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# Mobile and Accessible Dublin: an Application of the Prospective Methodology in Developing a Vision for the Future Integration of Transportation and Land use in Dublin

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# An application of the Prospective methodology in developing a vision for the future integration of transportation and land use in Dublin.

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**ABSTRACT:** Contemporary cities can be characterised by a high pace of change and the growing complexity of their systems. Technological, economic and social evolution brings transformation that needs to be dealt with and accommodated in order to sustain consistent harmonious growth. Many cities are not prepared to adapt to these changes. This results in a vast range of urban problems. The rapid growth of Dublin during the last decade has intensified infrastructural and transportation problems. A number of institutions have been addressing these difficulties through the application of various solutions.
This paper presents an attempt to address the lack of efficient integration between transportation and land use in Dublin through the application of the futures methodology – Prospective. Futures methodologies assist in understanding the main forces driving change; enable the creation of images of possible and desired futures; and help to generate recommendations and action plans to solve the existing problems in a rigorous, systematic and comprehensive manner.
This paper presents the methodology itself, the applied process and the results of the study.

**Keywords -** futures methods, Prospective, urban planning.

## 1. INTRODUCTION

Over recent years Dublin city and region has been struggling with a series of major infrastructural problems. The vast economic and demographic growth of the city and region in the 90s placed enormous pressures on the existing infrastructure and created many severe problems, such as traffic congestion, pollution, poor accessibility and mobility, a housing crisis and urban sprawl. Infrastructural difficulties result in very high social, economic and environmental costs, which need to be reduced in order to maintain the high competitiveness of Dublin – the engine of Irish economy, and to improve the quality of life for people living and working in the city and region.

The problems existing in the city have been broadly recognised. National and local agencies work intensely to find the best solutions to these problems. A number of projects, different in type and scale, have been undertaken in order to improve the situation. But much more needs to be done in order to resolve the crisis.

There are many factors responsible for this situation. The existing spatial structure and inefficient transportation system combined with poor planning decisions and lack of strategic thinking could be blamed. It could be argued that as well as a number of physical improvements, there is also a strong need to create a strategic vision that would guide future integration of transportation and land use.

This paper presents the research that attempts to address the lack of an effective relationship between transportation and land use in Dublin and to develop a vision of an efficient future relationship between the two. In order to fulfil the objectives of this project

the futures methodology Prospective was employed. Futures methodologies assist in understanding the main forces driving change; enable the creation of images of possible and desired futures; and help to generate recommendations and action plans to solve the existing problems in a rigorous, systematic and comprehensive manner. The Prospective process allows one to recognise and understand past and present trends and decisions that led to the formation of the existing situation and to explore and identify possible trends and forces that will shape the future. Furthermore it provides a framework to develop a vision of the most desired future state and to generate suggestions and recommendations how to achieve this state.

## 2. THE PROSPECTIVE METHODOLOGY

Prospective was invented by Gaston Berger in the 1950s in France as a way of thinking about the future. Berger claimed that the world was more complex than it was thought and that the extrapolations and classical forecasting process were not able to cope with the changes in the world. The role of Prospective was not to predict the future but to build possible future worlds (Roubelat, 1997). From the philosophical concept Prospective evolved into a formalised, comprehensive and rigorous methodology, which has been employed in many different fields, and which uses a whole spectrum of future techniques and methods.

On the grounds of documentary research and through conducting Prospective exercises, like the one presented in this article, the author has developed her own form of this methodology, mainly for use in the urban planning field (see Fig. 1). The process consists of the five main parts. The first step is '*formulation of the problem or strategic question*'. Identification of the problem/strategic question and formulation of a precise statement addressing it, is crucial for the whole process. Often the statement of the problem/strategic question acts as a 'point of reference' throughout the process and helps to focus on the main problem being considered.

The second phase, '*understanding the past and present*', aims at drawing a complex picture of the present situation. Identification of the key-issues and problems of the present state helps to develop an understanding of the overall situation. Often problems can be turned into positive statements during the visioning process in the fourth phase. Recognition of the past trends and decisions and their role in shaping the present state helps when trying to imagine their implications for the future. In analogical way, it also enables one to imagine the implications of various present and future trends. It supports identification of causes and addresses the sources of the problems rather than symptoms. Identification of the main actors present on the scene assists in recognising who is responsible for undertaking action and implementation of the vision, developed at the later stage.

