

# REAL CORP 2011

16<sup>th</sup> International Conference on Urban Planning, Regional Development and Information Society

Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE (Eds.)

## CHANGE FOR STABILITY LIFECYCLES OF CITIES AND REGIONS

The Role and Possibilities of Foresighted Planning in Transformation Processes



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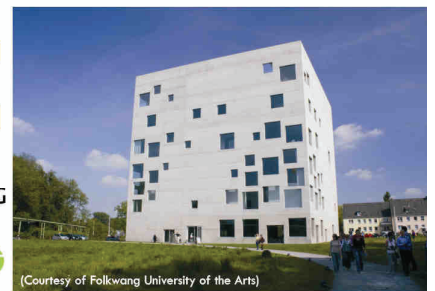


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The Role and Possibilities of Foresighted Planning in Transformation Processes**

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**Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE**

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**Table of Contents – Inhaltsverzeichnis**

<b>PREFACE</b> .....	15
Manfred SCHRENK, .....	15
<b>GRUSSWORTE</b> .....	17
Anne Katrin BOHLE.....	17
<b>Making Politics</b> .....	21
Henk WJ Ovink.....	21
<b>A ‘CUT’ Perspective on ‘New’ Technologies for Improved Municipal Asset Management in Urban Ethiopia</b> .....	25
Tendayi Gondo.....	25
<b>A Vision of Sustainability, or Spatial Chaos? Polish Spatial Planning and Arrangement Policy Dilemmas in Contemporary Theory, Legislation and Practice</b> .....	35
Michał Beim, Bogusz Modrzewski .....	35
<b>An Open Source WebGIS Solution for a Merging Cross-Border Region   A Best Practise Example Eurodistrict Saarmoselle45</b> .....	45
Guido Kebbedies, Jan-Philipp Exner.....	45
<b>Anforderungen an ein individuelles Verkehrsinformationssystem zur Optimierung der Verkehrsmittel- und Routenwahl von Pendlern</b> .....	53
Oliver Roeder.....	53
<b>Ausweitung der Kommerzzone. Entmischung in Szenequartieren als Ergebnis immobilienwirtschaftlicher (Einzel-)Rationalität</b> .....	63
Ricarda Pätzold .....	63
<b>Carbon Footprints aufgrund individuellem Verkehrsverhalten von unterschiedlichen Haushalten</b> .....	73
Sebastian Petsch, Subhrajit Guhathakurta, Hans Hagen.....	73
<b>Chance auf Vorbereitung eines geordneten Übergangs oder Herausforderung eines anlassbezogenen Krisenmanagements? Zur Stellung der Raumplanung in der Diskussion um post-fossile städtische Zukünfte</b> .....	83
Tatjana Fischer, Gernot Stöglehner, Franz Skala .....	83
<b>Circular Flow Land Use Management</b> .....	95
Uwe Ferber, Jifina Bergatt Jackson, Anna Starzewska-Sikorska .....	95
<b>City Computer Architecture. Corporate Information Systems Approach</b> .....	105
Vasily Popovich, Manfred Schrenk, Oksana Smirnova, Nataly Zhukova, Yaroslav Shalamaiko .....	105
<b>Contemporary Spatial and Hierarchie Characteristics of Urban System of Bosnia and Herzegovina</b> .....	113
Rahman Nurković .....	113
<b>Coping with Dynamic, Unstructured Data Sets – NoSQL a Buzzword or a Savior?</b> .....	121
Johannes Scholz .....	121
<b>Creating Added Value in Working Landscapes – The Development of the Atlanta BeltLine</b> .....	131
Dagmar Grimm-Pretner, Doris Gstach.....	131
<b>Current Trends and Management of Urban Development in Lithuania</b> .....	139
Dalia Bardauskienė, Mindaugas Pakalnis.....	139
<b>Data for Spatial Planning – A Comparison of Three Cities</b> .....	145
Gerhard Navratil, Johannes Scholz, Ladislav Danek, Farid Karimipour.....	145
<b>Dealing with Peripheralisation in Urban Development – the Case of Pirmasens</b> .....	155
Sabine Weck .....	155
<b>Den städtischen Wandel begleiten – Stadtentwicklungsförderung als europäische sowie regionale Aufgabe und Verantwortung: Möglichkeiten und Anwendung der europäischen Strukturfondsressourcen am Beispiel Deutschland und der Region Brandenburg</b> .....	163
Marc Altenburg, Jens Gerhardt .....	163
<b>Der Umgang mit Risiken für Wassereinzugsgebiete, eine neue Herausforderung für die Raumplanung in Istanbul</b> .....	173
Hale Mamunlu.....	173
<b>Designing with the Sun – Integrative Workflow and Solar Simulation with AutoCAD, 3D Studio MAX and EcoTect</b> .....	183
Wolfgang Höhl.....	183
<b>Development of an Open Framework to Provide Intelligent Multi-modal Mobility Services</b> .....	189
Raffaele De Amicis, Giuseppe Conti, Diego Taglioni, Daniele Magliocchetti, Gabrio Girardi.....	189
<b>Eco Sensitive Beach Design: Conceptualization of Community Recreational Sandy Beach Development</b> .....	199
Niyi Okedele, Tunji Adejumo .....	199
<b>Effects of Information Technology Facilities on the Urban Environment: A Comparative Study of Lagos Island and Victoria Island, Lagos</b> .....	209
Hakeem Bishi, Oluwafemi Olajide.....	209

<b>Ein standardisiertes Evaluierungsmodell für innerstädtische Verkehrsprojekte als Basis für eine Neuordnung der österreichischen Finanzierungslandschaft.....</b>	<b>219</b>
Roman Klementsitz.....	219
<b>Einsatzmöglichkeiten und Grenzen GPS-gestützter Parkraumbewirtschaftung.....</b>	<b>229</b>
Johanna Lebitsch, Reinhard Hössinger, Elisabeth Raser.....	229
<b>Elektromobilität als technologischer Treiber der Stadtentwicklung.....</b>	<b>239</b>
Oliver Schwedes, Ingo Kollosche.....	239
<b>Emotional Barrier-GIS – A new Approach to Integrate Barrier-Free Planning in Urban Planning Processes.....</b>	<b>247</b>
Benjamin Sebastian Bergner, Peter Zeile, Georgios Papastefanou, Werner Rech, Bernd Streich.....	247
<b>Energy Transition and Sustainable Spatial Development in the Northern Netherlands.....</b>	<b>259</b>
Martin Dubbeling, Michaël Meijer.....	259
<b>Engaging the Mobile Citizens – How Mobile Devices Offer new Ways of Civil Engagement.....</b>	<b>269</b>
Stefan Höffken, Bernd Streich.....	269
<b>Enhancing Competitiveness of Serbian Medium-Sized Cities in Global Urban Networks.....</b>	<b>275</b>
Sanja Simeunčević, Biserka Mitrović.....	275
<b>Evolutionary Processes, Morphology and Typology of Historical Architecture as a Line of Research: a Tool for Conservation.....</b>	<b>285</b>
Aida Amine Casanova Rosado, Brillante Zavala Centeno, Julián Yanez Tun, Mercedes Ordoñez Contreras, Rodrigo de la O Torres.....	285
<b>Expansion of the City of Resistencia. Its Metropolitan Process.....</b>	<b>293</b>
Paula Valdés, María Dora Foulkes, Regina Mafalda Pérez.....	293
<b>Exploration Spatial Analysis of Factors Influencing Farmland Conversion in Tainan, Taiwan.....</b>	<b>301</b>
Yung-Chen Hsu, Hsueh-Sheng Chang.....	301
<b>Explore Urban Flood Vulnerability based on Spatial Pattern in Taiwan Ecological City Viewpoint.....</b>	<b>309</b>
Chin-Hsien Liao, Hsueh-Sheng Chang.....	309
<b>Flex-I-Geo-Web –in dienstebasierter Softwarebaukasten als Planungswerkzeug für die Stadtentwicklung.....</b>	<b>315</b>
Robert Kulawik.....	315
<b>Foresighted Planning, Dynamic Plan – the Role of New Tools in Spatial Transformation.....</b>	<b>321</b>
Izabela Mironowicz, Mgdalena Mlek-Galewska.....	321
<b>From Urban Foresight to Urban Futures? Potentials and Limitations of Forward Looking Activities for Integrated Urban Development.....</b>	<b>335</b>
Christian Hartmann.....	335
<b>GEARViewer: A State of the Art Real-Time Geospatial Visualization Framework.....</b>	<b>345</b>
Stephan Mantler, Gerd Hesina, Michael Greiner, Werner Purgathofer.....	345
<b>GIS-Analysen mit Geodaten von Regionalplänen und ihre Bedeutung für die Politikberatung.....</b>	<b>355</b>
Klaus Einig.....	355
<b>GIS-based 3D Urban Modeling Framework Integrating Constraints and Benefits of Ecosystems for Participatory Optimization of Urban Green Space Patterns.....</b>	<b>365</b>
Noemi Neuschwander, Ulrike Wissen Hayek, Adrienne Grêt-Regamey.....	365
<b>Governance between Stability and Change – the Case of the Metropolitan Region Hamburg (MRH).....</b>	<b>375</b>
Sabine v. Löwis.....	375
<b>GRETAS® – Dynamische Simulation immobilienökonomischer Raum- und Standortpotenziale.....</b>	<b>391</b>
Axel Haeusler.....	391
<b>Guidelines and Rating Systems as Tools to Foster Climate Change Adaptation of Ho Chi Minh City’s Urban Infrastructure.....</b>	<b>397</b>
Ronald Eckert.....	397
<b>Housing Informality in Expanding Ethiopian Cities: Moving beyond the ‘New Normal’ Syndrome.....</b>	<b>405</b>
Tendayi Gondo.....	405
<b>Impact Assessment of Sustainable Public Transportation System on Quality of Life in Tehran.....</b>	<b>415</b>
Pooya Joodi, Mostafa Momeni, Hanieh Shams Kooshki, Hamid Azizi.....	415
<b>Improving Quality of Place: Strategic Approaches in Germany and the UK.....</b>	<b>425</b>
Andreas Wesener.....	425
<b>Impulsgeber für andere Regionen, Sachsen-Anhalt – ein Modell?.....</b>	<b>437</b>
Silja Tillner.....	437
<b>Innerstädtische Brachflächen als Chance sowie Herausforderung der Stadtentwicklung – das Innenstadtentwicklungsprojekt Sextius Mirabeau in Aix-en-Provence.....</b>	<b>447</b>
Heidi Megerle.....	447

