

Management Summary

The Valorization Program

The 'Valorization' (knowledge use) Program was introduced by the Ministry of Economic Affairs and Climate and the Ministry of Education, Culture and Science in 2010. Being a follow-up to the Subsidy program Knowledge Exploitation, it served as a new impulse for professionalization of entrepreneurship education and valorization structures. The program offered financial support to 12 consortia, consisting of universities (including the applied ones), firms, municipalities, provinces and societal actors. These consortia implemented valorization plans with a runtime of 6 years, the last ones of them ending in 2018. The goal of the plans was to improve and embed the use of knowledge in regional ecosystems.

A total of €62,7 million of subsidies has been granted to the 12 consortia, with the requirement of providing co-funding of at least 50%. The subsidies could be used for the following seven facilities:

- Entrepreneurship education
- Screening & scouting
- Intellectual property (IP)
- Pre-seed funding
- Proof of Concept funding
- Networking events
- Experiments

Valorization centers used these facilities to provide support activities to researchers and students with promising ideas, as well as to (other) starting and established firms in a region. Each valorization center acts as a hinge, connecting the domains of research and education with application domains of socio-economic relevance.

This evaluation builds on the mid-term assessment of 2014 and aims to determine the overall impact of the national Valorization Program. To this end, a combination of research methods was deployed, including desk research, microdata analysis, a CATI survey (>300 respondents), 12 site visits, about 15 interviews, and two validation workshops.

Region-specific implementation of the Valorization Program

The starting point of the Valorization Program is the possibility for participants to decide which type of valorization they would like to focus on. The consortia differ in the kind of knowledge they can offer, and (therefore) in the possibilities they have for enhancing the use of this knowledge. One key dimension in this respect is the difference between finding a use for knowledge that has been generated already (inside-out), versus developing knowledge by responding to demands from external parties (outside-in). Another key dimension is whether the emphasis lies on research, or on education.

Taking these two dimensions, we have grouped the participating consortia into three types of 'valorization systems': Push (inside-out * research), Serve (outside-in * education) and Exchange (the intermediary position). Furthermore, we also characterized the actual activities consortia have developed in order to spur knowledge use. About 15 archetypical activities can be distinguished. Most of the participants have activities in each of the quadrants. Only linking socio-economic challenges to available expertise is found sporadically, at least if we consider the scope of activities subsidized by the Valorization Program.

Conclusions

First, the impact of the Valorization Program needs to be appreciated by considering also other ongoing policy developments in the fields of science, innovation and entrepreneurship. During the past few years, a large number of parallel initiatives helped to put knowledge use higher on the agenda. The Valorization Program and the valorization centers can be regarded as fundamental structures within this policy mix, targeted at supporting actors that might also benefit from the complementary policies.

The overall impression is that participating consortia have been able to give a positive impulse to their valorization infrastructures. Ample use was made of the possibility to experiment with new activities linked to specific opportunities with a region. This has unmistakably strengthened the local connections between science, education and application.

With its emphasis on screening & scouting, IP and funding, the Valorization Program mostly focused on 'pushing' knowledge into society. Some consortia also managed to bring the user perspective more into the universities, as an alternative approach to ensuring that research and students eventually will be of use for society. This is a promising development.

The Valorization Program was also used to boost the entrepreneurial skills and attitude amongst researchers and students, as well as to get regional stakeholders (like SMEs) in touch with the universities. Remarkable is that most of the ±2000 supported firms consist of startups from outside the universities, rather than of academic startups. In practice the Program sometimes contributes more to regional economic policy than to valorization.

At this point it is too early to assess how supported firms are performing. Moreover, the total impact of the Valorization Program also involves other types of knowledge use that were strengthened. It is impossible to quantify the magnitude of the societal benefits, also because the indicators are not suitable for this purpose (they were mostly used for process control).

Although valorization gained prominence as an important topic for universities and regions, it still is only partially embedded in permanent institutions (strategies, departments, budget cycles). With the Valorization Program coming to an end, universities turn out to be holding back when it comes to guaranteeing sustained funding for their valorization structures. The shift to an impact-oriented vision is still far from completed.

