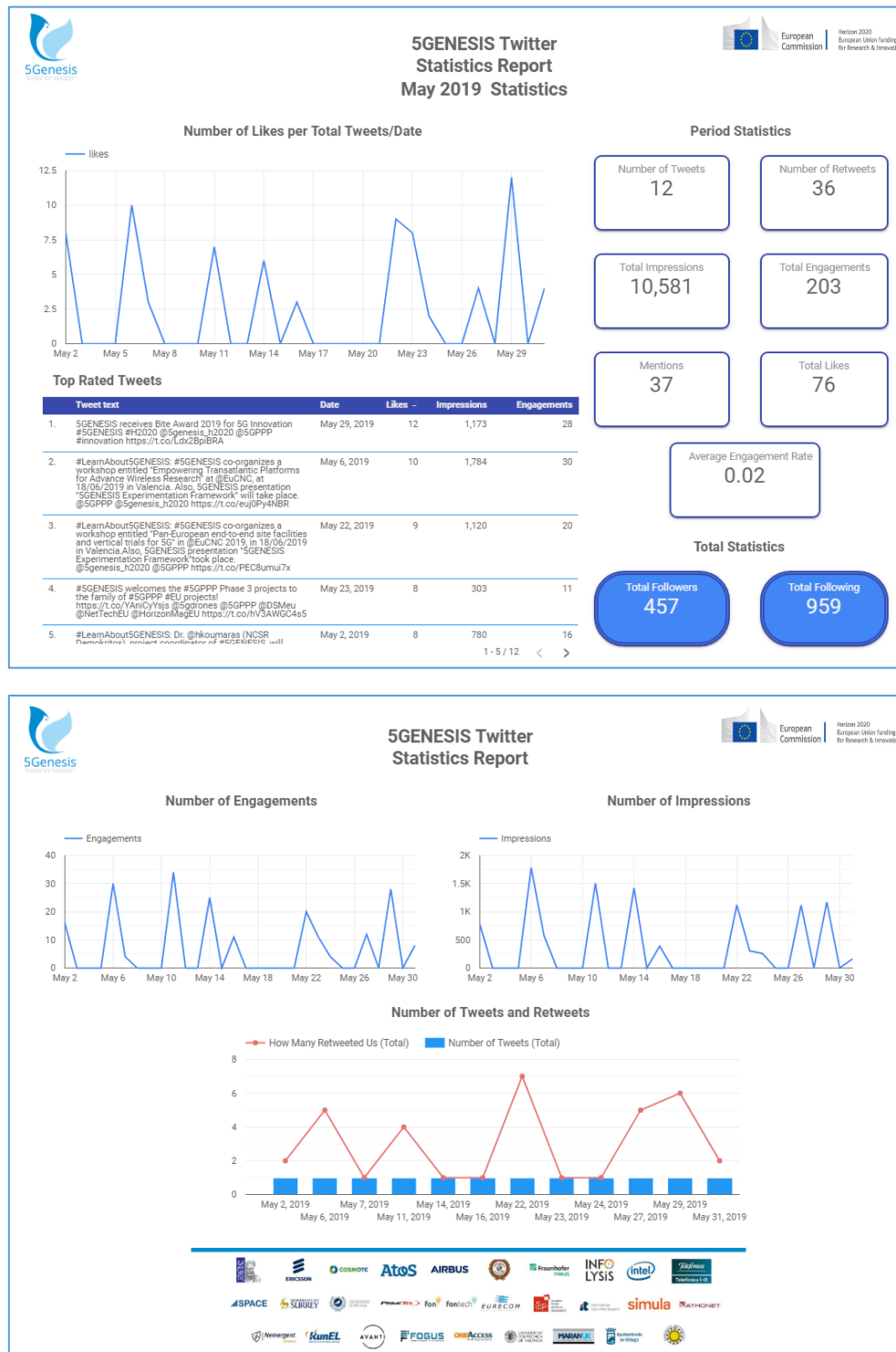


Figure 115. Twitter Statistics for May 2019

6.1.13. Twitter Statistical Dashboards June 2019 (up to 20 June 2019)

June 2019 Link:

https://datastudio.google.com/open/14NNQws70qTW1UNkFTKuHAgjweljx_6DC



Figure 116. Twitter Statistics for June 2019

6.2. LinkedIn Monthly Statistical Dashboards

In the next sections, the monthly statistical dashboards of LinkedIn for the first year of the project, along with their urls, are provided.

6.2.1. LinkedIn Statistical Dashboards July 2018

July 2018 Link:

https://datastudio.google.com/open/1Ilbmox1Ur_8c30dGUXT_sfWlv6pdETF



Figure 117. LinkedIn Statistics for July 2018

6.2.2. LinkedIn Statistical Dashboards August 2018

August 2018 Link:

<https://datastudio.google.com/open/1SeblpN57rYvhwrtw-Dx-MabEKaEu7USWJ>

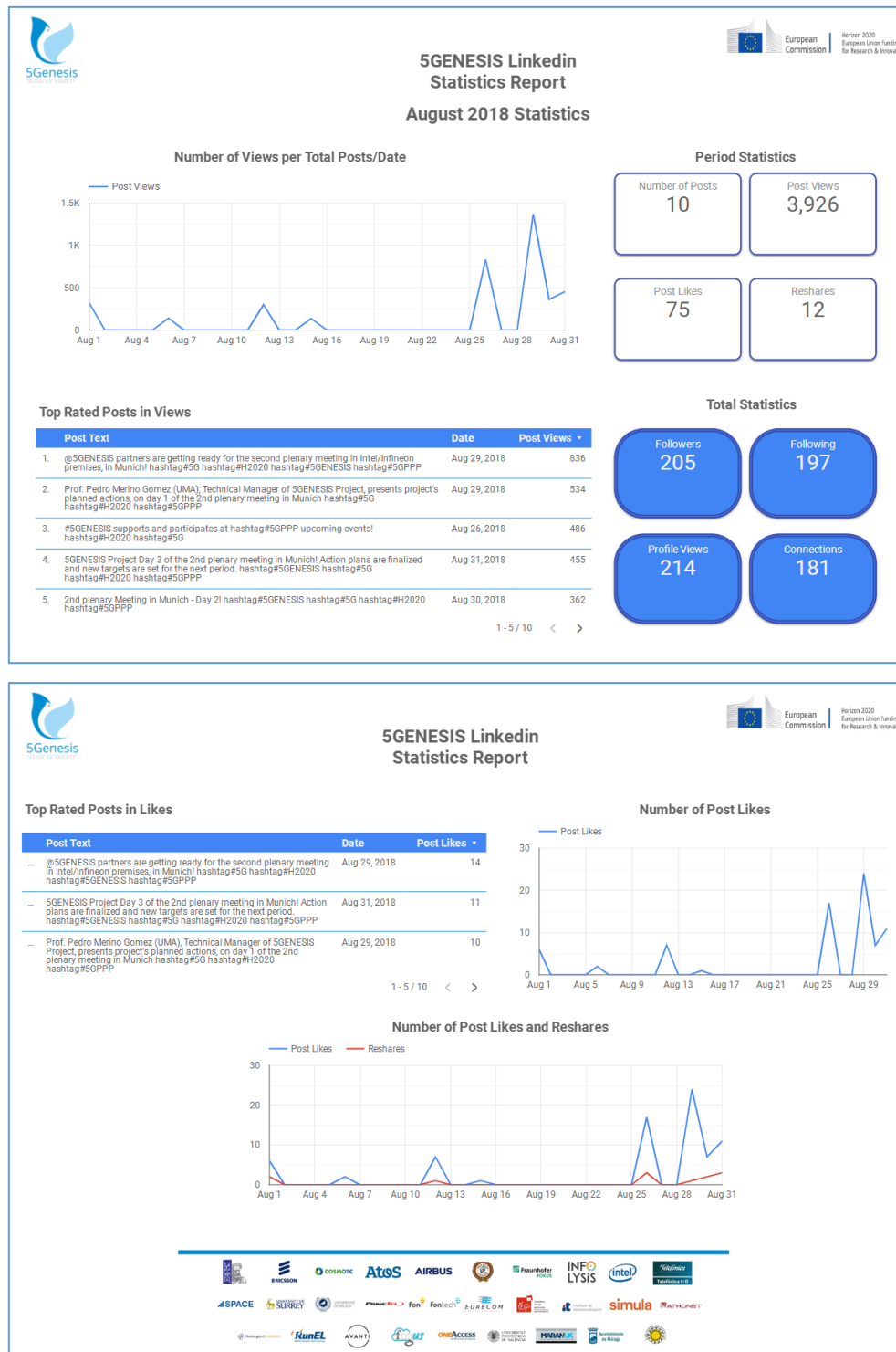


Figure 118. LinkedIn Statistics for August 2018

6.2.3. LinkedIn Statistical Dashboards September 2018

September 2018 Link:

<https://datastudio.google.com/open/18wM8sVdDkAkOhyQhqbEjC6eNBc1gwLDr>



Figure 119. LinkedIn Statistics for September 2018

6.2.4. LinkedIn Statistical Dashboards October 2018

September 2018 Link:

<https://datastudio.google.com/open/18wM8sVdDkAkOhYqhqbEjC6eNBc1gwLDlr>



Figure 120. LinkedIn Statistics for October 2018

6.2.5. LinkedIn Statistical Dashboards November 2018

November 2018 Link: <https://datastudio.google.com/open/1yLQfC8nrdl-OTDaVmJSfc5ES1J9JkymK>



Figure 121. LinkedIn Statistics for November 2018

6.2.6. LinkedIn Statistical Dashboards December 2018

December 2018 Link:

https://datastudio.google.com/open/1hII5yDijstaJ4iCJ7r_dVvo4RkHe3y_N

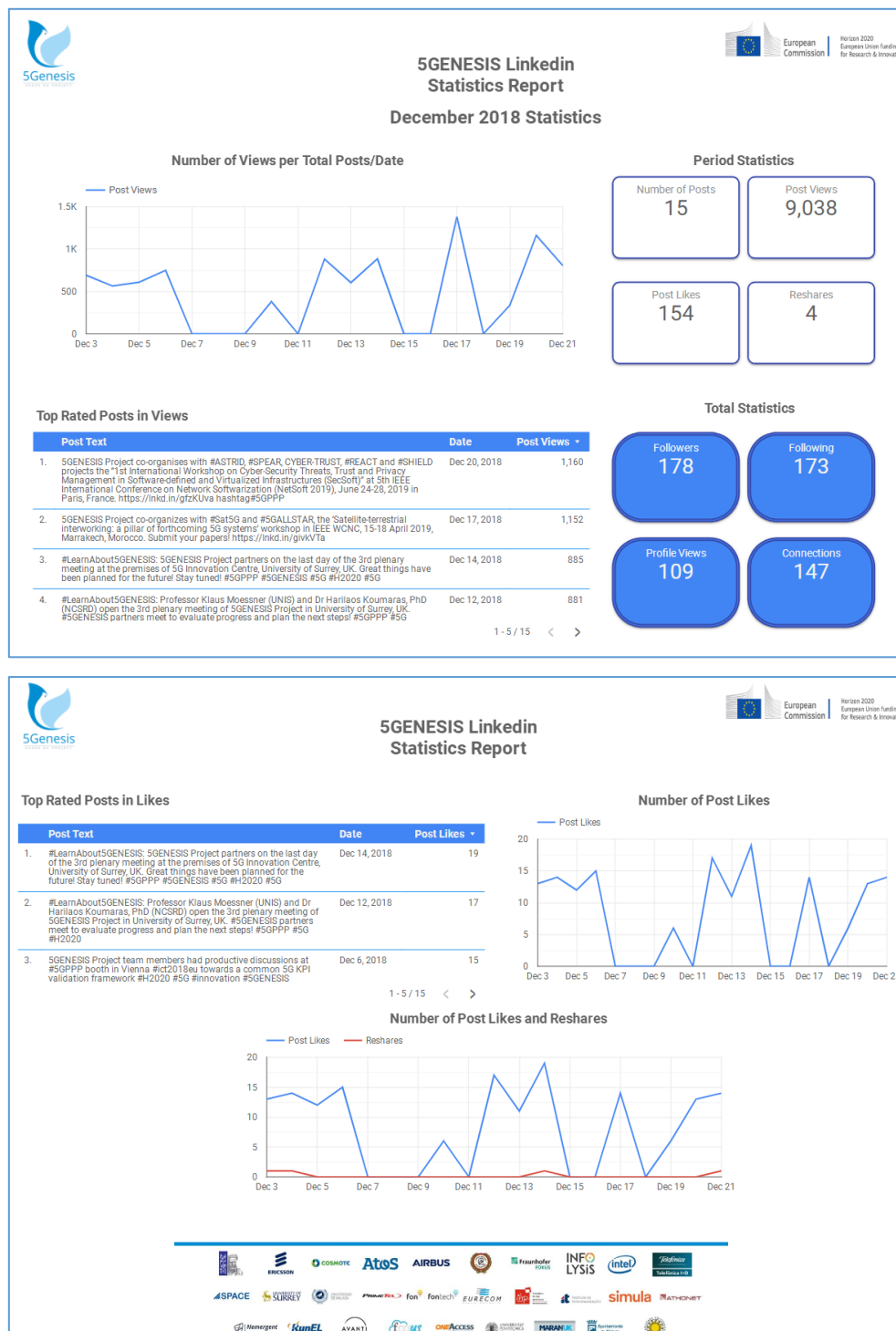


Figure 122. LinkedIn Statistics for December 2018

6.2.7. LinkedIn Statistical Dashboards January 2019

January 2019 Link:

