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## **Assessing organizational capacity in higher education**

Design of an organization capacity assessment tool for Ethiopian new public universities. First results following a design-oriented approach.

Rita van Deuren <sup>1</sup>

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<sup>1</sup> Dr. Rita van Deuren, Maastricht School of Management, Maastricht, the Netherlands (deuren@msm.nl)

# MSM

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## **Abstract**

The Ethiopian higher education system has realized enormous growth in the recent years and its future ambitions require additional capacity development in quality and in quantity. In planning and monitoring capacity development, organizational assessment plays a major role. This paper outlines the results of the first steps in the design of an organizational capacity assessment tool for Ethiopian new public universities and as such describes dimensions and indicators of university organizational capacity.

## **Key words**

organizational capacity assessment, higher education, developing countries, Ethiopia, design-oriented research

## **1. Introduction**

- 1.1. This document describes the results of the first steps of the design of an organizational capacity assessment tool (OCAT) for 13 new public universities (NPU) in Ethiopia. It is a 'work-in-process' document that will be updated using results of next steps in the research and design process. The OCAT research and design project is part of a larger donor sponsored capacity development program aimed at enhancing university leadership and management capacity in the 13 NPU<sup>1</sup> and was agreed upon in the April 2013 NPU presidents meeting in Addis Ababa (Van Deuren, 2013a).
- 1.2. The paper first describes the design-oriented research approach used in the OCAT design. This paragraph is followed by additional information on organizational capacity assessment. The last paragraph lists the elements of the prototype OCAT for Ethiopian NPU's.

## **2. Design-oriented research approach**

- 2.1. The OCAT design follows a design-oriented research (DOR) approach in which design decisions are supported by results from (practice oriented) research. The project group working on the realization of the OCAT consists of five members: i) the project leader and the author of this working paper, ii) three representatives from different Ethiopian NPU's and iii) a representative from Ethiopian Education Strategy Centre (ESC).
- 2.2. The design cycle is made up of six stages (Verschuren & Hartog, 2005):

### *2.2.1. First hunch*

Define small set of goals to be realized by the OCAT. The goals of the OCAT have been defined by the project group:

- OCAT to be developed is a tool for management, supporting (strategic) decision making and priority setting on organizational capacity development.
- OCAT aims to contribute to organizational learning.
- The results creates opportunities for bench marking with other universities.
- OCAT also contributes to Balanced Score Card planning and control cycle by widening the scope of organizational capacity and make things visible that previously were out of sight.

### *2.2.2. Requirements and assumptions*

Specification of functional, user and contextual requirements to be fulfilled and of functional, user and contextual assumptions underlying the design. User requirements are investigated making use of semi-structured interviews with 13 NPU presidents and heads of transformation offices. The results of this empirical research I in the design cycle are not yet available but will be included in a next version of the working paper. Functional requirements and assumptions follow from OCAT- logic as described in paragraph 3 of this working paper.

### *2.2.3. Structural specifications*

Listing of the characteristics, aspects and parts the OCAT must have in order to fulfill requirements and assumptions. For the OCAT this is fairly simple: instruments and procedures for collecting and analyzing data on organizational capacity. See also paragraph 3.

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<sup>1</sup> University Leadership & Management Capacity Development Project (<http://www.msm.nl/Projects/Projects/University-Leadership-and-Management-Capacity-Deve>)

#### *2.2.4. Prototype*

The prototype represents the first realization of the OCAT ready for testing in an empirical setting. In order to speed up the OCAT design it was decided to start working on the first parts of the prototype before completing the user requirements research. The results of this part of the prototype design are presented in paragraph 4 of this paper. They will serve as input for discussion with experts. Both results from the expert interviews and results from the user interviews will be used to adjust and complete the prototype.

#### *2.2.5. Implementation*

In this stage the prototype is put into practice and piloted in 3 Ethiopian NPU. The empirical research II will not only test the OCAT but also provide university management with information on organizational capacity and collect data in the framework of capacity development in higher education institutions in developing countries.

