

Evaluation of the Luxembourg Research Centres (CRP)

Report by the Technopolis Group based on Peer Review Reports of the three CRP and their respective departments

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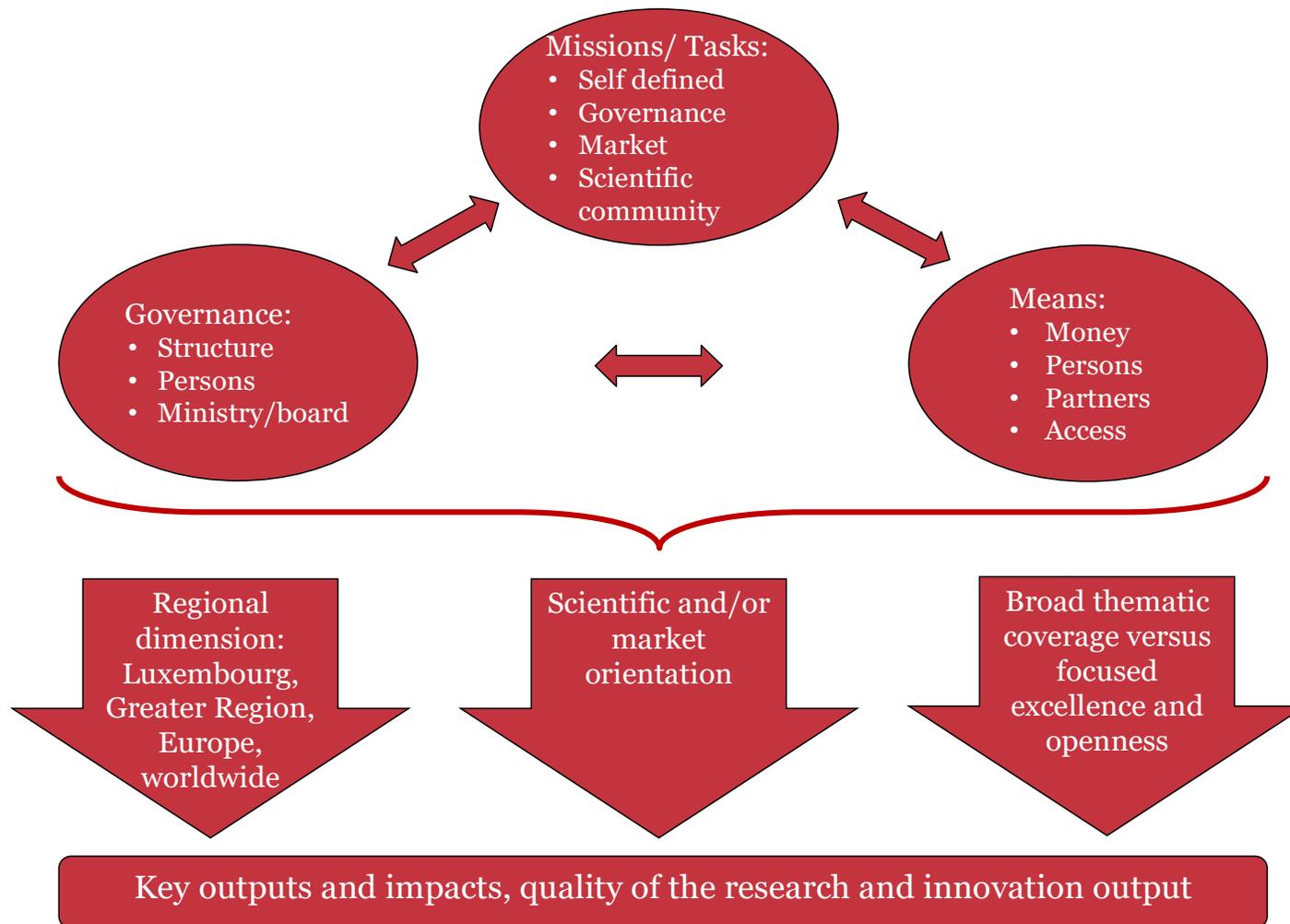
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INTRODUCTION

