Evaluation Netherlands Initiative Brain and Cognition (NIBC)

Report of the Midterm Evaluation Committee

Menno Witter (chair)
Olivier Bertrand
Ed Bullmore
Carsten Herstel

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Executive summary

The interim evaluation committee has been evaluating the Netherlands Initiative Brain and Cognition (NIBC) 2010-2012. Please find below its main conclusions.

On the results achieved by NIBC

conclusions

- The committee believes that **the scientific achievements of the participating groups and scientists are at a high level**. The committee considers the overall scientific strength of NIBC's activities a solid starting point to build upon for a possible second term.
- The committee notes that **NIBC** has been able to foster successful application efforts in terms of (societal) valorization and technology transfer through its networks. Clearly, this area constitutes a major strength of NIBC and should be maintained in the future
- The committee believes that **NIBC** has been successful in establishing cohesion and developing its programmes and networks: this has brought together the relevant actors in the domain of brain and cognition. The committee is very positive about this achievement and believes that the networks are an excellent starting point for further development of the field and can fulfill a major stepping stone function for a next phase.

recommendations

- The committee recommends **repeating (periodic) bibliometric assessments** in the future. In assessing both scientific and application strength, the committee also suggests to develop and add relevant parameters specifically tailored to the goals of NIBC.
- The committee encourages **NIBC** to strongly pursue its mission of valorization and technology transfer as the contribution of NIBC in these areas is very important for Dutch society and the committee sees ample opportunities. Within the somewhat more difficult medical domain the committee recommends NIBC to focus on initiatives in which NIBC will likely have the most impact, like in diagnostics, population based studies, health insurance and neuroimaging.
- Whereas the evaluation of the individual programmes shows that collaborations within programmes are successful, NIBC should try to further strengthen the cohesion within the entire field by coming up with a truly overarching vision, in which the bottom up connections between programmes form the basis. From these connections an even more coherent strategy can be formulated and launched, serving as a strategic vision for future activities.

On the added value of NIBC

<u>conclusions</u>

- The committee believes that **NIBC** has been a successful model for bringing together important actors and creating coherence in the varied field of brain and cognition in the Netherlands. NIBC has had a tremendously important influence as important connections have been established and the brain and cognition sector in the Netherlands is much stronger than before.
- However, the committee believes that the current **governance structure** of NIBC is lacking the structure required to take resolute and timely decisions. Besides, the structure would benefit from attracting more expertise on the application side, i.e. industry, societal organisations and government. The structure should be lean and professionalized and cost effectiveness should be paramount.

$\underline{recommendations}$

- The committee recommends **changing the governance structure** in a such a way as to remedy the shortcomings mentioned here.
- The committee recommends that **the role of NIBC as an integrator of the fields of brain and cognition should be continued and further strengthened in the future**. In the eyes of the committee, the NIBC is invaluable to drive forward developments in the fields of brain and cognition, provided it assumes a clear overarching strategy on how to implement its ambitions.

On the future of NIBC

conclusions

• The committee believes that NIBC has shown a clear strength in terms of having brought together key players in the area of brain and cognition research into networks and programmes. NIBC has been very successful in creating internal cohesion in the broad field of brain and cognition research, and is leading the field towards more and better application of scientific results. The committee is convinced that NIBC should continue to fulfill its fruitful work in the future, moreover that it is imperative for the Dutch government and NWO to not stop at this point.

<u>recommendations</u>

• The committee recommends the Dutch government and NWO to provide funds for NIBC to **continue to support** the domain of brain and cognition, at least into the near and medium term future. An extension of the first term of NIBC should be supported by **sufficient funding**, which allows NIBC to reach the objective of excellent science and valuable societal applications.

1. Introduction

Background

At the end of 2009, a national task force, operating under the name 'National Initiative Brain and Cognition' (NIBC), was established for the period 2010-2015. Its mission was defined as follows: the NIBC supports first-class research in order to further the understanding of the brain and behaviour, and seeks ways in which findings can be used to provide concrete solutions to problems in society. When stimulating first-class research and its application, the NIBC also seeks to achieve cohesion (coherence and synergy) at a national level.

Many subsidy programs and networks have been brought together at the NIBC, and these are tied to the NIBC to different extents. They comprise subsidy programmes for scientific research and development, as well as networks of scientists, some of which may also include businesses or social institutions. The NIBC has been entrusted with the management of the programmes and networks, which receive support in terms of money and manpower or form part of the NIBC through a collaborative structure.

