Hungary: Towards a National S3 strategy





MINISTRY

FOR NATIONAL ECONOMY



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Budapest, 25 June 2013

Source of map: wikipedia

The questions we would like the peer critical friends to discuss:



- How can the RIS3 process be tailored to a country, with substantial economic and social disparities and with no real economic regions (apart from the Capital region)?
- In terms of RDI-focused planning, evaluation and monitoring, how can the "leap frogging" expected by the S3 process designers be governed in countries lacking such experience?
- What are the good practices of CONCRETE examples of formulating a specialisation agenda? Why are they good examples? If possible, examples for innovation leaders and moderate innovators would be of help.
- What will happen *if the S3 design* and implementation *process fails*? Will there be conclusions drawn and additional mechanisms introduced also at EU levels? If yes, what are the likely organisational / institutional arrangements to do so?
- How would you define *non-performing investments* in the S3 context?



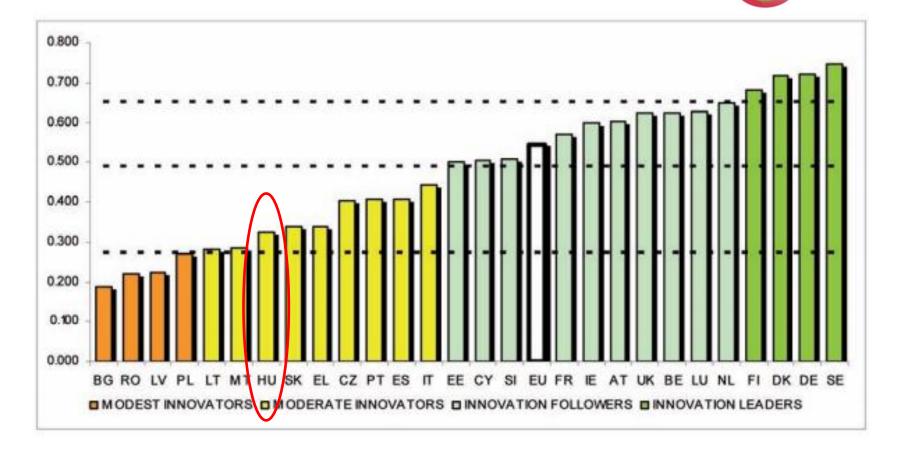
- Building the National RDI Strategy
- The starting points for the National S3 Strategy development
- Bottom-up: the Észak-Alföld (North Great Plain) case
- Status of the synthesis
- "Entrepreneurial process of discovery": the interpretation
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- Friends and critical: peers' time!



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Summary Innovation Index (SII)



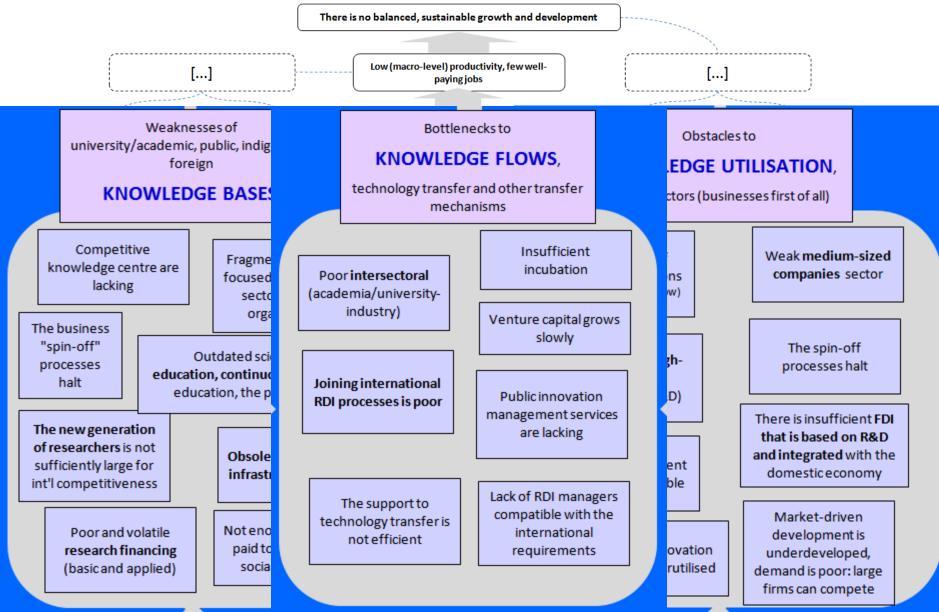
SMART

PLATFORM

SPECIALISATION

The gap is significant between leaders and moderate innovators...