Outline of this evaluation defined in the ToR

- The evaluation shall cover the performance of the CRPs (like inputs such as finances, infrastructures, HR etc as well as outputs like research, innovation activities, services, etc.) and organisational and management issues
- Wherever possible and appropriate the evaluator shall ensure that comparable topics shall be evaluated in a comparable (and to some respect comparative) way
- The main time period to be covered by this exercise is 2014-2017
 - *The retrospective element shall be based on a multitude of sources, centred around the peer panels*
 - *The prospective element includes the evaluation of the strategies and plans of the CRPs as well as the evaluators' assessment of challenges and opportunities ahead*
- The evaluation shall analyse and assess the achievements of the CRPs, individually and as a sector
- Comparison with suitable homologues serves as one indicator for the assessment of the quality of the CRPs in an international comparison
- The summative element shall be based on expert appraisal, mainly through the peer panels, as well as on other, complementary methods (e.g. bibliometric approaches, network analysis or other) proposed by the evaluator

Evaluation issues



Information Sources

Documents

Performance Contract 2014-2017	Self-Assessment report	Strategy Documents	CRP-Law 2014	Strategy CRPs&UL 2016-25
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Data

Funding data: FNR	Funding data: ERC	Funding data: Horizon 2020	Patent data	Bibliometrics ECOOM
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Primary data

On-site visit	Stakeholder interviews	Internal Interviews	Staff Survey	Project case studies
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International comparison / positioning

Other CRPS • Docs • Interviews	Additional secondary data analysis
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Historical and institutional background

- Investment in research and research institutes since 1987
 - *Creation of four CRPs*
 - *Creation of FNR as main competitive funding source*
 - *Introduction of performance contracts and KPI-based governance*
 - *Creation of the Luxembourg university*
- Law of December 2014
 - *New mission for all three CRPs*
 - *Merger of two CRPs into LIST*
 - *Integration of IBBL into LIH*

KEY FINDINGS OF THE THREE CRP EVALUATIONS

LIST: Background and key figures

- Largest of the three CRPs, 529 fte (2017)
- Block grant €41m, total turnover 66M€ (2017)
- Difficult period after the merger (CEO, merger process), not yet developed into a smoothly-running RTO

But

- Decision to form LIST was right from the Luxembourg state perspective
- Value is beginning to be realised from the merger

LIST: Scientific and innovation performance

- Medium to high quality of research activities in many areas
 - *ERIN: good enough to be internationally visible to a limited degree*
 - *ITIS: a national player, with some specific research areas where its' results obtain very good international impact*
 - *MRT: international competitive level*
- High potential for further development
 - *More focused thematic scope (thematic strategy).*
 - *More spatial deployment (international networking) strategy*
- Attention to innovation increased, esp. with many collaboration projects. (Public and private) clients satisfied. Some spin-offs
- Income from third parties not at the level of comparable institutes in Europe

LIST: Governance and organisation

- Strategic process can be improved: more focus and more synergies between departments
- Strategic and transparent use of block grant important.
- Rebalancing of the support functions needed
- Tensions in all departments: MRT in management; ERIN in broad critical mass; ITIS in moving from good outputs to impacts
- Imbalance in the supervision of LIST within the MESR-BoD-CEO triangle

LIST: Recommendations

- Increase the focus on research and innovation across all departments
 - Develop comparable strategies to other European RTOs to adopt a business model that provides positive incentives to offer research service to customers
 - Establish an External (scientific and societal) Advisory Board.
 - Empower the BoD and the CEO of LIST through more systematic interaction between CEO and BoD on the use of the block grant
 - Adapt KPIs of LIST to reflect the RTO role better, both as a research service provider, and as research partner for companies and other organisations. Consider introducing rewards when (ambitious) KPI-targets are met and penalties when KPI targets are not met
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LIH: Background and key figures

- Continuous growth from 214 to 337 FTE (2017)
- Block grant 30M€, total turnover 46M€ (2017)
- Interim CEO until the start of the evaluation
- Physical and organisational separation between IBBL and rest of LIH