<https://datastudio.google.com/open/1Qx45xCjh231zPOWURownpmnoA0MI8JSX>



Figure 123. LinkedIn Statistics for January 2019

6.2.8. LinkedIn Statistical Dashboards February 2019

February 2019 Link:

https://datastudio.google.com/open/1ZCsZ6ewkd7_Caf3uQ5jWfsydAubr_AS6

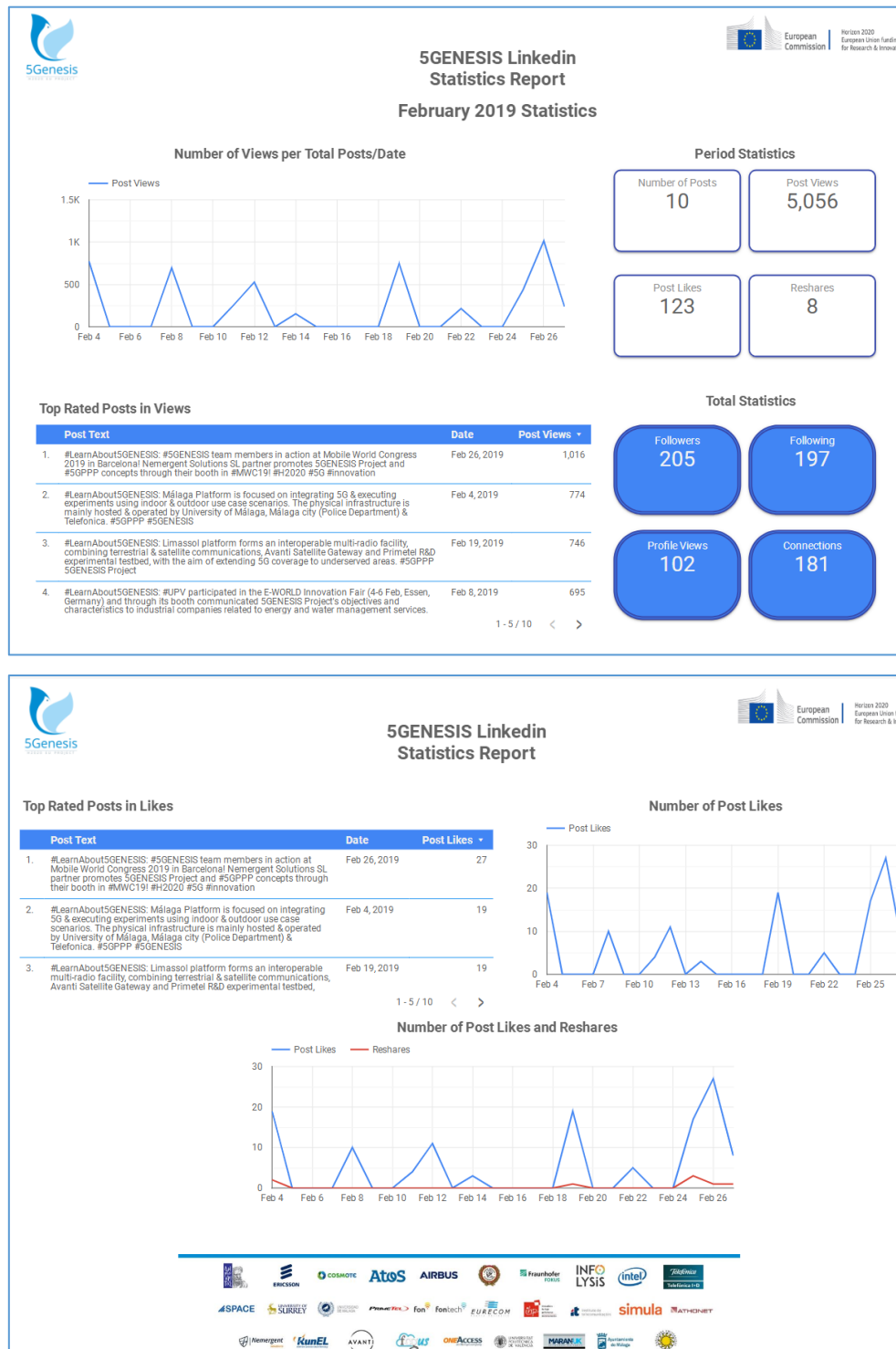


Figure 124. LinkedIn Statistics for February 2019

6.2.9. LinkedIn Statistical Dashboards March 2019

March 2019 Link:

https://datastudio.google.com/open/18DI1AMALW8GaGms_kgomH8Rk5Fvnosr



Figure 125. LinkedIn Statistics for March 2019

6.2.10. LinkedIn Statistical Dashboards April 2019

April 2019 Link:

<https://datastudio.google.com/open/1d0vgsqiqoPPPzLF1MuofTpi7t49z6DJY>



Figure 126. LinkedIn Statistics for April 2019

6.2.11. LinkedIn Statistical Dashboards May 2019

May 2019 Link:

<https://datastudio.google.com/reporting/1goENA-fEMJ31135pohDvnTLCgq58osVb/page/QHMW>

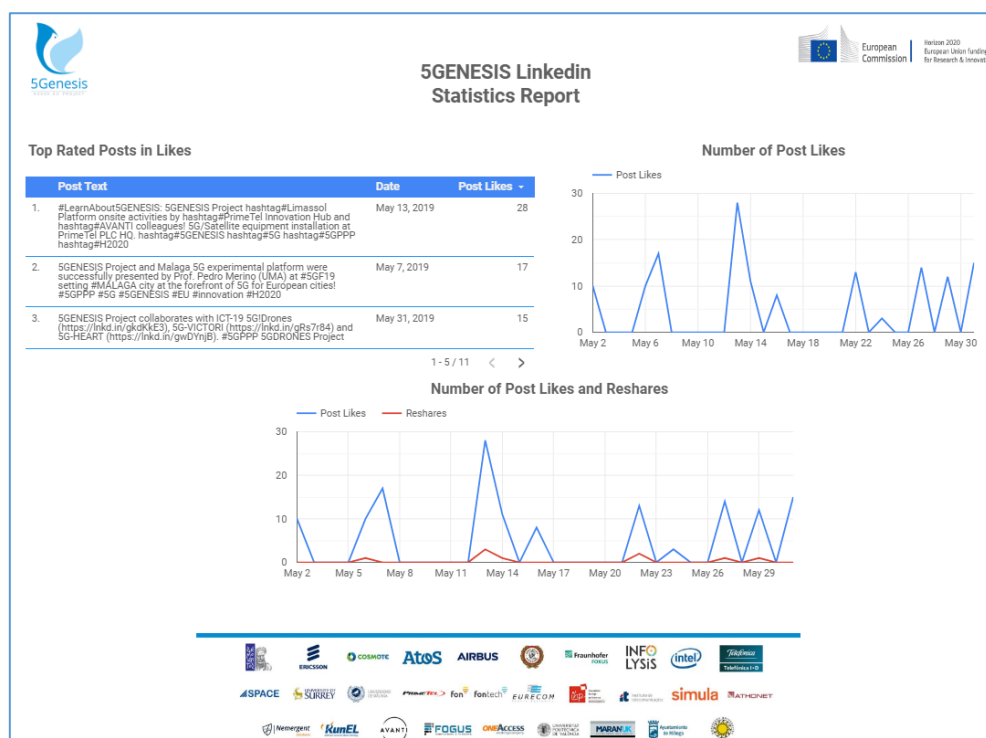
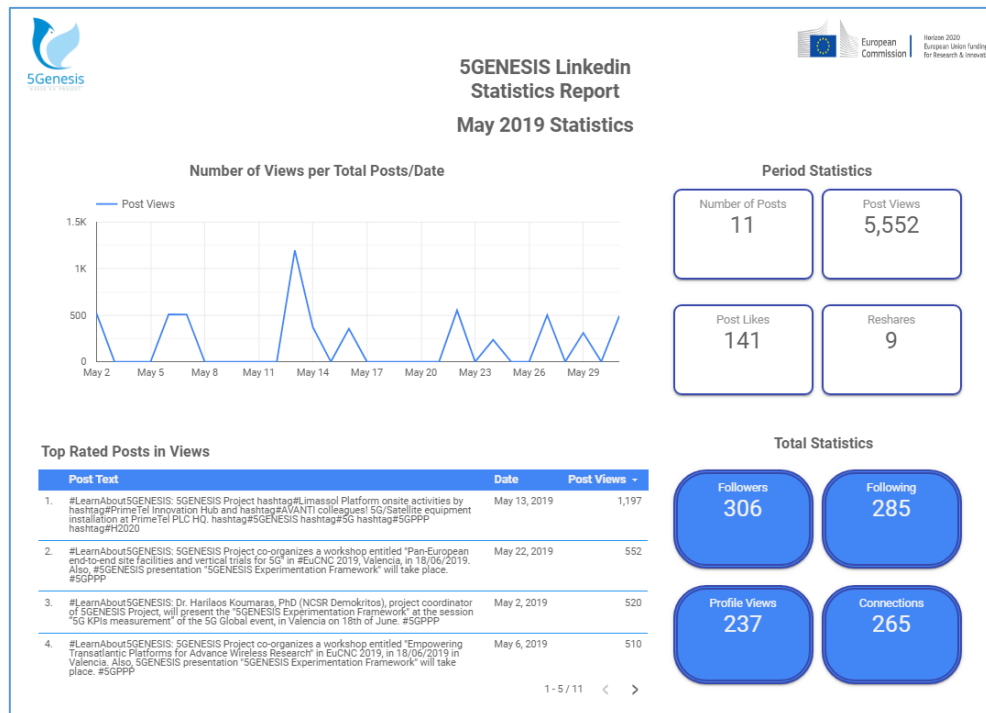


Figure 127. LinkedIn Statistics for May 2019

6.2.12. LinkedIn Statistical Dashboards June 2019 (up to 20 June 2019)

June 2019 Link:

https://datastudio.google.com/open/1vghflrK_D_5MfcFS6aPdozWw1KiyV_O2



Figure 128. LinkedIn Statistics for June 2019

6.3. Facebook Monthly Statistical Dashboards

In the following sections the monthly statistical dashboards of Facebook, for the first year of the project, with their urls, are available.

6.3.1. Facebook Statistical Dashboards June-July 2018

June - July 2018 Link:

<https://datastudio.google.com/open/12OHIdAzMwxRhzbFqOCG9ilejxzuyzMqJ>



Figure 129. Facebook Statistics for June and July 2018

6.3.2. Facebook Statistical Dashboards August 2018

August 2018 Link:

<https://datastudio.google.com/open/1yv3Kbl7rqlvpBCqt8Y9qxTUBwzCxetsg>

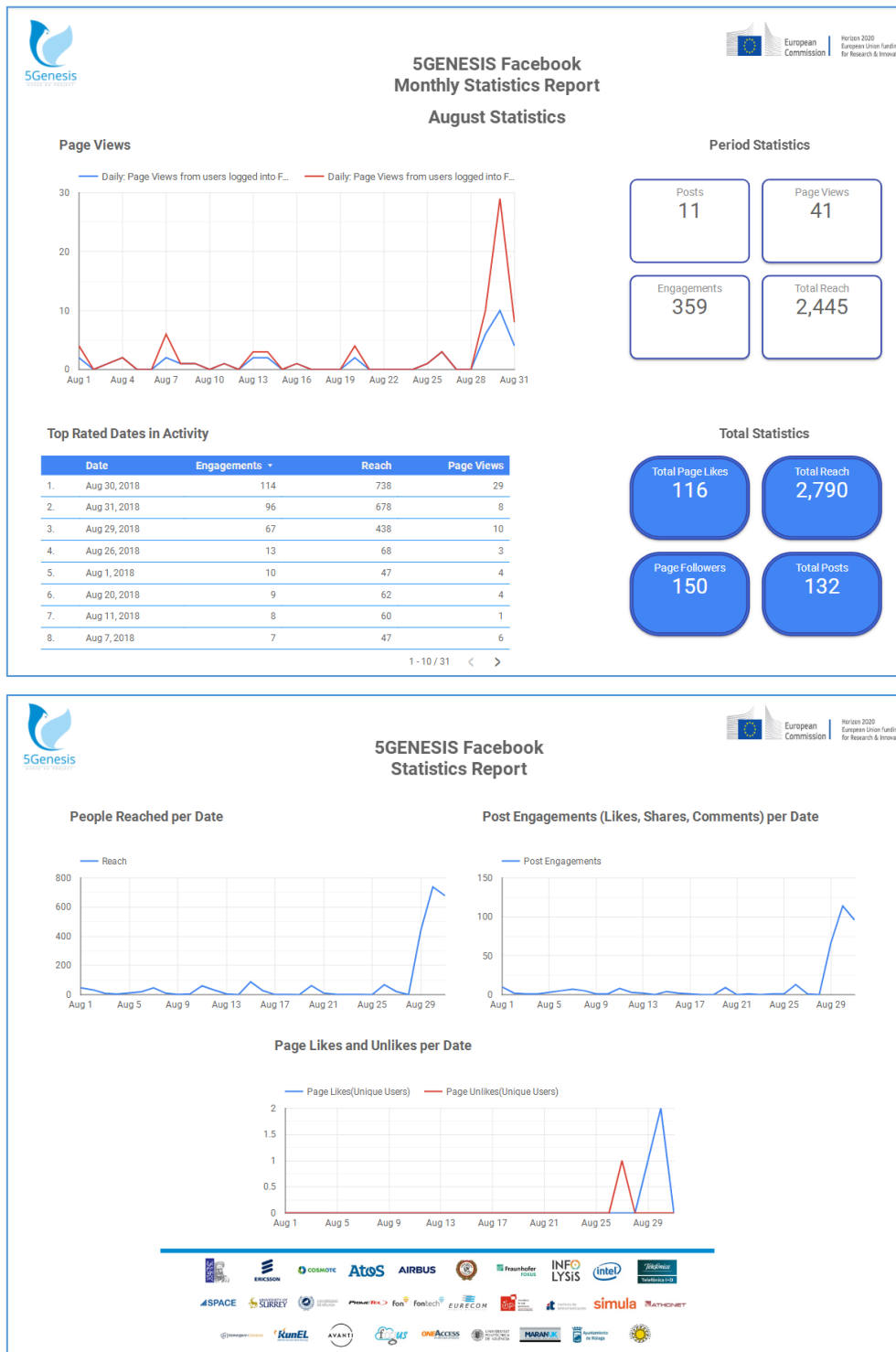


Figure 130. Facebook Statistics for August 2018

6.3.3. Facebook Statistical Dashboards September 2018

September 2018 Link:

https://datastudio.google.com/open/1sy3RJVk8wMEkjP52d2cgUe_q8GcDt1Do

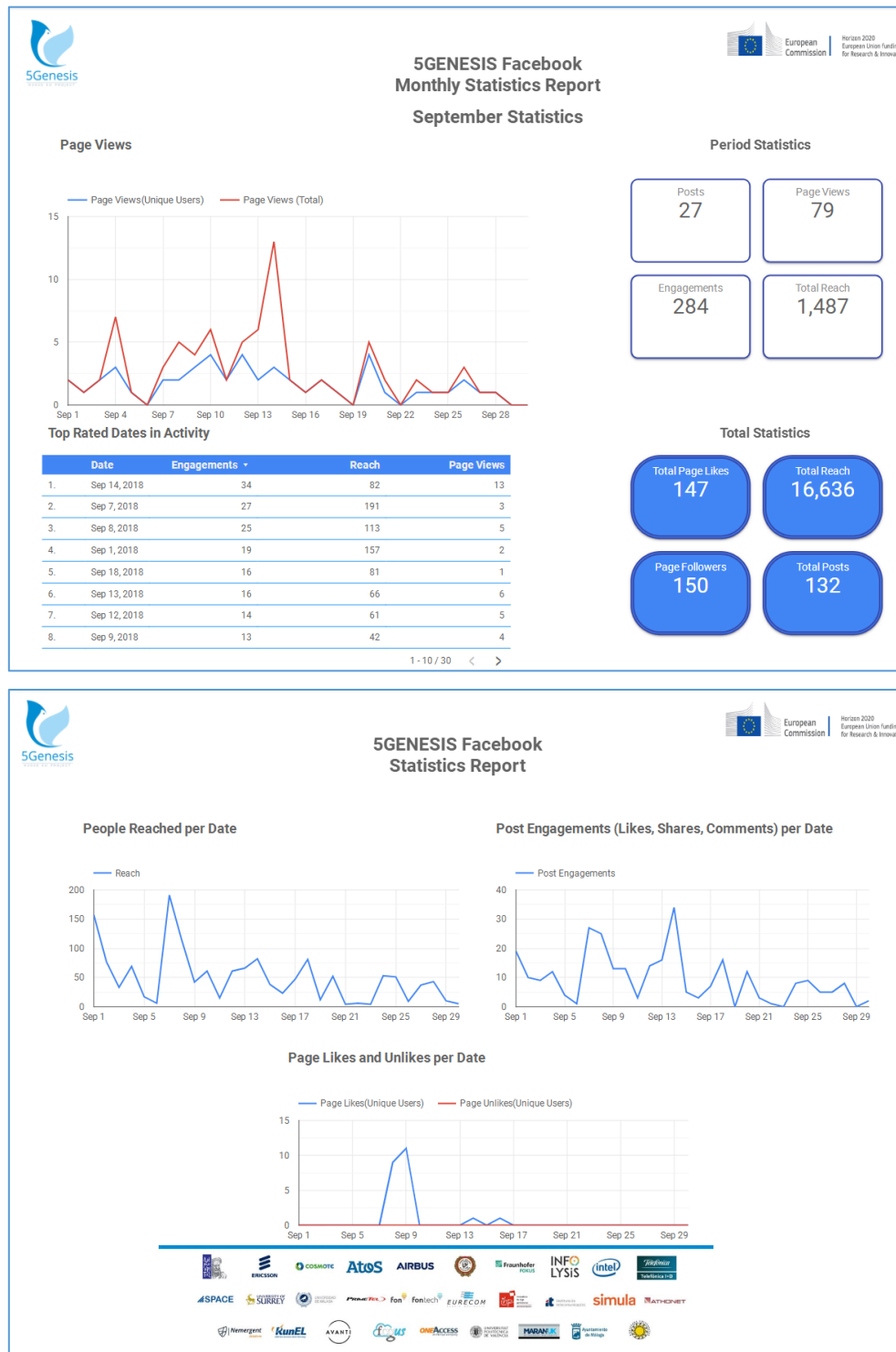


Figure 131. Facebook Statistics for September 2018

6.3.4. Facebook Statistical Dashboards October 2018

October 2018 Link:

<https://datastudio.google.com/open/1UMt2AoC29ZhAoHYwA3bM5nppniGUcnKu>

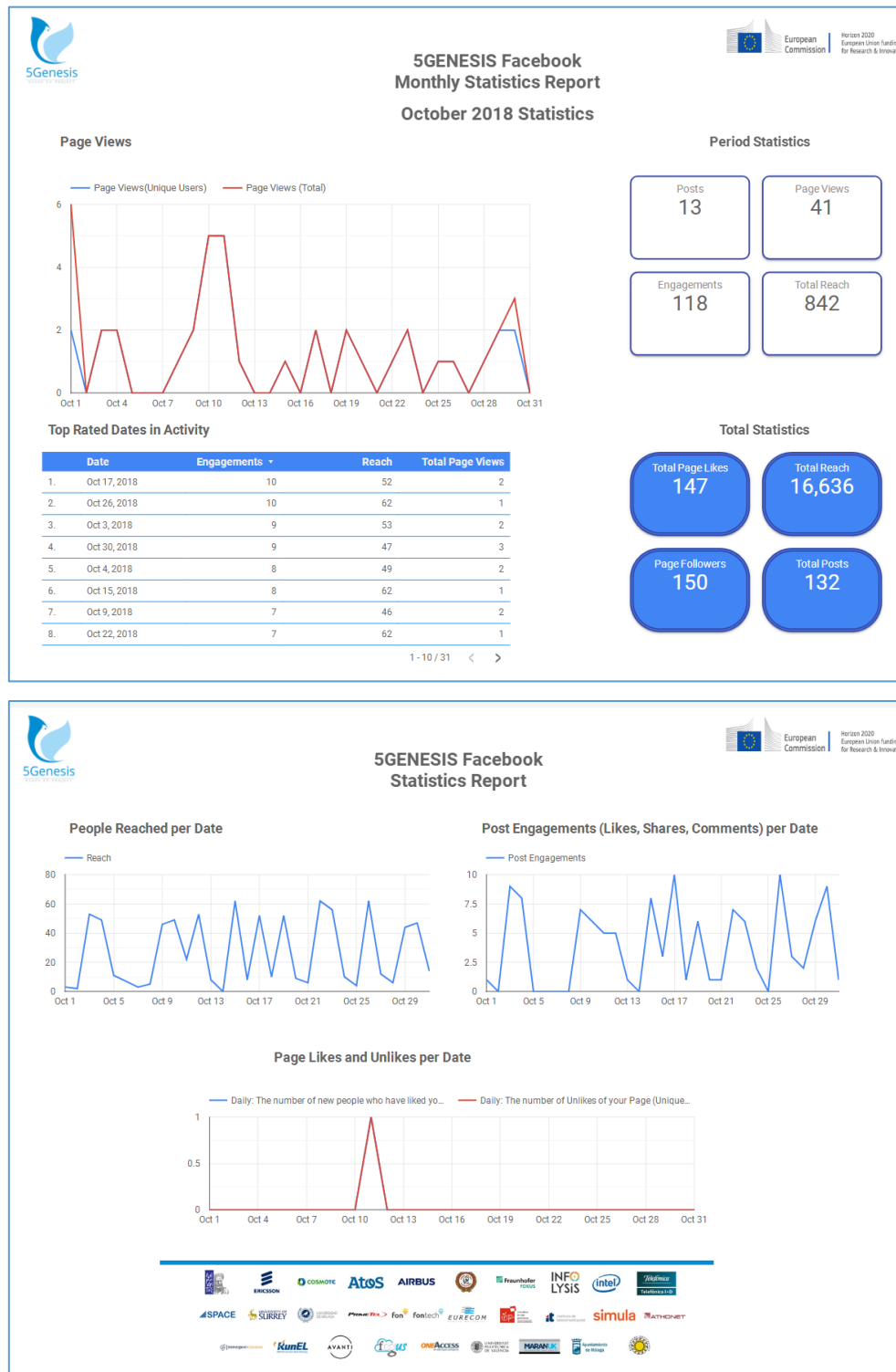


Figure 132. Facebook Statistics for October 2018

6.3.5. Facebook Statistical Dashboards November 2018

November 2018 Link:

<https://datastudio.google.com/open/1pTWaecfITOB8pIQq0cS-k3eP5mqxU5tX>



Figure 133. Facebook Statistics for November 2018

6.3.6. Facebook Statistical Dashboards December 2018

December 2018 Link:

https://datastudio.google.com/open/1FaHhv3soqF4UPchSrXp_MAG_qcPMIqt1

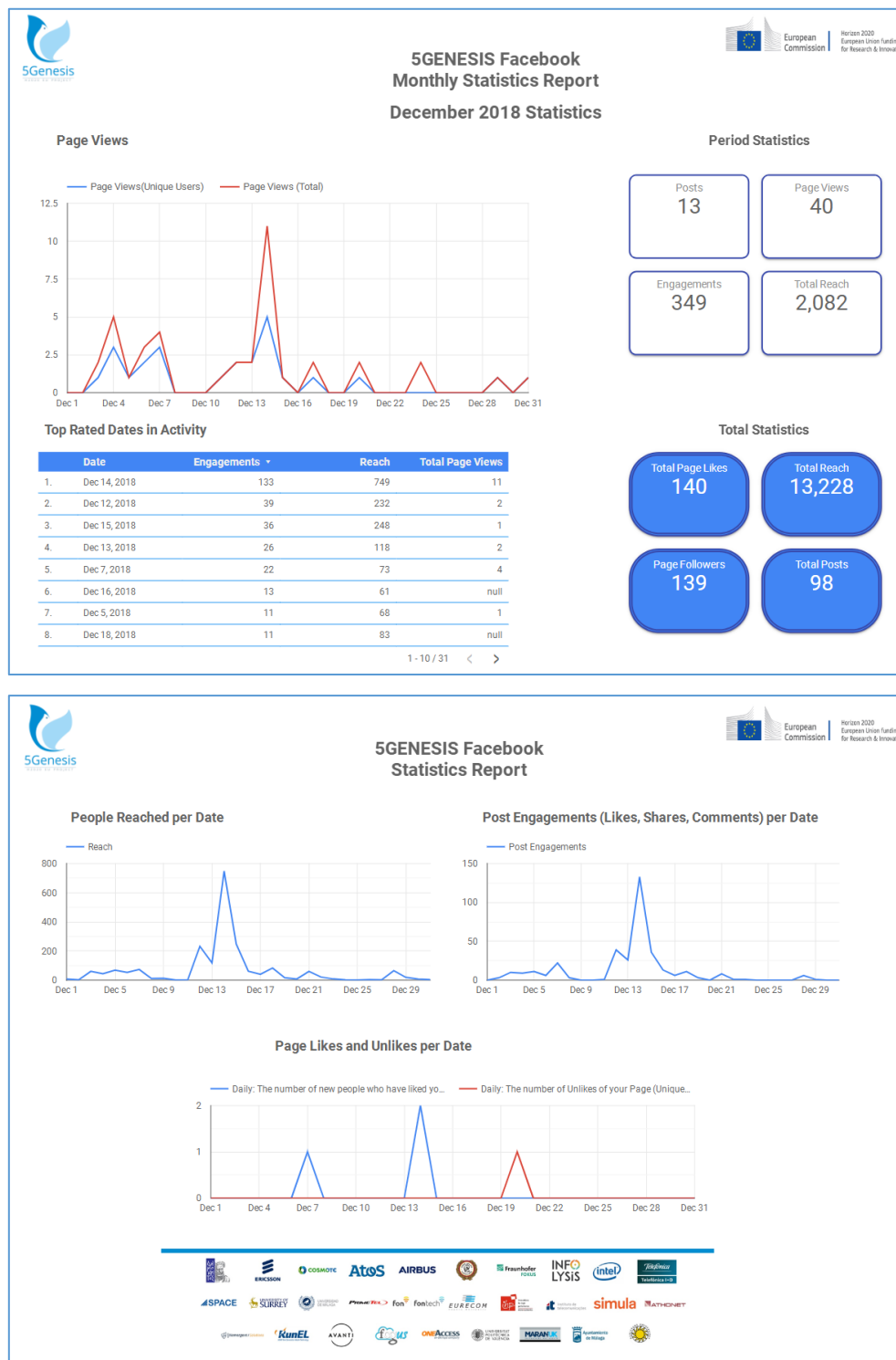


Figure 134. Facebook Statistics for December 2018

6.3.7. Facebook Statistical Dashboards January 2019

January 2019 Link:

<https://datastudio.google.com/open/1bgm8WrzQLDfh1hND7IVhWY4ESQBLQyhZ>



Figure 135. Facebook Statistics for January 2019

6.3.8. Facebook Statistical Dashboards February 2019

February 2019 Link:

https://datastudio.google.com/open/1IzVDXhtR_q9Mn-MjLTJmVANafyLb0qW2



Figure 136. Facebook Statistics for February 2019

6.3.9. Facebook Statistical Dashboards March 2019

March 2019 Link:

https://datastudio.google.com/open/1QLM_QY_R6KME2QHQ3qBO0Fnby7vkZ6W



Figure 137. Facebook Statistics for March 2019

6.3.10. Facebook Statistical Dashboards April 2019

April 2019 Link:

<https://datastudio.google.com/open/1187g38M0Dz3FVCdSCdAJmbes5W9WcPvt>



Figure 138. Facebook Statistics for April 2019

6.3.11. Facebook Statistical Dashboards May 2019

May 2019 Link:

<https://datastudio.google.com/reporting/1z3Sr2nRiA4OEtpwIPa0iBCmYqIY1qMn6/page/yFMW>



Figure 139. Facebook Statistics for May 2019

6.3.12. Facebook Statistical Dashboards June 2019 (up to 20 June 2019)

June 2019 Link:

https://datastudio.google.com/open/1_etVZQbw2sx6jUHoY6Oop89D5vbP5H2



Figure 140. Facebook Statistics for June 2019

6.4. Instagram Monthly Statistical Dashboards

In the following sections the monthly statistical dashboards of Instagram referring to the first year of the project are provided along with their urls.

6.4.1. Instagram Statistical Dashboards July 2018

July 2018 Link:

https://datastudio.google.com/open/1fJOHvbMR-ptLrPsum_hMNI7_CNBQ9SV0

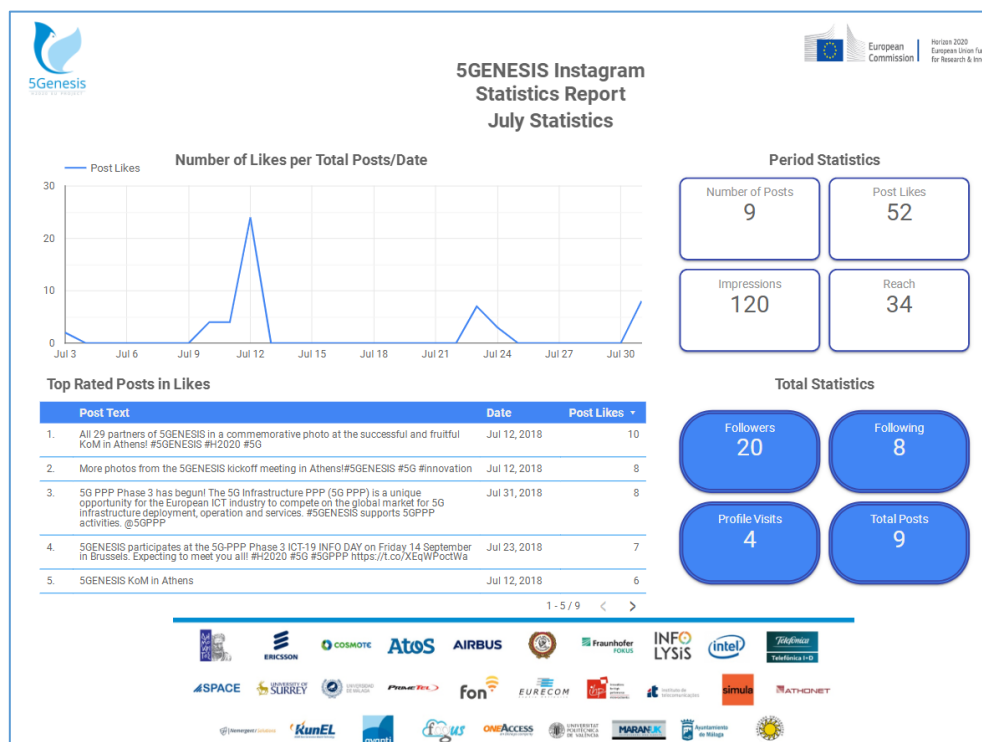


Figure 141. Instagram Statistics for July 2018

6.4.2. Instagram Statistical Dashboards August 2018

August 2018 Link:

