The Many Ways of Addressing Societal Impact Evaluations in Dutch Universities.

A report by the Task Force Societal Impact (as part of the UKB Coordination Point Research Impact): Alenka Prinčič¹, Shaya Abdolahzadeh², Ana Ranitovic², Lisa Idebolo³, Zohreh Zahedi⁴

¹TU Delft Library, Delft, The Netherlands.

² University of Groningen Library, Groningen, The Netherlands,

³ Eindhoven University of Technology, Eindhoven, The Netherlands,

⁴The Royal Netherlands Academy of Arts and Sciences, Amsterdam, The Netherlands.

Introduction

The societal impact of research and education, as well as collaborations with industry and society at large occupy a central position in the strategies of many higher education institutions in the Netherlands and across the globe. Different research disciplines generate scientific and societal impacts in various ways and so require flexibility and nuance in their definitions.

What is societal impact, and how can we measure it? What are the indicators of impact and how should we recognize, appreciate, and value academics for their endeavors in societal outreach? What data, tools, methods, and approaches are deployed to support research units in demonstrating their societal impact? And how can we track and recognize research teams' contributions in creating impacts for a better society? These are some of the key questions that are currently being addressed by academic institutions as they work to define their own methodologies for providing evidence of societal impact of their academic work.

In the past decade, new innovations in alternative metrics have been developed to address challenges of tracking societal outreach and impact. While these innovations are diverse, many of them are limited to commercial solutions and only a few include non-commercial, open data. Furthermore, alternative metrics may offer insights only in some aspects of the complex societal impact evaluation.

To examine how universities address societal impact – the needs, barriers, and expectations in different disciplines, the kind of information that is needed and how this information may be obtained – the Task Force Societal Impact (TFSI) instigated a survey among Dutch Universities (and KNAW). This information synthesis aimed at creating a better understanding of the current approaches of Dutch universities to societal impact evaluation, sharing their considerations, and in identifying relevant initiatives or best practices at the national level. In this way the review would provide fertile ground for further innovations in how academia tackles the challenges of societal impact. This report captures the views and considerations of all 14 universities in the Netherlands (and KNAW).

Methodology

The contextual information used in this review is based on a number of reports outlining best policy and practice across the sector regarding the societal impact of research, such as of the VSNU (Universiteiten van Nederland), KNAW, NWO, Springer Nature, REF, Science Guide, and more.

TFSI drafted a questionnaire for distribution to all universities (and KNAW) in the Netherlands via a contact point at each university:

University of Amsterdam (UvA) Utrecht University (UU) Tilburg University (UvT) Erasmus University Rotterdam (EUR) University of Twente (UTw) Maastricht University (UM) Wageningen University and Research Center (WUR) University of Groningen (UG & UMCG) Eindhoven University of Technology (TU/e) VU University Amsterdam (VU) Radboud University Nijmegen (RU) Delft University of Technology (TU Delft) Leiden University (LU) Royal Netherlands Academy of Arts and Sciences (KNAW)

The questionnaires consisted of eight questions about external influences and developments, definitions, and examples of societal impact, tools, and data availability, and innovative or best practice examples. The questions were:

- How have the latest developments like the responsible metrics initiative, SEP 2021–2027 and the position paper 'Room for Everyone's Talent' (VSNU recognition and rewards) influence your institution's evaluation practice, particularly in relation to measuring the societal impact of research? What challenges have you or your organization faced with regard to these changes? Has evidence of societal impact become a part of your institution's research evaluation?
- 2. How does your institution or organizational unit define 'societal impact'?
- 3. Does your organization have an institutional **policy** on societal impact evaluation? If yes, does the policy apply to all organizational units equally or are there disciplinary or other differences?
- 4. Is there sufficient robust data available to demonstrate societal impact using the indicators as required by your institution?
- 5. Which scientific works and activities best demonstrate societal impact from your organization's perspective?
- 6. Does your institution use any of the following (commercial or open source) sources of altmetric data and tools? Altmetric.com, Plum Analytics, Lagotto, PloS ALM, CrossRef Event Data, Mendeley.com, Cobaltmetrics, Overton, or Meltwater. If yes, how are these data aggregations made available – via a subscription-based institutional platform or other ways?
- 7. Are you investigating any new, unconventional data, tools, or methodologies, possibly open source?
- 8. Is there any best practice case regarding societal impact evaluation that you'd like to refer us to?

