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Latvia: Research Assessment Exercise
METHODOLOGY

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Technopolis
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International Evaluation of Science and Innovation Policy

- On 26 April 2011, the Cabinet of Ministers of the Republic of Latvia adopted a decision (Protocol No 27, §29) regarding the **need to conduct an external assessment of the implementation of the science and innovation policy in Latvia** in 2011/2012, in order to perform the necessary **measures for the implementation of structural reforms in science and to ensure well-founded strategic planning of the future cohesion policy of the European Union**

- The evaluation has two parts
  - **A Research Assessment Exercise**
  - **A review of the Latvian science and innovation system**

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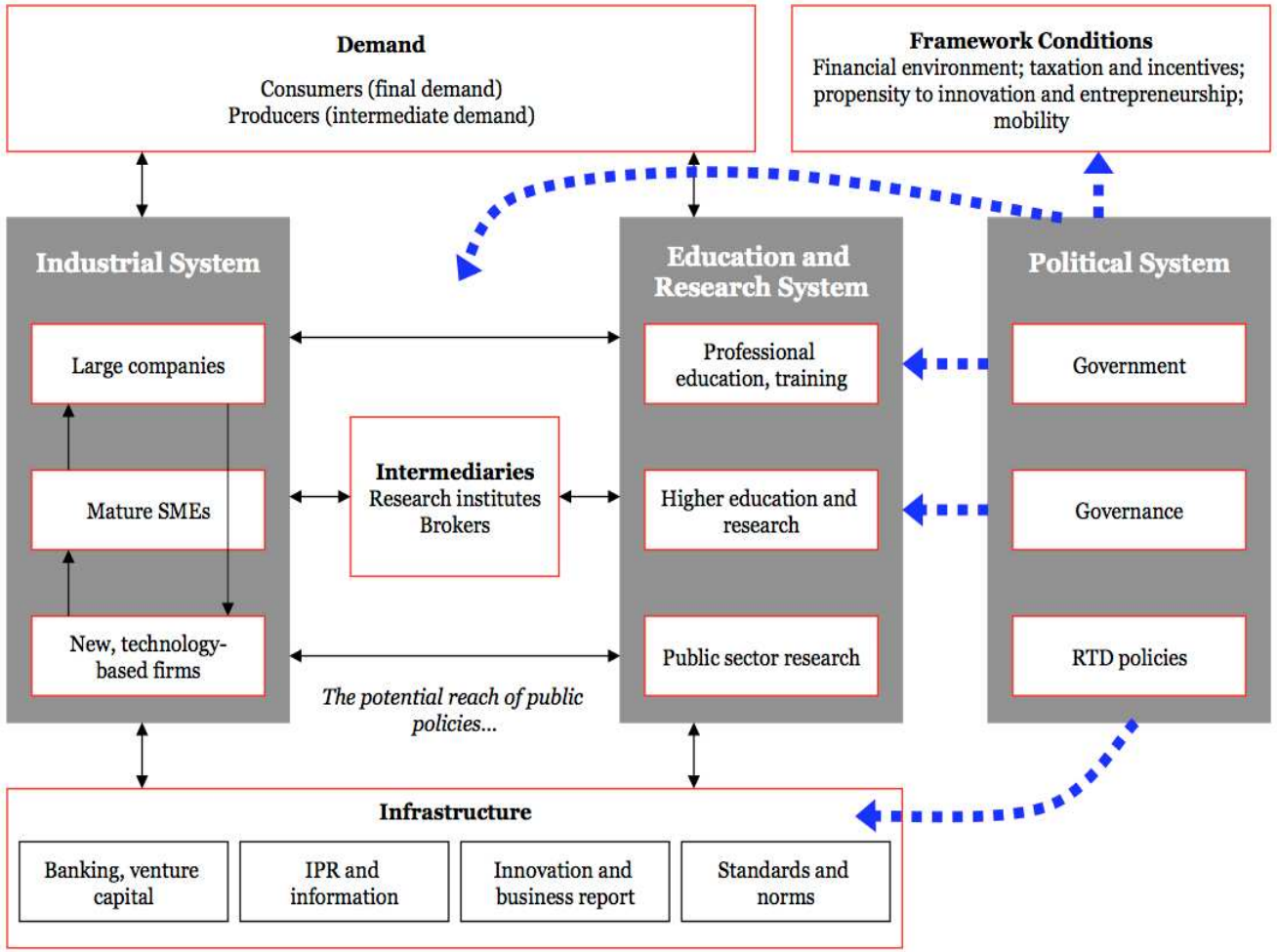
A systems view



Erik Arnold and Stefan Kuhlman, *RCN in the Norwegian Research and Innovation System*, Background Report No 12 in the Evaluation of the Research Council of Norway, Oslo: Royal Norwegian Ministry for Education, Research and Church Affairs, 2001

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Objectives of the Research Assessment Exercise (RAE)

- The **overall objective** of the assessment of the research performance of Latvian scientific institutions/structural units is
  - *To provide the Latvian public, policy-makers and decision-makers and the academic community with the most objective picture possible of the excellence and competitiveness of Latvian science in comparison with the global practice in the respective area of science*

- The assessment will produce analytical material that will describe the scientific excellence and competitiveness of Latvian science and the capacity of its scientific institutions. This material will
  - Provide evidence for science policy making at different of levels
  - Enable the scientific institutions involved in the process to improve their operations

