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Remodelling urban planning education for sustainable development: the case of Serbia

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Abstract

Purpose – The paper aims to present a pedagogical model tailored to the development of key competences in the urban planning profession in post-socialist transitional countries that is based on the creation of an integrated platform for dialogue and the development of professional competences as part of the process, whereby students produce their final projects.

Design/methodology/approach – The pedagogical model is based on the principles of education for sustainable development and focuses on the establishment of a repeatable platform for dialogue between students and mentors, members of the mentoring team, the local community, external members of the consulting team of experts and foreign master's degree programmes, in the process of producing students' projects. The proposed method addresses several dimensions, including: the education of students, teachers, professionals and local experts, the establishment of a network for cooperation and collaboration and the delivery of practical and usable results.

Findings – The paper provides a comparative overview of the pedagogical model's application in producing the final master's degree projects of three generations of students, as well as its alignment with the needs of re-defining the role and reach of the profession of urban planner in an environment of post-socialist transition. The model was improved, enhanced and optimised through this process and then corroborated with its practical implementation.

Originality/value – The innovative pedagogical model comprises an instrument to enhance the professional capacities of all participants in the production of final master's projects: academics, practitioners and future professionals/students, through discussions of topical issues, innovative modes of work and new professional responses grounded in the local context and tested by a broad range of stakeholders. It is of particular importance for countries in transition experiencing a shift in the paradigm of professional action, especially as the proposed pedagogical model establishes a problem-solving platform that surpasses academia.

Keywords Curriculum development, Urban planning, Paradigm change, Integrated urbanism, Post-social transitional country

Paper type Case study

Introduction

The political changes that Serbia underwent in 2000, followed by the shift to a democratic system of governance and a market economy, as well as the country's renewed openness toward Europe and the world, all brought about fundamental changes to the framework in which spatial development action can be taken. The new socio-economic context altered the



understanding of the key pillars of sustainable development and led to changes in the notion of spatial intervention and, consequently, in professional approaches to spatial and urban planning. This left the field wide open for the creation of new knowledge and the education of a cadre of professionals able to rise to the complex new challenges posed in practice in a country undergoing transition.

Although a new framework for professional action was created, the basic preconditions for the new planning system to operate remained absent, and consequently, essential changes to the actual practice of urban planning did not occur. An important aspect of this issue is the traditional urban planning education (UPE) within the framework of architecture studies. This means that urban planning practice is traditionally rooted in technical disciplines and oriented toward engineering knowledge and does not recognise the need to incorporate learning from social and environmental sciences.

The paper generally deals with the role of academia in improving urban planning in Serbia through the establishment of an innovative master's degree programme in line with the requirements of contemporary global planning practices and key competences for sustainability. It particularly addresses the issue of how the production of final master's degree projects, organized as an integrated platform for dialogue, can enhance the capacities of the broader professional community, placing specific emphasis on re-examination of the role of the profession in spatial development, the reach of its actions and outcomes that ought to be produced. The teaching process focused on the education of a new generation of experts enabled to act in a new socio-economic context, and the essential creation of preconditions for change to the planning paradigm within the community of practitioners, government officials, local communities and teachers.

The paper will first discuss the concept of UPE for sustainable development (UPESD) in relation to the contemporary understanding of UPE and the requirements of education for sustainable development (ESD) and will then contextualise this concept to the conditions that prevail in post-social transitional countries (PSTCs). This will be followed by a presentation of the pedagogical model (PM) for UPESD tailored to the conditions of PSTCs and an examination of the results of its implementation through a comparative overview of the processes of producing of final master's degree projects by three generations of students. Finally, the results of the application of the PM will be discussed, and general conclusions will be drawn.

Urban planning education for sustainable development

Contemporary UPE is essentially rooted in the sustainable development paradigm, and its principles are part of the curricula of planning schools throughout the developed world. In the 1990s, the growing significance of the environment exerted a major influence on changes to UPE. Following the Brundtland Report, rising global environmental concerns caused the purpose of planning to shift from the seemingly benign management of environmental change to the explicitly normative goal of achieving sustainable development (Davoudi and Pendlebury, 2010). At this time, it became commonplace to see planning as having to be basically oriented toward solving the needs of society within the framework of sustainable development (AESOP, 1995).

In today's increasingly globalised world, UPE is confronted with new challenges characterised by the growing complexity of economic, environmental and social conditions, along with different specific features in the politico-administrative environment at the local level (Mironowicz, 2015). In a world of limited natural resources where land plays a key role, accompanied by problems of growing populations and climate changes, the demands on the quality of UPE occupy a key position (Scholl, 2012). The New Urban

Agenda (UN HABITAT, 2016) stresses that future development relies on cities as engines of economic development, cradles of innovation and arenas of civil rights. Accordingly, key guidelines for urban professionals are to create a pattern of sustainable urban development fostering a new model of the city (UN HABITAT, 2016).

Urban planning education, as an independent educational model, has a long tradition in developed democracies. In general, leading planning schools view planning as an integrated practice that requires technical, analytical and communicative skills, including participation and conflict resolution in a multicultural context (Frank *et al.*, 2014). This view sees planners as professionals who do the complex work of planning under complex politico-administrative and socio-economic conditions to create living spaces for people and suitable locations for their activities (Friedman, 1996; Rodwin and Sanyal, 2000; UN HABITAT, 2009; Davoudi and Pendlebury, 2010; Geppert and Cotella, 2010; Scholl, 2012; Frank *et al.*, 2014; Mironowicz, 2015). Consequently, it is clear that planners' professional action are closely connected with the local peculiarities of the space in which actions are taken. Contextual conditionality is a hallmark of UPE, whereby the conditions and challenges of UPE differ from country to country and include political milieus, legal systems and law enforcement (Frank *et al.*, 2014; Mironowicz, 2015), as well as language, culture and paradigm (Scholl, 2012).

However, there are no common core curricula or even universally agreed guidelines for UPE, and even within Europe, planning schools do not agree on the competences professional planners should have (Frank *et al.*, 2014; Mironowicz, 2015). Although some authors have suggested the development of a uniform Western planning doctrine (Kunzman, 2004), there is a considerable need to adapt planning to local circumstances and to recognise the specific features of the environment in which the planning education curriculum and educational approach are applied (Frank *et al.*, 2014; Mironowicz, 2015). Political and socio-cultural realities and specific environmental and ecological challenges make the contextual grounding of UPE essential.