#### *2.2.6. Evaluation*

Evaluation and adjustment of the prototype is based on interviews with 3 NPU's after analyzing the results of the pilot (empirical research III). Validation of the OCAT will be done in a meeting with the 13 NPU presidents. Finally, an OCAT toolbox will be created supported by a workshop on how to use the OCAT.

### **3. Organizational capacity assessment**

- 3.1. OCAT's are designed to assess capacity, and plan capacity development. They help organizations in identifying strengths and weaknesses used as input for development plans. OCAT's also can be used to monitor capacity development; this requires repetition at discrete intervals (Simister & Smith, 2010:11).
- 3.2. Most of the OCAT work in a similar four-step way (Simister & Smith, 2010:12):
  - Breaking down capacity into manageable areas
  - Developing a ranking or rating system
  - Developing a process for ranking or rating capacity
  - Analyze the results and take action
- 3.3. OCAT's, in one way or another, break down capacity into a number of discrete areas. This assumes an, explicit or implicit, underlying model of capacity and its constituting elements. No standard or widely accepted model exists for the breakdown of capacity and choices made are always somehow arbitrary. In the OCAT design for Ethiopian NPU the capacity development framework developed by Van Deuren (2013b) is used to break down capacity (see paragraph 4). Following the logic of capacity enhancement indicators (Mizrahi, 2003) the framework is used to identify dimensions that are further divided into sub-dimensions and indicators. In a later phase the indicators will be operationalized into specific items in a questionnaire.
- 3.4. The ranking or rating system and the process for ranking and rating will be defined at a later moment. Design choices foreseen relate to (mixed) use of
  - primary and/or secondary data
  - objective and/or subjective data
  - ordinal and/or interval scales (see illustration 1 for examples from literature)
    - o ordinal scales with prescribed answering options
    - o interval scales using only numerical indicators and naming scale extremes
  - respondents used to collect the information from
  - method of data-collection
- 3.5. In order to properly function an OCAT consists at least of:
  - One or more instruments / questionnaires guiding the collection of data on organizational capacity

- Procedure for collecting the data, including respondents chosen
- Procedure for analyzing the data

*Illustration 1: Examples of ordinal and interval scales and mixed type*

*Ordinal scale (example taken from Venture Philanthropy Partners, 2001)*

Item	1 Clear need for increased capacity	2 Basic level of capacity in place	3 Moderate level of capacity in place	4 High level of capacity in place
Overall strategy	Strategy is either nonexistent, unclear, or incoherent (large set of scattered initiatives); strategy has no influence over day-to-day behavior.	Strategy exists but is either not clearly linked to mission, vision and overarching goals, or lacks coherence, or is not easy actionable; strategy is not broadly known and has limited influence over day-to-day behavior.	Coherent strategy has been developed and is linked to mission and vision but is not fully ready to be acted upon; strategy is mostly known and day-to-day behavior is partly driven by it.	Organization has clear, coherent medium- to long-term strategy that is both actionable and linked to overall mission, vision and overarching goals; strategy is broadly known and consistently helps drive day-to-day behavior at all levels of organization.

*Interval scale (example taken from CEPU, 2013)*

Item	0	1	2	3	4	5
Preparation and implementation level of Balanced Scorecard (BSC) / Strategic Plan	.	.	.	.	.	.

*Mixture of ordinal and interval scale (example taken from Charles, Conway and Benneworth, 2009)*

Item	1	2	3	4	5
Strategic plan for business support	No strategic plan in place. Ad hoc approach to business support.		Strategic plan developed but only partially implemented, or restricted to certain departments or central functions only.		Strategic plan developed as a result of an inclusive process across the whole university. Accepted across almost all units and recommendations implemented. Us of plan to set targets and monitor achievement.

