

Spa areas - a vision of sustainable mobility and measures for its promotion

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MALINKA - Life quality improvement in towns through humanization of streets
Technology agency of the Czech Republic, programe ÉTA, Nr. TL02000194

Introduction

- spas – sensitive areas
- different user groups with specific needs:

SPA GUESTS

LOCAL BUSINESS

INHABITANTS

SHORT-TERM VISITORS



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Introduction

- each spa area is unique
 - various size
 - different spatial arrangement
 - configuration of major roads
 - town organization
 - inner structure
- **each case must be approached individually**



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General vision

- one transport measure usually does not solve all the problems
- complex approach – **Sustainable Urban Mobility Plan (SUMP)**
- Road traffic - expel all transit traffic - bypass
- Restrictions may apply only after alternatives are developed
- Spa zone:
 - exclude as much transport as possible
 - car access restrictions may apply
 - low speed limit
 - parking outside zone -> last mile problem



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Last Mile problem

- need: clean and silent traffic; low safety risk
- preference of walking
- biking (etc.) in corridors only to avoid conflicts
- public transport: minibus (elektric), autonomous in near future (not possible in CZ yet due to law; in Germany regular operation in Bad Birnbach spa – 12-15 pers., 15-25 km/h, price aprox. \$250k)



Foto: Deutsche Bahn

short headway is crucial for attractiveness of service

- solution: Mobility as a Service (MaaS)

PLUS
DOPRAVNÍ VÝ CENTRUM



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Mobility as a Service (MaaS)

- linkage of the public transport system with different forms of personal mobility using modern technologies into single package
- should consists from:
 - public transport (municipal, regional, spa zone)
 - carsharing (for out-of-town trips)
 - on-demand ride services
 - individual micromobility – e-bikes (spa zone)
- inclusion of MaaS to the spa stay packages – should be aimed also to the guests with limitation (disabilities, visual impairment)
- should not be fully commercial principle – demotivation from the viewpoint of sustainable transport access (quality service only to ones, who pay the most)



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Shared public space

- transport-urban design solution for busy areas with mixture of urban functions
- all modes of transport are equal



Shared public space

- distribution of road space for cars and pavement is abolished
- formalised traffic rules are suppressed
- eye contact between individual traffic participants preferred



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Shared public space

- considered to be unproblematic to an intensity of about 10,000 vehicles/24 h and 500 crossing pedestrians per 100 m of zone length/24 h (according to austrian methodology)
- abolition of horizontal and vertical road markings and the suppression of height differences between traffic areas can cause problems to visually impaired persons - orientation in an unfamiliar shared space area is more complicated – still some kind of separation needed ie. surface tints or columns to simplify the navigation



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Urban Access Regulations

- diverse range of options:
 - ban of all vehicles
 - ban by vehicle type (eg lorry)
 - ban by weight (eg over 3.5 t)
 - ban by purpose of trip (eg delivery)
 - ban by driver (eg only residents can access)
 - environmental aspect (eg EURO 4 or better vehicles)
 - time-limited access (traffic allowed at certain times of the day)
- charging for access to road space

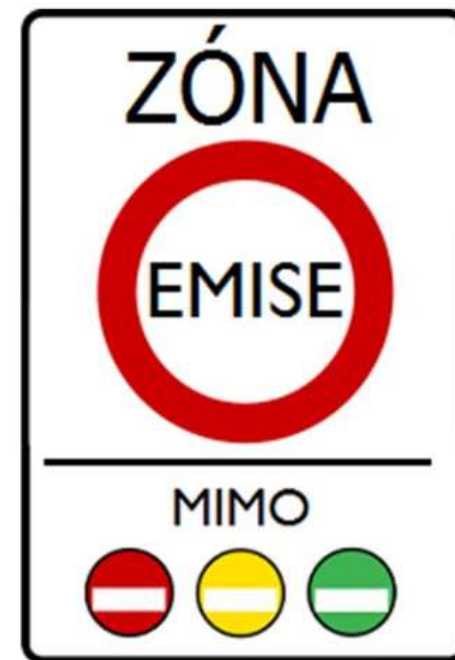


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Low emission zones in Czech spas

- low emission zones (LEZ) - geographically defined areas that restrict car access based on the level of their emissions
- air quality measure
- framework in Air protection law - 2009
government regulation - 2013



Case study – geographical analysis

- assessing spatial conditions for the implementation of LEZ
 - existence of adequate bypass routes
 - morphological structure of the settlement
- a) spas where LEZ can be introduced, due to existing bypass: Františkovy Lázně, Jeseník, Karlovy Vary, Lázně Libverda, Mariánské Lázně, Nový Darkov, Klimkovice, Poděbrady, Teplice nad Bečvou, Teplice v Čechách, Velichovky;
- b) spas where LEZ can be introduced after the completion of the planned bypass: Bludov, Lázně Bělohrad, Lázně Bohdaneč, Slatinice
- c) other spas where it is not possible to introduce LEZ because of non-existent bypass or the introduction is unnecessary due to the low traffic intensity



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Case study – municipality survey

- 30 municipalities questioned
- return on questionnaires 36.7% (11 replies)
- active interest in LEZ in one spa place – Klimkovice
- other 10 participating municipalities did not consider the introduction of LEZ as a priority
- refusals because of absence of a bypass route (6x), the low traffic load (2x), preference of another transport measure (1x)
- possible reconsidering of the decision in all 10 spas
- need: infrastructure measures such as bypass construction (4x), information on the impact of the introduction of LEZ (4x), methodological instructions (3x), information on air quality (2x)



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Conclusion

- each case – unique case
- one measure is usually not enough- complex solution needed
- challenges are smart travel, autonomous vehicles and linkage of independent mobility solution into one package
- preparation of SUMP with participation of all stakeholders is recommended
- need of cooperation between municipality, spa and mobility services operators
- best situation is when visitors do not arrive with their car – need to develop alternatives
- fees collected in transport sector have to be reinvested



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Děkuji vám za pozornost!

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