



# Amsterdam Data Science

## 2016 Report

### **Summary**

2016 has been an exciting year for Amsterdam Data Science (ADS) with many key goals achieved. Our network organisation has continued to grow with new partners joining, new collaborations with industry established, and a broadened international network. This report summarises our continued growth and how we are embedding more and more within the region. In this report we also highlight the Amsterdam Academic Alliance Data Science (AAA-DS) programme, as we move closer to unifying into one joint initiative.

### **Who we are**

ADS is a network organisation initiated in 2013 by the Amsterdam-based knowledge institutes: Amsterdam University of Applied Sciences (AUAS), Centrum Wiskunde & Informatica (CWI), University of Amsterdam (UvA), and Vrije Universiteit Amsterdam (VU).

ADS comprises over 600 scientific staff, at all levels, e.g.,:

- **Master students** who spend a day a week on a specific ADS research project (9);
- **PhD's and Postdoc's** on specific AAA-DS projects (16) ;
- **Associate and full Professor** level researchers (over 80) from multiple research disciplines.

### **Our goal**

ADS accelerates data science research by connecting, sharing and showcasing world-class technology, expertise and talent from Amsterdam on a regional, national and international level. Our research enables business and society to better gather, store, analyse and present data in order to gain valuable insights and make informed decisions.

### **Finance**

In 2016, each official ADS partner:

- Faculty of Digital Media and Creative Industries, AUAS
- CWI
- Informatics Institute, UvA
- Economics and Business, UvA
- Computer Science, VU

Contributed 10K in cash and 40K in kind. The cash contributions from the partners were used to support project management staff, hosting of regular seminars and events, sponsorship of the European Data Forum in Eindhoven, and the ADS website and marketing costs.

Within ADS, there is also the AAA funding stream, this is a joint data science initiative of UvA and VU, aimed at intensifying collaboration with each other and other regional knowledge institutions. The AAA-DS projects are unique in that they span multiple research domains (business, humanities, informatics, life sciences and social sciences), faculties and universities. There are 12 postdocs and 4

PhD students, each on a specific data science project within this 3-year programme.

- **3.069K** was the original funding amount awarded by the UvA and VU CvB.

In addition to this original amount the following has been secured:

- **1.255K** for AAA projects with ABS, AUAS, CWI, Philips, ORTEC and VUmc;
- **4.272K** in NWO grants to AAA researchers for project collaborations with AHold, Beeld en Geluid, Elsevier, and KNAW;
- **8.596K** in total cash injection to the AAA programme.

### **Key 2016 Highlights**

#### **Establishing new partnerships and building our network**

**Economics and Business, UvA:** At the start of 2016, Amsterdam Business School and Amsterdam School of Economics, under the umbrella of the Economics and Business Faculty, joined ADS. This partnership has led to many successful collaborations over the course of 2016.

**Elsevier:** In October, ADS signed an agreement with scientific information solutions provider Elsevier aimed at advancing data science research and education in Amsterdam. Both parties are embarking on a number of joint projects that will enable data scientists to access and share data and use the latest technology to collaborate and advance the field of data science together. ADS and Elsevier will collaborate together on several fronts, including research and development, joint promotion of Amsterdam as a data science hub, and data science talent development.

**Wuhan, China:** Also in October, ADS signed a Memorandum of Understanding with Wuhan University of Science and Technology (WUST), and the Wuhan Academic hospitals. This international collaboration will enable WUST and ADS to collaborate on research and education for at least the next five years. A number of projects have been identified which involve multiple ADS partners linking with Wuhan, specifically within the healthcare and informatics research fields.



**ACBA, VU:** In January 2017, ADS will welcome the Amsterdam Center for Business Analytics (ACBA) as an official ADS partner. We are very much looking forward to a strengthened collaboration and working together in the business analytics domain.

#### **Strengthening the Amsterdam knowledge institutions collaborations**

**AAA-DS:** UvA hosts 8 positions and VU also 8, with the individual positions bridging universities, thus maximising collaboration opportunities. Eight positions span research domains (e.g., informatics/social sciences, business/informatics) and 2 involve local industry partners (ORTEC, Philips). AAA-DS also partners with other key Amsterdam academic partners: AUAS, CWI and VUmc.