<b>Innovative Spatial Planning in Mitigating Climate Change-Related Vulnerability in Nigerian Urban Centres</b> .....	<b>459</b>
Yekken Sanusi.....	459
<b>Integration of Inhabitants in Contemporary City</b> .....	<b>473</b>
Małgorzata Zając.....	473
<b>International Knowledge Transfer - Analysis of Planning Cultures</b> .....	<b>483</b>
Christina Steinhauer.....	483
<b>Intertwining Big Events and Urban Strategy within Life Cycle Analysis: the case of Solo, Central Java, Indonesia</b> .....	<b>493</b>
Júlia M. Lourenço, Zulaikha B. Astuti.....	493
<b>Kommunikationsstrategien für erfolgreiche Stadtviertelentwicklung am Praxisbeispiel „Andräviertel“</b> .....	<b>505</b>
Gabriela Paumgartner.....	505
<b>Land Demand and Land Potential of Central Java in 2030: a Forecast to Promote a More Balanced Development Policy</b> ...515	
Wiwandari Handayani.....	515
<b>Land Use and Traffic Pattern along Lagos – Badagry Corridor, Lagos, Nigeria</b> .....	<b>525</b>
Leke Oduwaye, Wale Alade, Salami Adekunle .....	525
<b>Lebenszyklen und Transformationsprozesse eines städtischen Boulevards – die Rue de la République in Marseille</b> .....	<b>533</b>
Heidi Megerle.....	533
<b>Locational Analysis of Telecommunications Infrastructure in Residential Neighbourhoods of Lagos Metropolis</b> .....	<b>543</b>
Wale Alade, Hakeem Bishi, Oluwafemi Olajide.....	543
<b>Long Waves, Lifecycles, and Urban Development: Context for Short-Term Purposeful Action</b> .....	<b>551</b>
Alan E. Alvarez, Justin Root, David C. Prosperi, Zenyep Enlil .....	551
<b>Lovable City: Maintaining Our Beliefs While Living in a Changing World and Building Towards a Better Society</b> .....	<b>563</b>
Hao Zhang, Bochun Yu, Ebon Armon Pinson.....	563
<b>Maintenance and Management of Communist-Era Privatized Flats and New Condominiums in Tirana: Legal Requirements and Actual Practices</b> .....	<b>571</b>
Dorina Pojani .....	571
<b>Management of Delhi’s Urban Growth and Shrinkage</b> .....	<b>581</b>
Bikram Kumar Dutta, Sanhita Bandyopadhyay .....	581
<b>Management of Rapid Growth in the Rift between the Principles of Sustainability, Market Requirements and Strategic Planning – the Possible Approaches to Local Planning of National Park Kopaonik Area</b> .....	<b>591</b>
Biserka Mitrović, Sanja Simeunčević, Miodrag Ralević, Tanja Klišmanić.....	591
<b>Metaphors from the Resilience Literature: Guidance for Planners</b> .....	<b>601</b>
Adriana Scotti Petrillo, David C. Prosperi.....	601
<b>Metro or Light Rail: Belgrade Transport Proposals</b> .....	<b>613</b>
Rajko Lj. Korica, Danilo S. Furundzic.....	613
<b>Mittendrin und doch am Rand. Raumentwicklung in NRW einmal von der Peripherie her gedacht</b> .....	<b>623</b>
Nils Leber.....	623
<b>Mobile Augmented City – New Methods for Urban Analysis and Urban Design Processes by using Mobile Augmented Reality Services</b> .....	<b>633</b>
Benjamin Allbach, Martin Memmel, Peter Zeile, Bernd Streich.....	633
<b>Mobilisierung des endogenen Potenzials in peripheren ländlichen Regionen</b> .....	<b>643</b>
Wibke Strahl, Theresia Oedl-Wieser, Thomas Dax.....	643
<b>New Life of Modern Cities: Transformation and Renewal of Public Spaces in New Belgrade</b> .....	<b>655</b>
Mira Milaković, Milena Vukmirović .....	655
<b>Of Cells and Cities: a Comparative Econometric and Cellular Automata Approach to Urban Growth Modelling</b> .....	<b>667</b>
Tamas Krisztin, Eric de Noronha Vaz, Matthias Koch .....	667
<b>On-site Participation – Mobile Information Systems in Planning Processes</b> .....	<b>673</b>
Sebastian Althoff, Norman Kratz, Gregor Landwehr .....	673
<b>Parallel Infrastructures and the Changing Metropolis: the Case of Lisbon</b> .....	<b>681</b>
João Rafael Santos .....	681
<b>Parks and an Analysis of their Role in Improving the Quality of Urban Life, Using Seeking-Escaping Model. Case Study: Tehran Urban Parks</b> .....	<b>691</b>
Samaneh Khosravanezhad, Zahra Abaszadeh, Furugh Karimzadeh, Peyman Zadehbagheri .....	691
<b>Pathology of Urban-Rural Interfaces Role in Urban Growth Management</b> .....	<b>699</b>
Furugh Karimzadeh, Samaneh Khosravani, Peyman Zadehbagheri.....	699
<b>Planungsrelevante Datengrundlagen für Österreich: LISA – Land Information System Austria</b> .....	<b>707</b>
Klaus Steinnocher, Gebhard Banko, Jürgen Weichselbaum.....	707