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Scope of the RAE

Institutional Coverage

- The research assessment is directed at institutions included in the Register of Scientific Institutions
  - Higher education institutions and their constituent departments/faculties
  - Scientific institutes established by higher education institutes
  - State scientific institutes
  - Other scientific institutes/ organisations, including private scientific bodies

(Throughout the methodology all of the above are referred to as "institutions")

Timescale

- Research activities of Latvian institutions from 1 January 2006 to 31 December 2012

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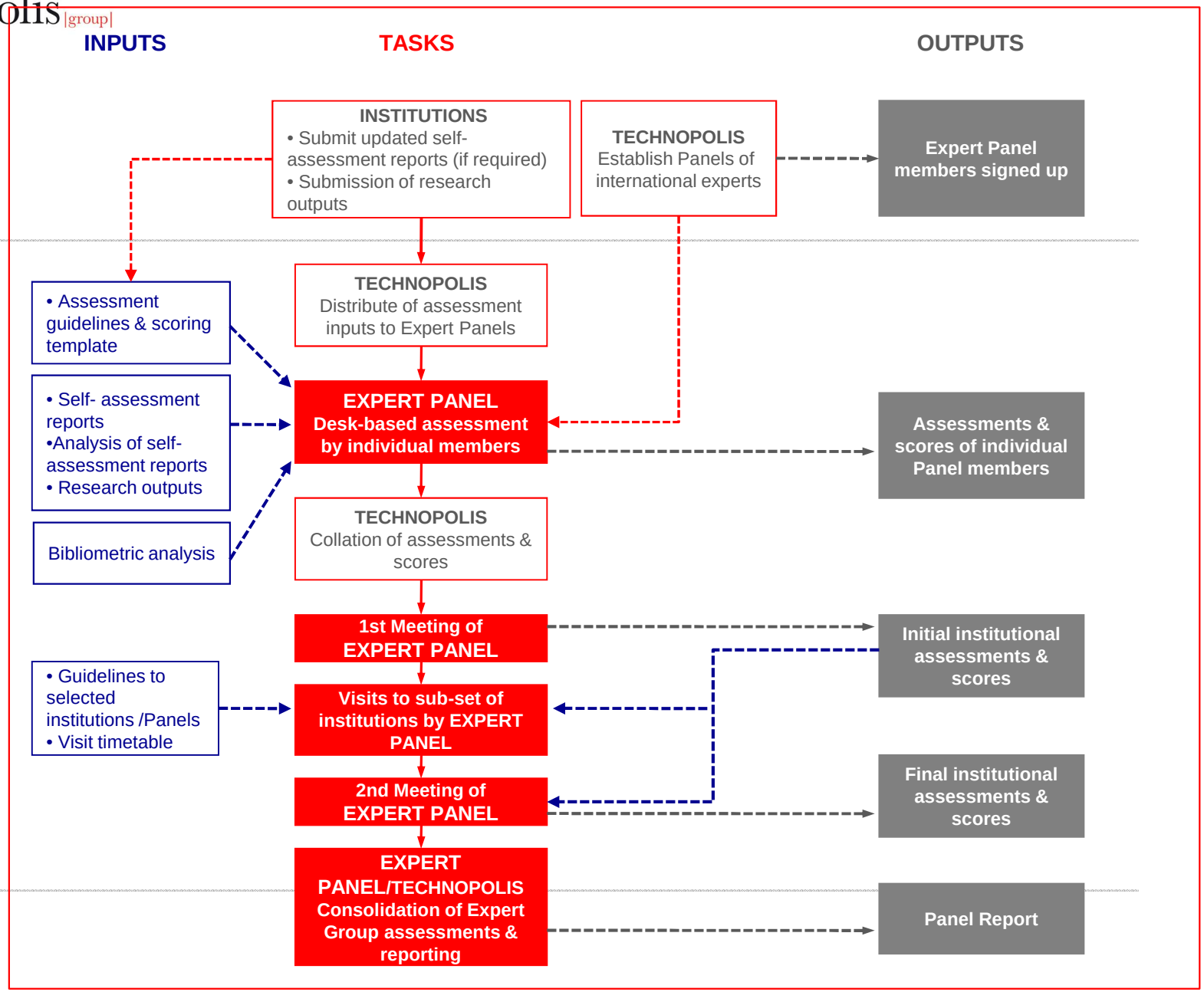
RAE Process