LIH: Scientific and innovation performance

- Very good scientific performance over the evaluation period
 - *Good productivity*
 - *High citation rate*
 - *Excellent production of internationally co-authored papers*
 - *Limited participation in international programmes*
 - *IBBL: performance is at internationally competitive level*
- Research too academic: a research institute should focus more on translating research into practice to the benefit of the public
- Focus on research excellence and patient-centred translation in new strategy is strongly supported

LIH: Governance

- Success dependent on more optimal, efficient and transparent use of the block grant
- The evaluation endorses a shift in budget distribution and allocation from a bottom-up to a top-down approach while reserving a big fraction for long-term strategic initiatives
- Systematic and intensive collaboration with the Luxembourg health sector is necessary
- Improve the use of the BoD's potential to generate access to and influence with decision-makers and to foster policy influence
- Relation IBBL/LIH would benefit from a different organisational structure

LIH: Recommendations

- Establish an External Advisory Board (EAB)
- Give careful thought to defining the missions for IBBL, and its position within the LIH organisational structure
- Develop a master plan for building a suitably located “health campus” in Luxembourg
- Encourage the Board of Directors to play a more active role in supervising the performance contract

LISER: Background and key figures

- The smallest of the 3 CRPs: 121 FTE (2017)
- Block grant 10M€, total turnover 18M€ (2017)
- CEO started in 2016
- Reformulation of mission in 2017 and new strategic plan 2018-2021

LISER: Scientific and innovation performance

- A strong and internationally visible institute, whose performance has been improving in the last three years
- Mission, goals and strategy are sound
- Increasingly good (occasionally excellent) research
- LISER's strengths include its survey capabilities and its unique databases
- It has policy influence, satisfies its existing customers and represents very good value to Luxembourg
- The effort in improving the science has overshadowed LISER's societal role to such a degree that LISER's core mission to generate societal impact is neglected in places. It is important to redress this imbalance

LISER: Governance

- Management and organisation are currently complex, in order to enable LISER to address its change in role and can be simplified in the medium term.
- The institute's thematic profile has become a little diffuse and LISER would benefit from sharpening of its strategic, thematic and market priorities.
- The potential of the BoD to support LISER is under-exploited

LISER: Recommendations

- Ensure that ‘impact culture’ is not lost in the drive to raise research-intensity
- (Internally) evaluate strategy in two years time
- Reduce cost and complexity of administration
- Use the potential of the Administrative Board as a link to wider needs of Luxembourg civil society better, to generate access to and influence with decision-makers and to foster policy influence
- More systematically exploit databases and survey capabilities
- Expand applied work by increasing the volume of externally-funded research and thereby increase the social rate of return on the institutional funding
- Review the policy for using institutional funding

KEY FINDINGS AT THE SYSTEM LEVEL

Key findings on the system level

- Public investment in the CRP is high and assures good infrastructure and high-level personnel, but also tolerates inefficiencies to the detriment of scientific progress
- More explicit and more focused thematic strategies are needed in all CRP, which can be realised through a strategic use of the block grant
- The CRP have, in international comparison, limited external income
There is room for improvement based on
 - *more structured cooperation with public and private partners*
 - *more international outreach, in particular in European programmes*
 - *a revision of the strategy related to collaborative research and research services*
- The balance in responsibilities in the MESR-BoD-CEO triangle is suboptimal: this needs to be redefined

OVERALL CONCLUSIONS

Overall conclusions (1)

