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## **News Release**

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### **PwC uses spatial data analysis to create development masterplan for the City of Tbilisi**

**Warsaw, 14 February 2017** — The consulting company PwC has prepared a detailed development masterplan for the Tbilisi Sea area of the Georgian capital city of Tbilisi. The project used spatial data analysis to determine the selection and location of investments in developing tourist, hospitality and retail facilities alongside the city’s main water reservoir. This geodata-driven urban design project is a unique one internationally and the first of its kind in Central and Eastern Europe. During the course of the project, PwC analysts combined hundreds of data layers such as demographic information, current city infrastructure and real estate value distribution to determine the optimal location of developments. The many data layers used during analysis were then combined into a three-dimensional visualisation of the area.

Geodata-driven urban planning allowed PwC to present city and national government officials with a comprehensive masterplan that takes into account all the key factors affecting the future success of investments in development. The masterplan involves construction of dozens of initiatives with different functions and minimum interference in the natural environment. At the same time, the initiatives are planned with a view to ensuring a reasonable rate of return to both local and international investors. The type of initiatives envisioned by the plan include recreation and sports facilities, sales and services outlets, as well as several kinds of entertainment attractions.

*“In its aim to make Tbilisi ‘the best of what the city can be’, the Government of Georgia has been considering the development of under-utilized land plots in the city. The Government selected the Tbilisi Sea area for development as it is a major land plot with the potential to develop along socio-cultural, traditional, and environmental lines for the benefit of the local area and the city at large.*

*PwC Georgia became actively involved in suggesting a vision for this project starting in August 2015, and carefully approached the opportunity not only from the commercial perspective, but in full recognition of the significance of this task for a citizen of our ancient city. Knowing that this multifaceted conceptual plan had to be developed in a coherent way, we at PwC Georgia teamed up with our data analytics colleagues at PwC Poland to combine local knowledge with technological best practice. The resulting project has huge potential for increasing the economic growth of the city and the well-being of its citizens,”* said **Tamta Shermadini**, Advisory Senior Manager at PwC Georgia.

**Tbilisi Sea Development Concept, Target Functional Division, Initiatives Matrix and 3D Visualisations**

Tbilisi Sea Development Concept | **Target functional division** | Initiatives Matrix | Initiatives location | 3D Visualisations | Communication scheme

## Target functional division

*Initial masterplan general concept*

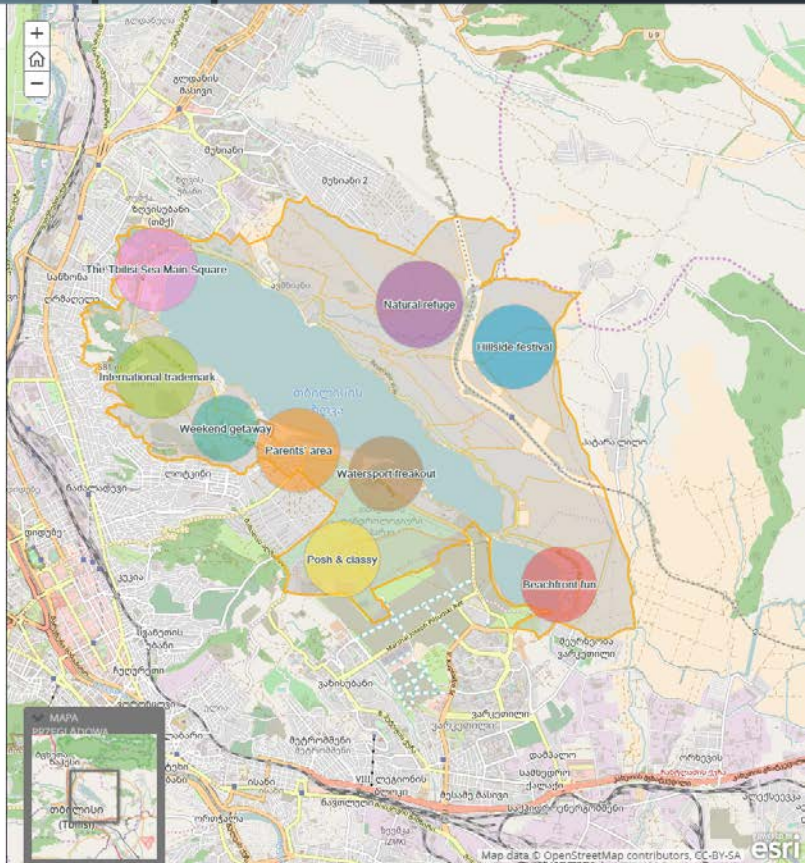
Based on the research and brainstorming that we have performed together with Chapman Taylor during the first phase of our project, we managed to design a clear vision of the Tbilisi Sea area development. Our main assumption while designing the masterplan was to preserve the beautiful natural character of this area. This assumption was in line with the recommendations from the City Hall of Tbilisi and urban planners working on the zoning plan for the whole city.

At the same time, we wanted to create space which would be popular among the citizens of Tbilisi and where they would like to spend their free time. Moreover, we wanted to create potential to attract international tourists and convince them to spend more time in Tbilisi.

*The greatest pressure was put on the recreational and hospitality functions. To provide support, we propose a diverse entertainment offering for both locals and tourists with different lodging options*

The general idea is to create several, interconnected zones/areas of activities alongside the loop road around the Sea and introduce various initiatives that can coexist in synergy.