'*Exploration of the possible and probable futures*' helps to address the strong need to know what the future might be like in order to prepare and plan for it. The activities in this phase do not aim to forecast the future, but their role is to identify the main trends and forces that will shape it. The set of future scenarios, developed in this phase, should steer the imagination and inspire thinking about the most desired and also the most feared future states. The scenario method (Ratcliffe 2002) provides a good framework for systematic exploration of the possible futures and creation of future scenarios.

'*Development of the most desirable vision*' is a key phase. This stage differentiates Prospective from other futures methodologies, which often concentrate only on anticipating the future change and its implications. An image of the most wanted future enables one to determine the direction and identify the path and means of how to get there. It helps to develop measures that would monitor the current course of action and would assist in verifying this direction. The visions of cities, communities and nations have an ethical

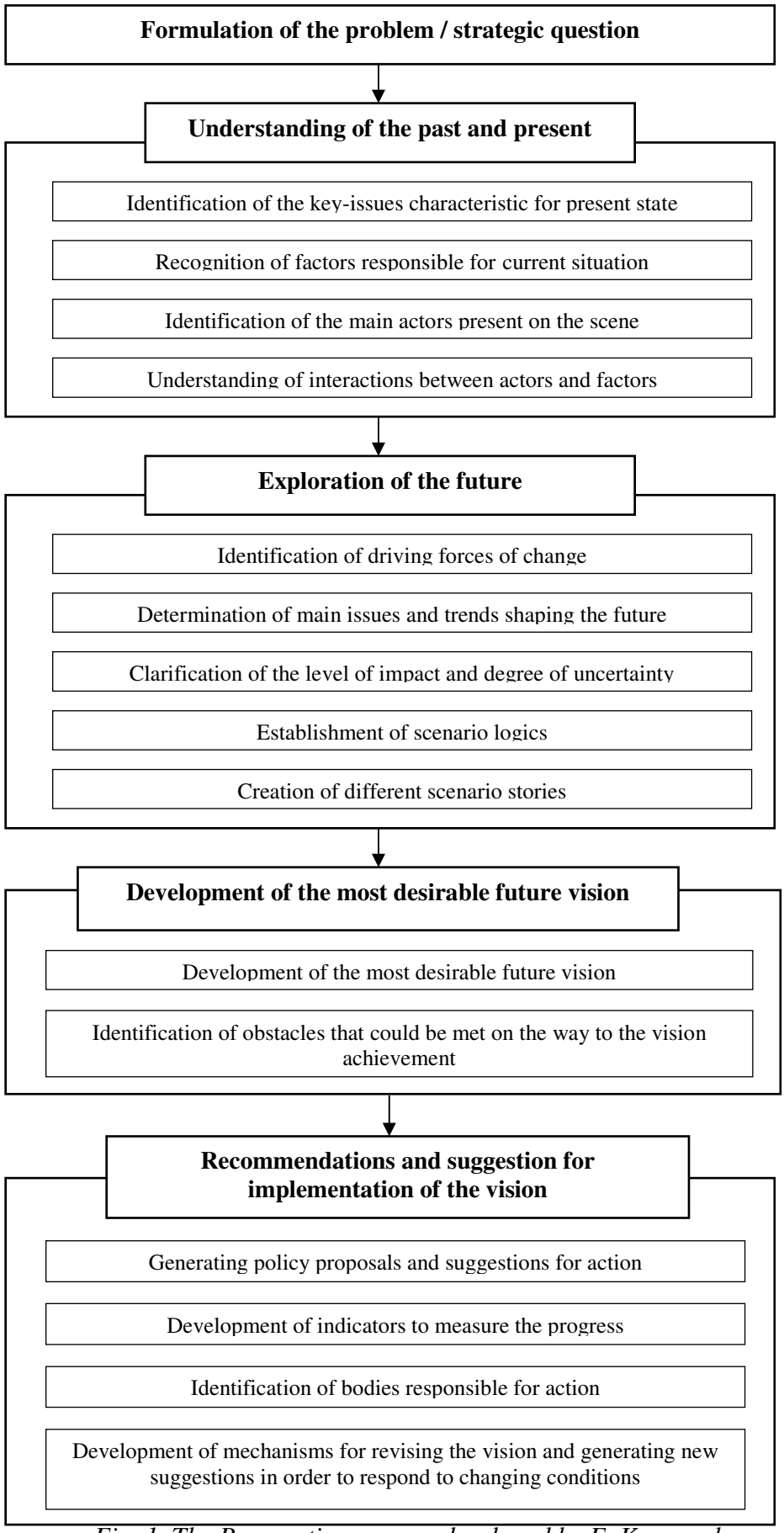


*Fig. 1. The Prospective process developed by E. Krawczyk*

dimension that need to be carefully considered. It is necessary to ensure the participation of all sectors of society and interest groups in the process, as their wishes and ideas about most desirable futures may vary. It also needs to be acknowledged that the decisions and actions taken in order to achieve the vision will influence the lives of the next generations.

