



the movement

*Working together
on Sustainable Development
in Education*

FIRE

TO

SPARKS

FROM

Tomas van Hermon

**12 february 2022
Leeuwarden,
the Netherlands**



the movement

From sparks to fire

From sparks to fire

Colophon

This report is composed by Tomas van Hermon
from the University of Groningen, Campus
Fryslân, as an internship project commissioned by
Vereniging Circulair Friesland,
RCE Fryslân | SPARK the Movement.

Leeuwarden, January 2022

The report is designed by Lennie Qiu.



Table of Contents

6	Short introduction to the Dutch education system	
7	Introduction	
	From pearls to sparks	
10	From sparks to fire	
12	Where are we now?	
	Evaluation tool and structure	
13	Interviews	
14	Measuring impact	
15	Discussion 1 - Coordination and network	
	1.1 How SPARK evolved	
16	1.2 How has membership changed?	
17	1.3 How local problems are addressed	
23	1.4 Which ESD initiatives have been undertaken?	
24	Discussion 2 - Activities and their effects	
	2.1 How did the portfolio of activities of SPARK evolve?	
	2.2 Examples of successful collaboration and decision making	
	25 Primary education	
	26 Vmbo	
	28 Havo/vwo	
	29 Mbo	
	31 Hbo/wo	
	34 Academics for Education	
	35 Collaborations with external partners	
	38 National and international partners	
	39 Reflection	
40	2.3 How can activities be upscaled and mainstreamed?	
42	2.4 How could better work be achieved?	
	2.4.1 Communication and organisation	
44	2.4.2 Methods for ESD	
47	Discussion 3 - Transformation and sustainability	
	3.1 Which projects reflect the success of SPARK?	
48	3.2 Which transformations regarding knowledge and practice are apparent?	
49	3.3 What had changed and how this change is evident?	
	3.4 What resources and governance have enabled success?	
51	Discussion 4 - Strategic areas and linkages	
	4.1 Which strategic focus areas, partnerships, and activities have been key to successes of SPARK?	
52	4.2 What could be done to improve learning and effectiveness?	
	4.3 How can existing linkages, processes and programs be strengthened?	
	4.4 What new strategic links and capacity development could be explored?	
53	Discussion 5 - Global RCE Service Centre	
	5.1 What have been the benefits of being acknowledged as an RCE?	
54	5.2 How are you interacting with the regional RCE Service Centre?	
	5.3 How are you working with other RCEs and what are some of the activities, successes and challenges?	
	5.4 How has your RCE participated in regional and global RCE conferences and undertaken follow up activities?	
55	Discussion 6 - Value and assessment	
	6.1 What are the most meaningful SPARK activities discussed?	
	6.2 What potential values are the SPARK activities producing?	
	6.3 What difference has this made that would not happen otherwise?	
56	6.4 What difference has this made to the ability of SPARK to produce what matters through its ESD projects?	
	6.5 What new understanding of what produces value are becoming evident?	
	6.6 Conclusion	
57	References	
58	Appendices	
	Appendix A - Explanation of the Dutch education system	
60	Appendix B - Additional list of Frisian initiatives	

Short introduction to the Dutch education system

SPARK the Movement started in the Dutch context. Therefore, a short introduction into the educational system of The Netherlands is laid out to help understand this context.

Dutch education is divided over schools for different age groups, some of which are divided in streams for different educational levels. Schools are further divided in public, special (religious), and general-special (neutral) schools, as well as some private schools.

Educational policy is coordinated by the Dutch Ministry of Education, Culture and Science together with municipal governments.

Compulsory education (leerplicht) in the Netherlands starts at the age of five, although in practice, most schools accept children from the age of four. From the age of sixteen there is a partial compulsory education (partiële leerplicht), meaning a pupil must attend some form of education for at least two days a week. Compulsory education ends for pupils aged eighteen and up or when they get a diploma at the vwo, havo or mbo level. An overview of the education system is shown in the table below, as well as a more in-depth explanation in appendix A.

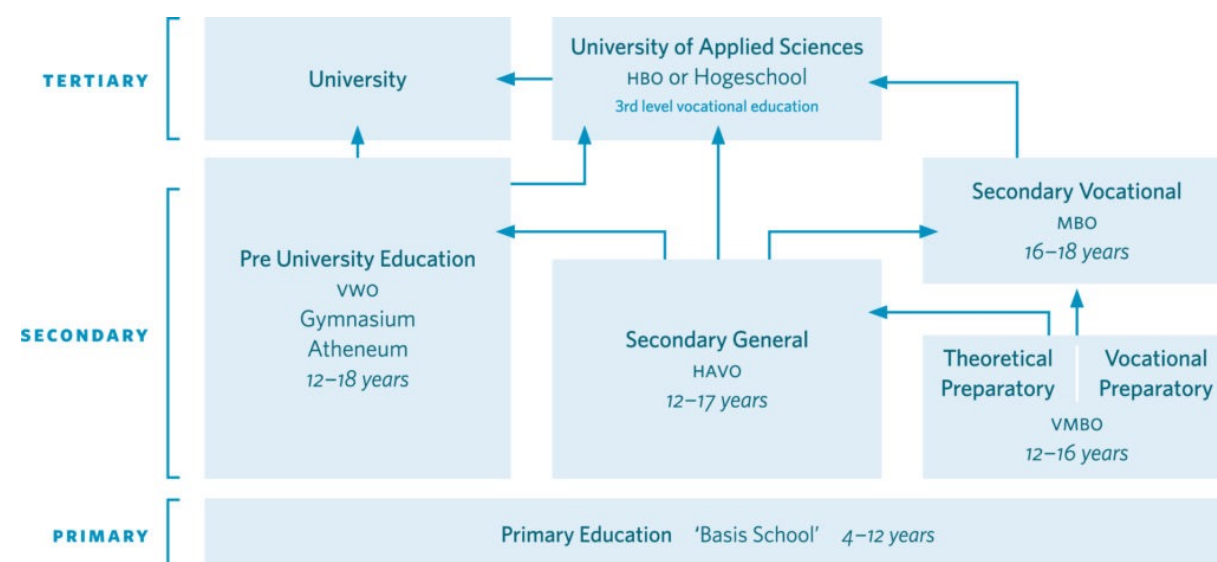


Fig. 1 Table by Willemijn van Oppen, Educaide



Introduction

Introducing the why, how and what of this report, the historical origin of SPARK the Movement and a short explanation of what the UN supported RCE Network is as well as how a Regional Centre of Expertise on Education for Sustainable Development should function.

From pearls to sparks

SPARK the Movement is the educational program of Vereniging Circulair Friesland and aims to help pupils and students to acquire the knowledge, skills, and attitude to be able to contribute to the development of a circular economy and a sustainable society. It does so by building up a regional ecosystem of stakeholders in the process of learning for sustainable development. This ecosystem consists of partners in the triple helix of entrepreneurs, local governments and schools on all levels. Yet, artists and citizens are included too, as to boost the imaginative power for a sustainable future of all stakeholders and to boost awareness among all groups of society, as for instance parents, village councils, sport clubs, etc.

SPARK the Movement (hereafter: SPARK), does so by catalysing the energy for sustainable development into a collective ambition and vision on Education for Sustainable Development (ESD), within the Frisian context. SPARK brings in knowledge about ESD and promotes an integrated or whole school approach, thus making ESD a normal activity for schools in the region.

They do so by for example developing tools and workshops, connecting to other networks on a regional, national, and international level, and by facilitating all kinds of projects. Generally, SPARK focuses on teach-the-teacher workshops, but sometimes direct interventions into classrooms are needed to showcase teachers how ESD can be embedded or to deepen SPARK's own understanding of how tools or projects work out in practice.

“Ultimately, sustainability needs to emerge in the everyday fabric of life – in the minds of people and in the values they live by. Such emergence depends on how and what people learn, both individually and collectively.”