<https://datastudio.google.com/open/1yfRyKulbsEBdksziOP6z9xE38wNQDKlj>

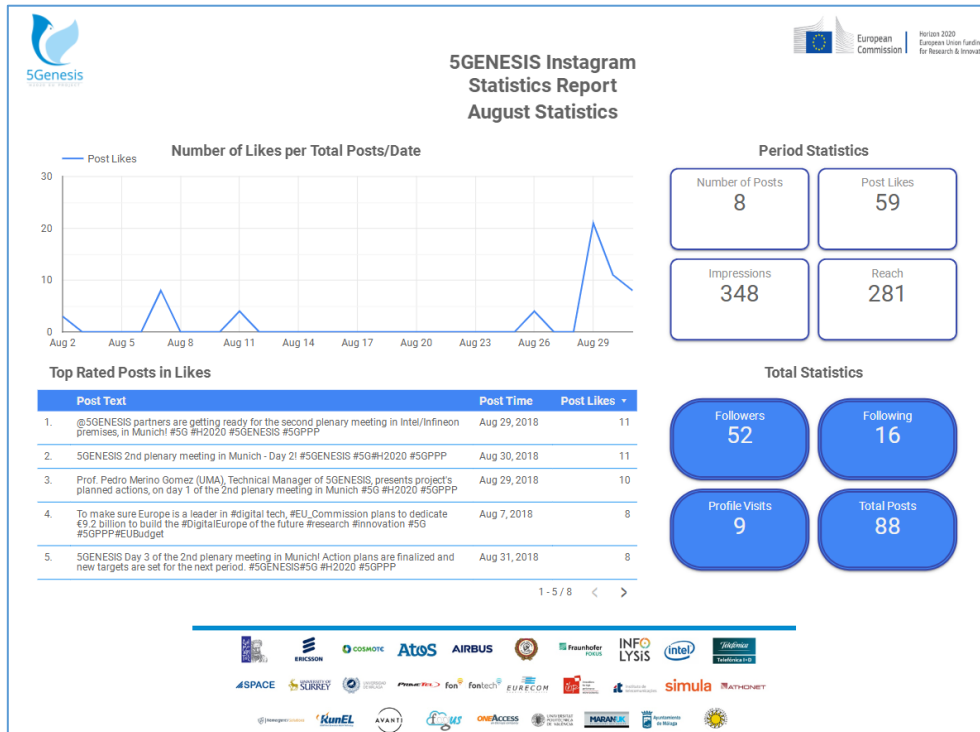


Figure 142. Instagram Statistics for August 2018

6.4.3. Instagram Statistical Dashboards September 2018

September 2018 Link:

<https://datastudio.google.com/open/1m9HnmXikM8JV94lCvw2CLlowCoWsohNU>

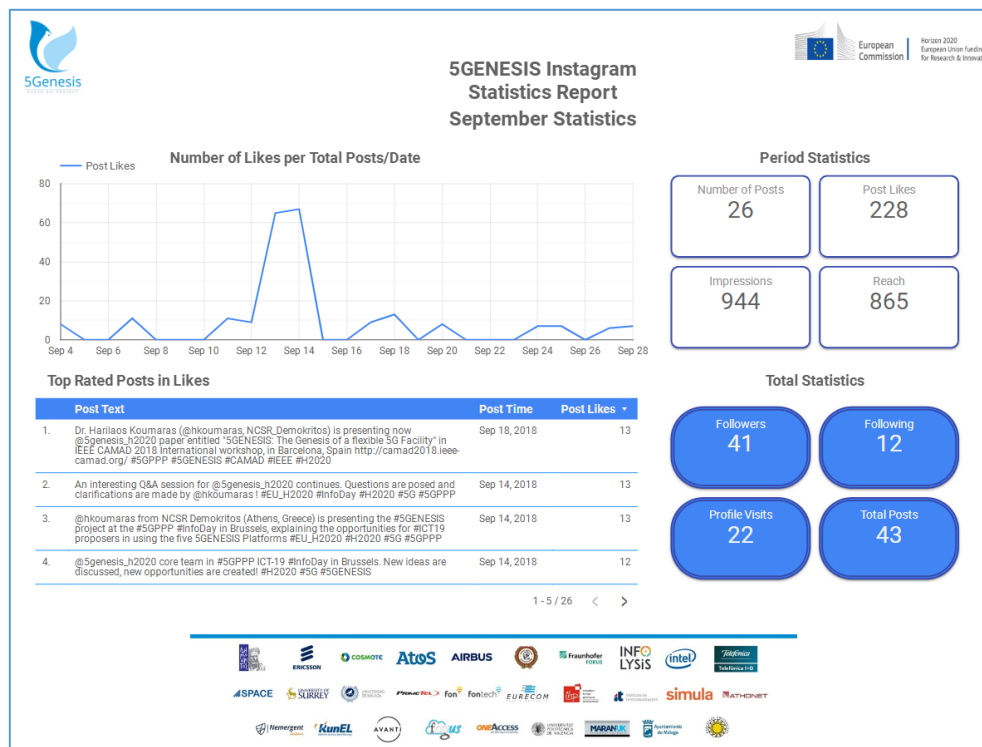


Figure 143. Instagram Statistics for September 2018

6.4.4. Instagram Statistical Dashboards October 2018

October 2018 Link: <https://datastudio.google.com/open/1DRRI4oM42uNpQYlvOwOJ-wyv9x8mBvzt>

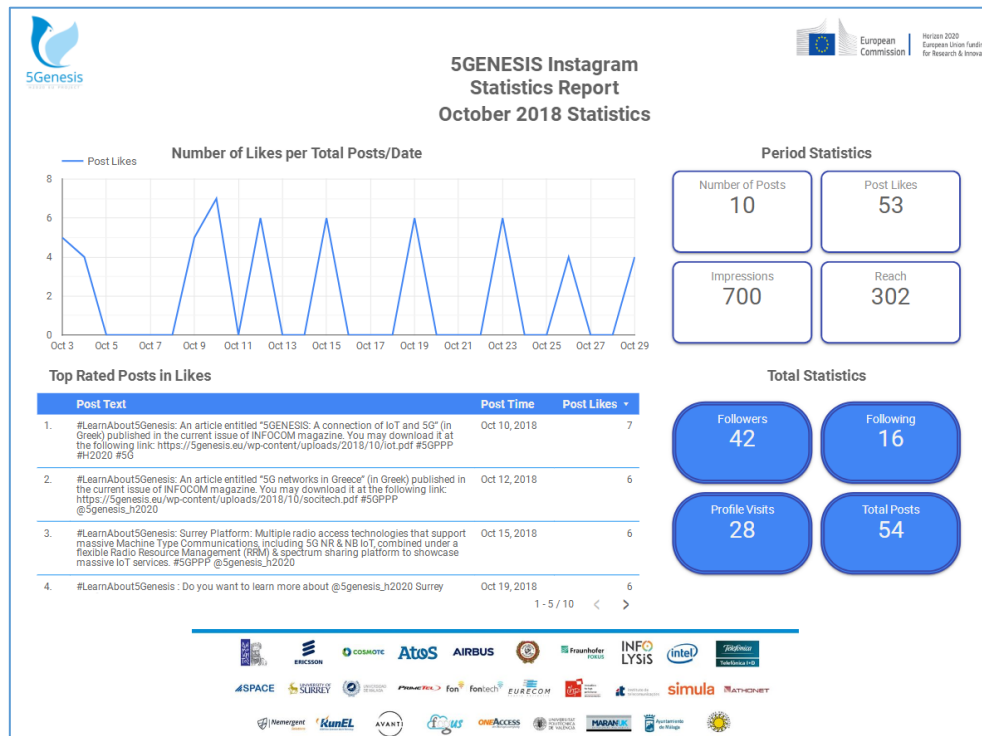


Figure 144. Instagram Statistics for October 2018

6.4.5. Instagram Statistical Dashboards November 2018

November 2018 Link: https://datastudio.google.com/open/1_NlMmvM5X4S-9qIDXTAAYrFHI4yaNji2

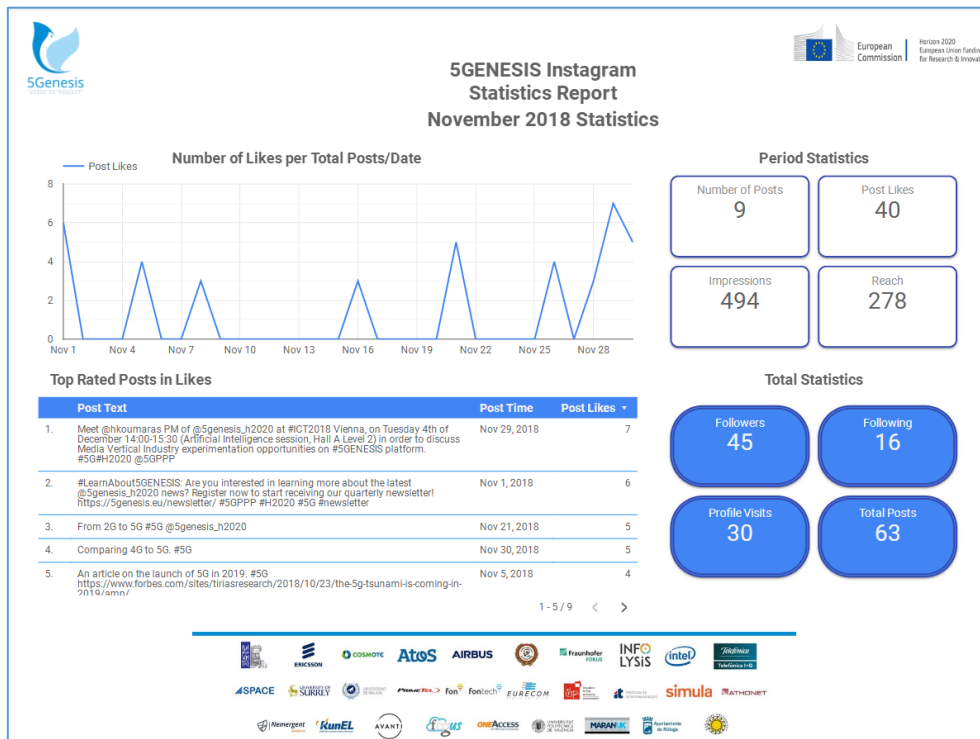


Figure 145. Instagram Statistics for November 2018

6.4.6. Instagram Statistical Dashboards December 2018

December 2018 Link:

https://datastudio.google.com/open/1vk1-Ecl9KO6Yxk1DsY3NwT_mXR8LuNnd

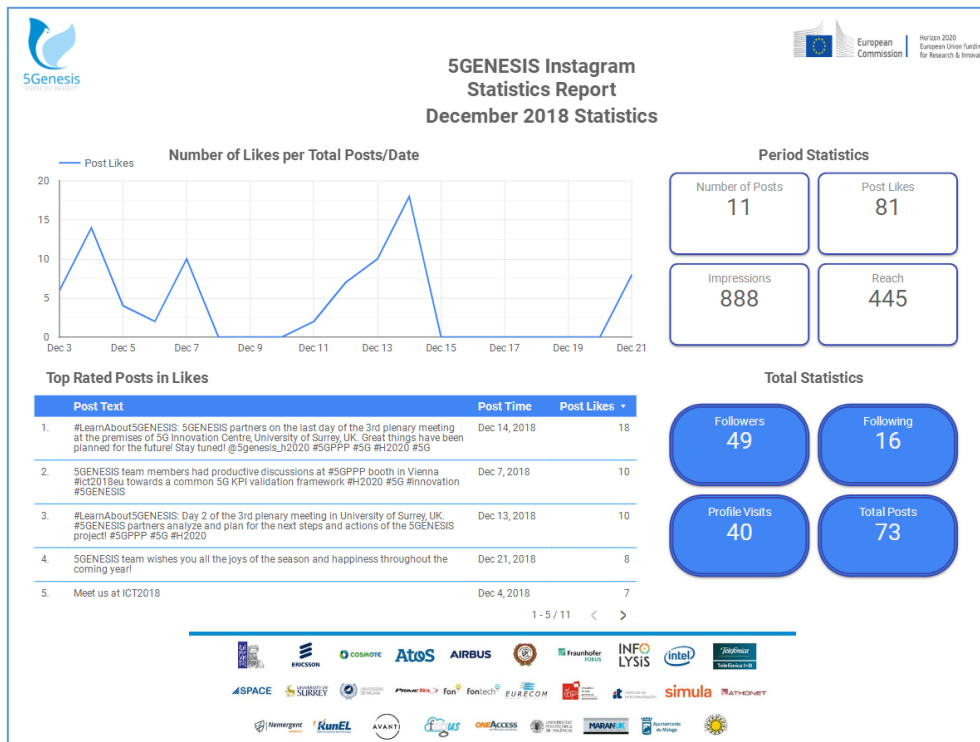


Figure 146. Instagram Statistics for December 2018

6.4.7. Instagram Statistical Dashboards January 2019

January 2019 Link:

https://datastudio.google.com/open/1YOYRRZAugt23zshW00A0oc53gTVA02B_

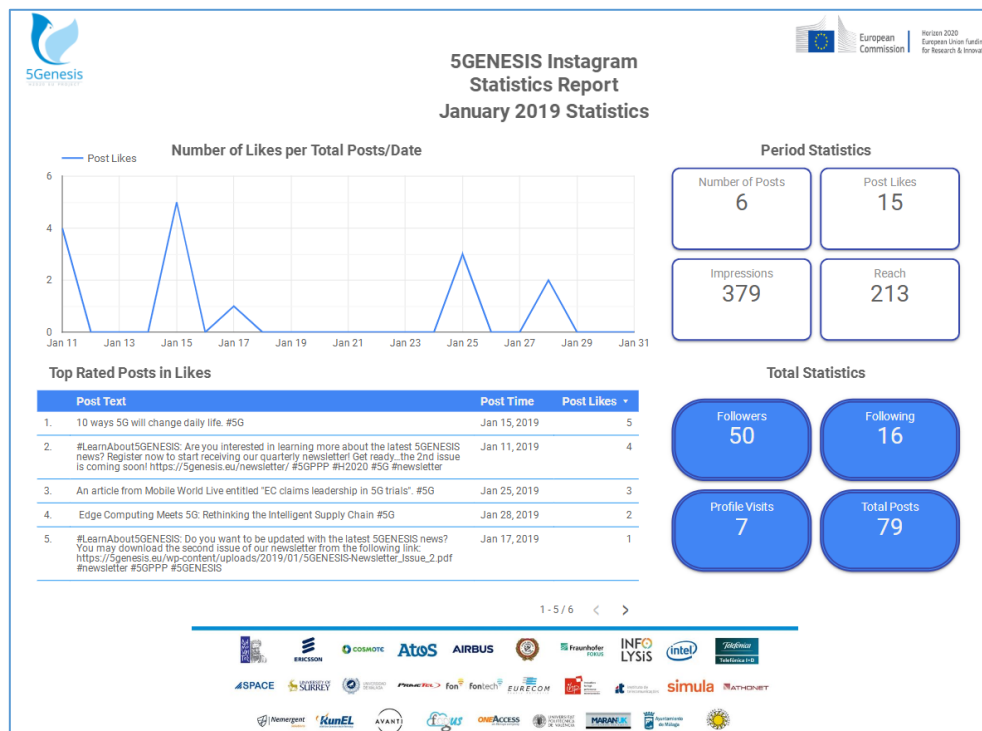


Figure 147. Instagram Statistics for January 2019

6.4.8. Instagram Statistical Dashboards February 2019

February 2019 Link:

