Implementation of the Research Core Dataset at universities in North Rhine-Westphalia – An approach of a federal initiative

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1. SUMMARY

In January 2016 the German Council of Science and Humanities (Wissenschaftsrat) published the specification of a core data set on research activities and recommended a nationwide realization within the german science system. To serve this recommendation the federal state North Rhine-Westphalia (NRW) established the federal initiative CRIS.NRW. This paper describes the aim and approach as well as recent activities and their results to succeed and enhance structures of communication and support for the implementation of the Research Core Dataset at universities in NRW.

2. INTRODUCTION

Research institutions are mostly faced with several internal as well as external reporting obligations. They have to gather different data regarding research activities for different occasions such as information needs for funding organizations, rankings and statistics as well as internal information needs. Furthermore the importance of acquisition and reporting of research activities and their results have constantly grown over the past years.
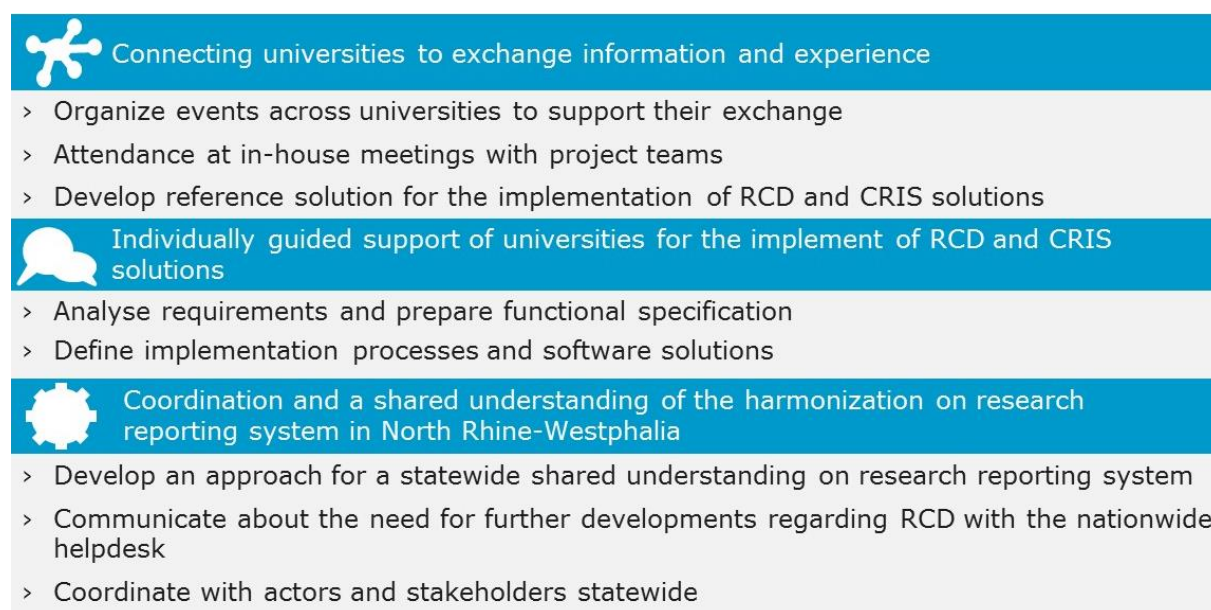
Especially in the German sciene system there are no existing general standards for the collection and processing of research information (Biesenbender & Hornborstel 2016). For this reason the effort to provide the necessary information of these diverse reporting purposes and obligation are often very high for universities. To reduce this effort, an approach to standardize the data definition, collection and reporting of research activities has been made by the Wissenschaftsrat. In January 2016 the Wissenschaftsrat published "Specification of a core data set on research activities", the so-called "Research Core Dataset" (RCD), and recommended a nationwide realization within the German science system (Wissenschaftsrat 2016, Biesenbender & Hornbostel 2016).