The last part of the process aims at generation of '*recommendations and suggestions for implementation of the vision*'. It provides a framework for formulating policy proposals and suggestions for action and the development of indicators to measure progress. An important part of this phase is the identification of agencies responsible for action and the development of mechanisms that would assist in revisions of the vision and in generating new suggestions in order to respond to changing conditions.

## 3. METHODODLOGY APPLIED IN THIS STUDY

A combination of futures methods and techniques was employed in this study in order to collect a broad range of information and ideas. Included was: a Prospective workshop, environmental scanning, survey, strategic interviews and observation. Table 1 shows the sources of information for each stage. The data generated in this study has qualitative and subjective in character.

Table 1. The source of data for each stage of the process

| Phase / Methods | Prospective workshop | Survey | Environmental scanning | Strategic interviews | Observation |
|---|---|---|---|---|---|
| Understanding of the past and present | √ | √ | √ | √ | √ |
| Exploration of the future | √ | √ | √ | √ | - |
| The most desired vision | √ | √ | - | √ | - |
| Recommendations for action | √ | - | - | - | - |

The Prospective workshop was the main method used. It took place over two days and was structured around the five main phases of the Prospective process (Fig. 1), however not all the stages were completed. This study was developed in order to test the methodology and some steps of the process shown in Fig. 1. were developed only in the course of analysis of this study. A number of techniques were employed within the workshop framework in order to complete individual tasks. Among them were: structured brainstorming, visioning, the scenario technique and mind mapping. Participants of the workshop were postgraduate research students in planning and fields related to it such as geography and social science. Their involvement was voluntary. The event was facilitated by the author.

The remaining methods used in this study had a complementary role. Environmental scanning assisted in the collection of information on the existing trends and future issues, which may gain impact over the topic of the exercise. The author monitored media, performed field observations and gained knowledge from various conferences, seminars, informal chats and the Internet.

The survey distributed among the workshop participants helped to discern their opinions on the present situation and to discover their fears and wishes about the future. The questionnaire aimed at the stimulation of creative thinking among the participants and also was a valuable source of information for the facilitator of the workshop.

Strategic interviews, a popular interviewing method in the futures research, were another form of collecting opinions and information. Strategic interviews have open character. The interviewer plays an active role during the course of interview trying to follow and develop the most interesting and significant themes emerging in the course of conversation.

## 4. RESULTS OF THE STUDY

### 4.1. Present situation and past trends and decisions, which formed the current state

The current situation regarding the relationship between transportation and land use in Dublin has been formed by a combination of various decisions and policies introduced over the decades and different trends and developments in numerous areas. In the process of analysis, a number of categories emerged by which the past and present could be characterised. These were: spatial structure and land use patterns, property market and housing stock, transportation system, governance and planning system, quality of life and social, cultural and economic aspects.

**Spatial structure** of Dublin city and region is characterised by low population densities in regard to urban areas, urban sprawl, an expanding commuter belt, and domination of single use residential areas in the suburban Dublin. Land use patterns are dominated by single use areas with very little of mixed use. This type of spatial structure creates huge pressure on the transport system and results in high economic and social costs. Low densities generate a dependency on private cars and discourage mixed use, which is most successful in the areas with higher level of population densities.

Planners and the government recognise the problems related to these spatial patterns. A number of new policies and regulations have been introduced in order to encourage higher densities and mixed-use developments, for example *Residential Density Guidelines*, *Local Location Area Plans* and *Living Above the Shop*.

Spatial patterns are strictly connected to the **property market** and **housing stock**, being residential, office and industrial. These are characterised by high house values, insufficient housing supply and lack of affordable residential housing in the city and region. The vast economic and demographic growth of Dublin in the 90s created a huge demand for residential housing that could not be accommodated by the existing stock. This led to the massive increase in house prices in the city and has been driving many house buyers to the neighbouring counties, where the prices are affordable. This led to an increase in the number of commuters.