<https://datastudio.google.com/open/1ZGCh2KqZTlDD4NivPp2hvvJiTco0NRq>

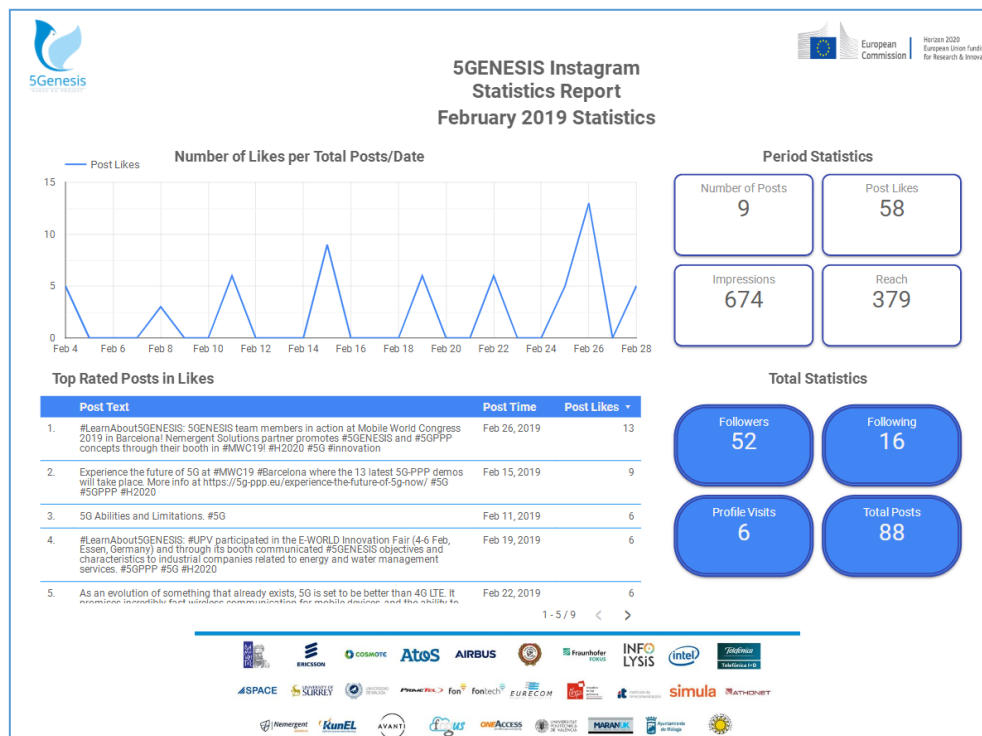


Figure 148. Instagram Statistics for February 2019

6.4.9. Instagram Statistical Dashboards March 2019

March 2019 Link:

https://datastudio.google.com/open/1LR7pLHUOkMo9gVqnqHyrPlcbsrIX9_Os

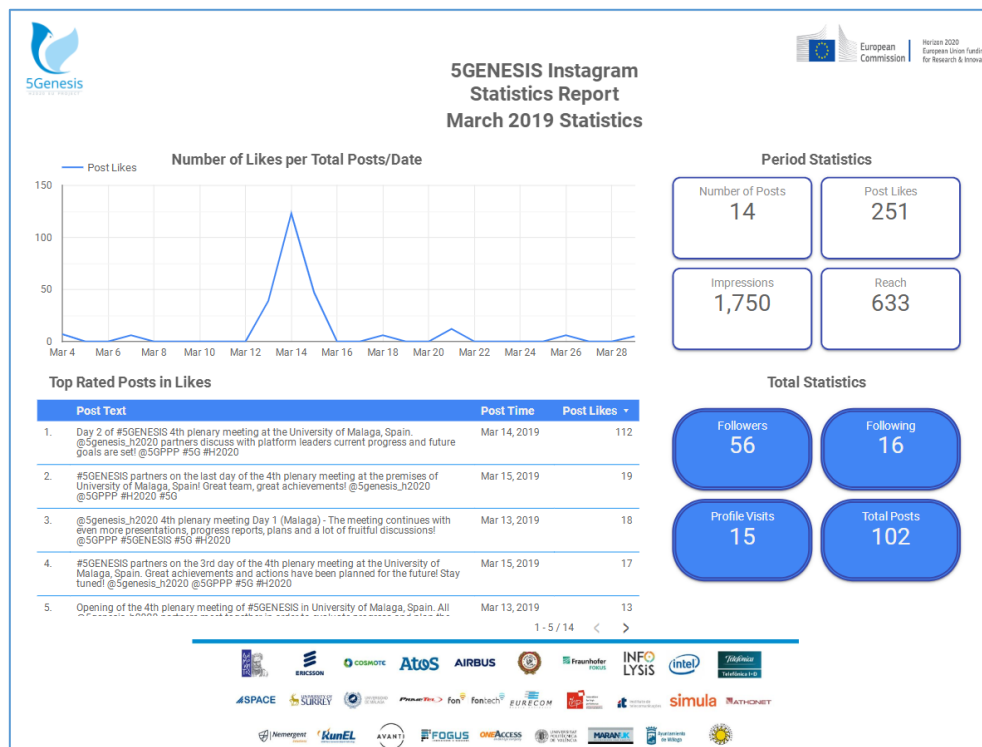


Figure 149. Instagram Statistics for March 2019

6.4.10. Instagram Statistical Dashboards April 2019

April 2019 Link:

<https://datastudio.google.com/open/16AoO8xthNFSaTeZ3OvaGOkHrLZCRNF9>

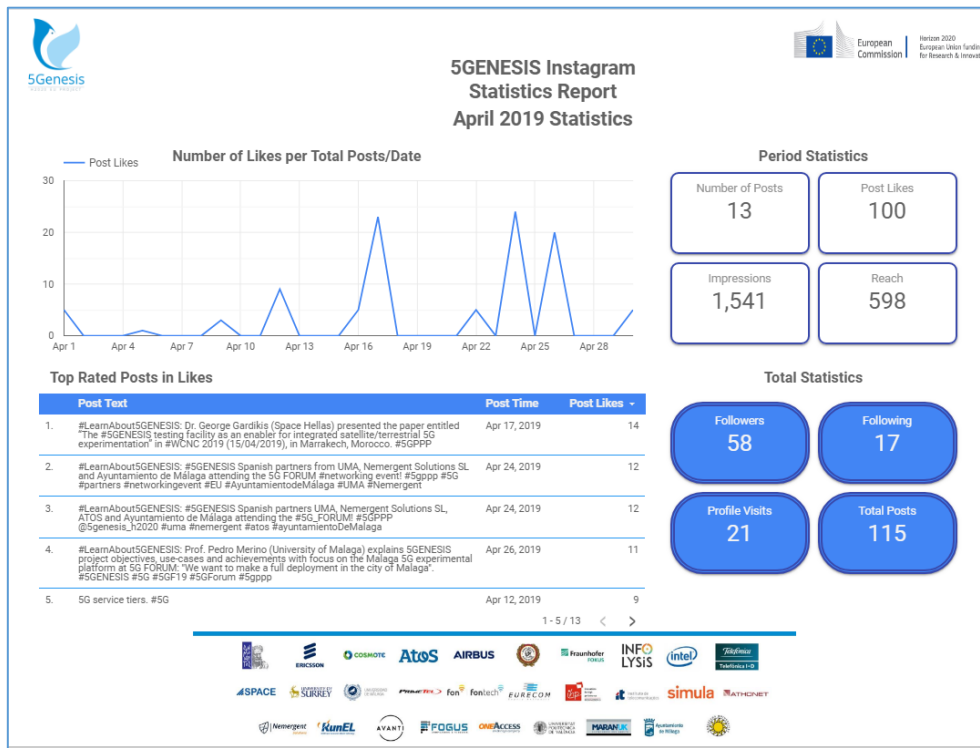


Figure 150. Instagram Statistics for April 2019

6.4.11. Instagram Statistical Dashboards May 2019

May 2019 Link:

<https://datastudio.google.com/reporting/104stwx6zPbpul6VhRGUeINAzidJm25fd/page/qGMW>

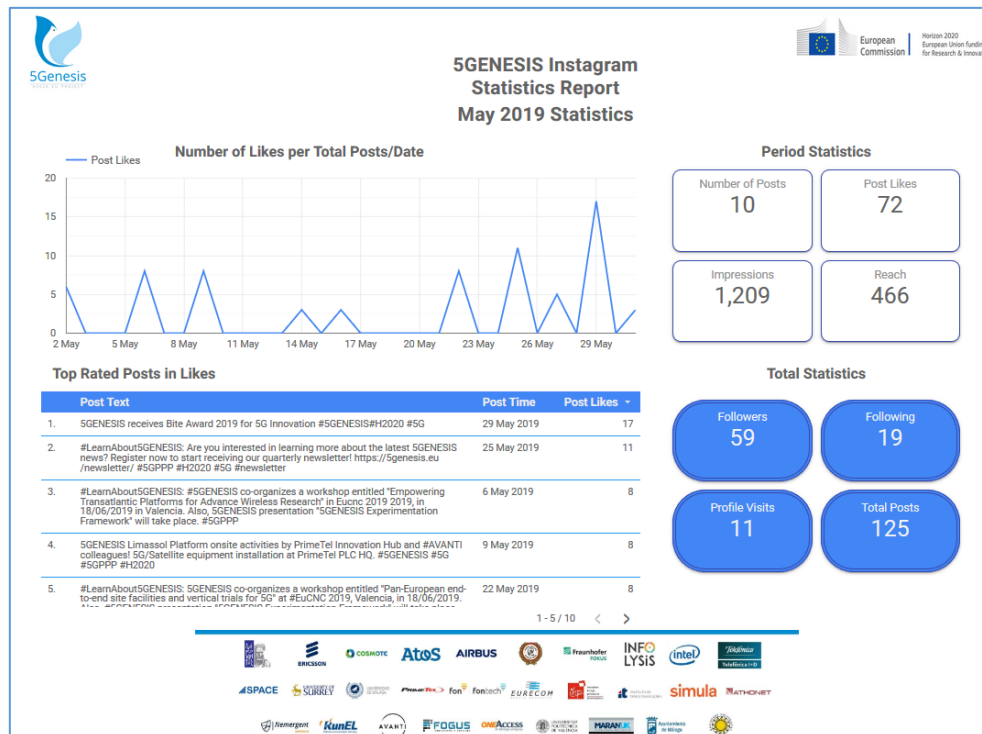


Figure 151. Instagram Statistics for May 2019

6.4.12. Instagram Statistical Dashboards June 2019 (up to 20 June 2019)

June 2019 Link:

<https://datastudio.google.com/open/1xSLCurQgZ600N4NHffuVMJrgRhUuhetA>

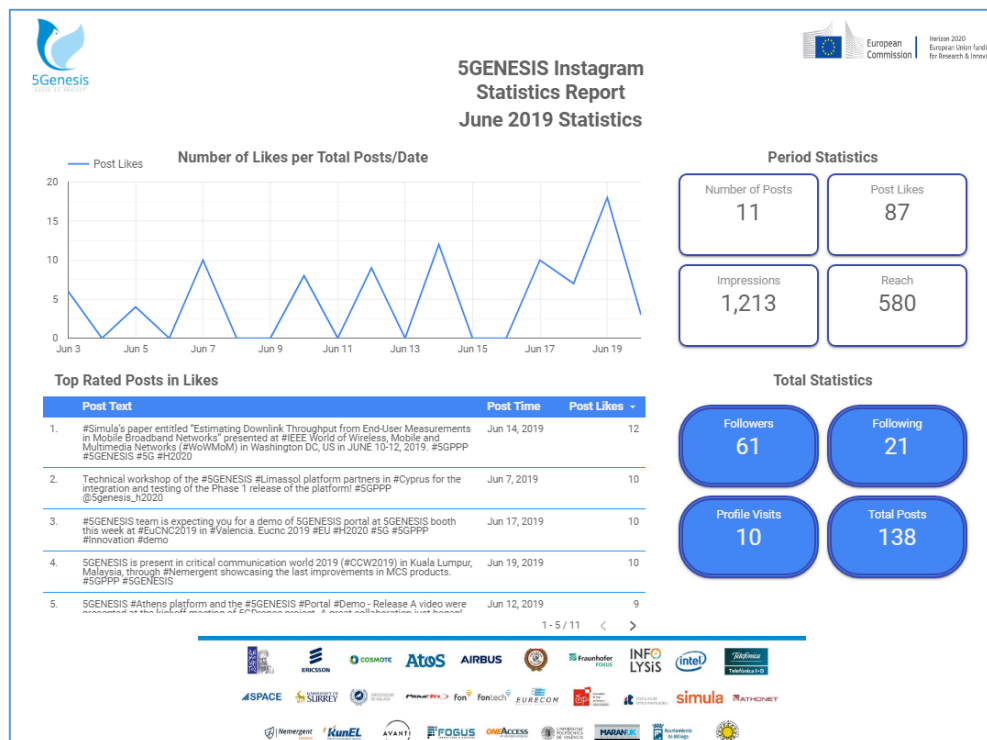


Figure 152. Instagram Statistics for June 2019

7.1. Website Statistical Dashboards

7.1.1. Website Statistical Dashboards August 2018

<https://datastudio.google.com/open/1tGLSK0eXvkoncFVhyTRbvd4XlIazFAhf>



7.1.2. Website Statistical Dashboards September 2018

September 2018 Link: https://datastudio.google.com/open/1UN8SLaezal-zYciBiextK4KKJ_jx5sYt

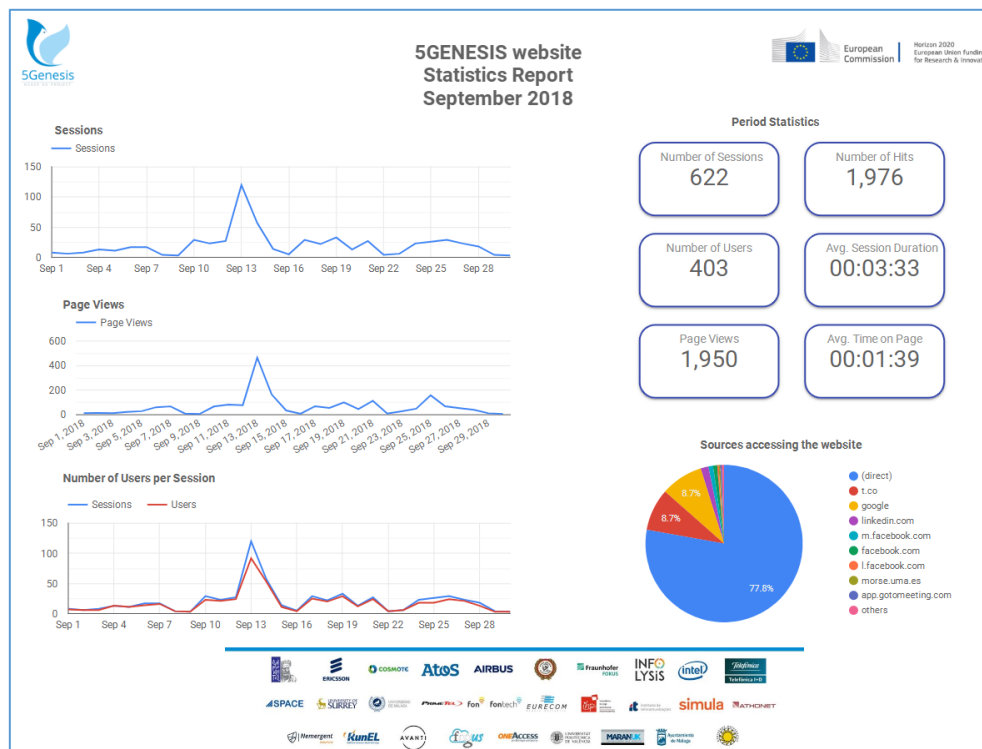


Figure 154. Website Statistics for September 2018

7.1.3. Website Statistical Dashboards October 2018

October 2018 Link: <https://datastudio.google.com/open/1irIWcj--jLt9Sr-aTkQA65PvznIMwv7t>