Source: Innovation Union Scoreboard 2013



Increasing regional disparities (also a global trend), the regulation for support to the Central Hungary Region (KMR) hinders absorption, in the non-Capital regions, absorption is poor

There is not enough awareness for the need for regional specialisation, the related developments are not coordinated

Awareness for innovation, innovation mindedness is poor (including awareness about IPR and risk tolerance)

The institutional structure and the regulatory environment supporting RDI is not efficient (including, among others, the grant schemes and evidence-based policy making)

Unfavourable macroeconomic prospects in the global economy and Hungary (FDI inflow slowed down, the assessments on competitiveness/business environment deteriorated etc.)

Hungary's new research and innovation strategy



"With the active support of Hungarian RDI policy, the **key players** of the National Innovation System strengthen and become invaluable partners in **global innovation systems**. By capitalising on **spillover effects**, they boost dynamism in the whole of the national innovation system. Thereby, they make a substantial contribution to the competitiveness of the Hungarian economy, making it a **sustainable knowledge economy**"

"Investment in Our Future – The National RDI Strategy 2020"



Main objective: GERD/GDP ratio shall reach 1.8% by 2020 (¾ from business sources)

Hungary's innovation performance should reach the EU average by the end of the decade.

In 2020 in Hungary...



+30 larger R&D labs are in the world elite,

+30 global MNC centres of R&D are deployed,

+30 R&D intensive "macro-regional, medium-sized firms produce value added,

+300 RDI and growth oriented SMEs compete on global markets,

+1000 innovative SMEs have received substantial support,

A substantially larger number of supplier SMEs have business links with the MNCs in the economy.

Objectiv

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Globally com	Efficient knowledge utilisation						
	-	+	+				
Training researchers creative profession	small firms	Medium-sized firms gaining momentum based on R&D and technology +30 R&D intensive macro-regional medium-sized MNC		Capitalising on the innovation potential of the public sector			
A1. Training and nurt the talented	C1. Building start-up ecosystem	C3. Creating the demand of medium-sized firms for R&D R&D Knowledge cooperatio		P1. Boosting innovation in healthcare, energy, education and transportation sectors			
A2. International competitive R&I		C4. Efficient assistance to entering global markets	C7. More and more innovative SMEs with diversifying markets				
infrastructure				CT. The websful many			
Horizontal system-level foci	C5. Thoughtful governme	ent demand for innovation		C5. Thoughtful governmen demand for innovation			
rizontal	grants and initiatives	3					
운 H6. St			evaluation and learning strategic RDI man	agement of the state			

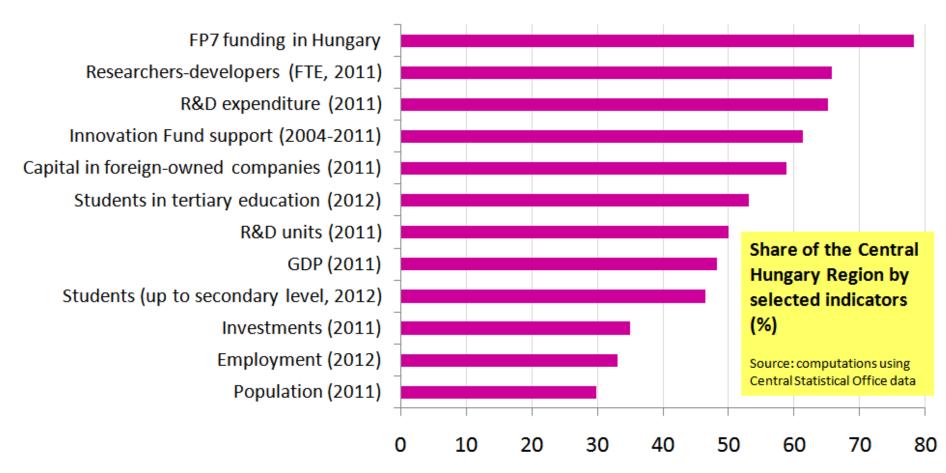


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Substantial challenges at the regional level (1)



Economic borders and administrative borders do not coincide The Central Hungary region has an outstanding weight in the Hungarian innovation system



