

THE FUTURE?



# Sharing data together

Summary of DANS strategy 2015-2020

*“Maximum data accessibility serves the typical scientific methodology in which researchers analyse each other’s findings and critically build on each other’s work.”*

*“Data is the new gold.”*

*“Data is the oil of science.”*

*“Data vary from small to large; data problems from great to immense.”*

*These quotes come from respectively:*

*Hans Clevers, KNAW President, foreword of “Zorgvuldig en integer omgaan met wetenschappelijke onderzoeksgegevens”, report commissie Schuyt, KNAW, Amsterdam 2012;*

*Neelie Kroes, Vice President of the European Commission responsible for the Digital Agenda (until November 1, 2014);*

*Máire Geoghegan-Quinn, European Commissioner for Research and Innovation (until November 1, 2014);*

*Jaap van den Herik, Professor Director of the Leiden Centre of Data Science.*

# Introduction

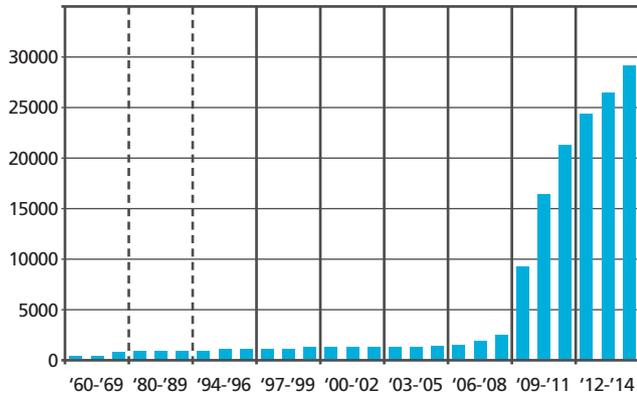
**E**fficient and timely data management, a safe data storage both during and after completing research, and a sustainable tool management to be able to continue reading and mining the data both now and in the future, are essential conditions for sharing this data.

The integrity of scientific practice benefits from transparent research processes, and responsible data management is part of this.

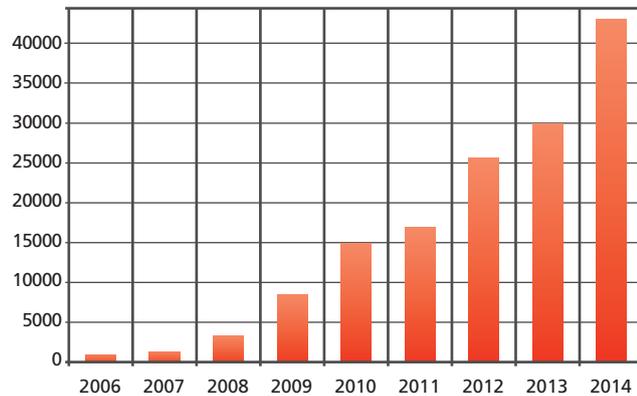
Universities and colleges are seeing an increasingly clear own role in formulating policy regarding data management within their organisation. A sound support of researchers and an efficient technical infrastructure are indispensable for implementing data policy.

The necessity of well-organised data management at universities (and government bodies) has however not yet been sufficiently realised or properly embedded. How can DANS play a role in realising all of the new requirements in the data management field?

The DANS strategy answers the question of which challenges DANS will address in the years 2015-2020, as well as how and with whom this will take place. This summary indicates the strategic priorities and objectives. The full version of the strategy can be found on the DANS website.