Interim evaluation

An interim evaluation has been carried out to obtain a comprehensive picture of the activities and impact of the NIBC and of all its subactivities. This report describes the evaluation as carried out by the independent international evaluation committee. The committee made use of self-evaluation documents provided by NIBC and has had the opportunity to talk to the relevant actors during a one-day site visit on May 6, 2013.

Structure of the report

This report follows the main evaluation questions which are described in the Terms of Reference for the evaluation (see annex 2):

- 1. Have the reporting and self-evaluation processes been carried out properly, and do they provide the committee with sufficient opportunity to form an objective opinion in respect of the questions 2-4 below?
- 2. What opinion has been formed with regard to the results achieved by the NIBC during its first three years in terms of science, application and cohesion?
- 3. Is the NIBC an appropriate model for fulfilling the expectations expressed in the agreement, and what are the NIBC's strengths and weaknesses in this context?
- 4. What recommendations and areas requiring improvement can be identified for the remainder of the NIBC's lifespan and beyond? Which opportunities and threats exist?

The first question will be answered in this introductory section. Sections 2-4 will be devoted to answering questions 2-4 respectively.

Opinion of the committee on the reporting and self-evaluation process of NIBC

Regrettably, the committee does not consider the material to be structured in such a way that it allows for a easily accessible overview of NIBC's structure, activities and results. Also, the committee would have like for the materials to focus more clearly on the added value of the overarching structure above and beyond the constituting components of NIBC presented in the report. Nevertheless, the committee is of the opinion that the reporting and self-evaluation processes have been carried out in a manner sufficient for the committee to be able to form an objective opinion with respect to the evaluation questions. Also, the site visit – which was very well organised – has provided sufficient opportunity for clarification and discussion above and beyond the provided documents.

2 Results achieved by NIBC

In this section, the committee gives its opinion with regard to the results of NIBC during the first three years of its operation (2010-2012) based on the provided self-evaluation documents. These results can be divided into three areas. The first is scientific achievements, the second area is achievements with respect to the application of scientific knowledge to other (i.e. societal and industrial) domains. The third area of results is the accomplished level of cohesion of the field of brain and cognition.

2.1 Science

Besides on the reports and evaluations of the programmes and networks themselves, the committee has based its opinion about the results in the science domain on a report (contained in the self-evaluation documents) of the CWTS (Centre for Science & Technology Studies) in Leiden, an institute which specializes in citation and impact analysis. However, the committee notes that in particular the CWTS analysis does not provide detailed information on the current status of the scientific achievements, compared to when the program started and hence does not allow the committee to evaluate scientific progress from the starting point up until now.

Given these reservations, the committee is under the impression that the scientific achievements of the participating groups and scientists in the programmes and networks of NIBC seem to be at a high level. The bibliometric analysis of CWTS also shows that this was the case at the start of NIBC. The committee however notes one exception regarding experiments done in areas where patient inclusion is an important factor. This has been noted in the self-evaluation reports to be a problem overall. Hence the committee notes that improved patient inclusion is a major factor for the scientific results to have the potential to have an impact in the near future.

As the materials presented by NIBC for this evaluation did not contain sufficient information to allow the committee to evaluate the development of publication impact over the years, the committee recommends that more measurements should be performed, at regular intervals. The committee would like to suggest NIBC to develop and add relevant parameters tailored specifically to the goals of NIBC, to allow for measuring the contribution of the NIBC-activities. Examples of such parameters could be the number of co-authorships and other cross-disciplinary interactions, which can measure the cross-over effects between disciplines and the effectiveness of network-development, or the number of industrial partnerships, which can measure the effectiveness of knowledge transfer to non-scientific sectors.

Conclusion: The committee believes that the scientific achievements of the participating groups and scientists are at a high level, with the exception of areas where patient inclusion is an important factor. However, the exact assessment of scientific strength and of progress in the application and knowledge transfer domain and the effect of NIBC on this is only possible at a further point in time and needs further tailored investigation in coming years. In any case, the committee considers the overall scientific strength of NIBC's activities a solid starting point to build upon for a possible second term.

Recommendation: The committee recommends repeating (periodic) bibliometric assessments in the future. In assessing both scientific and application strength, the committee also suggests to develop and add relevant parameters specifically tailored to the goals of NIBC, like for example the number of coauthorships and other cross-disciplinary interactions, or the number of industrial partnerships.