– Prof. Arjen Wals
WUR/UNESCO Chair Holder Transformative Learning



This report is made to showcase these processes, and to evaluate and learn from them. What transformations have occurred since the establishment of SPARK? What has driven these transformations? And what can we learn from them? By answering these questions, this report aims to provide insights on how to bundle the energy and inspiration in the region. In order to understand the current context, it is useful to know what the status of education for sustainable development was when SPARK was established.

'Parels zonder Ketting' (Pearls without a Chain), is a report that was published in 2017 as part of DuurzaamDoor¹. The organisations involved in the making of the Pearls without a Chain report assessed the state of circularity in education in Fryslân/the Northern Netherlands per educational phase. Circular economy was broadly defined, including themes such as 'sustainability', 'waste' and 'energy reduction'. Per educational phase lessons, actions and projects embedding knowledge and skills for a circular economy were assessed.

Pearls without a Chain sought answers to two questions:

- How circular is education in Fryslân/in the Northern Netherlands?
- How can the education and business sector bundle forces to contribute to a circular economy and a sustainable society?

In 2017, Pearls without a Chain found that there was still a lot to achieve: *"The potential role of **primary education** is mostly that of getting acquainted with the topic, the creation of awareness of the local environment and the behaviour that is necessary to keep it sustainable. On an ad hoc basis there are different activities, mostly offered by third parties, but structural attention does not exist.*

*If there is a push for awareness surrounding circular economy in primary education, this is not continued in **secondary education**. From our assessment of havo and vwo schools it shows that in the regular curriculum there is little activity surrounding 'sustainability', let alone surrounding circular economy". Isolated sustainability projects do exist. In the vocational oriented vmbo there is also only fragmented attention for sustainability and circular economy, although the education reform offers opportunities for structural integration.*

*In **vocational education (mbo)** and in the **applied universities (hbo)**² – the educational phases where students get closer to the labour market – it shows that the number of activities surrounding sustainability at the schools is growing. There are differences in the development of the mbo and hbo institutions and the different vocational courses. Here*

we see a large demand for support and follow-up activities. At the University of Groningen, circular economy and sustainability emerge as important themes in multiple study fields and research centres. It remains unclear whether these themes are an integral part of university level education." (Pearls without a Chain, 2017, p.3). The report emphasizes that, in the light of the global sustainability challenges, an innovative, circular economy offers new chances and perspectives to young people. The conclusion was, as the title indicates, that although quite some beautiful and promising initiatives were undertaken, coherence or a shared policy was lacking. Due to the global urgency and regional potency of taking up action for a circular economy and a sustainable society the authors claim that this ought to be reflected in education and the curriculum.

Therefore, Pearls without a Chain formulated three recommendations for government, education and the business sector:

1. **The Way of Awareness: a multi-year awareness program for circular economy should be developed.**
Activate educational institutions and connect regional small businesses to the theme of circular economy. 'Creative thinktanks' of pupils and students at all levels could get started with the question of how awareness can be amplified, and a circular economy be realised.
2. **The Way of Cooperation and Sharing: a network of sustainability officials in vocational education should be created.**
Use existing consultation networks in mbo/hbo to put sustainability and circular economy prominently on the agenda. Also, we propose to establish a central support point that enables broader cooperation between stakeholders in the Northern Netherlands and reinforces existing structures. In primary and secondary education, existing proven structures such as the NME centres and the projects of IVN could be reinforced and expanded.
3. **The Way of Digitalisation and Information Disclosure: a data bank for circular economy and sustainability should be developed.**
Collect and disclose relevant information sources and course material for teachers.

(Pearls without a Chain, 2017, p. 4-5)

¹ Pearls without a Chain was published in Dutch, any quotes used are therefore translated by the author of this evaluation.

² RUG/ CAMPUS Fryslân was not involved in the report of Pearls without a Chain, as this educational institution is only active in the region since 2018.



From sparks to fire

The outcomes of Pearls without a Chain were discussed during the annual 'Frisian Chances' Meeting, where regional leaders from businesses, educational institutes and the Province of Fryslân come together. One of the interviewed coordinators for sustainable innovation at the Nordwin College (now Aeres), Helena Swart, was contacted to find out if she could come up with a coherent program to connect the pearls and implement Education for Sustainable Development (ESD) for all schools, on all levels, in the whole province of Fryslân. After several design sessions with teachers, entrepreneurs, students and the local government, SPARK the Movement was born. In the autumn of 2018, Swart started to work as a program leader and a digital platform was launched. Several tools, such as a self-scan, an SDG-compass, a toolkit, and a guideline were developed to stimulate and help schools to join the movement to learn for sustainability.

Four years later, all kinds of sparks have been connected to form a torch. SPARK the Movement is now looking to bundle the energy and inspiration of the region to light a fire that keeps burning. Over the past years, much groundwork has been laid for this fire to take hold. SPARK the Movement's share in this work has even been acknowledged by the United Nations. In 2020, SPARK and Campus Fryslân applied to become a RCE ESD (figure 2), a Regional Centre of Expertise on Education for Sustainable Development (hereafter: RCE). In 2021 acknowledgment was granted, enabling SPARK to connect to a worldwide network of other regions that develop expertise on ESD. In recognition of the fact that expertise comes from the community as a whole, SPARK speaks of a regional *community-centre* of expertise. Claim your Future and Jongerenpanel Duurzaam Friesland joined as Youth Coordinators, and more than 20 organizations supported the application with letters of intent. This new RCE is called RCE Fryslân.

What is a RCE?

A Regional Centre of Expertise (RCE) brings together institutions and partners at the regional level to jointly promote ESD (Education for Sustainable Development). It builds innovative platforms to share information and experiences and promotes dialogue among regional stakeholders through partnerships for a circular economy and a sustainable society, resulting into broad prosperity here and now, as well as for living beings elsewhere in the world and for generations to come.

A RCE forms a regional knowledge base and functions as a key-knot in the supportive ESD network of stakeholders that wish to learn for a circular economy and a sustainable society. Its core activities are:

- **Governance** - addressing issues of RCE management and leadership and aligning regional agenda's
- **Collaboration and strategies for collaborative activities** - addressing the engagement of regional stakeholders from all levels of formal, non-formal and informal education and connecting them to national and international (RCE) partners
- **Research and development** - addressing the role of research and its inclusion in RCE activities
- **Education** - addressing the transformation of the current education and training systems in accordance with a whole school approach, to satisfy ambitions of the region regarding sustainable living and livelihood

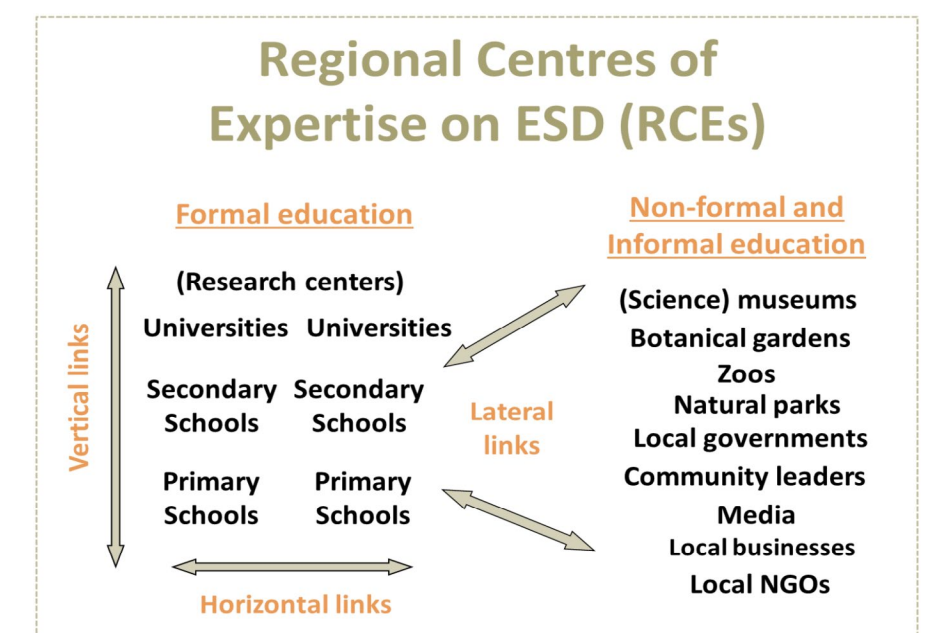


Fig. 2 www.rcenetwork.org/portal/rce



Where are we now?

