Human Brain Project

Co-funded by the

European Commission

Template
For Human Brain Project (HBP) FET Flagship
Call for Expression of Interest on
"Systems and Cognitive Neuroscience"

This template is for proposals made in response to the HBP Call for Expression of Interest on "Systems and Cognitive Neuroscience". Please note that your proposal – if accepted – will form one new Work Package within HBP, Subproject 3 (SP3, Systems and Cognitive Neuroscience).

The Call opens on 15th May 2015

This form may be submitted electronically any time before the 3rd July 2015, 17:00 Brussels time, to the electronic submission facility on the HBP website at:

www.humanbrainproject.eu/web/public/call-eoi

Text in red represents comments and should be deleted in your submission. Page limits refer to this text style (Body Text HBP) in MS Word:

- Font: Trebuchet MS 11 pt,
- Line spacing: single
- Paragraph spacing: 6pt before and after,
- Page size: A4 page size
- Margins: Top & Bottom: 1.5; Left & Right: 2.5

Table of contents

1. Scientific excellence and impact

(NOTE: total size limit for this chapter, including diagrams, images, etc. = 4 Pages)

In this section, you have to describe the research theme in systems and cognitive neuroscience that you are proposing and explain its importance, novelty and long- and short-term potential. Your theme may be one of the examples of research themes provided in Annex 1 or a new one. Remember that in order to be funded, your research theme must be visionary enough and have the potential to result in seminal work!

Please address the following points:

1.1 Research Theme

(NOTE: size limit for this section = 1,500 characters)

Explain the research theme (cognitive function) you are addressing, its importance, novelty and potential breadth; describe its 2 years perspectives, and indicate how it could contribute to a longer term vision (in a time frame of 7 to 10 years). Define the objectives of the suggested work.

1.2 Contribution of the proposal

(NOTE: size limit for this section = 1,500 characters)

Describe the contribution of your proposal, its progress beyond the state of the art (both scientifically and technologically), its novelty and innovation potential.

1.3 Ethical implications

(NOTE: size limit for this section = 1,500 characters)

Ethical implications of your work and compliance with applicable international, EU and national law.

1.4 Task list

The number of Tasks used must be suited to the complexity of the work (2-5 Tasks). The Task leader needs to be clearly identified. The planning should be sufficiently detailed to justify the proposed effort. Furthermore, the role of each Partner (in the case of two or more Partners) within each Task should be clearly stated, including the corresponding forecast effort.

Task No.	Task Name	Lead Partner	Start Month	End Month
T1				
T2				
T3				
T4				
T5				

1.5 Description of individual tasks

Describe what you propose, as a realistic research plan for the first phase of HBP in H2020 (01 April 2016 to 31 March 2018), broken down into up to 5 Tasks.

Task 1	
Task Name	(insert Task name)
Participants	(insert participants)
Objectives: Your concrete objectives and measurable results that you would reach in the next 2 years. Describe how you would reach these objectives and how you would measure the results, e.g., the cognitive paradigms, methods and experiments that you will use; the major scientific milestones of your work etc. [size limit: 1,200 characters]	
(insert objectives & related details as requested above)	
Interactions with Neuroscience SPs (1, 2 & 4) and with Platform SPs (5, 6, 7, 8, 9 & 10). Proposals should interact with at least 2 Platforms. Please give a 1-2 line description for each.	
SP1 Mouse Brain Data	(insert short description of interaction with this SP)
SP2 Human Brain Data	(insert short description of interaction with this SP)
SP4 Theory	(insert short description of interaction with this SP)
SP5 Neuroinformatics	(insert short description of interaction with this SP)
SP6 Brain Simulation	(insert short description of interaction with this SP)
SP7 Hi Perf Computing	(insert short description of interaction with this SP)
SP8 Medical Informatics	(insert short description of interaction with this SP)
SP9 Neuromorphic	(insert short description of interaction with this SP)
SP10 Neurorobotic	(insert short description of interaction with this SP)