<b>Planungsrelevanz: Potenziale und Herausforderungen neuer Geodatenstrukturen .....</b>	<b>715</b>
Stefan Fina.....	715
<b>+pol – Multimodale Mobilitätsstationen am Beispiel der Stadt Freiburg im Breisgau.....</b>	<b>727</b>
Nadja Bautz, Peter Zeile .....	727
<b>Preventive Development of Urban Neighbourhoods: Demand-Oriented Life-Cycle Management.....</b>	<b>737</b>
Jutta Deffner, Immanuel Stiess.....	737
<b>Quality of Information Collected with the Help of Map-Based Questionnaires.....</b>	<b>747</b>
Matthias Fessele, Alenka Poplin.....	747
<b>Quality of Life Indices Assessment for Disabled and Elderly People: Case Study of Tehran .....</b>	<b>755</b>
Hamid Azizi, Mostafa Momeni, Mahmoud Taghinia .....	755
<b>Qualitätsvolle, flächen-, kosten- und energiesparende Siedlungsentwicklung als gemeinsamer Lernprozess von Politik, Verwaltung, Bauträgern/-innen und Wissenschaftlern/-innen .....</b>	<b>767</b>
Doris Damyanovic, Florian Reinwald .....	767
<b>RADAR – Potentials for Supporting Urban Development with a Social Geocontent Hub.....</b>	<b>777</b>
Martin Memmel, Florian Groß .....	777
<b>Re-Thinking Urbanism for Kuala Lumpur Conurbation: Live Work and Travel Easily.....</b>	<b>785</b>
Syra Maidin, Jamilah Mohamad .....	785
<b>Recycling an Urban Space: Hasan Abad Square in Tehran .....</b>	<b>795</b>
Nasim Iranmanesh, Korous Etaati .....	795
<b>Redeveloping the City Structure – the Case of Lodz ‘New City Center’ .....</b>	<b>803</b>
Małgorzata Hanzl .....	803
<b>Research of Public Housing Policy in Taiwan.....</b>	<b>813</b>
Yi-Hsuan Lin.....	813
<b>Resilience and Transformation: Can We Have Both?.....</b>	<b>819</b>
David C. Prospero, Sofia Morgado.....	819
<b>Resource-efficient Urban Spatial Development Scenarios 2050. FP 7 Project SUME – Sustainable Urban Metabolism for Europe .....</b>	<b>831</b>
Christof Schremmer, Ursula Mollay, Barbara Saringer-Bory.....	831
<b>Rethinking the Urban Transformation Projects Again: the Distribution of Public Burden and Benefits. The Case of Kartal District, Istanbul .....</b>	<b>843</b>
A. Erdem Erbas, Tansel Erbil .....	843
<b>Seamless Urbanisation and Knotted City Growth: Delhi Metropolitan Region.....</b>	<b>853</b>
Sridharan Namperumal, Hannes Taubenböck, Manisha Jain.....	853
<b>Simulation of Pedestrian Behaviour in Urban Spaces. A Case Study of “Sidi Gaber” Public Space, Alexandria, Egypt .....</b>	<b>863</b>
Rania A. Raslan, Ali F. Bakr, Hany A. Ayad .....	863
<b>Socio-Economic Determinants of Urban Poor Housing Types in Makoko Area, Lagos.....</b>	<b>873</b>
Leke Oduwaye, Victor Ilechukwu, Omoayena Yadau.....	873
<b>Spatial Distribution and Dynamics of Innovation-Related Employment in Germany .....</b>	<b>883</b>
Rüdiger Meng.....	883
<b>Spatial Partitioning of Livability Indices: South Florida Case Study .....</b>	<b>895</b>
Yexsy Schomberg, Kasama Polakit, David Prospero .....	895
<b>Stability, Safety &amp; Vulnerability of Modern Cities.....</b>	<b>905</b>
Hari Baral .....	905
<b>Stadtumbau für das 21. Jahrhundert.....</b>	<b>917</b>
Markus Tomaselli .....	917
<b>Study on Evaluation of Thermal Environment Following Alleviation of Limit on Number of Floors of Apartment Complex .....</b>	<b>923</b>
Ji-Won Ryu, Eung-Ho Jung, Dae-Wuk Kim, Jae-Gyu Cha, Akira Hoyano.....	923
<b>Supra-regional Partnerships – What can they Contribute to Innovative Regional Development .....</b>	<b>935</b>
Sandra Pennekamp .....	935
<b>Sustainability via Soft Natural Resource Management. The Coastal Area of Vouliagmeni.....</b>	<b>945</b>
Agisilaos Economou.....	945
<b>Territorial Cohesion for Managing Change in Cultural Landscapes.....</b>	<b>955</b>
Liesl Vanautgaerden, Jan Zaman.....	955
<b>The “Sprawl Repair Act”: Realizing Polycentricity in Metropolitan Spatial Structure.....</b>	<b>965</b>
Jenny Hsu, David C. Prospero.....	965





<b>The Dynamics of Urban Change in Times of Climate Change – the Case of Ho Chi Minh City.....</b>	<b>977</b>
Harry Storch, Nigel Downes .....	977
<b>The Integration of Urban Regeneration Method into the Practice of Historical Conservation – the Case Study of Tainan, Taiwan.....</b>	<b>985</b>
Hsueh-Sheng Chang, Tzu-Ling Chen.....	985
<b>The Problems of Renewal of Old Quarters in Baku Historical Center.....</b>	<b>995</b>
Shahla Kahramanova.....	995
<b>The Qualitative Development of Land Use Structures.....</b>	<b>1007</b>
Despina Dimelli .....	1007
<b>The Quality of Public Facilities for the Disabled, Sari, Iran, 2010.....</b>	<b>1015</b>
Mehdi Golestani-Bakht, Khadijeh Rabiei, Mehran Mojtahedzadeh .....	1015
<b>The Use of GIS Application in Identifying Youth Recreational Area in Subang Jaya, Selangor.....</b>	<b>1019</b>
Rosilawati Zainol, Syra Lawrance Maidin .....	1019
<b>The Value of Green Infrastructure in Urban Quality of Life.....</b>	<b>1029</b>
Karsten Rusche.....	1029
<b>Towards Emotional and Opinion-Based Layers in City GIS .....</b>	<b>1039</b>
Amin Abdalla, Paul Weiser.....	1039
<b>Transformation of Derelict Areas into Mixed-Use Urban Neighbourhoods – Case Studies in the Polish Cities.....</b>	<b>1047</b>
Michal Stangel .....	1047
<b>Untersuchungen zum Informations- und Wissensmanagement in der urbanen Pflanzenverwendung .....</b>	<b>1053</b>
Marcel Heins, Wolfram Kircher.....	1053
<b>Urban Design and Urban Planning in Dynamic Global Positioning of Local Identities.....</b>	<b>1063</b>
Tatjana Mrdjenovic .....	1063
<b>Urban Green Areas: Lots of Benefits, but some Drawbacks .....</b>	<b>1069</b>
Sascha Henninger.....	1069
<b>Urban Management based on Citizen Participation to Enhance Quality of Life in Tehran.....</b>	<b>1079</b>
Mostafa Momeni, Hamid Azizi, Mahmoud Taghinia.....	1079
<b>Urban Monitoring Laboratory: New Benefits and Potential for Urban Planning through the Use of Urban Sensing, Geo- and Mobile-Web .....</b>	<b>1087</b>
Jan-Philipp Exner, Peter Zeile, Bernd Streich .....	1087
<b>Urbane RaumStrategien – Kernthesen des strategischen Entwerfens im Kontext der zeitgenössischen Stadt.....</b>	<b>1097</b>
Beate Niemann, Priscilla Schädler .....	1097
<b>Verwundbarkeitsanalyse urbaner Räume: Ableitung von Indikatoren aus multisensoralen Fernerkundungsdaten .....</b>	<b>1107</b>
Hannes Taubenböck, Michael Wurm, Igor Klein, Thomas Esch .....	1107
<b>Vienna’s Historic Ground Floor and its Socio-Urban Potential – Integrative Diversity Par-terre?.....</b>	<b>1119</b>
Angelika Psenner .....	1119
<b>Von der Brache zum urbanen Nährboden .....</b>	<b>1127</b>
Martina Baum.....	1127
<b>Wachstum und Schrumpfung – Flächenmanagement unter den Bedingungen der teilräumlichen Polarisierung.....</b>	<b>1135</b>
Hany Elgendy, Sabine Michels, Dirk Seidemann, Sebastian Wilske .....	1135
<b>Web-based Interoperability System: A Collaborative Method to Integrate Rural Buildings with Their Surroundings .....</b>	<b>1145</b>
Jin Su Jeong, Lorenzo García Moruno, Julio Hernández Blanco .....	1145
<b>What is Next after VINEX?.....</b>	<b>1153</b>
Stefan Netsch, Niels Kropman .....	1153
<b>Whose Quality of Life? In What Kind of City? .....</b>	<b>1163</b>
Judith Ryser.....	1163
<b>A Continuous Process with a Strong Vision and Frame can Deal with Transformation and Changes. Monitoring the Spatial Structure Plan of the City of Ghent.....</b>	<b>1169</b>
Guy Vloebergh .....	1169
<b>About the Impact of Information Technologies on the Atmosphere at the Workplace.....</b>	<b>1175</b>
Olivier Lefebvre .....	1175
<b>aspern, die Seestadt Wiens: Offene Strukturen für eine robuste Stadtentwicklung.....</b>	<b>1179</b>
Peter Hinterkörner.....	1179
<b>Autobahnen im Ballungsraum von morgen: Die Kunst der Vernetzung.....</b>	<b>1185</b>
Thomas Steiner.....	1185
<b>CentroeSTATISTICS – interaktive grenzüberschreitende Geo-Statistik .....</b>	<b>1191</b>
Clemens Beyer, Walter Pozarek, Manfred Schrenk .....	1191

