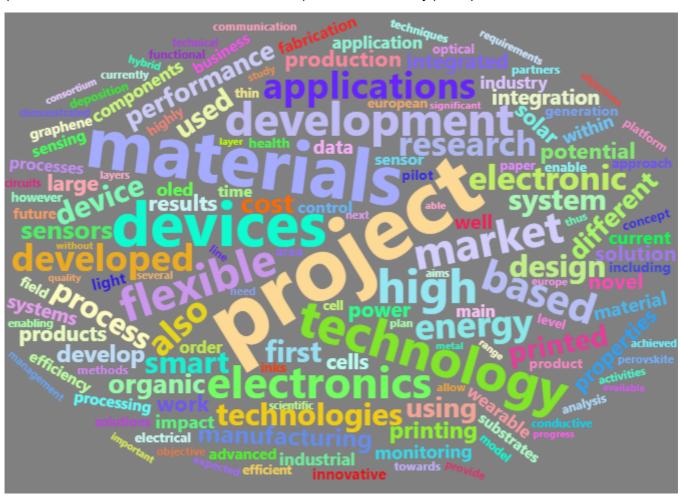
## Flexible Electronics Report

John Kennedy Mwangi, AMIRES s.r.o September 16, 2019

## INTRODUCTION

This report is an in-depth analysis of the flexible electronics projects within the Horiozon 2020 Programme. The analysis includes the number of projects funded by the European Commission over the years, the ecosystem of the participating organisations, the concentration of participation among the various NUTS 2 regions (Nomenclature of Territorial Units for Statistics-2) and overall country participation.



## NUMBER OF PROJECTS OVER THE YEARS

There are over 200 projects that deal with flexible electronics within the H2020 programme as shown in the graph below. Most of these projects were commissioned in the year 2015 and the number has steadily declined as the programme comes to a close in 2020.

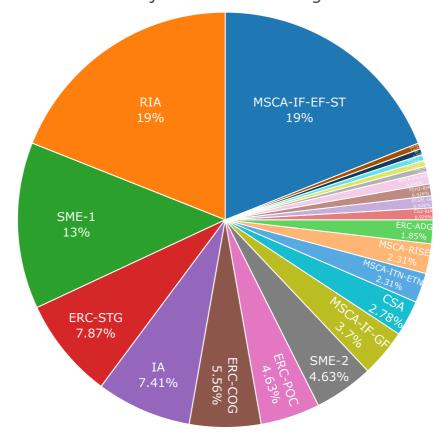
Number of Projects Funded over Time



## DISTRIBUTION OF PROJECTS AMONGST THE FUNDING INSTRUMENTS

The majority of projects fall within the RIA (19%), Marie Sklodowska-Curie actions (19%) and SME (13%) funding schemes while the rest of them are distributed amongst other instruments. This shows that efforts within this field of flexible electronics cover the whole spectrum of concepts and innovations aimed at supporting SMEs as well as exploring the feasibility of developing new products, solutions, as well as novel processes which is characteristic of the consortium based projects.