The questionnaires were set up in a way that enabled input by multiple initiatives and were passed to different areas of the university for completion. The questionnaires have been handled anonymously while the respondents had the option to share contact details for follow-up. The survey started in June 2021 and ran over several months to accommodate collecting the information from multiple institutional initiatives.

All responses were consolidated into a single workbook where each question was analyzed by at least two persons in two rounds of reviewing in order to find commonalities and to identify outliers. This ensured reducing any potential bias in the analysis. The draft report was first sent for facts – and confidentiality checking to those who have contributed to the survey, followed by the CRI members requiring their feedback.

What do the responses show us?

In total, 14 institutions submitted the responses (100% response rate). The responding departments were from:

- University Library departments (7) Research Support Unit, Research Analytics, Center for Digital Scholarship, RDM;
- University Corporate Office/Academic Affairs Office (6) Executive Services, Department Student Affairs, Education and Research, Research & Impact, HR, Strategy Department for Education and Research, University Research Services;
- Faculty/Institute (3).

How have the recent developments and initiatives influenced the institutions' evaluation practice?

The latest developments and initiatives in research evaluation (such as responsible metrics, the VSNU/KNAW/NWO Strategy Evaluation Protocol 2021–2027, and recognition and rewards initiative 'Room for Everyone's Talent'¹ have influenced institutions' evaluation practice, and particularly the way to measure the societal impact of research. Most institutions (13) engaged in raising awareness among faculties and staff on responsible metrics, recognizing the need for a strategic approach to impact evaluation, and/or immediate acknowledgment of a variety of activities in their evaluations, including those leading to potential societal impact:

- Both the new SEP and VSNU paper on Recognition & Rewards instigated projects, programs, or dialogues, that rendered high-level strategic papers on redefining existing frameworks such as visions, ambitions, perspectives, and recommendations, that will support developing intuitional policies. At the time of this survey (Q4 2021), most institutions were preparing their implementation plans a set of actions, new criteria, and new evaluations approaches to start no earlier than 2022. These have yet to materialize, as "no concrete steps have been taken yet towards change of practice."
- From these, a somewhat different approach worth pointing out is that of Erasmus University Rotterdam (EUR) where impact evaluation is seen as a learning and improvement instrument rather than looking back and assessing completed research (summative vs. formative

¹ https://recognitionrewards.nl/

evaluation). In this new approach, ambition, activities, evaluation, and learning are intertwined. This, therefore, entails a shift from impact as a by-product of research to impact as an explicit goal (and corresponding strategies, actions). Eventually the evaluation of societal impact as a narrative will be supported by pre-defined indicators selected by a specific group in line with their strategy.

- Three institutions noted that the emphasis shifts away from individual level towards group-level analysis.
- Single respondents implied that a larger variety of societal impact options (such as science communication, collaboration with industry, and starting a company) have become acknowledged and valorization activities are included in the evaluation. The influence of the developments has been manifested in a practical application rather than high-level strategy. More specifically, it adds a new source of citations (policy citations) into their bibliometric reports.

Altmetric Explorer has been used to support the narrative on impact use cases for the SEP in line with the strategy of the institute under evaluation (one respondent). However, it is mentioned that a similar exploratory tool for mentions in educational textbooks or clinical guidelines is lacking.

One respondent emphasized that metrics can or will play a role in assessing societal impact, but is yet to be determined and in what manner. Through a project, the institution will delve further in the products and activities that have a societal impact and seek ways to better value and appreciate them.

A different, somewhat practical effect of the developments in research evaluation practices is the gaining momentum for research intelligence and the universities investing in setting up well-skilled and well-equipped research intelligence units.