Innovation at the regional level -Regional Performance Groups

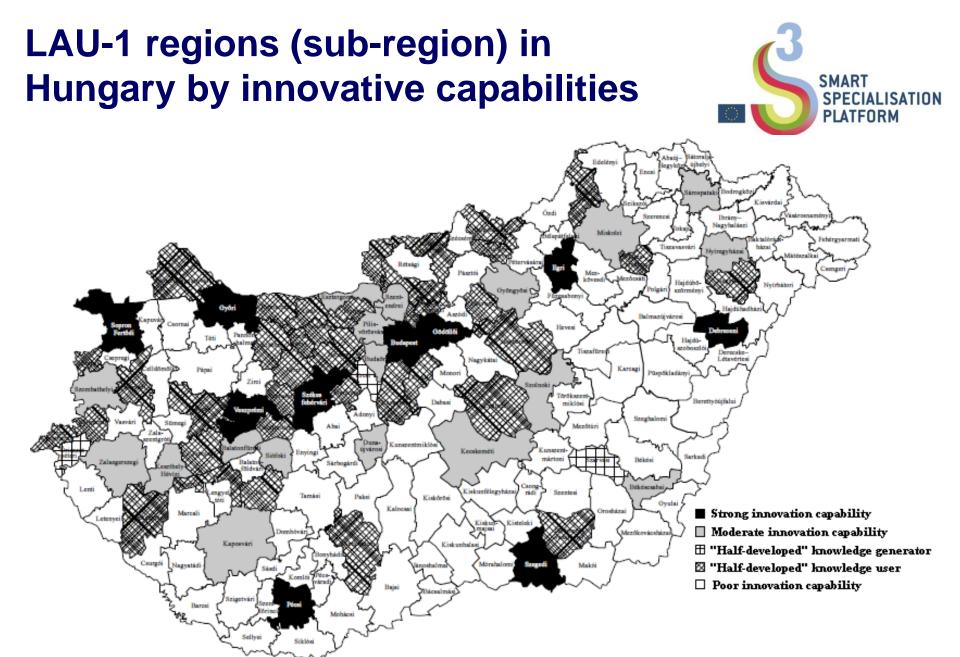


- 1. Capital regions with outstanding performance (21 regions)
- 2. The most business R&D intensive regions (11)
- 3. Business R&D intensive regions with many patenst (12)
- 4. Average developed regions with relatively high BERD (35)
- 5. Average developed regions with strong HERD and population growth (19)
- 6. The least R&D intensive developed regions with agricultural employment (29)
- 7. The 2nd ring of Capital regions with more moderate R&D (13)
- Agricultural regions with low growth (18)

C

- 9. Agricultural regions with higher growth (22)
- 10. Underdeveloped regions with some business R&D (7)
- 11. The least developed regions with some HERD (9)

Source: ProAct Policy Outlook (2008)



Source: computations by Zoltán Bajmócy and research team.

In: Borsi and Bajmócy (2009): Quantitative lagging behind, qualitative catching up? Közgazdasági Szemle LVI évf. 2009. október

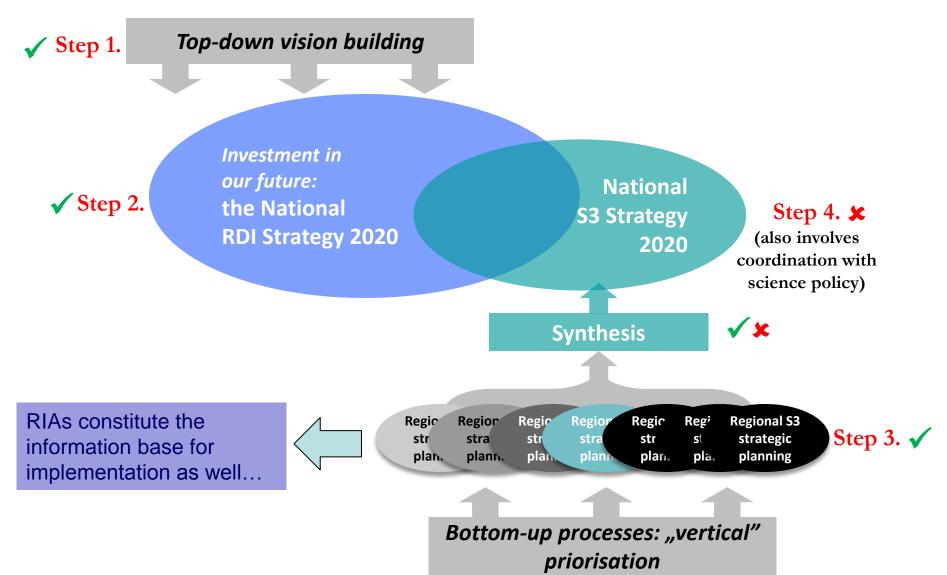
Substantial challenges at the regional level (2)



