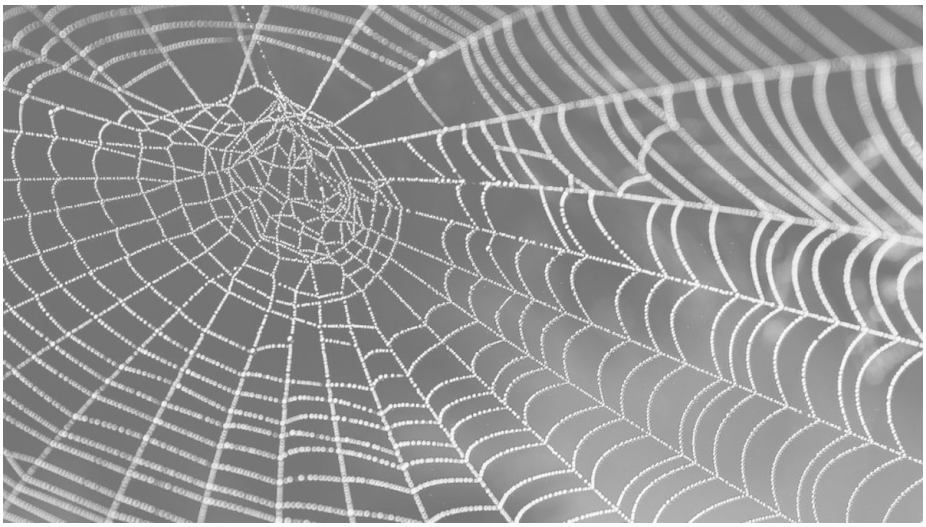
TILBURG UNIVERSITY

Tilburg University in 2027: Spider in the Web in Ecosystems?

Report of the Deliberation Table on Ecosystems.



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1. Assignment Deliberation Table

The Executive Board and the Deans have identified eight themes relevant to the formulation of the university strategy 2022-2027 to be formed. These themes have been elaborated in deliberation tables. The question for our deliberation table[1] was *"How can Tilburg University position itself optimally in broader ecosystems?"* This memorandum contains our exploration of that theme[2].

2. Definition of Ecosystems

The concept of "ecosystem" was introduced in 1935 by British ecologist Arthur Tansley[3]. Ecosystems, according to him, are "all the plants, animals, and people living in an area considered together with their environment as a system of relationships." Over time, ecosystems have also emerged as a concept in management literature, partly to explain why and how certain companies (successfully) work together. Think of "business ecosystems" such as in Silicon Valley in the United States. Later, we see similar, regional ecosystems in the Netherlands, such as the High Tech Campus in Eindhoven. The participants in such an ecosystem have then expanded to include knowledge institutions and (regional) governments (triple helix). The most recent extensions of such ecosystems are with social partners and citizens (quadruple helix) and nature (quintuple helix).

In its position paper "Universities without walls: a vision for 2030"[4], the EUA describes how universities (can) position themselves in ecosystems, distinguishing six elements:

- bringing together stakeholders around a common vision;
- promoting an entrepreneurial spirit in its widest sense;
- challenges in multi- and interdisciplinary teams;
- engaging in co-creation of solutions;
- making a demonstrable difference to society;
- through technological and social innovation.

We can agree with the description of the EUA although we would like to note the following:

- Given our profile, with competencies in the humanities and social sciences, we focus primarily on social innovation rather than technological innovation.
- Ecosystems are fluid and require active management[5]. Stakeholders may join and leave in the interim, and the shared mission and vision may change, for example as a result of societal challenges.
- A (bilateral) project or program is not automatically also an ecosystem. Ecosystems involve multiple stakeholders working together durably.

This brings us to the following definition of an ecosystem that is workable for our university:

> *The active interplay of multiple and diverse (types of) parties around a sustainable, common vision and ambition within which projects or programs can be initiated (more easily).*

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[1] Participants of the deliberation table: Dike van de Mheen (chair), Lien Denoo, Irmgard Borghouts, Edward van de Pol, Dirk van den Berg, Elisabeth Huis in 't Veld, Bas Werker, Hein Fleuren, Joks Janssen, Margriet Sitskoorn, Krijn Pansters, Martijn Nolen, Inge Bongers, Peter Gaillard, Willem Megens, and Lieke Staal (official secretary).