Some **challenges** have as well been acknowledged among the respondents – the lack of good indicators and metrics as the main one. Limited coverage of certain disciplines in databases (including altmetric databases) combined with a lack of DOIs makes it harder to create good indicators for some disciplines compared to others and impossible to benchmark. Consequently, support staff are empty-handed when they need to provide support for evidencing societal impact.

- A particular challenge is also researchers themselves (in some disciplines in particular), who find it difficult to let go of metrics. They can find it difficult to deal with an increased level of freedom through the narratives. It may as well appear unclear how changes in research evaluation on a national level (in the Netherlands) will influence their international reputation.
- One respondent pointed out that while societal impact is important, it may also add another source of work pressure. As researchers initially (have to) undertake fundamental research without a direct impact and are of the opinion that knowledge created by fundamental research is equally important as societal impact, a balance should be kept. Adding actions towards societal impact and valorization may thus cause additional pressure.

A better balance between teaching and research duties, greater recognition of team performance, and the elimination of simplistic assessment criteria are challenges to be considered in the new approach to scholarly recognition and reward frameworks (one respondent). Similarly, a challenge will be choosing/defining the main indicators of societal impact, striking the right balance between qualitative and quantitative evaluation; and using software applications that can support the registration of impact. It will be equally crucial to achieve alignment between research evaluation on an institutional and individual level, and between R&R, SEP, and the yearly reporting cycle.

About a definition of societal impact

A range of descriptions were given by the 14 respondents, confirming there is no "official" definition for societal impact. Universities describe societal impact in terms of *guidelines*, or a set of *criteria*. Often these criteria are around the *activities* as indicators of creating impact. Some universities' aspirations regarding societal impact are captured in their Universities Strategic Frameworks, however, the definitions in these documents are vague. Occasionally, specific areas of the university (e.g., faculty, library) may have their own working definition whereas others follow sector-wide standard guidance.

The definitions given are both broad or specific and vary from 'having impact & added value, to bringing about change – on the society, in education, and research. In some cases, the definition included political, social, economic, environmental changes, impact to outreach activities, and contribution to productive interactions and cooperation between researchers and stakeholders outside the academia (funders, industries, policy-makers, and citizens), contribution with social issues and challenges. Some respondents adapted the definition of societal impact based on the definition agreed upon by the VSNU "Raamwerk Valorisatie-indicatoren" (UG+ & MC) and the current Strategic Evaluation Protocol (SEP), which was incorporated as the core part of their strategic frameworks (TU Delft) or strategic plans (Tue). In fact, about a half of the universities relate their description of societal impact to SEP, thus in terms of *assessment* & *measurement* of the societal impact. Some respondents equated the definition of societal impact with valorization (UvA, VU, LU) and specified a matrix of output and activities, and their specific types of impact.

There is one exception (EUR) that attempts to step away from defining impact in terms of assessment of output and its measurement (the specific component of the SEP). Instead, they work with a set of descriptive 'characteristics' and behavior rather than activities. This is done through a project specifically devoted to studying evaluating societal impact. Three types of impact are distinguished: *Instrumental*: influencing the development of policy, practice, or service provision, shaping legislation, altering behavior; *Conceptual*: contributing to the understanding of policy issues, reframing debates; and *Capacity-building*: through technical and personal skill development.

In one case, a detailed <u>advisory document</u> for the Ministry of Education, Culture, and Science over the definition of societal impact was found (KNAW).

In summary, most common descriptors of societal impact are visualized in the map below:

- creating societal value,
- bringing about actual *change* in society,

- societal relevance,
- potential impact,
- knowledge exchange, knowledge utilization, knowledge exploitation,
- technological breakouts,
- cultural values,
- involvement and contribution,
- activities,
- industry, partnerships, public-private collaboration, start-ups, spin-offs,
- citizen science.



Image 1: Visualization of major terms associated with defining societal impact.

