



IMPACT GLOSSARY

KEY TERMS EXPLAINED

UTILIZING OUR IMPACT POTENTIAL

VERSION 1.0
DECEMBER 2023

ABOUT THIS GLOSSARY

'Utilizing our Impact Potential' (UTIP) is a program designed to integrate current impact related UT efforts, connect the UT community even better with her stakeholders and help colleagues learn from each other to further develop impactful education, research and innovation activities. This impact glossary is developed to align UT internal discussions on impact, and to have a clear story when talking to our external partners.

In our strategy 'Shaping 2030', we explicitly focus on maximizing our societal impact on various levels and together with our partners, see:

Shaping 2030: "In order to have maximum impact on society in 2030, we must become an entrepreneurial, inclusive and open ecosystem with a signature style of working."

Shaping society: "The university combines (cross-)disciplinary excellence with an explicit commitment to impacting society. We are recognised for our ability to bridge societal and academic challenges: societal challenges are appropriated in our academic pursuits, and we develop academic quests into creative, disruptive research insights that can truly improve the long-term well-being of society. The United Nations' Sustainable Development Goals (SDGs) are the reference point for our own sustainable development."

Shaping connections: "On campus, more than ever, we utilise our research infrastructure as a strategic asset in shaping new connections to maximise societal impact. Our research infrastructure consists of strategic, state-of-the-art instruments for managing scientific and societal problem-solving in our mission domains, in close collaboration with our partners."

Shaping individuals: "We enable our students and staff to become value-driven professionals with an intrinsic motivation to learn, teach, research and work, and with a commitment to creating a more sustainable world."

We hope to create a common understanding of the language used when talking about 'impact', for which we have put most common definitions for key terms and references in this glossary.

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December 2023

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A

TERM	DESCRIPTION	REFERENCE
ACADEMIC CITIZENSHIP BEHAVIOUR	Behaviours that contribute to group, unit, faculty, or UT performance, including contributions not typically recognized/included in the formal reward system.	UT Talent Development Map 2.0
ACADEMIC IMPACT	The demonstrable contribution that excellent research makes to academic advances, across and within disciplines, including significant advances in understanding, method, theory and application. Also used term: Scientific impact; can be seen as precursor of scientific impact	https://www.ucd.ie/impacttoolkit/whatisimpact/
ACTION RESEARCH (VS ACTIONABLE RESEARCH)	Action research is a form of applied research and is a systematic inquiry that involves the active participation of researchers in a collaborative and cyclical process of planning, acting, observing, and reflecting. It is conducted within a specific context or community to address practical issues and solve real-world problems. The aim of action research is not only to generate new knowledge but also to bring about positive change and improvement in the given context.	Stringer, E. T. (2014). Action Research (4th ed.). Thousand Oaks, CA: Sage Publications.
APPLIED RESEARCH	Applied research refers to a systematic and purposeful investigation that is conducted to address specific practical problems or to meet practical needs. The primary goal of applied research is to produce useful solutions, innovations, or interventions that can be directly applied to real-world situations. Unlike basic or theoretical research, which aims to expand knowledge for its own sake, applied research is focused on immediate and practical applications. Between applied and fundamental: strategic research; which “combines forces in the form of new or innovative combinations of academic research to address urgent challenges and developments. In doing so, participants have a shorter term in mind than what is sometimes needed to push scientific boundaries. The joining of forces and the combinations require the development of a strategy.”	Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). How to Design and Evaluate Research in Education (8th ed.). New York, NY: McGraw-Hill. KNAW rapport, "Evenwicht in het wetenschapssysteem: de verhouding tussen ongebonden en strategisch onderzoek" - 2019
ASSUMPTIONS	Assumptions are foundational beliefs and conditions that underpin the logic of how a program or initiative is expected to bring about desired outcomes.	www.hivos.org , ToC thinking in practice; a stepwise approach

B

TERM	DESCRIPTION	REFERENCE
BASELINE (STUDY)	Information about the situation or condition prior to a program or intervention.	Glossary of Impact Terms (oregonstate.edu)
BLUE SKIES RESEARCH	Scientific research in domains where "real-world" applications are not immediately apparent; also "research without a clear goal" and "curiosity-driven science", sometimes used interchangeably with the term "basic research", "fundamental research", "curiosity driven research"	Bell, David (2005). <i>Science, Technology and Culture</i> . McGraw-Hill International. p. 33. ISBN 978-0-335-21326-9. Linden, Belinda (February 29, 2008). "Basic Blue Skies Research in the UK: Are we losing out?". <i>Journal of Biomedical Discovery and Collaboration</i> . 3 (1):3

C

TERM	DESCRIPTION	REFERENCE
CAPACITY DEVELOPMENT	The process through which individuals, organisations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time.	UNDP; United Nations Development Programme
CHALLENGE BASED (RESEARCH / EDUCATION)	<p>Challenge-based learning (CBL) is a pedagogical approach that actively engages students in a situation that is real, relevant and related to their environment. Core to CBL is that learning is driven by challenging, open-ended problems that have multiple solutions. And that actual stakeholders are involved in the process.</p> <p>Challenge-based research (CBR) is about a co-creating the research agenda with society and the active participation of external stakeholders. This forms the basis for the development of multi-project research programmes with a strong focus on societal impact while retaining the opportunity for flexible and unplanned research outputs. [...] The active participation of external stakeholders, multi-project research programmes, focus on societal impact and flexible research outputs are key elements in building the long-term sustainable partnerships that are required to comprehensively address complex societal challenges.</p>	<p>UT CBL website https://www.utwente.nl/en/cbl/what-is-cbl/</p> <p>ECIU Challenge-based research for a stronger and more sustainable Europe</p>
CITIZEN SCIENCE	Citizen science is an 'umbrella' term that describes a variety of ways in which the public participate in science. The main characteristics are that: (1) citizens are actively involved in research, in partnership or collaboration with scientists or professionals; and (2) there is a genuine outcome, such as new scientific knowledge, conservation action or policy change.	European Citizen Science Association https://www.ecsa.ngo/