Regardless of the requirements of individual countries' planning practices that determine the development of curricula by each academic institution, a general list of universal competences is nonetheless under consideration. The European Council of Spatial Planners underlines that professional town planners require training aimed at developing the ability to identify problems and devise solutions from an interdisciplinary perspective, through an understanding of the complex processes that affect planning, using different methods for solution design (ECTP-CEU, 2017). The following are highlighted as key competences and skills for planners: interdisciplinary work, collaborative problem-solving, concept thinking, anticipatory skills, strategic thinking, communication and conflict resolution, ethical thinking, creative visioning, project management, leadership and stakeholder management (AESOP, 1995; ECTP-CEU, 2013; RTPI, 2016). In a way, determining key planners' competences and skills is part of the profession's global perspective. Today's networked society and modern communications systems permit professionals to work outside the local environment. Courses of study are, consequently, aimed at developing competences for working effectively in intercultural and trans-disciplinary environments, using a range of methods and tools, as well as technological and managerial competencies, which have global acceptance (Lehmann and Fryd, 2008).

Contemporary planning practice is nowadays grounded in the concept of the collaborative-communicative paradigm, which emphasises decision-making processes and the position of individuals within them. Important postulates of such a planning concept include: respect for the legitimacy of the interests of multiple groups, reasoned debate and consensus in decision-making between all stakeholders (Habermas, 1984; Forester, 1989;

Healey, 1991; Sager, 1994). This, consequently, implies that the planning process must be effective and efficient, accountable, transparent, responsive, equitable and inclusive. The focus of expert knowledge rests on the ability to negotiate with other parties and critically consider various interests, openness to different outcomes of the collaborative process and creativity in seeking solutions.

Positioning the individual at the centre of efforts to confront a complex environment is one of the key recommendations of the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals (SDGs) (UN, 2015). These documents place great emphasis on promoting bottom-up initiatives to address the challenges of sustainable development. As such, education to build the capacities of individuals has become a key instrument for attaining the SDGs. A well-established approach to ESD is felt to empower learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations. Key principles for designing educational programmes include: a learner-centred approach, action-oriented learning, transformative learning, experiential learning and co-construction of knowledge through dialogue (Scholl, 2012; Bertolini *et al.*, 2012; Frank *et al.*, 2014; Mironowicz, 2015), which provides system thinking, anticipatory, normative and strategic collaboration, critical thinking, self-awareness and integrated problem-solving competences (UNESCO, 2017).

Urban planning education in the post-social transitional context

Challenges for the urban planning profession in PSTCs

The period of Serbia's political transformation from one-party socialism to a democratic and market-oriented society began as early as 1989, when the country was still part of the former Yugoslavia. However, nationalist movements and the civil war of the 1990s led the Yugoslav state to disintegrate into multiple sovereign nations, which made the shift to a European civil society model much slower and more difficult (Nedović Budić and Cavrić, 2006). Social and political changes and reforms that affected urban planning sped up only after 2000.

The context of post-socialist transition that Serbia embarked upon has thoroughly transformed the attitude toward spatial development. Free-market and democratic decision-making principles have been adopted in general: these allow radical changes to be made to the socio-economic framework and, consequently, affect the planning system as well. Nevertheless, the key preconditions for changes to planning practice have not been put in place, because true reforms aimed at introducing a market economy have not materialised, and neither have democratic decision-making procedures that influence spatial development (Lazarević Bajec, 2009; Nedović Budić *et al.*, 2011). The comprehensive planning system inherited from socialist times has remained in place in Serbia. Although this system was notable for its openness to participation in the socialist 1970s and 1980s, this feature is not a key hallmark of today's planning system (Müller *et al.*, 2015), as it recognises neither the legitimacy of plural interests nor the free market.

The transitional environment in Serbia has led to confusion in spatial development, where the profession has by and large been unable to find its way and where, consequently, spatial development documents are out of sync with the needs of urban development (Vujošević, 2004; Vujošević and Nedović Budić, 2006; Lazarević Bajec, 2009; Müller *et al.*, 2015). One of the reasons for this state of affairs is the absence of true communication between planners and decision-makers – the lack of a communications platform for making decisions that concern spatial development as a framework for contemporary planning practice. Actual decision-making in spatial development is opaque and confined to a narrow

circle of actors. The current economic crisis has additionally exacerbated the problems caused by this state of affairs.

Problems of UPE in Serbia and the need for a specific course of study

In general, post-socialist transition countries have a strong tradition in educating urban planners, but here, unlike in other countries, the approach is highly oriented towards technocratic and economic planning that formerly provided the basis for industrialisation of the socialist state (Hirt and Stanilov, 2008). Until recently, Serbia belonged to the other half of the world's countries, those that did not offer separate and distinct programmes in urban planning (UN HABITAT, 2009). Education in urban and spatial planning is present, to differing extents, at a number of faculties throughout Serbia but is generally part of studies in other fields (architecture, landscape architecture, geography, geodesy, transportation, etc.) and in essence has no major impact on the development of the discipline of planning (Hirt and Stanilov, 2008; Bajić, 2012).

The parent institution for planning studies is the University of Belgrade' Faculty of Architecture (UBFA), where planners have traditionally trained as architects. Education in urban planning subjects is part of broader studies of architecture and is predominantly oriented toward the functional aspects of urban structure and its physical design, rather than development-related issues. The knowledge imparted lies firmly within the domain of technical sciences: it is predominantly focused on engineering disciplines and does not include topics from the social sciences, where urban planning issues actually lie.

The reform of higher education in Serbia in accordance with the principles of the Bologna Declaration allowed the diversification of programmes at various levels (undergraduate, master's, and doctoral), and the requirement to develop new courses of study was incorporated into official documents. The pressing need to educate specialised planners was recognised by UBFA's Department of Urbanism, which is responsible for educating urban planners, and a new course of study was initiated to produce experts capable of tackling the emerging challenges of spatial development in Serbia.

Main challenges for the development of key competences for sustainability in the urban planning profession in PSTCs

Hirt and Stanilov argue that in post-socialist transitional countries, urban sustainability challenges were compounded throughout most of the 1990s as a result of the severe economic crisis and the early chaos that followed property privatisation, in addition to environmental and cultural issues that became a low political priority (UN HABITAT, 2009). Planning practice, once successful and advanced, declined significantly in the new socio-economic situation, while the position of planner shrank in importance and became marginalised. Political decision-making has taken precedence over professionals' attempts to enhance practice in line with emerging needs and circumstances (Nedović Budić and Cavrić, 2006). Despite Serbia's prior robust tradition of urban and spatial planning, more definite and precise solutions are needed today to address newly emerged significant number of unsolved ecological, infrastructural, socio-economic and other problems.

