Test mobility scenarios and their consequences in Odorheiu Secuiesc FUA

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# 1. Information about this test scenario

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| FUA Name | Odorheiu Secuiesc |
| Scenario Name | **Business-as-usual( Must scenario)** |
| Date | 17.11.2017 |
| Policy target year | 2030 |
| Contributor | Toma Andreea-Urban planner  Alexandru Bunea- Urban planner  Marian Istrate- Geographer  Radu Andronic- Project Manager |

# 2. Describe this scenario

* Max. in 10 lines

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| In 2030, if local policies and regulations remain unchanged over the next 20 years, FUA motorise levels are increasing, the trend towards encouraging non-motorized transport will diminish and the degree of congestion and pollution will increase. The quality of life and the urban image will deteriorate, with the effect of increasing migratory growth and weakening the local economy. The lack of transport fluency will generate:  o Increasing the number of parking spaces;  o Imbalances between traffic flows (a problem that particularly affects the traffic at the roundabout intersections);  o Costs for the rehabilitation of road space;  o Reducing pedestrian spaces;  o Depreciation of public transport;  This scenario will focus on streamlining motorized transport and increasing traffic flow, as well as facilitating freight transport at a regional level. |
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# 3. Assessment of consequences

How will the demographic structure of your FUA and the core city in it be in your planning horizon around 2025 to 2030? (No of population, age structure, etc.)

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| Under this scenario, the demographic structure will have negative growth, with 3.49% for the entire FUA and 7.41% for core city. The age structure will change positively, at FUA level age groups over 65 will increase by 11.5% for the 2030 horizon, and 0-14 age groups will decrease by 4.3%. Thus, the horizon of 2030, will present an aging population, and the degree of migration of the population is increasing progressively at the entire FUA level, being discouraged by an inefficient connectivity with core city and between the municipalities within FUA. |

Which types of transport technology will have been diffused or will disappear in your FUA in your planning horizon around 2025 to 2030?

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| For this scenario:   * The public transport service will be diffused. * The number of cars, using fossil fuel, will be diffused. * The railway service will disappear. |

How will the share of transport mode change in your core city and FUA? Will there be higher share of journey with cars or less? Will it increase or decrease the share of public transport? Will there be more cyclists and walkers, or less?

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| For this scenario, the transport mode in the core city will change. The modal share of public transport decrease 11% ( 3% down compared to 2017), the personal car will have a 39% modal share (increase with 3 percent compared to 2017). Non-motorized transport will have linear growth than the other modal shares. Thus, the modal rate for walking will decrease by 10 percent (30 percent in 2030), and the modal share of cyclists will be maintained at 9 percent. |

Which part of your future prediction is not in line with upper-level transport policy (of region, country and EU)?

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| The parts of our future predictions that are not in line with the transport policy at country level are:   * Public transport is not supported * The non-motorized mobility is not supported |

Is the overall situation improving the living quality of your FUA?

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| The quality of life situation will not improve significantly, as there will be no major changes in the prioritization of alternative mobility. This will have a direct effect on the health of the inhabitants and the well-being. The lack of mobility alternatives will lead to an increase in the degree of marginalization and the unemployment rate that will have as effect the migrating of the population to other parts of the country. |

What are the effects on particular demographic groups, such as children, elderly, low-income group, foreigners and migrants, students, mobility-impaired people, etc.?

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| Effects on particular demographic groups will be felt at the level of travel safety. Children will be exposed to traffic due the lack of safe pedestrian routes.  The elderly will be incapable of moving in safe and effective conditions, which will lead to their isolation from the community. Low-income groups, foreigners and migrants, students will be disadvantaged by limiting access to public services. In this scenarios, unemployment is expected to increase. |

How will the transport-related cost paid by each end user change? How will the transport-related cost paid by your municipalities or regional government change?

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| In this scenario, it is anticipated a cost increase paid by each end user for public transport. This will happen due to a decrease in local revenues spending on supporting the public transport company, the price being adjusted according to the assistance for the public transport operator. For this scenario, it is anticipated that the main users of public transport will stop using public transport due to the low accessibility to the bus stations. There will be a decrease in parking costs for users of personal cars, as well as decrease in tolls for ownership or access with a private car in certain areas. |

Will the overall change will lead to increase or decrease of transport-related energy consumption in your FUA?

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| The overall change of this scenario will lead to an increase of energy consumption of transport-related energy consumption in our FUA. |

Will the overall change will lead to increase or decrease of transport-related CO2 emission in your FUA?