	Although the knowledge chain is rarely linear in reality, public groups can be involved in: 1. decisions regarding direction, programming, and funding; 2. conducting the research; and 3. disseminating and utilizing the results.	Rathenau, "Samen verder met Open Science", 2021
CO-CREATION, CO-DESIGN	<p><u>Co-creation activities</u>, such as citizen science or user-led innovation, involve citizens or end-users directly in the development of new knowledge or innovations, through a range of different levels of participation. These could include identifying R&I questions to be tackled by the project, developing a methodology, observing, gathering and processing data, right up to the publication and presentation of results.</p> <p><u>Co-design activities</u> could involve workshops, focus groups or other means to develop R&I agendas, roadmaps or policies. These could be one-off activities in one or several different localities or repeated consultations with the same or varying groups. They could involve citizens and/or one or many organisation types at the same time. Codesign activities often include deep discussion on the implications, the ethics, the benefits and the challenges related to R&I courses of action or technology development.</p>	Horizon Europe Programma Guide, p54

D

TERM	DESCRIPTION	REFERENCE
DESIGN, IMPACT BY	Including impact in the 'lifecycle of a research project and plan, from identifying the intended impact of research and writing it into grants and proposals, to engaging project stakeholders and assessing whether the project has had the desired impact'	Sreenan N, Hinrichs-Krapels S, Pollitt A <i>et al.</i> Impact by design: Planning your research impact in 7Cs [version 1; peer review: 2 approved with reservations]. <i>Emerald Open Res</i> 2019, 1:18)
DESIRED IMPACT / CHANGE	The desired change represents the changes in people's lives and the conditions and relationships in society that we wish to see occurring in the years to come and to contribute to by our actions.	www.hivos.org , ToC thinking in practice; a stepwise approach
DOMAIN (IMPACT DOMAIN)	In the context of university priorities, a domain represents a strategically chosen area of focus for research and academic endeavours. It is typically characterised by specific themes, challenges, or opportunities that align with societal needs or the institution's mission. Universities may prioritise certain domains, such as health or climate, to concentrate expertise, resources, and collaboration in addressing critical issues within these defined areas. Also see portfolio	Clark, B. R. (1998). "Creating Entrepreneurial Universities: Organizational Pathways of Transformation." Issues in Higher Education. Greenwood Publishing Group.

E

TERM	DESCRIPTION	REFERENCE
EDUCATIONAL IMPACT	Contribution to education, training and capacity-building, including through curricula, educational tools, and qualifications	https://www.ucd.ie/impacttoolkit/whatisimpact/
ENABLING CONDITIONS	Enabling conditions are defined as conditions that facilitate approaches to addressing social and ecological challenges. They can be defined as factors that increase the likelihood of an intended change in the governance approach, strategy, or management regime.	IPBES: Glossary definitions IPBES secretariat
ENGAGEMENT (PUBLIC)	A process whereby universities undertake joint activities with external communities in a way that is mutually beneficial, even if each side benefits in a different way. In practice, such joint activities can be undertaken by university staff or students, whether as a part of their teaching and research, as a part of joint projects and initiatives, or as a part of university governance and management	Tefce Toolbox, An Institutional Self-Reflection Framework for Community Engagement in Higher Education (2020)
EVIDENCE-BASED (VS EVIDENCE INFORMED)	Evidence informed working often refers to using scientific and practical knowledge to better one's way of working. Evidence-based sometimes is used to strictly only use scientifically proven practices, not industry best-practices.	Sleutels voor evidence informed werken PO Raad, NRO, Platform Samen Onderzoeken (Keys to evidences informed working)

F

TERM	DESCRIPTION	REFERENCE
FEASIBILITY	The possibility, capability, or likelihood of something being done or accomplished	Feasibility Definition & Meaning Dictionary.com
FUNDAMENTAL RESEARCH	<p>See blue skies research</p> <p>As opposed to applied and strategic research</p> <p>"Fundamental research means experimental or theoretical work under taken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct practical application or use in view."</p>	'Community framework for state aid for research and development and innovation' (2006/C 323/01)
FOURTH (4TH) GENERATION UNIVERSITY (VS FIRST, SECOND, THIRD, FIFTH)	<p>A Fourth Generation University co-creates its socioeconomic environment with core stakeholders to promote sustainable growth. Its aims and objectives stretch beyond disciplinary education, research, or economic impact. They are negotiated and legitimized within its stakeholder system to secure public value for a sustainable future.</p> <p>Role university: enable value creation for societal benefit (vs. creating value in 3rd gen, discovering nature in 2nd and defending truth in 1st).</p> <p>Objective: Education, open innovation (research), know-how exploitation, impact including through proactive economic development (GDP growth), regional engagement and regeneration (vs. education, research and commercialisation for 3rd, education and research for 2nd, and education for 1st)</p> <p>Also see Table 1 and Figure 1 below</p>	<p>Oztel, H. (2020). Fourth Generation University: Co-creating a Sustainable Future. In: Leal Filho, W., Azul, A., Brandli, L., Özuyar, P., Wall, T. (eds) Quality Education. Encyclopedia of the UN Sustainable Development Goals. Springer, Cham. https://doi.org/10.1007/978-3-319-69902-8_77-1</p> <p>Bodley-Scott, T., & Oymak, E. (2022). University-Industry Partnerships for Positive Change: Transformational Strategic Alliances Towards UN SDGs. Bristol University Press. doi:10.46692/9781447364252</p>

