

# Pracovní program Výzkumné infrastruktury 2016-17

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## Výzkumné infrastruktury v H2020

- zařízení, zdroje a služby využívané vědeckými komunitami k provádění výzkumu a podpoře inovací v příslušných oborech:
  - velká vědecká zařízení
  - zdroje založené na znalostech (vědecké sbírky, archivy)
  - infrastruktury založené na ICT (tzv. e-infrastruktury)
  - další infrastruktury jedinečné povahy
- výzkumné infrastruktury = Research Infrastructures (RI)

- optimální využití a rozvoj nejlepších výzkumných infrastruktur v Evropě a podpora vytváření nově vznikajících
- návaznost na ESFRI Evropské strategické fórum pro RI
  - podpora přístupu k vytváření politik týkajících se RI v Evropě, dlouhodobá vize k lepšímu využití a rozvoji RI na evropské i mezinárodní úrovni
  - cestovní mapy RI (roadmaps): 2006, 2008, 2010
  - **aktualizace v 2016**

1. Development and long-term sustainability of new pan-European RIs
2. Integrating and Opening RIs of European Interest
3. e-Infrastructures
4. Fostering the innovation potential of RI
5. Support to Policy and International cooperation (RI/e-RI)

# 1. Call INFRADEV

## Development and long-term sustainability of new pan-European RIs

- **To support the development of new sustainable world-class research infrastructures identified by ESFRI, to respond to challenges in science, industry & society**
- *Emphasis on long-term sustainability, implementation, data management and on fostering the innovation potential*

1.Design studies

2.Preparatory Phase of ESFRI projects

3.Individual support to ESFRI & OWCRI

4.Pilot action towards a European Research & Science Cloud

- **Support the conceptual and technical design of new research infrastructures, which are leading-edge user facilities of a clear European dimension and interest**
- *Bottom-up process*
- *Total budget 20 M€ (RIA) - EU contribution per proposal between 1-3 M€*
- *All fields of science*
- *Outcome: conceptual technical design report*

- **Support the preparatory phase of ESFRI projects**
- *Targeting the new projects in the 2016 update of the ESFRI roadmap*
- *Support for the preparatory phase leading to construction of new RIs or upgrades of existing ones*
- *Total budget 40 M€ (CSA) - EU contribution per proposal up to 4 M€*

## INFRADEV-3-2016-2017 Individual support to ESFRI & OWCRI

- **To facilitate and support long-term sustainability and efficient operation of the ESFRI & Other World-Class RI (OWCRI)**
- *Targeting individual ESFRI RI and OWCRI with established legal structure and governance at EU or international level, such as ERIC.*
- *Covering: membership enlargement, international cooperation, testing and improvement of access provision to users to increase reliability and create trust, definition of business model & service model agreements, outreach and technology transfer. Complementarity with EU grants.*
- *Total budget 30M€ (2016)+ 40M€ (2017) - EU contribution per proposal (CSA) 2 - 5 M€*



## INFRADEV-4-2016 European Open Science Cloud for Research

- **Pilot action to demonstrate how wide availability of scientific data and data-analysis services for European researchers can be ensured through a cloud infrastructure.**
- *Pilot action wide availability of scientific data and data analysis services*
- *Storage, access, re-use needs for data, knowledge from H2020 projects, etc.*
- *Build on existing infrastructures*
- *Complementary to EINFRA-12-2017*
- *EU contribution 10 M€ (RIA) – proposals between 5-10M€.*

## 2. Call Integrating and opening RIs of European interest

- **To open up key national and regional research infrastructures to all European researchers and to ensure their optimal use and joint development**

1.INFRAIA-1-2016/17: IA for Advanced communities: whose RIs show an advanced degree of coordination gained through previous IA grants

2.INFRAIA-2-2017: IA for Starting communities: never supported for their RI integration under EU FP7 or Horizon 2020 calls, in particular within an IA