2.2 Application: valorization and technology transfer

The committee has learned, not only from the documentation, but also from the discussion during the site visit itself, that NIBC has been quite active in using the networks to aim for the transfer and the application of scientific findings. Effective examples are the productive research on lighting, the living labs initiative, the Smart Mix programme *BrainGain* on brain-computer interfaces and efforts within the food sector. By employing these initiatives through the networks, the committee notes that NIBC has been able to show successful efforts in terms of (societal) valorization and technology transfer. NIBC seems to be doing very well in aiming for concrete valorization in this respect. Clearly this is a strength of NIBC which should be maintained and even extended in future if possible.

With respect to societal innovation (for example in the domains of education and justice), NIBC has developed a number of initiatives which seem to be very promising. An example is research into the recognition of people's emotions, which could be used to control crowds. However, it is still too early to be a able to fully evaluate the efficacy of the programme as the development of end products is still underway. The committee finds that the programme has strong potential if it remains clearly focused.

Within the medical domain, big pharma is no longer a key player in the Netherlands, but NIBC could reach out to foreign (big) players in the field as well as to smaller biotech companies in the Netherlands. Possible fruitful niches for NIBC to focus on while aiming at valorization and technology transfer could for example be initiatives within the diagnostic domain and the field of neuroimaging, population based studies and developments with respect to health insurance.

Conclusion: The committee notes that NIBC has been able to foster successful application efforts in terms of (societal) valorization and technology transfer through its networks. The participating actors have delivered a number of very promising initiatives. Clearly, this area constitutes a major strength of NIBC and should be maintained in the future. Within the somewhat more difficult medical domain it is important for NIBC to create focal points, making use of what is present in the Netherlands in order to increase its effectiveness in valorization and technology transfer.

Recommendation: The committee encourages NIBC to strongly pursue its mission of valorization and technology transfer as the contribution of NIBC in these areas is very important for Dutch society and the committee sees ample opportunities. Within the somewhat more difficult medical domain the committee recommends NIBC to focus on initiatives in which NIBC will likely have the most impact, like in diagnostics, population based studies, health insurance and neuroimaging.

2.3 Cohesion

With regard to the assessment of the results in the third area, being the level of cohesion of the field of brain and cognition, the committee notes that NIBC has been fiercely building networks of (groups of) scientists in order to promote collaboration between parties and synergies between activities. The committee notes that these networks constitute an essential part of NIBC's strategy to establish relevant new research connections in the rapidly developing fields of brain and cognition.

The committee believes that NIBC has been successful in initiating new relevant programmes, and also seems to have incorporated existing programmes within its overall activities in a fruitful manner. The overall aims of NIBC have functioned as guiding principles for establishing programmes and networks. The committee is under the impression that NIBC seems to have been successful in bringing together researchers within programmes, thus attributing to the cohesion within programmes and within certain fields. Even so, the committee thinks that the cohesion between the programmes and networks themselves could be strengthened by formulating a stronger overall vision, elucidating common ambitions and objectives. In such a vision the bottom up connections within the field could be taken as a basis from which an overarching strategy can be launched. Such a strategy could for example align individual, but similar objectives within each of the programmes, like for example objectives to transfer knowledge to the domain of education. In the current situation, each programme formulates its own objectives. An overall strategy would obviate this need and do away with a sprawl of almost similar, but still differently directed aims.

Lacking such a strategy for the moment, the committee finds it harder to evaluate the cohesion between programmes itself, particularly in view of the rather large number of programmes. Besides, the committee considers some activities quite small in scale and thinks they might benefit from aggregation into larger blocks in order to achieve more critical mass and better cohesion.

<u>Conclusion</u>: The committee believes that NIBC has been successful in establishing cohesion and developing its programmes and networks: this has brought together the relevant actors in the domain of brain and cognition. The committee is very positive about this achievement and believes that the networks are an excellent starting point for further development of the field and can fulfill a major stepping stone function for a next phase.

Recommendation: Whereas the evaluation of the individual programmes shows that collaborations within programmes are successful, NIBC should try to further strengthen the cohesion within the entire field by coming up with a truly overarching vision, in which the bottom up connections between programmes form the basis. From these connections an even more coherent strategy can be formulated and launched, serving as a strategic vision for future activities.

3 The added value of NIBC

In this section, the committee presents its opinion on the question whether NIBC is an appropriate model for fulfilling its aims, i.e. how is the position of NIBC in the field and is the way in which NIBC is organized (its governance) adequate to fulfill its tasks?¹

3.1 NIBC's position in the field

The programmes and networks of NIBC form a complex and diverse spectrum of activities within the domain of brain and cognition research.

