



Regional ICT Foresight exercise for SEE countries

Panel Discussion on Enhanced ICT Research and Innovation Cooperation

Building common future visions and joint priority settings for the Digital Content evolution in the SEE Region

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Introducing myself: Gabriel Neagu

- My organization: **National Institute for R&D in Informatics – ICI**
 - The main thematic areas: communication networks and advanced technologies for application development in shared environments; ICT systems and services in areas of public interest, in industrial and societal domains; digital content, creativity and personal development; systems and software engineering; knowledge-based systems, learning and cognitive systems; advanced systems for calculations and automated control;
 - National administrator of the Romania top level domain;
 - Editor for 3 scientific journals: "Studies in Informatics and Control", "Romanian Review for Informatics and Control" and "Advanced Modelling and Optimization".
 - General Director – Prof.dr. Doina BANCIU
- Excerpts from my professional record (<http://gneagu.ici.ro/>):
 - Ph.D. in Applied Informatics at the Faculty of Automatic Control and Computers, “Politehnica” University of Bucharest, in 1998; visiting researcher at Carnegie Mellon University, New Jersey Institute of Technology, Purdue University, USA, 1993;
 - project director in 4 national research projects and national representative in 8 European projects since 2001; reviewer for national and FP7 RDI programmes, vice president of the Scientific Council of ICI; author / co-author of more than 60 published papers; IPC member for about 40 Int. conferences; member of the ICT Expert Panel for the ‘National Strategy for RDI in the period 2014-2020’.

Pilot Domain

■ Digital content (DC)

Definition used in the context of the FORSEE pilot exercise: *Digital Content is provided, accessed, and used online on global digital platforms such as the Internet.*

From a production perspective, this includes:

- content produced by traditional media and entertainment industry (e.g. publishing, film, broadcasting, music, gaming, etc.),
- content produced by non-entertainment actors (e.g. industrial design, software, advertising, fashion, etc.),
- content produced by government-related (non-commercial) organisations (e.g. cultural, scientific, educational, health, public sector)
- internet content (web pages, blogs, digital photos/video, Web2.0)

Main concepts - Variables

Key factors, drivers, elements that influence the future development of DC in South East Europe that we need to consider in order to improve the quality of our decisions today

- **4 first-level variables** selected by their impact on DC development in SEE
 - **DC openness:** degree to which digital content is accessible and open for re-use, sharing, re-configuration
 - **Generativeness of technologies:** nature of technologies, platforms and infrastructure for DC production and distribution in terms of openness
 - **Access to publicly funded data:** includes publicly and privately owned data that have been publically co-financed
 - **Market reach of SEE firms:** innovative capacity of SMEs to penetrate markets and their commitment to investigate what audiences they target and which markets they manage to reach
- **12 second level variables** ranked by their capacity to depict various features of possible future states of DC in SEE: legal issues, investments, technology and capacities, human resources, RDI priorities, civil involvement, SEE collaboration

Main concepts – ‘Future’ Skeleton

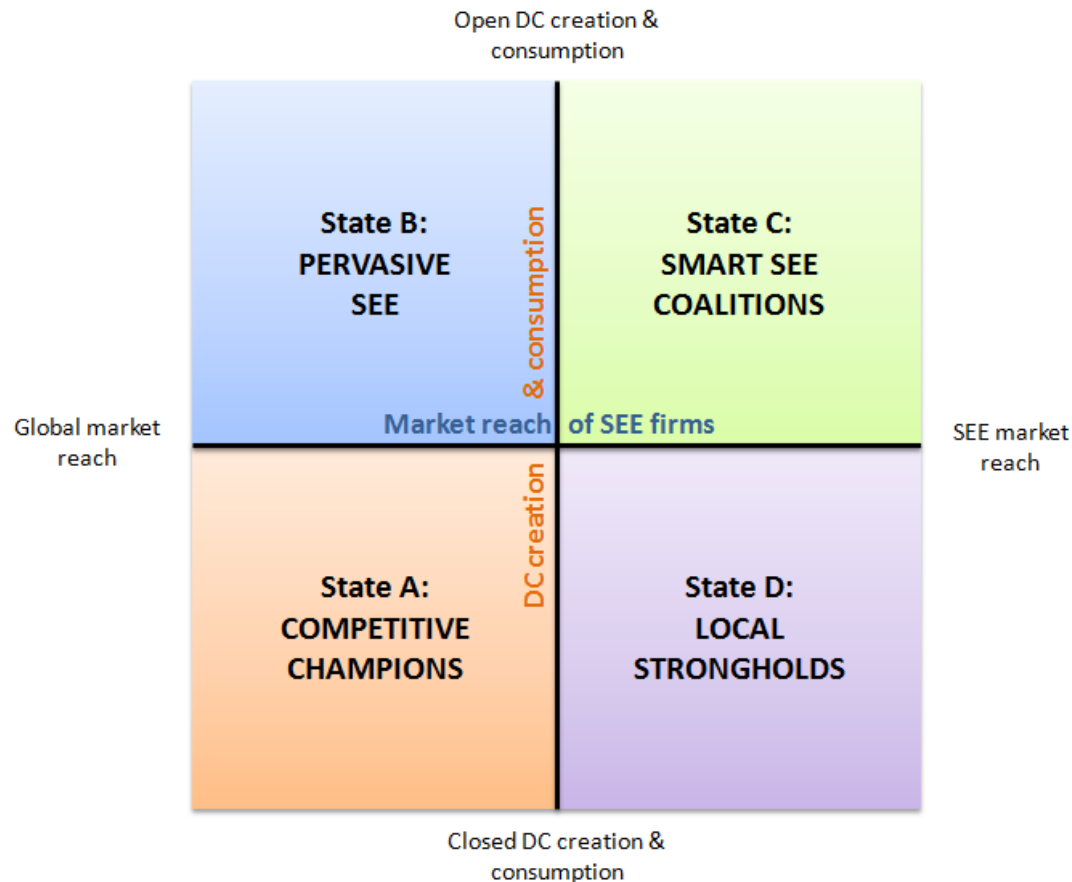
The conceptual model of possible Future States / Images of DC in SEE