## INFRAIA-1-2016/17: Integrating Activities for AC

- **Emphasis on innovation aspects, on widening trans-national and virtual access provision, on addressing the sustainability of the integrated RI services provided at European level**
- **IA has to combine:**
  - i. Networking activities
  - ii. Trans-national access or virtual access activities
  - iii. Joint research activities
- 1 proposal per area
- *88M€ 2016 + 72M€ 2017, up to 10M€ per proposal (RIA)*

## INFRAIA-2-2017: Integrating Activities for SC

- **Emphasis on networking, standardisation and establishing a common access procedure for trans-national and/or virtual access provision.**
- *All areas of science and technology considered*
  
- **All three categories of IA are mandatory:**
  - i. Networking activities
  - ii. Trans-national access or virtual access activities
  - iii. Joint research activities
  
- *Large oversubscription expected: 2 stage call proposal*
- *40M€ - 2017 call, up to 5M€ per proposal (RIA)*

### 3. E-Infrastructures

- Service orientation
    - Catalogue of services
  - Maximizing and assessing the impact of e-Infrastructures
    - Use of key performance indicators (**KPIs**) for operational, technical and socio-economic impact assessment
  - Participation in international fora such as the Research Data Alliance (RDA)
  - Innovation through co-design
  - Open research data
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### 3. E-Infrastructures

- **Theme 1 - Integration and consolidation of e-infrastructure platforms supporting European policies and research and education communities**
  - EINFRA-11-2016, EINFRA-12-2017
- **Theme 2 - Prototyping innovative e-infrastructure platforms and services for research and education communities, industry and the citizens at large**
  - EINFRA-21-2017, EINFRA-22-2016
- **Theme 3 - Support to policies and international cooperation**
  - INFRASUPP-03-2016, INFRASUPP-02-2017(3), INFRASUPP-03-2016

## EINFRA-11-2016 - Support to the next implementation phase of Pan-European HPC infrastructure and services (PRACE)

- **Need to pool and integrate High Performance Computing resources in order to provide state-of-the-art services to users independently of their location. To facilitate the access to the best supercomputing services for industry and academia.**
- To help Europe to stay at the forefront of scientific breakthroughs and innovation by opening access to HPC resources to new user communities and increase the amount of computing power to researchers at European level through user-friendly and efficient procedures
- *Budget up to 15 M€ (RIA)*

## EINFRA-12-2017 - Data and Distributed Computing e-infrastructures for Open Science

- (a) Secure and agile data and distributed computing e-infrastructures
- (b) Access and preservation platforms for scientific information
  
- *40M€ a) & b) combined*
- *(a) per proposal: 10M€ - 15M€*
- *(b) per proposal: 8M€ - 10M€*
- *RIA*



## EINFRA-12-2017 - Data and Distributed Computing e-infrastructures for Open Science (a)

- **To make research data discoverable, accessible, assessable, intelligible, useable, and wherever possible interoperable**
- **Integration of an on-demand service-driven e-infrastructure incorporating distributed databases, computing resources and software.**
- Related to INFRADEV-04-2016 "European Open Science Cloud for Research"
- TRL8 required before the start of the project

## EINFRA-12-2017 - Data and Distributed Computing e-infrastructures for Open Science (b)

- **To make research data discoverable, accessible, assessable, intelligible, useable, and wherever possible interoperable**
- **Supporting the integration and consolidation of e-infrastructure for reliable and permanent open access to digital scientific records, based on existing initiatives across Europe**
- Complementarity is sought between grants awarded under this topic
- TRL8 required before the start of the project

## EINFRA-21-2017 - Platform-driven e- infrastructure innovation

- (a) Support to Public Procurement of innovative HPC systems
  - (b.1) Research and Innovation Actions for e-Infrastructure prototypes Universal discoverability of data objects and provenance
  - (b.2) Research and Innovation Actions for e-Infrastructure prototypes Computing e-infrastructure with extreme large datasets
  - Prepare the capacity required to future generations of e-infrastructures. Be able to respond to the long-term needs of research and education communities in a 5 to 10 years' timeframe
  - Excellence criterion weighted by factor of 1.5
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## EINFRA-21-2017 - Platform-driven e- infrastructure innovation (a)