	1st generation	2nd generation	3rd generation	4th generation	5th generation
Output	Professionals	Professionals and scientists	Professionals, scientists and entrepreneurs	Professionals, scientists and competitive local economy (artists, customers, ecosystem participants)	Professionals, scientists and entrepreneurs and leaders of multi-sector transformational strategic alliances to achieve positive change and contribute towards UN SDG's
Language	Latin	National	English	Multilingual (National and English)	Multilingual (National and English)
Organisation	Colleges	Faculties	Institutes and centres	Innovation spaces	Integration, orchestration and streamlining of research, teaching and innovation across organisation. Digital, transdisciplinary and multi-sector aligned co-innovation spaces
Management	Chancellor	Part-time academics	Professional management, hierarchical	Professional management and local experts/Disruptors	Digitally aware, collaborative professional management, disruptors, innovative leaders and social reformers
Orientation	Universal	National	Global	Ecosystem	Global
Alliance approach	Almost non-existent	Ad-hoc	Transactional and philanthropic	Tactical and strategic, market competing	Quicker to create multi-sector, peer-to-peer, collaborative, transformational, market and shared value-creating, partner selection critical
Emergence	11 th century	1800s	2000s	2010s	2020s

Table 1: Evolution of the university, characteristics of 1st, 2nd, 3rd, 4th and 5th generation universities

Reference: Bodley-Scott, T., & Oymak, E. (2022). University-Industry Partnerships for Positive Change: Transformational Strategic Alliances Towards UN SDGs. Bristol University Press. doi:10.46692/9781447364252

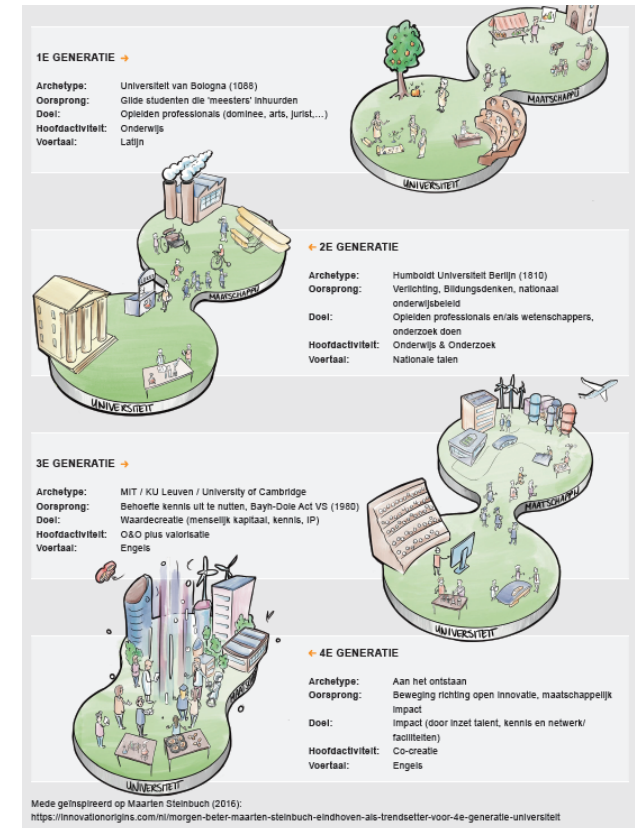


Figure 1: The evolution of universities and valorisation, Roland Berger, 2021

H

TERM	DESCRIPTION	REFERENCE
H-INDEX	<p>A way to measure the impact of [one's] work and other people's research. It does this by looking at the number of highly impactful publications a researcher has published. The higher the number of cited publications, the higher the h-index, regardless of which journal the work was published in. The h-index takes into account only citations of your work from scientific literature, reflecting impact in the scientific community.</p> <p>Note: There has been substantive criticism on using the h-index for evaluating (scientific) impact, such as:</p> <ul style="list-style-type: none"> • Does not incentivize other activities, e.g., education, sharing, public outreach • Correlates with age to the disadvantage of early-career researchers • “Incentivises” publishing in high-impact journals, which “allows” these journals to charge high APCs. • Does not consider different citation cultures in different scientific fields • Does not differentiate between first and last co-authorships • Does not consider data and software citations, and citing other materials is possible but not established. 	<p>Researchgate</p> <p>“What’s wrong with the h-index, according to it inventor” Nature, 2020</p>