#### **4. Dimensions and indicators of organizational capacity**

4.1. Following Van Deuren (2013b) breakdown of capacity is in four groups of variables:

- Organizational characteristics / parameters
- Organizational capabilities
- Organizational processes / performance
- Results

Results come from a good functioning of organizational processes or performance, in order to perform organizations need the right capabilities resulting from a combination of organizational characteristics.

4.2. Results, parameters and performance are classified in 9 groups. The first three groups (paragraph 4.3) relate to the core university functions: education, research and community service. The second three groups (paragraph 4.4) relate to supporting activities: human resources management, student management and management of facilities and infrastructure. The last three groups (paragraph 4.5) relate to leadership, organization and management: leadership, planning & control and organization & systems.

4.3. Education, research and community service.  
The tables below list the OCAT elements for the three primary process of the university: education, research and community service.

#### 4.3.1. Education

Results	<p><i>Program offering</i> Bachelor programs: amount, sector, gender specific and % STEM Master programs: amount, sector, gender specific and % STEM</p> <hr/> <p><i>Enrollments</i> Undergraduate enrollment: amount, sector, gender specific and % STEM Graduate enrollment: amount, sector, gender specific and % STEM</p> <hr/> <p><i>Graduation rates</i> Undergraduate level: amount, sector, gender specific and % STEM Graduate level: amount, sector, gender specific and % STEM</p> <hr/> <p><i>Efficiency</i> Drop out / attrition rates: amount, sector, gender specific and % STEM Throughput time: amount, sector, gender specific and % STEM</p> <hr/> <p><i>Labor market relevance</i> Extent to which employers are satisfied with graduates competences. Extent to which alumni are satisfied with competences acquired. Extent to which graduates have a job or started their own business.</p>
Education aspirations and strategy	<p><i>Education aspirations</i> Extent to which education mission, vision and overarching goals are clear. Extent to which education aspirations clarify on contribution of education to university mission and vision.</p> <hr/> <p><i>Education strategy</i> Extent to which university has a clear, actionable, realistic (also financially and organizationally) coherent medium- to long-term education strategy linked to overall strategy Extent to which education strategy is aligned with research, community service, HRM and other university strategies.</p>
Curricula	<p><i>Learning objectives / content</i> Extent to which programs learning objectives are clearly described, conform to qualification frameworks and reflect relevant external developments.</p> <hr/> <p><i>Educational vision / didactics</i> Extent to which program visions exists on learning &amp; teaching reflecting students 'characteristics and program learning objectives and that underpin the program didactic concepts and appropriate methods for teaching &amp; learning.</p> <hr/> <p><i>Program</i> Extent to which educational programs are clearly described and designed in such a way that the integrated units (courses, modules) jointly result in the learning objectives. Extent to which programs learning objectives and educational vision are developed into course learning objectives and course descriptions outlining teaching activities, learning activities, learning materials and assessment methods. Extent to which students are aware of learning objectives and perceive the program feasibility to realize these objectives.</p>
Teaching and learning	<p><i>Teaching and learning practices</i> Extent to which teaching and learning activities reflect the plans in the course outlines. Extent to which teaching reflects theory-practice, knowledge-skills, teacher centeredness-student centeredness balances. Extent to which innovative teaching and learning is encouraged and rewarded. Extent to which students perceive teaching supporting learning processes.</p> <hr/> <p><i>Resources</i> Extent to which adequate learning materials are available to students. Average class size. Ratio contact hours – self study hours.</p>
Assessment of learning	<p><i>Assessment policy</i> Extent to which assessment visions and policies exist suited to assess programs and courses learning objectives guiding assessment plans (as described in the course outlines) and assessment practices.</p>