- Matrix representation according to first-level variables

	Market reach of SEE firms	
DC creation and consumption	SEE firms target and achieve global market reach Open, generative and unrestricted DC creation & consumption	SEE firms mainly target and achieve SEE markets reach Open, generative and unrestricted DC creation & consumption
	SEE firms target and achieve global market reach Closed, non-generative and restricted DC creation & consumption	SEE firms mainly target and achieve SEE markets reach Closed, non-generative and restricted DC creation & consumption

4 Future States of Digital Content in SEE

Future States - ecosystems profiled by unique combinations of variables values.



Selecting the Most Favourable Future State

- 4 criteria of choosing among the four possible states
 1. Economic benefits (growth, employment, competitiveness, new markets)
 2. Benefits for the Education system
 3. SEE regional collaboration (SEE identity building)
 4. Societal impact (inclusive, equitable, fair)
- Voting results:
 - State A – 31 votes, State B – 91, State C – 101, State D - 17
- State C ‘Smart SEE Coalitions’ was selected the most favourable future on DC in South East Europe for the year 2025
 - Ranked 1st by criterion 3,
 - Ranked 2nd by criteria 1, 2 and 4

Participatory Process

- Preparatory work-3 FORSEE expert teams from working in parallel:
 - ▶ 3 draft skeletons
 - ▶ an extended list on candidate variables
- Regional expert Foresight ‘Future’ Workshop:
 - 27 participants including 8 external experts
 - ▶ a joint Skeleton draft
 - ▶ first list of selected variables
- Online ‘open’ stakeholders survey:
 - 157 participants from 8 SEE countries: policy makers, research, universities, large enterprises, SMEs, civil society, individuals
 - ▶ variables ranked by their *expected impact* on the future of DC in SEE to decide on the first-level variables
 - ▶ variables ranked by their most *desirable value* in the year 2025. (1..low, 5..high) – to configure the list of second-level variables

Participatory Process (cont.)

- Online DC experts survey:
 - 31 participants from 8 SEE countries: policy makers, research, universities, large enterprises, SMEs, civil society, individuals
 - ▶ validated impact ranking
 - ▶ variables ranked by their *most probable value (likelihood)* in the year 2025 to validate the final list of second-level variables
- Regional expert Foresight ‘Choices’ Workshop:
 - 20 participants including 5 external experts
 - ▶ Revised Skeleton of future states and list of variables
 - ▶ Criteria of choosing among the four possible states
 - ▶ Selection of the most favourable future on DC in SEE for the year 2025

Horizon 2020 Potential Benefits

■ Topics:

- H2020 objectives compliant with the FORSEE pilot domain:
 - ICT 17-2014 "Cracking the language barrier"
 - ICT 18-2014 "Support the growth of ICT innovative Creative Industries SMEs"
 - ICT 19-2015 "Technologies for creative industries, social media and convergence"
 - ICT 20-2015 "Technologies for better human learning and teaching"
 - ICT 21-2014 "Advanced digital gaming/gamification technologies"
 - PHC 25-2015 "Advanced ICT systems and services for Integrated Care"
 - PHC 30-2015 "Digital representation of health data to improve disease diagnosis and treatment"
 - REFLECTIVE-6-2015 "Innovation ecosystems of digital cultural assets"
 - REFLECTIVE-7-2014 "Advanced 3D modelling for accessing and understanding European cultural assets"

Horizon 2020 Potential Benefits (cont.)

- H2020 Push on Innovation:
 - For each H2020 objective the scope addresses research and innovation and / or innovation actions
- Support for innovative startups and SEMs
 - SME Instrument
 - Phase 1 - Concept and feasibility assessment (6 months, 50.000 Eur)
 - Phase 2 - R&D, demonstration, market replication (up to 24 months, 2,5 MEur)
 - Phase 3 – Commercialisation (no direct funding)
 - Risk Sharing Instrument for RDI driven SMEs and Small Mid-caps (RSI)
 - Designed to support access to debt finance and administrated by the European Investment Fund through financial intermediaries
 - All WB counties are eligible
- Availability of H2020 results as support for innovative SMEs in the post H2020 period.

Thank you for your attention !