Explaining the structure of the report and its methodology. The first paragraph covers the Regional Centre of Expertise evaluation tool and its structure. Paragraph 2 & 3 explain the interviews and provide nuance.

1 Evaluation tool and structure

The international RCE-network offers a self-evaluation tool for individual local RCEs. This evaluation comprises six different discussions. Together, these discussions form an extensive evaluation of the RCE to help reflect on their processes and output. Outcomes of the discussions can be recorded in for example a report or a set of recommendations. These discussions can also be adapted to fit particular circumstances or needs.

Because of this versatility, this report will use these discussions as its structure for evaluating the current impact of SPARK the Movement in the region. But, as SPARK the Movement has only been acknowledged as a RCE since 2021, the evaluating questions in this RCE tool are slightly modified as to suit its specific situation and history. This evaluation will give an insight into the activities undertaken by SPARK and their impact in the region.

The report will have the following structure:

- **Where are we now?**
An introduction to the RCE Evaluation tool and the structure of the report.
- **Chapter 1. Discussion 1 on Networking and coordination**
An evaluation focused on assessing the core elements of the RCEs – governance and networking, key strategies and activities – all seen in dynamic development. This discussion is based on interviews with SPARK founders Helena Swart and Sander Bos.
- **Chapter 2. Discussion 2 on Activities and their effects**
A developmental review looking on the one hand, on the activities and their effects and, on the other hand, exploring possible regional collaboration. For this discussion, interviews were held with a variety of stakeholders in and around education.
- **Chapter 3. Discussion 3 on Processes and their impact**
A review of the effects of multi-stakeholder work from the perspective of transformation and sustainability. In this discussion, a particular region will be highlighted and discussed, based on interviews with local stakeholders.
- **Chapter 4. Discussion 4 on Learning strategies and its impact**
An exploration of what has been done and the way it has been done. Next, this chapter discusses what has been learned within the RCE to improve learning and the effectiveness of such initiatives and exploring new areas. This discussion is based on interviews with Helena Swart and on insights gained during the internship period.

- **Chapter 5. Discussion 5 on Networking with other national, European, and global RCEs and the RCE Service Centre**
Covering the appreciation of networking activities with the Service Centre and other regional RCEs. This discussion is based on interviews with Helena Swart, Max Eisenbart and on insights gained during the internship period.
- **Chapter 6. Discussion 6 on Value creation**
Open discussion about the insights gained in the report. This final discussion will form a conclusion, reflecting on the report and the internship as a whole.

2 Interviews

To get an overview of the landscape, interviews were held with at least two stakeholders from each educational level (primary education, vmbo, havo/vwo, mbo, ho, wo), as well as with external partners that support regional education. The participants were selected with Swart as a gatekeeper, as she has the overview of the landscape in the Northern Netherlands and the key players within it. The participants are either directly involved with ESD or occupy a position such as principal that gives them an overview of their (educational) organisation and its efforts and transformations.

It should be noted that the selection of the participants and the interview questions, while carefully considered, might be coloured by my positionality. I am in many ways removed from the topic I am investigating. My own educational background in education, from a Montessori school to gymnasium and a bachelor programme in Global Responsibility & Leadership at Campus Fryslân, influences my perspective on the education system, and means I am less familiar with the other educational levels.

Within my bachelor, there is little academic content on education, which means that the knowledge I gained during the course of my internship is ultimately incomplete, and some perspectives might not be covered. Other educational movements, such as decolonization are also increasingly relevant, but due to the limited scope of the internship and my own background, these topics are not covered in this report.

This limitation is reduced due to the fact that for half a year I could observe the program-leader of SPARK closely during her work. Participating in the daily routine gave me the opportunity to discuss, meet and experience the process of embedding ESD into the region from various perspectives. Gatherings with mayors, people from the Province of Fryslân and schoolboards gave insight into governmental aspects, meet-ups with youth and students and discussions with teachers gave practical insights, and multiple strategic meetings with companies and the Circulair Friesland Team gave me an overview of the interests and ambitions of entrepreneurs. Meeting socially involved artists really inspired



me on a personal level, as well as giving insights on alternative forms of learning.

Considering biases and alternative perspectives is something that has always been of great importance to SPARK. In such a complex field as education, and additionally in an area that is relatively new and where research might be scarce, such reflections are very important. Meeting different people and organisations on a national and international level, with different views is integral to this, and the global RCE Network is very useful in this regard.

This process of reflection, and the many stories heard during my internship, have greatly broadened my understanding of ESD and its context in the Northern Netherlands. I have been impressed by the energy, dedication and passion of everyone I have talked to, and I am looking forward to see what will happen in this region in the future!

3 Measuring impact

Measuring impact is always a difficult task. Especially in an organisation like SPARK, where collaboration is dependent on the context of every different project and where clearly defined roles for everyone involved are often diffuse and even change during a project.

In general, the role of SPARK the Movement is not to initiate projects, but primarily to inspire, facilitate and connect until the project has taken on a life of its own and SPARK the Movements involvement is no longer necessary. Ownership and leadership always stay in hands of the school. New sparks can be uploaded by teachers, students and/or concierges on the website, www.sparkthemovement.nl, thus enabling SPARK to focus on other initiatives for ESD. This approach is expanded upon in 'How are local problems being addressed' (p.17).

Therefore, the discussed projects in this evaluation do not all have the same relation to SPARK, and the impact of SPARK on them cannot be quantified with objective parameters. In order to still gain an insight into this, impact is broadly defined, just as impact needs to be broad in order to enact systemic change. SPARK's specific involvement will be mentioned in every evaluating discussion below. With these nuances in mind, the next chapters will discuss the RCE evaluation questions and give an insight into SPARK the Movement and its influence in the Northern Netherlands/Fryslân.

DISCUSSION 1

COORDINATION AND NETWORK

Providing context for SPARK the Movement as an organization, paragraphs 1.1 and 1.2 will delve into the history of SPARK, paragraphs 1.3 and 1.4 expand on the most important tools used in communicating ESD.

1.1 How SPARK evolved

As mentioned previously, SPARK was initiated after the publication of the Pearls without a Chain in 2017. During a meeting of regional leaders, the results of this report were brought to the attention of Circulair Friesland, an association of companies, local governments and educational institutions who are working towards a circular economy in Fryslân. They wanted to involve education much more closely and structurally in this transition. During that time, Helena Swart worked at Nordwin College (now Aeres) for several years as coordinator for sustainable innovation.

Nordwin College was also mentioned in the 2017 report as an example of good practice. Because of this, Swart was asked to develop a programme, including all education in Friesland, from primary school to university. Not to establish a single project or to develop a learning plan, but to create a movement for circular talent; a transition to embed learning for a circular economy and a sustainable society at all educational levels, to make sure that all pupils and students in the Frisian region develop the knowledge and the skills to behave sustainably.

During several co-creating sessions with teachers, entrepreneurs, students, and people from the Province of Fryslân the program was given shape. The name SPARK the Movement was the result of a brainstorm session with youths. When a plan was formulated, with influences of previous tools and materials such as the Green Compass³, it was adopted and funded in about two weeks by entrepreneurs and the Province of Fryslân, indicative of the demand for such action.

From then, the website was developed to showcase the sparks that existed in the region. Sparks could be added by the initiators themselves; in this phase the role of SPARK was primarily to appreciate initiatives of teachers and students, and thus to inspire others. A jury chose the SPARK of the Month to put emphasis on a particular good practice and generate attention. After about a year and a half, SPARK began to focus more on the connection between business, local governments, NGOs, and education. Building an ecosystem for 'circular learning' is still one of the main priorities. Ultimately, the aim of SPARK the



Movement is to embed ESD structurally into the whole education system – not only into the curriculum, but also in how children learn, where they learn and from whom and with whom they learn.