*Datasets per year at DANS (according to EASY), 1960-2014*

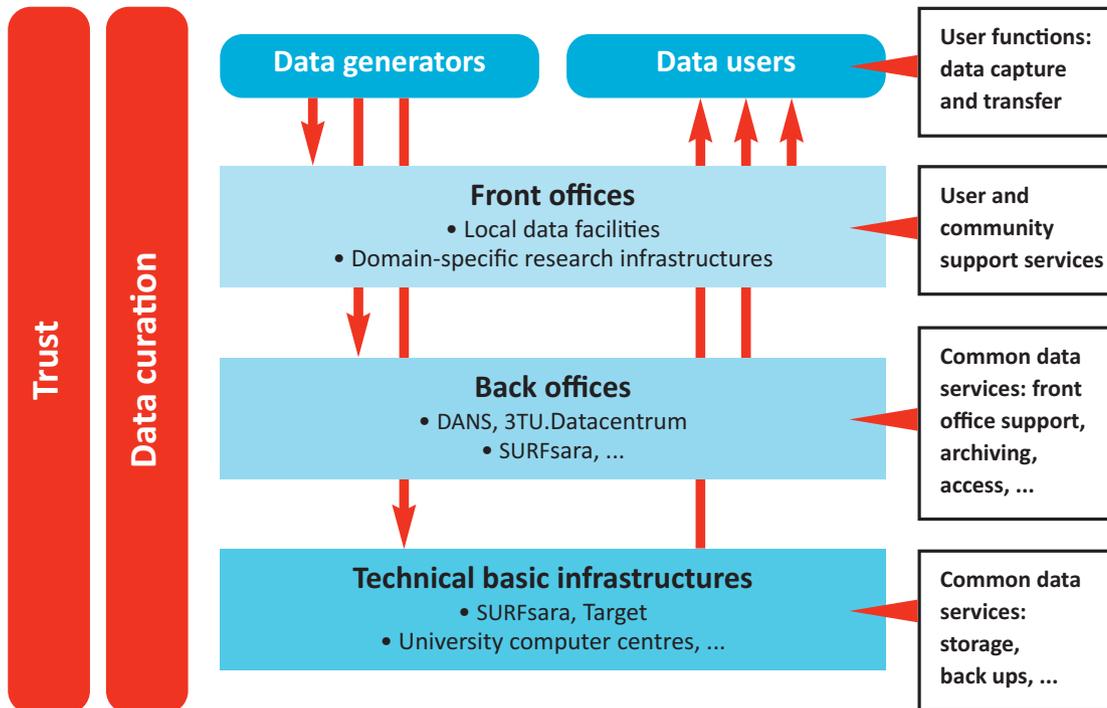


*Downloaded datasets per year (according to EASY), 2006-2014*

# Mission

**D**ANS's mission is to promote sustainable access to digital research data. With the term 'digital research data', DANS means research data (such as databases, spreadsheets, texts, images, audio, video, geo data and multimedia), research information (information about research, research institutes and researchers) and electronic publications (including preprints and reports, as found in institutional repositories).

In executing this mission, DANS provides services for long-term archiving and reuse of research data from closed research, as well as for supporting data management during ongoing research (Research Data Management, RDM). Furthermore DANS offers training and consultancy. DANS underpins its services with research on sustainable access to digital information. This research is a derivative of the main objective and is focused on innovation and improving services to users.



*Schematic representation of a Dutch federative data infrastructure*

## Target groups

**D**ANS's primary target group includes scientific researchers and public and private organisations that carry out research commissioned by the authorities. They are both data producers and data users. Within the federative infrastructure (see figure), DANS also focuses on research polling organisations for acquiring data. Data with a scientific significance collected by companies such as polling organisations and archaeological companies are also welcome. Researchers in training (doctoral students) belong to this primary target group as well. DANS has, in collaboration with the Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed), a special task of managing archaeological research results. Besides scientific researchers and research organisations, companies and the interested public are welcome to use DANS services. These groups can also find digital research data at DANS via online search engines.

