



Geodezija v državnih prostorskih načrtih

Geodesy in national spatial plans

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POVZETEK

V državnem prostorskem načrtovanju (DPN) je uporaba kakovostnih geodetskih podlog ključna za zagotavljanje natančnosti in skladnosti vseh faz načrtovanja. Geodetske podloge – od digitalnih katastrov in ortofoto posnetkov do podrobnih topografskih načrtov – predstavljajo temeljni referenčni okvir, ki omogoča prostorskim načrtovalcem, projektantom in organom, da sprejemajo premišljene odločitve. Brez ustreznih in ažurnih podatkov bi bila verjetnost napak, pravnih zapletov ter tehničnih neskladij bistveno večja.

Glavne vrste podlog vključujejo digitalni kataster nepremičnin (DKN), ortofoto posnetke, topografske načrte, lidar podatke ter tematske sloje (npr. poplavna območja, varstvena območja). Vsaka od teh podlog služi različnim potrebam:

- Kataster: ključ za identifikacijo parcel in lastništva.
- Ortofoto: vizualna predstava terena v realnem merilu in času.
- Topografski načrti: višinske in reliefne značilnosti, pomembne za načrtovanje infrastrukture.
- Tematski sloji: upoštevanje omejitev (varovana območja, območja posebnih režimov).

Sinteza teh podatkov zagotavlja celovit pogled na obravnavano območje, kar je nujno za pripravo utemeljenih prostorskih rešitev.

V zgodnjih fazah načrtovanja organi pridobijo aktualne geodetske podloge iz uradnih evidenc (GURS, ARSO ipd.). Te se digitalno integrirajo v programska orodja (GIS), kjer se prekrivajo z obstoječimi in načrtovanimi prostorskimi ureditvami. Nato sledi preverjanje skladnosti z zakonodajo (Zakon o urejanju prostora, Zakon o graditvi objektov). V fazi izdelave osnutkov in javnih razgrnitev se geodetski podatki uporabljajo kot podlaga za grafične prikaze načrtov, kar omogoča transparentno komunikacijo z javnostjo in nosilci urejanja prostora.

Ključni izziv ostaja ažurnost in usklajenost podatkov ter njihova aktivna uporaba. Geodetske podloge se morajo redno posodabljeni, saj spremembe v lastništvu, rabi tal in infrastrukturi vplivajo na ustreznost načrtov. Drug izziv je interoperabilnost med različnimi podatkovnimi viri in formati. Priporočljivo je uporabljati standardizirane formate (npr. GML, SHP) ter zagotoviti, da imajo vsi deležniki dostop do iste, enotne baze podatkov. Pomembna je tudi kadrovska usposobljenost – strokovnjaki morajo biti vešč delati z GIS orodji in interpretacije prostorskih

podatkov. Pri prispevku pa bo glavni poudarek na aktivni rabi teh podatkov ter principih, pristopih in praksah pri vseh fazah priprave državnih prostorskih načrtov.

Geodetske podloge so torej hrbtenica državnega prostorskega načrtovanja. Njihova pravilna uporaba prinaša večjo pravno varnost, učinkovitejše načrtovanje in boljšo obveščenost javnosti, prav to pa so vsebine, ki dejansko v sistemu državnega prostorskega načrtovanja in ob vedno bolj kompleksnih prostorskih izzivih najbolj zanimajo tako naročnike, kot tudi odločevalce in splošno javnost.

SUMMARY

In national spatial planning, the use of high-quality geodetic bases is crucial to ensure accuracy and consistency at all stages of planning. Geodetic bases – from digital cadasters and orthophoto imagery to detailed topographic maps – form a fundamental reference framework that enables spatial planners, designers, and authorities to make well-informed decisions. Without appropriate and up-to-date data, the likelihood of errors, legal complications, and technical inconsistencies would be significantly higher.

The main types of geodetic bases include the digital land cadaster, orthophoto imagery, topographic maps, LiDAR data, and thematic layers (e.g., flood zones, protected areas). Each serves different needs:

- Cadaster: the key for parcel identification and ownership.
- Orthophoto: a visual representation of terrain in real scale and time.
- Topographic maps: elevation and relief features, important for infrastructure planning.
- Thematic layers: consideration of restrictions (protected areas, special regime zones).

Synthesizing these data provides a comprehensive view of the area in question, which is essential for preparing well-founded spatial solutions.

In the early stages of planning, authorities obtain current geodetic bases from official records (GURS, ARSO, etc.). These are digitally integrated into software tools (GIS), where they are overlaid with existing and planned spatial developments. This is followed by checking compliance with legislation (Spatial Planning Act, Construction Act). In the draft preparation and public display phases, geodetic data serve as the basis for graphical representations of plans, allowing transparent communication with the public and spatial management stakeholders.

The key challenges remain the timeliness and consistency of data and their active use. Geodetic bases must be regularly updated, as changes in ownership, land use, and infrastructure affect the relevance of plans. Another challenge is interoperability among different data sources and formats. It is advisable to use standardized formats (e.g., GML, SHP) and ensure that all stakeholders have access to the same unified database. Staff expertise is also important – professionals must be skilled in using GIS tools and interpreting spatial data. In this context, the main emphasis will be on the active use of such data and the principles, approaches, and practices in preparing all phases of national spatial plans.

Geodetic bases are thus the backbone of national spatial planning. Their proper use ensures greater legal security, more efficient planning, and better-informed public communication – aspects that are of key interest to clients, decision-makers, and the general public in a system facing increasingly complex spatial challenges.

EXECUTIVE SUMMARY

High-quality geodetic bases are essential for national spatial planning, ensuring accuracy and compliance throughout all planning stages. These data sources—digital cadasters, orthophoto imagery, topographic maps, LiDAR data, and thematic layers—provide the foundation for informed decision-making by planners, designers, and authorities. They help identify parcels and ownership, represent terrain accurately, show elevation and relief, and highlight restrictions such as protected or flood-prone areas.

In practice, authorities gather current geodetic data from official sources (e.g., GURS, ARSO) and integrate them into GIS tools. This allows alignment of existing and planned developments with legal requirements and supports transparent communication through clear graphical representations during public consultations.

Key challenges in detailed national spatial planning include keeping data updated, ensuring interoperability among sources and formats, and their active use in all stages of planning processes. In this context, the main emphasis will be on the active use of such data and the principles, approaches, and practices in preparing all phases of national spatial plans.

Ultimately, geodetic bases are the backbone of DPN, providing legal security, more effective planning, and better public engagement—key elements in addressing increasingly complex spatial challenges.

EXECUTIVE SUMMARY (BRIEF)

Accurate and up-to-date geodetic data are the backbone of national spatial planning (DPN). Key sources—digital cadasters, orthophotos, topographic maps, LiDAR, and thematic layers—support parcel identification, terrain analysis, and consideration of legal or environmental restrictions. Authorities obtain this data from official sources (e.g., GURS, ARSO) and integrate it into GIS tools to align plans with regulations and communicate clearly with the public.

Main challenges include data timeliness, compatibility across formats, and their active use in all stages of planning processes. Standardized formats and unified databases are essential. Proper use of geodetic bases leads to more secure, efficient planning and better-informed decision-making in increasingly complex spatial contexts. In this context, the main emphasis will be on the active use of such data and the principles, approaches, and practices in preparing all phases of national spatial plans.

KLJUČNE BESEDE: geodezija, podloge, načrti, kataster, državni prostorski načrt, Slovenija

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