The answers in the questionnaires have been cleaned and collected in an Excel table (NLP-mined terms), including the number of times the terms appear in the answers (#Instances) and which terms have been chosen to include in the word cloud (WordcloudSelection). The terms consist of several words and of one word that have been labeled as 'relevant'. From this selection the VantagePoint word cloud visualization is created (D.J. Ligtenbelt, TU Delft Library).

Are there institutional policies on societal impact evaluations, possibly accommodating disciplinary differences?

The majority of organizations (12 out of 14 responses) reported that they do not have any institutional policy on societal impact evaluation yet. Some mentioned that they have only provided guidelines and best practices for their research community. This concerns embedding societal impact as a criterion in yearly appraisals and promotions, personnel planning, and recruitment. Nevertheless, the criterion is not clearly defined as an institutional policy.

At EUR, however, each faculty/school defines its own policy to provide room for disciplinary differences. Accordingly, each school would have an 'impact dean.' The EUR institution's Evaluating Societal Impact project² defines 10 basic principles of societal impact:

² https://www.eur.nl/en/research/research-services/societal-impact-evaluation

The many ways of addressing Societal Impact Evaluations in Dutch universities. By Alenka Prinčič (TU Delft), Shaya Abdolahzadeh (UG), Ana Ranitovic (UG), Lisa Idebolo (TU/e), Zohreh Zahedi (KNAW). 6

1. Societal impact occurs when research helps society to deal with the challenges it faces;

2. An impact-driven university knows about, supports, and promotes the societal impact of its research;

3. Clear strategies enable research to increase its impact;

4. Impact assessment is part of a learning process that aims to improve strategies for achieving impact;

5. Impact is assessed in light of the impact ambition and strategy of the project or group concerned;

6. Ambitions for impact specify goals, target groups, and interaction mechanisms (theory of change);

7. Evaluation of impact relies on a powerful combination of narratives and indicators. Narratives are qualitative reconstructions of productive interactions and impact pathways; indicators are selected on the basis of the ambition to substantiate the narrative;

8. Evaluation also maps the institutional environment and the extent to which this environment supports and facilitates the creation of impact;

9. Stakeholders from society are invited to and involved in impact assessment;

10. By 2024, impact ambitions, activities, and assessments are embedded in ongoing research processes so that evaluating societal impact is part of a learning, responsible, and inclusive organization.

Is there sufficient data available to support demonstrating societal impact?

The research institutions need reliable, quantitative methods to measure societal impact. However, the received responses show that despite the ongoing efforts there is still a lack of robust and high-quality data to demonstrate the (potential) societal impact. Several reasons for this shortcoming, as well as challenges to overcome the issue have been indicated in the collected responses.

One of the main difficulties in developing a societal impact measure is that impact carries different meanings for various research institutions and communities. This complicates establishing a unified assessment and evaluation of societal impact.

Societal impact activities are, in general, hard to use for benchmarking individuals or institutions. A possible approach toward this problem is stated in one of the responses as "one unified source of data nationally or globally is needed that would allow fair and transparent benchmarking, taking into account differences and elaborate national definitions and registration of relevant data for national benchmarking; giving the example of UK by the Higher Education Statistics Agency."

The data in CRISes is not always complete and updated, which hinders tracking and benchmarking societal impact activities. A similar issue, namely incomplete coverage, exists for commercial products. For these reasons, there is a pressing need for developing standardized frameworks to quantify societal impact for research institutions.

Institutions' views on which scientific works and activities can best demonstrate societal impact.

Almost all institutions acknowledge there is not sufficient robust (or high-quality) data to demonstrate (potential) societal impact. At the time of the survey the institutions are yet to identify which works, activities or indicators can best provide evidence for societal impact. Some examples of societal impact mentioned by some respondents are:

- Mentions of research output in policy documents
- Popular scientific works
- Patents
- Making historic and heritage collections available
- Impact-oriented research projects (e.g., NWA)
- Membership of advisory councils
- Collaboration with regional partners.