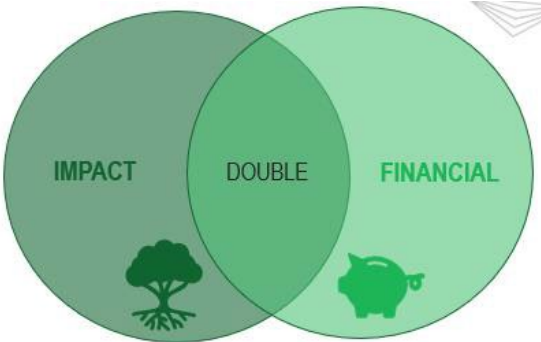
TERM	DESCRIPTION	REFERENCE									
<p>IMPACT</p> <p>IMPACT, SOCIETAL AND ECONOMIC</p>	<p>The positive and negative, desirable and undesirable, primary and secondary long-term effects produced by your project which can be direct or indirect, intended or unintended.</p> <p>Demonstrable contribution that excellent research makes to society and the economy, or benefit to individuals, organisations and nations.</p> <div data-bbox="582 534 1344 1085" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; padding: 5px;"> <p style="text-align: center;">ACADEMIC </p> <p style="font-size: 0.8em;">Contribution to advances across and within disciplines, including significant advances in understanding, method, theory and application.</p> </td> <td style="width: 33%; padding: 5px;"> <p style="text-align: center;">CULTURAL </p> <p style="font-size: 0.8em;">Contribution to people's understanding of ideas and reality, values and beliefs.</p> </td> <td style="width: 33%; padding: 5px;"> <p style="text-align: center;">ECONOMIC </p> <p style="font-size: 0.8em;">Contribution to a company's revenues and profits (micro level), and economic returns through increased productivity or economic growth (macro level).</p> </td> </tr> <tr> <td style="padding: 5px;"> <p style="text-align: center;">EDUCATIONAL </p> <p style="font-size: 0.8em;">Contribution to education, training and capacity-building, including through curricula, educational tools, and qualifications.</p> </td> <td style="padding: 5px;"> <p style="text-align: center;">ENVIRONMENTAL </p> <p style="font-size: 0.8em;">Contribution to managing the environment, such as protecting natural resources, reducing environmental pollution, improving weather forecasting, and tackling the climate crisis.</p> </td> <td style="padding: 5px;"> <p style="text-align: center;">HEALTH </p> <p style="font-size: 0.8em;">Contribution to public health, life expectancy, health-related quality of life, prevention of illness, and reduced health inequality.</p> </td> </tr> <tr> <td style="padding: 5px;"> <p style="text-align: center;">POLITICAL </p> <p style="font-size: 0.8em;">Contribution to how policymakers act, to how policies are constructed, and to political stability.</p> </td> <td style="padding: 5px;"> <p style="text-align: center;">SOCIAL </p> <p style="font-size: 0.8em;">Contribution to community welfare and quality of life, and to behaviours, practices, and activities of people and groups.</p> </td> <td style="padding: 5px;"> <p style="text-align: center;">TECHNOLOGICAL </p> <p style="font-size: 0.8em;">Contribution to the creation or improvement of products, processes and services.</p> </td> </tr> </table> </div> <p>Impact is sometimes used as a synonym for the 3rd core task of universities, while actually the connection between research, education and innovation is considered to have the highest potential of societal impact.</p> <p>Impact can take several forms and levels:</p> <ul style="list-style-type: none"> - Local, regional, national, international - Forms as displayed in the figure, plus: organisational, conceptual (see EUR) 	<p style="text-align: center;">ACADEMIC </p> <p style="font-size: 0.8em;">Contribution to advances across and within disciplines, including significant advances in understanding, method, theory and application.</p>	<p style="text-align: center;">CULTURAL </p> <p style="font-size: 0.8em;">Contribution to people's understanding of ideas and reality, values and beliefs.</p>	<p style="text-align: center;">ECONOMIC </p> <p style="font-size: 0.8em;">Contribution to a company's revenues and profits (micro level), and economic returns through increased productivity or economic growth (macro level).</p>	<p style="text-align: center;">EDUCATIONAL </p> <p style="font-size: 0.8em;">Contribution to education, training and capacity-building, including through curricula, educational tools, and qualifications.</p>	<p style="text-align: center;">ENVIRONMENTAL </p> <p style="font-size: 0.8em;">Contribution to managing the environment, such as protecting natural resources, reducing environmental pollution, improving weather forecasting, and tackling the climate crisis.</p>	<p style="text-align: center;">HEALTH </p> <p style="font-size: 0.8em;">Contribution to public health, life expectancy, health-related quality of life, prevention of illness, and reduced health inequality.</p>	<p style="text-align: center;">POLITICAL </p> <p style="font-size: 0.8em;">Contribution to how policymakers act, to how policies are constructed, and to political stability.</p>	<p style="text-align: center;">SOCIAL </p> <p style="font-size: 0.8em;">Contribution to community welfare and quality of life, and to behaviours, practices, and activities of people and groups.</p>	<p style="text-align: center;">TECHNOLOGICAL </p> <p style="font-size: 0.8em;">Contribution to the creation or improvement of products, processes and services.</p>	<p>See desired change www.hivos.org</p> <p>https://www.ucd.ie/impacttoolkit/whatisimpact/</p> <p>Roland Berger “Valorisatie ontketend” (2021)</p> <p>Defining Societal Impact at EUR, Erasmus University Rotterdam</p>
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IMPACT OUTLOOK (APPROACH)	Approach aimed at stimulating (unforeseen) opportunities for societal impact after granting. Applicable to research that focusses on scientific impact, but not necessarily to a societal challenge	NWO Leaflet Knowledge Utilisation
IMPACT PARAGRAPH / STATEMENT	A succinct and persuasive articulation of the tangible and meaningful outcomes or effects resulting from a research project, initiative, or intervention. It serves to communicate the broader significance and practical implications of the work to various stakeholders, including funders, policymakers, and the wider community.	Research Councils UK. (2015). "Pathways to Impact Guidance."
IMPACT PATHWAYS	The path from outputs (insights from research) via outcomes (changes in behaviour based on these insights) to impact (larger changes in society) is specified in several specific impact pathways.	Impact Plan Approach NWO
IMPACT PLAN (APPROACH)	The Impact Plan approach consists of an integrated strategy that promotes Productive Interactions through the use of a Theory of Change and Impact Pathways. The core of the approach is to facilitate reflection in the design and implementation of research (programming).	NWO Impact Plan Approach
INDICATORS	Pre-defined variables which help to identify (in)direct differences in quality and/or quantity within a defined period of time. As a "unit of measure" it allows to judge if an intervention was successful or not. Also known as KPIs –Key Performance Indicators.	Definitions knowledge utilisation NWO
INFLUENCE, CIRCLE OF / RANGE OF	How far one's influence stretches to make direct impact, from sphere of control, to sphere of influence, to sphere of interest.	https://impact.nwo.nl/en/working-with-an-impact-plan/theory-the-impact-pathway#route-to-societal-impact
INNOVATION (VS. VALORISATION, 3RD CORE TASK)	Innovation for society, as in valorising all talent, knowledge, network and facilities in knowledge institutions for society Note: at UT, the university committee for innovation is the committee responsible for aligning, coordinating and sharing knowledge on the third core task of valorisation	Roland Berger, 2021
INPUTS	Any resource that is put into your project to carry out an activity. These can be units of time, staff, money, equipment, know-how, ideas, etc. used by your project to produce the outputs and consequently outcomes. Also see value creation model University of Twente	Definitions knowledge utilisation NWO