SPARK the Movement now consists of programme leader Swart (0,8 fte) and content creator Lennie Qiu (0,6 fte), and together with trainees they stimulate schools to move from individual initiatives to cooperative projects with other schools and other partners in the region. More information about the SPARK crew can be found on the website⁴.

1.2 How has membership changed?

During the start-up phase, SPARK the Movement never formally worked with members, nor did schools have to pay for its services. Instead, during the first two years, every small or more impactful initiative was appreciated and paid attention to. The online 'wall of fame', on which every school can upload their sparks played an important role in getting insight into which schools were active in the field of ESD and which schools were not. While promoting the movement among the frontrunners, SPARK also made constant efforts to outreach to e.g., boards, principals, and team leaders to convince them to start working on ESD.

The fact that SPARK was financed and thus supported in its ambitions by the Province of Fryslân, two major educational institutes (Nordwin College (now Aeres), and NHL Stenden, and several companies such as Omrin, FB Oranjewoud and the Rabobank, helped to start the movement. The ambitions of these partners were clearly formulated: the Frisian region belonging to Europe's frontrunners concerning the establishment of a circular economy and a sustainable society^{5,6}.

After a year and a half, the initial funding was exhausted. It was then renewed and financed by all Frisian VET-centres and (applied) universities. During this second phase many different people, organisations and institutions were involved in one way or the other, thus becoming part of the regional eco-systemic network.

Swart: *'We choose not to work with members or membership-fees, as until now our focus was mainly upon creating awareness and the intrinsic motivation of partners to join us in a collective movement. However, we might decide to work with a membership-system in the near future as by now our focus shifts to upgrade the quality of ESD among the partners.'* This approach is expanded on in chapter 6 (p.38).

⁴ www.sparkthemovement.nl/over-ons (NL)

⁵ <https://www.fryslan.frl/flysystem/media/bestuursakkoord-geluk-op-1-2019-2023.pdf> (NL)

⁶ <https://www.circulairfriesland.frl/en/?noredirect=en-US> (EN/NL)

"The Blue Delta is our home. A wide strip of beautiful islands, wetlands, agricultural clay- and peat landscapes and wooded sandy areas along the north-western European coast. Over centuries, we have adapted our lives and livelihoods to be one with the water and the landscape, forming a deep relationship that drives our culture, our industry and our lives. The Blue Delta is not only the land we live on, but a mindset.

For more than 2 million people on the delta the need to act for the future is now. Given the increased effects of ecological hazards like climate change, soil degradation and biodiversity-loss, and social challenges related to demographic, democratic and economic change we feel an urgency to learn how we can meet these challenges and how we can achieve broad prosperity by 2030." (<http://www.bluedelta.world>; used in the RCE SPARK Fryslân Application Form, 2020)

1.3 How local problems are addressed

A growing number of organisations in the Blue Delta region, which encompasses the Northern Netherlands, is working together on the above-mentioned challenges within the set timeframe. Vereniging Circulair Friesland⁷ is addressing this from an economic point of view. With over 100 members, this association aims to belong to Europe's frontrunners in a circular economy in 2030. Therefore, circular learning is one of their five focus themes. Many brainstorm and cocreation sessions have been held to find out how to approach this difficult and multifaceted task.

These sessions brought up a lot of questions: how to evaluate progress, how to align visions and how to think about future avenues? And how to organize a successful and rewarding cooperation between entrepreneurs, teachers and students in light of a sustainable future?

To achieve this, the dynamics of business life have to connect fruitfully to the energy of the education sector. As of the writing of this evaluation, this collaboration is often still done next to business as usual, and in the form of temporary projects or challenges. The focus of SPARK is therefore to find ways to structurally anchor this collaboration and make it part of business as usual.

Swart: 'Looking at the 21st century, it should be absolutely normal for children of any age, in any course and on any level to develop the skills and the knowledge to work for a thriving future, together with students at other schools, and together with regional partners that strive for the same goals.

In this pursuit, SPARK uses several tools in communicating ESD to third parties who might not be knowledgeable on this topic.

⁷ <https://www.circulairfriesland.frl/en/?noredirect=en-US> (EN/NL)



Sustainable development goals

Firstly, and perhaps most prominently, the 17 Sustainable Development Goals are promoted as an international language to talk about sustainability. The SDGs are an umbrella under which every activity can be sorted, and through which the topic of sustainability can be directly connected to the topic at hand. The SDGs are communicated through for example the SPARK SDG Compass, see figure 3 below.

Circular Design Pillars

The second tool used by SPARK consist of the seven circular design pillars of Vereniging Circulair Friesland and Metabolic (Figure 4). These principles are inspired by the SDGs, the Donut Economy according to Kate Raworth, the theoretical assumptions from Cradle to Cradle and the characteristics of a circular economy from the thinktank Metabolic (VCF, 2021).

"To us, the ultimate goal of the circular economy is a flourishing society on an earth with self-healing and regenerative abilities. In our efforts to ensure the transition to a circular economy, we look at the seven pillars of the circular economy created by the sustainable think tank Metabolic."

Together these seven pillars, described below, form an exemplar of the circular economy. In an ideal world, all products and services comply with these pillars. We are working towards this ideal step by step."
- Vereniging Circulair Friesland, 2022

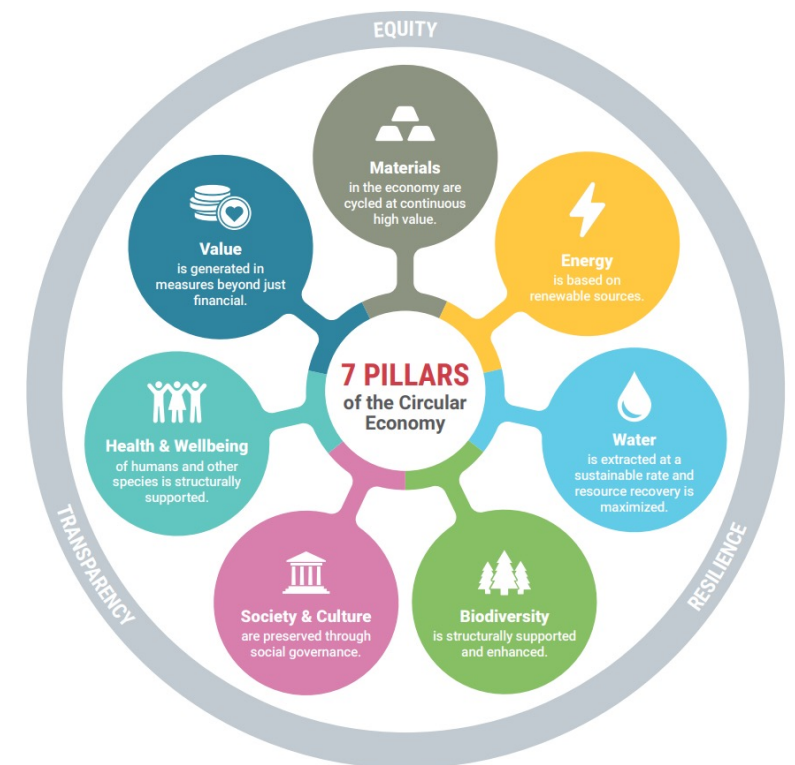


Fig. 4 Metabolic

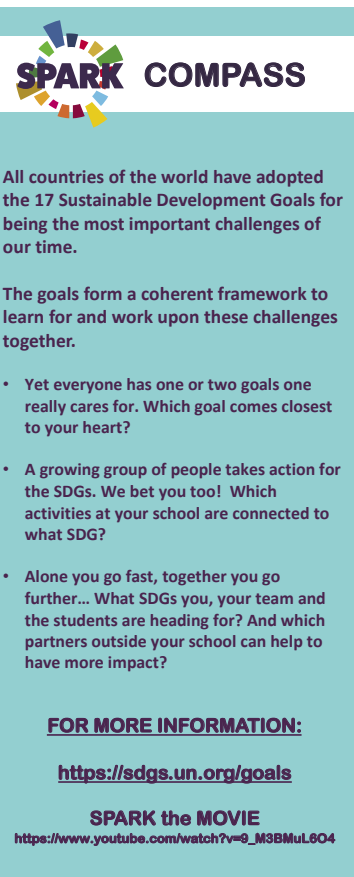


Fig. 3 SPARK the Movement



Whole School Approach to Sustainability

A framework that supports schools in giving shape to education for a sustainable future, in consultation with all stakeholders and interested parties in and around the school. The WSA helps to integrate sustainability issues structurally and coherently into the school organization.