<b>Challenges in Integrating Ecosystem Services in Sustainable Land Management</b> .....	<b>1197</b>
Jürg Altwegg, Adrienne Grêt-Regamey.....	1197
<b>Cities and Climate Change: A Simulation Model for the Ruhr Area 2050</b> .....	<b>1203</b>
Felix Huber, Klaus Spiekermann, Michael Wegener.....	1203
<b>City Discovered or Invented? A Dialogue between Geographer and Architect</b> .....	<b>1209</b>
Izabela Mironowicz, David C. Prospero.....	1209
<b>Climate Change Mitigation and the Role of Industrial Parks</b> .....	<b>1215</b>
Tom Maes, Greet Van Eetvelde, Karel Moentjens .....	1215
<b>Creation of Value-Added Services based on Harmonized Land Use and Land Cover Datasets: Project HLANDATA</b> .....	<b>1217</b>
María Cabello, Isabel Goñi, Delia Sola .....	1217
<b>CultNature – neue urbane Landschaften als Strategie ökologisch und ökonomisch nachhaltiger Stadtentwicklung</b> .....	<b>1221</b>
Andreas Kipar, Franz Lehner, Hans-Peter Noll.....	1221
<b>Demographischer Wandel – ein Thema für die Immobilienbewertung?</b> .....	<b>1225</b>
Martin Töllner .....	1225
<b>Demographischer Wandel in Leinefelde: Management eines Schrumpfungsprozesses</b> .....	<b>1233</b>
Gerd Reinhardt, Hermann Sträb .....	1233
<b>Deutschland verändert sich – LOCAL®2011 – das amtliche Gebietsraster</b> .....	<b>1237</b>
Dirk Schneider.....	1237
<b>Digital Graffiti – A Comprehensive Location-Based Travel Information System</b> .....	<b>1239</b>
Wolfgang Narzt, Wolfgang Wasserburger.....	1239
<b>Directions of Transformations of Postindustrial Greenery in the Silesian Agglomeration</b> .....	<b>1245</b>
Aneta Dyraga.....	1245
<b>Dynamic Expansion and Urbanization of Greater Cairo Metropolitan, Egypt</b> .....	<b>1251</b>
Ahmed Abdelhalim M. Hassan.....	1251
<b>Effects of Global Economy on Spatial Structure of Ikeja, Lagos</b> .....	<b>1257</b>
Leke Oduwaye, Gbenga Enisan.....	1257
<b>Emergency Management Pilot in BRISEIDE</b> .....	<b>1267</b>
María Cabello, Jose Achaerandio .....	1267
<b>Emotional Mapping for Migrants – Using Cartography for integration efforts</b> .....	<b>1273</b>
Georg Gartner, Felix Ortig.....	1273
<b>Erdbeobachtung und Raumentwicklung?</b> .....	<b>1275</b>
Hannes Taubenböck, Thomas Esch, Michael Wurm, Wieke Heldens, Christian Geiss, Stefan Dech .....	1275
<b>How the INTERREG IVc Project “GRaBS” can Change European Cities</b> .....	<b>1283</b>
Age Niels Holstein, Christine Schwaberger.....	1283
<b>Höher, schneller, weiter – Großinfrastrukturen als Stimulus der Stadt- und Regionalentwicklung?</b> .....	<b>1289</b>
Dirk Engelke, Wolfgang Jung .....	1289
<b>Innovative Urban Development Projects in Vienna</b> .....	<b>1291</b>
Brigitte Jilka .....	1291
<b>Joint Programming Initiative Urban Europe – a new Approach to Funding Research on Urban Issues and Technologies in Europe</b> .....	<b>1301</b>
Hans-Günther Schwarz.....	1301
<b>Konversion in Darmstadt</b> .....	<b>1303</b>
Harald Kissel .....	1303
<b>Mobilität prägt Städte und Regionen – MAI, der „Mobilitätsausweis für Immobilien“, als Promotor nachhaltiger Mobilität</b> .....	<b>1309</b>
Manfred Schrenk, Christian Eizinger, Tanja Egger, Linda Dörrzapf, Susanne Franz.....	1309
<b>Neue Konzepte der kommunalen Wasser-/Abwasser-Infrastruktur</b> .....	<b>1315</b>
Bernhard Michel.....	1315
<b>Neues Leben in alten Strukturen: Die Entwicklung der Kokerei Zollverein –Flächenrecycling und Weltkulturerbe</b> .....	<b>1321</b>
Hans-Peter Noll, Gernot Pahlen.....	1321
<b>NICE: Boom to Bust - Hintergründe und Konsequenzen der Wohnungsmarktkrise in Spanien</b> .....	<b>1327</b>
Thorsten Heitkamp .....	1327
<b>Niederländische Stadtbausteine</b> .....	<b>1333</b>
Stefan Netsch.....	1333
<b>Partnerschaft zwischen Planung und Dialog – Begleitung von Veränderungsprozessen</b> .....	<b>1339</b>
Yvonne Knapstein .....	1339



<b>Planungswerkzeuge in Raum- und Verkehrsplanung – quo vadis? .....</b>	<b>1343</b>
Martin Berger, Kurt Fallast, Martin Fellendorf, Gerald Kovacic, Gudrun Maierbrugger, Stephanie Novak, Mario Platzer, Manfred Schrenk, Helmut Schrom-Feiertag, Wolfgang Wasserburger .....	1343
<b>Regional Disparities in Availability and Affordability of Housing .....</b>	<b>1351</b>
Milada Kadlecová, Michal Hadlač .....	1351
<b>Renaissance of Cities? An Empirical Analysis of the Population Development in German City Regions 1999-2009.....</b>	<b>1357</b>
Frank Osterhage .....	1357
<b>Russian Urban Transport Strategy Today: Three Approaches .....</b>	<b>1363</b>
Mikhail Petrovich.....	1363
<b>Smart Cities Workshop: Inputs for a Roadmap towards Smart Cities in Austria .....</b>	<b>1367</b>
Edith Haslinger, Barbara Saringer-Bory, Olivier Pol, Ursula Mollay, Wolfgang Neugebauer, Jessen Page, Branislav Iglár .....	1367
<b>“Smart City Wien”: Vienna’s Stepping Stone into the European Future of Technology and Climate.....</b>	<b>1373</b>
Kurt Hofstetter, Alexandra Vogl .....	1373
<b>Sociopolitical Changes and City Growth – a Case Study of Novi Sad, Serbia .....</b>	<b>1383</b>
Milica Kostreš, Jelena Atanacković-Jeličić .....	1383
<b>Stadtentwicklungsplan Klima, Berlin.....</b>	<b>1389</b>
Carl Herwarth von Bittenfeld .....	1389
<b>Stages of E-Government Development using the Example of Tbilisi Municipality Local Self-Government Property Management .....</b>	<b>1395</b>
Valerian Gvatua .....	1395
<b>Stand der Einführung von XPlanung in Norddeutschland.....</b>	<b>1399</b>
Kai-Uwe Krause .....	1399
<b>Solarinitiative München (SIM) – 300 MWp auf den Dächern einer Großstadt.....</b>	<b>1405</b>
Michael König.....	1405
<b>Städtebaulicher Rahmenplan Luisenstadt – die Wiederentdeckung von Stadt .....</b>	<b>1409</b>
Brigitte Holz.....	1409
<b>Territory + High-Speed Rail – (Agriculture-Zones + Eco-Parks + Seashores). Proposal for Strategic Planning of China’s Coastal Region Starting with No-Build Zones .....</b>	<b>1413</b>
Stefan Rau .....	1413
<b>The Future of Strategic Brownfield Regeneration in England – Between Urban Intensification and Green Infrastructure Provision .....</b>	<b>1421</b>
Andreas Schulze Bäing .....	1421
<b>Web-based City Maps for Blind and Visually Impaired.....</b>	<b>1429</b>
Wolfgang Wasserburger, Julia Neuschmid, Manfred Schrenk.....	1429
<b>Why in the Czech Republic the Sustainable Land Use Efforts have Failed to Match up the Improvements in Available Tools .....</b>	<b>1433</b>
Jiřina Bergatt Jackson.....	1433