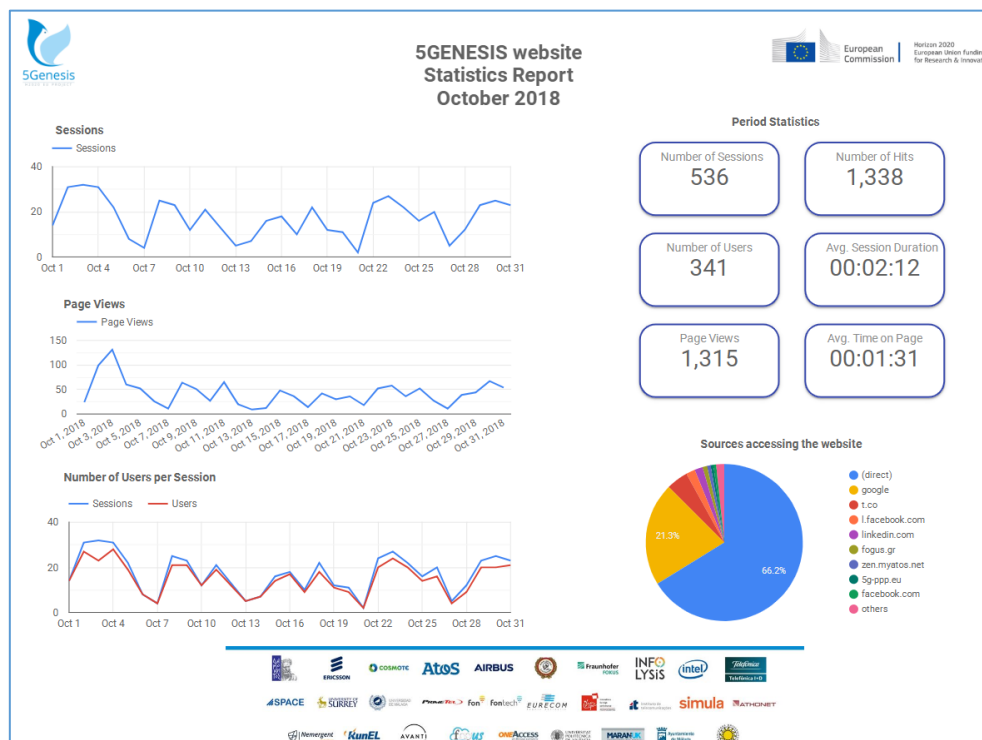


Figure 155. Website Statistics for October 2018

7.1.4. Website Statistical Dashboards November 2018

November 2018 Link: https://datastudio.google.com/open/1aqU77r_laDRkOVPFcWs1X-bbe_Cvlo7k

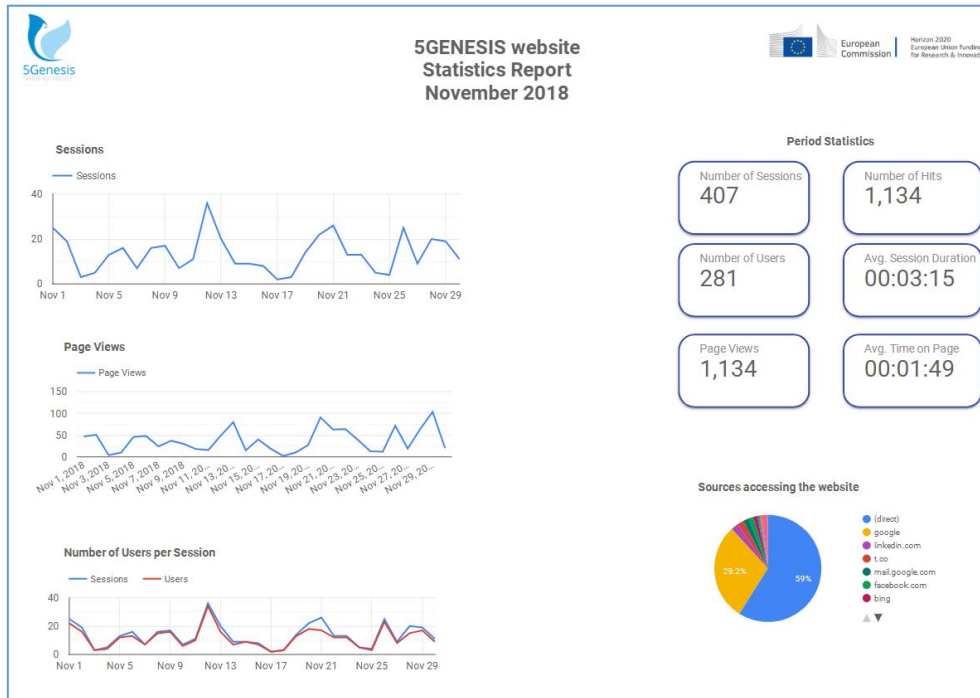


Figure 156. Website Statistics for November 2018

7.1.5. Website Statistical Dashboards December 2018

December 2018 Link: https://datastudio.google.com/open/1Dp3VI-NDFQhSpVpENI4AeRcsYgiNu97_

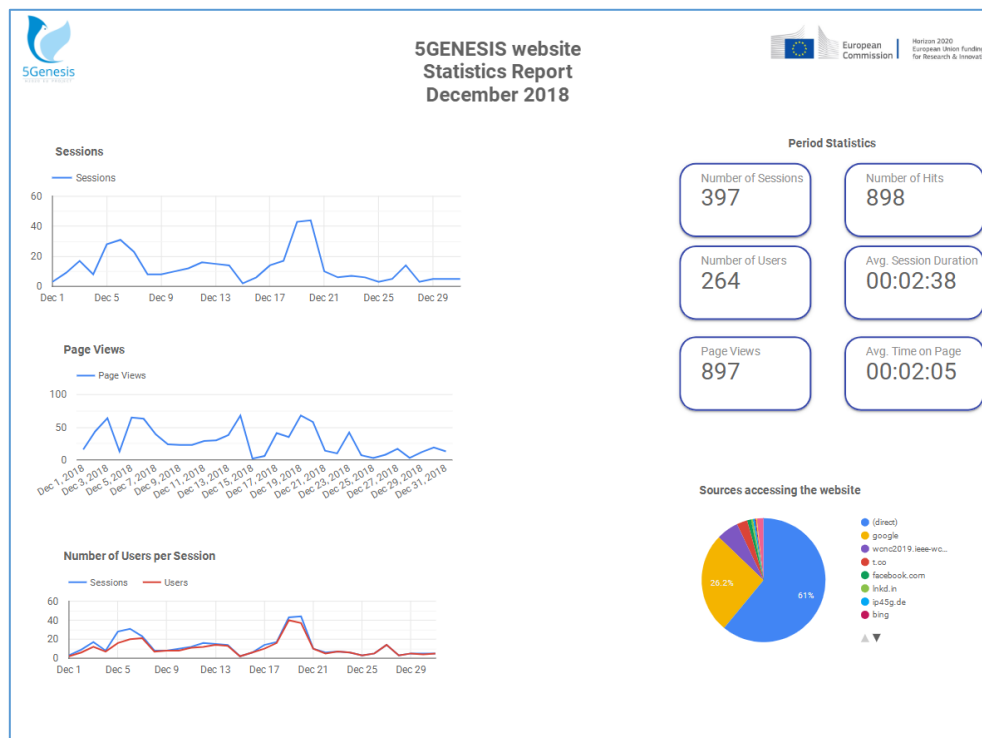


Figure 157. Website Statistics for December 2018

7.1.6. Website Statistical Dashboards January 2019

January 2019 Link: <https://datastudio.google.com/reporting/10pCr1hMLhtvKiVhG3zngHV-2mNSIAFHB/page/EP7X>

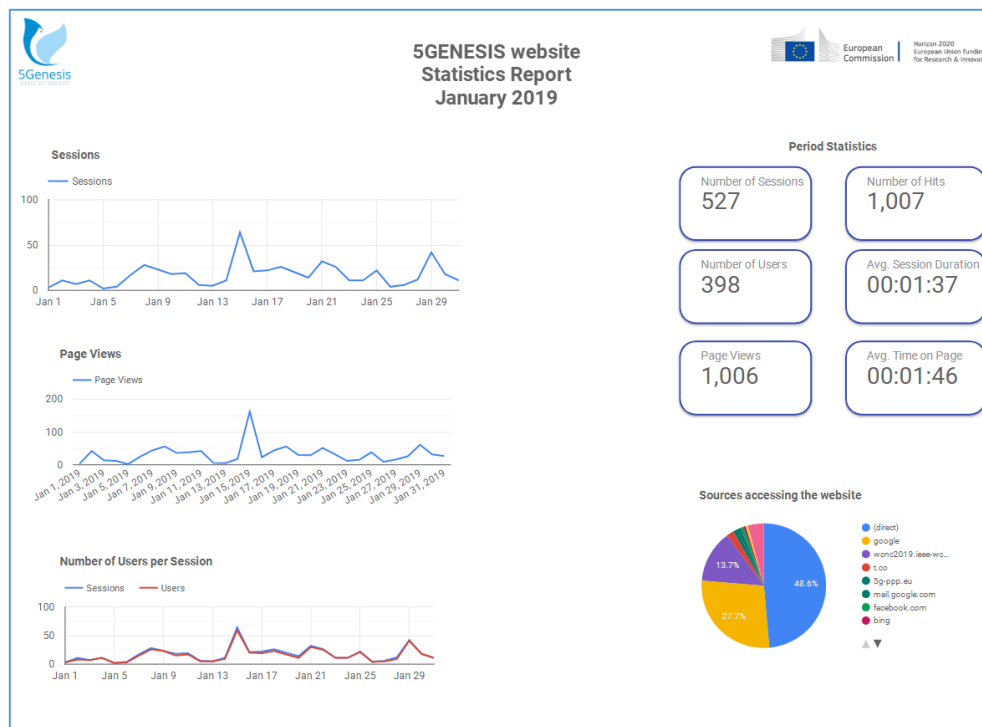


Figure 158. Website Statistics for January 2019

7.1.7. Website Statistical Dashboards February 2019

February 2019 Link:

<https://datastudio.google.com/open/1M55zrVwWsXenQbXUlkYHeR23u89kkvOw>

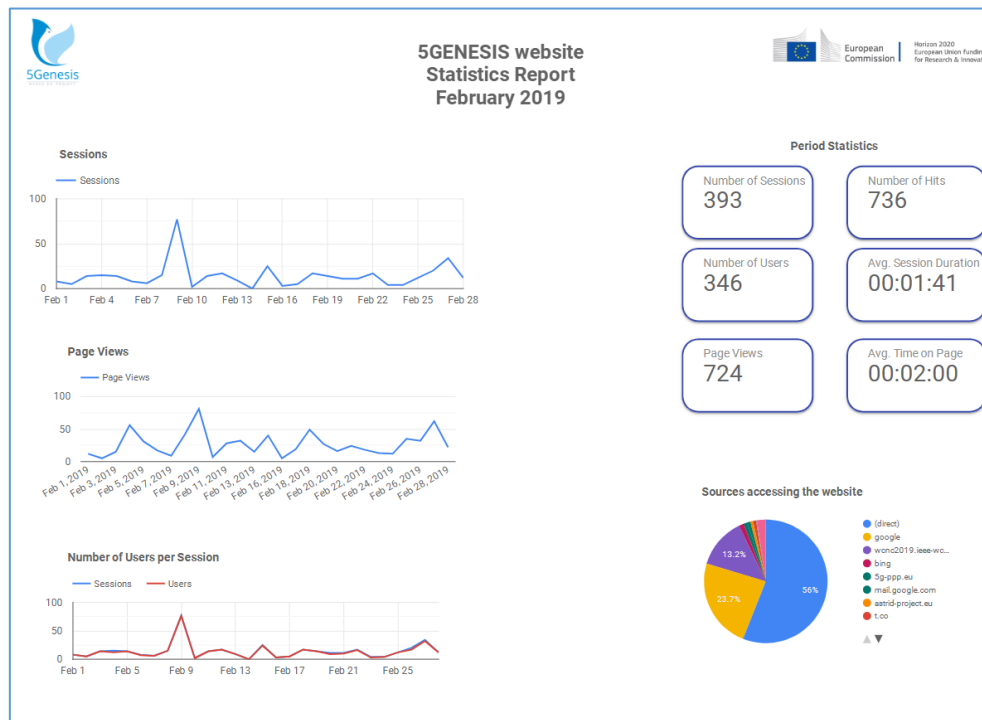


Figure 159. Website Statistics for February 2019

7.1.8. Website Statistical Dashboards March 2019

March 2019 Link:

<https://datastudio.google.com/open/1MqUXjThuT2NSMkskoD0PspDeGUGLJ8p->

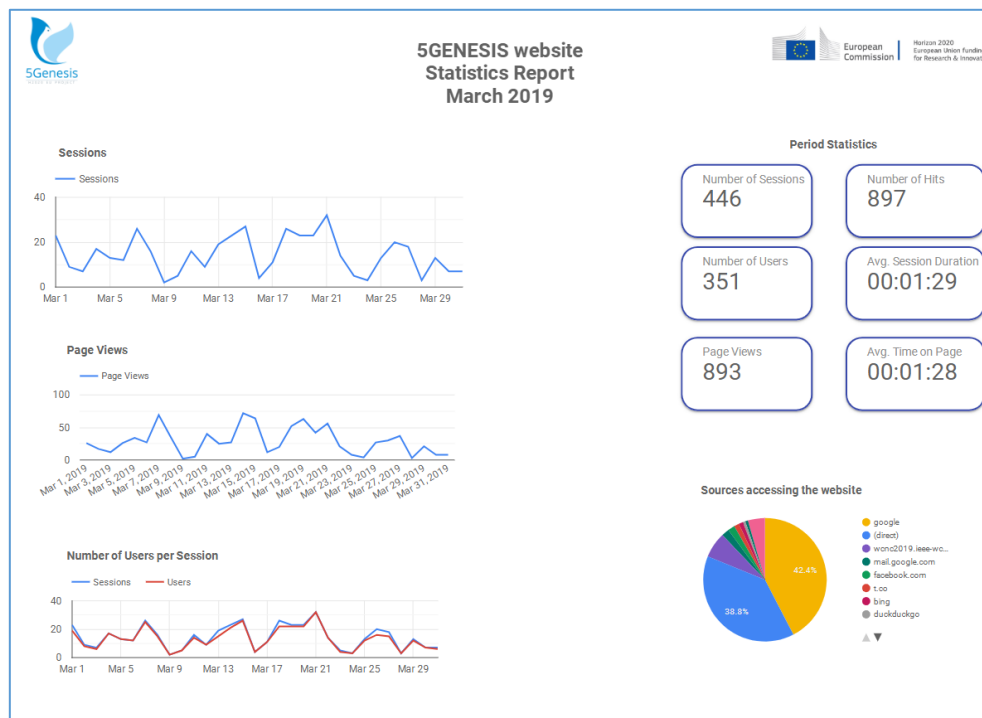


Figure 160. Website Statistics for March 2019

7.1.9. Website Statistical Dashboards April 2019

April 2019 Link:

<https://datastudio.google.com/open/1TuSUjqX5lvDGfmBShMFLEHUym7soMXfJ>

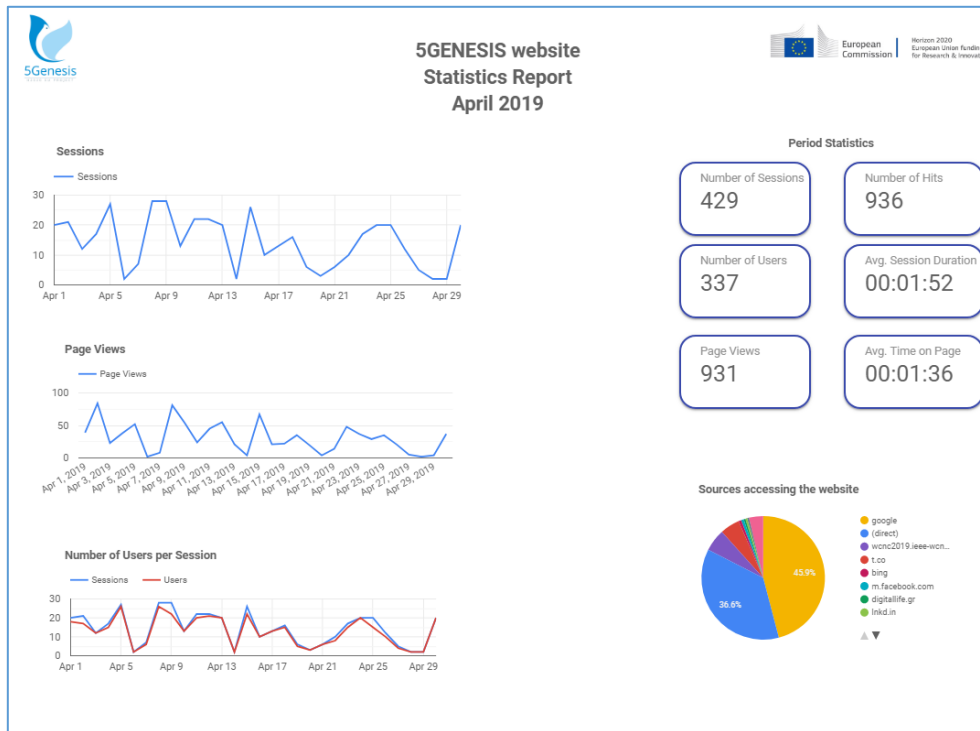


Figure 161. Website Statistics for April 2019

7.1.10. Website Statistical Dashboards May 2019

May 2019 Link:

https://datastudio.google.com/reporting/1diZoKtm18HT8kDEJPAu6qPWYDP9G1T_M/page/E_P7X

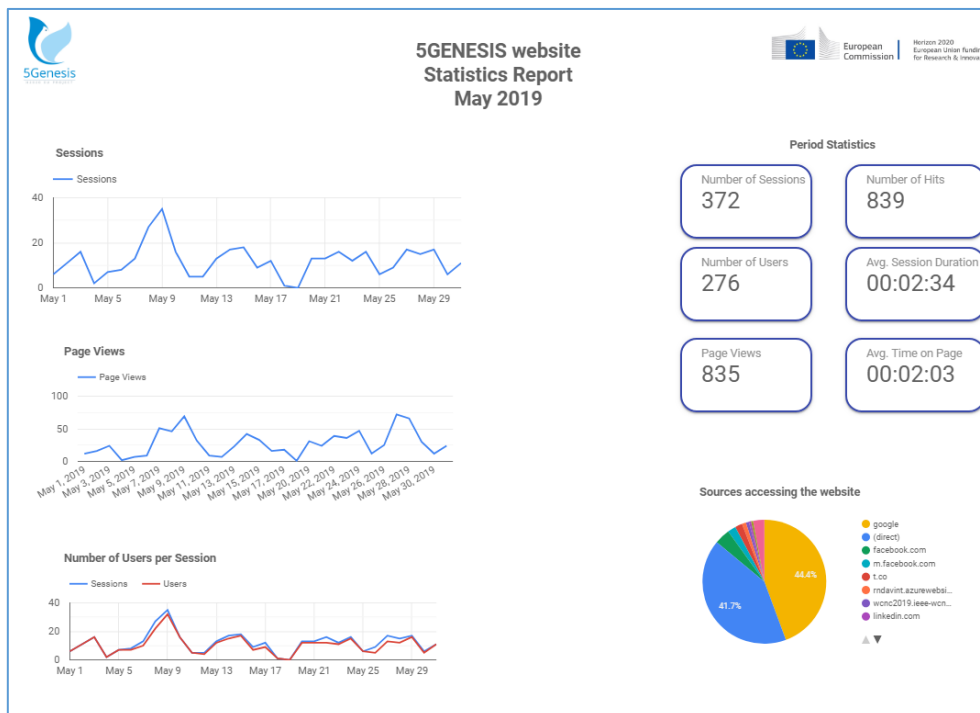


Figure 162. Website Statistics for May 2019.

7.1.11. Website Statistical Dashboards June 2019 (up to 20 June 2019)

June 2019 Link:

https://datastudio.google.com/open/1XQ_aJXOtHLiw5NfHK6ReumT1w55V4izA

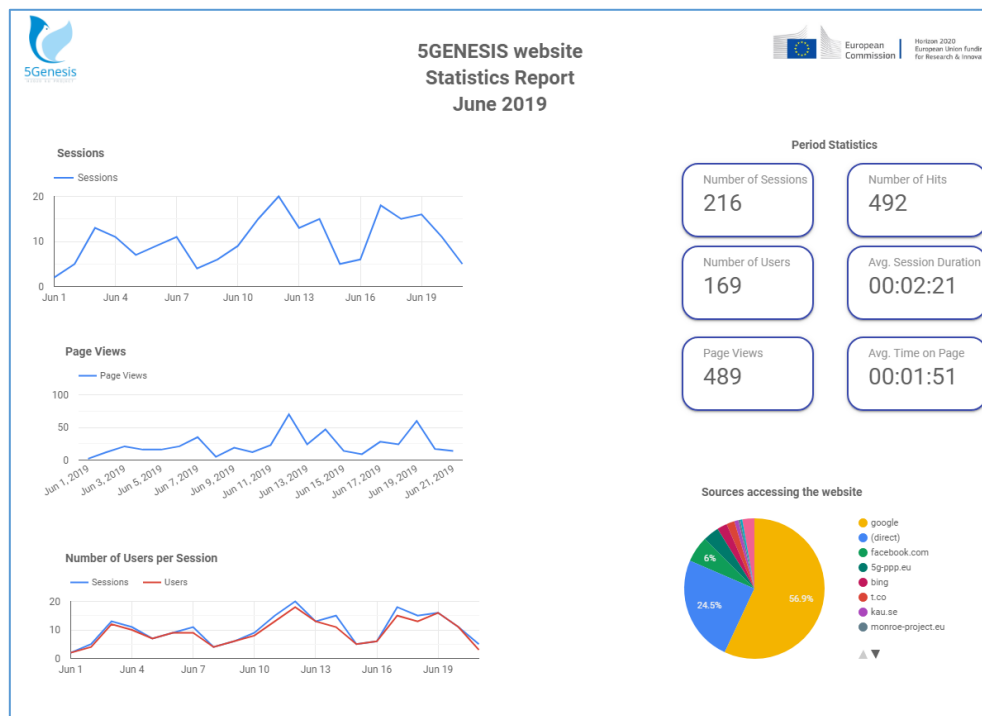




Figure 163. Website Statistics for June 2019

8. ANNEX 3 – QUARTERLY ISSUES OF 5GENESIS NEWSLETTER

8.1. Newsletter Issue 1 (July – September 2018)

Link: https://5genesis.eu/wp-content/uploads/2018/10/5GENESIS-Newsletter_Issue_1.pdf



European
CommissionHorizon 2020
European Union funding
for Research & Innovation

5GENESIS NewsletterPage 2

Dissemination and Communication Channels

In order to effectively communicate information about the 5GENESIS project and the events which will be held, communication channels have been created in order to promote 5GENESIS to the broad public.






An official 5GENESIS website has been developed in order to promote the concept of 5GENESIS with related material, past and upcoming events, deliverables and a newsletter. The link to the official 5GENESIS project website is:

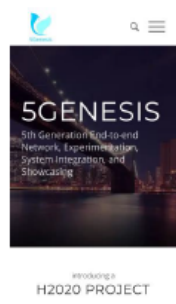
<http://www.5genesis.eu>

In addition to the official website, 5GENESIS social media channels are running in order to inform current, and attract new, users of the 5GENESIS project and events. During July and August, the focus of the social media channels was to promote general 5G topics and events. Starting from September, a different concept of the social media platforms is used with main focus to inform the followers about 5GENESIS specific activities by “publishing” information and activities closely related to the project (new series of posts entitled “Learn About 5GENESIS” have been inaugurated).

The following 5GENESIS social media channels are active and running since end of June:

- Facebook (@5genesis_h2020): www.facebook.com/5genesis
- Twitter (@5genesis-h2020): www.twitter.com/5genesis_h2020
- LinkedIn (@5genesis-h2020): www.linkedin.com/in/5genesis-h2020/
- Instagram (@5genesis_h2020): www.instagram.com/5genesis_h2020
- YouTube (@5GENESIS): www.youtube.com/channel/UCrT3GgwTi3nGiHLWmKUKxug

“like” us on
facebookfollow us on
twitterLinkedInInstagramYou
Tube






European
Commission

 Horizon 2020
European Union Funding
for Research & Innovation

5GENESIS Newsletter

Page 3

Dissemination and Communication Channels

5GENESIS core dissemination activities, will deal mainly with the diffusion of scientific knowledge generated within the context of the project, while core communication activities, will deal mainly with raising awareness about the project through electronic and non-electronic means, through interactive and non-interactive activities. 5GENESIS since its kickoff has already participated to the following dissemination events and activities: EuCNC 2018, 5G-PPP ICT-19 INFO Day and IEEE CAMAD 2018 workshop.

European Conference on Networks and Communications (EuCNC 2018)

The first conference which introduced the 5GENESIS project, took place from 18th to 21st of June 2018 in Ljubljana, Slovenia. Dr. Harilaos Koumaras (NCSR Demokritos), was among the conference's speakers and had the chance to present 5GENESIS project and discussed opportunities for experimentation by vertical industries.

5G PPP ICT-19 INFO Day

The 5GENESIS project was presented in the 5G PPP ICT-19 INFO Day which took place in the 14th of September in Brussels. Dr. Harilaos Koumaras, from NCSR Demokritos (Athens, Greece), was the project's representative and explained the opportunities for ICT-19 proposers in using the five 5GENESIS Platforms.

IEEE CAMAD 2018

The 5GENESIS paper with title "5GENESIS: The Genesis of a flexible 5G Facility" was presented by Dr. Harilaos Koumaras (NCSR Demokritos) in IEEE CAMAD 2018 International workshop, on Tuesday 17 September 2018, in Barcelona, Spain.





*Dr. Harilaos Koumaras
at EuCNC, Ljubljana*



*Dr. Harilaos Koumaras
at 5G-PPP ICT-19 INFO Day, Brussels*



*Dr. Harilaos Koumaras
at IEEE CAMAD 2018, Barcelona*





European Commission
 Horizon 2020
 European Union Funding
 for Research & Innovation

5GENESIS Newsletter

Page 4

General Assembly Meetings

Two plenary meetings have been organized during the first quarter in order to promptly manage and plan the 5GENESIS project. The 5GENESIS kickoff meeting took place in Athens, Greece in the 10th and 11th of July 2018 and a second plenary meeting in Munich, Germany from the 29th to 31st of August 2018.

Kickoff Meeting in Athens

The kickoff meeting was successfully organized in the Municipality of Aegaleo in Athens, Greece in the 10th and 11th of July 2018. All 29 partners participated and worked together to set the initial plans and actions. The main scope of this meeting was to discuss about the first phase of the project, its objectives and the upcoming actions that have to be taken.

Second Plenary Meeting in Munich

The second plenary meeting took place at Intel/Infineon Campeon headquarters in Munich, Germany, from 29th to 31st of August 2018. In this 3-day meeting, the progress of the first months was evaluated, action plans were revised and additional targets were set. First deliverables are under editing and the first milestones are met.

European Commission
 Horizon 2020
 European Union funding
 for Research & Innovation

Communication Channels

<http://www.5genesis.eu>

info@5genesis.eu

Platforms Contact Information

5GENESIS Athens Platform: athens@5genesis.eu

5GENESIS Malaga Platform: malaga@5genesis.eu

5GENESIS Limassol Platform: limassol@5genesis.eu



5GENESIS Berlin Platform: berlin@5genesis.eu

5GENESIS Surrey Platform: surrey@5genesis.eu

Figure 164. 5GENESIS Newsletter Issue 1

Link: https://5genesis.eu/wp-content/uploads/2019/01/5GENESIS-Newsletter_Issue_2.pdf





5GENESIS Newsletter

Page 2


Dissemination and Communication Activities

Dissemination and Communication Activities of 5GENESIS during October - December 2018, cover a great number of initiatives such as participation in conferences and presentations, papers, participation in workshops, several dissemination events and preparation/planning of upcoming events.

Conferences, Papers and Presentations

DySPAN 2018

Dr. Valerio Frascolla (INTEL) from 5GENESIS, co-organized with 5G-MiEdge and led the panel entitled "Dynamic spectrum management: the 5G verticals view" at the DySPAN 2018 conference in Seoul (Oct. 23, 2018) describing the importance of spectrum dynamicity of 5G systems.



Dr Valerio Frascolla (INTEL) at the DySPAN 2018, Seoul

20th INFOCOM World Conference


Dr Anastasios Kourtis (NCSRDI) presented "5th Generation End-to-End Network, Experimentation, System Integration and Showcasing: The case of the 5GENESIS Project" in the 20th INFOCOM World Conference, in 21st November 2018 in Athens.



The 20th INFOCOM World Conference in Athens

IEEE Global Communications Conference


Two 5GENESIS papers by Instituto de Telecomunicacoes (IT) were accepted for publication and presented in IEEE Global Communications Conference (GlobeCom) in Abu Dhabi, UAE, 9-13 December 2018. (Read the Papers: [Paper 1](#) and [Paper 2](#))



Workshops

FUSECO Fokus Event

Dr Zion Hadad (RunEL) presented in the Workshop "Architectures and Radio Technologies for 5G Transport and Access Networks" of FUSECO Fokus Event in 14th-15th November 2018 in Berlin, design techniques for URLLC Networks and their association with 5GENESIS project.




Dr Zion Hadad (RunEL) at FUSECO Fokus, Berlin

Professor Eckhard Grass and Dr.Valerio Frascolla organized and drove a workshop entitled "Architectures and Radio Technologies for 5G Transport- and Access Networks" at the FUSECO Fokus 2018 event in 14th-15th November 2018 in Berlin.



Dr Valerio Frascolla (INTEL) at FUSECO Fokus, Berlin

European
Commission

Horizon 2020
European Union funding
for Research & Innovation

5GENESIS Newsletter

Page 3

5GPPP Workshops

5G PPP Technical Workshop

The 5GENESIS deputy TM Dr. D. Tsolkas (FOG) had the opportunity to meet and discuss with representatives of other 5G PPP projects at 5GPPP Technical Workshop in Kista, Sweden, 20-22 November 2018.

Networld2020 Annual Event

Nemergent, in charge for monitoring SME WG and NetWorld2020, attended the event in the 15th November 2018, in Brussels and had the chance to explain the concept and different platforms of 5GENESIS to several partners during the event.

Other Events - Presentations

Ericsson Ireland Tech Day

On the 4th of October, as part of Ericsson Ireland Tech Day, an overview of 5GENESIS was presented, including project goals, underlying platforms, structure, as well as expected contributions to the 5G landscape.

Athens Innovation Festival

INFOLYSIS participated in the Athens Innovation Festival from 12th to 14th November 2018, where it had the chance to describe and communicate 5GENESIS project, its objectives and characteristics, as part of 5G ecosystem, through INFOLYSIS booth.