	<p><i>Assessment of learning practices</i> Extent to which assessment reflects the plans in the course outlines. Extent to which students' learning is assessed making use of various adequate assessment methods and reflects a mixture of formative and summative assessments. Extent to which students perceive assessments related to learning objectives and actual learning processes.</p>
	<p><i>Assessment transparency and feedback</i> Extent to which grading processes are objective and transparent and available for students. Extent to which students perceive transparency and reliability of the grading processes.</p>
Quality assurance and improvement	<p><i>Quality assurance policy</i> Extent to which policies, processes, organizational roles and resources exist and are used to measure and assure educational quality both for existing and new programs. Extent to which quality assurance encompasses elements such as learning results, content, teaching and learning and assessment. Extent to which staff, students, alumni and employers are involved in quality assurance.</p>
	<p><i>Quality assurance practices</i> Extent to which quality assurance activities follow quality assurance policies and plans.</p>
	<p><i>Quality improvements</i> Extent to which use of the quality assurance systems leads to demonstrable improvement plans and follow-up. Extent to which (departmental) leadership encourages and supports quality improvement plans and initiatives.</p>
Labor market relevance and involvement	<p><i>Labor market involvement</i> Extent to which labor market representatives are involved in deciding program learning objectives and participate in teaching and assessment activities. Extent to which the programs offer students to relate to labor market organizations by means of e.g. internships, assignments, community service.</p>
	<p><i>Labor market relevance</i> Extent to which programs reflect labor market relevant knowledge and skills, such as e.g. problem solving, entrepreneurship, communication and teamwork. Extent to which students perceive the program provides the adequate knowledge and skills for future careers.</p>

#### 4.3.2. Community service

Results	<p>Number / percentage of academic staff involved in community service Number of people / organizations in the community served</p>
Community service aspirations and strategy	<p><i>Community service aspirations</i> Extent to which community services mission, vision and overarching goals are clear. Extent to which community service aspirations clarify on contribution of community service to university mission and vision.</p>
	<p><i>Community service strategy</i> Extent to which university has a clear, actionable, realistic (also financially and organizationally) coherent medium- to long-term community service strategy linked to overall strategy Extent to which community service strategy is aligned to research, education, HRM and other university strategies.</p>
Community service involvement	<p><i>Education community service involvement</i> Extent to which regular education activities contributes to community service by addressing specific wants and needs</p>
	<p><i>Research community involvement</i> Extent to which university research is guided by community wants and needs and is characterized by community involvement</p>
	<p><i>Additional community service activities</i> Extent to which other community services exist</p>

#### 4.3.3. Research

Results	<p>Number / percentage of academic staff involved in research Research funding per academic Research publication</p>
Research aspirations and strategy	<p><i>Research aspirations</i> Extent to which research mission, vision and overarching goals are clear. Extent to which research aspirations clarify on contribution of research to university mission and vision.</p>
	<p><i>Research strategy</i> Extent to which university has a clear, actionable, realistic (also financially and organizationally) coherent medium- to long-term research strategy linked to overall strategy. Extent to which research strategy is aligned with education, community service, HRM and other</p>



	<p>university strategies.</p> <p><i>Research agenda</i> Extent to which research agenda exists, clearly describes research themes and priorities and participation of internal and external stakeholders. Extent to which research agenda drives priority setting and resource allocation.</p>
Research organization and management	<p><i>Research culture</i> Extent to which organizational culture supports research aspirations and management involvement to enhance organizational research involvement.</p> <p><i>Research structure</i> Extent to which formal organization structure exists appropriate for realizing research ambitions and plans.</p> <p><i>Research planning and monitoring</i> Extent which plans exist aiming at realizing research strategy and are used for guiding daily work and priority setting.</p> <p><i>Research funding and resources</i> Extent to which adequate funding is available for realizing research ambitions. Extent to which teaching load of academic staff interferes with realization of research ambitions.</p> <p><i>Research cooperation</i> Extent to which research involves national or international cooperation with external parties such as research centers, universities or industry partners.</p>

4.4. Management of staff, students and infrastructure. This section presents the table for the supporting activities contributing to the capacity in education, research and community service.