## Enhancing Competitiveness of Serbian Medium-Sized Cities in Global Urban Networks

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### 1 ABSTRACT

Serbian medium-sized cities went through dramatic changes in the last two decades. From national and regional centres of industrial productions in 70s and 80s, became cities with economical and demographic recession. They have lost their regional and, in some cases, even national competitiveness, as well as previously created advantages and networks. The process of transition from planned to market economy and privatization of state companies in the last decade, did not give the expected results in the cities development stimulation. A delayed entrance of the cities into global competition for mobile capital, after political and economic sanctions in the 90s, made their attempts for positioning in urban networks even more difficult. The rise of foreign investment inflow in 2002, which was seen as a cure for the degradation of the cities, was interrupted by the global economic crisis.

New challenging circumstances have put stress on new strategies and anticipatory plans for Serbian medium-sized cities development. This paper explores competitive potentials of medium-sized cities for their introduction in specialized global urban networks. It also analyzes the enhancement of their position in knowledge and innovation based economies, and applies them to chosen, case study Serbia. The aim of the paper is to present the approach to strategic planning of Serbian cities, which could withstand global economy changes; long-term plans relying on their inner resources, the existing and potentially created ones, which will reinforce the cities and make them competitive.

### 2 INTRODUCTION

In the previous three decades cities have gone through major changes at the global level. They have become centres of global and economic power, nodes through which capital flows in global networks (Sassen, 2001, Castells, 2000, Purcell, 2003). Globalization and mobility of capital and people have made cities replaceable entities, which are in constant competition for the global capital (Lever and Turok 1999). They compete to attract high rates of investment and tourists, expend their markets and attract highly skilled labour (Turok, 2004). The transformation of the global system from industrial to post-industrial, from manufacturing to knowledge society, has emphasized new challenges for cities. Competition is increasingly becoming the competition for innovation, knowledge and creativity (Hall, 1998, Florida, 2002).

Cities are regarded as privileged places for concentrating knowledge resources and promoting creativity and innovation (Jacobs, 1961). Being the core of creativity and therefore more competitive, large and high positioned cities are seen by researchers. This, as a result, leaves other cities on the periphery, outside global urban networks. As Castells (2000) says, a city does not exist by itself, because it is determined by its networks. To develop in the global knowledge and innovation based society, medium-sized cities also have to be included in global networks. Since there are different and specialized networks, medium-sized cities can integrate into those which are adequate for their possibility and path.

Medium-sized cities in Serbia are in a complex and difficult position. As in other post-socialist countries, globalization has significantly changed their position and development. Due to the international sanctions during the 90s, the transition from planned to market economy and the delayed involvement in international networks put additional stress on Serbian cities. Rapid changes in economic, social and political conditions created the climate for which medium-sized cities were not prepared. Previously regional and national industrial centres in the 70s and 80s, they lost most of their factories and entered strong economic and social decline. The attraction of foreign investment and privatization of state companies have not given the expected growth and rise in competitiveness since the year 2002. The global economic crisis decreased investment and a struggle of Serbian medium-sized cities for survival in this changed economic landscape continued.

Major changes and challenging conditions ask for the 'reinvention' of the cities in Serbia. Medium-sized cities need to develop new strategies and anticipatory plans to enhance their competitiveness in global

networks. Furthermore, it is necessary for them to integrate in knowledge and innovation based economies adequately. To enhance competitiveness, cities must be careful not to force 'the best practice models'. Different national and local conditions, in terms of institutions, organization and resources, and less-favoured regions, ask for specific development and competitiveness enhancement strategies. This paper will try to analyse possible approaches to strategic planning of Serbian medium-sized cities, long-term plans relying on their inner resources, the existing and potentially created ones, as well as development paths which could withstand global economic changes. The paper will try to give a new approach to medium-sized Serbian cities development in the context of knowledge society and urban global networks.

### 3 COMPETITIVENESS OF CITIES IN GLOBAL NETWORK-THEORETICAL FRAMEWORK

Understanding the theoretical framework behind successful city development strategies in the era of globalization and knowledge economy will help cities to build their own approaches, adequate for the local context. It will also enhance competitiveness. Having been isolated from international events for several decades, Serbian cities are now under stronger pressure to compensate for the late entrance in the race, as well as to understand the principles of competing for a position in global networks.

#### 3.1 Competitiveness in global urban networks

Competitiveness between cities is not a new phenomenon. Through centuries cities have been competing for power in hierarchy. What is different in contemporary context is intensity, complexity and global wideness of competition (Sassen, 2002, p. 25). Competition, which was previously primarily between cities of the same nation or same region, has expanded to the global level. Involvement in global capital flows and concentration of global control functions became the element that now determines the importance of a city and its power, and consequently intensiveness of its development. A possibility for easy and fast travel resulted in geographic location becoming less important, and involvement in different types of networks more influential. As Castells says, 'Highways are replaced by information flows' (Castells, 2000, p. 425).

Information society is determined by space of flows. The flow goes through the set of nodes-cities, which are connected to the other nodes in the global network of functions (Castells, 2000, p.407). Places are not disappearing, but the logic of their existence and importance is reinvented and absorbed in networks. A city does not have importance, it cannot rely on development unless it is in the network. The power of city is demonstrated by the number of networks present. Looked at a broader level, where the lowest unit is a city, different specialized networks can be clearly seen -IT, high-tech, cultural, health, education, production and other forms. In his last book, Richard Florida determines the existence of specialized networks of different creative people and specialized global urban hierarchies (Florida, 2008).

Today it is difficult to find isolated national markets which are not under the influence of global networks. In 1999 Evan World Bank indicated the significance of competition in global urban networks, saying that cities which manage to use their comparative advantages in global markets will prosper, and those that stay isolated will fight for survival. Reconfiguration and rescaling of cities and states does not just take place on a global but also on a regional scale (Brenner, 1999), and it is not only important for big, but also for small and medium cities.

When competing, cities use different approaches and concentrate to attract international companies, investment, tourists or/and highly skilled population. Cities try to improve their 'industrial productivity' or/and innovation (Jacobs, 1969), information (Castells, 2000), knowledge (Hal, 1998), culture (Scott, 2000) or/and creativity (Florida, 2002).

#### 3.2 Knowledge and creativity as the core of cities competitiveness

In knowledge society, creativity and knowledge are seen as the frontiers of economic development, as producers of highest values.

Landry and Florida introduced the concept of the creative city, a strategy that cities aiming to enhance their development and competitiveness should implement. According to Landry and Florida, cities need to compete with each other in order to attract and retain investment and creative human capital. Landry (2000) stresses the importance of creative city management, the potentiality a city gets from talents and creativity of residents' business, as well as from the city authorities and citizens. Florida (2002) underlines the importance of 'creative industries' such as IT, design and art, which cities should concentrate on. Since



the carriers of creative industries are people, the assumption is that all cities are competing for creative people, 'the creative class'. To be able to attract dynamic and mobile individuals of 'the creative class', cities need to offer attractive living conditions, e.g. urban buzz, varied cultural life, diversity and tolerance. The concentration of creative people will attract companies. A creative city could be defined as city that promotes creativity through creative, cultural and artistic activities and has a diverse dynamic 'creative milieu'.

However, the arguments about the creative city concepts have been challenged. There is no straightforward evidence of the connection between 'being creative' and 'being successful'. Creative cities cannot be created from scratch (Hall, 2004), they need history development paths. Not all cities can become creative only in the way Florida suggests. Perhaps modern competitive cities should be referred to as knowledge cities.

