

LETTER OF SUPPORT – MAPS4SCIENCE

To: Professor dr. ir. P.J.M. van Oosterom
OTB Research Institute for the Built Environment
TUDELFT
Postbus 5030
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Date: January, 5th 2012

Subject: Support to MAPS4SCIENCE

Dear Professor van Oosterom,

NMDC was established in 2010 as a strategic collaboration between Alterra, Deltares, KNMI, PBL, RIVM and TNO. NMDC is now finalizing its startup phase (2010-2012), supported by the *Programma Vernieuwing Rijksdienst*. The partners are currently drafting plans for sustainable continuation as NMDC 2.0. NMDC learned with great interest about your initiative to develop a large scale research facility Maps4Science. What Maps4Science aims to establish for the academic community is strongly related to what NMDC aims to establish for and by its own institutes. NMDC (through its partners) is data provider, user, supplier and innovator. We support your consortium and your application because we see organisational as well as technical benefits for us, and the Netherlands as a whole.

Geo information in the Dutch public sector is roughly covered by three types of bodies. First, the Netherlands has a range of ministries, departments and institutes that are subject to the EU INSPIRE directive. The GI-beraad, Geonovum, Nationaalgeoregister.nl and PDOK are good examples of convergent geo-collaboration in this sector. Second, the Netherlands has a big academic sector, for which your Maps4science infrastructure aims to establish convergence, collaborating with existing initiatives of NWO, SURF and KNAW such as e-Science Center and DANS. Third, there Netherlands has many not-for-profit technological institutes of which NMDC represents six major ones.

Geo-data of NMDC partners may reside under the GI-beraad when it concerns tasks that are performed for the government bodies. It may also reside under the academic sector when it concerns fundamental research, jointly executed with universities. But many geo-data of the NMDC-partners are outside the realm of the governmental and academic pillar. This gap is the first reason NMDC supports Maps4science. Through collaboration with Maps4science, NMDC aims to achieve full, yet non-overlapping organisational coverage of geo-data in the whole public sector, with concerted effort of its academic, government and institutional pillars.

The second reason that NMDC support Maps4science is that the geo-data of the NMDC partners is, roughly speaking, of different nature than traditional map data. The NMDC partners create, develop, maintain and run 3D numerical models that cover all three spheres of Earth: (i) 3D atmospheric models to predict the weather (HIRLAM, HARMONIE), air quality (LOTOS-EUROS) or external safety (explosions), (ii) 3D subsurface models to predict ground water flows and quality (NHI, Nationaal Hydrologisch Instrumentarium) and (iii) 3D hydrodynamic models that can predict storm surges or water quality (FEWS, Delft3D, SIMONA). These 3D models have a strong temporal component compared to the traditional 2D geo-data. NMDC faces the challenge to exchange and disseminate the input *and* output matrices of these models via web services (data cloud). The model results are geo-referenced, its 2D static fields fit today's standard technologies. These mainly concern maps with indicators derived from model output.

However, most traditional map technology implementations cannot deal with the 3D temporal nature of the majority the model generated data yet. NMDC hopes to benefit from collaboration with Maps4science to fill this gap. NMDC or its partners may provide the technologies it develops itself (ADAGUC) to Maps4science, train the international technologies it adopted (OPeNDAP), but hopes to benefit from new Maps4science technologies and networks as well. In addition, we also hope to establish collaboration on the geo web processing services in your proposal, which resemble the nature of our numerical models (model cloud).

NMDC wishes you all the best in getting Maps4science funded. We look forward to future collaboration.

Yours faithfully,


The NMDC program board
Ir. W.J. Nieuwenhuizen