It is of particular importance to regulate property policies, property restitution, incomplete land and ownership cadastres and illegal construction (UN HABITAT, 2013). This also means that planning ought not give legitimacy to or disguise the grabbing of formerly state-owned, socially owned and co-operatively owned land – the theft of public property (Nedović Budić *et al.*, 2011). In parallel, important issues to improve Serbia's planning system include the acquisition of knowledge needed to identify key problems and

the development of skills to translate professional efforts into products that are crucial for developmental policies (Vujošević, 2004; Müller *et al.*, 2015).

The shortcomings of Serbia's planning system and the underdeveloped framework to guide spatial development have had a direct impact on planning practice. The key problems that plague planning in Serbia can be identified with reference to key principles of the contemporary communicative and collaborative planning paradigm:

- A communication platform is missing as a framework for conflict resolution between the plurality of interests that concern spatial development.
- Practitioners are cocooned within existing operating procedures and legislation.
- Planning practice is technocratic in nature and oriented primarily toward physical interventions rather than any consideration of social issues.
- Plans and projects are seen as the sole instruments of spatial development and are not tested with reference to sustainable development practices.
- Operationalization of the sustainable development paradigm is at a low level.
- The planning system is incoherent and complex with as many as four types of plans serving the immediate needs of construction permits; the planning process is often forcibly cut short; there is little participation by all stakeholders; and decision-making is opaque.
- Isolation of the sector and absence of collaboration with other institutional stakeholders that are part of spatial development.
- Decision-making relies on collusion between politicians and investors.
- Plans are often not aligned with available financing sources.
- There is a persistent tradition of reliance on national and local budgets (Nedović Budić and Cavrić, 2006; Vujošević and Nedović Budić, 2006; Lazarević Bajec, 2009; Müller *et al.*, 2015).

Some authors feel that the first steps in reforming planning practice in Serbia should be identifying stakeholders and institutions that are able to test and, subsequently, implement recommendations received from the international context and develop new strategies of spatial development aligned with European standards (Nedović Budić and Cavrić, 2006; Müller *et al.*, 2015). Fostering sustainable development is of particular importance for Serbia, in view of the circumstances in which political primacy has been accorded to economic development and attracting investments, which are important but insufficiently so, given the quality of the environment and the overall quality of life.

When viewed from the standpoint of the growing number of sustainability challenges the world is facing, higher education institutions are recognised as key stakeholders in engaging global debate and initiating actions. For academia, such a complex mission is not only a professional challenge, but also a duty it must undertake to fulfil its educational purpose. Academics have the obligation to act where proven routines are missing or unusable (Scholl, 2012). A bottom-up approach can establish new knowledge that may lead to a paradigm shift in the planning profession, as well as to institutional transformation.

A new pedagogical approach for the co-production of knowledge in the post-social transitional context

Intended to provide specialised training for future planning experts that will allow them to act as professionals in the context of post-socialist transition, the Department of Urbanism

has developed a special two-year master's course of study in Integrated Urbanism (MCSIU). The course is designed to enable students to understand the complexity of today's urban planning issues, provide knowledge required to act under the new circumstances and develop the competences required for efficient professional action. This sort of initiative, based on perceived or real and identified needs in the society (Lehmann and Fryd, 2008), is a typical mode of introducing innovations within academia. The core element of this master's programme is project/studio education strongly anchored in practice, featuring a project-centred pedagogy that combines the academic and practical and the analytical and theoretical, with applied, intuitive and creative skills and knowledge. Central to this programme is an interdisciplinary approach to contemporary spatial problems, which provides a broad platform of knowledge for a variety of professional positions including administrators, decision-makers, planners, consultants, etc. The programme focuses on the development of competences to create responsible spatial solutions within the sustainability framework (Scholl, 2012; Frank *et al.*, 2014; Mironowicz, 2015) and on communicative and collaborative platforms to establish new knowledge and cause paradigm shifts. All previously listed elements are adopted from latest recommendations of European schools of urban planning.

Pedagogical approaches based on radical pedagogical practices, experiential learning principles and community-based ethics have special value and enable significantly different dimensions and outcomes in teaching, learning, research and practice (Porter *et al.*, 2015). The varied practical experience with these pedagogical approaches reveals both difficulties in their implementation and the need to improve how this work is done. New pedagogical approaches have influenced the development of new didactic teaching approaches that are still uncommon in university curricula. They call for different modes of structuring and designing courses, greater course loads, less certain learning outcomes and appraisals of students' work. Moreover, they depend on expectations and objectives that are realistic, clear and specific and, at least to some extent, shared between partners (Baum, 2000). On the other hand, universities have been endeavouring to position themselves by offering unique educational experiences and actively contributing to resolving complex urban issues through joint professional platforms and working outside the boundaries of individual disciplines (Rooij and Frank, 2016). The aim of this teaching concept is to develop critical reflection among students and help them develop a comfortable relationship toward the unknown (Sletto, 2010).

The master's programme of Integrated Urbanism at the faculty of Architecture is innovative in the specific context of a country in transition from a planned to a market economy. Elsewhere, this type of master's programme has been around for some time, such as ETH Zurich Studios, DPU London or TU Berlin's Urban Management master's course. Models can also be provided by more recent initiatives, such as platforms in Amsterdam and Rotterdam, which connect higher education and academic research to urban policy development, implementation, business and industry (Rooij and Frank, 2016).

Principles for a new pedagogical approach for the urban planning profession in Serbia

Based on the above, we can identify two fundamental aspects for the development of a new PM that addresses the problems faced by the profession in Serbia:

- (1) new knowledge to overcome the lack of educational programmes targeting current problems linked to transition and urbanization; and
- (2) new principles of professional action to overcome the inadequate planning system with its limited focus on shared decision-making and issues of sustainability.

The first aspect in the development of a new PM entails a comprehensive change in traditional knowledge and approaches to professional action, including the constellation of concept, belief, judgment and feelings, which shapes a particular interpretation. Applied to curriculum development, it could be recognized as a transformation discourse and transformative thinking, a concept that relies on critical reflection as a learning approach in terms of content, process and premise (Mezirow, 2000). As a second aspect, the main drivers of transformation regarding debates about suitable strategies to achieve sustainable development are based on the interplay of ideas, institutions, technological innovation and an economic foundation that drives successful transformation processes (Schneidewind, 2013). Accordingly, special attention was devoted to introducing new knowledge into the planning profession: this was oriented toward justifying innovative topics, widening the professional field of work and developing new forms of professional response that are financially justified and supported.

