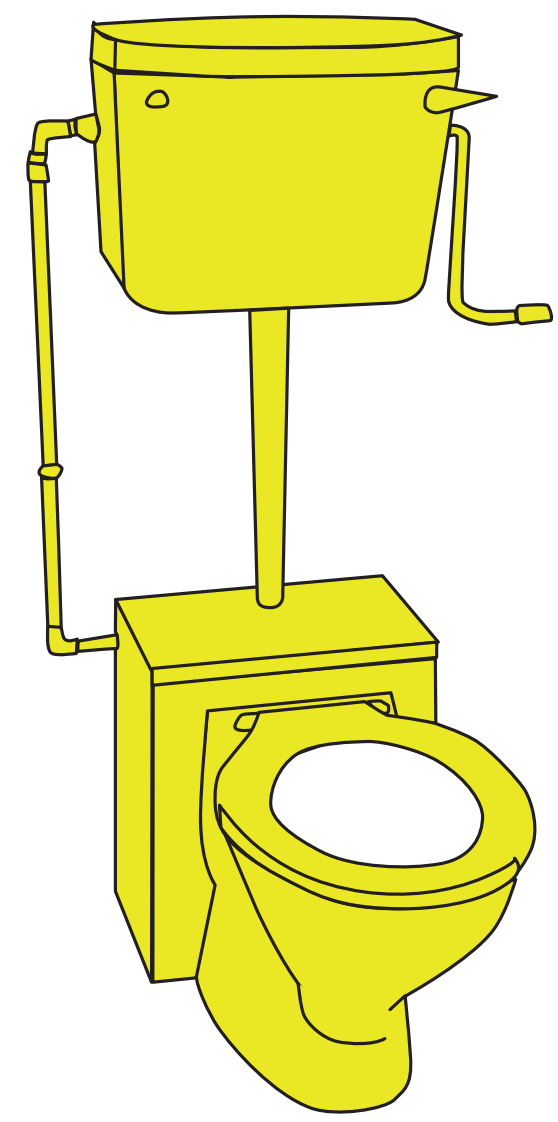


TACT³ Finding Public Toilets through Applications and Open Data



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Besides dementia, **nothing is more feared** by many older people than incontinence. Whilst the ageing population in the UK grows, Help The Aged (Age UK) found that the number of available public toilet facilities dramatically declined¹. Due to toilet access difficulties, many older people **limit the time and the distances** that they are away from home, reducing their quality of life².

TACT3 is a 3-year research project looking at ways to help older people with continence management. As part of TACT3, the Helen Hamlyn Centre for Design is exploring how to design-out problems with publicly-accessible toilet provision. The research takes an **inclusive design approach** by interviewing users of public toilets with more extreme needs as well as providers of different facilities and other professionals involved in public toilet provision.

The research proposals for a **'Great British Public Toilet Map'** brings together public participation, local authority input and private developers to address a problem of social value.

¹ Help the Aged. Nowhere to Go. London; Help to Aged; 2007.

² Hanson J, Bichard J, Greed C. The Accessible Toilet Design Resource. London; UCL/Vivacity; 2007. 22 p.

Inclusive Design Research

Continenence concerns affect people of all ages. We interviewed nearly 100 people, from the mothers and fathers of babies to those aged over 90, about the problems of needing, finding and using a toilet when away from home.

Our inclusive design approach involved speaking to those with more **extreme needs**, such as young women with irritable bowel syndrome, those experiencing urgency as a side-effect of medication, pregnant women, parents, carers and people with medical conditions for whom accessing toilets is **vital to their quality of life**.



We also spoke to providers of public toilets and other professionals about the **barriers** to better public toilet provision, including local authorities, planning departments, architects, department stores and train station managers.

The providers suffered mostly from **financial constraints**, particularly due to the cost of cleaning and maintaining facilities, and vandalism.

Ideas to improve the provision of publicly-accessible toilets for users would have to respect the financial barriers experienced by providers in order to be feasible.



"I won't go somewhere unless I know what's going to be there.. ..because it would just be a disaster for me if I went somewhere and they didn't have loos. I would just come home again."

26 year old with irritable bowel syndrome

Product design solutions for improving existing or new facilities could be costly for providers.

Instead we took a **service design** approach in order to rationalise the existing provision.

