

Organization PDEng program Data Science

Addendum REPORT FOR THE CERTIFICATION COMMITTEE

PROFESSIONAL DOCTORATE IN ENGINEERING PROGRAM DATA SCIENCE

September 2016 – September 2019



Jheronimus Academy of Data Science

Sint Janssingel 92

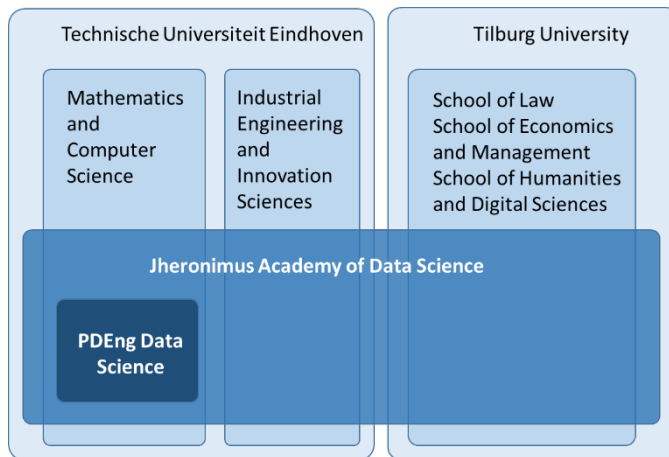
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Section 1 | Institutional stakeholders

The PDEng program Data Science was started in the context of the Jheronimus Academy of Data Science, JADS for short. JADS is an initiative of TU/e, TiU, the municipality of 's-Hertogenbosch, and the province of Noord Brabant, in order to boost education, research, and valorization of data science. In the following we describe the relations of PDEng DS with its various stakeholders.



Positioning of PDEng program Data Science within JADS, TU/e and TiU.

1.1 Jheronimus Academy of Data Science

PDEng DS is located at the 's-Hertogenbosch campus of JADS and is an integral part of the JADS ecosystem, which makes JADS one of the main institutional stakeholders of our program. The program's finances and budgeting are done at JADS. Project acquisition is almost entirely done at JADS, with involvement of IMPACT team and program's own network. Part of our lecturers are affiliated to JADS. In the medium and long term we aim at involving academic staff of JADS in all our activities, with a focus on lecturing and project supervision.

PDEng DS aims to strengthen the collaboration with other JADS programs. We are currently collaborating with the Professional Education program, where our trainees are involved in coaching activities, and, we also aim to collaborate closer with the Master programs at JADS.

1.2 Department of Mathematics and Computer Science, at TU/e

The Department of Mathematics and Computer Science (M&CS), at TU/e, is one of the main institutional stakeholder of our program. Until recently, PDEng DS was organizationally entirely embedded in M&CS at TU/e. Since 2020, the finance and budget activities of our

program are aligned with JADS. M&CS is involved in our educational environment through lecturing and mentoring 1st year trainees. The department is currently involved in four modules and two extra modules are under discussion. Our program's ambition is to get M&CS academic staff involved in the supervision of final projects.

We recognize the potential and importance of working closer together with the two PDEng programs from M&CS, Software Technology and Automotive / Mechatronics System Design, also in the context of Graduate School of TU/e. Due to various circumstances, especially the Covid-19 crisis, the discussions are put on hold for the moment and will be resumed as soon as possible.

1.3 Department of Industrial Engineering and Innovation Sciences, at TU/e

The Department of Industrial Engineering and Innovation Sciences (IE&IS), at TU/e, is the second institutional stakeholder of our program from TU/e. The direct involvement of IE&IS in the PDEng DS started with the incorporation of the last generation of PDEng trainees of the program Operations Management & Logistics. Currently we are redesigning the way we collaborate with the IE&IS department in our educational program and projects with business community. We plan to incorporate one module from the Information Systems group of IE&IS in our curriculum, and involve IS group members in final project supervision.

1.4 Graduate School, TU/e

The Graduate School of TU/e oversees all post-Bachelor programs: MSc, PhD, and also PDEng programs. The past few years efforts have been made towards more cooperation, improved quality control, and standardization of the various PDEng programs of TU/e.

Our program is aligned with these developments at Graduate School level. The management staff plays an active role in shaping the collaboration between various PDEng programs at TU/e. We are active in shared educational activities; our trainees take part in shared electives, and our program organizes one popular shared elective for the rest of PDEng programs at TU/e.

PDEng DS is also aligned with the initiatives and discussions related to quality of PDEng programs at TU/e. Our program management actively participates in the Board of Examiners where aspects such as changes to the predetermined curriculum, the Training and Supervision Plan, the Thesis Evaluation Committees, and special exemptions are discussed.

Trainees from PDEng DS take part in the TU/e PDEng Council, an informal consultative body.

More recently, in the context of the Covid-19 crisis, the Graduate School initiated a financial support plan that incorporates the PDEng Data Science program as well.