The committee believes that NIBC has shown a clear strength in terms of having organised the scientific networks, uniting hitherto heterogenous fields, interconnecting different disciplines and thus creating more cohesion within the field, and also preparing the field for top sector involvement. Also, NIBC has shown its value in maintaining important programmes like HCMI, and has shown its influence by even adding to this (e.g. the FCB programme).

The committee notes that NIBC has not only successfully organized its networks, but has also established itself as a valuable portal for other stakeholders, like industry, the general public and patient organizations. The committee welcomes this outreaching role of NIBC and considers it very important that it consolidates this function and extends this where relevant and possible in view of the next phase.

The committee recommends government and funding parties involved to strive towards continuation of NIBC after the first period of funding. The committee believes that NIBC can continue to play a role in bringing together the key players in the field of brain & cognition, and is capable of establishing further relevant programmes in this sector. When focusing on new initiatives, NIBC should be careful about keeping together the entire network to encompass the total spectrum from basic science up to applied sciences.

However, as already noted in section 1.3, NIBC needs to implement a clearer strategy to achieve its ambitions. The role NIBC takes on could also develop from a more facilitating one into a more initiating one, more actively initiating connections, collaborations and guiding activities than before, taking its cues from a coherent strategy and input from all stakeholders.

Conclusion: The committee believes that NIBC has been a successful model for bringing together important actors and creating coherence in the varied field of brain and cognition in the Netherlands. NIBC has had a tremendously important influence as important connections have been established and the brain and cognition sector in the Netherlands is much stronger than before.

Recommendation: The committee recommends that the role of NIBC as an integrator of the fields of brain and cognition should be continued and further strengthened in the future. In the eyes of the committee, the NIBC is invaluable to drive forward developments in the fields of brain and cognition, provided it assumes a clear overarching strategy on how to implement its ambitions.

 $^{^{1}}$ In the agreement of 2009, in which NIBC was instituted, the main tasks of NIBC were formulated as follows:

a. To develop and implement a package of programmes aimed at application in society of recent scientific insights (and those to be developed) into the relationship between brain and cognition and to develop and implement more applied social initiatives; and

b. To initiate cooperation between parties involved in the relationship between brain and cognition in areas of the scientific field not yet in the remit of the NIBC Taskforce.

3.2 NIBC's governance structure

In the self-evaluation document, NIBC signals some problems in terms of its governance structure, notably a mix of having a supervisory and a decision-taking responsibility for some key persons, which impacts the possibility to act fast.

The committee recommends NIBC to change its government structure to remedy these shortcomings. But aside from these aspects, the committee considers it important that NIBC makes sure that it includes people from industry and government in its supervisory board, which is not the case now. This will enhance the expertise necessary to deal with various aspects of NIBC's playing field and will introduce even more knowledge about applications and knowledge transfer. Overall, attention should be paid to an adequate representation of all stakeholders, but without forming a burden to running the programme.

Furthermore, the committee is of the opinion that the governance structure should be lean and professionalized in terms of its capacity to adequately run the organization and to foster a more proactive stance.

Finally, NIBC should be as precise as possible about the costs of the programmes vis-à-vis the costs for running the organization and the return on the investments made. From the self-evaluation documents, the committee could unfortunately not gain an unequivocal impression about these costs. However, a clear picture of the overhead costs is necessary to be able to maintain cost effectiveness of the initiatives of NIBC. Such information on cost effectiveness is essential to provide to decision making bodies when applying for continued support.

Conclusion: The committee believes that the current **governance structure** of NIBC is lacking the structure required to take resolute and timely decisions. Besides, the structure would benefit from attracting more expertise on the application side, i.e. industry, societal organisations and government. The structure should be lean and professionalized and cost effectiveness should be paramount.

Recommendation: The committee recommends changing the governance structure in such a way as to remedy the shortcomings mentioned here.

4 Future of NIBC

In this section, the committee takes the opportunity to provide its recommendations for the future of NIBC.

First of all, the committee is convinced that NIBC has proven to be a very valid and useful instrument to structure the hitherto heterogenous field of brain and cognition into a more coherent one, even if there is still some way to go. The Netherlands government has taken a right decision to institute this task force, and the level of organization in this domain is quite unique seen on a worldwide scale. The committee believes that NIBC should continue its work at least in the near and medium term. One of its main tasks should be to maintain the networks and to extend them wherever this is necessary or possible. But not only should NIBC maintain and initiate programmes, NIBC should also make sure that participants are ready to respond to new initiatives, possibly from other parties that are not yet part of NIBC. Top sector developments are a case in point here, as significant amounts of money are funneled into top sector domains. Preparing the field for active top sector involvement could be seen as an important new role of NIBC. For these reasons, the Dutch government and NWO are strongly recommended to use this opportunity and give their support to NIBC for a new term.