- A Whole School Approach Core Document, Leren voor Morgen, 2021

The final major concept used by SPARK to communicate ESD is the Whole School Approach to sustainability (WSA; figure 5). The WSA is the primary tool used in The Netherlands when communicating the envisioned structural change for ESD. It forms the basis of additional tools that can be used by schools or other organizations and is continuously built upon.

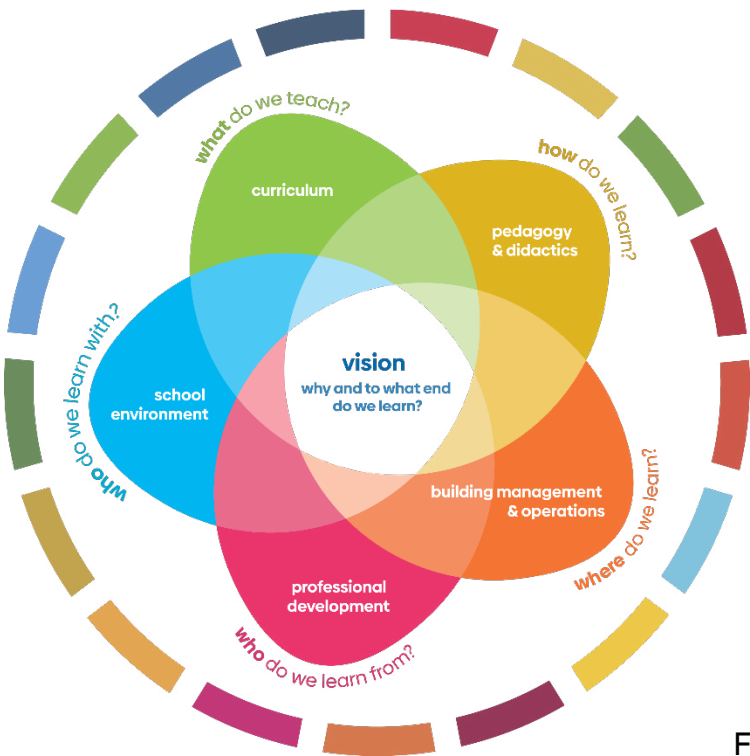


Fig. 5 A Whole School Approach

In cooperation with scientists such as Prof. Arjen Wals and several other members of Cooperation Leren voor Morgen, a Core Document WSA has been online published, in Dutch as well as in English⁸. The Core Document WSA to Sustainable Development was preceded by the development of another tool, called het Groene Kompas (Green Compass). SPARK was involved in the development of both tools.

Het Groene Kompas - Determining impact

A way to follow the structural integration of sustainability in education is to distinguish different phases, and this method is often used by SPARK (figure 6). These phases have found their way into the Green Compass⁹, deriving them from their origin in the Auditing Instrument for Sustainability in Higher Education (AISHE) and the European Framework for Quality Management.

Explanation of the phases				
1 Activity oriented	2 Process oriented	3 System oriented	4 Chain oriented	5 Society oriented
• Ad hoc • Implicit: not identified as sustainability, not recorded in any documents • Dependent on individual initiative	• Project based • Explicit: identified as sustainability and recorded in documents • Sustainability next to 'business as usual' • Sustainability is still mostly limited to management or a separate group of teachers within the school	• Sustainability is interwoven with what previously existed • Sustainable thinking and doing is natural within the education programme • Students and employees are actively contributing • Sustainability can be felt in the building and with the people • Goals are set, evaluated and adapted • Work is done according to the PDCA cycle: Plan-Do-Check-Act	• Secondary vocational education (mbo), green higher vocational training (hbo) and regional business are involved	• The educational programme is actively involved in society • Society is actively involved in the programme • The programme sets an example for the region and outside and is known for her expertise in the field of sustainability

Fig. 6 Het Groene Kompas, 2021

⁸ <https://wholeschoolapproach.lerenvoormorgen.org/en/> (EN/NL)

⁹ <https://www.hetgroenekompas.nl/en> (NL/EN)

In the Green Compass, five phases are distinguished. The first phase is the phase in which one works 'activity oriented' towards sustainability. In the most complicated phase, a close collaboration exists between the school, the business sector, students, delivering schools, alumni, and societal organisations. Practical experience shows that the transition from phase 2 to phase 3 is the most difficult step, but also that at phase 3, sustainability is already robustly embedded. See figure 6 for a more complete overview. Due pride is justified when an educational team fulfils the criteria of phase 3 (and phase 2 and 1!).

