The data have been collected through the following channels

Positron-emission tomography (**PET**) is a nuclear medicine functional imaging technique that is used to observe metabolic processes in the body as an aid to the diagnosis of disease. PET screening for both Amyloid-beta and Tau pathologies (depositions in the brain) have been performed in all participants only once.

Magnetic resonance imaging (MRI) is a medical imaging technique based on strong magnetic fields and radio waves to generate images of the anatomy and the physiological processes of the body. Advances in image acquisition and analysis of MRI now facilitate a diagnosis of Alzheimer's disease AD at a pre-dementia (e.g. Mild Cognitive Impairment (MCI)) stage. In particular, measures of whole brain and hippocampal atrophy have been shown to precede symptoms by several years and longitudinal imaging provides power to detect change in these early cases.

Magnetoencephalography and Electroencephalography (MEG and EEG) are functional neuroimaging techniques for mapping brain activity by recording magnetic and electric fields produced by electrical currents occurring naturally in the brain, using very sensitive sensors. Participants have been tested on the 'tasks' while recording their brain activity using MEG and where site-specific facilities allow, also using simultaneous EEG. The MEG scans have been performed in the same order, with up to 60 minutes of recording in a series of short 'tasks' each lasting 6-16 minutes.

Ophthalmology: Recent evidence has demonstrated changes in retinal nerve fiber layer and overall retinal thickness, changes in retinal vascular calibre and appearances in dementia.

Gait is the pattern of movement of the limbs of humans during locomotion over a solid surface. The gait data has been collected through deployed a body worn triaxial accelerometer for detailed gait analysis in the clinic and unobtrusive monitoring of gait and activity during free living. Time-series data (sampling frequency of 100 Hz), repeatedly collected 4 times in centers and using free-living sensor wearing for 7-days at home.

Biomarkers including blood test results and cerebrospinal fluid (CSF) analysis.

Clinical and cognitive assessments: Participants have been interviewed on socio-demographic, lifestyle factors, medical history, medication as well as a physical and neurological examination, including: height, weight, blood pressure, a variety (more than 10) of standard clinician and self-administered scales and Cambridge Neuropsychological Test Automated Battery (CANTAB).