



Dutch Platform for Complex Systems (NPCS)

Brief history and reason

In April 2008, the brochure was published *Complexity: outline of the NWO strategic theme Dynamics of complex systems*, which served as a description of the first NWO research program in the field of complex systems. The program committee, headed by Prof. dr. Maarten van Steen and later Prof. Dr. Peter Vervest, created that program have molded and guided released a new vision for future research in complex systems in September 2014 under the title *Grip on Complexity: how are manageable complex systems?* This book is the basis of (prospective) research programs include from NWO and TNO. In May 2015, the program committee has held a broad meeting at NWO in The Hague, where all present was expressed that a structured organization of the community in the Netherlands who feel connected to the described visions for research in complex systems and their use by government, industry and civil society organizations. A small group of "trailblazers" have thrown themselves at this meeting, from the broad group of initiators and the program committee, to give such "structured organization" shape and the first (of incorporation) to prepare meeting of the target platform. This document is a reflection of that.

Purpose

The purpose of the NPCs is to encourage national reconciliation in this multidisciplinary research area in the Netherlands. The platform should ensure that researchers working on more complex issues to operate as a community; scientists from different disciplines to know each other better, learn from each other and work together. The platform will be areas of complexity research where the Netherlands is particularly strong in and where identifying social / industrial needs are great. Moreover, the platform should provide good access to (potential) partners in business and society to the research community of complexity scientists. Finally, the platform must complex systems more drop as a research field, and ensure better coordination both within the Netherlands and for the contribution of the Netherlands in the European research complexity.

Foundation

The NPCs will be established for the Dutch universities, research organizations, industry, government and civil society organizations that have an interest in research or application more organized development and training in the field of complex systems. The initiative for the establishment was taken by the program committee Complexity. The initiative is long-term supported by NWO and TNO, and at least in the initial phase also by Utrecht University. The base of institutions that support the initiative will be actively expanded after the start.

Whereas

- That the study of complex systems is an important, growing and rapidly evolving field of science is that more knowledge is essential for understanding and responding to many social and business-related issues and questions about the world around us;
- This insight for most problems can only be achieved through interdisciplinary cooperation of various parties and knowledge;
- That there are no clearly formed discipline and discipline comprises complex systems and "complexity scientists" are not posting up as such;
- That there is nevertheless in the Netherlands on all universities and research organizations in both alpha-, beta-, gamma- as medical and technological fields, research groups are finding themselves in greater or lesser extent, directly and indirectly, keep working with complex systems;
- That for these researchers to society, science and industry and for the development of the field is of great importance that all parties involved know how to find each other easily accessible for collaboration, development and pollination;
- That the universities and research institutions and the Academy recognize this importance and this need and want to join forces to facilitate the Dutch researchers whose interests touch on the field of complex systems, supported by NWO and the Federation T02;
- That it is for the researchers in the Netherlands is good to link up with international developments in the field of Complex Systems in an organized manner;
- NWO That underlines the importance of research into complex systems in the selection of its key future strategic issues;

Is the proposal

- The Dutch Platform for Complex Systems (NPCs) to be set up with the below to describe participants, tasks, structure, embedding, procedures and responsibilities.

Description NPCs:

1. Association

- The NPCs will formally take the form of a notarial established this association because in the most literal sense does justice to the target platform.
- There will be a regulation and / or Articles of Association by the Board be drawn up in which matters such as the selection of new advisory, board and committee members and their term of office, duties and responsibilities are defined. In particular it will also capture the formal financial and substantive accountability.

2. Tasks

- Mapping, and a face to give the community of researchers in the Netherlands who feel connected with the research area Complex Systems;
- Initiating and conducting a continuing discussion of a research agenda for research on Complex Systems at national level, including the provision of financial implementation of a sustainable research program;
- Binding Together community formation for this group of researchers; encourage, facilitate and coordinate interactions and interdisciplinary collaboration;
 - o Establish, focused stimulate, unlock and coordinate a diverse nationwide interdisciplinary education in the field of Complex Systems at Bachelor, Master, PhD and post-graduate level;

- o Organize an annual national conference;
- o Organize thematic scientific meetings for the community, making connections across applications around;
- Actively advocate for society, government and business of the value and importance of a complex systems approach to a wide range of real problems; making tangible research and visualization of successful cooperation;
- Easily accessible encouraging and facilitating matchmaking between researchers and requesting parties; encouraging innovative applications and targeted development for business, civil society and governments;
- o Matchmaking Meetings;
- o Proactive support for recognizing complex system problems and sharp formulation of (research) questions;
- o Counter Function, broker through entrance and overview of the community and the field of fundamental and in full width in the Netherlands;
- Continued focus on questions of theory and broad foundations of common methodologies and techniques, and contribute to the evolution of Complex Systems as a fully-fledged research discipline;
- Developing and maintaining international contacts with relevant parties and organizations, including the EU and at the Complex Systems Society (<http://cssociety.org>);
- Profiling of the region Complexity / Complex Systems as a profession.