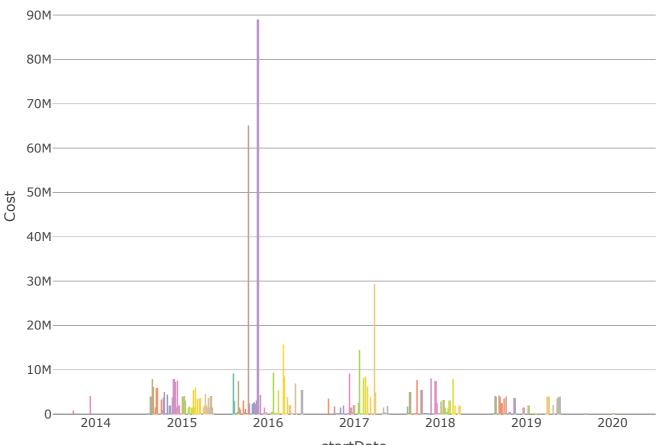




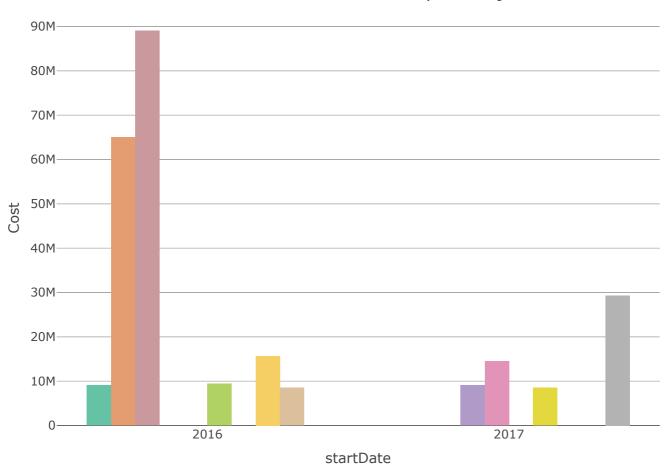
## PROJECT RANKING IN TERMS OF FUNDING

Since the projects range from concepts proposed by small businesses to novel solutions provided by consortia, the volumes of funding are as diverse. The project that has received the highest amount of funding (89 million Euros) is the Graphene core1 project.

EU Contribution in Euros for Individual Project

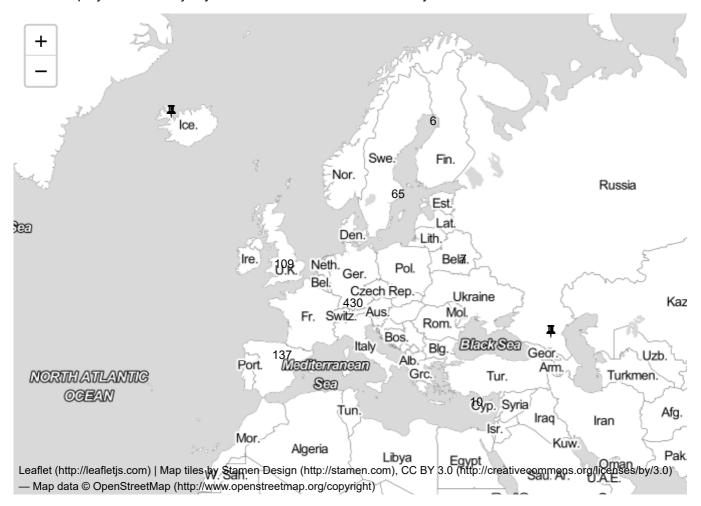


startDate EU Contribution in Euros for the Top 10 Projects



## THE ECOSYSTEM OF PARTICIPATING ORGANISATIONS

The map below shows the locations and the ecosytem of over 750 organisations participating in the flexible electronic projects. The majority of institutions is based in Germany.



## THE KEY PERFOMERS

As is expected, the most active organisations are the RTOs and the Higher Education Institutions such as Fraunhofer, VTT, CEA, IMEC, TNO, CNRS, Cambridge, Oxford, EPF Laussane and Imperial College, among others.



















#### Top Institutions

Organisation		PIC_Number	Cateç	
FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E V	999984059	REC	DE	20
Teknologian tutkimuskeskus VTT Oy	932760440	REC	FI	18
COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	999992401	REC	FR	18
INTERUNIVERSITAIR MICRO ELECTRONICA CENTRUM	999981149	REC	BE	16
NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	999988909	REC	NL	14
THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE	999977172	HES	UK	12
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS	999997930	REC	FR	11
THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD	999984350	HES	UK	10

ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	999973971	HES	СН	10
IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE	999993468	HES	UK	8

## THE DOMINANT PRIVATE FOR PROFIT ENTITIES

FlexEnable and AMIRES, which are participating in 5 projects each, are the leaders among the private companies in terms of flexible electronics projects participation.

