Regardless of the content and structure of the curriculum, how these new issues were to be introduced into the field of urban planning in Serbia was of particular importance. The principle from the outset was that the programme should be focused on establishing the legitimacy of the curriculum within the profession and creating trust among the broader public regarding the need to train professional planners. It is based on the arguments that co-operation with leading actors in practice is of central importance in high-quality education (Scholl, 2012), as is co-operation with external partners such as communities and non-formal educational institutions (UNESCO, 2017). This conforms to the view that neither firms and knowledge institutions nor people innovate in a vacuum. It can, therefore, be argued that the most basic characteristic of the innovative system approach is that it is “interactionist” or that innovation is a networked or networking process (Lehmann and Fryd, 2008).

The engagement of highly diverse expertise and experts in knowledge production and management, through collective action, based on partnership and the establishment of specific relationships between the actors involved, is known as urban Knowledge Production and serves as an instrument for the development of innovative knowledge through a more collective and creative approach (Andersen *et al.*, 2009). This approach allows all stakeholders involved in the education process to be simultaneously object of education. All of this initiates and leads to the later institutionalisation of a new planning paradigm in Serbia.

A major component of the PM is partnership between higher education and the community to allow academia to connect with practice. This enables the PM to apply the principles of partnership for the co-creation of knowledge (Rooij and Frank, 2016), place-based co-creation of knowledge for sustainable development (Trencher *et al.*, 2014) and partnership for education (Porter *et al.*, 2015). Accordingly, the PM presupposes the involvement of different disciplines and partners – research institutes, industry and think tanks, government representatives, NGOs and activists, communities and local enterprises and residents in experiential learning and the development of inter- or trans-disciplinary competences (Porter *et al.*, 2015; Rooij and Frank, 2016).

The pedagogical approach adopted by the PM assumes students’ active engagement in the teaching process through the development of learning skills, to help them organise their knowledge, reflect, analyse and evaluate what they are learning and how they are learning it and partially share responsibilities of the teaching process and its outcomes, recognising teachers not only as experts but also as facilitators in the learning process. The proposed PM also assumes that students will be able to verify their knowledge through actual experience, for instance, through service-learning projects, which could permit them to

abstract and generalise their own experience and thus become able to apply it in their professional work. By relying on live, real projects and using a range of disciplines, students face issues in their actual context and develop problem-solving interests. These considerations also stem from UNESCO's recommendations for ESD, in particular a learner-centred approach, action-oriented learning and transformative learning (UNESCO, 2017).

Problem-based learning was established as the backbone of the PM, as an approach that best allows the development of skills and competences in solving complex problems. A problem-based orientation allowing the integration of disciplinary learning evolves in response to an identified problem, rather than isolated disciplines driving sustainability from their own academic perspectives (Wiek *et al.*, 2014; Pedersen *et al.*, 2017).

Consideration of all the above explained aspects and corresponding methods resulted in the adoption of the following principles for urban planning education in post-social transitional countries (UPEPSTCs) to guide the design of the PM and the teaching process itself:

- multi-disciplinary orientation of the course of study and its openness to students of other related disciplines;
- connection of the core body of teaching with the Department's on-going scientific and research projects;
- involvement of national and foreign experts in the teaching process;
- involvement of foreign universities in the teaching process;
- involvement of local community in the teaching process;
- promotion of the results of the course through participation in scientific and professional conferences and exhibitions; and
- establishment of collaboration with relevant professional institutions and public and civil society organisations in Serbia (Wiek *et al.*, 2014; Caniglia *et al.*, 2015; Guerra, 2016).

These principles substantially reflect UNESCO's latest recommendations for the development of key competences needed to promote sustainable development: self-directed learning, participation and collaboration, problem orientation, inter- and trans-disciplinarity and the linking of formal and informal learning (UNESCO, 2017).

The implementation of above proposed general principles to the particular professional practice in Serbia resulted in more detailed elaboration such as:

- including sources of finance (both within and outside government budgets) in proposed solutions to ensure they are financially sound and reliant on a variety of funding types;
- defining preconditions for executing a solution within the solution itself so as to ensure feasibility and the development of innovative spatial development instruments to permit solutions to be put into practice;
- inter-disciplinary and inter-sectorial consideration and the resolution of problems through the involvement of a broad circle of stakeholders;
- orientation toward and respect for the local context when developing solutions by striking a balance with the global context;
- improving communication and collaboration between stakeholders by establishing a platform for dialogue and shared decision-making; and
- developing solutions by considering problems from a multitude of perspectives that go beyond just physical intervention as a response.

Proposed PM and corresponding pedagogical approach was designed to include all above principles and instructions with intention to overcome issues identified within the professional practice in Serbia.

The principles for UPEPSTCs, and proposed PM, were incorporated and used, in various forms, into teaching for the first three semesters of the new course of study. The fourth semester, devoted to the production of final master's projects, was intended to be a testing ground where the knowledge acquired could be consolidated and where course results could be tested with the involvement of the broader academic and professional community to re-define professional action.

Pedagogical model: an integrated platform for dialogue and professional capacity-building

The traditional PM of producing master's degree projects at UBFA involves students working in "mentoring studios", each made up of a teacher-mentor and ten students. Student work is monitored by a mentoring committee composed of the mentor and two professors drawn from other departments of the faculty. The master's project is designed as the product of each student's independent research (in the form of written text) and study (in the form of spatial application of the conducted research) that is created within the mentoring studio. Each mentoring studio is a separate organisational unit that applies a particular methodological approach to a specific topic, and each mentor is free to formulate the thematic and spatial framework for each master's project. The role of members of the mentoring committee is to bring their specific expertise to bear and, thus, enhance the quality of the project produced. A joint exhibition of student projects from all mentoring studios is organised at the end of each semester, which allows the results achieved to be considered (Figure 1).

The PM to produce final master's projects in MCSIU was derived from the general UPEPSTCs principles developed for the course of study, as outlined above, with the ultimate aim of providing an integrated communication and collaboration platform for dialogue and professional capacity-building. The model was created so as to ensure that moderated dialogue could take place with broader professional and academic communities to assess how topical issues of today's planning discourse might apply to solving local problems. The traditional UBFA two-part format for master's projects was retained: this consists of initial research and subsequent spatial application of the research results. However, emphasis was shifted to creating strategic proposals for spatial interventions that encompass interdisciplinary and inter-sectorial consideration of the issues involved, with the application of instruments of multi-level governance.

