

Enablers

Infrastructure/Sport Data Valley

- Dennis van Kooij, Mulier Instituut
- Peter Henneman, Amsterdam UMC

Data Science

- Arno Knobbe, U Leiden
- Julia Lefter, TU Delft
- Stephan van der Zwaard, Amsterdam UMC
- Arie-Willem de Leeuw, UMC Groningen

Wearables and Sensors

- Jasper Reenalda, U Twente
- Frank Wouda, U Twente
- Filipe Arroyo Cardoso, TU Delft
- Vandewauw, U Maastricht

(Cohorts? Look elsewhere →)

Knowledge, Expertise and Skills

The workpackage revolves around a set of skills related to the recording (*Wearables and Sensors*), storage and sharing (*Infrastructure/SDV*), and analysis (*Data Science*) of data. Approach us for any challenge in this area that you might have. We can advice on the use of existing wearables and also develop novel sensors for specific markers. If you intend to collect data for future analysis, we can advise on the best way to set up the data collection and on how to store the (potentially sensitive) data. SDV has many facilities for managing cohorts, connecting to third-party wearables and running surveys. They can also facilitate in setting up a federated data space that allows different parties access to data that you don't want to leave your secure environment. Finally, when it comes to analysing complex sensor data and dealing with longitudinal data, our experts can support you.

Our aim is to enable the different BIO-COMPaaS workpackages with knowledge and support on Data Science and Sensors and Wearables as well as to provide a data infrastructure.

Collaboration or interaction with Wp's, and other enables or stakeholders

The enablers workpackage is designed to enable and thus interact with each other workpackage. We interface with external stakeholders through the other workpackages. Note that while the SDV infrastructure will be available over the full 8 years, the budget for the enablers only allows activities roughly in years 2 and 3.



Key Stakeholders

All other workpackages!

Key Challenges

- Limited budget/resources
- Being sufficiently involved in the day-to-day activities of other researchers to make a difference
- Limited connections and overlap between cohorts and data sources

Refs

Paraschiakos et al. 2022, A recurrent neural network architecture to model physical activity energy expenditure in older people, Data Mining and Knowledge Discovery 36 (1), 477-512
 de Leeuw et al. 2023, Exploiting sensor data in professional road cycling: personalized data-driven approach for frequent fitness monitoring, Data mining and knowledge discovery 37 (3)
 Scheltjings et al. 2026, Do Training Load Metrics Agree? A Comparison of Session Rate of Perceived Exertion, Physiological and Biomechanical Load in Outdoor Running. Sports Med - Open 12, 18