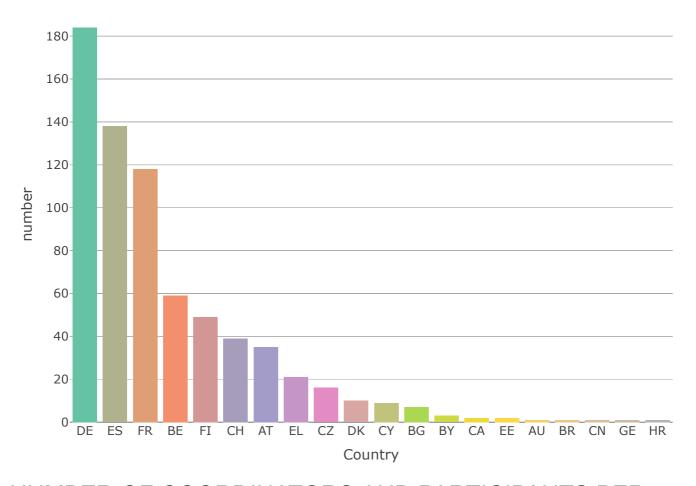


Organisation			PIC_Number	Category
FLEXENABLE LIMITED	991778053	PRC	UK	5
AMIRES SRO	956723805	PRC	CZ	5
PRAGMATIC PRINTING LIMITED	952007083	PRC	UK	4
M SOLV LTD	993332090	PRC	UK	4
INFINEON TECHNOLOGIES AUSTRIA AG	999705087	PRC	AT	4
INTRINSIQ MATERIALS LIMITED	998175203	PRC	UK	3
ROBERT BOSCH GMBH	999908787	PRC	DE	3
WALTER PAK SL	941799870	PRC	ES	3
SILVACO EUROPE LTD	996839416	PRC	UK	3
VARTA MICROBATTERY GMBH	999591015	PRC	DE	3

## NUMBER OF PROJECTS PER COUNTRY

As mentioned earlier, Germany leads in terms of participation (as seen in the graph below), followed closely by Spain and France. There is a great variance in terms of participation among the countries with some having a high number of projects while others seldom participated over the years.





# NUMBER OF COORDINATORS AND PARTICIPANTS PER COUNTRY

Germany leads in number of projects they are involved in as well as the number of participations in terms of organisations having the role of coordinators or participants. UK follows closely ahead of France and Spain.

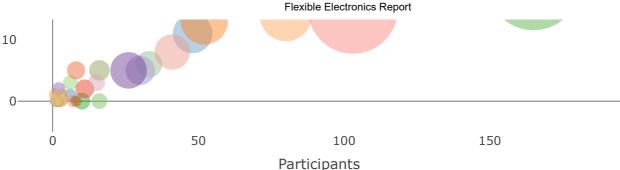
Number of Coordinators and Participants per Country

50

40

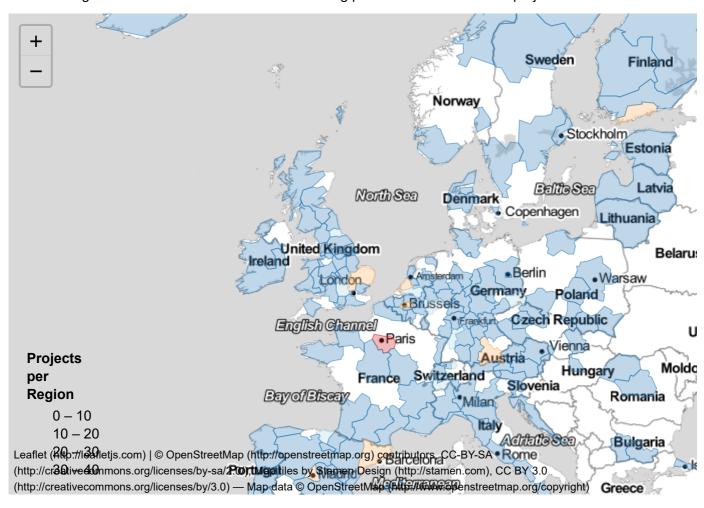
20





## NUMBER OF PROJECTS PER NUTS-2 REGIONS

The map shows the distribution of projects among various NUTS-2 regions. The red shows areas with high number of flexible electronics projects while blue shows regions with lower number of projects. The areas in white are regions where there are no institutions taking part in flexible electronics projects.



## FUNDING DISTRIBUTION PER NUTS-2 REGION

Over 500 million euros has been disbursed to support projects relating to flexible electronics. The NUTS regions where most of these funds have been channeled to are those that host the big RTOs like Fraunhofer, CEA, TNO, VTT, IMEC and others.

#### Funding per NUTS Region