Each area will be connected by water tram and with bike station system and other ecological (ideally electric) forms of individual transport. The road around the Sea may have different forms – from hiking trail or bike route to light ground road for vehicles. A form of educational trail could be created along the road, for example in the form of a sequence of historical station points commemorating history of the town of Tbilisi (one station per zone).



A detailed geospatial model of the city of Tbilisi was created for the purposes of the design works together with the architectural firm Chapman Taylor. It includes, among other things, a full map of public transport, a road model, a demographic profile, an infrastructure map and natural environment components. This made it possible to determine what features were missing around the area being analysed. On this basis, experts proposed business initiatives for the Tbilisi Sea area land use, along with financial models for every project, evaluating its potential and profitability.

A geospatial model was also prepared for every initiative, presenting the optimum location for the initiative within the area being analysed. The model took into account more than 300 spatial variables, including coastline length, access to infrastructure, population distribution, availability of road networks, average travel time to individual parts of the city, and an elevation model. A three-dimensional model of the Tbilisi Sea area after the execution of all phases of the masterplan was also included as part of the final product.


Tbilisi Sea Development Concept, Target Functional Division, Initiatives Matrix and 3D Visualisations

Tbilisi Sea Development Concept | Target functional division | **Initiatives Matrix** | Initiatives location | 3D Visualisations | Communication scheme

### Initiatives Matrix

#### Outdoor food markets

**Initiative description**  
This is an open-air, public marketplace where local food and spices are sold. It is often located at the centre of the city or at least near the city. It also contains space for open-air restaurants, where people can eat the purchased local food.

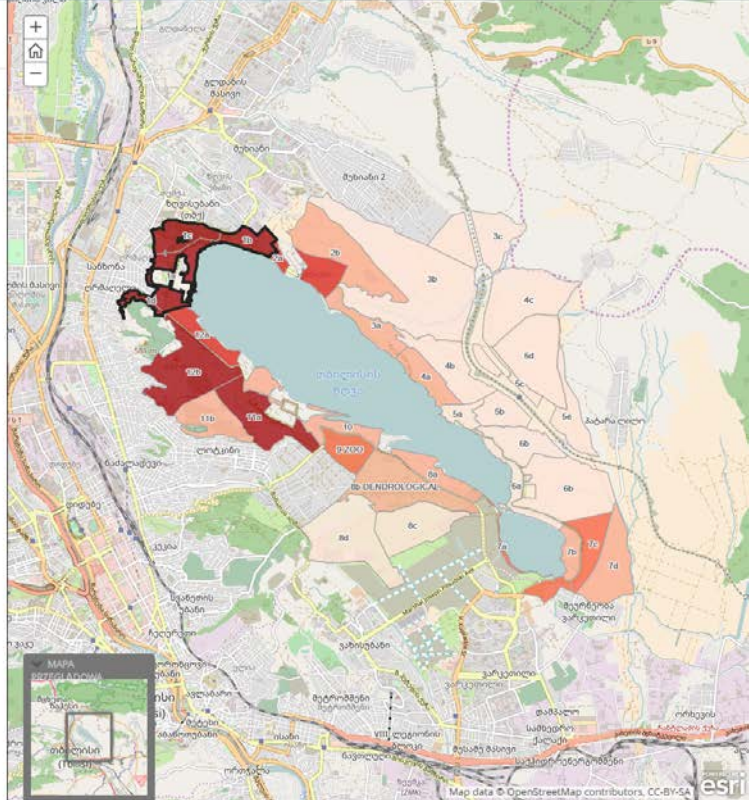


Outdoor food markets

**Key parameters**

- Access to utilities and infrastructure, mostly water and electricity
- Good quality connection with main roads, airport, etc.
- Elevation variance – flat area is required

**Location assessment**  
GIS-model indicates that outdoor food market should be situated in the northern parts of Tbilisi Sea coast. There is no doubt that the aforementioned initiative is in synergy with business function of this area as well as major population centres nearby. Similarly, other retail spaces in this area could boost client stream into the food market.



“The methodology used in the Tbilisi Sea development project is unique in that it combines an architectural perspective with large scale geodata analysis and financial modelling. As a result, Tbilisi officials received a sustainable masterplan that is actionable and attractive for a range of key stakeholders: investors, tourists and the citizens of Tbilisi. The proposed solutions are feasible from an urban design perspective and promise reasonable rates of return to potential investors, all the while giving the city an opportunity to promote itself on an international level. We are confident that such an approach could be applied for other large scale redevelopment projects around the world, allowing local administrations to make optimal and reasonable master planning decisions,” said **Michał Kliś**, GeoAnalytics Team Manager at PwC Poland.

According to the Mayor of Tbilisi, the most important document of the Tbilisi Sea area land use masterplan is now finalized and will be presented to the public and business community.

*“In the new year we will present the master plan of the Tbilisi Sea development to the public and business communities for them to see their opportunities and find their roles around the Sea. This is one of our important future projects. The correct development with maintaining the recreational function will make this place exclusively attractive,”* said **David Narmania, Mayor of Tbilisi City**.

The implementation phase of the project will begin in 2017, and final completion is planned for 2028.





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PwC has been active in Central and Eastern Europe for the past 25 years. PwC Central and Eastern Europe (PwC CEE) is a network of firms, consisting of separate legal entities in accordance with applicable local laws and regulations. We work to help our clients in local markets become more successful and globally competitive. Today we have more than 8,800 people, including 260 partners, working in 55 offices across 29 countries in the region.

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