In Germany, higher education policies are regulated by the individual federal states. Therefore, the federal initiative CRIS.NRW was established in May 2016 to implement the Research Core Dataset at universities in the federal state of NRW.

3. AIM AND APPROACH

The main aim of CRIS.NRW is to establish central structures of communication and support for universities in NRW to implement the RCD and if necessary tools to accomplish the realization, like current research information systems (CRIS). In general a CRIS is described as a database or information system, which collects, manages and provides research information within research institutions (Ebert et all. 2015; Herwig & Schlattmann 2016). With its possibilities to aggregate research information it supports the reporting of research activities.

The activities within the scope of CRIS.NRW are structured in three parts (see Figure 1). Summarized the activities serve the purpose to connect the universities in NRW to enhance the information and experience exchange, to guide and support the universities individually and to coordinate a shared understanding as well as the harmonization of the research reporting system in NRW.

Connecting universities to exchange information and experience
› Organize events across universities to support their exchange
› Attendance at in-house meetings with project teams
› Develop reference solution for the implementation of RCD and CRIS solutions

Individually guided support of universities for the implement of RCD and CRIS solutions
› Analyse requirements and prepare functional specification
› Define implementation processes and software solutions

Coordination and a shared understanding of the harmonization on research reporting system in North Rhine-Westphalia
› Develop an approach for a statewide shared understanding on research reporting system
› Communicate about the need for further developments regarding RCD with the nationwide helpdesk
› Coordinate with actors and stakeholders statewide

Figure 1: Work Packages of the project CRIS.NRW

Overall CRIS.NRW pursues a statewide common agreement of the definition, collection and provision of data regarding research activities. With its approach CRIS.NRW aims to take an important part in the coordination and harmonization of the research reporting system in NRW as well as a valuable mediator for universities and the Ministry of Innovation, Science and Research of NRW.

4. ACTIVITIES & RESULTS

CRIS.NRW made serveral efforts since starting the project in May 2016. The activities were chosen to fullfile the purpose to get to know the universities, especially the persons in charge, and their needs to implement the RCD. The results are also used to adapt and strengthen the structures of communication and support to the demands of the universities.

Survey about Research Core Dataset

CRIS.NRW started by conducting and evaluating a survey that focussed on 30 public universities in NRW (Hochschulkompas 2017). The purpose was to investigate the status quo of the progress universities made concerning the implementation of the RCD. The main focus of the survey were two relevant questions: 1. the status of discussions about the RCD at the university and 2. the value of the RCD at the university. Altogether 25 universities took part in the survey. The results of the

survey were used to get an impression about the current status of implementation at the universities and how high the acceptance of the RCD is.

Results

Relating to the status of discussion about the RCD within universities, 23 of the universities consider the RCD as relevant and want to pursue its implementation further (see Figure 2). 11 out of 25 universities have already formed a project team or initiated first steps to do so.
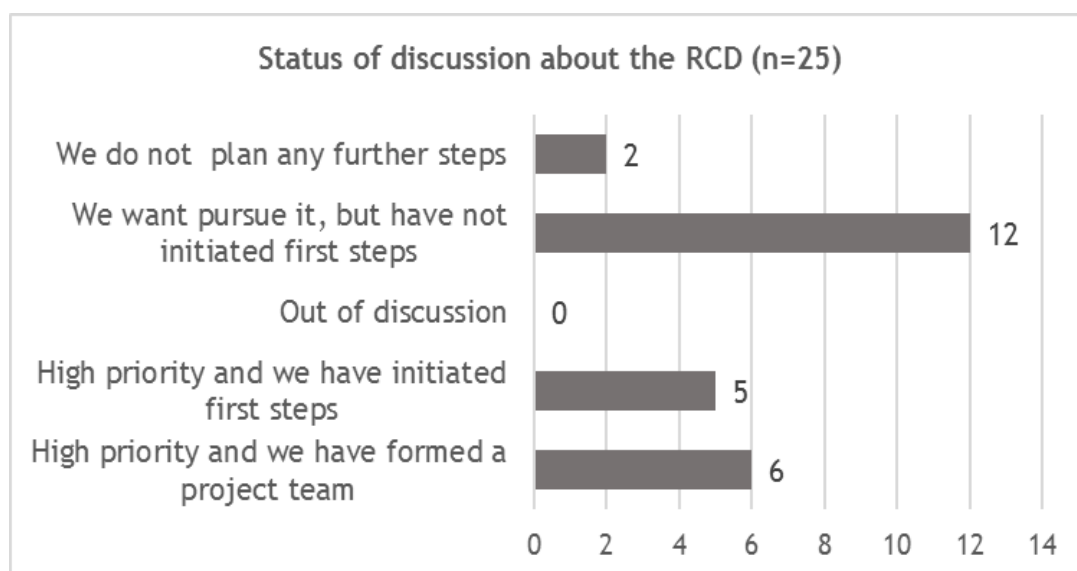