[2] This memorandum is a reflection of the discussion held and, therefore, not necessarily the views of individual members at our deliberative table.

[3] https://link.springer.com/chapter/10.1007/978-1-4612-3842-3_2.

[4] https://eua.eu/component/attachments/attachments.html.

[5] "Collaboration (...) leads to a diversity of collaborative relationships, which have a lasting intention, but are finite if not actively extended and maintained." (Kaats and Opheij 2008).

3. Fourth-Generation University

Why do ecosystems matter to our university? When are ecosystems useful to serve the primary process? How does working in ecosystems make our work as scientists better? In other words, how does working in ecosystems help us, as Tilburg University, better achieve our goal of "Understanding and Enhancing Society"?

According to Article 1.3 paragraph 1 of the HERA[6], in addition to education and research, universities have as their third core task the transfer of knowledge for the benefit of society[7]. Today's societal challenges, which are often complex, cross disciplinary, multi-level, and 'wicked', demand more from contemporary universities than just *transferring* knowledge. It is also about *exchanging knowledge*, and we will have to take up our role much more collectively and for longer periods of time in order to remain meaningful to that society. Garretsen & Van de Mheen (2019)[8] talk in this context about the importance of growing into a "fourth-generation university":

> Our society faces major complex challenges. It is necessary that universities also start to contribute more to the debate about these challenges and about possible solutions. Universities are rightly required to become more socially relevant. (...) As far as we are concerned, a fourth-generation university must be a university that reaches out to the outside world, and then it is about much more than just making knowledge from the university available in practice. It must be about dynamic and open innovation where scientists work partly outside and professionals partly within the university. It must be about working in interdisciplinary teams. After all, today's social challenges can no longer be tackled from one discipline. It must be about a joint approach from university and practice, based on absolute equality. The way to do this structurally seems to be to form lasting partnerships between the university and practice. There must be 'meeting places' where parties can find each other.

We can take these meeting places literally, just as our campus is a beautiful meeting place. More figuratively, we can regard ecosystems as meeting places in which partnerships and collaborations can grow and develop. They are systems of relationships that enable us to give a contemporary interpretation to our third core task.

Encounters can be accidental and have unknown outcomes or more of a means to a predefined end. To achieve impact with our research and education, we must be able to properly organize the *process* with stakeholders in the ecosystem. See also the recent Impact Plan Approach of NWO[9], in which broad consortia are asked to foster so-called productive interactions using a Theory of Change and Impact Pathways. Productive interactions with stakeholders can, in this idea, not only contribute to the enrichment of our education and research (e.g. more relevant research questions) but also improve the applicability of insights from that research. It follows that for an ecosystem to function well, it is important to listen to other parties, ask questions, respect each other, and see what we can do for each other. In short, a fourth-generation university requires us to be curious about the others in the ecosystem.

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[6] https://wetten.overheid.nl/jci1.3:c:BWBR0005682&hoofdstuk=1&titeldeel=1&artikel=1.3&z=2021-01-01&g=2021-01-01.

[7] That is, we make our contribution to society from the scientific disciplines for which we have established a strong research base ourselves.

[8] https://www.tilburguniversity.edu/nl/actueel/nieuws/nieuwsitem-zorg-gezondheidszorg-tranzo-garretsen-mheen-valorisatie-impact.

[9] https://www.nwo.nl/en/impact-plan-approach.

4. SWOT Analysis

From the above-mentioned conceptual framework, our deliberation table looked at our university's ecosystems. We did so by successively diverging and converging.

In the first step, we collected input (diverged) using the following questions:

- What do we see as our university's ecosystems?
- Where are we now with these ecosystems? *(as-is)*
- What do we see as our (future) role in those ecosystems? *(to-be)*
- What are opportunities/barriers to moving from *as-is* to *to-be*?

