

Parking Guidance in Waterford City Centre

In 2009, Waterford City Council commissioned Arup to design, manage and undertake the PSDP role for the installation and commissioning of the largest **Parking Guidance System** in Ireland outside of Dublin. The system was designed to provide an enhanced driver experience of Waterford City by providing real-time parking information on all approaches to the city and along all major routes within the city centre.

The System includes:

- 9 Car Parks
- 5 Full Matrix Variable Message Signs
- 20 Dynamic Parking Guidance Signs
- 10 Static Parking Guidance Signs

The system was designed to provide Parking Guidance Information (PGI) for 9 Car Parks within the City Centre area. Given the number of stakeholders and the complexity of designing a PGS which would satisfy all parties the design and siting of each sign was of critical importance. Through consultation all needs were facilitated by the provision of 5 Full Matrix VMS, 20 Dynamic PGS Signs and 10 Static PGS Signs.

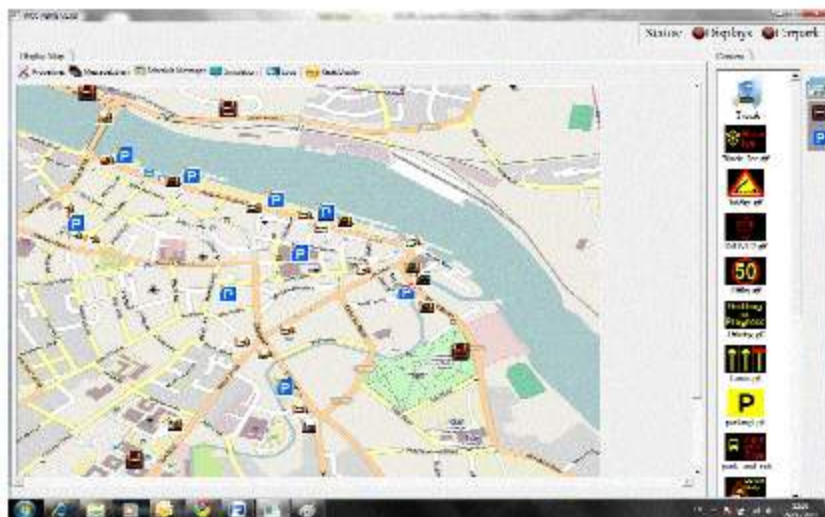
The Full Matrix Signs were installed on the major approach routes to the city, while the dynamic PGS signs were installed at the entrance to each car park and in advance of intersections within the city centre. Static signs were installed as route confirmatory signs at junctions where dynamic PGI was deemed excessive. At these locations drivers would not benefit from the provision of dynamic PGI. The car park interfaces and signs use a combination of 2G and 3G mobile communications depending on the sign type and data requirements.



3 - PGS Sign

The PGS management software is installed on a server within the WCC offices and is accessible to administrative staff via an internet browser behind the WCC firewall. The GUI consists of a map of the city with icons indicating the location of each sign and car park. The system is self diagnosing and monitors the health status of all elements of each sign and car park interface unit. Should an issue arise with any element the relevant icon on the GUI displays a red **X** and the user may then interrogate the system to assist the resolution of that issue.

Through co-operation, management of expectations and effective communications between all parties a key piece of ITS infrastructure has been delivered in Waterford which augments drivers' experience of the city. The Client has expressed satisfaction with the delivered product and has received very positive feedback from both road users and Car Park Operators alike.



1 - PGS software screenshot



2 - Full Matrix VMS

The Full Matrix Signs are dual colour displays (red and amber) and are used to provide both event and incident information. Bridge opening and parking information within the city are also displayed on these signs. The dynamic PGS signs are also dual colour display, however in this instance the colours are used to highlight the status of the car parking availability (green for spaces or open and red for closed or full). One dynamic PGS sign, located on Rice Bridge, has been augmented with a free text element to inform drivers of the next bridge lift.

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