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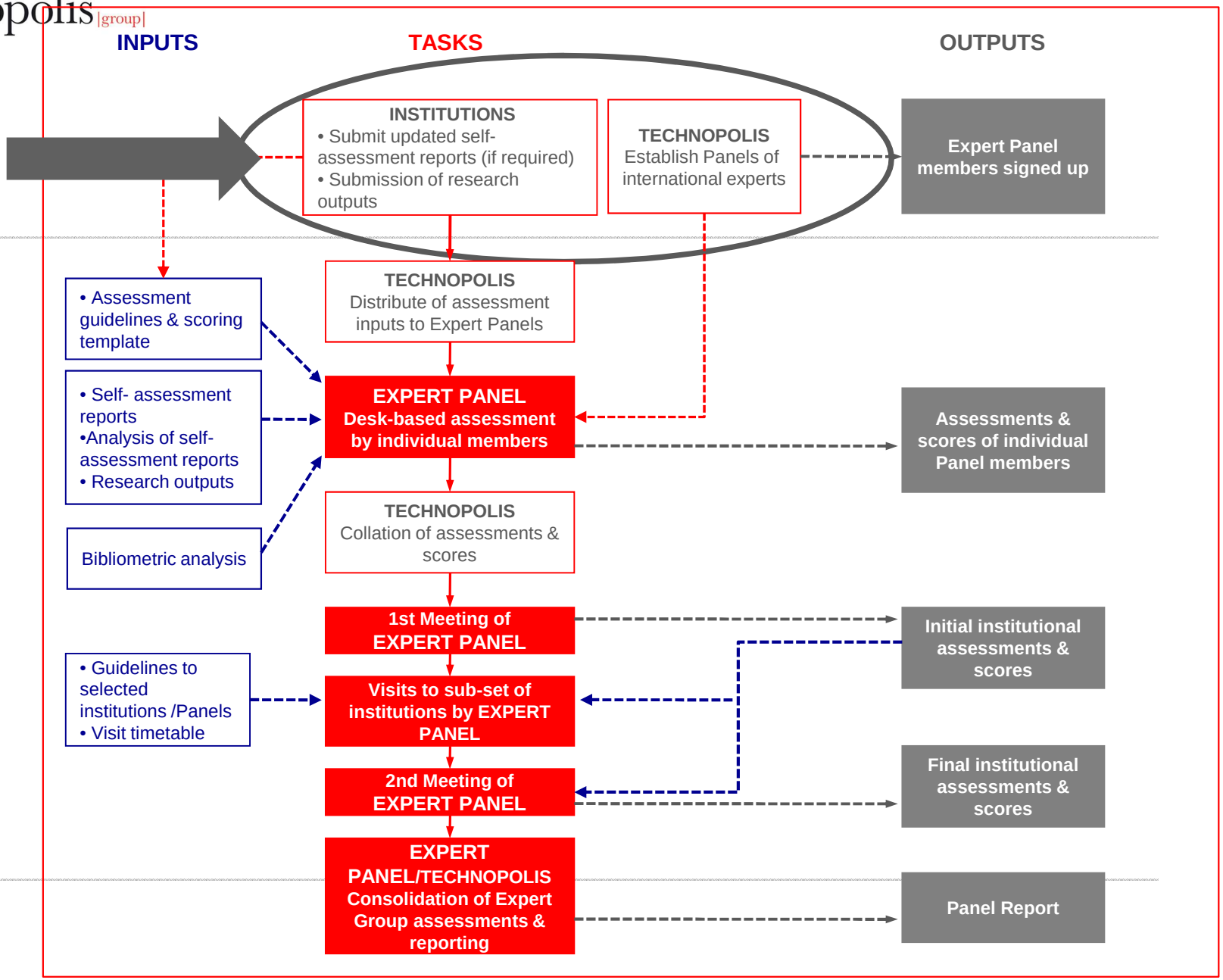
Current Stage (1)



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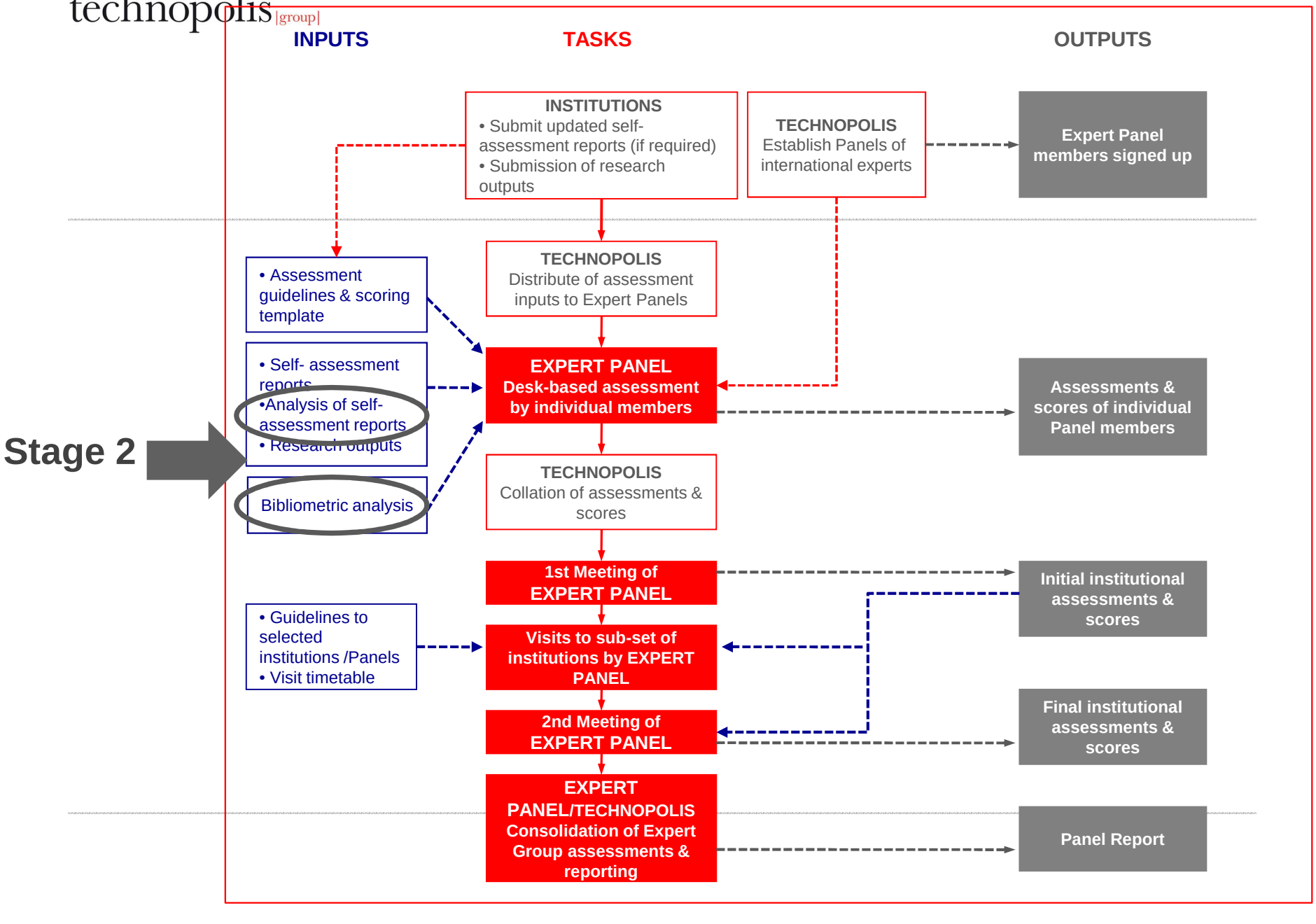