Although not all questions were systematically addressed, we have created a SWOT table based on this input:

	Strengths	**Weaknesses**
Internal	• Tilburg University has a solid disciplinary base in the humanities and social sciences for being able to fulfill the third core mission. • Our green campus invites encounters and relationship building. Relationships are at the foundation of an ecosystem. • We are already part of many regional (e.g., Midpoint and Brainport), national (e.g., Netspar), and international (e.g., Engage.eu) partnerships. We can connect these even more and better, and especially internally. This can be done through a bottom-up approach, and bilateral collaborations can grow into an ecosystem as well. • Commit to Recognition & Rewards, creating opportunities and chances for people who want to go for working in ecosystems. We are committed to interdisciplinarity and team science ("alone you go faster, together you come further").	• There are many (perceived) internal barriers (e.g., related to funding, support, rules, organizational issues, account management, management information, strict distinction scientific staff and support staff, compartmentalization in Schools), so we do not sufficiently maintain, utilize, or participate in our ecosystems at all. • A broad-based culture of collaboration with companies, (regional) governments, civil society parties, citizens, and other stakeholders does not exist yet. • The entrepreneurial mindset in the organization is not yet sufficiently developed. There is still too little know-how about commercial exploitation of knowledge. • Good people leave because we offer them too few opportunities in a new way of working or because they come up against internal barriers. Sometimes we do not recognize such talents sufficiently.
	Opportunities	**Threats**
External	• From our disciplinary strengths, we can market our niche—the social side of technological developments—even better. The societal demand is there. • Brabant has strong regional ties and regional initiatives that we can leverage. • The Engage.EU partnership creates an ecosystem across (country) borders and opportunities for research and education. • We tend to conform to existing structures and partnerships. However, we can also let our strength be our guiding principle and then seek partners in this. • The usefulness of science has been confirmed by the COVID-19 crisis. Possibly external parties will seek us out to collaborate with us. • Recent developments in digital communication, especially online meetings and working in	• Ministry of Education, Culture and Science/The Hague finds working in eco-systems increasingly important. We are not at the forefront of this. If we do not position ourselves more prominently in such collaborations (think also of ecosystems regarding university alliances such as LDE, Wageningen-UU-TU/e, VU-UT), will we remain relevant? • Money from civil society partners and companies is increasingly going to our competitors who have been working in ecosystems for some time, know their way around, and are setting the agenda through those ecosystems. • Internationally, the quality of scientific research is still mostly evaluated based on disciplinary output parameters. Ecosystems

	collaborative online environments, facilitate meetings and collaboration in (international) ecosystems. • The new generation of students is more externally focused and open to innovation. In addition to research, education can be part of the agenda and activities of ecosystems. • We can connect more explicitly to SDGs. Certainly at the European level, there are opportunities to connect with policy makers and to make use of funding possibilities.	with a wide range of parties involved in societal challenges require a multidisciplinary or interdisciplinary approach.

In the SWOT table, we see several external threats to which we must remain alert and weaknesses on which we must work. At the same time, we, as Tilburg University, have clear in-house strengths, and thanks to our flat (governance) structure, we should be able to use these to seize opportunities. And we see plenty of these opportunities! Effective participation in ecosystems requires unambiguous policy, good coordination (not only with parties in ecosystems, but also between levels at our university) and the creation of the right preconditions. These preconditions will be discussed later in the document. In addition, working in ecosystems requires a long-term commitment that goes beyond a single management term.