K

TERM	DESCRIPTION	REFERENCE
KNOWLEDGE TRANSFER	Transfer of UT's knowledge to a third party that is going to implement these results Also see Technology Transfer	NovelT
KNOWLEDGE TRANSFER OFFICE	The Knowledge Transfer Office provides support to move results from the lab to society for the benefit of the public and to amplify UT's global impact	NovelT

M

TERM	DESCRIPTION	REFERENCE
MATERIALITY	<p>Term to indicate what is of importance, what is in focus, in scope.</p> <ul style="list-style-type: none"> In financial setting: as of a certain amount, a topic is material. In sustainability /non-financial setting the term refers to 'double materiality'. A topic is material if it is identified as impact and/or financially material: <ul style="list-style-type: none"> Impact materiality: a topic is material from an impact perspective when it pertains to the undertaking's material actual or potential, positive or negative impacts on people or the environment over the short-, medium- or long-term. Financial materiality: The scope is an expansion of the scope of materiality used in the process of determining which information should be included in the undertaking's financial statements. 	csrd-delegated-act-2023-5303-annex-1_en.pdf (europa.eu)
MONITORING EVALUATION LEARNING	It is about tracking change in the system in order to know how to adjust our Theory of Change (ToC) and strategies. It involves monitoring short-term changes in the environment that our ToC says are important,	www.hivos.org , ToC thinking in practice; a stepwise approach

	periodic evaluation of what has changed – planned, unplanned, unforeseen and new developments, and learning about what is significant about these changes, for whom, and how we should adapt our ToC.	
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N

TERM	DESCRIPTION	REFERENCE
NOVEL-T	Novel-T helps new businesses get off the ground and existing businesses innovate. That's basically what this non-profit organization does. In reality, the support goes even further than that. We offer one on one support with our business developers, as well as top notch programs and support through our services. In addition, we offer entrepreneurs (to be) a direct line to knowledge, talent, capital, and networks of other market leaders. All of this can help with a successful market introduction. We offer support based on an assignment from our founders: the University of Twente, Saxion University of Applied Sciences, and the regional government.	Novel-T

O

TERM	DESCRIPTION	REFERENCE
OPEN SCIENCE	Open Science aims to make scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society.	Unesco recommendation on Open Science
OUTCOME	Changes in behaviour, relationships, actions and activities of stakeholders. ToC explanation: Outcomes are the intermediate or short-term changes that occur as a result of the program's outputs. They often represent shifts in knowledge, attitudes, behavior, or conditions among the target population. Outcomes are typically categorized as short-term, medium-term, or long-term.	Definitions knowledge utilisation NWO
OUTPUT	Direct and immediate insights obtained by a research project ToC explanation: Outputs are the immediate or direct results of the activities. They are typically quantifiable and include things like the number of workshops conducted, people trained, or materials distributed.	Definitions knowledge utilisation NWO