Our approach focused on better 2-way communication between users and providers. We began with info on **location, type of facilities and accessibility**.



Existing Toilet-finder Apps

Toilet-finder apps use 3 different methods to find information on public toilet locations:

Individual Moderator

A person/team who populate the database and/or check information from the public.

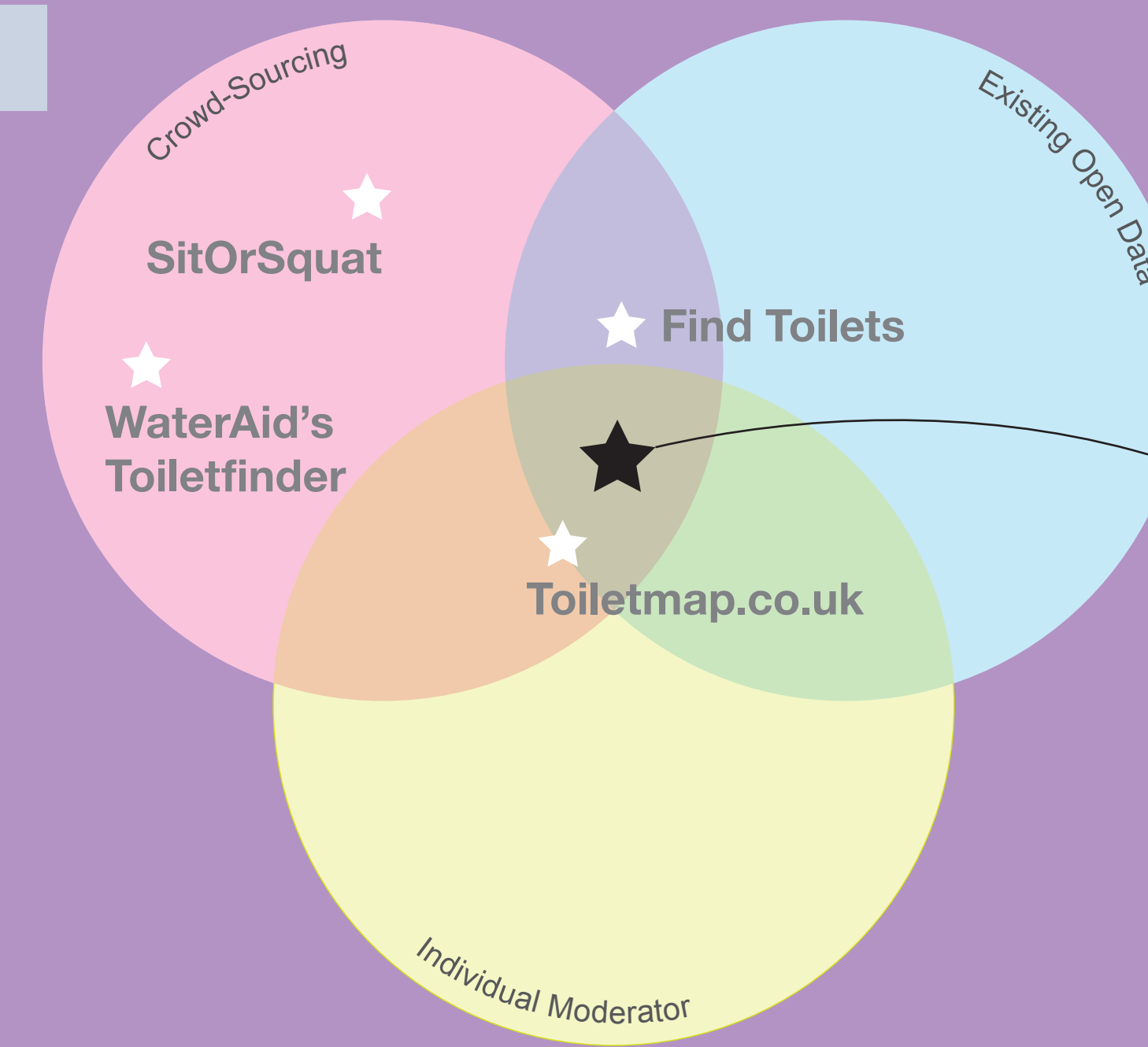
Crowd-Sourcing

Requesting entries from the public - in this case the app users.