- **Setting the scene for a sustainable European procurement market on HPC; increase effectiveness of public procurement in leading-class HPC systems**
- **Fostering adoption and use of innovative world-class HPC solutions available in Europe**
- **Better coordination of demand and supply in the European HPC ecosystem, with improved collaboration between users, technology suppliers and procurers**
- *PPI (Public Procurement of Innovative Solutions)*
- *Funding rate: 35% of total eligible cost*
- *Budget 26M€*

## EINFRA-21-2017 - Platform-driven e- infrastructure innovation (b.1)

- **To allow discoverability of digital objects that facilitate access to resources and collaboration between scientists.**
- **Settle the potential to be used as a core service across Europe and globally.**
- **Avoid duplication of efforts for developing services common to many e-infrastructures**
  
- *Budget 20M€ (b.1 and b.2 combined)*
- *Budget per proposal 4M€ - 5M€*
- RIA

## EINFRA-21-2017 - Platform-driven e- infrastructure innovation (b.2)

- **Support the evolution of e-infrastructure services based on exascale data resources.**
- **Prepare data and computing infrastructure to absorb needs of intensive computing science communities while easing the learning curve of new services for such communities.**
- *Budget 20M€ (b.1 and b.2 combined)*
- *Budget per proposal 2,5M€ - 3M€*
- RIA

## EINFRA-22-2016 - User-driven e- infrastructure innovation

- (1) Exploitation of e-infrastructures for user-driven innovation and pilots responding to community specific challenges Societal Challenges
- (2) Exploitation of e-infrastructures for user-driven innovation and pilots responding to community specific challenges Innovation with innovative actors (SMEs)
- (3) Exploitation of e-infrastructures for user-driven innovation and pilots responding to community specific challenges Development of a pan-European identity services federation
- (4) Innovation for Open Science e-infrastructures and services

## EINFRA-22-2016 - User-driven e- infrastructure innovation (1, 2, 3, 4)

- Current state-of-the-art technology in computing and data resources is pushed to the limits by scientific community. Need of supporting the prototyping of services and applications for long term sustainability.
  - To exploit a wide range of technology developments through openness to innovative stakeholders and engaging with independent software vendors and other innovation groups.
  - Support to Open Science while bridging the gap between the leading research and education communities and the wider population.
  - *Budget €21M (all points combined), RIA*
  - *Excellence. TRL 6 (min.) required before the start of the project and achieving at least TRL 8 by the end.*
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## 4. Call Fostering the innovation potential of Research Infrastructures

- **Focused on fostering the innovation potential of RI**
- Methodology for charging capitalised and operating costs of „large research infrastructures“ is not applicable for grants awarded under this call.

## INFRAINNOV-01-2017 – Fostering co-innovation for future detection and imaging technologies

- **Establishment of a novel research and innovation collaborative framework to support technology and innovation transfer from RI towards industrial partners and joint development of high-tech components**
- *EU contribution per proposal up to 20 M€*
- *RIA*
- *Financial support to third parties*

## INFRAINNOV-02-2016 – Support to Technological Infrastructures

- **Development of strategic agendas & roadmaps for key technologies for the construction/upgrade of RI, i. e. identification of potential markets, exchange of good practices**
- Pilot initiative
- Application in the fields of medicine, manufacturing industry, aerospace, ICT, engineering, environmental science
  
- *Total budget 10 M€*
- *EU contribution per proposal up to 2 M€*
- *CSA*
- *Expected to cover at least five different technological domain of interest for pan European RI*

## 5. Call – Support to policy and international cooperation

- **Focused on reinforcing European research infrastructures policy and international cooperation**
- **Support to the implementation and monitoring of the Open Research Data Pilot**
- **Support to coordination of European, national and regional policies and programmes**
- **INCO will promote European leadership and linking with third countries, acces to unique RI**
  
- Methodology for charging capitalised and operating costs of „large research infrastructures“ is not aplicable for grants awarded undeer this call.