P

TERM	DESCRIPTION	REFERENCE
PATHWAYS (OR STRATEGIC PATHWAYS)	A logical sequence of inputs, activities and outputs in contribution to the outcomes that are to be achieved either concurrently or sequentially to make a meaningful contribution to reaching the vision.	www.hivos.org , ToC thinking in practice; a stepwise approach
PORTFOLIOS / PROGRAMS / PROJECTS	<p>At the UT, we use the term impact domains or impact themes related to societal challenges (e.g. health, climate). Impact domains are strategic, long-term (min. 5 years), contribute to institutional profiling and are determined and discussed in the Strategic Board of the UT.</p> <p>Within these domains, we develop long term impact portfolios (e.g. sustainable healthcare) which serve as interfaculty/ institute knowledge hubs and steering mechanism for initiatives. Portfolios are basically a collection of programs to be discussed in the Strategic Board as well.</p> <p>Programs (e.g. healthcare staffing) are an impulse to develop, temporary (approximately four years), and inter faculty/ institute (decision level Strategic Board as well).</p> <p>Within programs, projects are short-term (two- four years), high variety (e.g. TRL) and frequency, can be competitive, individual or consortia and are decided upon at faculty/ institute level.</p> <p>For portfolio development, the UT Strategic Board agreed upon the following criteria:</p> <ol style="list-style-type: none"> 1. Responding to external needs (roadmap where external parties are engaged and committed, related to public policy development) 2. Involvement and commitment of internal community (staff from several faculties/institutes involved with complementary expertise, recognizable track record, figure head etc; support from MT of institutes and at least two faculties) 3. Programmatic approach (roadmap, financial plan including funding acquisition strategy, lobby etc) 4. Integral approach (linking R&D including infrastructure, valorisation/innovation, and education and/or LLL) 	SBD
PRODUCTIVE INTERACTIONS	Productive interactions are defined as 'exchanges between researchers and stakeholders in which knowledge is produced and valued that is both scientifically robust and socially relevant'	Spaapen and van Drooge 2011: 212.

R

TERM	DESCRIPTION	REFERENCE
REACH	<p>Reach refers to how widespread the impact is, or how many beneficiaries there are. Significance refers to how important or valuable the impact is to each beneficiary.</p> <p>So, saving a life is profoundly significant at a small scale. Slightly enriching a million lives has substantial reach but has less significance. Ideally, reach and significance will be considered relative to the academic disciplines and the scope of the research.</p> <p>Also see influence</p>	<p>Research Impact Toolkit by University of Dublin https://www.ucd.ie/impacttoolkit/whatisimpact/</p>
RECOGNITION AND REWARDS	<p>Dutch program (set up by UNL, NFU, KNAW, NWO, ZonMW) for a system of recognition and rewards of academics and research that:</p> <ol style="list-style-type: none"> 1. Enables the diversification and vitalisation of career paths, thereby promoting excellence in each of the key areas; 2. Acknowledges the independence and individual qualities and ambitions of academics as well as recognising team performances; 3. Emphasises quality of work over quantitative results (such as number of publications); 4. Encourages all aspects of open science; and 5. Encourages high-quality academic leadership. 	<p>https://recognitionrewards.nl/wp-content/uploads/2020/12/position-paper-room-for-everyones-talent.pdf</p>

S

TERM	DESCRIPTION	REFERENCE
SCIENCE COMMUNICATION	<p>Science communication is a two-way exchange between researchers and society about the processes, results, and consequences of scientific research. Science communication is important in a society where science plays a significant role. It helps citizens make informed decisions, is necessary for citizens and scientists to collaborate on solutions to societal challenges, enriches the lives of many with stories about our shared culture and history, and contributes to mutual understanding and trust between science and society.</p>	<p>Nationaal Expertisecentrum Wetenschap & Samenleving – Plan van Aanpak [Hoger Onderwijs-, Onderzoek- en Wetenschapsbeleid Tweede Kamer der Staten-Generaal]</p>
SIGNIFICANCE	<p>Reach refers to how widespread the impact is, or how many beneficiaries there are. Significance refers to how important or valuable the impact is to each beneficiary.</p> <p>So, saving a life is profoundly significant at a small scale. Slightly enriching a million lives has substantial reach but less significance. Ideally, reach and significance will be considered relative to the academic disciplines and the scope of the research.</p>	<p>Research Impact Toolkit by University of Dublin https://www.ucd.ie/impacttoolkit/whatisimpact/</p>

SMART	Using a SMART formulation of a goal asks for making that goal Specific, Measurable, Achievable, Relevant, and Time-Bound	Doran, G. T. (1981). " <u>There's a S.M.A.R.T. way to write management's goals and objectives</u> " (PDF). <i>Management Review</i> . 70 (11): 35–36.
STAKEHOLDERS	Person or group of people with a vested interest--a stake--in a program or evaluation, including clients, customers, beneficiaries, elected officials, support groups, program staff, funders, collaborators. Added: and citizens	<u>Glossary of Impact Terms (oregonstate.edu)</u>
STAKEHOLDER MAPPING	Stakeholder mapping is defined as the process of identifying, diagramming, and prioritizing stakeholders by analysing their influence and interest in a project.	<u>What is Stakeholder Mapping? Definition, Examples, Advantages and Benefits (ideascale.com)</u>
STRATEGIC EVALUATION PROTOCOL (SEP)	The SEP is the standard for research evaluations, as stipulated by UNL, KNAW and NWO. The main aim is for a research unit (faculty or discipline) to evaluate itself in the light of it's own strategy	Full protocol in PDF: <u>https://storage.knaw.nl/2022-06/SEP_2021-2027.pdf</u>