Strategic priority	Strategic objective	2015	2016	2017	2018	2019	2020
1. Leading building block	1. Prominent in federative data infrastructure	Participation in RI projects	Participation in RI projects	Consulting peers	Participation in RI projects	Participation in RI projects	Consulting peers
2. Improved services for more users	2. Growth in use of services	Index 100	Index 110	Index 120	Index 130	Index 140	Index 150
	3. User satisfaction	User Satisfaction Survey (GTO)		GTO / External evaluation		GTO	Mid-term evaluation
	4. Support management live data / RDM (DataverseNL)	13 organisations	16 organisations	19 organisations	22 organisations	25 organisations	28 organisations
	5. Software sustainability	Plan / Preparation	Pilot / Preparation	Building	Implementation	Operational	Operational
3. Efficient and integrated systems	6. Linking information types	Metadata EASY LOD	NARCIS LOD	Metadata DataverseNL LOD	1 <sup>st</sup> Selection Datasets EASY LOD	2 <sup>nd</sup> Selection Datasets EASY LOD	3 <sup>rd</sup> Selection Datasets EASY LOD
	7. Innovation and integration of systems	1 <sup>st</sup> Iteration 'EASY 3.0' + NARCIS + DataverseNL	2 <sup>nd</sup> Iteration	3 <sup>rd</sup> Iteration / delivery	Plan for system renewal	1 <sup>st</sup> Iteration	2 <sup>nd</sup> Iteration

*Strategic priorities and objectives, 2015-2020*

# Strategic priorities and objectives

The three strategic priorities and corresponding annual targets are:

## Strategic priority 1

**DANS forms a leading building block in national and international data provision**

**Objective 1.** Prominent in federative data infrastructure. DANS forms a leading building block in data provision in both the Netherlands and internationally. Domestic and international representation outside of social and humanities sciences are RDNL coordinated. DANS's role in the domestic federative data infrastructure will be determined by RDNL's success (Research Data Netherlands, a coalition in the area of long-term data archiving), and the increase in use of back office services by universities and other institutions for higher education and research. Indicators include:

- a growing, or at least stable, number of nominations for data awards;
- reinforcing 'one face to the customer', thanks to an increase in coordination/integration of rates structure, accepted file formats, minimum metadata, brochures, etc. The international position will be determined by:
  - DANS's contribution to international data organisations (Research Data Alliance, Alliance for Permanent Access, ICSU-CODATA, W3C) and data conferences;
  - participation in important international data projects;

- participation in the main disciplinary-organised Research Infrastructures (RI) in social and humanities sciences (CESSDA, CLARIN, DARIAH);
- periodical comparison with sister institutions.

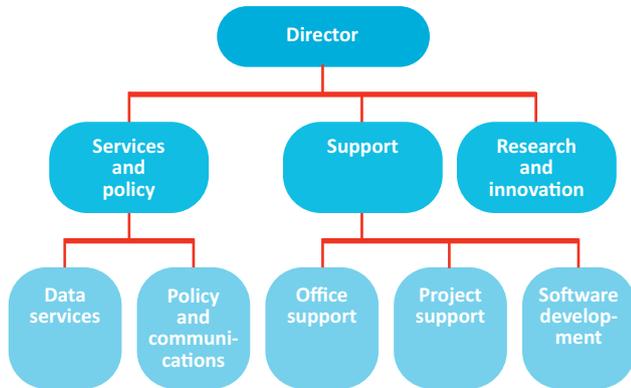
## Strategic priority 2

**DANS improves services to an increasing number of users**

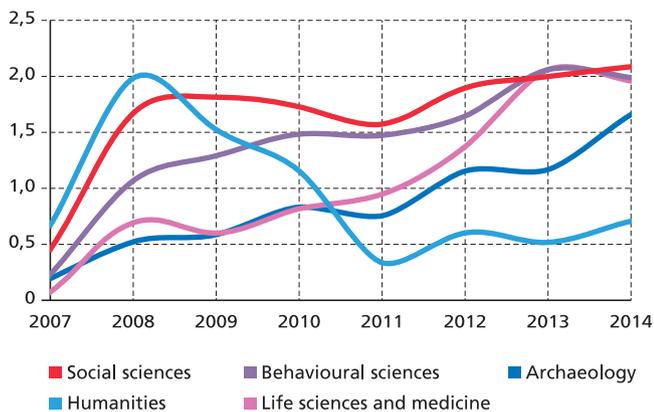
**Objective 2.** A 50% growth in use of services before 2020. This objective expresses the ambition of providing service to more users. This will take place both directly and indirectly: this also includes the use of data in repositories managed by strategic partners (for instance regarding RDNL), though this information will not always be available. Indicators include:

- number of datasets archived in EASY;
- number of datasets downloaded from EASY;
- number of contracts/cooperation agreements with research organisations;
- number of NARCIS users;
- number of digital objects accessible via NARCIS;
- number of searches in NARCIS;
- number of datasets stored in DataverseNL.