- Spin-offs, start-ups
- Business development, entrepreneurship
- Societal service and charity initiatives
- Media performance (TV, newspapers, etc.)
- Social media activities
- Public lectures and debates

A range of noteworthy points are mentioned:

- a) There is *no one size fits all* approach. Publications and activities are means that can be used on the pathway to impact, but they should not be confused with the goal itself. In general, indicators that show *collaboration* of and *interaction* between *partners* (academic and non-academic) demonstrate a more likely chance of impact in the end.
- b) At TU Delft, the scientific works and activities regarding societal impact are divided into three possible categories of societal impact (in development): *Explain* (e.g., media activities), *Engage* (e.g., cooperating with partners from other universities or the industry) and *Change* (e.g., practical applications of designs or inventions).
- c) As part of the Leiden University's advice to their research staff on achieving maximum impact is that it all starts with a vision, the step-by-step plan lists various means to increase societal impact, namely: through interaction with professionals, the commercial sector, the government and NGOs, or general audiences.
- d) Even though societal impact implies a focus on an end-result, what matters for EUR are the 'Pathways to impact,' that is the processes of interactions between various scientific and societal actors, the patterns of contact, collaboration, and exchange. These pathways can help researchers and stakeholders to shape their relationships at the beginning and deal with a shared challenge or concern in the process.

For additional information the reader is referred to the following webpages:

- The UU defined four strategic themes and societal impact: https://www.uu.nl/en/research/profile/collaboration-within-hubs
 Tilkum University large at Decempon
- Tilburg University Impact Program: https://www.tilburguniversity.edu/nl/onderzoek/impact and the nominees
- EUR innovative concepts in impact evaluations: https://www.eur.nl/en/research/research-services/societal-impact-evaluation/theoretical-concepts
- Tilburg University Impact Award: https://www.tilburguniversity.edu/nl/onderzoek/impact/impact-award-2021-videos
- Leiden University step-by-step plan towards more impact:
- https://www.staff.universiteitleiden.nl/research/impact/roadmap-and-examples/roadmap/service-uni

ts?cf=service-units.

About altmetric data and tools used by the institutions

The survey explored if the universities use any of the (commercial or open) sources of altmetric data and tools and how these data aggregations are made available – via subscription-based institutional platform or other ways. Of the 13 universities that responded to the questionnaire, the majority use Altmetric Explorer – a total of nine. Of these nine, two universities only use the Altmetric badge on their institutional repositories, whereas the other seven use it for other purposes such as collecting mentions and to a lesser extent, generating analysis. This is in four universities also supplemented by PlumX analytics. Other tools that are used are Meltwater (three universities), LexisNexis, Mendeley and Cobalt Metrics (two or fewer universities), as well as social media platforms more generally. Three universities and one organization use none, to their knowledge.

Investigating new, unconventional data, tools, and methodologies.

While this question may have been the most interesting one in this survey, the responses were somewhat discouraging at a first glance. Most universities (eight out of 13) are not investigating unconventional tools or data at present. Moreover, none of the universities have indicated that they are investigating open source data, and of those, only one emphasized that this may change in the future.

Again, the EUR stands out from the crowd. The university's Evaluating Societal Impact team addresses the theoretical concepts that are important while discussing impact evaluation as an instrument for learning and improvement at Erasmus University Rotterdam. The <u>evaluating societal</u> <u>impact project</u> is elaborating on new methodologies and approaches, rather than merely looking for new data or tools, and EUR is seeking to explore different pathways to impact, the different science-society relationships that lead to these, how best to facilitate and support their realization, and track the results. For EUR, evaluation can also be considered as a process, taking place across all phases of a project, used to determine what has happened and whether the initial aims of the project have been carried out and achieved. Evaluation can do more than assess and measure; it helps set the stage for a culture of learning, change and improvement. EUR puts the development and learning process central (formative evaluation), instead of looking back and assessing completed work (summative evaluation).

Though other universities may be investigating new approaches in their own capacity, they primarily responded about the tools they are or would like to be testing. Of those that are looking into expanding their toolkit, the greatest interest is in testing the Dimensions research database (three organizations). Other tools mentioned include LexisNexis, SDG-analysis using Elsevier's SciVal and Scopus, Scite.ai, Publons, Lens.org, OpenAlex, and OpenCitations.