#### 4.4.1. Human resources management

HR Planning	<p><i>HR-planning</i> The extent to which policies, processes, organizational roles and resources exist and are used to forecast HR needs of the university and to plan steps to meet these needs. The extent to which HR planning relates to strategic plans (university wide and education, research and community service specific) and is integrated with other functional plans. The extent to which accurate and actual data on staff are available to support decision making.</p>
HRM-cylyce	<p><i>Recruitment and selection</i> The extent to which policies, processes, organizational roles and resources exist and are used to recruit and select administrative and academic staff. The extent to which financial and non-financial compensation is adequate to recruit qualified staff. The extent to which faculty is involved in selection of academic staff.</p> <p><i>Training and professional development</i> The extent to which policies, processes, organizational roles and resources exist and are used to develop administrative and academic staff. The extent to which budget is available for professional development. Percentage of staff engaged in professional development aimed at improvement on the subject matter and on didactical competences.</p> <p><i>Performance evaluation and rewarding</i> The extent to which policies, processes, organizational roles and resources exist and are used to evaluate and reward staff performance. The extent to which evaluation and rewarding is related to strategic goals of the university. The extent to which peers and students are involved in performance evaluation.</p>
Diversity	<p><i>Diversity</i> The extent to which policies, processes, organizational roles and resources exist and are used to strengthen the diversity of human resources. Percentage of female staff in various levels and functions.</p>
Employee quality and efficiency	<p>Proportion of faculty with bachelor, master and doctoral degree</p> <p>Percentage of faculty earning a degree after being hired</p> <p>Percentage of faculty with didactical qualification</p> <p>Academic staff- student ratio</p> <p>Academic staff – administrative staff ratio</p>
Employee satisfaction	<p>Faculty and administration preference for this university over others</p> <p>Faculty and administration satisfaction with employment</p> <p>Number of faculty members and administrators leaving</p>

#### 4.4.2. Student management

Recruitment and selection	<p><i>Recruitment</i> The extent to which policies, processes, organizational roles and resources exist and are used to inform and recruit prospective students.</p>
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	<p>The extent to which information for prospective students is complete and correct.</p> <p>The extent to which prospective students are supported in selecting an appropriate study program.</p> <p><i>Selection</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to select students.</p> <p>The extent to which selection processes are transparent and in line with pre-defined criteria.</p>
Student support	<p><i>Student support</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to support students.</p> <p>Extent to which incoming students' abilities are assessed and appropriate interventions arranged.</p> <p>Extent to which academic and non-academic counseling services are in place.</p> <p>Extent to which students perceive student support as adequate.</p> <p><i>Complaints / appeals</i></p> <p>Extent to which complaints / appeals procedure exists and is adhered to.</p> <p>Extent to which students perceive complaints / appeals procedure and outcomes satisfactory.</p>
Administrative	<p><i>Student administration</i></p> <p>Extent to which student data (personal and performance) are correct, up to date and complete.</p> <p><i>Tracking student performance</i></p> <p>Extent to which student data are available and used to facilitate student support services (tracking student performance and signaling backlog).</p> <p><i>Generating management information</i></p> <p>Extent to which student data are used to create management information related to performance targets.</p>
Alumni	<p><i>Alumni</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to build and maintain relationships with alumni.</p> <p>The extent to which alumni are involved in Education (e.g. teaching, tracer studies), research and community service.</p>
Diversity	<p><i>Diversity</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to strengthen the diversity of student population.</p> <p>Female enrollment in undergraduate, graduate and STEM.</p> <p>Female graduation rates in undergraduate graduate and STEM.</p> <p>Female students' efficiency.</p> <p>Similar for students from pastoralist and underserved area's and disabled students.</p>
Student satisfaction	<p>Student preference for this university over others</p> <p>Student satisfaction with overall university experience</p>

