Utilising GIS Data to Personalise GPS Navigation
as downtown and city landscapes change through regeneration or decline and the use of space changes, previously familiar places may become unfamiliar.

unfamiliarity can lead to insecurity, disorientation, fear over personal safety, social exclusion and loss of independence.

this is important for both older adults ageing in place and the increasing numbers of older people traveling the world as tourists.
1) outline the mechanisms and strategies used by older people to navigate unfamiliar spaces as drivers, pedestrians and users of public transport.

2) operationalise a collaborative spatial planning toolkit that enables older community members to build a content relevant GIS information database.

3) demonstrate how the GIS information can facilitate personalized GPS navigation (exploration) in built environments.
mechanisms and strategies

panoramic images

film footage of journeys through town centres

still images depicting the same location at different times

physiological and perceptual responses

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micro-level analysis of walkability

- characteristics of the built environment indexing four aspects of streetscapes (functionality of structural aspects of the streetscape (sidewalks, verges, etc.); personal and traffic safety; aesthetics of the visual surroundings; and availability of services, transportation and parking to support the location as a destination)
- urban design qualities (imageability, enclosure, human scale, transparency, complexity)

access available data sources in local government
complete the data set with street audits by older adults
personalized GPS navigation

integrate GIS information with GPS location

desktop interface

route finder

personalised navigation

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OPUS is Latin for a work with a collection of works (plural) an opera

In architecture, OPUS describes a specific technique, method or style of connecting building elements, following the history of Roman architecture.

In Roman times, social elements such as wealth and high population densities in cities forced the discovery of new (architectural) solutions.

The creation of buildings and spaces made to impress as well as perform public function.

The present OPUS (work) will enable personalised navigation of built environments.

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OPUS research team

new dynamics of ageing
a cross-council research programme

investigators:
Professor Judith Phillips, Professor Nigel Walford, Dr Mike Lewis, Professor Nigel Foreman, Ann Hockey, Edgar Samarasundera, Dr David Carswell, Dr Mark Del Aguila

collaborators:
The Welsh Assembly Government, Colchester Borough Council, Castleoak Care Partnerships, Age Concern Cymru, Swansea Network 50+, Swansea U3A, Clinical Research Collaboration Cymru

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