An important driving force in the property market is costumer preference. In Ireland especially, tradition and cultural values have great influence on the property market. Irish dwellers favour living in houses preferably with front and back garden. Apartment dwelling is a fairly new trend and is gaining popularity only recently, as the need for higher densities has been recognised and the number of apartment developments has grown significantly.

The **transportation system** in Dublin is overloaded and its capacity does not meet the systematically growing demand. The public transport system could be described as being unreliable, expensive and of poor quality. Its radial structure reflects old travelling patterns, when most of the economic, social and cultural activities were concentrated in the city centre and a need for inter-suburban connections was very small. Obsolete routes structures and the lack of fully integrated ticketing systems make travelling long distances in the city time consuming and expensive. The failure of public transport to compete successfully with private cars results in over-dependence on private cars and leads to immense traffic congestion in the city centre and some suburban nodes. All this makes accessibility to and mobility within the city very poor, and as a consequence affects the quality of life in the city.

The transportation crisis has been recognised and addressed, but the situation is improving very slowly. The Dublin Transportation Office (DTO) developed a strategic plan for improvement of the transportation system in the city. It requires provision of new infrastructural elements, such as LUAS (the light railway system currently under construction) and Port Tunnel, which will provide an alternative to the city centre route for heavy goods vehicles travelling from Dublin Port to the outskirts of the city. Also necessary are changes in the traffic regulations. The DTO introduced QBCs (Quality Bus Corridors), which enable buses move faster than regular traffic. A number of initiatives introduced, such as parking restrictions and 'operation free flow', aim at changing the commuter behaviour patterns.

A very important trend is the growing awareness of the unsustainability of existing travel patterns. Walking and cycling are being recognised as equal to the car. The necessary infrastructure for the further development of these means is being provided.

**Governance** and **planning** have great importance in shaping the relationship between transportation and land use. Irish governance system is highly centralised. It results in a relatively weak local government, which does not have enough power and financial resources to develop and implement appropriate regional and local policies. The unsustainable character of many macro-policies enhanced development of the present crisis situation.

Planners could be accused of having poor professional skills, lack of long-term strategic planning and deficit of innovative and creative thinking. Delays in implementation and weak development control could be pointed out as further sources of problems. Fragmentation of local government in Dublin - four local authorities operating in the city - results in the four separate spatial development plans, which do not always correlate with each other. The need for the integration of planning departments has been recognised and the idea of establishment the Greater Dublin Area Authority has been proposed, but so far has not been addressed.

Over recent years central and local governments have changed their ways of thinking about future development. Sustainability has been adopted as the key model for the future growth. A lot of energy and resources are being directed into provision of necessary infrastructural elements and regeneration and rejuvenation of different parts of the city.

The relationship between transportation and land use have important implications for the cities functionality and the **quality of life** of residents. Traffic congestion causes air and noise pollution, which becomes source of many health problems. The time spent in the traffic jams is lost from family life, hobbies, leisure or social activities. Lack of affordable housing and lack of adequate facilities for families living in the city centre pushes out many families to the commuter belt areas. The housing stock, in the city centre as well as in the suburban areas, can be characterised by poor design and lack of adequate facilities that would attract a variety of tenants – young single people, families and elderly.

Dublin has many positive aspects, which would strengthen the city's attractiveness, if adequately promoted. The city is located between the sea and the mountains. It has many attractive historic areas, such as Georgian Squares, parks, neo-classical buildings, that create an interesting and distinctive atmosphere. Dublin is also an attractive size, which keeps a good balance between a big city choice and a small city intimacy.

There are a number of other issues related to the relationship between transportation and land use. They could be summarised under **'social, cultural and economic aspects'**. The Conflict between 'private vs. public good' has a great impact on the planning process and governance. It influences formulation of development plans as well as implementation phases. A cultural attitude that could be summed up 'it'll do' restrains creativity, change and innovation.

Demographic and economic issues have an important impact on the relationship between the two aspects discussed. A proportionally high population of young people in the city and

large immigration into the country combined with the cultural change, create new demands for greater variety of housing and services.

A high rate of economic growth in the 90s played a very significant role in the creation of the present situation. Location of new businesses and high level of immigration into Dublin put enormous pressure on the existing infrastructure. The rapid economic growth was 'played for' through introduction of various policies, but was not 'planned for' by the improvement and development of the necessary infrastructure that would support and maintain this growth. The financial resources have been directed towards infrastructural improvement, but the timing and efficiency of these projects are in question.