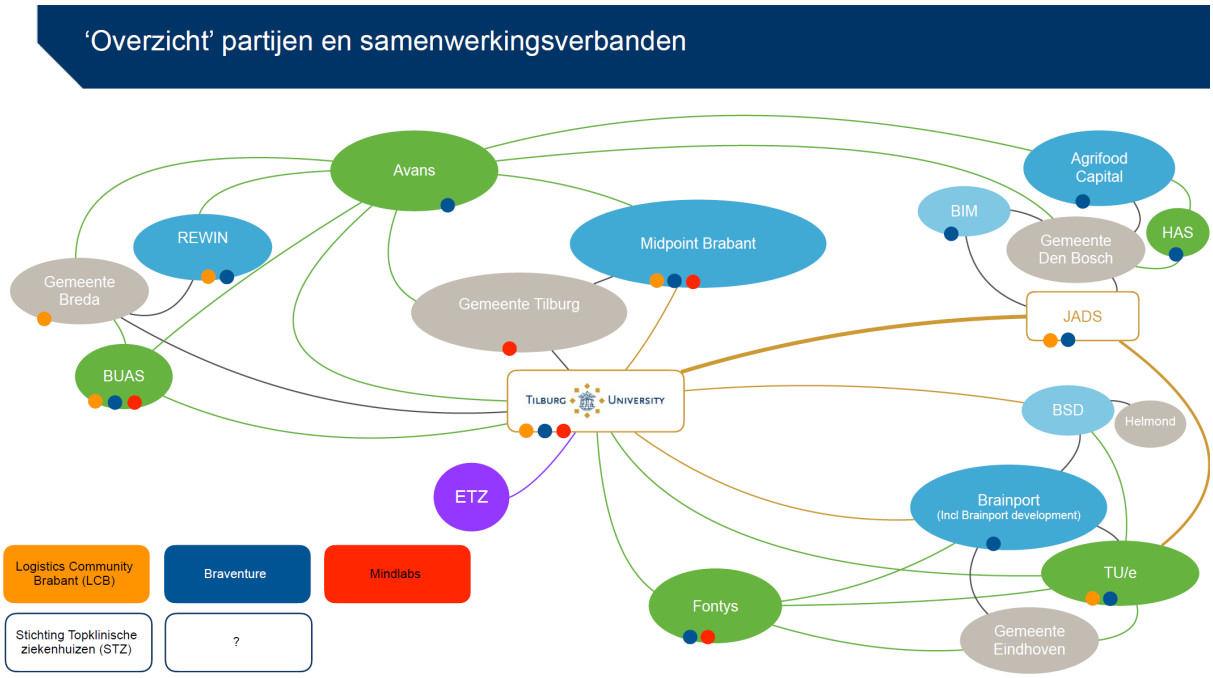
5. Starting Points for Positioning

In the second step, we asked ourselves how Tilburg University can position itself optimally in ecosystems (convergence). We did this from two starting points:

Perspective 1: Thinking in terms of (university) research themes [10]
Suppose the university chooses new cross-School themes, what ecosystems are needed to do so? Do we make use of existing ecosystems (if so, which ones?) and are they adequate? If not, what will we do to be part of existing ecosystems, or should we take the initiative to develop new ecosystems ourselves?

Perspective 2: Thinking in terms of pre-existing (regional) ecosystems
See the slide below with some existing, slightly more managerial regional ecosystems[11]. Do these ecosystems provide an effective vehicle for connecting our university research and education to society? And suppose the university chooses new cross-School themes, can we embed ('load') these themes into these existing ecosystems? If so, how?

[10] The deliberation table "Substantive priorities in overarching research themes" is exploring these themes. At the time of writing our paper, that deliberation table is exploring as possible themes: sustainability transition, equality and diversity (possibly also: inclusion), and wellbeing and health (care).
[11] Source: Edward van de Pol, March 2021.



Both perspectives offer opportunities. Perspective 1, in which we start from our own strengths, enables us to be or become agenda-setters for our own themes in existing or non-existing ecosystems. Perspective 2 offers opportunities because existing ecosystems have often existed for a long time and have acquired a more or less structural character, in which incidental encounters and collaborations are also possible. The fact that these ecosystems are administratively relevant and can, therefore, generate clout may be a consideration for continuing to participate in them. However, they do not resonate strongly with the scientists on the shop floor.

Our conclusion is that we need to think primarily from substantive themes (Perspective 1). Without this strength and the associated ambition, our participation in ecosystems will be insufficiently effective. Existing ecosystems in which we already participate can be instrumental in this but are not leading. Positioning from university research themes can be done by actively connecting broad groups of scientists to them. On this basis, we can determine in which (existing) ecosystems we wish to participate, what we can offer them, and what we can gain from them. A condition for this is that the themes are sufficiently focused. See Section 7 for more suggestions for positioning based on research themes.