Figure 2: Status of discussion about the RCD

In general the results showed that almost every participating university feels positive about the RCD (see Figure 3). More than half of the universities appraise the RCD as a valueable approach to simplify the research reporting system and to standardize reporting requirements.
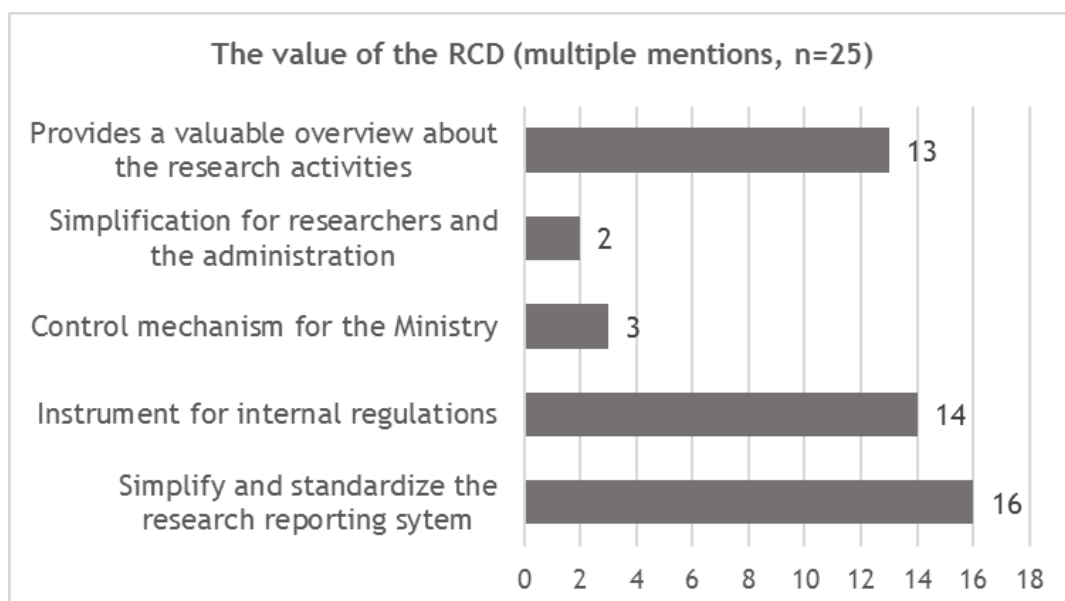

Figure 3: The value of the RCD

Individual meetings and informative events

As first step to create awareness about the RCD and to enhance the assembled structures of communication and support, CRIS.NRW started visiting several universities in NRW. These universities were interested in the approach of CRIS.NRW and/or needed guidance as well as support for the implementation of the RCD and CRIS solutions.

Furthermore CRIS.NRW organized and evaluated an information workshop in January 2017 for university members, explicitly for people, who are operationally in charge to realize the RCD and/or CRIS solutions. The aim was to promote the exchange of information and experience between universities as well as present examples of universities, which are already dealing with the RCD and/or CRIS.