'Economic development in a knowledge society is associated with individual and group learning processes capable of spreading both explicit, encoded knowledge and the sort of tacit knowledge that can be conveyed only by means of direct exchanges' (Menez and Moral, 2010, p.2). The concept of knowledge city focuses on the research and development, and its transfer to companies and production (OECD, 2001). Cities develop strategies to encourage and nurture locally focussed information, science and creativity, with the aim of expanding knowledge economy and society. Storper (1997) stresses the importance of the transfer of specific knowledge between related firms. The main characteristics of knowledge city are accessibility, cutting edge technology, innovation, cultural facilities and services, and quality education, as well as world class economic opportunities.

### 3.3 Innovation and productivity as the core of cities competitiveness

Cities are privileged places for the concentration of knowledge resources and promotion of innovation. Jan Jacobs (1984) makes a forceful argument that it is cities that are the main players in the world economy, not nation states. Furthermore, they are carriers of national wealth. Taking into consideration Jacobs' assumption, the position of a city in urban networks affects its region and nation, so the importance is even more stressed. In order to have a successful economy and be competitive, cities need to be innovative. Cities must have the ability to create mixed economies that will replace imports with local production. In other words, they should lower import and become exporters of goods. Prosperity or stagnation of cities is based on their ability to continue the import/export cycle, on their resources, and capacity to come up with innovative response (Jacobs, 1984).

Building development strategies for cities upon creative class is limited, according to Alan Scott. The mere presence of 'creative people' is certainly not enough to sustain the urban creativity over long periods of time. Creativity needs to be mobilised and channelled, to emerge in practical forms of learning and innovation (Scott, 2006). He points out that the transfer of ideas in production happens when there is spatial proximity and specialization. In production networks, companies profit from each other by exchanging information and knowledge about certain products. The networks of complementary and specialised producers generate additional opportunities and economic development. Scott concludes that if a city wants to create successful development strategy in global knowledge economy, it needs to combine creativity with local production system. The city needs to train and attract relevant labour force, 'appropriate programming of urban space, and ensure that all different elements involved work more or less in harmony with one another (Scott, 2006, p.11).

Competitiveness of cities is generated through interaction and cooperation of R&D and production. This is accelerated by the proximity of institutions and companies, adequate framework for knowledge exchange and the importance of social capital. 'It is assumed that innovation generation proceeds most efficiently either in specialized clusters, where inter-firm links play a part, or in areas where industry, academia and other regional actors collaborate with each other, which results in innovative solutions that subsequently trickle down to other entities/regions via knowledge spillovers' (Zeintara, 2008, p.62).

### 3.4 Medium-sized cities competitiveness in urban networks

Medium-sized cities have not been excluded from the competition for a position in urban networks. Smaller cities face natural competitive disadvantage. A city's size logically affects its critical mass of economic actors, workforce, number of innovators, and the ability to attract companies and new residents. The popular concept of the creative city has been copied from large cities by a number of medium-sized cities, based on the vision that any city can become creative and frightened by the 'do it or else' imperative (Peck, 2007).

These strategies are not ideal for many of these cities, and for some they are even impossible and dangerous. Mimicry without adjustment to local conditions will not give the desired growth and sustainability, but rather deplete their financial resources.

Although smaller cities do not have the same capacities as the large ones, they still have resources to be creative, innovative and productive. 'In addition, not all creative industries or creativity in general requires highly urbanised and mixed centres – numerous examples can be given of innovative developments in more homogeneous, less urban environments...' (Musterd and Murie, 2010, p.21). There is empirical and research evidence that, in some types of creativity, knowledge and innovation, smaller cities are more productive than large urban agglomerations. Small urban regions have a higher share of innovating, knowledge intensive firms. The innovation patterns of firms are quite similar, irrespective of location. Large, heterogeneous cities tend to have more radical innovation and smaller, specialized cities, higher implementation of technological innovations. The product and process innovation rates in the knowledge-intensive industries are higher in small urban regions. Cooperation and co-development of innovations is higher between enterprises in smaller cities.

Empirical research gives support to Alan Scot's concept of cities competitive enhancement when it comes to medium-sized cities. Its adjustment to the specific city could give adequate results. But the other concepts should not be disregarded, but rather reinterpreted to fit the city size and potentials.

## 4 PRESENT SITUATION IN MEDIUM-SIZED CITIES IN SERBIA

### 4.1 Present situation in medium-sized cities in Serbia

Historically, Serbian economy was largely agricultural, and industrial revolution had relatively little direct impact on the cities in Serbia. Some industrial plants have been present, and some of them have induced the creation of small industrial cities, but overall, the country stayed agricultural. The character of cities was dominated by trade and craftsmanship. The industrialization of the country began after the World War II, with the establishment of the communist regime. In the period between 1945 and 1960, the country went through intensive industrialization. The main centres were the capital of Serbia-Belgrade and other major cities like Niš, Novi Sad, Kruševac, Subotica and Kragujevac. The period from the 1960s to the mid 1980s witnessed a considerable emphasis on small towns in national and regional development. Medium cities were industrialized with the aim to induce even more development and industrialization, and reduce the migration pressure on big cities. The capital city, Belgrade, received around half a million of immigrants from other cities and rural areas in Serbia and Yugoslavia in the period from 1945 until 1980.

The economic transformation that began in the 1980s, the creation of global economy and the rise of global cities, did not influence the cities in Serbia. This was because of the closed communist system in Yugoslavia. The process of deindustrialization and transfer to post-industrial cities, which was happening in the west European cities, was not present in Serbia. The beginning of 1990s brought disintegration of Yugoslavia and national war. In the year 1990, the communist regime fell, and the precondition for market opening was created. But the ongoing national war and international sanctions introduced by the United Nations in 1992 disabled that process. The transition from planned to market economy, characteristic of all post-communist countries, was even more complicated in Serbia. The isolation prolonged the transition and it actually started in 2001, after the abolition of sanctions and creation of new democratic political conditions.

Serbian cities entered the competition for global capital and position in urban networks with great delay. Large parts of manufacturing industry were not competitive at the global level. Outdated technology and lost productivity during the sanctions resulted in a decrease of production and intensive job losses. Consequently, national and local governments saw foreign investment as the way out of the situation but also as a stimulant for cities development. The inflow of foreign investment was rising between 2001 and 2008 from \$64 million to \$4.264 billion. This, however, was not sufficient to recover the cities. Privatisation of state owned companies did not go as desired, and many privatizations ended up with the closure of factories and layoffs of workers.

The rebuilding of industrial production by foreign investment and import of technology was mainly directed towards lower-tech manufacturing. Therefore, endogenous development and innovation was rarely present in Serbian cities. The outsourcing of higher and more high-tech activities that began in the east European countries in the late 90s, still did not happen in Serbia (Pickles, 2002). The late transition and the financial



crisis in 2008 could be the reason. Medium-sized cities in Serbia lost their industry and, in addition, did not show signs of transfer to post-industrial cities. The number of industrial medium-sized cities in Serbia shrank from 17 to 4 in 2008 (Zeković, 2010 p.29). Only two major cities in Serbia have shown the transfer to service and knowledge sector, Belgrade and Novi Sad. The inadequate transition has been most damaging for medium-sized cities, which have witnessed tremendous loss of production, jobs and workforce. The workforce is migrating to large cities, mainly to Belgrade and abroad to west Europe, Australia and America. Losing the workforce, especially the high-skilled one, is the disadvantage for future development.

#### 4.2 Critical review of present strategies for medium-sized cities development in Serbia

Capitalist transformation comes with the cost of urban change, as well as with high disparities between capital cities and periphery, in relation to work opportunities, labour market, work-poverty and potentials for development. In the last decade the government of Serbia and local governments of municipalities have brought documents and strategies to tackle these problems, and used different mechanisms in practice. Unfortunately, most of them have not given the expected results.