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| In this scenario the overall change will lead to the increase of the CO2 emissions. By diffusing  alternative means of transport it will be an increase with 25 % of greenhouse gases. |

# 1. Information about this test scenario

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| FUA Name | Odorheiu Secuiesc |
| Scenario Name | **Fostering “active” transport modes (walking and cycling) (GROUP 1)** |
| Date | 17.11.2017 |
| Policy target year | 2030 |
| Contributor | Toma Andreea-Urban planner  Alexandru Bunea- Urban planner  Marian Istrate- Geographer  Radu Andronic- Project Manager |

# 2. Describe this scenario

* Max. in 10 lines

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| In 2030, the ZUF area of ​​Odorheiu Secuiesc is an important tourist and economic hub of the Central Region, which faces a good accessibility to high connection. The scenario is based on the concept “walk and connect”, which relates to the implementation of efficient pedestrian and cycling routes that connect with the transfer points of the public transport. The core city and the FUA area in the year 2030 is an important tourist destination of Harghita County, a modern, dynamic and sustainable urban community that offers to its inhabitants a high quality of life with a competitive and low-carbon oriented economy, open to investors, with a citizen-oriented public administration and an intense civic life. The FUA emphasizes cooperation and connectivity between all its localities, encouraging non-motorized movements, all of which are characterized by an urban image meant to define the region.  The development of urban transport in FUA will be based on the following directions:  Core city and other municipalities of FUA - a green, non-polluting area with high cycling mobility and high accessibility to the main urban area;  o In the central area of the core city - the emphasis on pedestrian and bike mobility, with connections between the main public objectives and green spaces;  o A strong decrease in the time travel of electric public transport that supports good access of all FUA residents to the core city;  In conclusion, in 2030 an ordinary resident of FUA Odorheiu Secuiesc travels daily by bicycle or on foot, using public transport for longer distances and rarely by personal car. |

# 3. Assessment of consequences

How will the demographic structure of your FUA and the core city in it be in your planning horizon around 2025 to 2030? (No of population, age structure, etc.)

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| Under this scenario, the demographic structure will have positive growth, with 10% for the entire FUA and 6.5% for core city. The age structure will change positively, at FUA level age groups over 65 will drop by 7.9% for the 2030 horizon, and 0-14 age groups will increase by 13%. Thus, the horizon of 2030, will represent a rejuvenation of the population, and more and more families will establish their residence in the FUA municipalities, being assisted by an efficient connectivity with core city. |

Which types of transport technology will have been diffused or will disappear in your FUA in your planning horizon around 2025 to 2030?

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| For this scenario:   * The number of cars, especially fossil fuel, will be reduced. * Buses running on fossil fuels will disappear |

How will the share of transport mode change in your core city and FUA? Will there be higher share of journey with cars or less? Will it increase or decrease the share of public transport? Will there be more cyclists and walkers, or less?

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| For this scenario, the transport mode in the core city will change. The modal share of public transport increases to 27% (a 5% increase compared to 2017), the personal car will have a 20% modal share (down with 14 compared to 2017). Non-motorized transport will have a much higher growth impact than the other modal shares. Thus, the modal rate for walking will increase by 7 percent (37 percent in 2030), and the modal share of cyclists will increase by 6 percent (16 percent in 2030). |

Which part of your future prediction is not in line with upper-level transport policy (of region, country and EU)?

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| The parts of our future predictions are in line with the transport policy at EU level. |

Is the overall situation improving the living quality of your FUA?

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| The situation of the living quality will improve in our functional urban area by providing pedestrian and bicycle-protected routes and connecting all the routes with points of interest throughout the entire area. The level of pollution will decrease in the whole area, by replacing fossil fuels and opting for alternate mobility. Emphasis is placed on the mobility of people with reduced mobility, addressing different measures such as curb adjustment, special signage, guide marks for visually impaired people. The urban image of the area will be improved by rehabilitating public spaces and increasing the percentage of green space per capita. Promoting the image of the localities will become a priority, which will increase the number of tourists. |

What are the effects on particular demographic groups, such as children, elderly, low-income group, foreigners and migrants, students, mobility-impaired people, etc.?

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| Effects on particular demographic groups will be felt at the level of travel safety. Children will move safely to educational institutions, grow in an environment that encourages sustainability, and health risks will decrease.  The elderly will be supported by creating safe travel environments, with an emphasis on the development of well-connected networks with measures for people with reduced mobility, such as curb adjustment, special signage, and guidance for visually impaired people. Low-income groups, foreigners and migrants, students will be supported by providing easy access to public services. In this scenarios, unemployment is expected to decrease, local economy encouraged and people with disabilities are supported with different measures. |

How will the transport-related cost paid by each end user change? How will the transport-related cost paid by your municipalities or regional government change?

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| In this scenario, it is anticipated a cost increase paid by each end user for public transport. This will happen due to an increase in local revenues spending on supporting the public transport company, the price being adjusted according to the assistance for the public transport operator. For this scenario, it is anticipated that the main users of public transport would be people who walk and cycle. There will be an increase in parking costs for users of personal cars, as well as increases in tolls for ownership or access with a private car in certain areas. In this case, a cyclical economy will be created at the level of the municipality, where the taxes for the cars owners and users will cover the costs of maintenance and development of other alternative means of travel. |

Will the overall change lead to increase or decrease of transport-related energy consumption in your FUA?

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| The overall change of this scenario will lead to a decrease of transport-related energy consumption in our FUA. By migrating to the encouragement of non-motorized mobility means a reduction of fossil fuels and the promotion of regenerative energies is achieved. |

Will the overall change lead to increase or decrease of transport-related CO2 emission in your FUA?

