

**Measure title : Implementation of new access restrictions and parking management schemes**

**Country:** Poland

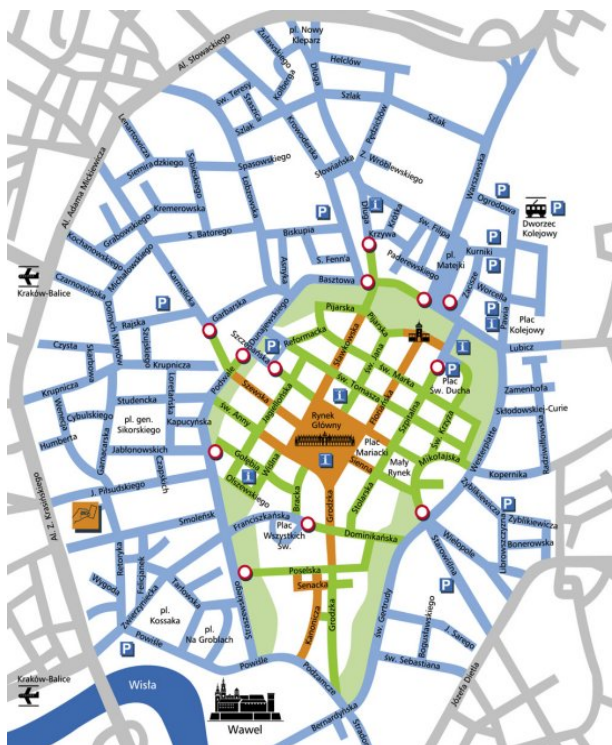
**City:** Krakow

**A1 Objectives**

- To extend access-controlled areas in the city
- To implement a new parking management scheme (removal of on-street parking places due to the implementation of new underground parking lots)
- To free-up public space
- To make the historic city centre more attractive to non-motorized modes of transport

**A2 Description of the CS**

Krakow was the first city in Poland to implement severe access restrictions in the city centre, based on three levels of access zones. “A” zone are restricted exclusively to pedestrians and cyclists; “B” zone is accessible for residents and goods delivery vehicles; while in the “C” zone, parking fees are applicable between 10 am and 8 pm.



Map: Existing scheme of A, B, C (red, green, blue) zones with restrictions for individual cars.

In response to the problems of congestion and poor air quality, the city is constantly implementing extensions of the paid parking zone and the limited traffic zones, improvements in public transport, including its integration within the wider metropolitan area, better service standards (including modern rolling stock), improvement of public transport connections at the national and European level and investments in bus hubs, integrated PT

nodes, logistics centres and urban traffic control systems. There are also strategies related to improved parking management (including implementation of Park & Ride).

Parking standards for new development (e.g. parking-space-to-unit or per inhabitant ratios) are set in local development plans but only about a third of the city's area is covered by such local plans; implementing parking requirements in the remaining areas is not regulated in a uniform way.

Within this particular measure (partly implemented within the Civitas Caravel Project) the city intended to implement an updated parking management scheme in combination with some new access restrictions in the "B" zone. Around 300 on-street parking spaces in two large public squares were eliminated (thanks in part to the ongoing construction of a commercial underground car park). There were two areas where on-street parking was eliminated: Mały Rynek ("Little Square") with 100 parking places and Szczepański Square with 200 parking places. These two historic squares were used only as parking lots, but now they are once again restored to their previous condition and used as a space for pedestrians –both citizens and tourists.



*Picture: Little Square before and after restoration.*

The main activities focused on traffic reorganization in the city centre, including a new detailed project for the "C" zone. The detailed project for new access rules in the city centre was created on the basis of a wide consultation process and stakeholder involvement. The traffic restricted B-Zone has been enlarged by some several hundred metres. Also changes were implemented at Karmelicka street (a closure of both exits). These changes did not affect the overall "B" zone dimensions significantly, but both have had a real effect on reduction of car traffic in the area.

## **B** Costs and who paid them

The main costs were related to the redesign of traffic movements and accompanying regulations at several intersections and streets within "C" zone in Krakow (ca. 30 000 EUR). Other costs concerned paint and signs for road markings, etc. (ca. 10 000 EUR). Concerning the renovation of the two public squares, there were high investment costs (ca 1.5 mln EUR).

All implemented changes are in place (i.e. measure is continued up to now).