Networld2020 Annual Event

Israel Koffman (RunEL) participated in Networld2020 Annual Event in 15th November 2018, in Brussels and presented the 5GENESIS project contributions to the 5G ecosystem during the "The role of SMEs in the new 5G ecosystem" panel discussion.

NCSR INFODAY


On 30th November 2018, NCSR organised an infoday on 5G advances, where Nokia Greece from 5G-VINII was invited in order to present and share view on its 5G strategy, both commercially and in 5G-VINII work plan.


ONF Connect

David Artunedo Guillen (Telefonica) participated in ONF Connect in Santa Clara on the 5th of December 2018 where he analyzed use cases running on edge computing and presented 5GENESIS Malaga platform.



The 5GENESIS deputy TM Dr. Tsolkas (FOG) at 5G PPP Workshop, Sweden







Vaios Koumaras (INF) at the Athens Innovation Festival, Athens.




NCSR INFODAY





European
Commission

Horizon 2020
European Union Funding
for Research & Innovation

5GENESIS Newsletter

Page 4

Journals/Magazines/Newspapers

INFOCOM magazine

An article entitled “5G networks in Greece”(in Greek) was published in the October issue of the INFOCOM magazine (issue 243) presenting 5GENESIS project and its specifications. Dr. H.Koumaras (NCSRD) has been interviewed for this article. Read more about this [article](#).

An article entitled “5GENESIS: A connection of IoT and 5G” (in Greek) published in INFOCOM magazine (issue 243). Dr. H.Koumaras (NCSRD) has been interviewed for this article. Read more about this [article](#).

EconomyToday Newspaper

Vasilis Nikolaidis, Primetel's Sales Manager gave an overview of 5GENESIS and Primetel's role in the project. While describing the first 5G Pilot Testing Platform in Cyprus. Read more about this [article](#).

Simerini National Newspaper

An associated article by PrimeTel, giving an overview of the 5GENESIS project, was also included in Simerini National Newspaper of Cyprus. Read more about this [article](#).

Upcoming Events - Call for Papers


IEEE WCNC 2019 (15-18/04/2019, Marrakech, Morocco)

5GENESIS co-organizes with Sat5G and 5GALLSTAR, the ‘Satellite-terrestrial interworking: a pillar of forthcoming 5G systems’ workshop in IEEE WCNC. Find more [info](#).

5GENESIS co-organizes with ULTRAWAVE and 5G-MiEdge the “2nd Workshop on Economics and Adoption of Millimeter Wave Technology in Future Networks” in IEEE WCNC. Find more [info](#).

IEEE NetSoft 2019 (24-28/06/2019, Paris, France)

5GENESIS co-organises with ASTRID, SPEAR, CYBER-TRUST, REAC and SHIELD projects the “1st International Workshop on Cyber-Security Threats, Trust and Privacy Management in Software-defined and Virtualized Infrastructures (SecSoft)” at 5th IEEE International Conference on Network Softwareization (NetSoft 2019). Call for papers [info](#).



5Genesis

Call for Papers



European Commission
Horizon 2020
European Union Funding
for Research & Innovation

5GENESIS Newsletter

Page 5

Deliverables

Three deliverables have been published in the period Oct-Dec 2018: D2.1, D2.2 and D7.8.

D2.1: This document is the first technical deliverable of the 5GENESIS project and addresses the outcome of its first technical task (Task 2.1), targeting the definition of the requirements of the envisaged 5G Facility. It presents a distilled view of the project's scope and objectives, and highlights the innovations and ambitions that are set to be fulfilled.

D2.2: This document starts with a short review of the main requirements as has been already provided in deliverable D2.1. It then presents a distilled summary of the technologies and standards that the project builds upon, discusses how the 5GENESIS approach is related to these, and documents the envisaged contribution towards the implementation of a 5G experimentation platform. Based on this background and the well-defined architectural design principles introduced, the study delves into the 5G Facility reference architecture to specify in more detail each of the three layers (introduced in D2.1) and their components, as well as interactions among them, concluding to a concrete reference architecture specification.

D7.8: This deliverable focuses on the activities of the innovation program run within the consortium over the first 6 months of 5GENESIS as well as exploitation related activities and plans of 5GENESIS consortium/partners.

Upcoming 5GENESIS deliverables

- D2.3 Initial planning of tests and experimentation
- D4.1 Athens Platform (release A)
- D4.4 Malaga Platform (release A)
- D4.7 Limassol Platform (release A)
- D4.10 Surrey Platform (release A)
- D4.13 Berlin Platform (release A)
- D4.16 Portable 5G Demonstrator (release A)

If you wish to learn more about 5GENESIS deliverables you may visit 5GENESIS website on the corresponding Deliverables page <http://www.5genesis.eu/deliverables/>



5Genesis
5G Ecosystem for Next-Generation Services




Horizon 2020
European Union funding
for Research & Innovation

5GENESIS Newsletter

Page 6

General Assembly Meetings

Third Plenary Meeting

The 5GENESIS third plenary meeting took place at the premises of 5G Innovation Centre, University of Surrey, 12th to 14th of December 2018. 5GENESIS partners had the chance to meet once more and work together in order to evaluate the project's progress. The main objective of this meeting was to discuss and evaluate the actions already taken and the milestones that have been met while deciding on the activities that will follow.












Horizon 2020
European Union funding
for Research & Innovation

Communication Channels







<http://www.5genesis.eu>
info@5genesis.eu

Contact Information

5GENESIS Athens Facility: athens@5genesis.eu

5GENESIS Malaga Facility: malaga@5genesis.eu

5GENESIS Limassol Facility: limassol@5genesis.eu

5GENESIS Berlin Facility: berlin@5genesis.eu

5GENESIS Surrey Facility: surrey@5genesis.eu



Figure 165. 5GENESIS Newsletter Issue 2

8.3. Newsletter Issue 3 (January – March 2019)

Link: https://5genesis.eu/wp-content/uploads/2019/04/5GENESIS-Newsletter_Issue_3.pdf






Horizon 2020
European Union funding
for research & innovation

5GENESIS Newsletter

Page 2

Dissemination and Communication Activities

Dissemination and Communication Activities of 5GENESIS during January - March 2019, cover a great number of initiatives such as publications, participation in conferences and workshops, presentations, several dissemination events and preparation/planning of upcoming events.

Papers in Journals

The University of Malaga paper entitled "An End-to-End Automation Framework for Mobile Network Testbeds" was accepted for publication in the upcoming issue of the Mobile Information Systems Journal.



Papers in Workshops

The 5GENESIS paper entitled "The 5GENESIS testing facility as an enabler for integrated satellite/terrestrial 5G experimentation" was accepted in the 2019 Satellite-Terrestrial Interworking Workshop of WCNC 2019 which will take place in the 14th of April, 2019 in Marrakech. Find more [info](#).

Eurecom paper entitled "The OpenAirInterface 5G New Radio Implementation: Current Status and Roadmap" was accepted in WSA 2019, 23rd ITG Workshop on Smart Antennas, Demo Session, 24-26 April 2019.

Other Events - Presentations

E-WORLD Innovation Fair (4-6/02/2019, Essen, Germany)

Universitat Politècnica de València participated in the E-WORLD Innovation Fair and through its booth communicated 5GENESIS objectives and characteristics to industrial companies related to energy and water management services.



Universitat Politècnica de Valencia in the E-WORLD Innovation Fair

MWC 2019 (25-28/02/2019, Barcelona, Spain)

Nemergent Solutions participated in MWC 2019 with a booth in the Spanish pavilion where besides its technology and mission critical solutions, the 5GENESIS project was presented and introduced to interested customers and vertical users.



Nemergent Solutions participated in MWC 2019

BAPCO 2019 and CCE 2019 (12-14/03/2019, Coventry, UK)

Nemergent Solutions participated in BAPCO 2019 and CCE 2019 with a booth where besides its technology and mission critical solutions, the 5GENESIS project was presented and introduced to interested customers and vertical users.



Nemergent Solutions participated in BAPCO 2019 and CCE 2019




European
Commission

Horizon 2020
European Union funding
for Research & Innovation

5GENESIS Newsletter

Page 3

EGALEO Smart City 2020-2030 Event (18/03/2019, Athens, Greece)

The Town Hall of Egaleo hosted the Egaleo Smart City 2020-2030 event which was organized by the Municipality of Egaleo and took place in the Town Hall of Egaleo in March 18th, 2019. This event focused on 5G future and innovations as well as on 5GENESIS project.

Dr. Kourtis presented 5GENESIS at EGALEO Smart City 2020-2030 (18/03/2019, Athens, Greece)

Dr. Anastasios Kourtis (IICSR_Demokritos) presented the 5GENESIS Project in the Egaleo Smart City 2020-2030 event which was organized by the Municipality of Egaleo and took place in the Town Hall of Egaleo in March 18th, 2019.

Magazines/Newspapers

La Opinion de Malaga (13/03/2019)

Malaga local news media "La Opinion de Malaga" promotes the 4th plenary meeting of 5GENESIS highlighting the importance of 5G for Malaga city and the achievements that 5GENESIS project will accomplish in five 5G European cities/platforms. Read more about this [article](#) (in Spanish).

Upcoming Events

IEEE WCNC 2019 (15-18/04/2019, Marrakech, Morocco)

- 5GENESIS co-organizes with Sat5G and 5GALLSTAR projects, the 'Satellite-terrestrial interworking: a pillar of forthcoming 5G systems' workshop in IEEE WCNC. Find more [info](#).
- 5GENESIS co-organizes with ULTRAWAVE and 5G-MiEdge projects, the "2nd Workshop on Economics and Adoption of Millimeter Wave Technology in Future Networks" in IEEE WCNC. Find more [info](#).

5G Forum (24-25/04/2019, Malaga, Spain)

The 5GENESIS Project participates as sponsor in the 5G forum event which takes place in Malaga where 5GENESIS concepts and achievements will be promoted. Read more about the event in <https://www.5gforum.es/en/>




Dr. Anastasios Kourtis presenting 5GENESIS Project at the Egaleo Smart City 2020-2030 event








Horizon 2020
European Union Funding
for Research & Innovation

5GENESIS Newsletter

Page 4

IEEE INFOCOM, IEEE International Conference on Computer Communications (29/04 - 2/05/2019, Paris, France)

Karlstad University participates in Infocom 2019 Panel A: Smart Networks: What is Next?, promoting 5GENESIS accomplishments. Find more [info](#)

International Microwave Symposium - IMS2019 (2-7.06, Boston, Massachusetts)

INTEL will present on eMBB and mmWaves topics of the IMS2019 focusing on the Corresponding aspects of 5GENESIS

EuCNC 2019 (17-21/06/2019, Valencia, Spain)

- 5GENESIS Workshop “3th Workshop on business models and techno-economic analysis for 5G networks” co-organized with the projects 5GCity, 5G-MiEdge, 5G-VIIINI, 5G-AuRA, BlueSPACE and 5G-MoIArch.
- 5GENESIS Special Session “Validating and Demonstrating the Satellite Integration into 5G” co-organized with SaT5G, 5G-VIIINI, SATis5, S45G - Satellite for 5G, SHINE and VIBES projects

IEEE NetSoft 2019 (24-28/06/2019, Paris, France)

5GENESIS co-organises with ASTRID, SPEAR, CYBER-TRUST, REAC and SHIELD Projects the “1st International Workshop on Cyber-Security Threats, Trust and Privacy Management in Software-defined and Virtualized Infrastructures (SecSoft)” at 5th IEEE International Conference on Network Softwarization

5GENESIS Call for papers

3rd Workshop on Mobile Network Measurement – MNM’19 (17/06/2019, Paris, France)

Karlstad University organizes the 3rd Workshop on Mobile Network Measurement (MNM’19) at TMA Conference 2019 in June 17, 2019. Call for papers [info](#)

IEEE 5G World Forum (30/09 - 2/10/2019, Dresden, Germany)

The 5GENESIS project co-organizes with the rest ICT-17 projects the 2nd workshop on 5G-Trials - From 5G Experiments to Business Validation adjunct with IEEE 5G World Forum. Call for papers info:
<http://sites.ieee.org/wf-5g/from-5g-experiments-to-business-validation/>















Call for Papers



European Commission
Horizon 2020
European Union Funding
for Research & Innovation

5GENESIS Newsletter

Page 5

Deliverables

Eight deliverables have been published in the period January-March 2019 referring to the initial planning of tests and experimentation of the 5GENESIS project, innovation and exploitation activities as well as the first release of 5GENESIS platforms and portable demonstrator details.

Deliverables (Public)

- D2.3 Initial planning of tests and experimentation: This document is the third technical deliverable of the 5GENESIS project, and contains work conducted in the WP2 of the project, complementing the content of deliverables D2.1 and D2.2. Specifically, this document serves as a reference point for WP3 activities, where the key components of this experimentation methodology will be implemented, and for WP6 activities, where the 5G KPIs will be evaluated.
- D7.8 Innovation and exploitation activities This deliverable focuses on the activities of the innovation program run within the consortium over the first 6 months of 5GENESIS as well as exploitation related activities and plans of 5GENESIS consortium/partners.

Deliverables (Confidential)

At the end of March (M9), six confidential deliverables were released with the five of them focused on 5GENESIS platforms/locations (D4.1, D4.4, D4.7, D4.10 and D4.13) which describe the architecture of each platform and report their current status/achievements, and the sixth deliverable focused on the 5GENESIS portable demonstrator (D4.16).

In detail, these deliverables provide a summary of each of the components/sites that will form the corresponding platforms (Athens, Malaga, Limassol, Surrey, Berlin, Portable 5G Demonstrator). They initially present the platforms instantiation as expected by the end of the project and then report the current status (platforms release A) resulted after the first integration cycle of the project.

- D4.1 Athens Platform (release A)
- D4.4 Malaga Platform (release A)
- D4.7 Limassol Platform (release A)
- D4.10 Surrey Platform (release A)
- D4.13 Berlin Platform (release A)
- D4.16 Portable 5G Demonstrator (release A)

Upcoming 5GENESIS deliverables (April-June 2019)

- D6.1 Trials and experimentation (cycle 1)
- D7.2 Dissemination, communication and ecosystem engagement activities
- D7.5 Standardisation and regulation

If you wish to learn more about 5GENESIS deliverables you may visit 5GENESIS website on the corresponding Deliverables page <http://www.5genesis.eu/deliverables/>




European Commission
 Horizon 2020
 European Union Funding
 for Research & Innovation

5GENESIS Newsletter

Page 7

General Assembly Meetings

Fourth Plenary Meeting

The 4th plenary meeting of 5GENESIS took place at the premises of the University of Malaga, Spain from the 13th to 15th March 2019. The partners met in order to evaluate progress and plan the next steps of the project. The objective of this meeting was to discuss actions already taken and through fruitful discussions to plan the new actions that will be taken.











European Commission
 Horizon 2020
 European Union Funding
 for Research & Innovation

Communication Channels







<http://www.5genesis.eu>
info@5genesis.eu

Contact Information

5GENESIS Athens Facility: athens@5genesis.eu

5GENESIS Malaga Facility: malaga@5genesis.eu

5GENESIS Limassol Facility: limassol@5genesis.eu

5GENESIS Berlin Facility: berlin@5genesis.eu

5GENESIS Surrey Facility: surrey@5genesis.eu



Figure 166. 5GENESIS Newsletter Issue 3