### 4.2. Exploration of the future

The first step in the '*exploration of the future*' phase was identification of the main driving forces of change that would influence the strategic question. These were identified within six main categories: Economy, Governance, Technology, Environment, Culture/Society and Demography. Then the more specific issues and trends arising from these forces were determined. In the next step the level of impact and degree of uncertainty of these issues and trends were assessed. This helped to classify these trends and issues in terms of their role in shaping the future. Ratcliffe (2002) distinguishes four categories of trends and issues in regard to their level of impact and degree of uncertainty. These are:

a) *Pivotal uncertainties* – these are likely to have a direct impact, but their outcome is uncertain. They are pivotal in the sense that the way they turn out may have strong directional consequences. These trends determine the shape of different scenarios.
b) *Significant trends* – these impact more directly upon the theme considered and it should be possible to anticipate their effect.
c) *Potential jokers* – these are pretty uncertain as to their outcome and less relevant. However they may gain importance over time and become *pivotal uncertainties.* Thusly, they should be monitored in order to detect any changes in their level of impact.
d) *Context shapers* – these are relatively certain and have low impact. They surely will shape the future context.

Future scenarios are usually built around pivotal uncertainties. Their strong impact, but high uncertainty of the outcome creates the possibility for very different futures to unfold. In this exercise, due to a failure of the marking system used for assessment of level of impact and degree of uncertainty, a definite majority of trends were classified as 'significant trends' and only 4 out of 72 were categorised as 'pivotal uncertainties'. This eliminated the possibility to create a set of legitimate future scenarios.

Despite the failure to build alternative images of possible futures this part of the exercise was very valuable for participants of the workshop in order to stimulate and inspire their thinking about the future and to gain understanding how different futures may unfold. It is necessary to remember that Prospective methodology is a process, which is as important as the final results.

### 4.3. Development of vision of the most wanted future

The visioning method was used in order to collect ideas that would characterise the most wanted future. The facilitator was trying to encourage participants to think the unthinkable, to be creative and innovative and to keep their minds open to any irrational thoughts. All ideas were equal and possible. Critique of others was forbidden. This helped to generate many realistic and non-realistic ideas about desired state of Dublin in 2025.

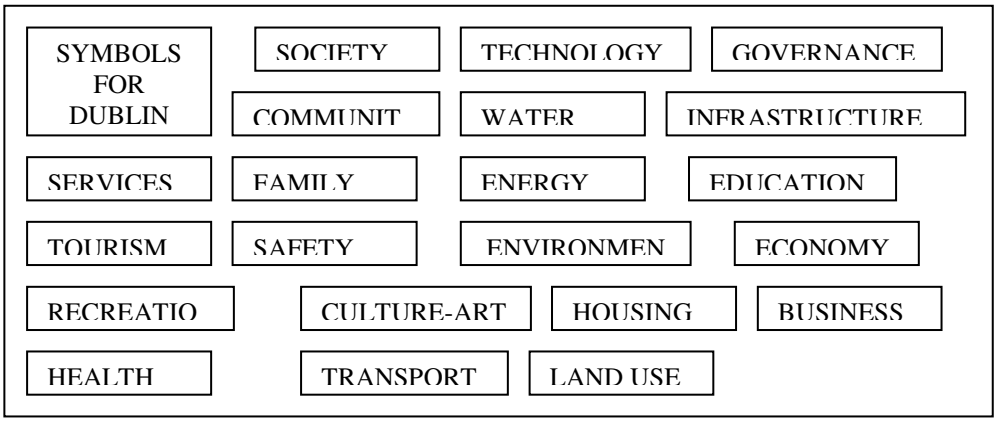


*Fig. 2. Themes that merged in the clustering process*

The ideas were related to the whole city, but with special focus on the relationship between transportation and land use. In the clustering process 22 themes emerged (Fig. 2). The author composed an overall vision for Dublin 2025 using the collected ideas (Fig. 3). Later the participants of the workshop approved the vision story.