## C Project objectives, indicators, data and impact/results

| OBJECTIVE                                   | INDICATOR   | DATA USED  | IMPACT/RESULTS   |
|---|---|--|--|
| <i>Extension of restricted area</i>         | <i>% or km of roads</i>   | <i>Measurement</i>   | <p><i>B zone was extended to Szczepanski square and surrounding streets, with dimensions of approximately 62x62 m. and section of Dunajewskiego street to Garbarska street. The result of this operation is an increase of the length of the B zone by 310 m. Also there have been changes implemented at Karmelicka street (closure of both exits).</i></p> <p><i>Although these changes did not affect overall "B" zone dimensions significantly, both have had a real effect on car traffic in the area (due to limitations in possible through-traffic).</i></p> |
| <i>Reduction of car traffic in "B"-Zone</i> | <i>%</i>  | <i>Measurement/Modelling</i>   | <i>Direct measurements, supported by modeling, showed that intensity of traffic [vehicles/hour] before and after implementations decreased by ca. 20% (5122 v/h vs. 6429 v/h).</i>   |
| <i>Eliminated on-street parking</i>         | <i>Number of parking spaces</i>                                     | <i>Measurement</i>   | <i>There were two areas where on-street parking was eliminated: Mały Rynek ("Little Square") with 100 parking places and Szczepański Square with 200 parking places.</i>   |
| <i>Public perception</i>                    | <i>% of persons having noticed positive changes in travel times</i> | <i>300 direct questionnaires - perception of PT passengers concerning time needed to travel in the area of Karmelicka and Dunajewskiego streets, where new access restrictions elements have been implemented. Citizens were asked about their perception of travel time (if it has been shortened/extended/no change occurred).</i> | <p><i>Surveys results:</i></p> <p><i>No change - 44,6%</i></p> <p><i>Shortened travel time – 49,3%</i></p> <p><i>Extended travel time – 6,1%</i></p>   |
| <i>Vehicle fuel efficiency</i>              | <i>l/vehkm</i>  | <i>Modelling</i>   | <i>Estimation of saved energy in private cars (modeling with micro simulation software Vissim). The difference between analyzed scenarios is 17 litres / hour for whole number of vehicles travelling within the calculation area (for one hour of simulation).</i>  |

## D Implementation process

### D1. Stages

**Stage 1: Conceptual project of new access control strategy (01.2006 – 12.2007)** Main activities from the beginning were focused on the creation of a conceptual plan for traffic reorganization in the city centre. It meant adapting existing plans to the current situation, and subcontracting a new detailed project for the whole “C” zone.

**Stage 2: Finalizing of the detailed design of the new access control scheme (12.2007 – 03.2008)** – a widespread consultation process and stakeholder involvement took place in order to create a final detailed design for the new rules for access in the city centre. The main stakeholders consulted were as follows: inhabitants of the zone, the shopkeepers’ association, road management structures, Police, city council, district councils and environmental lobby groups clubs. Many adaptations were made to take concerns into account, mainly concerning road safety issues.

**Stage 3: New underground parking lots programme (05.2005 – 10.2007)** – A new innovative tendering procedure including a public-private partnership was launched by UMK. As a result, a Spanish company was subcontracted to build and operate an underground parking lot at “Plac na Groblach” close to the historical city centre.

**Stage 4: Implementation of first changes in the city centre traffic scheme (04.2008 – 03.2009)** – concerning access restrictions and parking elimination:

- closure of exits from Karmelicka street (where trams were congested together with cars due to a narrow street after a reconstruction project that left a common lane shared by PT and private cars)
- extension of the “B” zone on the Dunajewskiego street and on streets around Szczepanski Square
- elimination of parking spaces in two historic squares in the city centre

### D2 Barriers – what were the key problems or difficulties in implementing the CS?

- **Delays in the construction of underground car parks** - due to considerable political discussion and opposition from some city councillors, only some elements of the measure – the extension of the "B" zone - were implemented within the project. More access restrictions and elimination of on-street parking places was possible from July 2009, after the opening of the first underground parking lot (at Plac na Groblach). Building of new underground parking lots in the historical city centre is perceived as an innovative solution helping to reorganize parking management and to attract car drivers and ease conditions for PT, since congestion caused by cars nowadays creates big problems and takes space originally planned for pedestrians and cycles.

- **Lobby in City Council against extending access restricted B-zone** - The city administration (and specifically the department responsible for the administration of local roads) refused to implement the measure in its entirety and proposed several major changes. The initial scheme and the changes that it proposed were perceived by the department to be too demanding. The reason was that the city administration wanted to prevent complaints from residents, shopkeepers, other local businesses, and so on. An interesting point is that in internal talks with the mayor, he suggested an even more severe restriction. However, the main priorities for the city are hard measures such as the improvement of infrastructure (parking, roads and public transport). Therefore the measure implementation very much relied on the process of tendering and subsequently constructing the underground car park.
- **Negative public opinion** - Polish society is very much geared to possessing a private car. From the day cars became affordable and at the same time a symbol for freedom, Polish people strived to have their own car. Understandably, to alter this development is rather difficult. Moreover, a big part of Polish society is not aware of the problems caused by private transport and restricting car access is more often associated with hindering society's development than with a positive impact.
- **Negative Information and public relations** - From the very beginning the measure received much media attention since everybody could be affected by its implementation. Local media reported quite negatively about the plans to extend access restrictions in the inner-city. The lack of a professional public relations strategy and the focus on the technical implementation of the measure was the reason for the negative image. But this initial critique gradually turned into more positive coverage acknowledging the correct direction of the measure and admitting that building roads does not solve traffic problems.

### D3 Drivers – what factors really helped in implementing the CS?

- **Support from independent institutions** - several institutions such as the Polish Ecological Club or bicycle organizations were involved in the implementation process. However, their role was only limited and rather supportive than leading. Nevertheless, these institutions always sent positive signs to the outside world about the schemes and influenced broader public opinion. Their involvement was a crucial driver within the measure's implementation and should even have been enhanced. These organizations are independent, believable and reliable.
- **Involvement of external experts** as a partner with an own budget from the very beginning of the project. This approach helped to reach the citizens.
- **Engagement of the politicians which support sustainable mobility** - mainly Deputy Mayor has been engaged fully to support measure implementation (i.e. his presence on almost all stakeholders meetings and an important voice in the discussion).