- Overall, 4 types of Hungarian NUTS-2 regions can be distinguished:
- Fully functional RIS: Central Hungary
- Part of fully-functional "Western" RIS: Western and Central Transdanubia
- Underdeveloped RIS type 1: Northern Hungary and Southern Transdanubia
- Underdeveloped RIS type 2: Northern and Southern Great Plain

Smart specialisation – the planning framework



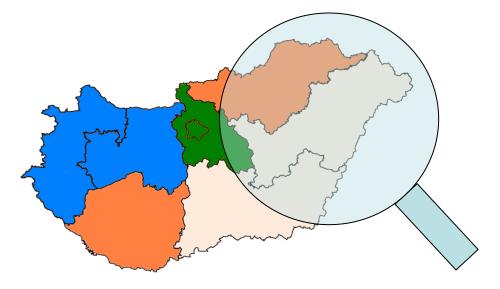




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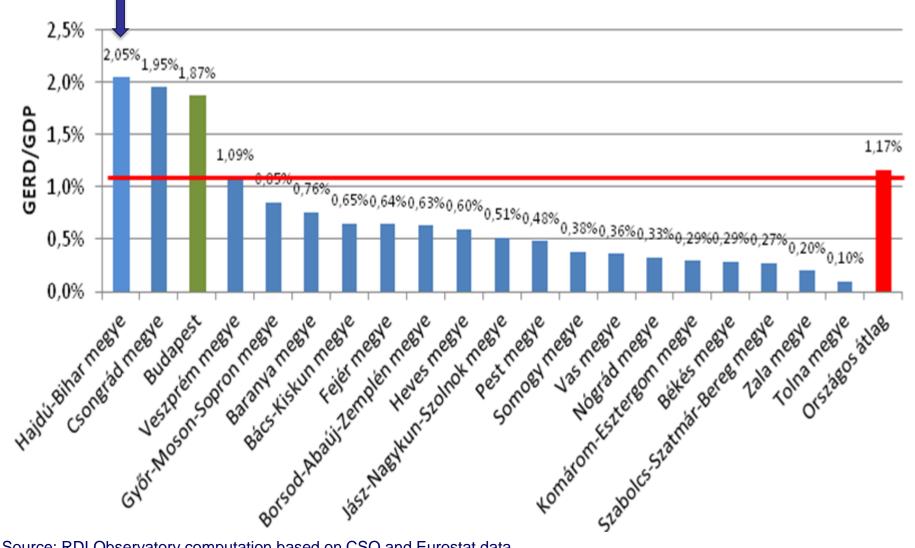


S3 planning in the regions: the case of ÉSZAK ALFÖLD (North Great Plain)



Research and development expenditure by counties (% of GDP, 2010)





Source: RDI Observatory computation based on CSO and Eurostat data.



The main elements of planning

- 3 local workshops in the 3 counties (NUTSIII level) of the Észak-Alföld region (NUTSII)
- 4 sectoral workshops (health, health services, logistics, industrial parks) Collection of projects Series of workshops and wide project generation process at the Universtiy of Debrecen

Involvement of the target group into the planning process EU, national and regional strategic documents

Észak-Alföld Smart

Specialization

Strategy

Planning documents of Debrecen (capital of the region)

SMART

SPECIALISATION

Sectoral strategies

Existing documents

How we defined the priorities (examples)

										SM	IART		
Industries		Contribution to the GDP > 2% (2009, 2010, Source: KSH)			Location quotient for the industry to EU average (>1%), Eurostat	Territo- rial priorities			RIS 2011- 2013	S3			
		JN	SZ	ÉA	ÉA	HB	JN	SZ	ÉA	HB	JN	SZ	ÉA
Agriculture, hunting and Forestry													
Manufacture of food;													
beverages and tobacco													
Manufacture of textiles													
and textile products													
Manufacture of leather													
and leather products													
Manufacture of coke,													
refined petroleum													
prod. and nuclear fuel													
Manufacture of rubber													
and plastic products													

Horizontal S3 priorities in the Észak-Alföld Region

SMART SPECIALISATION PLATFORM

- H1: Developing the R&I infrastructure of available in the region
- H2: Securing the human resources of the innovative economy (developing vocational and higher education in line with the market demands)
- H3: Stimulating the innovation oriented entrepreneurship in the region
- H4: Raising the quality and the availability of the innovation-management services
- H5: Developing social and public services connected to innovative activities
- H6: Dissemination the innovative approaches
- H7: Stimulating the national and international networking activities of the innovative actors
- H8: Supporting the development and realization of RDI programs
- H9: Stimulating innovative forms of cooperation

