ODPRTA ZNANOST OPEN SCIENCE

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glavna in odgovorna urednica | Editor-in-chief

Ob prebiranju prispevkov septembrske številke in pod vtisom zanimivih predavanj na nedavnih strokovnih dogodkih tako na mednarodni ravni kot v Sloveniji, o katerih poročamo v tej številki, ne moremo mimo izjemnih znanstvenih in raziskovalnih dosežkov na širšem področju geodezije in geoinformatike. Izredno hiter tehnološki razvoj že danes močno vpliva na naše delo. So pa razprave na navedenih dogodkih pokazale, da smo do inovativnih rešitev pogosto precej zadržani in veliko je dvomov, ali se bodo raziskovalni dosežki uvedli v praksi.

Z izzivi prenosa znanstvenih dosežkov v prakso se srečujejo na mnogih področjih, ne le v geodeziji in geoinformatiki. Problem vrzeli med znanstveno-raziskovalno sfero na eni strani ter gospodarstvom, javno upravo in širšo družbo na drugi strani posebej naslavlja tudi Evropska komisija. Tako se v novi finančni perspektivi (2021–2027) uvaja za mnoge raziskovalne projekte koncept odprte znanosti (angl. o*pen sceince*), ki jo v njenem osnovnem poslanstvu pravzaprav že dobro poznamo.

Ideja deliti znanstvene dosežke s strokovno in širšo javnostjo je zelo stara in je povezana s prvimi objavami znanstvenih dosežkov za širšo strokovno in siceršnjo javnost. Pomemben napredek na tem področju je prinesla informacijska revolucija, ki je povsem spremenila dostop do znanja. Včasih je bilo znanje dostopno le redkim izbrancem iz višjih družbenih slojev, danes pa sta vstop na univerze in pridobivanje znanja omogočena vsem. Poleg znanja, ki ga pridobimo v izobraževalnih inštitucijah, so danes velike količine znanja (in neznanja) prosto dostopne tudi na svetovnem spletu. Slednje sicer zahteva izredno kritično presojo, a o tej izredno aktualni tematiki tu ne bomo razpravljali, saj bi lahko napisali cel roman.

Toda koncept odprte znanosti se spreminja. Še pred desetletjem je bil poudarek predvsem na »odprto dostopnih« objavah znanstvenih dosežkov. Danes je ideja odprte znanosti omogočiti, da so znanstveni dosežki, raziskovalni podatki in dognanja odprto dostopni in hkrati zanesljivi, ob tem pa se spodbuja aktivno sodelovanje vseh deležnikov.

S spodbujanjem znanosti, da je bolj povezana z družbenimi potrebami, je odprta znanost lahko prava rešitev pri premoščanju vrzeli v znanosti, tehnologiji in inovacijah z vidika prenosa dosežkov v prakso. Tako imenovano gibanje odprte znanosti sicer izhaja iz znanstvene skupnosti, a se je zelo hitro razširilo v družbi, zato ne čudijo vse močnejši družbeni pozivi k »odpiranju vrat znanosti«. Temu pozivu se pridružujejo tako javna uprava, industrija, podjetja kot splošna javnost. Žal pa se še vedno srečujemo s težavo razumevanja

koncepta odprte znanosti v poslovnih modelih, kjer se namesto »toka znanja« poudarja »tok kapitala«. V tem smislu tudi na svetovni ravni potrebujemo strateške gospodarske, politične in družbene spremembe, ki bodo na prvo mesto postavile potrebe družbe, upoštevajoč usmeritve trajnostnega in zelenega razvoja.

Zamisli odpiranja in širjenja znanja ter grajenja tako imenovane družbe znanja sledi tudi Zveza geodetov Slovenije – naj bo prek odprto dostopnih objav v Geodetskem vestniku ali pa strokovnih dogodkov, kot so Geodetski dnevi. Zagotovo pa je še mnogo neizkoriščenih možnosti za aktivnejši dialog med raziskovalci, razvijalci, podjetniki in končnimi uporabniki naših rešitev. Verjamem, da bomo te priložnosti znali izkoristiti. Naj sklenem z mislijo vabljenega predavatelja letošnjega Geodetskega dneva dr. Joca Triglava: »Za dobre rešitve in razvoj so v prvi vrsti pomembni ljudje, čas in denar. In to natančno v tem vrstnem redu.«

While reading the contributions in the most recent issue of Geodetski vestnik and under the still fresh impression of interesting lectures at recent professional events that took place in Slovenia and abroad – many of them presented in this issue – one cannot help but admire the remarkable scientific and research results in the disciplines of surveying and geoinformatics. Extremely rapid technological development has left a deep mark on our work. In contrast, the debates held during the events mentioned above showed that we are still somehow reluctant to embrace innovative solutions; considerable doubts about how scientific achievements can be implemented into practice persist.

These challenges are found throughout the scientific landscape, not only in surveying and geoinformatics. The problematic gap between science and research on the one hand and the economy, public services and the wider public on the other has been specifically addressed by the European Commission. Thus, the next financial perspective (2021–2027) introduces a concept of open science for many research projects. This concept has been quite well-known in our fields of expertise.

Indeed, the idea of sharing scientific achievements with the professional and general public is long established, dating from the first published scientific achievements for the professional and general public. The Information Revolution profoundly changed access to knowledge and accelerated development in the field. In the past, knowledge was accessible only to a few chosen individuals from the upper classes, while university studies and knowledge are today available to everyone. Apart from the knowledge gained in educational institutions, vast amounts of knowledge (and ignorance) are freely accessible on the internet. Of course, strictly informed judgment is necessary, but we will avoid this highly relevant theme here as it might stretch this text to the length of a novel.

Nevertheless, the fact remains that the concept of open science is changing. Not a decade has passed since the main focus was on open access publications of scientific achievements. Today, the primary idea of open science is to enable freely accessible but reliable scientific achievements, research data and findings, by which the active participation of all interested parties is fostered.

With the necessity for science to better address needs in society in mind, open science can offer the right solutions to narrow the gaps between theory and practice in science, technology and innovation. The so-called open science movement was indeed born in the scientific community but has spread throughout society since. Thus, the increasingly loud calls "to open

the door to science" seem perfectly understandable. They have been repeated in public services, industries, companies, and by the general public. Unfortunately, the understanding of the open-science concept in business models remains poor, where the focus still has to shift from "money flow" to "knowledge flow". This calls for strategic, economic, political and societal changes not only locally but also globally. Here, the central importance lies in the needs of society, with due regard to the guidelines of sustainable and green development.

The Association of Surveyors of Slovenia has been actively promoting opening up and spreading knowledge and the building of the so-called society of knowledge – be it through open-access contributions in Geodetski vestnik or through expert events such as the Land Surveying Day. Undoubtedly, there are ample opportunities for a more active dialogue between researchers, developers, entrepreneurs and the end-users of our solutions. I am confident that we will be able to use them. Allow me to finish with the words of our guest lecturer at this year's Land Surveying Day, Joc Triglav, Ph.D.: "As a rule, people, time, and money are needed for good solutions and development. Precisely in this order."