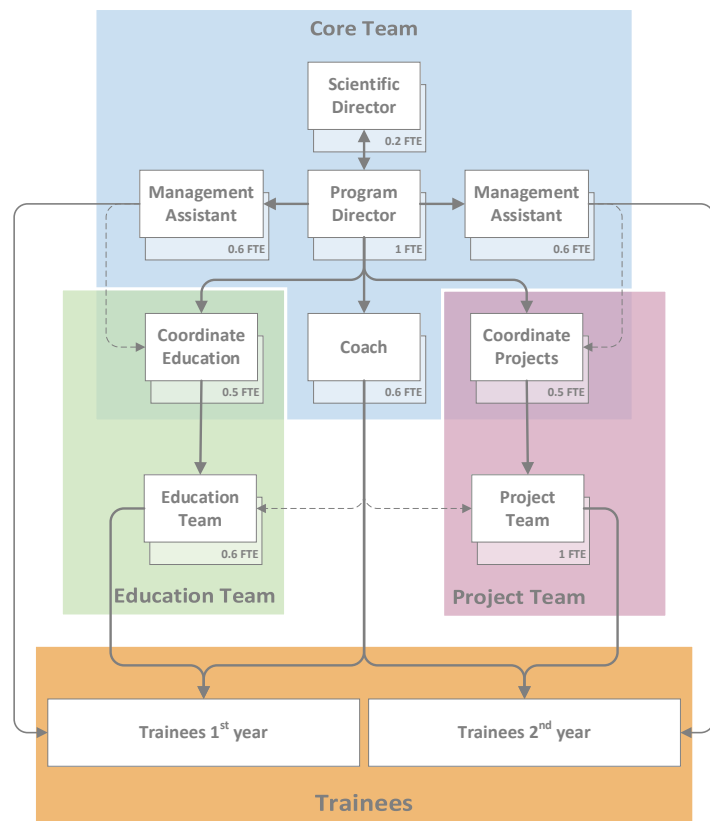
1.5 Tilburg University

Tilburg University (TiU) is the second institutional stakeholder of JADS. In PDEng DS TiU brings in the social, economic, ethic and law perspectives to Data Science. Modules such as Business analytics, Ethics and Law are examples of educational activities where TiU contributes in our program.

Section 2 | Program management structure

The structure of the PDEng program Data Science organization consists of three teams:

- **Core Team**, to create, to implement, and to maintain the learning environment;
- **Education Team**, to support the learning environment of first year trainees. The focus is on teaching, mentoring during the projects, and coaching the professional skills;
- **Project Team**, to support the learning environment of second year trainees. The focus is the acquisition, preparation and supervision of graduation projects



2.1 Scientific Director

The scientific director position is currently filled by prof.dr.ir. **Jack van Wijk**, with 0.2 FTE. Jack is full professor in visualization at the Department of Mathematics and Computer Science of TU/e.

The main responsibilities of the scientific director are designing the learning environment, controlling the quality of education, representing the program at Graduate School level, and chairing the graduation project evaluation committees.

2.2 Program Director

The program director position is currently filled by dr. **Tiberiu Muntean**, with 1 FTE.

The program director is responsible for designing and implementing the learning environment, driving and controlling the quality of education, assessing the new candidates, bridging between first and second year, supporting and quality controlling the program administration, supporting project acquisition, mentoring trainees, design and implement the Training Supervision Plan, supervise second year trainees.

2.3 Coordinator Education

The Coordinator Education position is currently filled by the program director.

The Coordinator Education designs and implements the learning environment, drives the quality of education, organizes and maintains the educational team, updates program's curriculum, establishes new connections with groups within TU/e and TiU, attracts academic staff to supervise graduation projects.

2.4 Coordinator External Relations (Coordinator Projects)

The Coordinator External Relations position is currently filled in by **Tanya Lagoda**, with 0.5 FTE, since September 1st 2020.

The Coordinator External Relations is mainly responsible for acquisition and supervision of graduation projects, establishing and maintaining connections with business community, and co-creation with companies and government organizations.

2.5 Program Management assistants

The management assistant positions are currently filled by **Denie Maas** and **Femke Korst**, each with 0.6 FTE.

The two management assistants split their duties roughly into first year trainees (Denie Maas) and second year trainees (Femke Korst). The main activities related to first year trainees are planning education activities, supporting the educational team, handling the applications of new trainees, organizing the Data Challenge Weeks and graduation ceremonies, and maintaining the communication with the institutional stakeholders. The main activities related to second year trainees are the administrative actions during final

projects, contracts for the final projects, support and organization of round table with business community, supporting the project team.

2.6 Coach

The Coach position is currently filled by **Anouk van den Kerkhof**, with 0.3 FTE.

The program coach is responsible for the development of professional skills through one-on-one coaching sessions, workshops, design and implementation of the Training and Supervision Plan, support assessment of new trainees. Our program recognizes the increasingly important contribution of the coach to the professional development of our trainees.

2.7 Education Team

The current members of the Education team are Cassio Polpo de Campos (associate professor in Information Systems group, M&CS, TU/e), Rui Pires da Silva Castro (assistant professor in Stochastics group, M&CS, TU/e), Damian Tamburri (associate professor in Data Engineering at JADS), Jack van Wijk (full professor, Visualization group, M&CS, TU/e), Stef van Eindhoven (associate professor, JADS), Koen van Holten (legal practitioner), Judith Strother (professor Global Strategic Communication, Florida University), Willem-Jan van den Heuvel (professor, Information Systems, TiU).

2.8 Project Team

The current members of the project team are Tanya Lagoda (coordinator external relations, PDEng Data Science), Liesbeth Leijssen (director IMPACT, JADS), Bas van Leeuwen (business director, JADS), Renato Calzone (business director, JADS), Tiberiu Muntean (program director, PDEng Data Science). The project team is responsible for project acquisition, maintains the contacts and the network with the business community, organizes regular round tables with the companies and government organizations, and co-creation with business community.