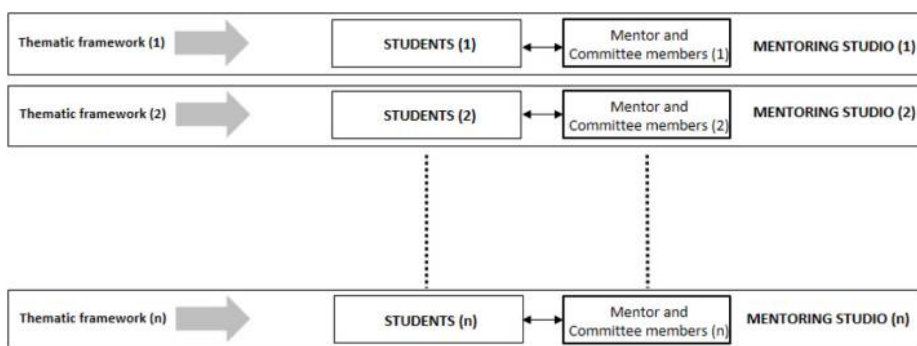


Figure 1.
Traditional PM to
produce final
master's projects at
the UBFA

The PM has the following elements (Figure 2) for production of final master's degree projects:

- (1) *Topics*: A topic with global relevance that is important for the resolution of Serbia's current urban development issues (exclusively chosen by the mentoring team).
- (2) *Key documents*: Predefined framework around requirements establishing project constraints and authorising the topic.
- (3) *Promotion of results*: Presentation of teaching results and students' work at national and international scientific and professional events, as well as all kinds of media exposure.
- (4) *Products*: New forms of professional responses, as well as new instruments to implement created solutions.
- (5) *Stakeholders*: Active involvement through dialogue of a broad circle of stakeholders:
 - *Mentoring panel*: This is a grouping of all mentoring studios, where each studio is composed of one mentor, two members of a mentoring committee and an associated group of students. Mentoring committees comprises teachers from all three of the Faculty's departments.
 - *Local community*: Representatives of the local community linked to a specific testing ground and concerned about resolving actual problems, in an inter-sectorial and cross-cutting fashion.
 - *External team of consultants*: Individual experts from the most reputable professional institutions and organisations in Serbia at both the national and local level.

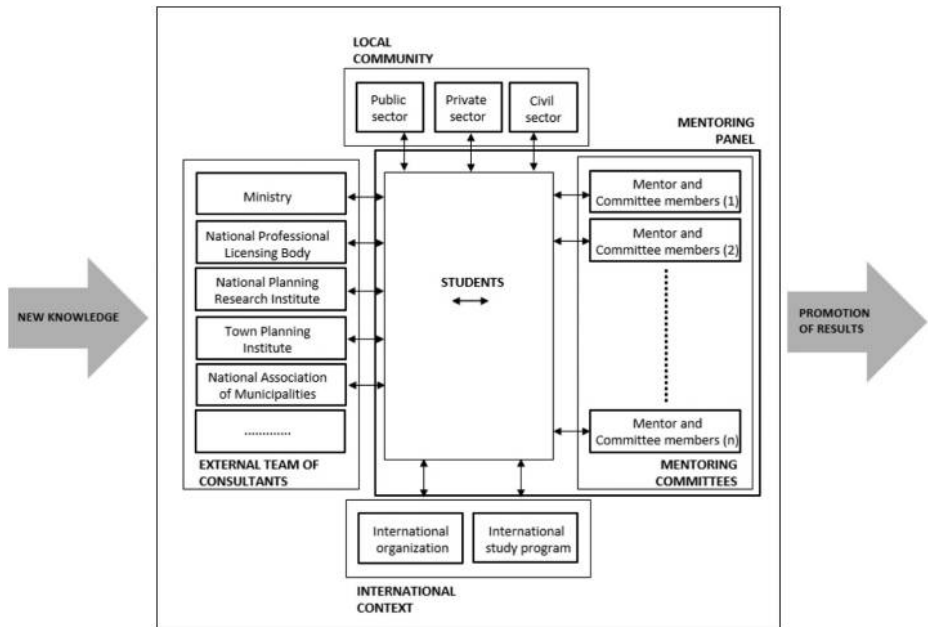


Figure 2.
PM of the production
of final master's
degree projects

- *International context*: International organisations and universities from a network of partners.

Work on a master's project begins with preparatory activities, primarily the input of interested mentors, and then the selection of a globally relevant and topical issue of importance to the local context. This takes place in consultation between all the mentors within mentoring team. In doing so, academia assumes responsibility for introducing new topics into professional practice.

In the second step, agreement is reached with the local community, where the spatial testing ground is also selected. Engagement with the community entails recruiting public, private and civil sector institutions and preparing them for collaboration. In parallel, interested professionals from various institutions and disciplines are invited to join the external team of consultants. Support from international organisations helps establish the international context: they create contacts with and provide assistance for taking part in international courses of study. This is the working environment in which students begin to engage with other stakeholders through workshops, dialogue, consultation sessions, lectures, presentations by visiting experts and visits to institutions.

This leads to the development of solutions in the form of students' projects, which are then presented to the broader professional community through participation in exhibitions and national and international conferences, the publication of printed materials and announcements in the media. The process is described in greater detail below where individual cases are discussed.

The methodological approach to education applied to the course of study generally speaking contributes to the establishment of broader dialogue within the profession on the re-assessment of the position of professionals within the altered socio-economic context of Serbia and the re-definition of their role in sustainable spatial development. That may and should lead to the institutionalisation of new knowledge and new principles of professional actions.

Results: overview of the production of master's degree projects by three generations of students

The primary PM used to produce master's projects in the MCSIU was developed through co-operation with the GIZ project Strengthening of Local Land Management in Serbia, implemented in 14 cities, towns and municipalities throughout Serbia that aimed at promoting new EU sustainable development instruments to enhance and improve planning capacities (Müller *et al.*, 2015). This collaboration was initiated by the Department of Urbanism at UBFA, which wished to obtain international support to introduce new knowledge from European planning practice into its teaching process so as to educate professionals in line with the shifting social and economic context in Serbia.

The academic course of study in urbanism received direct support from the GIZ project in the development of master's projects for the first two generations of students, and this firmly anchored the proposed PM. The experience gained with the master's projects of the first three generations of MCSIU students was endorsed by both academics and the professional community as a sound method to promote new knowledge and develop the profession, which subsequently allowed the model to be varied depending on different input requirements (Table I).

The PM was improved iteratively and incrementally with every generation as presented below.