Het Groene Kompas, 2016; translated and adapted from Dutch

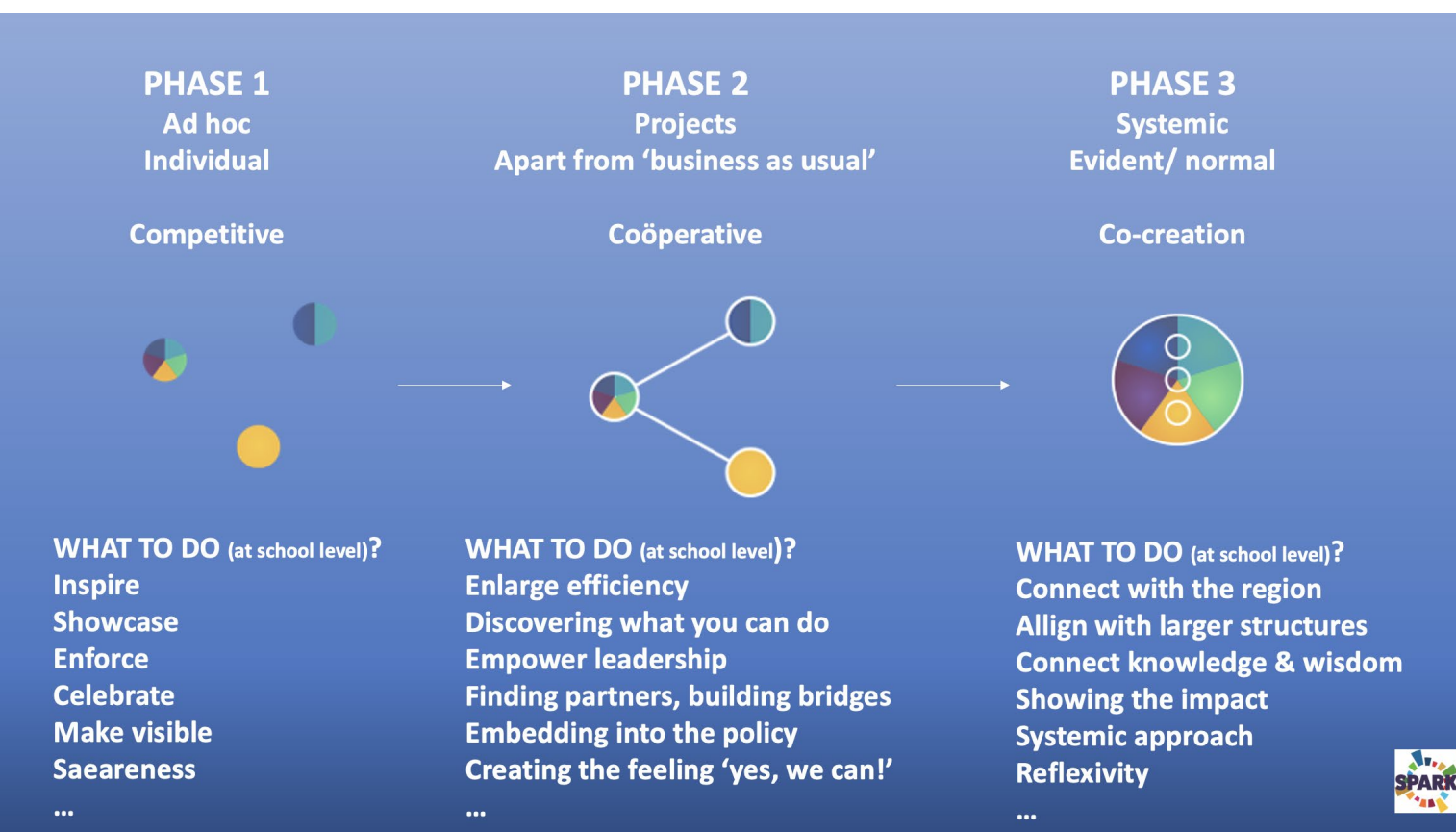


Fig. 7 Swart, 2019

These five phases are still used when talking about embedding ESD in education. To keep it simple, SPARK usually focuses on the first three phases (figure 7), keeping in mind that making the leap from phase 2 to phase 3 requires a system change and is therefore challenges the people and the organisations with whom SPARK works the most. Phases 4 and 5 will follow easily after phase 3 is established.

1.4 Which ESD initiatives have been undertaken?

As discussed previously, SPARK focuses on the movement that is needed for the overall educational transition to make ESD a common practice in all schools in the region. The model of Geels and Kemp (2000) helps to understand the work of SPARK, as they lift the initiatives on micro-level to the meso-level, and from there searches how to embed ESD into the macro-level or educational landscape. Recent developments, as for instance the formation of the Educational Agreement Friesland, show the first steps for achieving this ambition. This approach is expanded upon in chapter 4 (p.50)

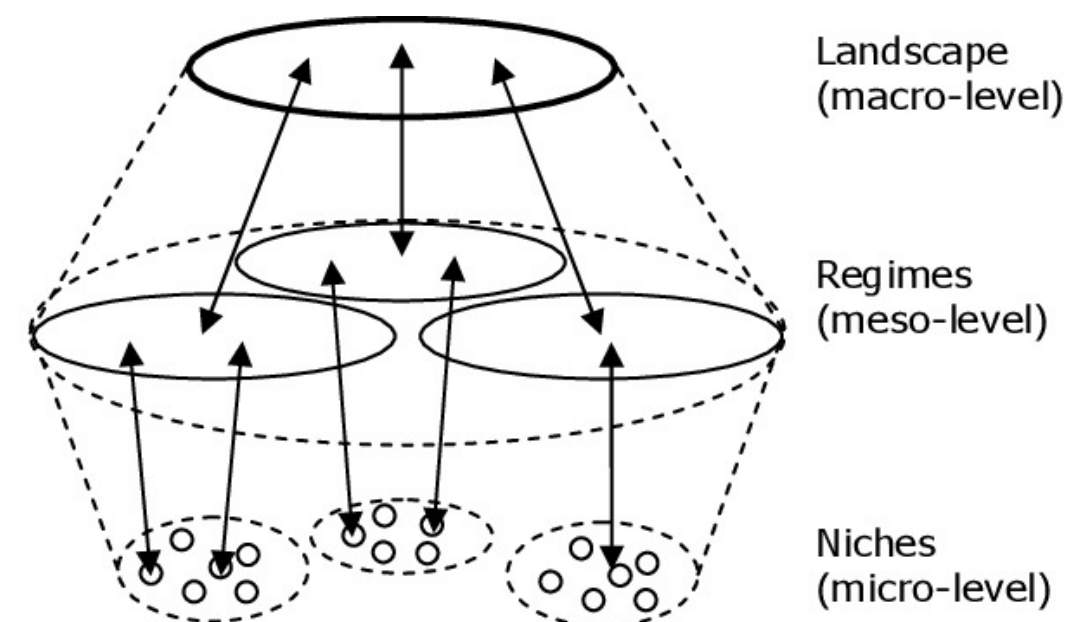


Fig. 8 Geels and Kemp, 2000

This makes clear why, in general, SPARK does not initiate projects on its own. There are however numerous projects that SPARK has enabled, aided, featured, or otherwise contributed to. For the purposes of this report, it would not be useful to write down an enormous list, but an overview of more than 400 projects on micro and meso-level can be found on the SPARK website¹⁰. The featured sparks are only a part of all projects in the province (See appendix B for a short overview). The discussion in the following chapter will focus on exemplary projects.

¹⁰ <https://sparkthemovement.nl/#galerij>

DISCUSSION 2

ACTIVITIES AND THEIR EFFECTS

Covering a sample of the activities of SPARK in the past years, based on interviews held with SPARK partners. These mini case studies are presented in the paragraphs 2.2 & 2.3, after which the insights gained are discussed.

2.1 How did the portfolio of activities of SPARK evolve?

Evaluating the movement that SPARK creates makes it evident that most educational institutions are at least at phase one, meaning that some activity connected to sustainability is taking place. Even phase two has already been attained by many institutions, although this does heavily skew towards higher education institutions. SPARK now focuses on the step from phase two to phase three, which is perhaps the hardest step to take, as the aim is to structurally embed ESD into the educational systems. Therefore, the regional and meaningful SDG-related learning questions have to be visible for students. In the process of learning to solve these questions, expertise has to be developed which is useful (either as a solution or as a failure) to both students as well as for the regional partners. This means that systemic change in the educational system and in how regional partners perceive education is also necessary. Collectively we have to become aware that *'it takes a region to raise a child'*. How SPARK attempts to do so will be explored in the following sections of this report.

2.2 Examples of successful of collaboration and decision making

To discuss these collaborations, this report will follow the format of Pearls without a Chain, dividing this evaluation into five educational levels, from primary school to higher education, giving several examples for each. This report also adds one level, that of peripheral organisations working on ESD, subdivided into categories: academies for education, the business sector, province of Fryslân and regional NGOs, and national and international collaborations. This is done in order to note insights gained from that perspective as well.

Primary education

Generally, ESD is not very explicit in primary education at the investigated schools, though exceptions were found as for instance in the municipality of Ooststellingwerf. Attention to topics related to the SDGs is given, but in most schools, teachers and pupils are unaware of the relationship between a topic and sustainability. Therefore, this report concludes that most schools and school umbrella organizations are still in phase one. However, the motivation is present, and individual pearls are steadily being strung on the chain.

CASE 1

The interviewee at primary school De Wâldiik, connected to Roobol, a school umbrella organisation in the north-eastern part of Friesland got convinced of the importance of ESD. They and their team started orienting themselves and they organised several discussions about ESD and the Sustainable Development Goals. They mentioned that today more people are aware of the concepts connected to sustainability through media, societal debate, etc and want to engage with the topic more structurally. An inspiration day organized by SPARK is what got the principal and the team active in their own school. SPARK provided material for the school to use, such as the SDG Compass, and contact is regular. The school also intends to join a Designathon in February 2022. During a design-a-thon children are guided through a 7-step experiential process, linked thematically to a bigger global challenge such as water scarcity, poverty, deforestation, or citizenship.

CASE 2

In the municipality of Ooststellingwerf in the south of Fryslân, all primary schools work together with external partners to stimulate children to develop sustainable behaviour. An ongoing learning line from group 1 (4 years old) to group 8 (12 years old) and even beyond until the final year of high school was developed by Kunst & Coö and the Veerkieker, in close cooperation with the municipality. This learning line is called Roots & Wings. Not only children are educated, teachers and art professionals also take part in the learning process. A closer look at the region Ooststellingwerf will be taken in chapter five (p.30).