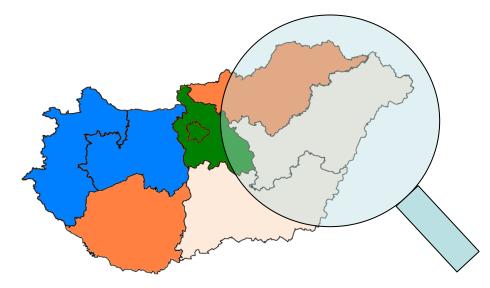
Sectoral S3 priorities in the Észak-alföld Region



- A1: Development of the competitiveness of agriculture (with a focus on vegetable, fruit production and livestock breeding) to produce products of higher added value as well as to develop energy efficient technologies
- A2: Developing premium quality, healthy nutrition products
- A3: Developing the health industry with a spacial focus on pharmacy, imaging and molecular technology – of Hajdú-Bihar county by utilizing existing innovation potential and creating new research infrastructure
- A4: Developing the plastic and rubber industry of Szabolcs-Szatmár and Jász-Nagykun-Szolnok counties, strengthening the R&I base
- A5: Developing the mechanical, electrical and automotive industry of the region, helping the territorial embeddedness by utilizing the existing innovation potentials and creating new RDI infrastructure
- A6: Raising the level of use of natural and renewable energy sources, developing corresponding research potential.
- A7: Developing the service sector, based on existing potentials, with a special focus on the health and IT services



S3 planning in the regions: the case of ÉSZAK ALFÖLD (North Great Plain)





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Synthesising the regional S3 strategy documents and building the national S3 framework



After collecting the regional S3 strategy documents, **analysis of four areas** at the national level:

- RDI-based synergies between regional plans ongoing
- Analysis of sectoral strategic white papers and other past achievements ongoing
- Regional governance structure (embedded into national STI coordination) ongoing
- International and EU linkages to be done
- R&D and innovation infrastructure ongoing

Alignment of the national RDI Strategy and the S3 synthesis strategy

Elaboration of metrics and indicators

Social consultation of the National S3 Strategy 2020 in the regions (end of Summer)

Finalisation and submission to the Commission (end of October)

The coordination between the regional and national levels is challenging.

National framework for developing the final regional S3 "specialisation mix" (draft version only!*)



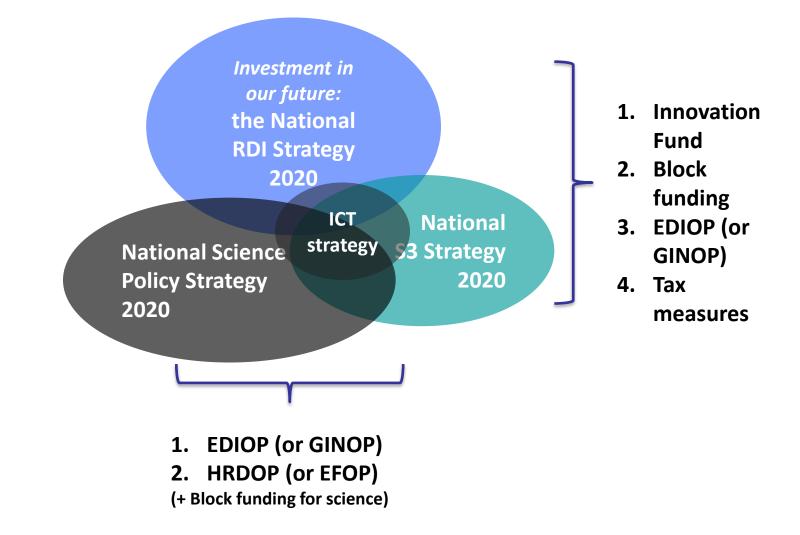
		· · · · · ·					
	Specialisation directions						
	1. multidisciplinary and technology fusion-driven transformation of science and/or KET development	2. New knowledge driven lifestyle and health	3. Network-based and "value chain learning" economy, industrial based innovation				
Central Hungary	A globally competing region – tackling all?						
Western Transdanubia	(Regions with relatively strong, and globally relevant industry networks and connected higher education/research)						
Central Transdanubia	\checkmark	$\checkmark\checkmark\checkmark$	√ √ ?				
Southern Transdanubia	(Some sporadic industry players yet weak economy in general, higher education and research is (usually) locally important and relevant)						
Northern Hungary	\checkmark	\checkmark	√ √ √ ?				
Northern Great Plain	(Economy is the least competitive, strong (often interdisciplinary) research with international connectivity)						
Southern Great Plain	$\checkmark\checkmark\checkmark$	\checkmark	√?				