Table I.
Comparative
overview of the
production of
master’s projects by
three generations of
students

	City of Kragujevac	Urban municipality of Obrenovac	City of Pančevo
Topic	Integrated urban development strategy	Resilient Cities: Urban Disaster Risk Management	Instruments for managing integrated urban development
Key document	Integrated Urban Development Strategy for the Kragujevac	UNISDR – How to Make Cities More Resilient	City of Pančevo Development Strategy
Mentoring committees	Department of Urban Planning Department of Architecture	Department of Urban Planning Department of Architecture	Department of Urban Planning Department of Architecture
Local community	Department of Architectural Technology Urban Planning Directorate	Department of Architectural Technology Mayor’s Office	Department of Architectural Technology Mayor
		Municipal administration	City Council
		Urban Planning Department	City administration
		Public enterprises	Urban Planning Directorate
		Committee for Emergency Services	Economic Council (private)
		Local NGOs	Public enterprises
External consultants	National government Professional chamber	National government Professional chamber	National government Professional chamber
	National research institute	National research institute	City Planning Institute
	City Planning Institute	City Planning Institute	Association of local municipalities (NGO)
	International consultant	Faculty of Security Studies	International consultant
International context	International organization	International organization	/
		Master - TU Berlin	
Products	Specific measures	Action plan	Operational programme
Promotions	Faculty exhibition National professional exhibition Students’ catalogue	Faculty exhibition National professional exhibition Students’ catalogue National publication	Faculty exhibition Exhibition in municipality National professional exhibition Students’ catalogue
		International conference	International conference
		National conference	National conference
		International publication	Media (TV, newspapers)

First generation of students – city of Kragujevac

A deliverable produced by the GIZ project was selected to provide topics for the master's projects of the first generation of students. This document, which finally became the key document, entitled "Integrated Urban Development Strategy for the Inner City of Kragujevac: Kragujevac 2030", was patterned after the latest European experience with spatial development and is the result of testing an innovative sustainable urban development instrument, the Integrated Urban Development Strategy, in co-operation with the local community of the city of Kragujevac.

The choice of the Kragujevac Urban Development Strategy as the starting point for the master's projects defined the thematic, methodological and spatial framework for the students' assignments, additionally based on specific measures defined under the Strategy.

Final projects were produced by the first generation of students under the supervision of six mentors and four committee members from the Department of Urbanism, four committee members from the other departments from the Faculty, four committee members from the Department of Architecture and one member from the Department of Architectural Technology. The mentoring committees continuously monitored the students' progress through individual and group consultation sessions and took part in grading both components of the final master's projects.

With the support of the GIZ project, experts from reputable institutions were invited to participate in the programme. An external consulting team was formed to work with students: this was made up of officials of the national government, members of the professional chamber, national research institute, city planning institute and also included a national expert serving with an international organisation. Students discussed issues with these experts in two one-day workshops, once while writing their master's thesis and once when producing their master's project. Students' proposals and initial ideas were reviewed in the course of moderated discussion in these workshops. Representatives of the Urban Planning Directorate of Kragujevac, as local community members, also took part in the workshops.

Students defended their final projects before mentoring panel and members of the consulting team at the end of the semester. The projects were presented at the annual exhibition of works at UBFA, as well as at the annual Urban Planning Salon, where they won the second prize for student projects. Finally, they were published in a catalogue of MCSIU student projects.

Second generation of students – urban municipality of Obrenovac

Master's project topics for the second generation of students of MCSIU reflected the interest of both partners – the GIZ project and UBFA – in topical research issues of urban planning. Initially, the dialogue between the two stakeholders focused on climate change and its impact on city development, in the context of the catastrophic flooding that struck Serbia in the spring of 2014. The actual topics were formulated with reference to *How to Make Cities More Resilient*, which finally became the key document, a report issued by the UN Office for Disaster Risk Reduction (UNISDR, 2012). The Urban Municipality of Obrenovac, which suffered heavy damage and losses in the floods, was chosen as the testing area.

When approached by the GIZ project, the Urban Management course of study at the Technische Universität (TU) Berlin also expressed interest in collaborating with MCSIU. The two courses proved compatible, which allowed parallel teaching to take place over the course of the spring semester on a common topic, "Resilient Cities: Urban disaster risk management in Serbia". Teaching was divided into three stages to account for the specific nature of collaboration with a foreign programme:

- (1) *Stage 1:* Parallel work by students in both courses in small groups to develop individual aspects of the primary topic, with communication by means of social networks. Workshops involving MCSIU students, the local authority and members of the consulting team, with participation by experts from the national government, professional chamber, national research institute and city planning institute. Formal verification of results by defending master's theses produced by MCSIU students before mentoring committees at the end of Stage 1.
- (2) *Stage 2:* A joint workshop for students in both courses working in mixed groups, in Belgrade and Obrenovac, designed to develop ideas for action plans. Guest lectures by professors of the Faculty of Security Studies. Site visits and interviews with numerous local officials intended to aid students in understanding the issues at hand (including staff from the Mayor's office, municipal administration, local Urban Planning Department, public institutions, Emergency Services Committee and local NGOs); presentation of an outline action plan, made up of individual student projects, to the staff of the Obrenovac local authority.
- (3) *Stage 3:* Work on MCSIU individual student projects and public defence of these projects before mentoring panel (comprising four mentors and six committee members from the Department of Urbanism, four committee members from the Department of Architecture and two committee members from the Department of Architectural Technology), the consulting team, local officials and interested members of the public.

The output of the mixed groups was published by TU Berlin. At the same time, mentors who took part in the joint effort presented the collaborative arrangement and its learning outcomes at an international conference. Final projects produced by MCSIU students were also shown at the annual UBFA exhibition and the annual Urban planning Exhibition, where they received a special award for student projects and were published in a special catalogue of MCSIU student projects. In addition, mentors of the Department of Urbanism published a monograph on this innovative approach to the production of master's projects, containing an academic review of the pedagogical process. Also published were papers devoted to individual approaches to managing disaster risk, and these were presented at a national conferences.

In this iteration, PM was improved by the involvement of the international context and the broader engagement of the local community and its institutions, as well as the inclusion of the NGO sector. It was also enhanced by the growing interest of broader professional community.

Third generation of students – city of Pančevo

The location chosen for the third generation of students was Pančevo, a medium-sized city within the Belgrade metropolitan area. The topic was "Multi-Level Integrated Instruments of Urban Governance" and took as its starting point the City of Pančevo Development Strategy, 2014-2020 (2014), an official document adopted by the local authority, which finally became the key document. The assignment involved developing particular aspects of the Strategy as self-contained integrated projects, which, taken together, would make up an operational programme as an instrument of strategic planning primarily oriented toward funding the projects to implement the Strategy.

