The roundabouts are a kind of intersection that is characterised by an especial geometry derived on the way their branches are communicated by a ring-shaped road where circulation is established in one-way, rounding a central obstacle.

They first appeared on the early XX’th century as a solution for traffic congestion problems that happened in most of important European cities. The roundabout geometry allows their adaptation to many different situations and, because of their particular mode of operation, they introduce a reduction in number of conflicts between the vehicle’s trajectories, improving the capacity and security of the intersection for a better traffic fluidity.

After promising beginnings and their later generalization in cities and towns, roundabouts suffered a gradual displacement out of urban context. It was the consequence of the boom in using cars after the Second World War, and the changes it implied on the modes of circulation: the extending of road networks made countryside more accessible while urban spaces became even more saturated. Urban roundabouts were in most cases congested.

The established priority rule in roundabouts was, at that time, the same that ruled all the intersections. This made that incorporations to the traffic circle were assimilated as braided lanes, so the only way to solve the roundabouts blockage was by making them bigger, taking up more surface from the building land and causing the abandon in using them inside urban environment.

The change in the priority rule proposed by the British engineers resolved the problem of auto blockage in roundabouts. This rule prevented circular intersections from locking up, by not allowing vehicles to enter the intersection until there were sufficient gaps in circulating traffic (the vehicles circulating inside the roundabout has right of way over the entering ones). So, the roundabout doesn’t work as a braided lane and it does like a “T” intersection. That permits reducing their size, allowing the return of roundabouts into the always limited urban space.

The main advantage of the new roundabouts is their versatility. They can be used for lots of objectives and can take many different configurations in function of the concrete needs of every emplacement. In fact, they are not only useful for traffic matters, they can also be useful from the point of view of cost, maintenance, security and environment. Their competitiveness lies in the great possibilities that they offer for a relatively low cost and occupation.

Nowadays we are witnessing a generalisation in the use of roundabouts (whether we are talking about urban space as the space between cities, but specially in the transition between both, what is called sub-urban space) existing the risk of exporting a standard solution whatever the case, however this solution is only valid for a specific situation.

The differences between solutions become greater as the roundabout is situated higher in the scale of urbanity (countryside or intercity – transition – town). This is because the urban space presents lots of different contexts where an intersection could be placed (transition, connecting urban mesh with segregated roads, industrial areas, city centre, junctions between two high capacity streets, residential areas, etc…), and all of them are able to hold roundabouts with different functions (intersection, connection, traffic management, town planning instrument, etc…).

All of this, added to traffic charges and the specific geometry of every site, makes every intersection as a specific project, which must be done by a multi-disciplinary team able to detail the needs, the determining factors and its aim.