Best practices in societal impact evaluation.

Finally, the respondents were asked if they are aware of any best practice cases regarding societal impact evaluation. Several universities shared that they have adapted their career tracks and/or

assessment criteria to the Rewards and Recognition framework, and consider this to be a current best practice. This primarily means diversifying the focus of career tracks within the performance and talent development cycle into the five domains of education, research, societal impact, leadership, and team spirit. Other universities have indicated that the development of new procedures and protocols is underway and that working groups have been created for this purpose.

The surveyed organizations have also shared examples of what they consider to be best practice as follows:

- <u>KNAW advice 2018 Maatschappelijke impact in kaart</u>, which uncovers significant factors and processes that can lead to an increase in societal impact and provides valuable recommendations on how to go about estimating future impact;
- **<u>REF Impact Case Studies</u>**, as a rich source of evidence-based societal impact examples from the domain of industry and public policy especially;
- <u>Knowledge exchange framework (KEF) UKRI</u>, which is useful to explore the different ways in which UK universities collaborate with external partners;
- <u>Impact cycle webinar</u> of the University Medical Center Groningen Impact team, which raises awareness among researchers on the importance of showcasing impact and presents the Impact cycle approach as an effective way to do so;
- <u>NWO Impact Outlook Approach</u>, developed to facilitate the discovery of (unforeseen) opportunities for societal impact arising out of research. The approach provides interesting concepts that help researchers in planning, increasing, and evaluating the societal impact of their research, as well as ideas on how best to incorporate these within their research plans.

Conclusions

The aim of this survey was to explore the current approaches as well as identify relevant initiatives of Dutch universities in measuring societal impact. A summary of the results and a concluding note are presented below.

The result of the survey showed that in terms of definition there is no consensus among Dutch universities in defining societal impact. The definitions vary per organization and are both broad and/or specific and vary from having impact, added value, or changes on society, education, and research to diverse activities.

As expected, the latest developments and initiatives in research evaluation (such as SEP, VSNU recognition and rewards, and responsible metrics) have influenced institutions' evaluation practice and particularly measuring societal impact of research. The need for a strategic approach to impact evaluation and including a variety of activities in evaluation are emphasized by many universities. It seems that universities are currently busy with preparing implementation plans and relevant actions for tackling new approaches for measuring societal impact. Particularly, some practical approaches such as shifting from individual level towards group-level analysis and from measuring impact

towards identifying characteristics are visible in some universities' strategic plans. Some examples of practical approaches performed by some of the universities include valorization activities, collaboration with industry, starting a company, using new source of metrics to bibliometrics toolkit, supporting narratives with the so called new altmetrics indicators, setting up well-skilled and well-equipped research intelligence team.

However, some of the main challenges reported by universities in measuring societal impact are the lack of good indicators and metrics, limited coverage of certain disciplines in databases, striking the right balance between qualitative and quantitative evaluation, and using systems/software applications that can support the registration of impact. Dealing with researchers who are mostly metrics friendly and who find it difficult and as a source of work pressure for actions that need to be taken toward demonstrating societal impact of research is another challenge that universities are facing. Moreover, developing meaningful evaluation criteria for societal impact, achieving alignment between research evaluation on institutional and individual levels and on the national level, maintaining a better balance between teaching and research duties, having greater recognition of team performances and the elimination of simplistic assessment criteria, and how changes on the national level will influence international reputation are recognized as the main challenges to be considered by the universities in the new approach on the renewal of scholarly recognition and reward frameworks.

The results showed that there is still a lack of robust and high-quality data to demonstrate the (potential) societal impact. Several reasons for this shortcoming are related to lack of a unified set of assessment and evaluation criteria for societal impact definition and measurement, lack of unified source of data (incomplete coverage) that would allow fair and transparent benchmarking and take into account differences, and incomplete and not updated CRISes which hinders tracking and benchmarking societal impact activities.

