# Visualization of Data from the Participatory Budget System of the City of Most

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### Motivation

• The city of Most lacks a centralized database, a tool for data management, map-based project visualization, advanced project search and a statistical dashboard for Participatory Budgeting.

### Participatory Budgeting

• A democratic process based on the active involvement of wide range of citizens in decisionmaking and voting on the allocation of public financial resources.

#### **Application Structure** Backend (Data + logical layer) **ArcGIS ArcGIS Enterprise** Online Geographic Feature database Service Frontend (Presentation + logic layer) ArcGIS SDK React for JavaScript

# Data Structure Types Table Point Layer Multipoint Layer → Attribute Rules → Cluster Layer Polyline Layer Polygon Layer Figure 2: Data structure diagram

# Map Widgets

Zoom in/out

Default position 

Search • By Address

• By Buildings blocks

Basemap Gallery

**Filtration** 

• By Years • By Projects Types

Legend

• Shows Projects Types

Information i

Projects

Project gallery with search

Dashboard .00

Editor • Editing, Adding and

Projects Types Settings

deleting project

• Editing, Adding and deleting projects types

## **Application Screenshots**

Figure 1: Application structure diagram

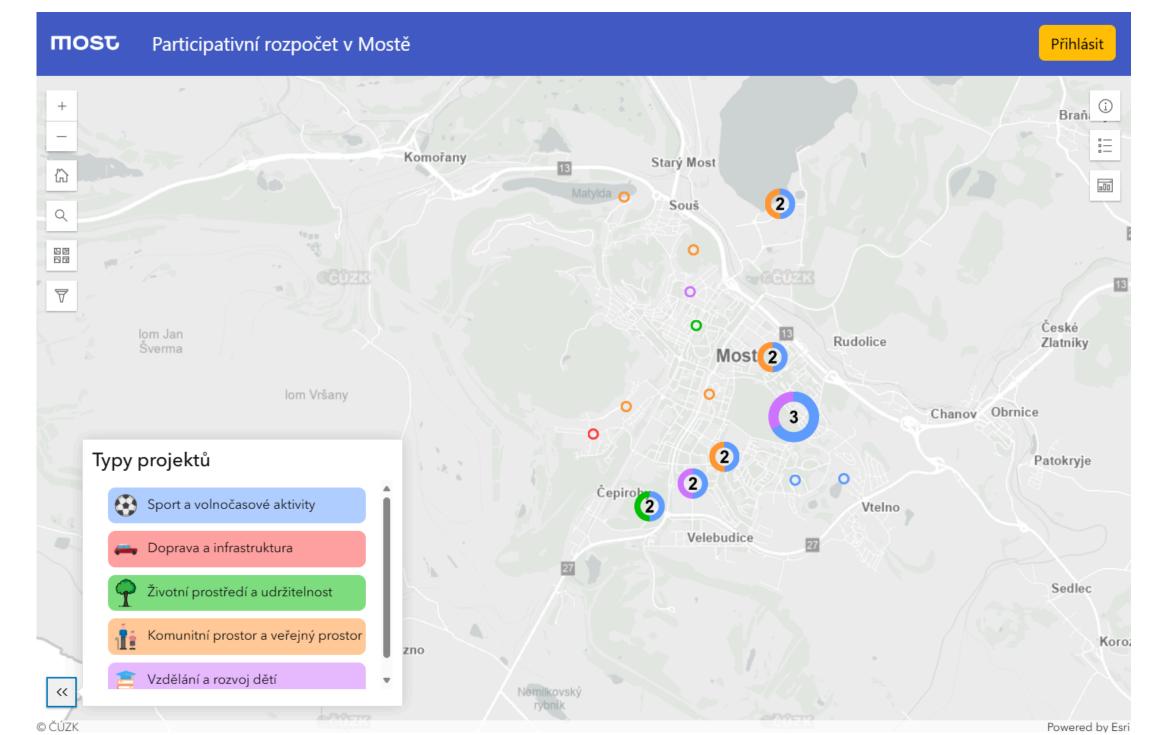


Figure 3: Public map for general public

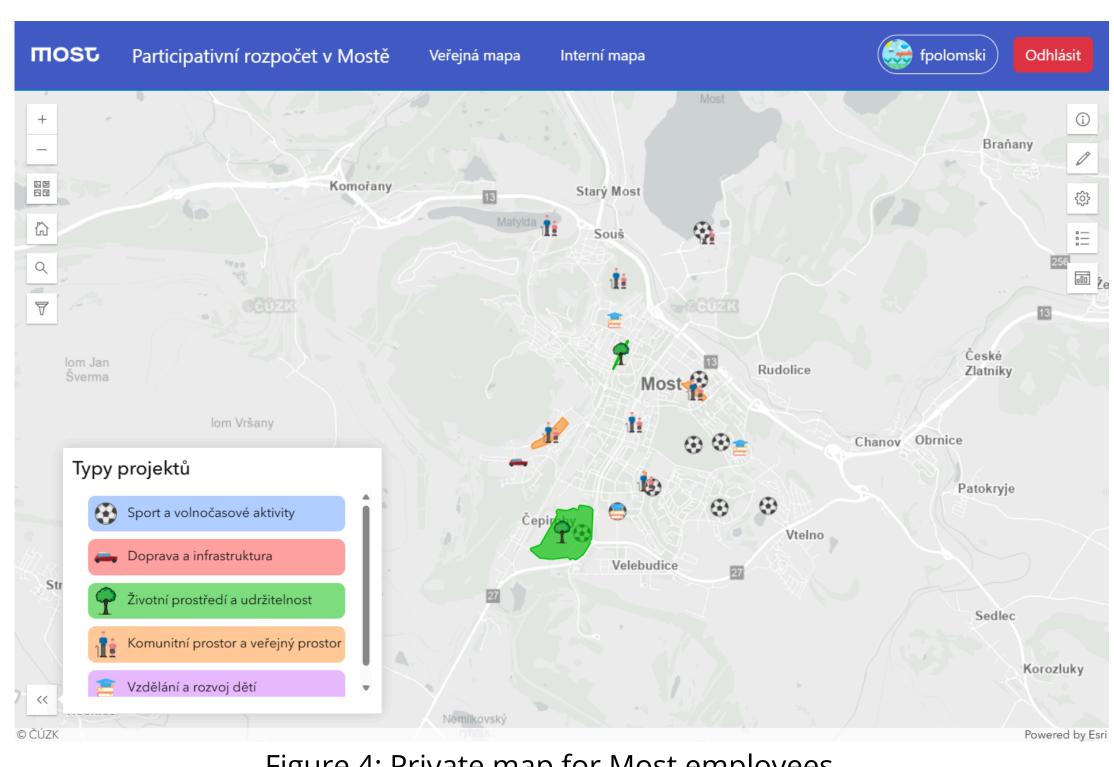


Figure 4: Private map for Most employees

### Public Map

- **Clustering layer**: Groups projects at certain zoom levels, displaying original geometry when zoomed in.
- Filtering: Allows filtering of project on the map.
- **Project gallery**: Browse projects that advanced to voting.
- **Dashboard**: Displays stats on projects in voting, winners, total costs and graphs.

### Private Map

- Access: Has the same widgets as regular user, with access to all projects.
- Projects Types Settings: Manages project type icons, names and colors displayed on the map.
- **Editor:** Allows management of all projects on the map and adding new ones.