



# **Case study on the Dutch Valorization Program, the Netherlands**

POLICY  
CASE  
STUDY

Contribution to the OECD TIP Knowledge Transfer  
and Policies project

Martijn Janmaat, Sander Kes, Joost Dieleman, Jelle Wijnstok,  
Eline Castelejin

Please cite as:  
Janmaat et al. (2019), "Case study on the Dutch Valorization Program, the  
Netherlands: Contribution to the OECD TIP Knowledge Transfer and Policies  
project".

**Case study on the Dutch Valorization Program, the  
Netherlands: Contribution to the OECD TIP Knowledge  
Transfer and Policies project**

*Authors: Martijn Janmaat, Sander Kes, Joost Dieleman, Jelle Wijnstok, Eline Casteleijn*

---

*Table of contents*

<b>Foreword .....</b>	<b>4</b>
<b>1. Main features of the Valorization Program .....</b>	<b>5</b>
<b>2. Interactions with the policy mix .....</b>	<b>8</b>

## Foreword

This document was prepared by the Dutch Ministries of Economic Affairs and Climate and Science and Culture at the request of the OECD TIP project on knowledge transfer. The first part reproduces the executive summary of the evaluation of the Dutch Valorisation Program (DVP), performed by Dialogic in 2018. The second part includes two additional sections. The first additional section covers the relation of the DVP to existing (STI) policy instruments, highlighting those that promote knowledge transfer. It describes how the DVP complements these policies, identifying (pre-existing) gaps and possible duplications. The second draws general lessons from the DVP experience that can be applicable to any other country. It also identifies some issues that remain a challenge and a number of current initiatives related to knowledge transfer.

## 1. Main features of 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 2 validation workshops.

### 1.1. 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.

## 1.2. 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.

### **1.3. 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, etc. 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 (EZK) and the Ministry of Education, Culture and Science (OCW) 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.

#### 1.4. 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.

## 2. Interactions with policy mix

The Dutch Valorisation Program (DVP) was introduced by the Ministries of Education, Culture and Science (OCW) and Economic Affairs (EZK) in 2010 as one of several answers to the ‘knowledge paradox’, which embodies the concern (often heard in EU-member states) that (technological) knowledge created in Higher Education Institutes (HEIs) and public research institutes (PRIs) often does not advance into stages of development, demonstration and diffusion, thereby limiting its potential economic and/or societal impact.

Specifically, the DVP challenged consortia of HEIs, regional governmental organisations and public research institutes, to draw up propositions for knowledge transfer to innovative firms, setting up TTO’s, incubators (tech start-up facilities), regional internship support programs and entrepreneurship education programs teaching students about new business venturing. Thus, it complemented OCW’s policies for higher education research and knowledge transfer that generally do not earmark largely lump-sum institutional budgets for such activities. It also complements the NWO programs Take-off grant/loans (providing

pre-seed capital to academic start-ups) and Large research facilities, a funding program for facilities that are often located on science parks where HEIs also house their TTO and incubators, as well as R&D-facilities for firms.

The ambition to increase the societal and economic impact of knowledge is also on the agenda of StartupDelta program. StartupDelta was launched by the Dutch government in 2014 to strengthen the ecosystem for start-ups and scale-ups in the Netherlands. One of the major issues at this moment is the access to knowledge around breakthrough technologies and the transfer of knowledge into entrepreneurship and innovation.

The Netherlands does not have explicit regional policy at the national level, but applies a regional focus in several policy domains. The current government ‘Rutte III’ has strengthened the focus on regional strengths and differences between regions. In 2017 the ministry of Agriculture, Nature and Food Quality introduced the ‘Regional Budget’ as a financial instrument to address specific regional challenges and foster cooperation between national, regional governments, the business community, academia and civil society. The fund contains €950 million euros for the period of 2018 until 2022. The ‘Regional Budget’ is a financial instrument that allows cooperation and collaboration between the national government, regional governments, the business community, academia and civil society on addressing specific regional challenges. The Ministry of Interior and Kingdom Relations, in partnership with the Ministry of Infrastructure and Environment and the Ministry of Economic Affairs, co-ordinates the development of a National Urban Agenda (Agenda Stad). The agenda includes measures to boost economic growth, quality of life and innovation in Dutch cities. Thus, while several current government programs potentially support knowledge transfer, they are not set up to do specifically this single task. Rather, they are used to facilitate regional deals between national and local partners on multiple thematic goals (sustainable growth, economic development), including activities to ease knowledge transfer.

## 2.1. General lessons and broader implications

### *The need to address technology transfer at the regional level, responding to region-specific characteristics*

Dutch policy makers have learned that it is important to stimulate knowledge transfer at regional level, since regional knowledge hubs are often keen to organise such efforts (agenda setting) and most of the benefits are reaped at this level. Readiness/willingness to invest differs per province/region, making a national initiative such as the DVR a useful vehicle to mobilise regional stakeholders.

Setting up instruments and facilities around HEIs to (pre)seed start-ups and university spin-offs is a critical task for government, since market failures are most present: possible positive externalities in terms of knowledge spill-overs and capital markets providing insufficient financial means to very young, innovative companies. If regions structurally invest in an excellent start-up ecosystem this will likely be rewarded by new business activity, possibly leading to scale-ups and larger high-growth companies. If such investments do not take place, new firms are not as likely to arise and grow, thus limiting regional economic growth.