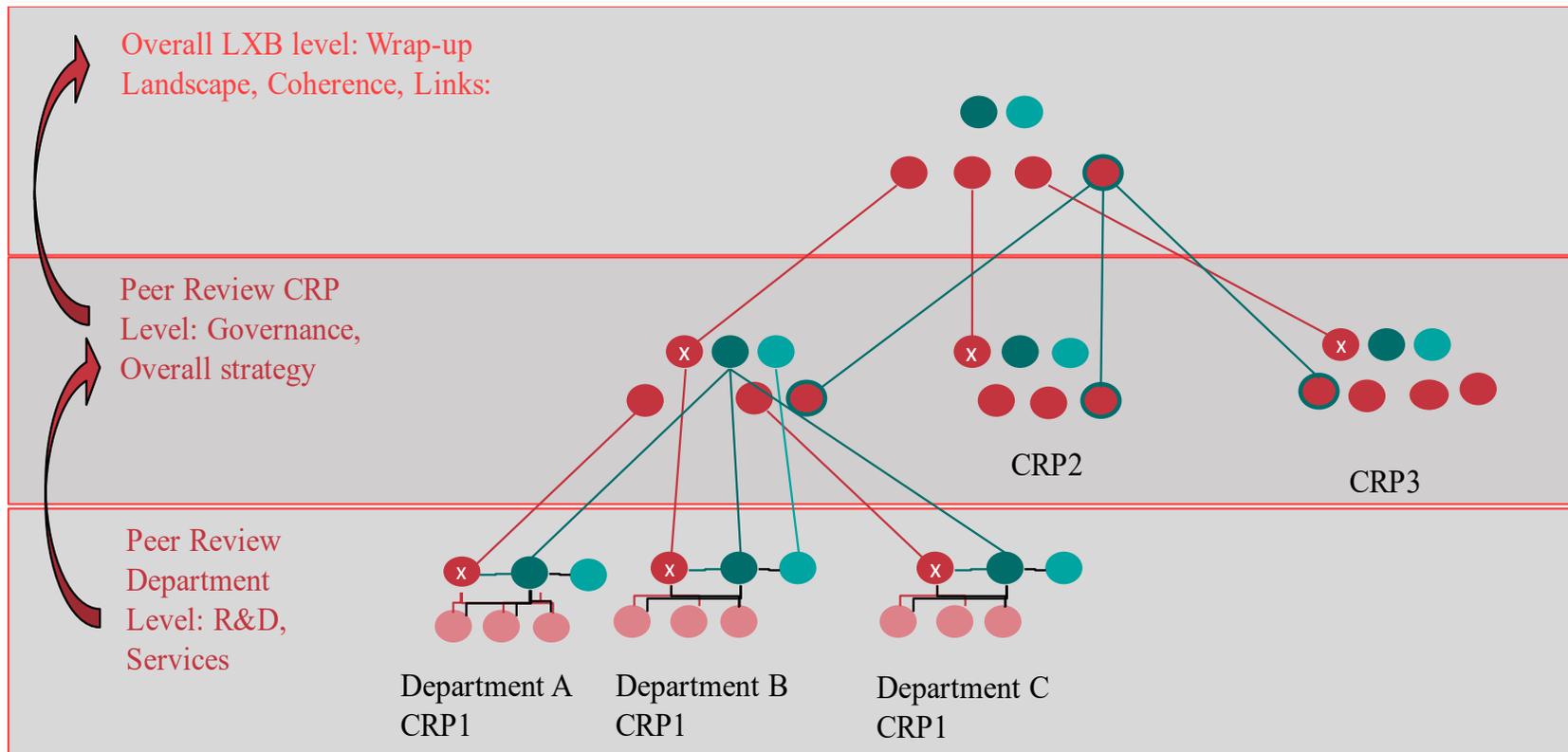
- The CRPs fit well into the commitment of Luxembourg to build a science and innovation system, and are well funded
 - The start of the three CRPs was challenging and in some places difficult. Now, the three institutes are sailing into calmer waters and are beginning to develop themselves well
 - The Luxembourg CRPs globally not yet reached the top international level, despite good, sometimes excellent research performed in all three
 - The potential to reach international top level is nonetheless there
 - More focused strategies and better international positioning are necessary in all 3 CRPs to achieve broader top-level research and impact. The block grants should be used better to implement these strategies
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Overall conclusions (2)

- The research generally has relevance for society: for private companies as well as for public organisations
- This relevance can be strengthened by working to a greater extent with and for external partners and clients (in Luxembourg and internationally). This should also increase third-party income
- The CRPs are attractive places for young people from across the globe to work. The common approach of the CRPs with the Luxembourg university on PhD education in the doctoral schools is a strong asset
- Internal administration should be made more transparent and efficient
- The KPI targets are too low for RTOs aiming to be among the leading research institutes in Europe and are not particularly incentivising

APPENDIX

Overview peer review organisation



Legend:

- x Panel Chair
- Panel Member
- Rapporteur (Technopolis, 1-2 per CRP)
- Assistent (Technopolis, 1 per panel)
- Expert Governance (Technopolis)