## INFRASUPP-01-2016 – Policy and INCO measures for RI

- **Synchronising and harmonisation of RI evaluation mechanisms and road-mapping**
- **International landscaping exercise for RI**
- **Bilateral cooperation on RI with Africa**
- **Training needs of SESAME, Jordan**
  
- *Total budget 8 M€*
- *EU contribution per proposal up to 1,5 - 2 M€*
- *CSA*

## INFRASUPP-02-2017 – Policy and INCO measures for RI

- **Development of a model describing the socio-economic leverage of RI**
- **Cooperation between EU and strategic partners for the development of global RI**
- **Support to RDA secretariat, participation of new communities and ESFRI RI and emergence of building blocks for interoperable data infrastructure**
- *Total budget 6,5 M€*
- *EU contribution per proposal up to 1) & (2): up to 1.5 M€, (3): 3 - 3.5 M€*
- *CSA*

## **INFRASUPP-03-2016 Support to policies and international cooperation for e- infrastructures**

- (a) Research and Innovation Actions for International Co-operation on high-end e-infrastructure requirements
- (b) Coordination and Support actions for international co-operation and policy development
  - (b.1) INCO on e-infrastructure supporting major societal challenges
  - (b.2) Policy support to e-infrastructure programme
  - (b.3) Support to dissemination for the e-infrastructure programme
  - (b.4) Support to small-size foresight roadmaps for the e-infrastructure programme

## INFRASUPP-03-2016 Support to policies and international cooperation for e-infrastructures

- **Fostering targeted international co-operation with third countries in order to reach e-infrastructure interoperability at global level.**
- **Contribute to standardisation activities and share best practices.**
- **Coordination of investments at European, national and regional level is essential to optimise the impact of the different policies**
- *Total budget 4,5 M€*
- *EU contribution per proposal up to 1) & (2): 0,5 – 1,5 M€, (3): 1 - 1.5 M€, (4) 300K – 400K€*
- *CSA*





- <https://ec.europa.eu/research/participants/portal/desktop/en/home.html>
- Jednotný přístup pro účastníky H2020
  - předkladatelé,
  - hodnotitelé,
  - instituce.
- Informace o výzvách, vyhledávání témat, podávání návrhů projektů, dokumenty, průvodci, manuály, kontakty na podporu, ...
- Registrace uživatele (ECAS účet), registrace instituce (kód PIC)

## Participant portal

Updates  

Calls  

H2020

Research Fund for Coal & Steel

3rd Health Programme

Promotion of Agricultural Products

Consumer Programme

COSME

Justice Programme

FP7 & CIP Programmes  
2007-2013

Calls

Other Funding Opportunities

 Horizon 2020 [Advanced search for topics](#)  
[Calls for tenders on TED](#)

- Excellent Science
  - European Research Council (ERC)
  - Future and Emerging Technologies (FET)
  - Marie-Sklodowska-Curie Actions
  - Research Infrastructures
- Industrial Leadership
  - Leadership in enabling and industrial technologies (LEIT)
  - Information and Communication Technologies

Status  Calls with forthcoming topics  Calls with open topics  Calls with only closed topics

Sort by  Call title  Call identifier  Publication date

**Excellent Science**  
Fostering the innovation potential of  
Research Infrastructures  
H2020-INFRAINNOV-  
2016-2017

Publication date: 14 October 2015

**Excellent Science**  
Integrating and opening research  
infrastructures of European interest  
H2020-INFRAIA-2016-2017