The most desirable vision for Dublin 2025 portrays the city of a compact urban structure served by fully integrated and efficient transport system, which will ensure fast and convenient movement around the city. Higher densities of new developments, especially in the inner city, and mixed land use in the inner city and suburban areas will reduce the need for travelling in first place. Public transport will provide good links between high density and mixed-use hubs in the city region. A dense network of safe, multi-purpose cycling lanes will support the use of alternative modes of transport for short journeys. A culture of healthy living will support the use of bikes, roller-blades, segway over cars. Realisation of this vision will be possible, because of the shift in how individuals, organisations and government agencies think and the co-operation of all key decision-makers in the city. A new planning system, in which the transportation services will be considered before planning permissions will be granted, will be based on collaboration. The local authorities and planning agencies will learn from the best European practices and they will also encourage and support creative and innovative indigenous ideas. Dublin will be a pedestrian friendly city with many attractive pedestrian walkways. Public space will be accessible to all citizens, especially families. Well-designed buildings and green infrastructure will create a pleasant environment for variety of activities.

After the development of the vision, the obstacles that could be met on the way to achieve the vision were identified. Two groups of barriers were considered – local and global. Among the obstacles of local character were: financial constraints, people's attachment to the car, lack of courage, the motor-industry lobby, the system of local governance, lack of political will, economic systems, lack of efficiency in public expenditure, lack of political vision, lack of co-operation, lack of imagination, self-interest, corruption, short-sighted developers, short-termism, cynicism and scepticism, apathy, lack of opposition in the political system and global monopolism. Among the global factors identified as obstacles were: running out of oil, diseases, slowdown in the world's economy, too much centralised power in the global context, technology in the wrong hands, Sellafield, fundamentalism, flooding and climate change, Dublin under threat from Northern Ireland terrorism.

It needs to be stressed that 13 out of 19 obstacles of local character were related to the ways of thinking, attitudes and politics, which are very difficult to change, once formed. Change in attitudes and ways of thinking as well as provision of financial resources are required in order to create conditions, in which the vision can be realised.

Dublin in 2025 is a city with a well-established symbol of community/ pub culture/ Clery's Clock/ Ha'Penny Bridge/ Trinity College/ Book of Kells with a strong sense of place.

There are no class divisions any more. It's a happy, smiling society, where there is no place for homelessness. People feel attached to their neighbourhood. There is a support network in place for people with problems and difficulties. More stability is created by more equality.

Family values are integral to city living. Government policies are supporting parenthood by longer paid paternity leave and provision of decent childcare facilities. Families are overwhelmingly present in city life, especially in the city centre, where a range of facilities for children and pedestrianised zones create a welcoming environment for family living.

Dublin has a big cultural centre with an art gallery meeting national demand. A vibrant cultural and social life is concentrated in the car-free city centre, where pubs are mixed with late night cafés. Many varied festivals, concerts and celebrations take place in a big open public space.

People feel safe in the city. The security staff is redundant, because there is no need for them anymore. People respect each other and others' property. Streets are safe, because of the values and because of fewer cars on the streets.

Dubliners are healthy people. They care about their eating habits and the importance of fast food is decreasing. It's a drug free city. The improvement of the quality of air has helped to fight asthma and other diseases.

Citizens of Dublin are engaged in civic life. They participate in local elections, which they enjoy. They have more rights and their voices are listened to. The option for nominations brought a possibility to nominate their own candidates, if any of proposed by the political parties is not satisfactory. The Mayor of the city has executive functions and is elected directly by citizens. People involved in politics are there because of their aspirations to make a difference, not because of the benefits associated with politics and governance. Government services and the police are trustworthy and credible, performing their functions for all citizens.

The economic climate of the city fosters young entrepreneurs and co-operative markets. The value of crafts is recognised and affordable workshops are provided. The economy is diversified and there is less space for monopolies.

Environmentally friendly attitudes are characteristic of Dubliners. Littering is a social crime. Everybody recycles waste and is aware of his/her personal impact on the environment. There are many factories based in Ireland using recycled material for their production.

Water is an important element in the city landscape and life. There is no wasted water any more, no leakages and the drainage system is a part of a green infrastructure. The quality of water used in the city is high as it comes from natural sources and there is no fluoride in it any more. The Liffey is an axis of the city and it doesn't divide Dublin for the better South and worse North. Clean water in the river and the canal network invites to various water based activities. There is a water-bus operating on the Liffey. People live in barges berthed on the canals.

Use of alternative sources of energy like solar and wind are common.

The city is marked by variety. It works 24 hours. There are always places to go at 3 a.m. The variety of shops and services are available most of the time. Flexibility and diversity are characteristic of the city. There are no queues to taxis anymore because pubs are closed at different hours.