Secondly, NIBC has a huge variety of different entities and activities. It should strive towards aggregating some of these into (slightly) larger elements, in order to strengthen the focus and achievements of these parts. In the meantime, weaker parts should be given less attention or should even be abolished. In order to guide its decisions, NIBC needs to develop a common strategy, providing an overall vision, elucidating common ambitions and objectives of programmes and networks.

Thirdly, the committee recommends government and NWO to provide sufficient funds for NIBC's operation, fitting to the objective of creating more coherence in the field, resulting in excellent science and valuable societal applications. This means that NIBC should have enough budget to be able to create new initiatives and to be able to fund these initiatives at least partially. The documentation provided to the committee does not allow to take a clear stand on what the future budget of NIBC should amount to. It is evident however, that the apparent success of NIBC is depending on the availability of sufficient financial means to initiate new activities by providing seed money when opportunities emerge. Network activities will remain an important activity in the future and sufficient means to actively support them is required.

Conclusion: The committee believes that NIBC has shown a clear strength in terms of having brought together key players in the area of brain and cognition research into networks and programmes. Participants are scientists driving basic developments, as well as stakeholders developing and using new applications. NIBC has been very successful in creating internal cohesion in the broad field of brain and cognition research, and is leading the field towards more and better application of scientific results. The committee is convinced that NIBC should continue to fulfill its fruitful work in the future, moreover that it is imperative for the Dutch government and NWO to not stop at this point.

Recommendation: The committee recommends the Dutch government and NWO to provide funds for NIBC to continue to support the domain of brain and cognition, at least into the near and medium term future. An extension of the first term of NIBC should be supported by sufficient funding, which allows NIBC to reach the objective of excellent science and valuable societal applications.

The committee recommends NIBC to:

aggregate some of its activities and entities in order to strengthen their achievements, on the basis of an overarching strategy;

to develop a transparent accounting system such as to be able to provide convincing arguments on return on investment.

5 Conclusions and recommendations

The interim evaluation committee has been evaluating NIBC with special reference to the following three main evaluation questions. Please find below the main conclusions and recommendations of the committee.

- What opinion has been formed with regard to the results achieved the NIBC during its first three years in terms of science, application and cohesion?

The committee believes that **the scientific achievements of the participating groups and scientists are at a high level**, with the exception of areas where patient inclusion is an important factor. However, the exact assessment of scientific strength and of progress in the application and knowledge transfer domain is only possible at a further point in time and needs further tailored investigation in coming years. The committee considers the overall scientific strength of NIBC's activities a solid starting point to build upon for a possible second term.

Recommendation: The committee recommends repeating (periodic) bibliometric assessments in the future. In assessing both scientific and application strength, the committee also suggests to develop and add relevant parameters specifically tailored to the goals of NIBC, like for example the number of coauthorships and other cross-disciplinary interactions, or the number of industrial partnerships.

The committee notes that **NIBC** has been able to foster successful application efforts in terms of (societal) valorization and technology transfer through its networks. The participating actors have delivered a number of very promising initiatives. Clearly, this area constitutes a major strength of NIBC and should be maintained in the future. Within the somewhat more difficult medical domain it is important for NIBC to create focal points, making use of what is present in the Netherlands, in order to increase its effectiveness in valorization and technology transfer.

Recommendation: The committee encourages NIBC to strongly pursue its mission of valorization and technology transfer as the contribution of NIBC in these areas is very important for Dutch society and the committee sees ample opportunities. Within the somewhat more difficult medical domain the committee recommends NIBC to focus on initiatives in which NIBC will likely have the most impact, like in diagnostics, population based studies, health insurance and neuroimaging.

The committee believes that **NIBC** has been successful in establishing cohesion and developing its programmes and networks: this has brought together the relevant actors in the domain of brain and cognition. The committee is very positive about this achievement and believes that the networks are an excellent starting point for further development of the field and can fulfill a major stepping stone function for a next phase.

Recommendation: Whereas the evaluation of the individual programmes shows that collaborations within programmes are successful, NIBC should try to further strengthen the cohesion within the entire field by coming up with a truly overarching vision, in which the bottom up connections between programmes form the basis. From these connections an even more coherent strategy can be formulated and launched, serving as a strategic vision for future activities.