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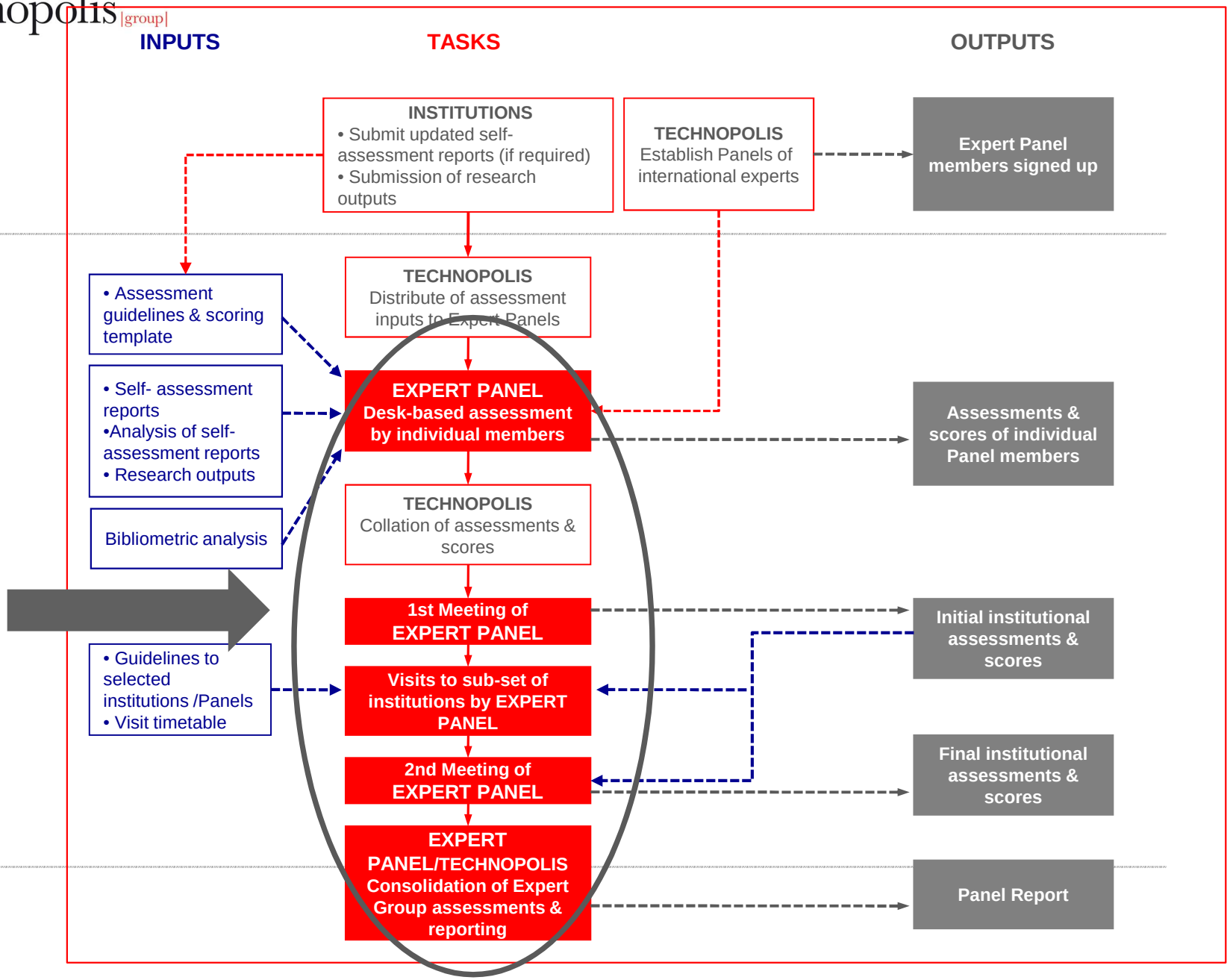
Stage 3: Panels



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Documentary inputs to the RAE

The assessment makes use of the following documentary inputs:

- The institutions' **self-assessment reports**
- The most important **research outputs** submitted by each institution
- **Bibliometric analysis** of the research outputs of each institution