Peer review panels

LIST – institute level

- **Louis Schlapbach** (Chair), ETH / Université de Fribourg
- **Colette Rolland**, University Paris 1 Panthéon-Sorbonne
- **Marc Benoît**, INRA (France)

LIST – MRT

- **Louis Schlapbach** (Chair), ETH / Université de Fribourg
- **Renaud Bachelot**, University of Technology of Troyes (UTT)
- **Bernd Mayer**, University of Bremen / Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM, Bremen
- **Xavier Obradors**, Institute of Materials Science of Barcelona (ICMAB-CSIC)
- **Stefaan De Wildeman**, Maastricht University / B4Plastics

Peer review panels

LIST – ITIS

- **Colette Rolland** (Chair), University Paris 1 Panthéon-Sorbonne
- **Marina Jirotko**, University of Oxford
- **Pericles Loucopoulos**, Harokopio University of Athens (Greece) / Bournemouth University
- **Martin Matzner**, Friedrich-Alexander-Universität Erlangen-Nürnberg
- **Günter Schäfer**, Technical University of Ilmenau

LIST – ERIN

- **Marc Benoît** (Chair), INRA (France)
 - **Johanna Berlin**, RISE Research Institute of Sweden
 - **Minna Hakkarainen**, KTH Royal Institute of Technology (Sweden)
 - **Gerik Scheuermann**, Leipzig University (Germany)
 - **Justin Sheffield**, University of Southampton
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Peer review panels

LIH – institute level

- **Rudi Beyaert** (Chair), University of Ghent / VIB, Ghent
- **Gabriele Anton**, Institute of Epidemiology at Helmholtz Center Munich
- **Pierre Hainaut**, Université Grenoble-Alpes / Institute for Advanced Biosciences, Grenoble
- **Patrick Rossignol**, Nancy Plurithematic Clinical Investigation center (CIC)- Inserm
- **Helle Ulrich**, Institute of Molecular Biology (IMB), Mainz

LIH – DoPH

- **Patrick Rossignol** (Chair), Nancy Plurithematic Clinical Investigation center (CIC)- Inserm
 - **Maja Bertram**, University of Southern Denmark (SDU)
 - **Francis Guillemin**, University of Lorraine
 - **Roger Salamon**, University of Bordeaux
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Peer review panels

LIH – DONC

- **Pierre Hainaut** (Chair), Université Grenoble-Alpes / Institute for Advanced Biosciences, Grenoble
- **Colin Watts**, University of Birmingham
- **Rolf Apweiler**, EMBL-EBI, Cambridge

LIH – DII

- **Rudi Beyaert** (Chair), University of Ghent / VIB, Ghent
- **Seppo Meri**, University of Helsinki
- **Ronald van Ree**, Amsterdam Medical Centre AMC

LIH – IBBL

- **Gabriele Anton** (Chair), Institute of Epidemiology at Helmholtz Center Munich
 - **Gareth Bicknell**, University of Birmingham
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Peer review panels

LISER

- **Robin Hickman** (Chair), The Bartlett School of Planning, UCL
- **Wilfried Altzinger**, Vienna University of Economics and Business
- **Michael Beckmann**, University of Basel
- **Adele Bergin**, ESRI, Dublin
- **Desmond Dinan**, George Mason University
- **Wiemer Salverda**, Amsterdam Centre for Inequality Studies

Evaluation Team

- Geert van der Veen, Project leader, Rapporteur LIST, LIH
- Katharina Warta, Deputy project leader, Rapporteur LIST
- Anke Nooijen, Rapporteur LIH
- Janna van Belle, Rapporteur LIH
- Erik Arnold, Rapporteur LISER
- Fritz Ohler, Expert on governance on institute and system level

Evaluation timing

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Phases:	Kick-off	SAR, data collection & analysis							Peer Review			Reporting				
SAR template																
SAR (by CRPs)																
Data delivery CRPs																
Interviews																
Data coll. & analysis																
Bibliometrics																
Synthesis Reports																
Panel composition																
Panel organisation																
On site visits																
Draft reports																
Draft final report																
Final report																
Meetings	X			X					X			X				
Presentations														X	X	