There is a co-operation of different educational institutions. The universities and colleges based in the city have created a forum for research and exchange with dedicated facilities.

People have time and space for recreation. Appropriate recreational facilities keep youth far from trouble. Open spaces, where people meet, walk and talk, are abundant such as pedestrianisation of College Green. The sporting spirit is very visible in the city. The new national soccer stadium hosts the games of the championship league, as Dublin has a championship league team these days.

Dublin has an efficient public transport network consisting of buses and rail and a water- bus with an integrated smart card system for the whole of Dublin. The transport system is accessible for all. The necessary assistance instruments are built into the system and there is a mobility scheme for the elderly, monitors on the bus stops with information on the next bus. The mixed use of land helps to shorten the distances for travel. The efficient transport system is combined with alternative modes like cycling, segway, roller-blades etc.

The necessary infrastructure is provided for alternative modes. The transport system is eco-friendly. There is a big emphasis on the saving resources and minimising the impact on the environment. Modern technology assists in improving the quality and comfort of people and freight movement.

The 1960s legacy of badly designed buildings like Liberty Hall or Hawkins House, are replaced with new high quality construction. There is a new large modern conference centre that hosts many prominent world events, as Dublin is a vibrant, welcoming and friendly city easily reachable from any location in the world. The green infrastructure performs a number of important roles. It creates a sense of harmony and friendliness in the city and also is used as natural filter for pollution, helps to keep the rain water levels stable, is used for natural

drainage systems. The quality of design is very high and all new buildings are equipped with good insulation systems, energy saving equipment and recycling facilities etc.

All development land is nationalised and there are no longer difficulties associated with zoning and unfair speculation associated with it. Space for city gardens and farms is provided to allow people to live close to work and nature at the same time. High buildings create an important line in the city landscape. They provide the necessary accommodation for many international corporations to consolidate their operations.

Anyone can find a suitable and nice place to live as there is enough high quality and affordable housing, rented and owner occupied for all types of tenancy. Flexible housing layouts, proper storage facilities and different types of design are characteristic of the housing fabric. There are many housing co-operatives and development speculation is minimised.

Dublin is a welcoming city with the name well established on the tourism market. New tourist centre offers a broad range of services for visitors. It provides parking for coaches under the building and a helicopter landing on the top. Tourists come to the city.

*Fig. 3. The Most Desired Vision for Dublin 2025*

### 4.4. Recommendation and suggestions for action

In the last phase of the process suggestions and recommendations on how to achieve the most desirable vision were proposed. A number of 'suggestion themes' emerged in the process of analysis. These were:

**Development of integrated public transport system,** which would be an equal competitor to the private car. This could be achieved through development of multi-mode public transport system, which would consist of rail, bus, metro and water-bus. These modes would be connected through "exchange travel centres" equipped with shelters, and which would provide information on the next departures and alternative modes and routes. The centres would offer waiting facilities and possibly small retail and service points. The public transport system would have an integrated ticketing system, what could be achieved through application of smart-card technology.

**Formation of multi-skilled specialist body responsible for planning and development in Dublin city and region.** The need for the creation of one agency responsible for the planning and development of Dublin city and region has been recognised over recent years and has resulted in the proposal of establishment of Greater Dublin Authority. Participants of the workshop strongly emphasised this need by proposing the creation of one agency, which would link and integrate functions distributed between different local authorities in the Greater Dublin Area. An alternative proposal was creation of a platform on which local authorities in the region could co-operate, as it was recognised in the first phase of the process that the competition between local authorities is one of the most important problems characterising present situation. Perhaps the Prospective process could provide a framework within which local authorities meet and develop a suitable form of collaboration.

**Rising political, civic and environmental awareness through different channels, such as media and education.** A significant problem, which was stressed in the first and third part of the process, was the attitude of politicians, government and public. Raising political, civic and environmental awareness is necessary in order to engage wide public in governance and in order to create space for change of behaviour and ways of thinking. This could be done through different means. Among proposed suggestions were:

- The Local Agenda 21 bus travelling around the country and spreading civic and environmental awareness. The arrival of the national bus could be combined with local actions focused on local issues.
- Transparent and adequate communication of government actions and decisions to the community, including explanation of reasons, expected effects and possible side effects.

- Shaping civic and environmental attitudes from an early age (primary school) through introduction of civic and environmental subjects and through special educational programmes, run by well-trained teaching staff.
- Educational programmes promoting civic and environmental awareness for all age groups.

