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Table 3: Content analysis and profile construction
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CATEGORIES, DIMENSIONS AND THEMES				
CATEGORY 1: MISSION AND BASIC ORIENTATION			**Group-theme composites for analysis**	**Elements included in the construction of profile and geo-social orientation**
Dimension 1 RG Mission: 1.Basic research NE1, NE2, CE2, CE4, SE1, SE2 2. Researcher) education NE1, CE1, *CE4*, SE1, SE2 3. Applied research NE1, NE2, NE3, CE2, CE3, CE4, SE1, SE2, SE3 SE4	4. Prototype/product development NE2, NE3, CE2, SE1, SE2, SE3, SE4 5. Targeted problem-solving NE3, CE3, SE1, SE3, SE4 6. Science-business bridge NE3, CE1, CE2, SE1, SE2, SE3, SE4 7. Start-up development SE3, SE4	8. Promoting national/local industry NE2, NE3, CE1, CE2, SE1, SE2, SE3, SE4 9. Technology transfer SE2, SE3	Applied composite: combination of themes 3-9: NE3, CE3, SE3, SE4 Broad composite: combination of themes from 1-2 and 3-9: NE1, NE2, CE1, CE2, CE4, SE1, SE2	All themes of this dimension included in the profile construction
Dimension 2 RG –orientation (perceived arena of operation) 1. Global NE1, NE2, NE3, CE2, CE3, CE4, SE1, SE2, SE3, SE4 2. National NE2, NE3, CE2, CE4, SE1, SE2, SE3 3. Regional NE3, CE1, CE2, CE3, CE4, SE4			Global composite: theme 1: NE1 Middle composite: combination of themes 1- 2: NE2, SE1, SE2, SE3 Global and Regional composite: as is CE3, SE4 Broad composite: combination of themes 1-3: NE3, CE4 Regional composite: theme 3: CE1	All themes of this dimension used in constructing the geo-social orientation
Dimension 3 Primary beneficiaries or audiences of RG work 1. CompaniesNE1, NE2, NE3, CE1, CE2, CE3, SE1, SE2, SE4 2. Society/country/ region NE1, NE2, NE3, CE1, CE2, CE3, SE1, SE2, SE3, SE4 3. Scientific community NE1, NE2, CE1, SE1, SE2, SE4			Broad composite: combination of themes 1-4, 1-3 or at the minimum 1 and 3: NE1 NE2, CE1, SE1 SE2, SE4 Narrow societal composite: combination of themes 2 and 4: SE3 Applied composite: combination of themes 1- 2: NE3, CE2 CE3 *Information missing: CE4* *Theme 4 alone is an empty marker, it doesn't change the orientation*)	All themes in this dimension included in the profile construction

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4. Own organisation NE1, NE2, CE3, SE1, SE2, SE3, SE4				
CATEGORY 2: DESCRIPTION OF COLLABORATION			**Composites for profile analysis**	
Dimension 4 **Forms of funding collaborative activities with other organisations** 1. Purposeful, bilateral project, commissioned and funded by/ tailored for company or companies NE1, NE2, NE3, CE2, SE2, SE3, SE4	2. Purposeful, multilateral externally, publically funded project NE1, NE2, NE3, CE1, CE2, CE3, CE4, SE1, SE2, SE3 3. Organic, non-funded basic research collaboration NE1, NE2, CE4, SE1, SE2		Broad projects composite: combination of themes 2-3: NE3, CE2, SE3 Narrow projects composite: only one of the themes: CE1, CE3, SE4 Basic projects composite composite: combination of themes 2-3: CE4, SE1 Composite "All" : all three themes: NE1, NE2, SE2	All themes in this dimension included in the profile construction
Dimension 5 **Types of collaboration partners** 1. University RGs, scientific community NE1, NE2, NE3, CE1, CE2, CE3, CE4, SE1, SE2, SE3, SE4	2. Companies/industry NE1, NE2, NE3, CE1, CE2, CE3, CE4, SE1, SE2, SE3, SE4 3. Research institutes NE1, NE2, NE3, CE3, CE4, SE1, SE2, SE3, SE4	4. Hospitals SE3 5. Competence Centres (CE only) CE1, CE3	Broad composite: combination of at least themes 1-2, may include more: All RGs	Dimension not included in profile construction