Serbia presented a new Strategy for Regional Development (2005) and adopted new Spatial Plan of Republic of Serbia (2010), which showed renewed interest in the role of small towns in regional development and the positive role they can play in spatial development, poverty reduction as well as the achievement of an equitable development. The economic development model presented in Spatial Plan shows the understanding of present global economical trends and knowledge society. But, since it is completely new, its enforcement is yet to be seen. The previous Spatial Plan of Republic of Serbia (1996) more reflected outdated economical concepts. Economic development models, strategies and practices pursued by the local and, in part, by the central government, still reflect past experiences and are inappropriate or fail to obtain the development needed in complex present environment of integration into global networks. 'Creative knowledge industry has different needs than manufacturing industry and within the creative sector there is a range of distinctive demands' (Musterd and Murie, 2010, p.241). The old economic model for attracting foreign investment in manufacturing and industry does not function in new economy. Still, it is implemented in most local municipality development strategies and spatial plans.

The way of enhancing competitiveness of cities in Serbia during the previous decade has been by attracting foreign investment. The way to be attractive is done by two methods - development of new industrial and economic zones, and subsidies for investment in less developed regions. In attempt to compete for foreign investment, local jurisdictions set up a large number of development zones for industrial and commercial uses. Although first zones were established with the help of central government, very soon local governments started setting up their own development zones. They were typically located at the edge of urban area of a medium-sized city and induced expansion of urban boundaries. 23 commercial zones were planned and 4 were set up. National investment plan of Serbia has supported the building of 64 new industrial zones only in the last 3 years (Zeković, 2010, p.29). Many of the planned industrial and commercial zones have never received any investment-no funds to justify their establishment and reduction of agricultural land. With the global economic crisis, these zones have a tendency to remain undeveloped sites for long. On the other hand, the lack of central control resulted in the creation of the same zones with the same functions in many locations. This, however, does not help the creation of a recognizable picture and involvement in specialised global networks.

The strategy based on the attraction of foreign investment has shown to be vulnerable and not sustainable in the long run. Much of the FDI in Serbian medium-sized cities has involved branch-plant multinational manufacturing operations characterised by low-skill assembly and low-wage workers. Post-socialist countries can easily lose those companies to Asian and African countries, due to the rise of global economic crisis. Moreover, foreign investments have been nearly absent from the innovation (Costa and Filippov, 2008). They are weak, with spill-over effects of knowledge and know-how, and do not induce innovation and creativity in the city. Investment in human capital is more a long-term strategy than the attraction of FDI, as the cases of Finland and Ireland demonstrate. The strategy of spatial connection, creation of specialized cluster, concentration of research and production in spatial proximity, which is present in many successful city developments, is not evident in Serbia. The main disadvantage of medium-sized cities in Serbia lies in the lack of educated workforce. However, decentralization of high education and research institutes is not



part of national strategies, despite the fact that it helps the concentration of high-skilled workers and competitiveness of cities in urban networks.

What can be concluded is that most strategies of local and central government present optimistic economic targets and aspirations of officials, but lack spatial methods that would support them.

## **5 PROPOSITION FOR ENHANCEMENT OF SERBIAN MEDIUM-SIZED CITIES COMPETITIVENESS IN URBAN NETWORKS**

Serbian cities, which have been cut from global restructuring process, have to 're-invent' themselves. The competitiveness of cities needs to be built from the ground and accommodated to the new, creative and knowledge economy, despite the deficiency of capital, institutions and supporting policies. However, not all medium-sized cities in Serbia can become creative cities, nor should they. They need to be creative and innovative at the level that is adequate to their existing and desired strength and position in urban networks. Creativity is not only connected with art and design, but it can also be connected with production of R&D intensive industries. Serbian medium-sized cities should not concentrate solely on policy towards the creative class, but develop broader policies which would affect different scales of workers. Integration of innovation and production enables highly skilled workers to come and stay in the city, and at the same time provides rezones for ordinary households from the city to stay.

The proposed approaches for enhancement of competitiveness of Serbian medium-sized cities have to be reshaped and adopted by each city in order to fit its context and aims adequately.

### **5.1 Creation of import-replacing cities**

Serbian development strategies concentrate on enhancement of export. Although export-oriented economic theories have long been the mainstream of the development theory for local economies, economic development in import-substitution industries is more desirable (Markusen and Schrock, 2006), since this is the era of knowledge/ information-based economies. This brings back the theory of Jan Jacobs (1969, 1985) on import-replacing cities.

Serbian cities are predominantly import cities. Most of the goods needed in its medium-sized cities are imported from abroad and, in smaller amounts, from major national cities. The production which would satisfy the city's needs does not exist and neither does the production for region or specific global networks. The main economic sectors in Serbian medium-sized cities are import and trade. Cities do not invest in innovation and production of their own products, which would replace import goods. According to Jacobs, this is a sign of decline of cities, and the way for starting their development lies in the creation of a process of import-replacing. Cities need to bust innovation. Therefore, the first step should be replicating import products, and the second one improving the products and becoming exporters. This requires that medium-sized cities invest in education of citizens and research and innovation. Cities should not only concentrate on one product, but rather be flexible to changes.

In the globalising world, import-replacing is becoming more important when it comes to knowledge and services. The creation of one's own technologies, knowledge and innovation is crucial, giving independence by foreign investment and import of know-how and technologies. Depending on foreign transfer of companies does not give cities sustainable development. The solution is building cooperation between research and production, based on Alan Scott's theory (2006).

To be able to start the process of an import-replacing and transferring city to an exporter city, it needs to be part of the global network. For medium-sized cities, which cannot offer a wide range of services and products, belonging to specialized global networks is crucial. Medium-sized cities cannot compete with metropolitan regions. But with the aim to become as competitive as possible, they should interconnect. Each city should have specific sector specialization and be connected in regional urban network, so that it can create competitive advantages. The overall production will then be diverse enough for import-replacement.

### **5.2 Creation of local networks of knowledge**

In contemporary knowledge society, competition between cities is becoming more and more competition for people. EU countries not only compete with non-EU countries/regions, but they also compete among themselves in order to attract and maintain sufficient flows of highly skilled labour. Richard Florida says that



‘the key factor of global economy is no longer goods, services or flows of capital, but the competition for people’, creative people (Florida, 2007. P.16). Taking into consideration Florida’s perspective, the question that arises is - how can Serbian medium-sized cities attract the highly-wanted, creative and knowledge class? Serbian medium-sized cities have a problem to keep the existing workforce from migrating. If they cannot attract highly educated and creative workforce, they could consider producing them. Education, too, is a fundamental, yet an over-looked building block for creative and knowledge potential. This aspect is more sustainable than merely importing educated and talented individuals into medium-sized Serbian cities.

A lack of social capital diminishes a region’s ability to capture the gains of economic growth (Putnam, 1993). Human capital theorists argue that the concentration of educated individuals, along with training, will produce high levels of long-term economic growth. ‘Intellectual capital’ is correlated with density of institutions such as universities, which produce and attract educated population. It leads to clusters of human capital. Besides traditional ‘hard’ conditions, availability of highly skilled labour attracts firms to places. Glaeser and Saiz (2003) found that more educated cities grow more quickly than comparable cities with less human capital, because they become more economically productive.

In this respect, the necessity for growth and development of medium-sized cities in Serbia is the creation of high education facilities. Finland is a great example of successful implementation of this strategy. From the 1960s to 1980s it expanded its university system all over the country from three to twenty universities. In the period of three decades, Finnish economy turned from the rural to high-tech. Serbia, on the other hand, has 6 public and 7 private universities. They are concentrated in three major cities, Belgrade, Novi Sad and Niš. In the recent years two more cities have built university centres, Kragujevac and Novi Pazar. Taking as an example Finland’s strategy, according to its number of inhabitants, Serbia should have about 28 universities. Public universities have their branches in 10 smaller cities, but they are not effective and have the character of displaced classes of the central university. What is also apparent is the non-existent correlation with production character and market needs.

What medium-sized cities in Serbia should consider is opening universities, high education centres which would specialise in the knowledge correlated to the production paths of the city. High education centres would help keep the workforce in their productive age in the city, attract new, and produce highly skilled social capital. In city regions, about 80% of young creative and knowledge workers have been educated within the region, and very often the first reason for being there relates to the presence of a good university (Musterd and Murie, 2010).

Human capital and education institutions provide opportunities for development of research centres. Local governments need to determine strategic sectors and lobby for the transfer of research institutes of importance to the city. The role of the public sector is to create conditions for innovation, to work as a moderator or initiator of companies-research cooperation and companies’ investment in R&D. With time, the role of government diminishes. Spatial proximity to the recipients of innovation and knowledge fertilises the idea transfer and better relationship between R&D and companies. The existing problem with the transfer of scientific discoveries from research institution to production systems could be overcome by integration in the same cities.