*before detailed processing of the regional strategy documents and finalisation of the synthesis

Required strategic integration for RDI-based growth



(only the main and RDI-relevant funding sources are illustrated)



Digital Growth Priorities



- The Digital Growth Strategy ("National Infocommunication Strategy 2014-2020") is being finalised and goes for public consultation process these days
- The following <u>target intervention areas</u> have been identified:
 - Digital infrastructure a horizontal area
 - Digital competencies (e-literacy + e-inclusion)
 - Digital economy (innovative developments, e-governance, digitalisation of contents, e-services, RDI)
 - Digital state
- The *Digital Agenda for Europe* have been taken into account in depth
- Accompanying indicators are identifed and are being finalised
- The regional aspects for the digital growth agenda are not distinguished, priorities are set on the national level



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Entrepreneurial dynamics – a historical challenge

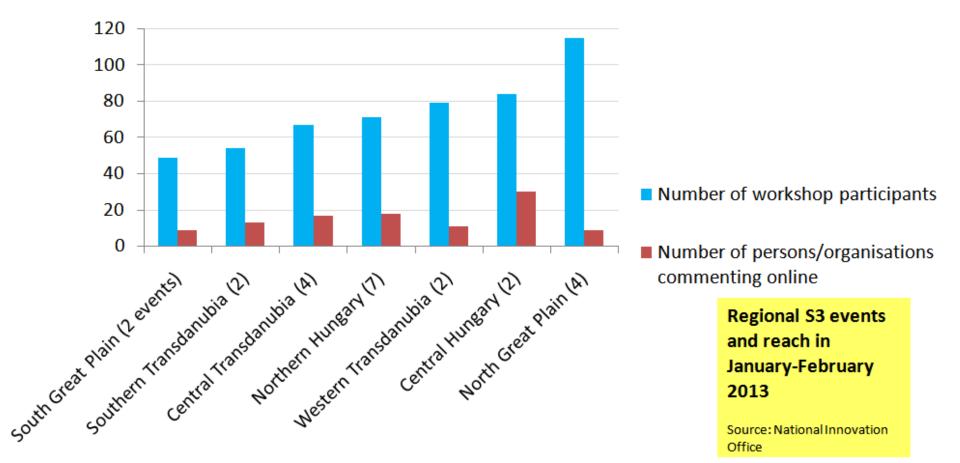


- Interpretation of the 'entrepreneurial process of discovery':
 - <u>Ideally</u> it resembles "Quadruple Helix" dynamics, whereby regions behave like "entities" and can make <u>decisions like corporations do</u> and through the entire "process", business actors take a leading role. Note the specific regional context in Hungary...
 - It is <u>common sense</u>" specialisation... what is worth to invest in?
 - Examples and potentials: there are only local examples, such as BKIK and the start-up community, Kecskemét and the Mercedes factory, or Pannon Nóvum RIS...
- Involvement of the business community in developing the RIS3:
 - In practice, only short time was available (but there is an attempt to extend the involvement during Summer and beginning of Autumn)
 - "questionable execution of bright ideas" in the RDI domain has <u>historically</u> made business actors less willing to get involved
- Tackling the challenge: the regions' involvement
 - Regional consultation of the <u>National RDI Strategy</u> took place in November-December 2012
 - The <u>regional S3 strategy documents</u> were prepared with the involvement of the local business community in the discussion process
 - "Grand project ideas" were collected from the regions and are being processed

Consultations in NUTS-2 regions about the S3 strategy documents



In-depth interviews (82) with stakeholders + workshops were organised during the process...





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Governance



- The <u>RIS3 design process is coordinated by</u> the Department for Innovation and R&D (Ministry for National Economy) and the National Innovation Office
 - For the National RDI Strategy, there was a consultation body, the "Innovation Advisory Council", involving different actors
 - For the RIS3 process, there is a partnership between the Regional Innovation Agencies and the Ministry for National Economy
- Relevant <u>actors at the regional level</u> are identified and approached by the RIAs. They were engaged in the development of the strategy more than in the past, however, it is far from involvement levels in more developed economies / societies
- National and regional *governance bodies* and mechanisms are still to be defined
 - High-level S&T policy coordination body is to be introduced
 - For S3 a fully centralised governance system at the national level is planned
 - Chief scientists for facilitating public-sector RDI is to be introduced in the ministries at deputy-secretary level
- Future governance mechanisms to facilitate an entrepreneurial process:
 - Social consultation still in this planning phase and if time and resources allow, a delphi-survey
 - Involvement of business and civil actors in the governance
- Flexibility mechanisms are already part of the National RDI Strategy. In terms of S3 prioritisation, flexibility mechanisms are to be designed

