



Visual Exploration and Sampling Toolkit for Extreme Computing

Fact Sheet

Project Information

VESTEC

Grant agreement ID: 800904

[Project website](#)

DOI

[10.3030/800904](https://doi.org/10.3030/800904)

Project closed

EC signature date

18 April 2018

Start date

1 September 2018

End date

28 February 2022

Funded under

EXCELLENT SCIENCE - Future and Emerging Technologies (FET)

Total cost

€ 3 196 227,50

EU contribution

€ 3 196 227,50

Coordinated by

DEUTSCHES ZENTRUM FÜR
LUFT - UND RAUMFAHRT EV



Germany

Objective

Technological advances in high performance computing are creating exciting new opportunities that move well beyond improving the precision of simulation models. The use of extreme computing in real-time applications with high velocity data and live analytics is within reach. The availability of fast growing social and sensor networks raise new possibilities in monitoring, assessing and predicting environmental, social and economic incidents as they happen. Add in grand challenges in data fusion, analysis and visualization, and extreme computing hardware has an increasingly essential role in enabling efficient processing workflows for huge heterogeneous data streams.

VESTEC will create the software solutions needed to realise this vision for urgent decision making in various fields with high impact for the European community. VESTEC will build a flexible toolchain to combine multiple data sources, efficiently extract essential features, enable flexible scheduling and interactive supercomputing, and realise 3D visualization environments for interactive explorations by stakeholders and decision makers. VESTEC will develop and evaluate methods and interfaces to integrate high-performance data analytics processes into running simulations and real-time data environments. Interactive ensemble management will launch new simulations for new data, building up statistically more and more accurate pictures of emerging, time-critical phenomena. Innovative data compression approaches, based on topological feature extraction and data sampling, will result in considerable reductions in storage and processing demands by discarding domain-irrelevant data.

Three emerging use cases will demonstrate the immense benefit for urgent decision making: wildfire monitoring and forecasting; analysis of risk associated with mosquito-borne diseases; and the effects of space weather on technical supply chains. VESTEC brings together experts in each domain to address the challenges holistically.

Fields of science (EuroSciVoc)

[natural sciences](#) > [computer and information sciences](#) > **[software](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > [sensors](#) > **[smart sensors](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > [computer hardware](#) > **[supercomputers](#)**



Programme(s)

[H2020-EU.1.2. - EXCELLENT SCIENCE - Future and Emerging Technologies \(FET\)](#)

MAIN PROGRAMME

[H2020-EU.1.2.2. - FET Proactive](#)

Topic(s)

[FETHPC-02-2017 - Transition to Exascale Computing](#)

Call for proposal

[H2020-FETHPC-2016-2017](#) 

[See other projects for this call](#)

Sub call

H2020-FETHPC-2017

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV

Net EU contribution

€ 1 005 943,75

Total cost

€ 1 005 943,75

Address

LINDER HOHE

51147 Koln

 **Germany** 

Region

Nordrhein-Westfalen > Köln > Bonn, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (10)



THE UNIVERSITY OF EDINBURGH

 United Kingdom

Net EU contribution

€ 361 138,75

Address

OLD COLLEGE, SOUTH BRIDGE

EH8 9YL Edinburgh 

Region

Scotland > Eastern Scotland > Edinburgh

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 361 138,75



KUNGLIGA TEKNISKA HOEGSKOLAN

 Sweden

Net EU contribution

€ 396 500,00

Address

BRINELLVAGEN 8

100 44 Stockholm 

Region

Östra Sverige > Stockholm > Stockholms län

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 396 500,00



SORBONNE UNIVERSITE

 France

Net EU contribution

€ 255 750,00

Address

21 RUE DE L'ECOLE DE MEDECINE
75006 Paris 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Higher or Secondary Education Establishments

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 318 250,00

 THIRD-PARTY

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

 France

Net EU contribution

€ 62 500,00

Address

RUE MICHEL ANGE 3
75794 Paris 

Region

Ile-de-France > Ile-de-France > Hauts-de-Seine

Activity type

Research Organisations

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 

Total cost

€ 62 500,00



KITWARE SAS

 France

Net EU contribution

€ 139 500,00

Address

6 COURS ANDRE PHILIP
69100 Villeurbanne 

SME 

Yes

Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Rhône

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#) 
- [Participation in EU R&I programmes](#) 
- [HORIZON collaboration network](#) 

Total cost

€ 139 500,00



INTEL DEUTSCHLAND GMBH

 Germany

Net EU contribution

€ 134 126,25

Address

DORNACHER STRASSE 1D
85622 FELDKIRCHEN 

Region

Bayern > Oberbayern > Ebersberg

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- Contact the organisation
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

€ 352 636,25

THIRD-PARTY

INTEL TECHNOLOGY POLAND SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA

Poland

Net EU contribution

€ 218 510,00

Address

UL SLOWACKIEGO 173
80 298 Gdansk

Region

Makroregion północny > Pomorskie > Trójmiejski

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- Contact the organisation
- Participation in EU R&I programmes
- HORIZON collaboration network

Total cost

€ 218 510,00



FONDAZIONE BRUNO KESSLER

Italy

Net EU contribution

€ 230 000,00

Address

VIA SANTA CROCE 77
38122 Trento

Region
Nord-Est > Provincia Autonoma di Trento > Trento

Activity type
Research Organisations

Links
[Contact the organisation](#) [Website](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
€ 230 000,00



UNIVERSITE PAUL SABATIER TOULOUSE III

France
Net EU contribution
€ 222 100,00

Address
ROUTE DE NARBONNE 118
31062 Toulouse Cedex 9

Region
Occitanie > Midi-Pyrénées > Haute-Garonne

Activity type
Higher or Secondary Education Establishments

Links
[Contact the organisation](#) [Website](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost
€ 222 100,00



TECNOSYLVA SL

Spain
Net EU contribution
€ 170 158,75

Address

Parque Tecnológico de Leon Parcela - Edificio Tecnosylva 20
24009 Leon 

SME 

Yes

Region

Centro (ES) > Castilla y León > León

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 170 158,75

Last update: 4 May 2023

Permalink: <https://cordis.europa.eu/project/id/800904>

European Union, 2025