3. Structure

- Advisory Board with representatives from selected organizations participating in the platform, business, society and government.
- Administration (at least six members in the startup phase nominated by the program committee Complexity, responsible for drafting regulations of the NPCs, composing, smooth operation and coordination of the Committees, policies developed by Committees of implementation, provide nationwide support, shaping long-term policy and vision, coordination with relevant programs and relevant committees NWO-related platforms and (inter) national scientific associations, financial responsibility for establishing budget and long-term funding arrangements):
 - o Chairman and Vice Chairman
 - o Chairman and Vice-Chairman of each of the following three working committees
 - o Secretary (this task coincides with that of director of the Office).
- General Assembly which exercises control in the Board and the performance of its duties and responsibilities, and which meets at least once a year.
- Work Committees (appointed by the Board and nominated by relevant organizations, the different functions invested in the Working Committees are described under 2; the duties, composition and procedures of the committees shall be worked out after the start):
 - o Education (designing and implementing education for the benefit of the community, but also for the evolution of the area)

- o Research (encouraging overarching interdisciplinary scientific meetings, initiating and organizing and opening up and facilitating thematic research meetings, including annual conference, on behalf of the community, but also for the evolution of the discipline)
- o Society (matchmaking, counter, communication with business, governments, NGOs and parties proactively together; tangible make / let life of the field, communicating the added value, and the field mapping of the outputs / results of participants).

- Office (in charge of enforcing decisions, executive NPCs, national and international communication, publicity web site / social media, practical aspects of organizing meetings, mapping the community, making connections and forging various forms of interaction and cooperation, financial responsibility for the actions of the NPCs, management and content web site that includes who-is-who-does-what-and-where (for example <http://csregistry.org/>), et cetera)
 - o Director (part-time, exempt employer)
 - o Coordinator (part-time 0.4fte paid from NPCs)
 - o publicity assistant (perhaps in the future, part-time, paid from NPCs)
 - o the Bureau preferably has a fixed location that can change, however, after the initial implementation.

4. Participants

- Participants in the NPCs are basically professionals who feel connected to their area of focus and work with the field of Complex Systems. Those connections may lie in the area of basic research, to applications in alpha, beta, gamma or medical disciplines of research and work with the business community, (semi) -overheidsinstellingen and social organizations.
- It is contemplated that the participation / membership of individuals in three ways are possible:
 - o At the invitation of the Board
 - o On request, approval by the board
 - o It is for consideration by the board to "young members" as master students, PhD students and postdocs recognize as a separate category of members or participants. Own active roles might be defined for this group in the platform and specific additional own activities.
- The procedure and guidelines are drawn up by the board.

5. Financing

- The NPCs needs funding to its tasks to perform. This applies to the staffing of the Office, but also for the organization of meetings and facilitating consultation. The Board will make a proposal for a minimal budget and how long-term this can be ensured through proper agreements between relevant support staff. NWO and TNO have the intention to financially support the activities of the platform long-term co. Furthermore, Utrecht University has agreed to house in the start-up years (until at least 2018) and the Bureau to support financially. Finally, the intention being generated from the beginning of 2016 income from membership fees for example. Members or participants will, for example, a contribution of € 25 will be charged per year.

6. Milestones and benchmarks for success in start-up phase

- Board, Supervisory Board and Committees set up office operational by end 2015;
- At least 50 members by invitation in early 2016;

- At least 100 individual members end 2016;
- National Annual Conference from 2017 and several other events in 2016 and 2017 and positively evaluated by the participants;
- Winter School for PhD students and postdocs organize, annually or biannually since 2016;
- Commissions operational in 2016, long-term plan by commission finished by mid-2016;
- Long-term financing and operating methods established late in 2016;
- First contacts with relevant (inter) national organizations and related platforms in 2016;
- The NPCs is co-organizer in the Netherlands International Conference on Complex Systems in September 2016 (Amsterdam, chair: Peter Sloot);
- National Master Complex Systems operational and certified in 2020;