Many of the centers running the valorization activities are now required to arrange their own funding. As a result, they have few incentives to work on those forms of knowledge use that would not happen without their support (e.g. solving societal challenges that do not bring a clear business case). The focus on maintaining the valorization structures that have been put in place clearly inhibits possibilities to keep improving them. This is unfortunate, as there is still a clear potential there. For instance, collaboration and exchange of good practices between regional consortia occurs only very occasionally. The same holds for interacting with professional research institutes and relevant (valorization) centers abroad. Lacking attention for engaging with parties elsewhere is reinforced by regional governments' tendency to direct investments in particular towards incubation and acceleration within their own districts.

Recommendations: three courses of action

The Valorization Program has helped to make an important next step in entrepreneurial education and knowledge use in at least 12 regional ecosystems. However, at most universities valorization is still far from being fully ingrained. This puts serious pressure on the much-needed maintenance and improvement of the valorization structures that have developed over the past years. Based on our findings, we suggest three courses of action.

A first recommendation is to create a permanent facility for keeping up and strengthening the valorization centers. The **universities** formally have the assignment to strive for impact, which implies they should structurally devote part of their budget to entrepreneurial education, IP support, guiding spin-offs, etcetera. As long as the executing valorization centers do not have a stable base, in terms of (financial) commitment, their continuity and therefore quality is at risk. In that case they might also demand too much from starting firms, or refrain to supporting only firms with a high likelihood of yielding success in the short term (thereby competing with the emerging private and regional incubators). Besides arranging permanent funding, universities can also boost the esteem of valorization by making it a more explicit part of e.g. their human resource policies. Similarly, embedding valorization also requires the **Ministry of Education, Culture and Science** to strongly express the importance it is assigning to this topic. While the emphasis should be on flagging the societal relevance and creating suitable framework conditions, the ministry is also recommended to consider introducing a financial solution matching the impact objective it has set (at least until the universities and their partners have improved their ability to secure more funding).

The second course of action pertains to the ambition of taking the current valorization structures to a higher level. Still much more can be done in terms of activities that truly combine research, education and application, and/or activities that contribute to a national valorization network (instead of local structures that do not learn from each other nor pass on promising startups to the most fitting context). The **valorization centers** themselves are best positioned to improve their alignment, preferably by also adopting a stronger thematic specialization. To organize this, both the **Ministry of Economic Affairs and Climate** and the **Ministry of Education, Culture and Science** can provide support, for instance by facilitating joint learning initiatives. An additional possibility is to create an 'Impact Program' that invites centers to submit proposals (together) for new valorization experiments.

The third course of action concerns funding for academic spin-offs (and possibly also other startups) that cannot yet approach regular capital providers. The **Ministry of Economic Affairs and Climate** could create a new fund or rely on existing policy instruments. Providing funding – as well as the corresponding supervision – in a startup's initial product development stage turns out to be crucial. Especially after termination of the Valorization Program, funding for this stage has become scarce; possibilities offered by **Provinces and their Regional Development Agencies** mostly focus on propositions and firms at a later (more secure) stage of development. To use such facilities, however, 'raw ideas' first need to germinate. Hence the urge for warranting sufficient pre-seed funding.

Issues for policy deliberation

Given the current state of affairs, there are two issues clearly requiring decision making:

1. Formulating a view on who is in charge of what part of valorization. We recommend developing a 'valorization vision' or even establishing a 'valorization pact' with relevant stakeholders. Especially in the latter case this should involve the whole knowledge chain, including the Netherlands Organization for Scientific Research (NWO), the professional research institutes, and the institutes for intermediate vocational education. The creation of a vision or pact would also be a suitable occasion for aligning all available valorization policy instruments and strengthening the attention for outside-in dynamics.
2. Formulating a vision on the balance between national policy and regional/local policy. In our view the alignment between the two is key, for instance in order to avoid discrepancies in the goals and instruments that are being deployed. In this respect it might be helpful to distinguish between what *valorization policy* should do, and what *regional development policy* should do.

To conclude, we stress the importance of not waiting too long with providing another impulse to valorization in the Netherlands. Most of the valorization centers have finalized their subsidized plan, and now run the risk of losing momentum or even having to scale down substantially. A second consideration is not to base future valorization policy on one single model for boosting knowledge use and impact. This evaluation has shown that de various consortia deal with region-specific knowledge chains and valorization infrastructures. Different valorization systems can co-exist, and it is welcomed if enabling regions to enhance their valorization efforts will lead to more specialized knowledge domains and associated impact types. In that respect, a future with more collaborative and thematically focused valorization center would be an expedient next step in the evolution of valorization in the Netherlands.