



**Cees Brouwer** is the chairman of the 'Coordination in the Cloud' Steering Committee.

'Over the past year, we have been working on the i-strategy in conjunction with a large number of administrators, CIOs and various representatives from education and research. We have explored the major strategic challenges, especially those resulting from current developments in ICT, and cloud computing in particular. We have also determined what we as higher education institutions can do both jointly and individually to create a more stable position and strengthen the Dutch knowledge economy. In November, together with the i-strategy, the Higher Education Reference Architecture (Hoger

Onderwijs Referentie Architectuur, HORA) will also be completed. The HORA has been created by enthusiastic IT architects from 20 different institutes, and is also intended as a means to aid collaboration in higher education and research.

We are inviting all institutions to take part in the initiatives and work towards the objectives that best suit them. That is why, after the upcoming Management Consultation, we are planning to discuss the i-strategy individually with as many institutions as possible."

## 'Coordination in the Cloud' project results

THE 'COORDINATION IN THE CLOUD' PROJECT WILL OFFICIALLY CONCLUDE ON 1 NOVEMBER. THIS MARKS THE COMPLETION OF AN OVER-ARCHING I-STRATEGY AND THE HIGHER EDUCATION REFERENCE ARCHITECTURE, ALONG WITH SAMPLE DATA MANAGEMENT PLANS FOR RESEARCHERS.

The i-strategy outlines how the institutions can make smarter use of the potential that cloud computing has to offer education and research. The strategy describes twelve shared objectives and promising initiatives suitable for collaboration either collectively or in smaller coalitions. Marjan Vernooij, member of the 'Coordination in the Cloud' project group: "Cloud facilities do offer new opportunities, however there are also associated risks, such as inadequate data security. The i-strategy makes a case for sharing facilities and knowledge, increasing purchasing power and standardising processes and concepts to facilitate information exchange."

### Details

The i-strategy details these aspects for application in research, education and operational management. 'Shared facilities may include things like regional exam halls or joint computing centres', Marjan Vernooij explains. 'Sharing knowledge is useful in areas such as e-teaching, with new methods created by integrating online learning into the curriculum.'

Data-management checklists help researchers to take care when working with research data, and to meet the requirements stipulated by their institutions and those funding their research. Data security is also an area where sharing knowledge is important. And in terms of information exchange, the Higher Education Reference Architecture (HORA) is extremely valuable.'

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### Implementation aids

The HORA is a description of the ICT landscape in a typical higher education institution. Roelof Kooy, also a member of the 'Coordination in the Cloud' project group, explains: 'We have created a full-breadth and high-level description of all of the business functions, specifying which data is processed and by which IT systems.' A model

architecture of this type is very useful for when several institutions contract out an application together, or if they wish to exchange information. 'People understand one another better because the concepts are strictly defined. The architecture also provides a head start when designing a new application, or drawing up a schedule of requirements to use in selecting a supplier. It helps to clearly delineate the boundaries of your project.' The HORA also includes a vision document and a set of implementation aids. An Architecture Council (yet to be instituted) will manage the HORA in a technical sense.

### Partner institutions

The foundations for the i-strategy and the HORA were laid through intensive consultation with a large number of administrators, CIOs, directors of IT, research and education, IT architects and field experts. The i-strategy will be presented on 12 November during the upcoming SURF Management Consultation on Cloud Computing. After that, the strategy will make the rounds among the institutions themselves, in order to convert the proposed initiatives into concrete projects.

## Open Education Management Trip

FROM 22 TO 27 OCTOBER, ELEVEN LEADING OPEN EDUCATION ORGANISATIONS IN WASHINGTON DC, BOSTON AND NEW YORK WERE VISITED BY DIRECTORS AND ADMINISTRATORS FROM RESEARCH UNIVERSITIES AND UNIVERSITIES OF APPLIED SCIENCES, THE MINISTRY OF EDUCATION, CULTURE AND SCIENCE (OCW) AND THE ASSOCIATION OF UNIVERSITIES IN THE NETHERLANDS (VSNU).

Discussions were held with the U.S. Department of Education and the OpenCourseWare Consortium, as well as with Tufts, State University of New York, Columbia, MIT and Harvard universities. Lectures were given by Blackboard, edX, Coursera and the American Council on Education. SURF organised the trip in order to garner fresh insights and inspiration, and to support

the institutions in their efforts in formulating visions on Open Education. Another objective was to establish the added value offered by collaboration.

The group concluded that Open Education is an inevitable development. It reveals the quality of both teaching materials and lecturers, and has the potential to attract talented students and lecturers, as well as form new partnerships

with education and research institutes, SMEs and industry. Open Education also provides a means of supporting effective learning, and can help accommodate the major demand for life-long learning. The Netherlands is in a good initial position, thanks to its state-of-the-art infrastructure and international outlook. It is now time for the institutions themselves to start giving concrete form to online education.

*The day-by-day reporting on the trip (the Daily Open) can be found [here](#).*