Recognition & Rewards – Impact

This narrative describes the vision on impact, including its assessment, of the UM impact committee of the recognition & rewards project. This narrative is a dynamic vision document, aimed to serve as basis for further discussion.

Impact is key at UM

By linking the university to society from the local to the global level, UM aims to have a broad impact and to contribute to resolving societal challenges. Sound and high-quality education and research are prerequisites to achieve this. However, impact results from co-creation of knowledge with societal stakeholders and may also affect education and research in a positive feedback loop.

Impact can be defined as the effect of universities and its employees that goes beyond, as well as through, the traditional mission of academia related to education and research, or as in the British Research Excellence Framework "an effect on, change or benefit to the society, culture, economy, public policy or services, health, the environment or quality of life".

Open science is an important means to facilitate impact, as it allows more people to access scientific knowledge. Additionally, it simplifies the use and dissemination of research results and data both within and outside academia.

What is impact?

Impact arises in an intricate interplay between an academic's activities and environment that may improve the entire ecosystem. Impact is created not in a linear process, but more through a cyclical, continuous process with a complex interaction of many actors and reactors. There is no single impact, as there is not just one example of what constitutes impact. Different stakeholders will have different perspectives on what they consider impact.

Generally, impact results from the professional interaction of academics with society. Examples of an academic's impact could be a contribution to policy development, through formal and informal mentoring, and by representing academic institutions in societal debates, community-engaged research etc. Impact can be co-created by all employees, be it an academic or support staff, by using authority, position and an individual's unique set of skills, competences and experience developed throughout a career. In that respect, impact activities such as knowledge production, translation and transformation are seen as one integrated process (i.e. integrated approach), whereas some focus the attention selectively on knowledge exchange, dissemination, or impact generation as activities separate from the research process (separated approach). An integrated concept of scientific and societal value, adaptable to the local situation of the department, group, or field under study, will encourage doing what is valued most instead of doing what can be measured.

Impact concerns how academics are able to reach out and engage society – so it is not only the way in which education and research are utilised outside the field of science. Next to education, society can be engaged with science in a reciprocal process, for instance by means of citizen science. This, for example, includes engaging society by collecting data, by interpreting and communicating results, by setting an agenda, and by developing research plans, ideas and questions.

Complexities of impact

When looking for ways to assess impact, it is essential to consider the nature of that impact. There is sometimes an erroneous perception that the process leading to impact is a linear pathway that starts from fundamental research and proceeds via more application-oriented (applied) research to – ultimately – applications. This 'pipeline model' is obsolete. In current research endeavours, new knowledge is generated within a dynamic and iterative process that is increasingly open and focuses on co-creation with students and societal stakeholders. The reach and scope of impact should be differentiated according to career stages and career paths. In this sense, it is important to acknowledge that the timescale of (short-term, mid-term, long-term) impact evolves throughout a career and differs for different types of research.

How to assess impact?

In the assessment of impact, a distinction can be made between 1) the impact of education and research, and 2) an academic's development in this area.

Impact of education and research
The methods for assessing the impact of education and research can be divided into two categories. The first comprises methods that assess impact at certain time-points after the co-creation of knowledge with society has been completed (ex-post assessment). The second category consists of methods that try to estimate in advance the impact that scientific co-creation can have in advance (ex-ante assessment). There is often a considerable time lag between scientific activities being carried out and society experiencing its impact. In order to understand this process, most methods distinguish between three different types of results:

1. Output, i.e. the most direct results of scientific co-creation, which are often apparent in the relatively short term. These results can most easily be quantified and counted.
2. Outcome, i.e. the medium-term results, which often have a clear relationship with the objective of, for example, a research project.
3. Societal and economic impact, effects typically in the long-term.

It should be noted that short-term results also could impact on the long-term. In addition, a third additional method is to undertake an assessment at a certain point during the research/education impact process, as a point of reflection. This also correspondents to the viewpoint that impact is a cyclical continuous process, sometimes without a clear 'before' or 'after'.

The table below contains examples that exemplify the diversity of forms that impact can take. These examples are derived from the Strategy Evaluation Protocol 2021-2027.[1]

Table. *Examples of types of impact*

Type of impact	Examples
Output (effects already in the short-term)	- Contribution to universities' primary processes (research and education) - Bachelor, master, and post-graduate education - Supervising students - Engaging with society in one's research, e.g. as a client panel, data collection through the public (citizen science approach) - Community-engaged research (in all phases of the research process) - Public presentations - Media appearance - Professional publications - Participation in panels/debates - Consultancy work and advisory body work - Membership of councils, boards and advisory committees (within and outside UM)

[1] https://www.vsnu.nl/files/documenten/Domeinen/Onderzoek/SEP_2021-2027.pdf

	- Direct patient care - Serving the court by providing advice - Films, documentaries and exhibitions - Participation in exhibitions and music - Software - Blogs and forums
Outcome (effects in the medium-term)	- Patents and licences - Spin-offs - Improved citizen/consumer behaviour - Improvement of organizational processes - Impact on policy design
Societal and economic impact (effects typically in the long-term)	- Results of output and outcome. For example an adopted policy that results in an improvement of welfare, well-being, health, safety, sustainability etc. - Education of a next generation of professionals - Influencing local, regional and national politics

Measuring impact
Impact has many parameters and impact assessments are often undermined by the tendency of academics and funding bodies to "count what can be easily measured", rather than measuring what "counts". Assessments of impact should primarily focus on personal development and growth (during a career) and not be about 'ticking boxes'.

The nature and scope of impact changes over a career path. Expectations and assessment have to be aligned with the appropriate career phase. Key to an adequate assessment of impact is to provide a solid and understandable framework in which an academic can assess her/his own performance and development, but that also is flexible enough to accommodate the different types of careers. Given that impact comes in so many ways and forms, there is no one size fits all when it comes to assessing impact.

Assessing impact requires formative assessment strategies. For example, a guided narrative in which the academic and others reflect on the academics' impact performance and development in both a qualitative and quantitative way. This guided narrative could also address how the education and research impacts society, economy and culture (in a qualitative way). It is further important to include the ecosystem, in which the academic performs, in this guided narrative.

When assessing impact, it is important to take into account the following aspects:
- The three different types of impact: output, outcome and societal and economic impact.
- Different types of impact efforts:
    - efforts made during the research process to involve the relevant stakeholders
    - efforts made during and/or after the research process to share research results with the relevant society
    - efforts made during the education process to include societal value and impact
    - efforts made during the education process to go beyond education for the purpose of passing the exam/obtaining a degree
- Recognize and acknowledge that:
    - different types of impact require different skills, and also assess what one has done during a certain time period to acquire relevant skills
    - the type and scope of impact varies per discipline
    - impact itself as well as the type of impact activities differ during a career and happen over time
- Individual versus collective (team-based) impact: research is very often a collaborative effort and not always traceable to an individual researcher or research unit resulting from an iterative and dynamic process. Impact is often unknown or indirect and is often created collaboratively in teams, but potential impact awareness should exist in all individuals that make up a team.

- Impact work is not always recognized and rewarded, and sometimes overlooked by managers. Also attention for inclusion and diversity and their effect on impact assessment is important: people belonging to minority groups often perform more internal and external impact work but do not recognize the work as such and are often not recognized and rewarded for it. Managers not belonging to these groups often overlook this particular type of impactful activities.

It is recommended to look for best practices regarding impact assessment both within and outside UM.