T

TERM	DESCRIPTION	REFERENCE
TECHNOLOGY TRANSFER	Refers to the process of conveying results stemming from scientific and technological research to the market place and to wider society, along with associated skills and procedures, and is as such an intrinsic part of the technological innovation process.	<u>https://knowledge4policy.ec.europa.eu/technology-transfer/what-technology-transfer_en</u>
THEORY OF CHANGE	Theory of Change is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context. It is focused in particular on mapping out or "filling in" what has been described as the "missing middle" between what a program or change initiative does (its activities or interventions) and how these lead to desired goals being achieved.	<u>What is Theory of Change? - Theory of Change Community</u>

	<p style="text-align: right;">DESIGN PHASE</p> <p style="text-align: center;">IMPLEMENTATION PHASE</p>	
<p>TRANSFORMATIVE RESEARCH/ IMPACT</p>	<p><i>Sometimes colloquially called “transformational research”</i> Transformative research addresses persistent societal problems by developing action, socially robust knowledge, and scientific knowledge that fosters just sustainability transitions. This kind of research takes a critical standpoint vis-à-vis dominant cultures, structures and practices that are evidenced to be persistently unsustainable or unjust and aspires to contribute to their transformation. To this end, actors from different scientific disciplines and societal domains work together in a systematic co-production setting and process.</p>	<p>Wittmayer, J.M., Loorbach, D., Bogner, K., Hölscher, K., Hendlin, Y., Lavanga, M., Vasques, A., von Wirth, T., and de Wal, M. (2021) <u>Transformative Research: knowledge and action for just sustainability transitions</u>. DIT Working paper for positioning transformative research. Rotterdam, Design Impact Transition Platform, Erasmus University Rotterdam.</p>

U

TERM	DESCRIPTION	REFERENCE
<p>UTIP (UTILIZING OUR IMPACT POTENTIAL)</p>	<p>Strategic program designed to integrate current impact related UT efforts, connect the UT community even better with her stakeholders and help colleagues learn from each other to further develop impactful education, research and innovation activities.</p>	

V

TERM	DESCRIPTION	REFERENCE
VALORISATION	<p>Supporting innovation for society, as in valorising all talent, knowledge, network and facilities in knowledge institutions for society</p> <p>Third core task Dutch universities: "het overdragen van kennis ten behoeve van de maatschappij" (knowledge transfer to benefit society; added as third core task (next to education and research) for Dutch universities in the law for higher education in 2005.</p> <p>Specifically: "Economische valorisatie is daarbij het in economische waarde omzetten van universitaire kennis, maatschappelijke valorisatie het in maatschappelijke waarde omzetten."</p> <p>English: Economic valorization involves converting university knowledge into economic value, while societal valorization involves converting it into societal value."</p>	<p>Roland Berger, 2021</p> <p>Wet Hoger Onderwijs</p> <p>Letter Ministry OCW to executive boards of Dutch universities, 27th January 2005, see https://zoek.officielebekendmakinge.nl/kst-29338-30-b1.pdf</p>

CLOSING NOTE

Connection between mission, vision, strategy, objectives/goals, and results

In the impact discussion, an “impact strategy” is often named. Two things need to be clarified here:

- 1) the difference between a strategy, vision, mission, objectives and goals, and results (see the figure below), and,
- 2) that UTIP is a program, not a strategy. UTIP aims to accelerate efforts around various projects related to impact, but does not set an outline for the UT’s activities. This outline is set in Shaping2030.



Utilizing our impact potential

With Shaping2030, our research strategy and vision on teaching and learning, we have defined our ambition to **maximise our positive societal impact**. We take our public role and responsibility with regards to pressing societal challenges very serious and we want and need to shift our mindset even more **from knowledge transfer to knowledge exchange and co-creation**.

As organization, we also want to **minimise our negative impact**, for example by decreasing our CO2 footprint and striving for inclusion and diversity.

As the **entrepreneurial** university of technology with excellent fundamental research, various challenge-based research, education and innovation activities, embedded in an ecosystem with (eu)regional, national and international triple helix partners, we have all the ingredients to work impact-driven, outside-in. However, we need to even more recognize and reward our colleagues for their impact efforts, focus our strategic efforts, and measure and communicate our impact.

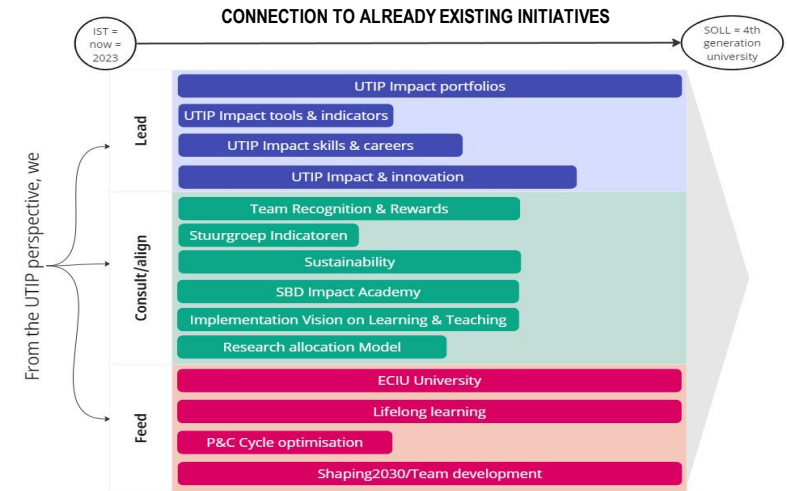
In this regard, the program 'Utilizing our Impact Potential' (UTIP) is designed to **integrate current impact related UT efforts, connect the UT community even better with her stakeholders** and help colleagues **learn from each other** to further develop impactful education, research and innovation activities, all with the overarching goal to **move the UT towards a 4th generation university** (that is, "co-creating a socioeconomic environment with core stakeholders (...) beyond disciplinary education, research or economic impact", Oztel 2019).