Dimension 6 **Important collaboration partner characteristics** 1. Good results achieved NE1, NE3, CE4, SE1, SE2, SE4 2. Strategically prioritised partner NE1, NE3, CE1, *CE3*, SE1, SE2, SE3 3. Atmosphere: (Attitude, trust, shared ideas, smooth collaboration)	4. Repeated/long term collaboration NE1, CE1, CE2, CE3, SE1, SE2, SE4 5. Availability of (larger)funding CE2, CE3, CE4, SE3, SE4 6. Non-rivalry of companies CE1, CE2, SE3, SE4	7. Complementarity of knowledge NE1, NE2, CE1, CE2, CE4, SE1, SE2, SE4 8. Reputation/credibility of partner NE3, CE2	*Three themes analysed (2, 5, 6)* Strategic partners composite; combination of themes 2 and 6 theme present: NE1, NE3, CE1, CE2, CE3, SE1, SE2, SE3, SE4 theme not present: NE2, CE4 Importance of funding composite: theme 5 theme present: CE2, CE3, CE4, SE3 theme not present: NE1, NE2, NE3, CE1,SE1, SE2, SE4	Theme 2 included in the profile construction

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NE1, NE3, CE1, CE2, CE3, SE1, SE2				
Dimension 7 **Modes of finding collaboration partners** 1. Personal contacts NE1, NE2, NE3, CE1, CE2, SE1, SE2 2. Contacts or recommendation of partners/institutional contacts NE3, CE2, SE3, SE4 3. Marketing/Strategic partnership building NE1, NE2, NE3, CE1, SE1, SE3	4. Gets asked to join NE3, CE1, CE2, CE3, SE1, SE2, SE4 5. Coincidence NE1, NE2, NE3, SE2 6. Public presence CE1, SE2	7. Previous collaborations NE1, NE2, NE3, CE1, CE2, SE1, SE2, SE3	*Two themes analysed (3,4)* <u>Gets asked to join composite</u>: theme 4 *(info missing: CE4)* theme present: NE3, CE1, CE2, CE3, SE1, SE2, theme not present: NE1, NE2, NE3, SE4 <u>Marketing/Building strategic partnerships composite</u>: theme 3 *(Info missing: CE4)* theme present: NE1, NE2, NE3, CE1, SE1, SE3 theme not present: CE2, CE3, SE2, SE4	Theme 3 in this dimension included in the profile construction
Dimension 8 **Outcomes of collaboration** 1. Scientific publications and presentations NE1, NE2, CE2, CE4, SE1, SE2, SE3 2. Patents NE1, NE2, CE2, SE1, SE2, SE3 3. Project proposals/funding applications NE1, NE2, NE3, CE4, SE1, SE2 4. Targeted solutions/product development NE2, NE3, CE1, CE2, SE1, SE2, SE3, SE4	5. Technology transfer SE2, SE3 6. Start-ups SE3 7. Dissemination of knowledge to public NE1, NE2, NE3, CE1, SE1, SE2		<u>Applied composite</u>: one or more of the themes 2, 4, 5, 6: CE3, SE4 <u>Applied and Public composite</u>: combination of theme 7 and at least one of 2, 4, 5, 6: NE3, CE1, CE2 <u>Basic composite</u>: theme 1: CE4 <u>Broad composite</u>: combination of theme 1 and at least one of the themes 2, 4, 5, 6: NE1, NE2, SE1, SE2, SE3 *(Note that theme 3 is an empty marker, it doesn't change the orientation)*	All themes in this dimension included in the profile construction

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CATEGORY 3: DESCRIPTION OF COMPETITION			Composites for profile analysis	
Dimension 9 Competition perceived to be for 1. Science/Knowledge NE2, CE4, SE1, SE2, SE3 2. Resources/funding (public, tendered) NE1, NE2, NE3, CE1, CE2, CE4, SE1, SE2, SE3, SE4	3. Clients/client-funded projects NE2, NE3, CE1, CE2, CE3, SE1, SE2, SE3, SE4		Funding composite: theme 2: NE1 Clients composite: theme 3: CE3 Money composite: combination of themes 2-3: NE3, CE1, CE2, SE4 Broad composite: combination of theme 1 and at least one of the themes 2-3: NE2, CE4, SE1, SE2, SE3	All themes in this dimension included in the profile construction