#### 4.4.3. Management of facilities and infrastructure

Physical infrastructure	<p><i>Physical infrastructure</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to forecast infrastructure needs (buildings, internal services like water and electricity) of the university and to plan steps to meet these needs.</p> <p>The extent to which physical infrastructure is in line with educational, research and community service ambitions.</p> <p>Extent to which students and staff perceive physical infrastructure to be adequate.</p>
Technological infrastructure	<p><i>Technological infrastructure</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to forecast technological infrastructure (computers, applications, network, website and e-mail) needs of the university and to plan steps to meet these needs.</p> <p>The extent to which availability and quality of technological infrastructure is in line with educational, research and community service ambitions.</p> <p>Extent to which students and staff perceive technological infrastructure to be adequate.</p>
Academic infrastructure	<p><i>Academic infrastructure</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to forecast academic infrastructure (science laboratories, language laboratories, libraries) needs of the university and to plan steps to meet these needs.</p> <p>The extent to which availability and quality of academic infrastructure is in line with educational, research and community service ambitions.</p> <p>Extent to which students and staff perceive academic infrastructure to be adequate.</p>
Housing and campus facilities	<p><i>Housing and campus facilities</i></p> <p>The extent to which policies, processes, organizational roles and resources exist and are used to forecast housing and campus facilities (sports, recreation medical service etc.) needs of the university and to plan steps to meet these needs.</p> <p>The extent to which availability and quality of housing and campus facilities is in line with university ambitions.</p> <p>Extent to which students and staff perceive housing and campus facilities to be adequate.</p>

4.5. Leadership, organization and management. The tables below show the items related to the steering and organizational context of the university.

#### 4.5.1. Leadership

Aspirations	<i>Mission</i> Extent to which a (written) mission expresses universities reason for existence, including values and purposes. Extent to which the mission is broadly held in the university and frequently referred to.
	<i>Vision</i> Extent to which a clear, inspiring, shared and demanding but achievable understanding exists of what the university aspires to become. Extent to which the vision is consistently used to direct actions and set priorities.
	<i>Overarching goals</i> Extent to which the vision is translated into clear, bold and measurable set of goals that university aims to achieve. Extent to which goals are broadly known and consistently used to direct actions and set priorities.
Formal leadership / university management	<i>Inspiration</i> Extent to which formal leadership is able to influence attitudes, behavior and values of others towards university goals.
	<i>Support of formal leadership</i> Extent to which academic and administrative staff support the formal leadership roles in the university.
	<i>Institutional transformation / change</i> Extent to which university leadership is able to communicate and discuss the rationale for change and 'sense-making' ('collective creation of a new reality through language').

#### 4.5.2. Planning and control

Strategy	<i>Strategy</i> Extent to which university has a clear, actionable, realistic (also financially and organizationally) coherent medium- to long-term strategy linked to overall mission, vision and overarching goals. Extent to which the strategy is broadly known and held in the university and drives behavior at all levels in the university.
	<i>Performance targets and realization</i> Extent to which quantified performance targets that are linked to aspirations and strategy, exist in all area's of the university. Extent to which performance targets are realized.
	<i>Policies</i> Extent to which university policies in all area's (including ethics, academic misconduct, nepotism, HIV/AIDS and sexual harassment etc.) are transparent, understood throughout the organization, linked to aspirations and strategy and guiding behavior at all levels of the university.
Planning and control	<i>Performance measurement, analysis and adjustment</i> Extent to which a comprehensive system exists for measuring performance and progress on continual basis including all aspects of university functioning. Extent to which performance is analyzed and used for making necessary adjustments and improvements.
	<i>Strategic planning</i> Extent to which strategic planning occurs regularly and strategic plans are used extensively to guide management decisions. Extent to which faculty is involved in strategic planning. Extent to which management information is available (both external to and internal to the university) to guide strategic planning.
	<i>Monitoring landscape</i> Extent to which the university has extensive knowledge on stakeholders and their interests and uses this information in strategic planning processes. Extent to which the university monitors external developments influencing university performance.
	<i>Operational planning</i> Extent to which university departments regularly develop and refine concrete, realistic and detailed operational plans (on e.g. faculty capacity planning, scheduling lecture halls and classrooms), both for routine activities and project activities. Extent to which operational plans are linked to strategic planning and systematically used to direct operations. Extent to which information is available to guide operational planning decision making.
	<i>Financial planning</i>