What is our mission?	Who are our heroes?	What blocks their way?	What can we do to help?
We empower society through sustainable solutions.	Academics	Tools and support to work on impact (e.g. consortium building, influence on policy making, entrepreneurial activities) not available throughout the whole UT Recognition for impact efforts varies greatly within the UT Confusion over impact terminology (e.g. open access/ science / outreach) and UT goals wrt impact Often unclear where to find relevant training and struggles to find time for personal development Difficulties in recognition of individual vs. team effort	R&R: include impact and innovation in career paths Clarification and examples of impact-driven way of working Link UT internal training offer to career paths and opportunities, communicate on UT external training offer Develop advice on how to stimulate entrepreneurial mindset and recognition (among the whole UT community, all staff and students) Showcase and communicate examples of how activities can contribute to societal challenges Share best practices on recognizing team work
We maximize our societal impact by 2030.	University services	Perceived borders between scientific staff and university services Lack of communication on good practices how to support others and contribute yourself to making societal impact	Clear vision/agenda on impact & translation to university services work Train impact-driven way of working (e.g. Theory of Change)
	Management	Insufficient tools to steer towards impact Difficulties to define criteria to determine priorities Finding the balance between autonomy with strategic UT programming Strategic personnel planning Impending budget cuts	Definition of impact competencies Implement priority impact in annual cycle Develop indicators and norms regarding desirable impact-oriented processes and (proxy) outcomes

RESULTS SO FAR

- SB workshop to move towards 4th gen university
- EB decides to steer with impact portfolio approach, and gives assignment to define portfolios for four domains: health, climate, secure & safe societies, semicon/ chips
- 2023 strategy day higher management on impact (followed up by 2023 I'm PACT Dies Natalis and OAY 2023/2024)
- Movement in the community:
 - Workshops on impact pathways
 - Impact officers in ITC, BMS etc
 - Impact community lunches
 - Theory of Change workshops for higher management, program directors, department heads etc
- Embedding in strategic budget and strategic partnerships framework

Utilizing our impact potential



UTIP impact skills & careers

Team: Wiebke Eberhardt, Jeroen Jansen, Anne Bergen, Marlies Oude Bos-Althuis, Marloes Letteboer

Timeline: 03/2023 – 11/2023

Deliverables:

- An (1) UT internal insight in current impact skills and recognition and rewards efforts, and (2) UT external impact skills at other knowledge institutions to inform decision making, and
- An actionable definition of (1) 'impactbased' or impact driven research and education, as well as (2) impact / academic citizenship criteria which is based on the needs of the UT community, and is developed for implementation in the 'talent development policy' as currently being developed by the team R&R.

UTIP impact & portfolios

Team: Rianne Huis in 't Veld, appointed facilitating SB members, support staff from institutes and service departments (partly), academic staff (bd)

Timeline: 09/2023 – 02/2024

Deliverables:

- Developing one recognizable UT narrative on **contewise** contributions within health, climate, safety & security and chips/semicon (that ultimately can lead to decisions/strategy/ actions for our way of work). Improved understanding of different perspectives, roles and expectations, bringing them together in one recognizable UT narrative (that can lead to decisions/strategy/ actions for our way of work)
- 4 Impact Portfolio propositions: document describing the unmet need addressing the UT's contribution on the societal challenge, the strategic imperatives (internally & externally), type of activities, funding opportunities and envisioned impact
- Increased awareness on effort and required support for steering, monitoring and evaluating strategic portfolio development (likely ppt).

UTIP impact pathways & strengths

Team: Marike Poldervaart, Patrick Hoetink, Hanneke Becht, Joost Teuben, Anke Marit Albers, Renske van Wijk, Tom Boogerd, Rik Kühlkamp. Laurette van der Woning

Timeline: 09/2023 – 03/2024

Deliverables:

- Report describing a set of quantitative and qualitative impact indicators using the UTIP portfolio healthcare staffing as a case study.
- Establishment of a set of minimum viable impact indicators" as add on to the UT research and innovation performance dashboard accepted by UG OZ, UCI and SB. Necessary actions to collect and analyze data for these indicators are described*.
- Recommendations for how impact monitoring can be included in the regular UT P&C Cycle.

UTIP impact & innovation

Team: Roy Kolkman, Wander Kenter, Mike Verkouter, Roelyn van der Hoek, David Fernandez Rivas

Timeline: 10/2023 – 04/2024

Deliverables:

Advisory report including

- Description of the project including innovation glossary
- Description of the status quo with regards to the three identified challenges to be tackled in this project (Shaping 2030 core value entrepreneurial, ownership, communication & profiling)
- Collection of actions to tackle the three challenges (such as advice on role UCI in the UT community connected to roles of faculties, institutes, HR, FIN, CFM, student union) including suggestions for implementation
- Boundary conditions (via connected UTIP Projects)
 - Impact & Innovation included in Recognition & Rewards (boundary condition)
 - Set of quantitative and qualitative impact indicators