In the Netherlands, there are several external educational organizations supplying primary schools with high qualitative curriculum and materials about e.g., nature and environment, technics, science, and art and culture. While the first two are often already closely connected with sustainability, the latter are not. These art and culture organizations have a great reach,



Keunstwurk is an organization present at three quarters of Frisian schools. When SPARK was asked to participate in an Erasmus+ project Global Roots, this was an easy decision. This way SPARK and the art & culture education in the province could work together. Global Roots aims to empower children in primary education to understand, reflect and act on their rights and responsibilities as citizens in a constantly changing world. From this program, other projects such as Roots and Wings¹¹ and the Arcadia¹² programme are working towards a through line in education, inspiring children from group 1 to the end of high school.

CASE 3

An interviewee from primary school umbrella network PCBO Leeuwarden used SPARK as a source of information and inspiration on the topic of ESD and with their influence sustainability was incorporated in the strategic plan of the school network. In this SPARK also contributed to the thought process. Although the principal does not oblige individual schools to adopt a certain approach and many obstacles remain, much progress is being made and more ambitious plans will be made when this governmental period for the schools comes to an end in 2023. The fact that an entire school network is working on ESD is a sign that primary education is developing quickly on this front.

Vmbo

At the vmbo schools that were approached, ESD is not yet present in a meaningful way. At one visited VMBO school the first project only just got started. There were already projects and initiatives that are linked to sustainability, such as solar panels on roofs, green themed weeks, vegetable gardens, etc. However, these were not explicitly linked to sustainable terminology or to broader societal aspects and were approached from an environmental perspective. Another visited school representative mentioned that "It's just not alive". It seems that the awareness of the importance of ESD is there, but that there are other issues that take priority or that there is no concrete plan on how to proceed. To some extent this might be an effect of the concept 'sustainability' itself, being an abstract and little discussed concept. Plenty of work remains for SPARK in this sector.

CASE 1

At CSG Liudger in Drachten, one teacher was invested to do something with sustainability in their school. A collaboration is well under way and this year the first project that explicitly links project content to sustainable development has started. SPARK's network provided the project developer and the information surrounding the concepts of ESD to the teachers through (online) meetings. The SDG compass, also provided by SPARK will be used to explain the concept to teachers and children. It seems that there is awareness about available resources, but less so on how to make use of them.

CASE 2

At Piter Jelles YnSicht and Piter Jelles Montessori, a plan to get started with an innovation lab where technology is in service of the SDGs was received well by the board of directors. However, due to complications at the school, an initial project was moved to the Impuls and Montessori high school location, where it will be part of a broader plan surrounding 'moving learning'. General awareness at the school about the importance of sustainability is much higher than it was before. For example, sustainability is more often mentioned in media, and appears more often in learning methods provided to schools.

The schools are also planning an 'SDG experience route' where the SDGs are made visible and tangible. A brainstorm session was held to gather ideas. Two representatives of SPARK, which co-organized the session, were present. But also a large array of students, teachers and other thinkers contributed greatly. This meeting showcased that there was a lot of enthusiasm from all involved parties to make something together, and not the effort of select individuals.

CASE 3

At Aeres VMBO Leeuwarden learning for sustainable development has a long tradition; since about 8 years, pupils, teachers, facilitatory management and team leaders work together to embed ESD into the curriculum and the policy of the school. They are a UN supported EcoSchool, and the courses they run are linked to innovative agricultural sectors. A new course that is being developed is on restoration of the soil as a living being, of which we are dependent for our health and well-being. The practical and down-to-earth approach of this school is well worth mentioning.

¹¹ <https://wortels-en-vleugels.kunstencoo.nl/> (NL)

¹² <https://arcadia.fr/english/> (EN/NL)



Havo/vwo

It is fair to say that all secondary education is more or less at the same level. Even though vmbo schools are usually separate from havo/vwo schools, in terms of sustainability integration, they are very much comparable. The approached schools don't have an explicit vision or policy on ESD, and they are still figuring out how to allocate time and resources to bring SDG-related topics more structurally into the classrooms. Both in terms of the curriculum development as well as getting staff on board. However, they also mirror the vmbo in the sense that there is an increasing motivation to improve.

CASE 1

At CSG Comenius, an interviewee mentions the difficulty of changing systems. They posted SPARKS on the website and were involved with the presentation of the 'atlas of sustainability'. Now they are working on creating more sparks at their school and getting more teachers on board. In this endeavour they are using the WSA and keep SPARK in mind as a way to receive support once they have progressed further. While perhaps not much is concrete yet, it seemed that sustainability was very much regarded as something that is necessary.

CASE 2

An interviewee from the second high school interviewed, RSG Magister Alvinus has a different story. Due to the activities and enthusiasm of a 'green team' in their school, many technical sustainable solutions have been brought into the school, even acquiring highest UN supported Eco Schools certificate, the Green Flag. SPARK was of assistance in some of these projects. The next step, which SPARK has been advocating for and is assisting in, is to make sustainability a core aspect in the connection between secondary and higher education. The enthusiasm at this school is great, and much will happen here in the near future.

CASE 3

In Ooststellingwerf, a shining example can be found in the Stellingwerf College. This high school is arguably already in phase three of sustainability integration. Sustainability is present in many different courses and projects. For example, talking about circular economy in economics, building an insect hotel or making art from plastics. Partnerships with primary and higher education are running, as well as many collaborations with the business sector and the municipality. In fact, the advanced collaboration between different sectors in the region and that it is business as usual warrants a closer look. This will be done in chapter three (p.46).

Mbo

Mbos in Fryslân are doing very well in the field of ESD. All institutions have included sustainability as a focus in their vision and strategic policies. mbos, due to their practical vocational education are particularly well suited for collaborations with the business sector. The ongoing transition in the province towards a circular economy will require a workforce with circular skills and knowledge. In addition, a lot of attention is paid to the development of global citizenship and to 'bildung', promoting a caring attitude towards other living beings and to the planet.

The collaboration between students of mbos and entrepreneurs can also influence the businesses themselves to become more sustainable. This interplay is of great importance to Vereniging Circulair Friesland. Because of this, one of the focus themes in their policy plan is circular learning, thus promoting the development of circular talent and expertise in the region.

CASE 1

An example of such a connection between mbos and the business sector is the Environment Consultancy Bureau (Dutch: Milieu Advies Bureau), where groups of Life Sciences students from different years work together on a question of a local business or government. These businesses or projects are related to sustainability and were initiated by a very committed teacher and team leader. SPARK supported them where possible. This was encouraged by Aeres MBO Leeuwarden, which included sustainability in its mission and vision as an important factor. The projects include an evaluation phase where the students, teachers and partners are all present and assess their performance. The focus of these projects is on the technical side of sustainability and students did not place individual projects in a societal context. The students were very positive about the theme of sustainability and recognized the need for it.

CASE 2

Another leading example is ROC Friese Poort, an mbo school that has the ambition of being 100% CO2 neutral by 2030¹³. The school recognized that sustainable innovation has a big role in future developments, and that education has a crucial role to play in this transition.

Their approach centres around teams of teachers, which have a lot of agency. The interviewee noted that in order to properly integrate something, you need to develop affinity with the subject. Therefore, planning the integration of sustainable initiatives top down is not effective.

¹³ <https://www.rocfrisepoort.nl/nieuws/klimaatakkoord-voor-roc-friese-poort-100-co2-neutraal-onderwijs-2030> (NL)



Friese Poort encourages new initiatives and provides inspirational 'expeditions' to create positive experiences surrounding sustainability. The goal is that frontrunners in the teams will motivate and pull the rest along with them. This has worked and led to initiatives such as the Centre for Sustainability Friesland, which organizes workshops and guest lectures about sustainable techniques, and other current sustainability topics.

Another example is Green Scissors, aimed at making the hairdressing industry more sustainable, sector that is usually not associated with this topic. These initiatives are clearly part of a larger strategy and also have effect outside the institution.

CASE 3

Friesland College, the third and final mbo in the region, recently received the SUSTAINABUL, a national award for belonging to the most sustainable vocational training centres in the country. They incorporated the SDGs into their strategy four years ago, and even organized an applied research centre (practoraat) 'Sustainable Acting, Sustainable Thinking', as the school recognizes sustainability as a trend that keeps growing in Fryslân – and in the rest of the world.