The mentoring panel included: three mentors and three committee members from the Department of Urbanism and another three committee members from the Department of Architecture. The external consulting team was made up of officials of the national

government, members of the professional chamber, city planning institute, Association of Towns and Municipalities and also included a national expert serving with an international organisation. As had become the tradition, students and external consultants met in two one-day workshops, once while writing their master's theses and once when producing their master's project.

The local authority played a major role in interacting with students. In addition to building a database of relevant information, experts from various city authorities and relevant public institutions/enterprises were available for interviews and held lectures. The city also organised group and individual study visits to sites of interest. The Mayor and members of the City Council, city administration, Urban Planning Directorate, Economic Council (private sector) and public institutions/enterprises also took part in the project.

As was customary, students defended their master's projects before mentoring panel and members of the consulting team at the end of the semester. A special presentation of these projects was also held for officials of the Pančevo local authority and the city's local community. In addition, projects were showcased at the annual UBFA exhibition and the Urban Planning Salon, as well as collected in an annual catalogue of MCSIU student projects. Cooperation with the local community was formalised through a signed agreement between UBFA and the City of Pančevo. The successfully completed projects led to the following activities: collaboration between the City of Pančevo and UBFA on the Participatory Budgeting Project for 2016 and their admission in the category of "new technical solution" at the Ministry of Science and Technological Innovations. In this iteration, the process of collaborating and developing these projects received exceptionally broad coverage in the media, such as local and national radio and television stations and the website of the business community at the national level. In this iteration, PM was improved and enhanced by the stronger and proactive involvement of local community experts, representatives of the private sector and NGOs, an emphasis on practical results and delivery to end users and media visibility.

Discussion/results

An analysis of the outcomes of master's project production by three generations of MCSIU students provides insight into the complexity of this innovative methodological approach applied to education and capacity building of planners. The PM used in the production of final master's projects produced two key groups of outcomes significant for re-defining the position of professionals in Serbia's post-socialist transition: the introduction of new knowledge and the introduction of new principles of professional action as presented below.

Further outcome is implementation of UNESCO recommendations for ESD (2017) in the case of UPEPSTCs as explained below.

Introduction of new knowledge

Because of the particular nature of issues faced by planning in Serbia, three aspects are important for the introduction of new knowledge: innovative topics, a new professional field and new products for professional action.

Innovative topics. The topic of each master's project is drawn from the contemporary professional context of sustainable development and constitutes a problem framework for which authorities from the European or global level have already provided a solution (such as GIZ, UNISDR and UN HABITAT). The choice of such a topical issue ensures that the assignment is understandable to all, provides uniform terminology and gives direction to the master's project as the means of arriving at a solution. This approach overcomes any problems with the legitimacy or purpose of the topic and does away with any differences in

understanding and interpreting it. It also creates a common starting point to compare the results achieved. In addition, the choice of a common topic ensures that all master's projects cover the same aspect of the issue at hand, thereby shifting the emphasis of the creative process to the development of solutions to problems.

New professional field. The extension of professional field is directly determined by the chosen topic of the final project, which is oriented toward a particular problem and, as such, requires a research approach to arrive at a solution. The methodology relies on experience attested in contemporary practice and documented in publications issued by reputable international institutions. This approach to the production of final master's projects (based on research and spatial application of the results) ensures that solutions are firmly rooted in the structure of the research process, which is directly linked to the degree to which each problem is understood. In this context, the spatial solution is no more than an illustration of the complex response to the posited research problem. The document on which each paper is based may be considered as a set of guidelines that provide direction for the students in their work.

New products. Professional products, in essence, derive from the concept of sustainable urban governance and constitute innovative instruments to solve development-related problems. Their main hallmarks are a strategic spatial approach, an orientation toward linking resources and the comprehensive inclusion of various stakeholders. The actual process of seeking a solution – which involves a complex analysis of the issue and consideration of a myriad of aspects – requires a creative approach to providing professional answers.

Introduction of new principles of professional action

New principles of professional action derived from contemporary planning practice is not directly applicable to the local context. The PM created here has made room for the shared re-examination, exchange of opinions, understanding, development, review and application of new knowledge. The involvement of diverse stakeholders in the development of solutions has established dialogue as the basis for making spatial development decisions and gaining acceptance of a planning paradigm founded on communication and collaboration. By directly collaborating with students on their master's projects, these stakeholder groups – mentoring panel, representatives of local communities, external consultants, international experts and the broader scientific and professional community – have all aided in the acquisition of knowledge. True dialogue with a broad group of varied stakeholders throughout the production of master's projects allowed both students and other participants in the process to adopt the following:

Methodological review within the academic community. Mentoring panel allowed dialogue to take place between students, mentors and committee members. From a methodological perspective, working on the same topic as part of a single mentoring panel allowed the academic community to absorb new issues and contributed to the development of theoretical knowledge. Mentors played a key role in this learning model by translating new theoretical concepts into usable practical knowledge. Communication between mentors proved particularly important for the understanding of innovative topics: in dialogue among themselves and in group work with all the students, mentors together constructed new knowledge and adjusted it to the local context. This exchange occurred in multiple directions: among students; between students and mentors; between students and members of mentoring committees; among mentors and among members of mentoring committees; as well as between disciplines – through contacts between students doing their master's degree

after completing different undergraduate programmes, as well as between teachers specialising in different thematic areas at the Faculty.

Foundation in the local context and current practical problems. The local community allowed selected topics to be tested in the local context. The selection of the spatial framework was directly linked to the choice of topic and was aimed at providing solutions to real problems faced by the community. In this arrangement, all students worked within a common thematic and spatial framework, which directed the assignment – the research process – toward overcoming the complexity of problems that might appear in the given local context. Each assignment focused on solving the identified problems and developing applicable solutions. Co-operation with the local community during the production of the master's projects gave students the opportunity to understand the many facets of the local context by meeting stakeholders from multiple sectors (private, public and civil) and disciplines (through various departments of the local authority). In addition to primary communication, which taking place between students and representatives of the local community through individual and group visits and guest presentations by local experts, exchange also occurred between academics and practitioners. The learning process – founded as it is in the local context and with local professionals playing an essential collaborative role in the production of master's projects – constituted a testing ground for the exchange of knowledge and mutual learning by all those involved. In participating, students developed solutions that are important for their practice and professional skills; established planners gained new knowledge; and academics adjusted this new knowledge to the local context.

