

# Data Roles of the Future at TU Delft

30 November 2017 by Alastair Dunning and Marta Teperek

	Data Steward	Data Manager	Data Engineer	Data Scientist
<b>Affiliation</b>	Faculty	Research Group	Faculty/Research Group	Research Group/Non-university
<b>Expertise</b>	Good understanding of Faculty's research; some understanding of research data	Understanding of research specific to the research group	Background in software development and databases	Data analysis, programming
<b>Education</b>	PhD or equivalent	PhD or equivalent	BSc or higher	MSc or higher
<b>Skills &amp; knowledge</b>	Data management Disciplinary workflows and metadata standards Oral and written communication skills Negotiation skills Project management	Data management Disciplinary workflows and metadata standards Analytical thinking Project coordination Written communication skills	Analytical thinking Programming and data modelling Software management Data management Disciplinary workflows and metadata standards	Analytical thinking Programming Data modelling Oral and written communication skills
<b>Tasks</b>	Analyse faculty needs for data management; Create policies and workflows; Identify skill gaps and ensure appropriate training provisions; Identify support service gaps and design strategies to fill them; Advise faculty on internal and external developments in data management.	Analyse data management needs of a research group; Propose, implement and monitor workflows to improve data management practice; Oversee collection, description, cleaning, merging, licensing, sharing and publishing of data.	Analyse and consolidate database needs of a research group; Design and maintain databases for specific use cases; Develops code for applications / interfaces / web services; Champion software sustainability practices.	Find, clean, merge, analyse and interpret datasets; Ensure intellectual consistency of data across various projects; Model, visualise, present and communicate data insights and findings to various audiences, and recommend applications.
<b>Liaison</b>	Cross-faculty stakeholders University-wide support services Data Stewards from other faculties National and international stakeholders	Research group members Faculty Data Steward Data Engineer Faculty-level support service providers Third party providers of specific tools for data management	Research group members Data Manager Data Scientist Faculty Data Steward Programming communities	Research group members Data Manager Data Engineer Project leaders Other stakeholders, including third parties, as appropriate