Also, universities do not yet have any institutional policy on societal impact evaluation. Instead, some guidelines and best practices which concerns embedding societal impact as a criterion (which is not clearly defined as an institutional policy) in yearly appraisals and promotions, personnel planning, and recruitment have been developed by some of the universities.

In terms of using tools and data sources for demonstrating societal impact, the majority of universities use Altmetric Explorer and/or Altmetric badge on their institutional repositories for collecting mentions and generating analysis. Some other tools such as PlumX analytic, Meltwater, LexisNexis, Mendeley and Cobalt Metrics, as well as social media platforms are also used by some of these universities. Besides, universities are looking into expanding their tool-kit and some data sources such as Dimensions, LexisNexis, SDG-analysis using Elsevier's SciVal and Scopus, Scite.ai, Publons, Lens.org, OpenAlex, and OpenCitations are among the tools that are investigated the most by universities. Moreover, most universities are not investigating any unconventional tools or data at this moment. Also, no open source data source was observed among the responses.

In terms of the scientific works and activities that would best demonstrate societal impact most universities replied that there is *no one size fits all* approach and mentioned that beside publications

and activities, collaboration of and interaction between partners (academic and non-academic) that could also demonstrate impact. Some examples of societal impact mentioned by some respondents among others are research output, mentions in policy documents, Popular scientific works, Patents, Spin-offs, start-ups, business development and entrepreneurship, societal service and charity initiatives, making available historic and heritage collections, impact-oriented research projects, media performance, social media activities, public lectures and debates, membership of advisory councils, and collaboration with regional partners.

Regarding awareness of best practices in societal impact evaluation, several universities considered the Rewards and Recognition framework as the current best practice. Other universities have indicated that the development of new procedures and protocols is underway and that working groups have been created for this purpose.

Based on the above results, it seems that it is still too early to have an overview of approaches in measuring societal impact that are already implemented by the surveyed universities. In line with the recent initiatives at the national level, universities acknowledged the importance of taking into account the diverse types of output, activities, and impact and were completely aware of the need to consider the impact of science on society in their strategic plans and appraisal/promotion decisions. However, due to the diverse nature of societal impact in terms of concept, lack of appropriate tools, and lack of robust data, as well as disciplinary differences across fields of science, tracking, and measuring such an impact becomes very complex. Hence, following the suggestions for maintaining responsible metrics in measuring societal impact³ and the societal impact advise,⁴ it is best to focus on the context under evaluation, as well as the actors, and their interactions and consider tailor-made approaches which are suitable for the discipline of the unit under evaluation.⁵

³ <u>https://leidenmadtrics.nl/articles/responsible-metrics-for-societal-value-of-scientific-research</u>

⁴ https://www.knaw.nl/nl/actueel/publicaties/maatschappelijke-impact-in-kaart

⁵ <u>https://academic.oup.com/rev/article/30/3/323/6220452?login=false</u>

Acknowledgment

We would like to acknowledge the contributions from the members of the UKB-CRI group. We also thank Dirk Jan Ligtenbelt from TU Delft Library for creating the word cloud visualization, and Jordy Gevers for his contribution in setting up the survey.

About the Task Force Societal Impact and the authors of the report:

The Task Force Societal Impact works (anno 2021–2022) under the umbrella of the UKB Coordination Point Research Impact. We are a small group that joined their efforts in studying the policies and approaches in societal impact evaluations among Dutch universities.

Alenka Prinčič (TU Delft), Shaya Abdolahzadeh (UG), Lisa Idebolo (TU/e), Ana Ranitovic (UG), and Zohreh Zahedi (KNAW). <u>A.Princic@tudelft.nl</u>, <u>s.abdolahzadeh@ruq.nl</u>, <u>l.m.idebolo@tue.nl</u>, <u>a.ranitovic@ruq.nl</u>, <u>zohreh.zahedi@knaw.nl</u>



For any further questions regarding the questionnaire and the report, please contact any member of the TFSI.

About the UKB-CRI:

https://ukb.nl/commissies-en-werkgroepen/coordinatiepunt-research-impact-cri/