In addition CRIS.NRW concucted a second survey during the information workshop. The main part of the survey were questions and views about: 1. the current status of the realization of the RCD at the university, 2. the aims that were pursued by the university in implementing the RCD, 3. which tools would be used to implement the RCD and 4. the possibilities of a cooperation with other universities. Overall 22 out of 28 participating universities completed the survey.

Results

The results of the survey confirmed the results of the previous survey as well as the individual meetings with a few universities the team of CRIS.NRW had. Regarding the current state of the realization of the RCD, 20 out of 22 universities answered that they are at the beginning of the implementation of the RCD. Only three universities had already made basic decisions, but are still at the beginning of their planning phase.

In terms of the aims the universities pursue in implementing the RCD, over 90% of the universities see an efficient data collection and analysis as well as research reporting as an advantage (see Figure 4). Also more than 80% want to optimize the external presentation about research activities in general and want to help researchers to represent themselves in a better way.
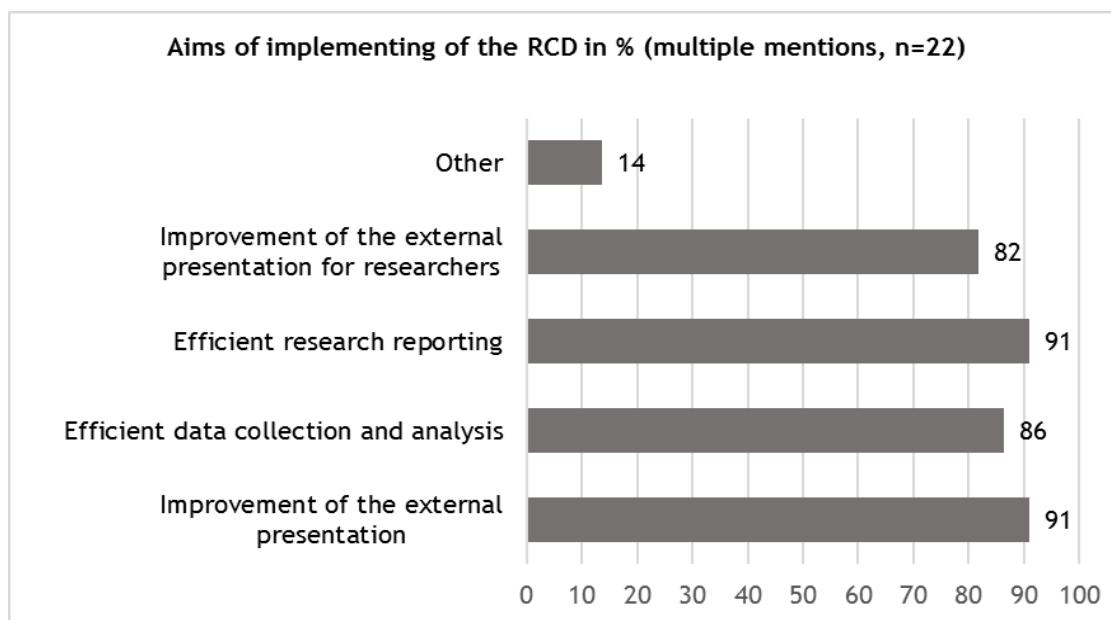

Figure 4: Aims of implementation of the RCD

Concerning the tools they want to use to implement the RCD, 11 out of 22 universities are not sure yet which tool they plan to use. Nine universities want to use a CRIS (commercial and non-commercial) to help implement the RCD. The remaining universities will use their already existing information systems or a data warehouse solution.