For the competitiveness of cities personal links and networks are also important. Most highly skilled workers in cities have had previous links with the city, either through family networks or the networking established during their studies. Most of them were born in or near the city, or have studied there. The presence of high education institutions gives opportunities to establish those links with medium-sized cities in Serbia. Here lies a big possibility for medium cities in Serbia to retain the existing population. On the other hand, personal links with highly educated emigrants present a comparative advantage of Serbian medium-sized cities. They could stimulate innovation and development, and enhance their position in global networks.

The effects should not be expected to be visible immediately. They require decades. Human resources can be fully activated only if a city’s economic base permits the generation of quality jobs. ‘That is why achieving a smooth integration between the supply from the education system and employers’ demand becomes an essential objective for every city.’(Mendez and Moral, 2010, p.5)

### 5.3 Creation of local development-production clusters

In the present economic conditions marked by the global economic crisis, relying on foreign investment is not productive. Instead, Serbian medium-sized cities should concentrate on intensification of relationships among the existing firms, and seeking the establishment of new firms. Relationships among dynamic firms stimulate the circulation of knowledge and the improvement of innovation and competitiveness. To achieve this improvement, a possible strategy is to create development-production clusters. Innovation decreases when the distance from the R&D institutions holding patents increases. The cluster strategy became one of nine components of Union-Wide Innovation Policy of EU in 2006 (EU Commission, 2006). Serbia, especially its medium-sized cities, is lagging behind the European Union in strength of clusters from the regional, innovation and industrial perspective, and needs to put strength on the development of innovative-industrial clusters.

‘[E]nduring competitive advantages in the global economy is often heavily localized, arising from concentrations of highly specialized skills and knowledge, institutions, rivalry, related businesses, and sophisticated customers’ (Porter, 1998, p.90). Porter defines cluster as ‘a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities’. Clusters have several benefits—they save on transportation costs, create pools of specialized workers valuable to firms, exchange information and knowledge. The prerequisites for the emergence of clusters are qualified labour and strong networks between actors, the existence of universities and research centres. Cluster oriented policies increase the likelihood of becoming innovators in the target industries by 4.6 to 5.7 per cent. At the same time, R&D expenditures decrease by 19.4%, while the access to the external know-how, cooperation with scientific institutes and availability of suitable R&D personnel increases (Falck, Heblich and Kipar, 2010).

In order to get the most out of the cluster concept, firms with similar or closely complementary capabilities should be concentrated. In the creative economy, the carriers of city development are small and medium-sized businesses. In order to survive on world markets, it is imperative for these industries to cooperate with each other. Transfer of knowledge through face to face contact is of most significance (Pratt, 2004).

The proposition for medium-sized Serbian cities should be the creation of specialized clusters which would incorporate research and innovation with production and industry. Furthermore, their specialization should use the potentials of the cities, their history and development path most adequately. The spatial proximity will help the transfer of knowledge among firms and bust innovation, and at the same time reduce costs. The lack of investment capital for starting up the production-development clusters can be exceeded by large and strategically vital international enterprises, but as catalyst of development by relationship with research universities and institutions. There are attempts for this in medium-sized cities, for example in Kragujevac, where Fiat branch has been opened. The spillover effects are yet to be seen, since the connection with universities, research and education is missing.

Governments cannot force firms and other participants to cooperate, but they can provide them with favourable conditions. Unfortunately, nothing guarantees that strategies for fostering the development based on the cluster concept actually will have the desired results. For example, Gibney et al. (2009) have argued that in the knowledge-based economy, leadership of place involves leading and holding together a consortium of potentially separate interests that shape place. This represents a challenge for local governments of medium-sized cities.

### 5.4 Competitiveness of Serbian medium-sized cities in the global urban networks

The establishment of the socialist regime in the 1940s in Serbia destroyed much of the previous ties and networks of cities. As a result, cities lost their natural development path and artificial industrialisation came to reactivate development. The collapse of the communist regime did not bring the return to natural process of development of Serbian cities, but put them on hold instead. The transition and reestablishment of network connections started in 2000, but only for the major cities. Medium-sized cities, the leaders of their regions in the pre-war period, have stayed completely excluded from the global urban networks and are now witnessing a severe decline. The situation requires reinvention of cities and their integration in regional or global urban networks. That to establish, cities need to enhance their competitiveness.



Cities outside the flows of global information, networks and capital do not exist. To be able to survive and develop Serbian medium-sized cities, they need to be included in networks and compete for their position. Since medium-sized cities cannot expect to enter global networks in the same way as metropolitan ones, their chance for grasping part of the global capital is in integration in specialized networks. In his last book Florida (2008) underlines the existence of concentration of a certain type of people and professionals in some cities and the existence of specialized nodes and networks between them. The opportunity for medium-sized cities to position themselves in global networks is in careful developing of the unique character by segmentation and specialization. Cities should direct their policies towards strategic sector. R&D funding can be more easily tailored in medium-sized cities with sectoral specialization (Duranton and Puga, 2002).

Specialization in one sector, on one product, makes cities vulnerable to market shocks and changes. To be able to withstand the unexpected economic crises in the future, the strategy needs to be adjusted. Cities containing disparate but complementary industries with common science base have higher rates of production than cities that specialize in one industry. So, medium-sized cities in Serbia need to build a science core according to the dominant industry and then expand to related sectors. The needed specialization for recognition in global networks will be kept, while at the same time the risk of economic shocks reduced.

Cities enter the global urban networks through companies' connections, but also through networks of professional workers. Links of companies, research and education institutions with other companies and institutes determine the network level - regional, national or supranational. Like cities, companies in modern information society need to be part of a network to exist and produce. A company location is very often determined by personal links with the city of managers (Mustared and Murie, 2010). Educational institutions create these attachments and increase opportunities for the establishment of international headquarters and branches, i.e. new companies. Florida (2007) stresses the importance of urban atmosphere and quality of urban life for cities development. But the resent research by Mustared and Murie (2010) shows that highly educated workers are attracted to a particular city primarily because of job opportunities, affordability of living space and existence of personal links. Although the urban atmosphere and cultural institutions are not attractive, medium-sized cities in Serbia have one advantage compared with large cities. That is the real-estate price. In order to exploit the price advantage more, medium-sized cities in Serbia need to broaden the types of housing, improve its quality and create a pleasant urban atmosphere. The most important thing for the competitiveness of medium-sized cities in Serbia lies in creating diverse job opportunities. The creation of jobs is based on the creation of development-production clusters.

Competitiveness of cities is not based on one thing only. It is complex and many different levels are interwoven. The strategy for enhancing competitiveness of medium-sized cities in Serbia cannot be a linear process based on a one-thing improvement. It has to be multisectoral and coordinate the development of many elements with one clearly defined goal-to enhance cities competitiveness in global networks.

## 6 CONCLUSION

Drastic changes in cities functioning can often be triggered by critical incidents. Unfinished transition from a planned control system to an open, liberal one, interrupted by the global economic crisis, can be seen as a needed critical incident that will initiate the process of restructuring and reinventing of medium-sized cities in Serbia. Medium-sized cities in Serbia need a transformation from a factory- and resource-driven to innovation and import-replacement driven economy in a short period of time. They need to adapt to a new knowledge society and, with a very late start, enter the race for position in urban networks. They need to make up for the lost time they have spent in isolation, outside the global events.

The creation of an import-replacing condition, knowledge links and development-production systems should be a bottom-up, local-level activism, rather than a central government. Medium-sized cities need to show initiative and pursue their own strategies and development. They need to create approaches unique to their characteristics, not replicate the existing patterns. To succeed, it is necessary to develop the awareness on the importance of process and common consensus among citizens. The restructuring needs to be supported by all the key players in the society: the government, municipalities, universities and businesses. They have all been invited and are willing to join major strategic policy meetings and invest in putting the economy back on its feet together (Holstila, 2007). This is difficult to achieve in Serbian unregulated and chaotic system.

However, the difficulties that the social and economic crisis has brought can develop a common understanding and cooperation for the implementation of new development strategies of medium-sized cities in Serbia.

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