**Changes in taxation.** The introduction of local taxation was proposed in order to allow the local government to generate more money and to spend it according to needs. Another suggestion involved introduction of road pricing and 'carbon taxes', which would be used for investment into public transport. It also has been recognised that development of transparent taxation system is important for building trust in government.

**Changes in the planning practice.** Planning is crucial for the development of the city and it should have proactive and long-term character. The application of the Prospective methodology was suggested as one of the methods to encourage and support long-range planning. Another proposal was related to the gradual process of introduction of new elements, which would allow to monitor the change and to evaluate its impact.

The importance of active and creative public participation in the planning process was emphasised and called for. 'Planning by cartoon' was proposed as one of the ways to gain public engagement. The planning process should be meaningful for citizens and should motivate them to express their opinions and solutions to different problems. Wider public participation could be achieved by making the planning process interesting and fun. The media was indicated as a good channel to inform and challenge society.

Another suggestion to promote best planning practice was learning from good examples developed and applied elsewhere. It does not mean applying ready solutions used by others, but rather be stimulated and inspired by them in order to develop best practices for the Irish and the Dublin context.

**Reduce the need for travel.** Part of problem solving is elimination of the cause. A solution to the traffic congestion and car dependence problem could be a reduction in the need for travel and commuting. The following suggestions were put forward in order to reduce need for travel:

- Attracting business and jobs to the towns in the commuter belt,
- High density and quality apartments close to work places,
- Mixed land use developments.

**Role of employers in supporting alternative modes of transport and in integration of transportation and land use.** Participants of the workshop recognised employers as one of the important players in the process of implementation of the vision. Employers can shape behavioural patterns and choices of their employees by:

- Changing shift patterns that would ease congestion in peak times,
- Provide financial incentives for car-sharing,
- Reduce car bonus in companies,
- Substitute car bonus with free pass for public transport that would be tax free,
- Provide change and shower facilities for cyclists,
- Create new jobs in the hubs in the commuter belt.

Employers are affected in a significant way by the problems of current situation, such as delays caused by traffic, tiredness and the high stress levels of commuting employees. They have a choice: to be engaged in the process or shift their business elsewhere. Therefore it is very important to engage them in the vision development process and to give them a chance to express their opinions and concerns.

**Development of land use patterns integrated with transportation.** This group of recommendations relates to capitalisation on the infrastructure already existing. The

suggestions propose increase in the population densities around transport nodes and formulation of a nodal development scheme.

**Implementation process and planning control.** In the first part of the Prospective process a weak planning control and inefficient implementation process were recognised as important problems in the current situation. In order to address these issues the following suggestions were proposed:

- Establishment of planning ombudsmen (outside, independent) control body,
- Decrease the flexibility of the zoning process,
- Establishment of the position of the 'planning mediators' that would participate in negotiations between developers, planners and public,
- Develop mechanisms for effective policies enforcement.

**Accessibility of public spaces and their role in community building.** An important part of the vision was the development of a strong community identity and building viable social links. In order to address this part of the vision a role of public space in this process was indicated. Pedestrianisation of city centre, inner city and creating pedestrian friendly neighbourhoods was one of the proposals. Others involved protection of existing green spaces and creation even more green spaces in the city, increasing visual attractiveness by introduction of more elements of small architecture to the city landscape, i.e. shelters in most needed places, development of derelict parts of the city and encouragement of better aesthetics and design.

## 5. FINAL THOUGHTS

In present times it is not enough to prepare spatial plans and implement them in order to ensure stable and healthy growth of cities. Globalisation, accelerating pace of change and growing complexity of urban systems created new contexts that makes it more difficult to plan for and manage city growth. It is necessary to link physical planning with social, economic and cultural development. Understanding the city and context, in which it functions, is crucial for policy development and the decision-making processes.

Futures methodologies, especially Prospective, offer a framework to develop a better understanding of the city system, its complexity and its past, present and possible future dynamics. The results of the study show that a change in the way of thinking, in attitudes and political system is necessary to plan for a better future for all. The participants of the study recognised the possible role of Prospective in creating a space for mindset shift and developing creative and innovative ways of thinking, which was indicated by this recommendation: "sit all of the councillors of the local authorities down to workshops like the 'prospective' workshop we have just had in order to realise that competing with each other is detrimental to their own areas and working together is in all of the their own self interests".

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