Implementation and Budget



- The National **<u>RDI Strategy</u>** is implemented in bi-annual action plans
 - KTIA (Research and Technological Innovation Fund) ≈ an annual EUR 170 million
 - EDIOP [GINOP] = HUF 500 bn (≈ EUR 1,7 bn) for the 7 years
 - Tax measures
- The National <u>S3 Strategy</u> is implemented using the EDIOP [GINOP] and the KTIA first of all, but CHOP [VEKOP] also has its role
 - The flexible framework is planned to be maximised for CHOP [VEKOP] ≈ 15% of the above
- <u>Synergies</u> between different policies and funding sources are still being designed, including role of financial instruments (such as Jeremie, seed funds, combined grants/loans etc.)
- Relevant stakeholders are to be involved in the implementation stage <u>as members of</u> <u>advisory boards</u> (national and/or regional, to be defined, see the slides on governance)
- Private R&D+I investments are stimulated foremost by the National RDI Strategy (tax measures + collaborative R&D), for the S3 process, such options have not yet been explored
- Implementation is planned as part of the central EDIOP [GINOP] Managing Authority (an "S3 unit"), however, details are still to be worked out
 - <u>RIAs</u> would play role in monitoring and project generation
 - Coordination to be ensured by a <u>monitoring committee</u>

The EDIOP [GINOP] measures under priority axis 2



"Development of the knowledge economy"

- Measure 1: Support of business RDI activity
- Measure 2: Support of strategic RDI collaborations and initiatives
- *Measure 3*: Promotion of scientific and technological excellence, support of international R&D linkages

The planned interventions of the measures are **fully aligned** with the RDI Strategy – coordination with the S3 plans is ongoing

Outline

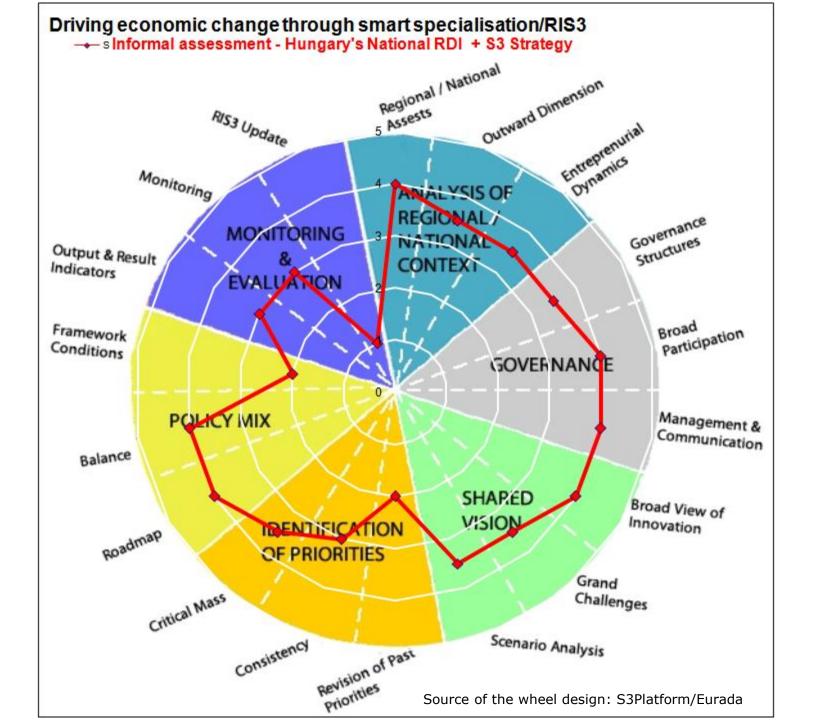


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Measuring the progress



- Monitoring and evaluation mechanisms:
 - Monitoring *indicators for the national level* are to be developed by mid-2014
 - Indicator collection for the RDI Strategy is planned to be the monopoly of the <u>RDI Observatory</u> in the National Innovation Office
 - Independent evaluation is an integral part of the National RDI Strategy
 - A similar approach is to be elaborated for the S3 process, including a review of the strategy based on the evaluation outcomes to weed out nonperforming investments
- Challenges in relation to monitoring at regional level:
 - Whether or not the required <u>integration of the monitoring systems</u> will be possible
 - Whether or not enough time and resources can be dedicated to developing an indicator system, that is, among others, <u>relevant for all evaluations</u> foreseen



Awareness and supportive environment



- How aware of the processes and supportive are:
 - the regional/national administrations?
 - the Hungarian government?
 - the business community?
 - Hungarian politicians?