Discussion with experts. The role of the external consulting team was primarily to guide and shape students' designs to fit the planning practice in Serbia and the circumstances in which the profession operates. The consulting team included staff members of several Serbian professional institutions of differing professional profiles (architects, economists, landscape architects, environmental experts, etc.), fields of action (urban planning, spatial planning, strategic planning, research, science, administration, consulting, etc.) and levels of governance in which they operate (from the local to the national). The consultants' experience had a major impact on the realism of the final project designs. Moreover, dialogue with the many and varied members of the consulting team added value in that it allowed the re-examination of selected topics from European and global practice and the construction of shared professional knowledge. Special workshops, organised at key times in the production of master's projects, were exceptionally significant for professional capacity-building. The forms of learning that took place included workshops, dialogue, consultation sessions, lectures, presentations by visiting experts and visits to institutions.

Thematic and conceptual testing in an international environment. The international context planted the assignments firmly within the framework of the contemporary planning paradigm and conferred legitimacy on topics that might be new to national practice. Further, the presence of international experts made the programme more visible and allowed more direct contacts between academics and the local community. At the same time, the teaching process gained visibility, while the broader professional public became more interested in the quality of the outputs. Collaboration with international actors fostered the development of academic networks and enabled the new course of study to be tested against compatible foreign courses through joint work on the same topics and the exchange of knowledge and experience between teachers and students from differing professional and cultural environments. Moreover, the reliance of students' assignments on the results of international projects implemented in Serbia helped Serbia's planning practice align with European Union standards.

Dialogue with the broader scientific and professional community. Promoting results is a particular form of dialogue with the broader professional community. Here, it took place through exhibitions of student works at professional events, presentations at scientific conferences, the inclusion of these works in professional and scientific publications and the presentation of projects to the broader public. This showcasing of the results allowed impressions to be summarised and created space for reflection on the entire process. The positive reaction of the broader professional community to the outcome of the process (in the form of awards received at national professional events) underscored the success of the PM and, thus, contributed to its informal acceptance as a platform for the production of master's projects.

Consideration of professional issues that includes the recognition of various aspects and positions assumed by stakeholders from the public, private and civil sectors. The actors here include the national government, local councils, academic staff, businesses, professional associations, NGOs, public institutions, policy-makers, etc. This approach was ensured through dialogue with consultants in structured workshops; interviews with experts from all three sectors at the local level; and interviews and surveys involving members of the public. The approach is aimed at understanding the nature of conflict of interests between stakeholders what directly leads to conflict resolution as a way of proper decision-making and problem-solving. That is why it is particularly significant to develop the skills needed for professional action, such as better communication, listening, teamwork, leadership and negotiation, facilitation and mediation skills, etc.

Introduction of new recommendations for UPEPSTCs

The PM is especially valuable for its implementation of contemporary recommendations for ESD, which emphasise two key aspects: the whole-institution approach and the action-oriented transformative pedagogical approach.

The key elements of the whole-institution approach were applied especially through the working methodology which promotes communication, co-operation, discussion and the exchange of ideas, knowledge and skills between all stakeholders establishing shared vision, design and implementation plan for the PM and a set of guidelines (together with the publication of a catalogue of projects by students of all three consecutive annual courses) designed to be used in the broader context of instruction at UBFA as technical support for institutional re-orientation.

Similarly, key elements of the action-oriented transformative pedagogical approach were addressed in the PM through a learning process that: stimulated and helped learners to reflect on their own knowledge and experience; allowed students to gain the necessary experience and, thus, form abstract knowledge for generalisations they could then apply in their later professional assignments; encouraged disruptive thinking, which in turn led to the development of new types of professional responses, such as new products and integrated solutions and enabled problem-oriented research aiming at reaching solutions and ensuring the participation of numerous stakeholders and, as such, sharing responsibility for the final product.

Conclusion

In societies where transition has caused crises in professional action, academia can assume a leading part in re-defining the position and role of the profession in spatial development and, as such, bring about a shift in the planning paradigm. The PM for the production of master's degree projects outlined above is primarily oriented toward the creation of sustainable professional solutions that owe their quality and complexity to the multitude of stakeholders involved. Here, the construction of knowledge is directly conditioned by the thematic framework, selected so as to reflect the most up-to-date professional experience and issues of

global importance for the planning community but, at the same time, to relate to problems currently faced by the planning profession in Serbia caused by its inadequate planning system, with limited focus on shared decision-making and issues of sustainability, as well as problems linked to transition and urbanisation.

The proposed PM provides a forum for permanent communication between all stakeholders across domains in the production of final projects. Various venues for organised discussion – such as meetings, group debates, lectures and workshops – provided an extensive area for experimentation and open professional dialogue. In addition, collaboration between students from different courses of study and differing professional backgrounds in tackling the same topic made a major contribution to the quality of their learning and master's projects. Moreover, co-operation with a foreign university substantially enriched the learning process for both students and teachers. Finally, the involvement of an international organisation as the sponsor of collaboration and guarantor of the relevance of the thematic framework greatly contributed to the diversity and quality of communication. This allowed the creation of a communications platform to make decisions that concern spatial development as a framework for contemporary planning.

The PM incorporates key elements of the transformation thinking concept, which permitted the establishment of new and innovative discourse through the free exchange, discussion and verification of new ideas as part of the platform for dialogue provided by the model. At the same time, the promotion of ideas and discourse through the involvement and engagement of professionals and the local community, in collaboration with academia, allowed the process of their institutionalisation to commence, and this led to the establishment of new framework for professional action.

Embedding the concepts of whole-institutional approach and action-oriented transformative pedagogical approach into the core of the proposed PM ensured its sustainability, while the positive results achieved through the application of this PM constitute a foundation for its elaboration in subsequent cycles of the production of master's degree projects and extension of the network of participants. The outcomes of the process have affirmed the legitimacy of the curriculum and enhanced the confidence of the broader professional public in the quality of the programme and the importance of training planning professionals for sustainable development. At the same time, this resulted in the new master's course of study being recognised as relevant and adopted by UBFA. The new programme has contributed to the improved professional capacity of academics as well as practitioners and has, in essence, set into motion the establishment of a new professional paradigm in Serbia. Finally, the proposed and implemented PM, as a practical, transparent, inclusive and proven problem-solving platform, built with a bottom-up approach, could serve as a sound starting point for a national framework for sustainable spatial development and thereby surpass academia.

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