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Self-assessment reports

- Completed by relevant institutions against a template provided by the Ministry
- Institutions have had an opportunity to update their submitted reports to include data for 2012
- The reports cover (i) entire institutes and (ii) university departments /institutes
- **125** self-assessments reports are available (before update) covering ~ 4,200 staff and 34,000 research outputs

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Selection of research outputs

- The assessment will be based on publications/papers published **in peer reviewed journals** i.e. original articles in anonymously refereed scientific journals cited in *Thompson Reuter Web of Science, SCOPUS, ERIC* or *Engineering Village*
- The publications/papers should be those provided in **section 2.4** of the self-assessment
- The number of research outputs to be assessed for each institution is based on the number of academic/ research staff. The number is calculated as follows
  - *The **minimum** number of papers for review is **5** (whatever the size of the institution)*
  - *The **maximum** number of papers for review per institute or group is **one paper per 10 academic/ research staff** as defined in section 1.1 in the self-assessment report (except where this would fall below a minimum of 5 papers)*
- Papers must be made available for the assessment via the Ministry's online system
- Papers must be in English

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Bibliometrics

The bibliometrics will:

- Cover all staff named in the self-assessment reports
- Report at the level of the institution being assessed (*i.e. the (i) entire institute or (ii) university department /institute for which a self-assessment report has been submitted)*
- Will be based on standard bibliometric indicators – number of publications, (normalised) citation counts, % highly cited, etc.

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Expert Panels

- The assessment will be conducted by **independent international experts**, supported by a panel coordinator from Technopolis
- The experts will be grouped into **six Panels** covering six broad disciplines
- Each Panel will have **six experts**, with one expert assigned the role of Panel Chair
- Panel members are currently being selected based on the following criteria

  As individuals
  - Independent
  - International experts in their field
  - Experience in international assessments

  As a group – balanced composition in terms of
  - Experience from range of different national research systems
  - Disciplinary coverage and in alignment with the Latvian institutions being assessed

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Expert Panels

Panel (full title)	Panel (abbreviation)
Agriculture, Forestry & Veterinary Science	Panel A
Engineering & Computer Science	Panel E
Humanities	Panel H
Life Science & Medicine	Panel L
Natural Sciences & Mathematics	Panel M
Social Sciences	Panel S

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Expert Panels

Panel	Coverage
Agriculture, Forestry & Veterinary Science (A)	• Natural, economic and social science directed at agriculture and forestry • Veterinary science
Engineering & Computer Science (E)	• All key engineering sub-disciplines (mechanical, civil, electrical, etc.) • Informatics and computer sciences
Life Science & Medicine (L)	• Medical research • Clinical research • Biology (*except where it is relates specifically to agriculture*)
Natural Sciences & Mathematics (M)	• Chemistry • Physics • Mathematics • Materials science • Earth science • Environmental science (*except where it relates specifically to agriculture*) • Geology

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Expert Panels

Panel	Coverage	
Social Sciences (S)	• Psychology and the cognitive sciences • Pedagogic and education research • Social anthropology • Sociology • Gender studies • Economics • Business and administrative sciences	• Geography • Demography • Law • Political sciences • Communication sciences • International relations • Social statistics and informatics
Humanities (H)	• Anthropology • Archaeology • Art, art history and arts • Classical studies • History • History and philosophy of science • Languages and philologies	• Linguistics • Literature and literary studies • Music and musicology • Oriental and African studies • Philosophy • Psychology • Religious studies and theology

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Panel tasks

1. Panel Members (individually) review the documentary inputs and provide initial assessments (that is, scores and explanation of the score) for each institution against the assessment criteria
   - *Panel members will review the self-assessment reports and bibliometric data for institutions assigned to the Panel*
   - *Each research output will be reviewed by two panel members*
2. Panel coordinator (Technopolis) collates the scores
3. Panel Members attend a 1st Panel Meeting to review and moderate the scores and make any necessary adjustments
4. Panel Members visit a sub-set of institutions in Latvia
5. Panel Members attend a 2nd Panel Meeting to review scores in light of the visits and make final adjustments
6. Panel Chair writes a Panel Report presenting the Panel's assessment (i.e. that of the of Panel as a whole) for each institution plus a summary of the research performance across the disciplines covered by the Panel

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Institutional visits

- Panel Members will visit a number of institutions in Latvia
  - *Panels will visit to 5 to 8 institutions (the exact number to be defined)*
  - *Visits will be focused on the largest and highest quality institutions based on the initial review of the self-assessment reports and the bibliometric analysis*
- The visits will enable the Panel to
  - *See the research environment in Latvia directly*
  - *Meet with researchers and research managers /senior staff*
  - *This will provide additional input to the moderation of the assessments*
- Visits will take place in September and October 2013

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Institutional visits

Panel (full title)	Panel (abbreviation)	Dates
Natural Sciences & Mathematics	Panel M	02-06 Sept 2013
Life Science & Medicine	Panel L	16-20 Sept 2013
Humanities	Panel H	23-27 Sept 2013
Engineering & Computer Science	Panel E	07-11 Oct 2013
Social Sciences	Panel S	14-18 Oct 2013
Agriculture, Forestry & Veterinary Science	Panel A	21–25 Oct 2013