Task 2	
Task Name	(insert Task name)
Participants	(insert participants)
Objectives: Your concrete objectives and measurable results that you would reach in the next 2 years. Describe how you would reach these objectives and how you would measure the results, e.g., the cognitive paradigms, methods and experiments that you will use; the major scientific milestones of your work etc. [size limit: 1,200 characters]	
(insert objectives & related details as requested above)	
Interactions with Neuroscience SPs (1, 2 & 4) and with Platform SPs (5, 6, 7, 8, 9 & 10). Proposals should interact with at least 2 Platforms. Please give a 1-2 line description for each.	
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SP7 Hi Perf Computing	(insert short description of interaction with this SP)
SP8 Medical Informatics	(insert short description of interaction with this SP)
SP9 Neuromorphic	(insert short description of interaction with this SP)
SP10 Neurorobotic	(insert short description of interaction with this SP)

Task 3

Task Name	(insert Task name)
Participants	(insert participants)

Objectives: Your concrete objectives and measurable results that you would reach in the next 2 years. Describe how you would reach these objectives and how you would measure the results, e.g., the cognitive paradigms, methods and experiments that you will use; the major scientific milestones of your work etc. [size limit: 1,200 characters]

(insert objectives & related details as requested above)

Interactions with Neuroscience SPs (1, 2 & 4) and with Platform SPs (5, 6, 7, 8, 9 & 10). Proposals should interact with at least 2 Platforms. Please give a 1-2 line description for each.

SP1 Mouse Brain Data	(insert short description of interaction with this SP)
SP2 Human Brain Data	(insert short description of interaction with this SP)
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SP8 Medical Informatics	(insert short description of interaction with this SP)
SP9 Neuromorphic	(insert short description of interaction with this SP)
SP10 Neurorobotic	(insert short description of interaction with this SP)

Task 4

Task Name	(insert Task name)
Participants	(insert participants)

Objectives: Your concrete objectives and measurable results that you would reach in the next 2 years. Describe how you would reach these objectives and how you would measure the results, e.g., the cognitive paradigms, methods and experiments that you will use; the major scientific milestones of your work etc. [size limit: 1,200 characters]

(insert objectives & related details as requested above)

Interactions with Neuroscience SPs (1, 2 & 4) and with Platform SPs (5, 6, 7, 8, 9 & 10). Proposals should interact with at least 2 Platforms. Please give a 1-2 line description for each.

SP1 Mouse Brain Data	(insert short description of interaction with this SP)
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SP8 Medical Informatics	(insert short description of interaction with this SP)
SP9 Neuromorphic	(insert short description of interaction with this SP)
SP10 Neurorobotic	(insert short description of interaction with this SP)

Task 5	
Task Name	(insert Task name)
Participants	(insert participants)
Objectives: Your concrete objectives and measurable results that you would reach in the next 2 years. Describe how you would reach these objectives and how you would measure the results, e.g., the cognitive paradigms, methods and experiments that you will use; the major scientific milestones of your work etc. [size limit: 1,200 characters]	
(insert objectives & related details as requested above)	
Interactions with Neuroscience SPs (1, 2 & 4) and with Platform SPs (5, 6, 7, 8, 9 & 10). Proposals should interact with at least 2 Platforms. Please give a 1-2 line description for each.	
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2. Relevance to the aims of the Human Brain Project

(NOTE: total size limit for this chapter, including diagrams, images, etc. = 4 Pages)

In this section, you have to describe the relevance of your proposal and the degree of its compatibility with the HBP vision and objectives. Explain why the research theme (cognitive function) that you propose is relevant for HBP and how it will contribute to the overall HBP vision and objectives.

Remember that only proposals addressing research themes that are HBP cross-cutting and that are closely interacting with the ICT Platforms will have a chance to get funded. Remember also that you need to show that you are not duplicating what is already done or planned in HBP (see Annex 4) and that your Group of Partners complements well that of HBP!

There are two crucial requirements that you need to demonstrate in this section:

1) Your genuine commitment at the highest level towards the HBP goal to develop new ICT technology to help neuroscientists in approaching an understanding of the human brain at its different levels of organization.