**Research Assistant Projects:** ADS has enabled 9 research assistant projects, where Master's students spend 1 day a week on a specific project, with each individual project spanning two different

knowledge institutes including AUAS, CWI, UvA and VU, but also local industry and start-ups, for example CTcue and Dagblad De Correspondent. These represent new collaborations that would not exist without the ADS funding.

**ADS Assignments:** The assignments group have also worked together in 2016 on joint funding calls, which span the Amsterdam knowledge institutes, enabling stronger applications to be submitted, for example in the Cities and Creative Industry domains.

### **Linking with related data science initiatives**

**Responsible Data Science:** ADS researchers have been key applicants in a joint data science project application for the 2016 round of the NWO Zwaartekracht, a collaboration of 11 knowledge institutions across the Netherlands. This new collaboration has enabled this important topic to receive great attention within the industry. Alongside this we organise a monthly seminar programme, with the launch event attracting over 80 attendees.

### **Promoting data science education in Amsterdam**

**Master's Data Science Track:** ADS researchers were actively involved in the setting-up, and now the teaching of, the data science track in the joint UvA-VU Information Studies Master's (commenced in September with 35 students). In setting up this curriculum and education programme, we actively involved industry and key stakeholders. Fifteen organisations are involved within the master thesis process and they provide students the option to base their thesis on specific cases within their organisation.

**Education Awards:** In November, ADS researchers were successful at the Computable Awards receiving two awards: ICT project of the year in education for the Watson Innovation Course (a VU and IBM collaboration), and ICT educator of the year (a ABS-UvA, ADS, ORTEC, The Analytics Academy collaboration).



**Amsterdam School of Data Science:** Recently we have launched a new education initiative, an umbrella term to encompass the data science education offering from Amsterdam. In November we launched the new School website (<https://www.schoolofdatascience.amsterdam>), where potential students can search for all course and programme options in data science from the Amsterdam knowledge institutes and at all levels: Bachelor, Master, Postgraduate and Professional/Executive education. Currently we have over 170 courses and programmes featured. Around this initiative we have carried out intensive marketing to highlight to the external community the strong position of the Amsterdam knowledge institutions in terms of data science study.



### **Disseminating our research to the outside world**

ADS has an active local Meet-up community (<https://www.meetup.com/Amsterdam-Data-Science/>) with over 2,650 members. We organise seminars and events, generally twice a month, which is an opportunity for our researchers to showcase their projects to key stakeholders. We also invite local industry to present at these events, e.g., at the recent City Analytics Event (October), representatives from the Municipality presented. In our December event there will be a presentation from an Air France-KLM representative.

In 2016, we facilitated 3 different types of knowledge sharing sessions to encompass our broad community:

- **Coffee & Data:** On a topic and/or an application area, where knowledge on research and applications from industries are shared, e.g., Cities, 9 events in 2016;
- **Deep Dive:** On a focussed topic, going into more depth in the technology than within the Coffee & Data, e.g., Business analytics, 5 events in 2016;
- **Responsible Data Science:** On how we can ensure that data science research is fair, accurate, confidential and transparent, 4 events in 2016.

In August, we launched a monthly newsletter, which is mailed to our internal and external community to highlight our research further and enhance its reach. Together with Elsevier, a press release was disseminated in November to show the new collaboration activated.

### **Looking to 2017**

**ADS Foundation:** One of the key goals of 2017 will be for ADS to become a foundation. As a foundation, external parties will be able to become a member, which will allow us to expand our connections further and enable our network to broaden.

**Education:** In March, we will hold an official launch event for Amsterdam School of Data Science where we will focus on attracting parents and teachers to disseminate the demand for young people with a data science education.

**Minor Data Science:** We will focus on the preparation of a new minor in data science as part of the goals of Amsterdam School of Data Science to stimulate more youngsters to study data science in Amsterdam.

**Regional and International Network:** We will continue to expand our network and collaborations, for example we will focus on setting up a stronger international network. We are currently in discussion with Columbia Data Science (New York) and Insight (Dublin, Ireland) to set-up new collaboration agreements.

**External organisations:** We will continue to work on setting-up more research collaborations with new partners in 2017. We will continue to move forward with the planned collaboration with CBS (National Center of Statistics) and multiple private partners to work together in labs.