Publication date: 14 October 2015

**Excellent Science**  
E-Infrastructures  
H2020-EINFRA-2016-2017

Publication date: 14 October 2015

**Excellent Science**  
Support to policy and international  
cooperation  
H2020-INFRASUPP-  
2016-2017

Publication date: 14 October 2015

**Excellent Science**  
Development and long-term  
sustainability of new pan-European  
rese ...  
H2020-INFRADEV-2016-2017

Publication date: 14 October 2015

EN

Horizon 2020

Work Programme 2016 - 2017

4. *European Research Infrastructures (including e-Infrastructures)*

Important notice on the second Horizon 2020 Work Programme

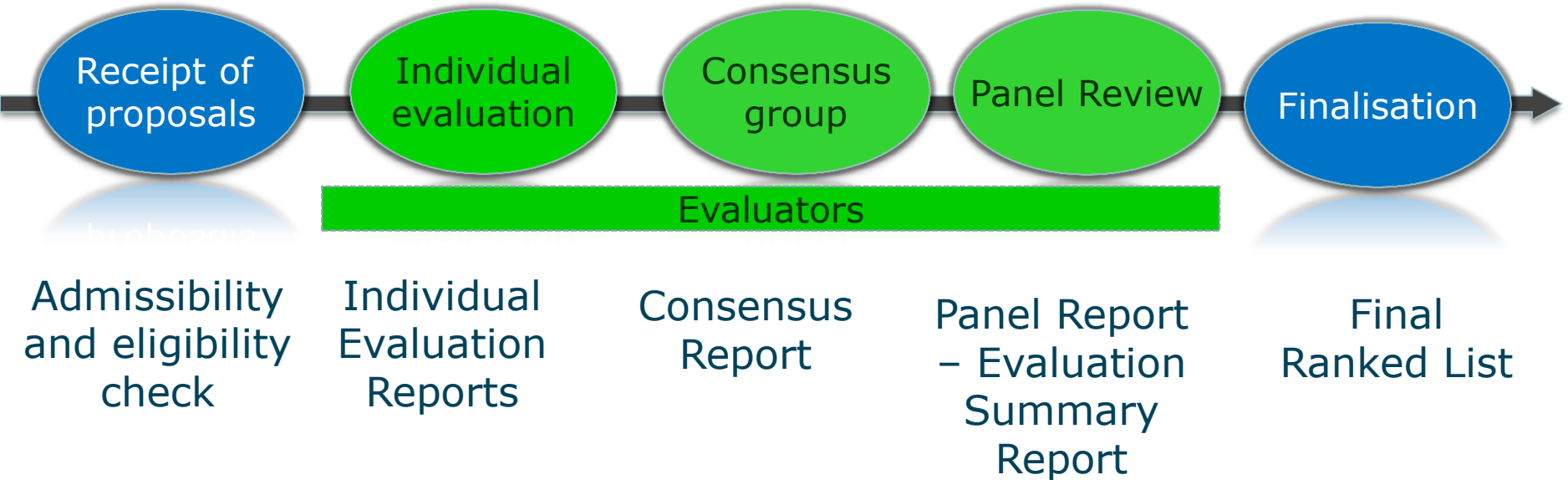
This Work Programme covers 2016 and 2017. The parts of the Work Programme that relate to 2017 are provided at this stage on an indicative basis. Such Work Programme parts will be decided during 2016.

*(European Commission Decision C (2015)6776 of 13 October 2015)*

- Dokumenty obsahující témata pro financování a informace o požadovaných projektech:
  - *Scope (S&T)*
  - *Impact*
  - *Type of Action*
- Dvouleté (2016 - 2017)
- Další informace k:
  - rozpočtu pro jednotlivá témata
  - uzávěrkám pro předkládání návrhů projektů
  - ...
- *General Annexes*

## Hodnotící proces

- Negociační fáze neexistuje
- Time to grant: 8 měsíců (5+3)