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Summary and next steps



- For the Hungarian socio-economic context, a *top-down planning combined with bottom-up building* of technological and sectoral priorities was chosen
- The national RDI Strategy, the national S3 strategy, the Science Policy Strategy and the ICT Strategy constitute an <u>integrated planning framework</u> for RDI based growth
- A common specialisation planning framework is being developed using the regional strategy documents, however, the OPs cannot wait for the final S3 plans, therefore, <u>continuous information flow</u> needs to be maintained
- When the national level synthesis is finished, a regional and national social consultation is planned to *reinforce* participation of the regional stakeholders
- What is needed (in the short and medium term) to develop and implement a good RIS3 in Hungary?
 - Conclude the planning process and establish a governance structure that is linked both to the RIS3 process and the National RDI Strategy
 - Develop and start running a monitoring framework suitable for data collection and analysis throughout the 2014-20 period
 - Use of **evaluations** in a 'smarter' way
 - Useful activities include organisation of high-level meetings, where decision makers regularly meet the dilemmas of experts and learn from each others' practices

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The questions we would like the peer critical friends to discuss (1)



- How can the RIS3 process be tailored to a country, with substantial economic and social disparities and with no real economic regions (apart from the Capital region)?
- Background information / considerations:
 - As shown also in the presentation slides, Hungary's innovation performance largely depends on the Capital region, however, in the Capital region stakeholders have comparatively weaker "regional identity"
 - Other regions have pronounced ambitions in terms of playing the "innovation card", but (in the past) not necessarily using the innovation theme to address the most important socio-economic challenges of the region
 - The Hungarian approach was to take the opportunity of the RDI Strategy and the S3 planning context to engage local players and the central administration in a learning process the national (and long-time known) challenges are dealt with in the National RDI Strategy, and the sectoral/local "flavour" is added in the S3 process.

The questions we would like the peer critical friends to discuss (2)



- In terms of RDI-focused planning, evaluation and monitoring, how can the "leap frogging" expected by the S3 process designers be governed in countries lacking such experience?
- Background information / considerations:
 - The RIS3 methodology seems to pay off in countries/regions where there is a developed culture of cooperation in the innovation policy field. In Hungary this is obviously a challenge, whereby a great deal of learning takes place during the S3 planning process (the learning curve is steep).
 - RDI as a central theme, traditionally has challenges to get to its deserved place in the economic policy.
 - Even if the financial (but do not forget human!) resources are secured, evaluation has its specific challenges (note the dual culture of evaluation emerged also in the European context).
 - The whole monitoring/evaluation policy cycle and its importance are often recognised ex-post, nonetheless, expert capacities to assist the administration are also underdeveloped (and not fed to the cycle at appropriate times leading to a bias in the demand for such services).

The questions we would like the peer critical friends to discuss (3)



- What are the good practices of CONCRETE examples of formulating a specialisation agenda? Why are they good examples? If possible, examples for innovation leaders and moderate innovators would be of help.
- Background information / considerations:
 - Seeng some well-formulated specialisation "keywords"/"agendas" and the assigned tools/resources could bring some more dynamism in the planning process in Hungary.

The questions we would like the peer critical friends to discuss (4)



- What will happen *if the S3 design* and implementation *process fails*? Will there be conclusions drawn and additional mechanisms introduced also at EU levels? If yes, what are the likely organisational / institutional arrangements to do so?
- Background information / considerations:
 - The first 1-2 years of S3 planning and implementation may not be as fruitful as it had been anticipated at the start.

The questions we would like the peer critical friends to discuss (5)



- How would you define *non-performing investments* in the S3 context?
- Background information / considerations:
 - Imagine a well-formulated specialisation agenda for region X, where for some reason the evaluation practice/policy is not based on complex, context-specific (evolutionary based) evaluation and the investments are shown not to have yielded the returns as planned.
 - Now imagine region Y with a general specialisation agenda, where by using tailored evaluation techniques – the RDI investments are shown to have had spillover impacts.
 - Are we ready to conclude that region X was underperforming in S3 and should bear the consequences?



THANK YOU VERY MUCH FOR YOUR ATTENTION!



Ministry for National Economy