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Schedule – for one Panel

	(By WEEK)											
	Wk 1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12
RESEARCH ASSESSMENT EXERCISE												
PANEL 1												
Brief Panel Members/distribute inputs (TECHNOPOLIS)	P1											
Panel Members review documentary inputs/ score institutions (PANEL)		P1										
Collate Panel Members' scores (TECHNOPOLIS)					P1							
Panel in Latvia (1 week in Latvia): 1st meeting/ visits/ 2nd meeting (PANEL/ TECHNOPOLIS)								P1				
Panel report written (PANEL)									P1 reporting			
Panel report delivered to Technopolis												
Review and accept final report (TECHNOPOLIS)												

Technopolis tasks
Panel tasks
Panel visits in Latvia

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Schedule – all Panels

	2013									2014	
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
Research Assessment Exercise	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11
Preparation											
Analyse self-assessment reports											
Recruit peers, build panels											
Bibliometrics											
Expert Review											
PANEL M: NATURAL SCIENCE & MATHEMATICS				15 Jul to 4 Oct *(Visit 2-6 Sep)*							
PANEL L: LIFE SCIENCE & MEDICINE					29 Jul to 18 Oct *(Visit 16-20 Sep)*						
PANEL H: HUMANITIES					5 Aug to 25 Oct *(Visit 23-27 Sep)*						
PANEL E: ENGINEERING & COMPUTER SCIENCE					19 Aug to 8 Nov *(Visit 7-11 Oct)*						
PANEL S : SOCIAL SCIENCES					26 Aug to 15 Nov *(Visit 14-18 Oct)*						
PANEL A: AGRICULTURE, FORESTRY & VETERINARY SCIENCE						2 Sep to 22 Nov **(Visit 21-25 Oct)**					
Support to Panels											
Collate Panel outputs/ write RAE report									Report		
Complete wider evaluation project											

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Number of institutions per Panel (*initial estimate*)

Panel (full title)	Panel (abbreviation)	No. of institutions	No. of staff covered*
Agriculture, Forestry & Veterinary Science	Panel A	23	358
Engineering & Computer Science	Panel E	23	1307
Humanities	Panel H	14	280
Life Science & Medicine	Panel L	15	794
Natural Sciences & Mathematics	Panel M	24	688
Social Sciences	Panel S	23	626

*Institutions vary in size from 1 to 252 staff
(N.B. three institutions are not been assigned in the table)

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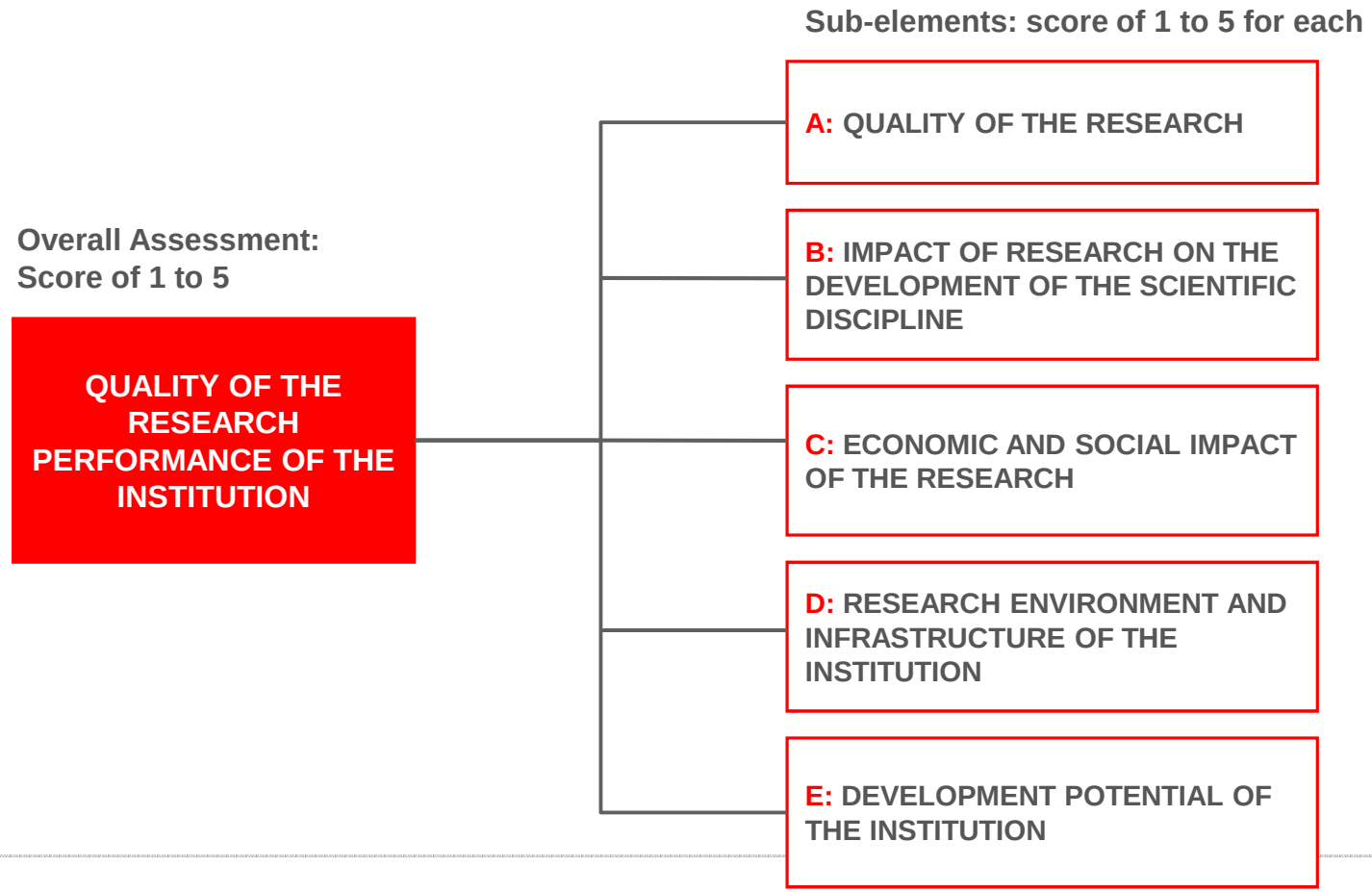
Assessment criteria