Open Data

Free-to-reuse information from toilet providers that can be read by a computer program.

Smartphone App Comparison

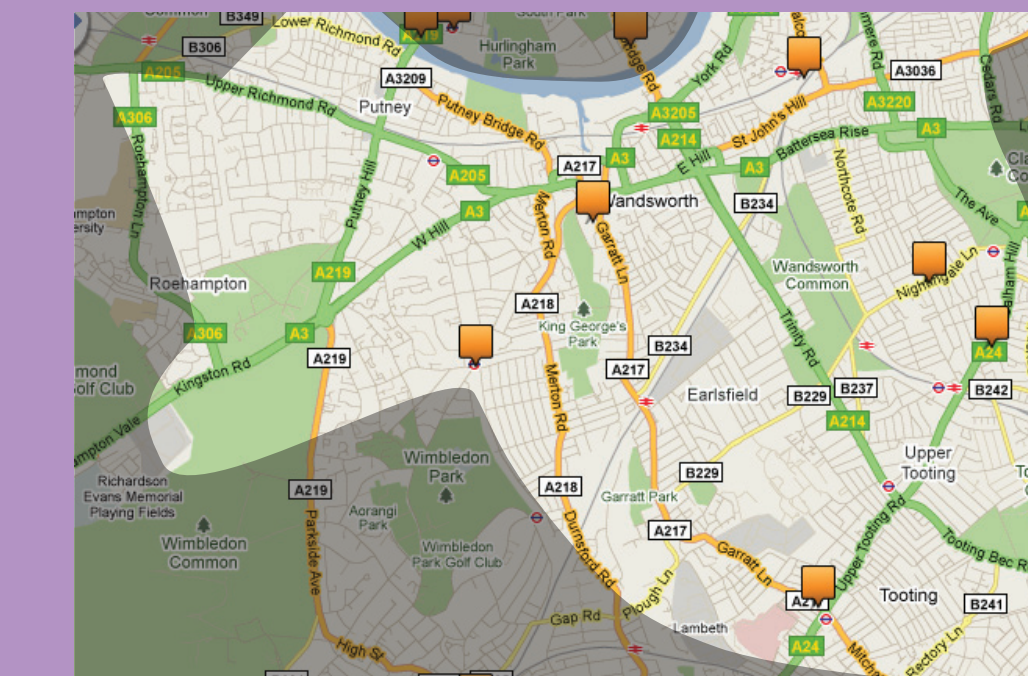


APP INFO	SIT OR SQUAT	WATERAID'S TOILETFINDER	FIND TOILETS	TOILETMAP.CO.UK
Developer	Densebrain, Inc	Be Tomorrow	Elbatrop	Ian Mansfield
Coverage	World-Wide	UK	UK	London
Find Toilets	via GPS/Name/Map	via GPS	via GPS/Name	via GPS/Map
Add Toilets	via GPS/Name/Map	via Address	via GPS	via website
TOILET INFO				
Facility Type	✓	X	X	✓
Opening Times	✓	X	✓	✓
Accessibility	✓	X	✓	X
Baby-changing	✓	X	X	X
User Rating & Reviews	✓	X	X	X
# OF TOILETS:				
in Wandsworth	6	NA	10	45
Within 1km of Clapham Junction	1	2	1	7
	Nov '10	Nov '10	Nov '10	April '11

Public Toilet Open Data

The app Sit or Squat allows the most information about a facility to be added.

However apps that rely on crowd-sourcing alone suffer from a lack of data. The information in the Sit or Squat app is incomplete and out-of-date.



SitorSquat in Borough of Wandsworth



OpenData for Borough of Wandsworth

The map on the right shows the 56 public & community toilets provided by Wandsworth Council in Nov 2010. 'Open data' produced by toilet providers such as councils is complete and maintained by the provider.

If more 'open data' was available, all the apps would operate nearer the centre of the diagram.



The research output will be a website, The Great British Public Toilet Map. The site will ask the public to contact their councils to request that they publish open data and participate in the project, in order to create a national map of publicly-accessible toilets.

As the data is 'open', app developers can also use it to join-up information that is fragmented across 300+ councils, to communicate where toilets are and fulfil a social need.