6. Preconditions for Working in Ecosystems

We have categorized preconditions for successfully working in ecosystems into a number of clusters.

Innovation Space & Culture

Create innovation space for scientists. Allow them to spot opportunities for sound scientific research from other avenues of approach, and give them the possibilities to take these new paths. The example of Utrecht University (Bas van Bavel) is mentioned, where they work with pop-up academic collaborative centers in addition to fundamental research. For this idea, contribute to a situation in which managers and team members are proud of new initiatives aimed at connecting with ecosystems inside and outside the School. Also, dare to make mistakes and value this boldness. This means accepting that, sometimes, an innovation budget may have no return. If we want to encourage people to experiment and innovate more, we will also have to enable them, partly in view of work pressure, to do this alongside or instead of other tasks and to make their own choices in this regard. Recognition and rewards play an important role here.

Internal Connection & Steering
Encourage people from different fields, Departments, and Schools to meet, that is, substantively on our strategic themes with also room for other themes and bottom-up initiatives and 'horizontally' right across the organization. After all, ecosystems are about connecting, and by connecting within our own organization, we can develop "richer" propositions for external parties. We can facilitate this internal connection, for example, by periodically organizing cross-School substantive seminars, as we now see in some research groups and impact-driven sub-communities[12], but also by stimulating interdisciplinary projects across Departments or Schools (cf. the Impact PhD positions), or by using seed money for small initiatives and pilots. Various best practices already exist online to facilitate these encounters, for example through digital communities.

Account Management
Maintaining and connecting internal networks at our university to external ecosystems still depends too much on coincidences: we often do not know that we are meeting with the same external party. If we want to set the agenda for larger themes in important ecosystems in the future, our account management with the strategic accounts for those themes must be in order, both in terms of responsibilities and in terms of available information (more data-driven) about who is doing what and what steps are being taken. This requires a thorough information strategy (monitoring activities, accessing and using this data), organization, and financing. It also requires a culture change (transparency, open-mindedness, trust, not begrudging someone) in order to *be willing* to disclose and share exclusive personal networks, in order to subsequently deploy them for the greater, strategic interest.

Uniform internal policies
Where ecosystems are cross-School, it is important that financial, administrative, and legal principles are the same. In this way, we can offer scientists from different groups equal opportunities and possibilities, and collaboration between them will come to fruition faster and better.

Students and alumni
Engaging students and alumni presents opportunities. We need to ask ourselves what we can offer these groups and what we can get from them. Interesting are lifelong learning for (strategic) collaboration partners and alumni, and for students working with student teams, outreaching labs, and challenges. This requires facilitation and pre-investment.

Support for collaboration & Ecosystem brokers
This mainly involves high-quality, easily accessible support for participating in ecosystems and building (public-private) projects in those ecosystems. This includes not only knowledge and expertise in the financial, administrative, and communication and legal areas but also the exchange of methods and other best practices for successful co-creation. It may also involve supporting (groups of) scientists who want to start collaborating with external parties, for example, by guiding them in working out a business case for research or setting up professional learning. The support that is already available could be better coordinated and made easily accessible, for example, by means of a helpline for brief, practical questions relating to collaboration with external parties in ecosystems.

In addition to this more generically available expertise, and for specific ecosystems with high strategic value, consideration could be given to appointing individuals specifically as "ecosystem brokers." These connecting links between our internal network and the external ecosystem can link internal expertise to external parties in the ecosystem, take a proactive approach ("take charge"), and thus relieve scientists of the burden.

[12] Consider, for example, the TAISIG Talks of the Tilburg University Artificial Intelligence Special Interest Group, in which people exchange knowledge on the ethical, legal, and social aspects of AI.

7. Connection to Other Deliberation Tables and Aspect Themes

Finally, we looked at the connections between our deliberation table's theme and those of other deliberation tables and aspect themes. We limit ourselves below to the deliberation table "Overarching Research Themes" and the aspect theme "Internationalization," without wishing to detract from the importance of the other deliberation tables.