### ***The advantages and risks of forming regional consortia to implement this kind of policies***

The Dialogic report shows that the regional consortia tended to boost regional start-up pre-seeding and not necessarily high tech / knowledge driven spin-outs. This approach was effective in boosting regional start-up ecosystems, which is clearly advantageous to regional economic activity. However, the approach might have distracted from the screening and scouting function, closely organized around research groups. The lesson drawn, is that this screening and scouting function of HEI TTOs is even more important than thought earlier: the consultants conclude screening and scouting should be the core priority for a Knowledge Transfer Office of a university. This is related to the conclusion that the university staff culture in general still much prefers publication over valorisation (patenting and licencing, or starting a business) and still has limited career opportunities for knowledge transfer specialists. This career issue is already a part of the long-term policy goals set in national vision on science 2025.

The advantage of a “freedom to experiment” approach is that there is more variety in outcomes across the 12 consortia. There is now much opportunity to learn from each other and also to be inspired by success and failures of other consortia. A disadvantage might be that results are less comparable than in a uniform approach.

A more generic disadvantage of subsidizing a culturally low-acceptance activity such as knowledge transfer and business venturing, is that this leads to higher likelihood of prolonged dependence on subsidies instead of anchoring the finance of these activities more structurally within the HEI. Structurally embedding financial means for this crucial function in HEI’s start-up ecosystem is now a follow-up challenge. Part of the solution lies in the new National Science Agenda and the new mission-driven innovation policy and Topsector approach). Impact activities are now required in the eligibility criteria for calls for proposals and as such form an integral part of competitive research collaboration stimulation.

### ***The mechanisms for national-regional coordination in this kind of policy programmes***

Given the experimental challenge set-up of the program, national coordination was at an understandably low level at first. Regional consortia had the freedom to experiment and were therefore logically more focussed on internal learning and coordination between consortia partners. However, there was an advisory board comprised of several experts from diverse backgrounds that performed audits on site and stimulated problem solving and exchange of practice between consortia.

### ***Follow-up policy development***

Now, after the DVP has ended and has been evaluated, we already see more intrinsically motivated coordination activity between HEI’s, TTO’s (eg. exchanging best practises and standardization of guidelines codes of conduct for IP policies etc.) Furthermore, national coordination between regions has become a new policy focus area for the current government, possibly a next step to build up the Dutch spin-out and start-up ecosystem. This will be a responsibility of the Ministry of Agriculture, Nature and Food Quality, which also coordinates the regional budget.

On a national level, the Netherlands Organisation for Scientific Research<sup>1</sup> (NWO) will renew its impact strategy and consequently it plans on more rigorous monitoring of effectiveness, using impact criteria for research funding.

The ministries of OCW and EZK will soon introduce a new thematic tech transfer program aimed at forming new and larger national PPP consortia with a thematic focus, to be funded from the ‘Future Fund’ budget of the Ministry of EZK. For example, it will fund the risk-finance and tech transfer of research stemming from the recently introduced Oncode Institute (a virtual institute focussing on excellent cancer research in combination with a focus on knowledge transfer). This institute will also be funded by the Dutch ministry of Health (VWS).

The regional DVP-consortia are still active and perceived as useful by their stakeholder. Thus, they will presumably continue to function as important regional bases for knowledge transfer initiatives, with primary focus on screening and scouting and generic supporting activities, such as entrepreneurship education and courses. Additionally, a new version of the national valorisation committee might also specifically aim agenda setting activities towards regional stakeholders outside of the current consortia.

The official government response to the evaluation has been sent to the Dutch parliament December 11<sup>th</sup> 2018 (available only in Dutch)<sup>2</sup>.

In it, OCW and EZK underline their strong support for knowledge transfer and utilisation and announces measures in the following areas:

- Solid foundation: this includes ‘sector agreements’ with regard to knowledge transfer and impact activities of RTOs, HEIs in various fields of science. It also announces monitoring activities and a Stevin prize to promote more variety in academic career opportunities.
- Impact program for improved cooperation between HEIs and firms. This includes new activities of Startup-Delta and the introduction of a Thematic Technology Transfer instrument. Both will support knowledge transfer and strengthen research and innovation ecosystems. This aligns with the new focus of the Topsector Policy towards missions in four societal thematic areas, a policy change which is currently being readied for implementation. Within the Smart Industry program five regional hubs will be set up to strengthen mutual learning and cooperation between the 35 field labs, where SMEs experiment with ICT.
- Entrepreneurship Education: HEIs have already committed to provide a fitting level of such education. It will be investigated if and how impact has been measured and what further actions are required, given the government’s ambition to provide any student, researcher, employee and entrepreneur the opportunity to learn entrepreneurial behaviour and stance.

---

<sup>1</sup> Its main task is to fund scientific research at public research institutions in the Netherlands, especially universities. NWO also facilitates research programming and impact activities.

<sup>2</sup>

[https://www.tweedekamer.nl/kamerstukken/brieven\\_regering/detail?id=2018Z23415&did=2018D59050](https://www.tweedekamer.nl/kamerstukken/brieven_regering/detail?id=2018Z23415&did=2018D59050)

- **Optimisation of financial links:** this includes a broad analysis of the Dutch market for SME financing, using ongoing evaluations of EAC financing support instruments.
- **National and Regional government cooperation:** this includes an investigation into possibilities for synergies between valorisation policies of national and provincial governments.