Dimension 10 Competitor definition 1. Same as collaborator NE1, NE2, NE3, CE1, CE2, CE4, SE1, SE2, SE3 SE4 2. At global /international level NE2, NE3, CE3, CE4, SE2, SE3 3. At national level NE1, NE2, NE3, CE2, CE3, CE4, SE1, SE2, SE4 4. At reg. level NE3, SE1, SE3	5. Companies CE3, SE3, SE4 6. Universities/ UAS's CE3, SE1, SE2, SE4 7. Research institutes NE2, CE1, CE2, SE1, SE2, SE3 8. Competence centres CE1, CE3, SE3		*Two types of themes: Type 1: Levels and Type 2: organisations* *Levels (themes 2, 3, 4): (Information missing: CE1)* International composite: theme 2: CE4 National composite: theme 3: NE1, CE2, SE4 Middle composite: themes 2-3: NE2, CE3, SE2 National + regional composite: themes 3-4: SE1, SE3 Composite "All": themes 2-4: NE3 *Organisations (themes 5,6,7,8): (Information missing NE1, NE3, CE4)* Applied composite: at least theme 5, can also include 7, 8: NE2, CE1, CE2, CE3, SE3 Basic composite: at least theme 6, can also include 7,8: SE2 Broad composite: at least themes 5-6, can also include 7,8: SE1, SE4 *Themes 7,8 are empty markers, don't change the orientation*	Themes 5-8 in this dimension included in the profile construction and themes 2-4 included in the construction of the geo-social orientation
CATEGORY 4: CHANGE AND OPERATIONAL CONTEXT			**Composites for profile analysis**	
Dimension 11 Perception of changes encountered in recent years 1. More projects/collaborations and partners in house, in general or with	3. Improved expertise and reputation NE3, CE2, CE4, SE2, SE4 4. Organisational changes in the host organisation NE1, CE1, CE2, SE1, SE2, SE4 5. Changing operational	8. Larger research group NE1, CE1, SE3, SE4 9. Better Understanding of partners on what group can do NE3, SE1, SE2	*Two types: type 1: broad/ narrow change and type 2: internal/external change* Broad change composite: min. four themes; Narrow change: max. three themes Internal change composite: themes 1,2,3,6,8; External change: themes 4,5,7,9 Narrow internal and external composite: CE3 Narrow internal composite: SE3	Dimension not included in the profile construction

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industry, more intensive collaboration NE1, NE3, CE1, CE2, CE3, CE4, SE1, SE2, SE3, SE4 2. More diverse, focused or otherwise changed research area, change of topics or development of equipment NE1, NE3, CE4, SE1, SE2	context: NE1, CE4, SE1, SE2 6. Internationalisation, emergence of international projects, more international scope of work NE3, CE3, CE2, SE1, SE2, SE3 7. Changes in funding, NE1, NE3, CE1, CE2, CE3, SE1, SE2	Broad internal and external composite: NE1, NE3, CE1, CE2, CE4, SE1, SE2, SE4 *Information missing: NE2*	
Dimension 12 Perceived significance of the country in which located 1. High: Large language area and relations within it CE1, CE3 Good infra and funding CE1, CE3; National tasks NE2, SE1, SE2, SE3, SE4 2. Critical: Lack of vision CE2, SE1, SE2; Lack of stable policy CE2, SE1, SE2, SE3; Too many tasks SE1, SE2; Gender gap CE4, SE1; Lack of funding SE1, SE2; Brain drain, aging staff CE4, SE1, SE2, SE4	3. Medium: National culture and/or legislation influence work NE1, 3, NE4, SE1, SE2, SE3; Type of operative context CE1, SE1, SE2; knows everyone in a small country CE2, CE4, SE4 4. Low: Global mission/audiences NE1, SE3; Nature of scientific knowledge NE1, SE1, SE2; 5. Region is important NE3, CE1, CE4, SE1, SE2, SE3, SE4	High composite: Theme 1 alone, or themes 1 and 3: NE2, CE1, CE2 Low composite: theme 4 alone, or themes 3-4: CE1 Mixed composite: at least 3 themes SE1, SE2, SE3, SE4 Neutral composite: theme 3 alone or themes 3 and 5: NE3 Critical composite: theme 2 alone or with themes 3 and/or 5: CE2, CE4 *Note that theme 5 is an empty marker and does not change the orientation*	Dimension not included in the profile construction
Dimension 13 Knowledge Society engagement 1. Disengaged: knowledge society concept glued on top or badly defined NE1, CE1, CE2, CE4, SE4; KS framed in terms of infrastructure alone NE1, NE3, CE3	2. Engaged NE1, NE2, NE3, CE1, CE2, CE3, CE4, SE2, SE3	Engaged composite: theme 2: NE2, CE1, SE2, SE3, SE4 Mixed composite: themes 1-2: NE1, NE3, CE2, CE3, CE4 *Information missing: SE1*	Dimension not included in the profile construction