- Is the NIBC an appropriate model for fulfilling the expectations expressed in the agreement, and what are the NIBC's strengths and weaknesses in this context?

The committee believes that **NIBC** has been a successful model for bringing together important actors and creating coherence in the varied field of brain and cognition in the Netherlands. NIBC has had a tremendously important influence as important connections have been established and the brain and cognition sector in the Netherlands is much stronger than before.

However, the committee believes that the current **governance structure** of NIBC is lacking the structure required to take resolute and timely decisions. Besides, the structure would benefit from attracting more expertise on the application side, i.e. industry, societal organisations and government. The structure should be lean and professionalized and cost effectiveness should be paramount.

Recommendation: The committee recommends that the role of NIBC as an integrator of the fields of brain and cognition should be continued and further strengthened in the future. In the eyes of the committee, the NIBC is invaluable to drive forward developments in the fields of brain and cognition, provided it assumes a clear overarching strategy on how to implement its ambitions.

Recommendation: The committee recommends changing the governance structure in a such a way as to remedy the shortcomings mentioned here.

- What recommendations and areas requiring improvement can be identified for the remainder of the NIBC's lifespan and beyond? Which opportunities and threats exist?

The committee believes that NIBC has shown a clear strength in terms of having brought together key players in the area of brain and cognition research into networks and programmes. Participants are scientists driving basic developments, as well as stakeholders developing and using new applications. NIBC has been very successful in creating internal cohesion in the broad field of brain and cognition research, and is leading the field towards more and better application of scientific results. The committee is convinced that NIBC should continue to fulfill its fruitful work in the future, moreover that it is imperative for the Dutch government and NWO to not stop at this point.

Recommendation: The committee recommends the Dutch government and NWO to provide funds for NIBC to continue to support the domain of brain and cognition, at least into the near and medium term future. An extension of the first term of NIBC should be supported by sufficient funding, which allows NIBC to reach the objective of excellent science and valuable societal applications.

The committee recommends NIBC to:

aggregate some of its activities and entities in order to strengthen their achievements, on the basis of an overarching strategy;

to develop a transparent accounting system such as to be able to provide convincing arguments on return on investment.

Annex 1: NIBC-evaluation committee 2013

The NIBC has appointed an ad hoc committee consisting of four members and a chair. Between them, the members of the committee are to have a good picture of the Dutch context and the international position of the Dutch research and information domain in the relevant area. Neither the members of the committee nor the chair have any direct involvement. Two of the members cover the scientific domain, and so a neurocognitive researcher and a researcher working in areas ranging from basic research to clinical research were sought. Two members were also sought to cover the applications domain: one from the private sector and the other from the public sector. The secretary of this evaluation committee was provided by NWO.

Given the above considerations, the composition of the committee has been as follows:

Chair

Prof. dr. Menno P. Witter (NTNU - Norwegian University of Science and Technology, Trondheim, Norway)

Members

Prof. dr. Olivier Bertrand (Director, Centre de Recherche en Neurosciences de Lyon, INSERM, France)
Prof. dr. Edward Bullmore (University of Cambridge and GlaxoSmithKline, UK)

Carsten Herstel, MA (Director General, Netherlands Institute of Forensic Psychiatry and Psychology)

Secretariat

Anko Wiegel, MA (Senior Policy Advisor, NWO - Netherlands Organisation for Scientific Research)

Annex 2: Terms of Reference for the evaluation committee

The committee evaluated the NIBC on the basis of all the reporting documents (covering primary activities, subsidy programmes and networks), including self-evaluations and external evaluations as appropriate. The *strategic plan for 2013 - 2015* was also included in the external evaluation. The committee basis its review and evaluation on the following questions:

- 1. Have the reporting and self-evaluation processes been carried out properly, and do they provide the committee with sufficient opportunity to form an objective opinion in respect of the questions 2-4 below?
- 2. What opinion has been formed with regard to the results achieved the NIBC during its first three years in terms of science, application and cohesion?
- 3. Is the NIBC an appropriate model for fulfilling the expectations expressed in the agreement, and what are the NIBC's strengths and weaknesses in this context?
- 4. What recommendations and areas requiring improvement can be identified for the remainder of the NIBC's lifespan and beyond? Which opportunities and threats exist?

Annex 3: Self-evaluation NIBC

The self-evaluation documents of NIBC are added as an electronic annex.