2) The cross-cutting aim of your proposal itself with respect to the HBP Subprojects: Your activities are expected to take advantage of the interplay of the neuroscience Subprojects of HBP with the ICT Platforms that HBP is developing. In particular, your proposal should address as many of the following points as possible: You need to explain

   a) To what extent the results of the proposed work can be aligned with the other Neuroscience Subprojects of HBP (SP1, SP2), in particular:

      - Contribution to mouse-human neuroscience (to address HBP SP1 and/or SP2);

      - Capacity to cross and bridge different scales of brain organization (temporal, spatial)

   b) To what extent it will contribute to the Theory Subproject (SP4);

   c) The link to the ICT Platform Subprojects (SP5-SP10) to develop multi-scale models of the human brain, in particular

      - Capacity to interact with (use and/or feed) the HBP ICT Platforms (SP5 to SP10 – at least 2 Platforms should be addressed) including specification of data and/or tools, which are distributed through the Platforms to the scientific community;

      - Potential for real-world applications (e.g., robotics, neuromorphic computing, software, atlases)

   d) In general terms, the following points:

      - Coordination with the other HBP Subprojects

      - Addressing diseases (e.g., interacting with SP8 or SP1&2)

For a description of the HBP Subprojects, see www.humanbrainproject.eu.

3. Quality of the Group of Partners and of the individual Partners

(NOTE: size limit for this section = 1 Page per Partner + 1,200 characters for the Group of Partners as a whole)

In this section, you have to describe the quality and relevant experience of the individual Partners and of your Group of Partners as a whole. Remember that only very high-level quality Consortia will have a chance to be funded! The term Group of Partners is used to avoid confusion with the HBP Consortium, which refers to the entire set of c.90 Partners responsible for implementing the HBP Core Project. All the Institutions that are selected via this EoI Call will be admitted as full Partners in the HBP Consortium.

In particular, your proposal should address the following points:

3.1 Individual Partners

(NOTE: size limit = 1 Page per Partner)

- Provide a brief description of the participating labs and their previous experience relevant to the tasks they will undertake in the proposed work. *(NOTE: 700 characters)*

- Provide a short profile of the main individuals who will undertake the work, and demonstrate their scientific qualification. *(NOTE: 400 characters per person)*

- List up to 5 references per Partner. *(NOTE: no extra annex for references is allowed!)*

3.2 The Group of Partners as a whole

- Explain the quality of your Group of Partners as a whole and why it is an excellent Group of Partners to address the research theme you propose. *(NOTE: size limit = 1,200 characters)*

4. Resources to be committed

(NOTE: size limit for this section = 1 Page of text + the budget table)

In this section, you have to provide a realistic financial plan for two years.

The maximum funding per proposal is EUR 2 million and the funding you request needs to be very well justified. The maximum funding requested should include indirect costs of 25% of direct costs.

Your proposal should address the following points:

- Describe how the totality of the necessary resources will be mobilised in the time horizon of 2 years (01 April 2016 to 31 March 2018), including any own resources you will be providing that will complement the EU contribution.

- Identify any major non-personnel direct costs and explain why they are necessary for the activity you propose. Justify equipment to be purchased and why it is needed, describe travel expenses, and other major cost items.

- Indicate whether you will include subcontracting costs, justify them, and state what they are and their amount. Subcontracting costs are not subject to indirect costs.

- Provide information about putative additional support (e.g., equipment provided by the participating organizations) in case the project is funded.

4.1 Cost and funding breakdown by participating organization (Partner) for the first 2 years

(NOTE: An MS Excel sheet for this table can be downloaded from the Call page.)

Cost (€)	Partner 1	Partner 2	Partner 3	Partner 4	Partner 5	Total (€)
Personnel costs						
Other direct costs						
Indirect costs (% total costs for Partner)	25%	25%	25%	25%	25%	
Indirect costs (€ amount)						
Subcontracting costs[1] (if any)						
Total costs						

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[1] Please note: there are no indirect costs for subcontracting