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Assessment criteria: overall performance

QUALITY OF THE RESEARCH PERFORMANCE OF THE INSTITUTION	
SCORE	**DEFINTION**
5	Outstanding/high level of research
4	Very good level of research
3	Good level of research
2	Average level of research
1	Poor level of research

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Assessment criteria: sub-element A

A: QUALITY OF THE RESEARCH		
SCORE	**DEFINTION**	**Description**
	Particular factors to take into account	*Pure and applied research shall be evaluated as being of equal significance*
5	**Outstanding level of research**	In terms of the quality, the research output of an institution is **comparable with the best work in the same area of research**. The research possesses the requisite quality to meet **highest standard in terms of originality, significance and accuracy**. Work at this level should be **the primary point of reference** in the respective area
4	**Very good level of research**	Research by the institution possesses a very **good standard of quality** in terms of originality and importance. Work at this level can **arouse serious interest in the international academic community**, and **international publishers or journals with the most rigorous standards of publication** (irrespective of the place or language of publication**) could publish work of this level**.
3	**Good level of research**	**The importance of research by the institution is unquestionable** in the experts' assessment. Internationally recognized publishers or journals could publish work of this level.
2	**Average level of research**	The international academic community deems the significance of the research by the institution to be acceptable. **Nationally recognized publishers or journals could publish work of this level**.
1	**Poor level of research**	Research by the institution contains **new scientific discoveries only sporadically**. **The profile of the research by the institution is expressly national**, i.e., the institution is not involved in international debates of the scientific community. It focuses on introducing international research trends in Latvia.

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Assessment criteria: sub-element B

B: IMPACT OF RESEARCH ON THE DEVELOPMENT OF THE SCIENTIFIC DISCIPLINE		
SCORE	**DEFINTION**	**Description**
	Particular factors to take into account	*The impact of the research on the development of the scientific discipline*
5	**Outstanding level of research impact**	The research outputs of the institution **are published in the leading forums of the respective discipline**, and they have **a considerable impact** on the development of the discipline**; the institution is highly valued as a partner in international research projects**.
4	**Very good level of research impact**	**The institution is internationally recognised** in its discipline and is **highly regarded as a partner in international research projects and networks**.
3	**Good level of research impact**	The institution occupies a stable position in the international scientific community, is considered **a respected and recognized centre of competence**, and **possibly hosts national research centres.**
2	**Average level of research impact**	The institution occupies a stable position in the national scientific community. **The position of the institution within the international scientific community is still evolving**; it still has to vie for its status as a recognised member of the discipline; its **impact on the international scientific community is undetermine**d.
1	**Poor level of research impact**	The **publishing strategy and scientific** impact of the institution **are predominantly geared towards the national scientific community.**

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Assessment criteria: sub-element C

C: ECONOMIC AND SOCIAL IMPACT OF THE RESEARCH		
SCORE	**DEFINTION**	**Description**
	Particular factors to take into account	*The economic and social impact (including culture and gender)*
5	**Outstanding level of research of international standard**	Research of the institution is **highly important for society**, which renders the **institution a highly esteemed partner in research and development projects outside the academic environment**. Staff members of the institution are in high demand as experts in the public and private sector, and the institution is an important driver of societal development.
4	**Very good level of research of international standard**	Research of the institution is **very important for society**. The institution's interactions with the public stand out in terms of their extensive and dynamic nature.
3	**Good level of research**	Research of the institution is important for society. The **institution's interactions with the public are at a level that is expected of recognised academic institutions**.
2	**Average level of research**	Research of the institution is important for society. The **research activities of the institution are characterised by a low level of interaction with the public**.
1	**Poor level of research**	Research of the institution is important for society. **The interaction by the institution with the public is yet to be established.**

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Assessment criteria: sub-element D

D: RESEARCH ENVIRONMENT AND INFRASTRUCTURE OF THE INSTITUTION		
SCORE	**DEFINTION**	**Description**
	Particular factors to take into account	• *Organisation of the management of research at the institution* • *The long-term strategic and financial resource planning, including the human resource development strategy* • *The goal orientation of the research work* • *The availability and quality of support services, research infrastructure, databases, technical staff, staff teaching and training workload, the ratio of students* involved in research to the overall number of staff members, etc.
5	**Outstanding level of research of international standard**	The institution's research environment **is fully comparable to the best international institutions in the discipline**, in terms of the organisation, strategy and infrastructure of research work.
4	**Very good level of research of international standard**	The institution is able to **provide an internationally comparable excellent research environment to high-level international scientists** in the given discipline.
3	**Good level of research**	The institution is able to provide a research environment that **is comparable with globally recognised academic institutions** in its discipline.
2	**Average level of research**	The institution's research **environment is still evolving** to achieve a level that is expected in the international scientific community of a respected institution in the given discipline.
1	**Poor level of research**	The institution is **still only in the process of creating an internationally comparable research environment.**