The results about potential cooperations between the universities (see Figure 5) show that nearly 70% of the universities are highly interested in a development partnership or would use a configuration of a CRIS from another university.
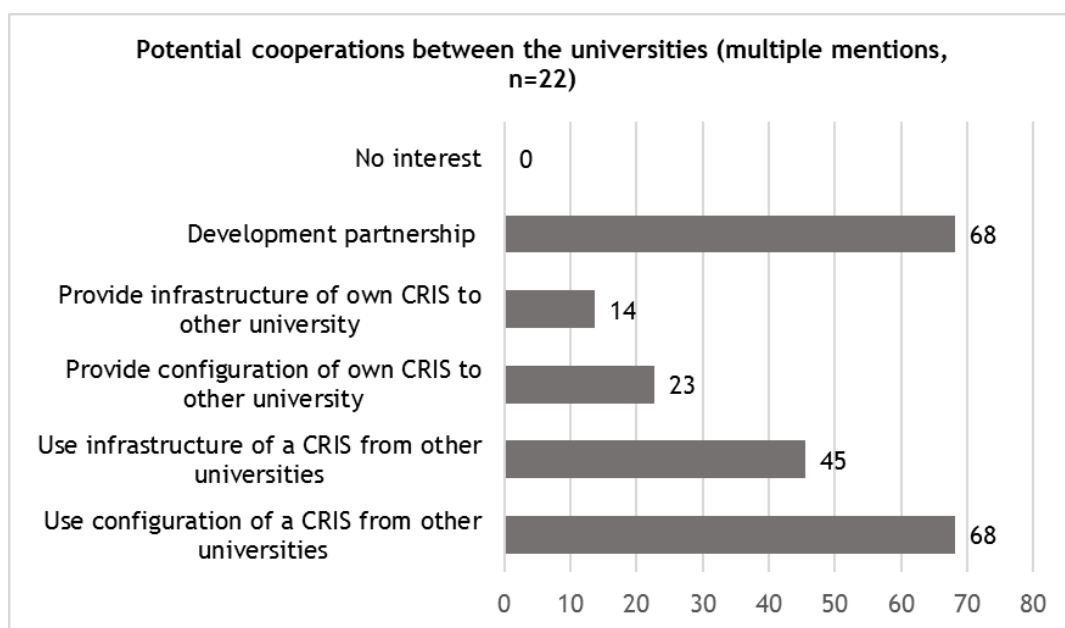

Figure 5: Potential cooperations between the universities

5. CONCLUSION & OUTLOOK

This paper presents the effort of the initiative CRIS.NRW from its start in 2016 to help and support universities in NRW to implement the RCD. The recent activities and their results show that most of the universities are still at the beginning of their intentions to implement the RCD. Fortunately a big part of the universities are highly interested in a common approach to implement the RCD and/or CRIS solutions.

Nonetheless the selected approach was fundamental to get to know the status quo of the universities in NRW as well as their planned attempts in implementing the RCD and/or CRIS solutions. In addition CRIS.NRW was able to adjust their approach and enhanced the structures of communication and support for universities in NRW. Further achievements of the activities can be summarized as follows:

- Got in touch with the universities and the persons in charge by conducting a survey about RCD
- Got to know the (information) needs of the universities for the implementation of RCD/CRIS solutions by doing individual meetings at different universities
- Connecting the universities and responsible persons for information exchange by organizing informative events

Furthermore the initiative took a big step in connecting the universities as well as making the first move regarding the cooperation possibilities between the universities in NRW.

A limitation of this paper is, that the federal initiative CRIS.NRW is still the only initiative in Germany with this approach. Concerning this fact, the authors can only report activities and results that were made within the initiative CRIS.NRW and do not have the chance to compare the approach and the results with other federal initiatives in Germany. But as the approach turned out to be a good proceeding to archieve the goals, it could be used as best practice for other federal initiatives in the future.

The next important step for the team of CRIS.NRW is to develop concepts for a common practice for the implementation of the RCD in cooperation with the universities in NRW. Even if most of the universities are still at the beginning of their attempts, it can be seen as a good starting position. Based on the current level of implementation one concept could be to identify how the universities of NRW can be brought together in usergroups for an enhanced exchange. The goal of these usergroups will be to evaluate a common approach in how to implement the RCD/CRIS solutions and how to develop a common understanding regarding the research reporting system in NRW.

6. ACKNOWLEDGEMENTS

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