## Hodnotící kritéria

Excellence	Dopad	Implementace
<ul style="list-style-type: none"> <li>• Cíle</li> <li>• Převratnost řešení</li> <li>• Ambicióznost projektu, State of the art</li> <li>• Koncept, celkový přístup a metodologie</li> </ul>	<ul style="list-style-type: none"> <li>• Očekávané dopady WP</li> <li>• Posílení inovační kapacity a integrace nových poznatků</li> <li>• Environmentální, sociální a ekonomické dopady*</li> <li>• Otevřený přístup, IPR</li> <li>• Komunikační aktivity</li> <li>• Genderový rozměr</li> </ul>	<ul style="list-style-type: none"> <li>• Pracovní plán, rozdělení úkolů a zdrojů</li> <li>• Organizační struktura, kompetence a komplementarita účastníků v konsorciu</li> <li>• Řídící struktury a postupy, řízení rizik</li> </ul>
Threshold: 3/5	Threshold: 3/5	Threshold: 3/5

**Min 10 out of 15**

## Prioritní pořadí

- Uplatní panel expertů při rovnosti bodů
- ✓ Zaměření na témata, která nejsou obsažena u ostatních návrhů
- ✓ Hodnocení kritéria excellence
- ✓ Hodnocení kritéria dopad
- ✓ Rozpočet alokovaný pro SME
- ✓ Rovnost pohlaví
- ✓ Synergie mezi projekty

## Dvoukolové výzvy

- 1. kolo - předložení krátkého návrhu (hodnotí se způsobilost návrhu, kritéria excellence a dopad)
- 2. kolo – předložení úplného návrhu (hodnotí se dopad a implementace)
- projektové návrhy musí být konzistentní
- dynamická bodová hranice

## Lessons learnt



*However..*

*..the proposal falls within scope of the current call.*

*..the vision and scope of this proposal are limited.*

*..stakeholders from outside the consortium are not clearly identified.*

*..the methodology is not described in sufficient detail.*

*..the proposal does not present a clear vision of state-of-the-art infrastructures for researchers.*

*..the concept is over-ambitious within the time-frame proposed.*

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## Lessons learnt



*However..*

- ..there is insufficient evidence of a credible business model.*
- ..the dissemination/exploitation/communication plans are insufficiently described.*
- ..the management of IPR is insufficiently addressed.*
- ..the proposal does not provide measurable criteria for impact, lack key performance indicators.*
- ..cross cutting issues such as economic, environmental and societal impacts are not well addressed.*
- ..the amount of data to be shared is not quantified.*

## Lessons learnt



*However..*

- ..the work plan lacks sufficient detail.*
- ..industrial participation is not adequately addressed.*
- ..resources are not sufficiently allocated to the participants.*
- ..the risk management is insufficiently described.*
- ..there are inconsistencies between the listed work packages and the described role of the participants.*
- ..the quality of the participants is only fair, and they lack a convincing international profile.*

## Exploitation, Dissemination, Communication



- **Exploitation** (využití) – propagování výsledků projektu pro hlavní uživatele a cílové skupiny
- **Dissemination** (šíření) – informování zúčastněných stran o výsledcích a dopadech projektu
- **Communication** (komunikace) – informování veřejnosti o výzkumu financovaném EU

## TRL - technology readiness level

stupnice úrovní připravenosti technologie

- 0 – Nápad
- 1 – Základní výzkum
- 2 – Technologický koncept
- 3 – Experimentální potvrzení výzkumu
- 4 – Laboratorní ověření technologie
- 5 – Ověření v příslušném prostředí
- 6 – Demonstrace v příslušném prostředí
- 7 – Demonstrace v provozním prostředí
- 8 – Dokončený a kvalifikovaný systém
- 9 – Plné tržní uplatnění

## Doporučené dokumenty

- Pracovní program: [Výzkumné infrastruktury 2016-17](#)
- Obecné přílohy k WP 16-17: [General annexes](#)
- Vzor projektového návrhu: [RIA, IA, CSA](#)
- Hodnotící formulář: [RIA, IA, CSA](#)
  
- [Staňte se hodnotitelem](#)





**Děkujeme za pozornost!**

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