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Assessment criteria: sub-element E

E: DEVELOPMENT POTENTIAL OF THE INSTITUTION	
Factors	**Description**
Particular factors to take into account	*The development potential of an institution comprises:* *• The ability of researchers to participate in international competition* *• The capability of the scientific environment to support the chosen research* *• The capability of the selected scientific objectives and research themes to impact the international scientific community and society at large* *• The ability to initiate new research directions* *The assessment should focus on:* *• The institution's future vision and plans* *• How realistically the institution assesses its strengths and weaknesses, opportunities and threat, and whether the institution has a carefully considered plan to manage such factors* *• Plus* *• The age and career progression of the active scientific staff* *• The size of the institution and its ability to attract high-level doctoral students and scientists from abroad* *• Ability to raise funding that is awarded competitively* *• Its orientation towards topical issues in the selection of research themes* *• Involvement in promising international collaboration projects and networks, etc.*

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Assessment criteria: sub-element E

E: DEVELOPMENT POTENTIAL OF THE INSTITUTION		
SCORE	**DEFINTION**	**Description**
5	**Outstanding level of research of international standard**	The institution is able to assume scientific leadership in the given scientific discipline. It is expected that **over the next 5-10 years it will achieve a significant international breakthroug**h in the particular scientific discipline, and it will **attract leading researchers** and promising doctoral students. Within the foreseeable future, the institution **is able to achieve a level of excellence that is comparable with the most outstanding institutions in the world** within their discipline.
4	**Very good level of research of international standard**	The institution is **able to establish itself as a recognized and respected player in the international scientific community** within the given scientific discipline. It is expected that over the **next 5-10 years it will achieve an excellent level** of scientific quality and influence and **will become a highly regarded partner in international collaboration projects and networks**.
3	**Good level of research**	Over the next 5-10 years the **institution will be able to strengthen its position in the international scientific communit**y as a convincing actor and a **trustworthy partner within international collaboration networks.**
2	**Average level of research**	The institution is capable of being a **visible local player in its area of research**, which from **time to time can be expected to** contribute to the activities of the international scientific community.
1	**Poor level of research**	The institution **has to work hard to establish itself as an internationally notable institution** in its discipline within the foreseeable future.

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Panel report

Panel reports that will include

- *An assessment of each institution*
- *A overview of research performance across all disciplines covered by the Panel*

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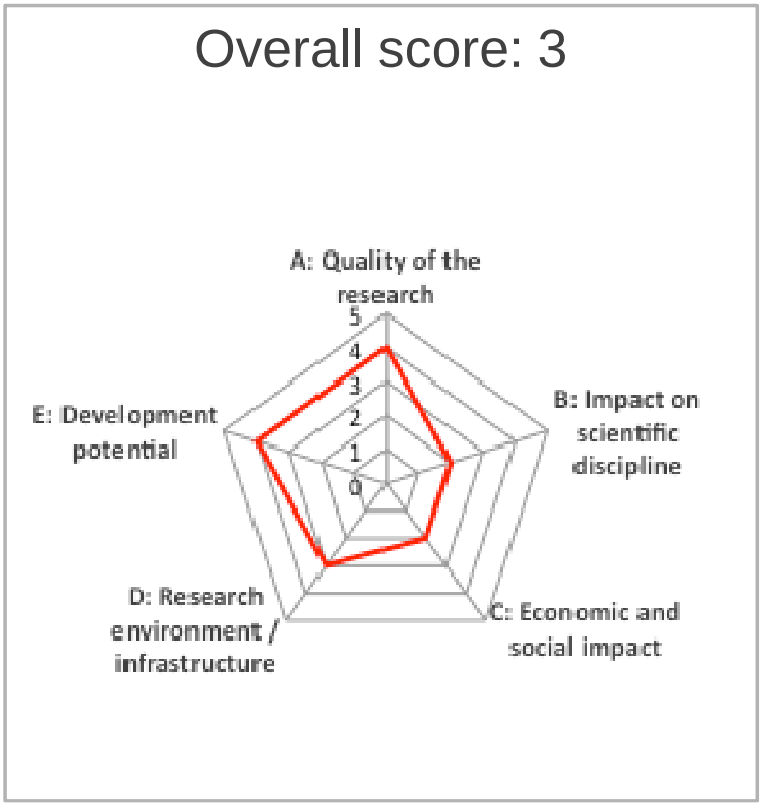
Panel report – institution level

Reports for each institution will include:

- **Overall score for Research Performance** and explanatory text
- **Scores for each of the five sub-elements**, with explanatory text for each
- **Recommendations** for the future development of the institution in the context of their area of research and the national science and innovation system. This may include:
  - *The potential evolution of the research environment and infrastructure, including strategic management and operational issues, composition of research staff etc.*
  - *Opinions regarding the potential for collaboration with other institutions and for interdisciplinary research*



Panel report – panel level

An overview of the research performance across the Panel coverage, highlighting

- *The range of performance*
- *Identifying specific areas of high and low performance*
- *Identifying the potential for improved performance e.g. via consolidation of institutions*

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Thank you

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