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| In this scenario the overall change will lead to a decrease of the CO2 emissions. By promoting walking and cycling, and other alternatives for traveling by car, we will have a reduction with 20 % of the greenhouse gases, Odorheiu Secuiesc FUA contributing to the European objective of fighting climate change. |

# 1. Information about this test scenario

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| FUA Name | Odorheiu Secuiesc |
| Scenario Name | **EU Policy to prohibit private car ownership by 2045 (GROUP 2)** |
| Date | 17.11.2017 |
| Policy target year | 2030 |
| Contributor | Toma Andreea-Urban planner  Alexandru Bunea- Urban planner  Marian Istrate- Geographer  Radu Andronic- Project Manager |

# 2. Describe this scenario

* Max. in 10 lines

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| The development of urban transport in FUA will be based on the following directions:  Efficient public transport – electric busses that interconnects with all the municipalities of FUA;  o Car sharing systems- offer alternative for public transport that support alternative mobility;  o Promoting electric bicycle- create efficient networks for electric bicycle contribute to the active travel.  Investments in green energy- to sustain the green mobility and sustaining the area's system efficiency  In conclusion, in 2030 an ordinary resident of FUA Odorheiu Secuiesc travels daily by bicycle or on foot, using public transport for longer distances and for a smooth transition to exclude the private car ownership by 2045. |

# 3. Assessment of consequences

How will the demographic structure of your FUA and the core city in it be in your planning horizon around 2025 to 2030? (No of population, age structure, etc.)

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| Under this scenario, the demographic structure will have negative growth, with 8% for the entire FUA and 4.5% for core city. This phenomenon will as the migration trend of the population will focus on the major areas of the country. By decreasing the use of cars will improve the overall health of the population, but the FUA will experience aging of the population. The age structure will change, age groups over 65 will increase by 9.8 % for the 2030 horizon. |

Which types of transport technology will have been diffused or will disappear in your FUA in your planning horizon around 2025 to 2030?

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| For this scenario:   * The number of private cars will disappear. * Car factory will be diffused. * Gas stations will be diffused. * Parking systems will be used for other purposes. |

How will the share of transport mode change in your core city and FUA? Will there be higher share of journey with cars or less? Will it increase or decrease the share of public transport? Will there be more cyclists and walkers, or less?

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| For this scenario, the transport mode in the core city will change. The modal share of public transport increases to 50% (a 37% increase compared to 2017), the personal car will have a 10% modal share (down with 27 compared to 2017). Non-motorized transport will have a much higher growth impact than the other modal shares. Thus, the modal rate for walking will decrease by 15 percent (25 percent in 2030), and the modal share of cyclists will increase by 5 percent (15 percent in 2030). |

Which part of your future prediction is not in line with upper-level transport policy (of region, country and EU)?

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| The parts of our future predictions are in line with the transport policy at EU level. |

Is the overall situation improving the living quality of your FUA?

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| The living quality will improve in our functional urban area by providing pedestrian and bicycle-protected routes and connecting all the routes with points of interest throughout the entire area. The level of pollution will decrease in the whole area, by replacing fossil fuels and opting for alternate mobility. Emphasis is placed on the mobility of people with reduced mobility, addressing different measures such as curb adjustment, special signage, guide marks for visually impaired people. The urban image of the area will be improved by rehabilitating public spaces and increasing the percentage of green space per capita. Promoting the image of the localities will become a priority, which will increase the number of tourists. A more space will be dedicated to parks and green areas. |

What are the effects on particular demographic groups, such as children, elderly, low-income group, foreigners and migrants, students, mobility-impaired people, etc.?

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| Effects on particular demographic groups will be felt at the level of travel safety. Children will move safely to educational institutions, grow in an environment that encourages sustainability, and health risks will decrease.  The elderly will be supported by creating safe travel environments, with an emphasis on the development of well-connected networks with measures for people with reduced mobility, such as curb adjustment, special signage, and guidance for visually impaired people. Low-income groups, foreigners and migrants, students will be supported by providing easy access to public services. In this scenario, unemployment is expected to increase, local economy encouraged and people with disabilities are supported with different measures. |

How will the transport-related cost paid by each end user change? How will the transport-related cost paid by your municipalities or regional government change?

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| In this scenario, it is anticipated a cost increase paid by each end user for public transport. This will happen due to an increase in local revenues spending on supporting the public transport company, the price being adjusted according to the assistance for the public transport operator. For this scenario, it is anticipated that the main users of public transport would be people who walk and cycle. There will be an increase in parking costs for users of company cars. In this case the cost of car production will increase making the car a luxury item for big companies. Various logistic companies will pick the train as their option for transporting goods. |

Will the overall change lead to increase or decrease of transport-related energy consumption in your FUA?

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| The overall change of this scenario will lead to a big decrease of transport-related energy consumption in our FUA. By encouraging non-motorized mobility and public transportation the use of fossil fuel will diminish. |

Will the overall change lead to increase or decrease of transport-related CO2 emission in your FUA?

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| In this scenario the overall change will lead to a decrease of the CO2 emissions. By promoting walking and cycling, and other alternatives for traveling by car, we will have a reduction with 35 % of the greenhouse gases, Odorheiu Secuiesc FUA contributing to the European objective of fighting climate change. |