Extent to which solid financial plans budgets exist that are continuously updated following performance-to-budget monitoring.  
 Extent to which university higher-level budgets are translated into departmental, lower-level budgets and are integrated with operational plans.  
 Extent to which information is available to guide financial decision making.  
 Extent to which available budgets are used to its full extension.

### 4.5.3. Organization and systems

Organizational culture	<p><i>Organizational culture</i>          Extent to which university culture embraces quality and performance as shared values and is characterized by openness to the outside world and external focus.          Extent to which organizational culture is aligned with aspirations and strategy.          Extent to which beliefs, values, preferences and practices are shared or scattered throughout the university and provide members with a sense of identity and direction for behavior.</p>
Decision making	<p><i>Decision making framework</i>          Extent to which clear and formal systems exist and are used for decision making including relevant participation and dissemination of outcomes</p> <p><i>Balance administration and faculty</i>          Extent to which decision making structures and processes achieve an effective balance between legal authority (administration, boards), professional authority (faculty) and students' interests.</p> <p><i>Decision making and problem solving</i>          Extent to which problem-solving in the university follows a logic approach (diagnosing the problem, identifying alternative courses for action, decision making) and involves the appropriate participation</p> <p><i>Information for decision making</i>          Extent to which information needed for sound decision making is available, looked-up, sought for and used.</p>
Organizational structure	<p><i>Board governance / government structure</i>          Extent to which the governing structure links / harmonizes (conflicting) interests of internal and external stakeholders.</p> <p><i>Organizational design</i>          Extent to which tasks and responsibilities of all university entities are formalized, clear and a reflection of current reality.          Extent to which organizational design is aligned with strategic plans and aspirations.          Extent to which organizational structure and culture match.</p> <p><i>Individual job design</i>          Extent to which individual academic and administrative positions are formalized, clear and a reflection of current reality.          Extent to which faculty job design reflects professional characteristics of the job and balances between professional autonomy and organizational bureaucracy.</p> <p><i>Vertical reporting and communication lines</i>          Extent to which vertical reporting and communication lines (top-down and bottom-up) to properly inform management and staff on issues relevant for smooth functioning of the university.</p> <p><i>Horizontal coordination</i>          Extent to which effective horizontal coordination and communication between departments and functions exists and functions, either formalized (e.g. team meetings, project groups, liaison positions) or informal.</p>
Internal communication	<p><i>Internal communication</i>          The extent to which information is actively exchanged to create a shared understanding among members of the university.</p>
External relations	<p><i>Partnership and alliances development and nurturing</i>          The extent, to which university identifies, approaches and effectively builds and maintains relationships with external organizations and groups of strategic importance.</p> <p><i>Local community presence, relations and involvement</i>          The extent to which the university is widely known within the local community and is perceived as actively engaged.          The extent to which the university is aware of the power of public relations and marketing activities and actively makes use of them.          Extent to which easy accessible interfaces exists between the university and the community.</p>

4.6. Following the results from the interviews with NPU representatives and expert interviews the items will be adjusted and the system for ranking or rating and data-collection will be developed. Expert interviews are also expected to inform on how to include and operationalize the 5c-model of capacity.

## List of abbreviations used

DOR	design-oriented research
ESC	Education Strategy Centre
NPU	new public universities
OCAT	organizational capacity assessment tools
STEM	science, technology, engineering and math

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