**Objective 3.** Increase in user satisfaction. This objective concerns service quality, which also partly depends on the quality of the (information about using) data provided by DANS. DANS is not responsible for the content of the data.



DANS organisation chart



Ratio annual downloads compared to available data sets for different disciplines in EASY, 2007-2014

However, DANS strives to provide data of the highest possible quality, providing datasets that contain sufficient research information to keep the data comprehensible for future users. Indicators include:

- users value DANS services with an average score of at least 7 out of 10;
- the DANS archive meets the requirements for certification in accordance with the Data Seal of Approval and DIN31644/nestor and/or ISO 16363;
- the mean valuation for reviewed datasets is at least 8 (4 out of 5);
- a number of peer-reviewed publications.

**Objective 4.** Support data management during ongoing research.

• Since May 2014, DANS provides DataverseNL and manages DataverseNL as a back office service. DANS wants the number of organisations participating in this network to rise to 28 in 2020. If it becomes apparent that DataverseNL does not meet the requirements of the participants, DANS will provide another system for supporting Research Data Management (RDM).

• DANS offers consultancy on RDM and promotes the realisation and utilisation of a tool through which research funders and funding institutions can include their criteria and via which researchers can draft up a Data Management Plan (DMP).

**Objective 5.** Software sustainability. In various fields, software must also be stored sustainably to be able to interpret the data. DANS develops in federative alliance a plan with tasks for different players and carries out a pilot project for its own tasks. The further development of building and operating a software sustainability service depends on the pilot results, the roles that other players in the federative infrastructure desire and can play, as well as on the prospect of covering operating costs.

### **Strategic priority 3**

#### **DANS realises efficient and integrated systems to support its core services**

**Objective 6.** Linking types of information. DANS gradually offers all metadata and a selection of datasets as Linked Open Data and carries out Research & Innovation projects to connect data. This will take place step by step: the metadata from EASY, NARCIS and DataverseNL is first offered as Linked Open Data. The most important open access datasets in EASY are then gradually converted into Linked Data.

**Objective 7.** Innovation and aligning systems. The core systems EASY and NARCIS are improved and/or replaced. Whenever possible, development takes place at an international level, or in collaboration with other parties (DataverseNL, EUDAT). Any overlap between the core systems disappears. In EASY, emphasis lies on archive management, irrespective of the underlying repository. In NARCIS, the

objective is to improve content quality, reduce the amount of manual editorial work and provide more reporting possibilities. DataverseNL will become the most important means for acquiring data; EASY for managing sustainably data; and NARCIS for access to scientific data, publications and research information. In realising interoperability between these systems, DANS takes into account the CERIF data model (Common European Research Information Format) developed by EuroCRIS.



**T**his document is a summary of the DANS strategy 2015-2020. For further details and/or the full version, please contact DANS via [info@dans.knaw.nl](mailto:info@dans.knaw.nl).

### **Data Archiving and Networked Services (DANS)**

DANS promotes sustained access to digital research data. For this, DANS encourages scientific researchers to archive and reuse data in a sustained form, for instance via the online archiving system EASY ([easy.dans.knaw.nl](http://easy.dans.knaw.nl)) and Data-verseNL ([dataverse.nl](http://dataverse.nl)). With NARCIS ([narcis.nl](http://narcis.nl)), DANS also provides access to thousands of scientific datasets, publications and other research information in the Netherlands. The institute furthermore provides training and consultancy and carries out research on sustained access to digital information.

Driven by data, DANS ensures the further improvement of access to digital research data with its services and participation in (inter)national projects and networks. Please visit [dans.knaw.nl/en](http://dans.knaw.nl/en) for more information and contact details.