Deliberation table "Substantive priorities in overarching research themes (interdisciplinary and inter-School)"

When writing our paper, another deliberation table is exploring the possibility of university-wide themes. These themes are deliberately broad in scope, to give researchers from several Schools the opportunity to participate (to be all-inclusive). Currently, this deliberation table is also looking at possible sub-themes. Our deliberation table wishes to emphasize that (sub-)themes must have sufficient focus to be recognizable and appealing, both internally and to external stakeholders with whom the university would like to collaborate in ecosystems within these themes. Therefore, our suggestion is to (further) develop sub-communities within large, overarching themes regarding more focused sub-themes, for example, concerning a social challenge or mission. At the level of these sub-communities, one can then join or help create existing ecosystems.

As an example, we take the possible, broad theme Equality and Diversity (possibly also: Inclusion). If, for example, a sub-theme such as "Debt" is identified as being promising, then scientists from all Schools will be able to commit to it, in a community, in terms of content. These scientists will share individual networks in order to seek connections with social partners, companies, authorities, and citizens. Tilburg University can take the lead in such a broad community concerning a focused theme such as "Debt". As soon as this community, together with external partners, establishes a common vision and develops activities that link our scientific knowledge to social issues, the community will evolve over time into an ecosystem according to the definition we chose earlier.

Aspect Theme "Internationalization"

The group dealing with the aspect theme Internationalization gave the following message to our deliberation table: "Create cross-links between regional networks and international networks, e.g., how can the Brainport network help us to reach out to international partners, and vice versa?" We endorse the importance of connections between regional and international networks. We could map out in which ecosystems with social partners and companies we are currently active and successful. In addition to Brainport, think of existing collaborations in the context of extended Master's programs, the ecosystem of JADS, the Zero Hunger Lab, projects initiated within the Impact Program, and Tranzo's academic collaboration centers (to which approximately seventy partners are structurally connected). Internationally, there are also numerous networks, of individual scientists or more on an institutional level (such as Engage.eu), within which we can make links with strategic goals. Among the possible goals of participation, one can think of a better positioning ourselves for Horizon Europe grant applications, the creation of international internships, and the more strategic positioning with national governments and Brussels on themes that are crucial for the humanities and social sciences.

8. Dot on the Horizon: where do we want to be in 2027?

The task for our deliberation table was "How can Tilburg University position itself optimally in broader ecosystems? With our paper, we started from a definition of ecosystems that is workable for our university and that is consistent with a vision of a fourth-generation university. In our search, we inventoried strengths, weaknesses, opportunities and threats, and explored some perspectives, and this led us to a shortlist of preconditions for successful participation in ecosystems. In doing so, we have mainly been thinking in terms of the "now," and not so much in terms of where we want to be in 2027. Below, we outline a number of possible dots on the horizon.

In 2027, ...

-external positioning-	-culture, governance, and support-
...Tilburg University has a leading role in the ecosystems in which it participates by promoting and living up to its core values of 'Connected, Curious, Caring, Courageous' *... Tilburg University is known regionally, nationally, and internationally for actively working in ecosystems, in co-creation with partners and end users, and in social significance (beyond technology).* *... parties in regional ecosystems see Tilburg University as the partner of choice for social science contributions to complex issues that sustainably advance the region.* *... scientists on the labor market consciously choose Tilburg University because we offer them the opportunity to take on and/or initiate socially relevant projects in co-creation with external parties.* *... prospective students consciously choose Tilburg University because we offer them the opportunity to study and help solve complex social problems together with external partners.*	*... scientists feel valued and supported for their entrepreneurial activities in ecosystems thanks to stimulating personnel and incentive policies from the university.* *... scientists active in ecosystems are taken care of by the university through enabling policies, high-quality support, and manpower in linking positions.* *... transparent account management (information) enables our scientists and administrators to make the connection between research, education, and impact at the account and ecosystem levels.*

In the further elaboration of the strategy for 2027, and in coordination with the recommendations from the other deliberation tables and aspect themes, strategic choices can be made on the way to achieving these dots on the horizon. This requires commitment and involvement throughout the entire strategy period, in all layers of the organization. In this way, we can realize our ambition of Understanding and Enhancing Society together with partners in our ecosystems!