Our interviewee expects that the embedding of sustainable behaviour will follow the same path as technology: the new generations will grow up with sustainability and will be much more connected to it. Their aim therefore is to place the SDGs in every course, in the personal development of the students and in the organization itself. During the last two years the former practor helped to launch an SDG-proof citizenship-platform. The new practor is expected to help teachers and students to the curriculum, the didactics and the management of the school even further.

The initiatives that sprang from this policy were also positively received by the student advice body. Friesland College is of the opinion that, on the topic of sustainability, it is better to inspire and facilitate as opposed to enforcing measures top-down. SPARK played a supportive role in the development of initiatives. The involvement of all different actors at the school has led to a very inspiring environment.

CASE 4

Leerbedrijf Invloed Studenten (LIS stands for Learning company Influence Students), is a team that consists of many different students from Friesland College, Friese Poort and NHL Stenden. Originally, it was set up as a support system for students that need additional help, but it has expanded to empower students for the future, therefore having a full focus now on sustainability.

A very inspiring example is the Global Land Conference, organized by students, for students, which is all about raising awareness for sustainability. It does so by showing concrete examples: peer to peer and companies to students. Activities vary from clothing swaps to challenges eating bugs, to inspiring Ted Talks from youths, to showcases of SDG-proof companies.

Global Goals TV is also an initiative of LIS, broadcasting existing efforts on sustainability from people in the region, by students and for students. SPARK provides continuous support and connects the initiatives to other organizations like the Dutch Association for the UN, the NVVN.

A recent result from this collaboration is an initiative to reach at least 50% of mbo students in the Netherlands through the Dutch VET Council (mbo Raad) and inform them about sustainability. The scale of the activities, and the prominent role for students makes this an impressive organization.

Hbo/wo

Like the Frisian mbos, all applied universities and the 11th faculty of the University of Groningen, Campus Fryslân, have incorporated sustainability into their mission and vision in the past years. This shows clearly in the approached schools and their projects. Arguably, these institutions have arrived at phase three, although there is still work to do. From an overall perspective sustainability is anchored pretty well in all departments of the organization, though having it rooted unambiguously is still a joint effort.

For example, the criterion '*Sustainable thinking and doing is natural within the education programme*' is difficult to achieve for all courses and it will take some more time before non-initiators think sustainably as well. Not to mention that there is not necessarily a consensus on what this would entail in the first place.

At the same time, steps towards phases 4 and 5 are being made. The Onderwijs Agenda Friesland (OAF) is a major steppingstone in a collective process of all mbos and hbos and Campus Fryslân. This agreement consists of three main themes, and (learning for) circularity and sustainability has been made an integral part of all themes.



All mbos, hbos and the university closely cooperate with SPARK and are all member of Association Circulair Friesland. All involve other educational institutions and connect to the environment by working together with companies, governments, and citizens. Compared to four years ago, the difference is huge and current developments are very promising.

CASE 1

Numerous collaborations with applied university NHL Stenden are currently running. The institution has sustainability anchored in its policy. Many collaborations between education, government, companies, and citizens are present.

One of the examples mentioned is the project Leeuwarden Oost within the programme Vital Regions, which focuses around improving a disadvantaged neighbourhood in the city of Leeuwarden. In this collaboration with NHL Stenden, SPARK had the role of connector. They could identify where knowledge was missing, who had specific expertise and how these organisations and people could come into contact with one another. Behind the scenes SPARK also urged the board to make connections between their policy for Design Based Education and the SDGs. A 'coalition of the willing' in NHL Stenden now has to fulfil phase three and start making sparks themselves. Additionally, the Green Wave office got a prominent spot in the building, thus raising further awareness of the importance and nudging people to take action.

Another example of establishing useful connections was when SPARK provided the coordinator of sustainability at NHL Stenden with the Core Document for the Whole School Approach to Sustainability. This document was used for a position paper. The author of this paper also named the academy of Leisure and Tourism as a great example of how sustainability can be integrated into higher education.

A third example is the support of SPARK of students from the minor Meaningful Media. As sustainability is a pillar of the institution and key to the region, the lecturers wanted to incorporate the SDGs more strongly in this the minor. During the collaboration SPARK supported the students, by listening to their ambitions and what they wanted to learn. Then, based on their interest, connections were made to specific companies of the Circulair Friesland Network: they worked on sustainable prototypes for Omrin, DonkerGroen, New Nordic Wave etc.

A final example is the cooperation with the PABO, on which will be reflected on more in the next paragraph.

From the interviews, it is clear that sustainability is part of business as usual, and that there is a lot of motivation to increase the quality and scale of ESD.

CASE 2

Van Hall Larenstein is an educational institution that did not have much contact with SPARK until recently. This is quite logical as in the first three years SPARK primarily focused on raising awareness and promoting projects, and this was evidently already the case at Van Hall Larenstein. For some years now, they have been recognized as the most sustainable hbo institute of the Netherlands¹⁴, doing an incredible effort in the field of sustainability on all kinds of aspects and in all courses¹⁵.

Now that SPARK is aiming to improve the quality of ESD in the region, a new link with the institution has been made. Van Hall Larenstein is now working on signing the letter of intent to become a partner of the RCE, and hopefully an icon project will be started in which all partner companies of Vereniging Circulair Friesland will join. The idea is to start a project where students will analyse the raw material flow of these companies to make these more circular.

CASE 3

Campus Fryslân is a unique example in the region. The Campus is part of the University of Groningen, based in Leeuwarden. From its inception in 2018, sustainability, especially the SDGs, are an integral part of its educational program and organizational design. It is an illustration of how an institution can look like after having reached phase 5. From interactions with teachers and students, to curricula, to the building itself: the Campus breathes sustainability.

Of course, here too there is still much room for improvement, confirmed by internal reviews. As young programme, the developments will continue to change for the better in the coming years. A special workgroup now is exploring the possibilities to embed the didactical and pedagogical aspect.

SPARK has many connections with the Campus. First and foremost, the collaboration to become an RCE, but also on projects like Pocket Gardens. Not to mention that this report is the result of the internships that connect the university with SPARK.

¹⁴ www.vhluniversity.com/about-us (EN/NL)

¹⁵ www.vhluniversity.com/binaries/content/assets/hvhl/internet-en/research/12806-applied-research-vhl-web.pdf (EN)



According to one of the interviewees the RCE also channels the energy within the campus to develop further. Both the campus and SPARK are in full development and because the connection has already been established, plenty of opportunities for collaboration will come up.

Academies for Education

The Northern educational academies, connected to NHL Stenden and the University of Groningen, are bundling efforts on education, professionalization and research by forming the Northern Educational Alliance (NEA). It is not a project as much as it is an open program, inviting anyone that wants to contribute to SDG 4, quality education, in the Northern Netherlands. Their focus is broad, tackling issues like unequal opportunities. In doing this, sustainability plays a large role as it is part of the solution to all of these challenges.

The Academie Primair Onderwijs, or Academy for Primary Education, noticed a growing demand in the educational field for sustainable education. As a consequence, a chair called 'Training for Democratic and Sustainable Coexistence' was created to develop pedagogical expertise in this field. SPARK is member of the advisory board and was involved in the

Evidently, SPARK does not operate in a vacuum. A widespread network has evolved. Countless stakeholders that all have their own agenda add ESD to their activities and policies. This field is evolving together with the educational institutions. More initiatives in more places, as well as new approaches to ESD, uplifting the quality of the process and therefore the impact of activities, and new ways to integrate them into schools make up this emerging landscape.

SPARK has engaged in numerous collaborations and the following section will highlight a few of them. These collaborations are important to discuss as these organizations and thinkers all have a different view of and approach to the educational field. This creates opportunities for learning, new connections, and greater impact.

appointment committee surrounding this chair. SPARK aims to operate as a sounding board, thus contributing to the development of the next generation of teachers.

The Academy Primary Education is connected to the national platform Sustainable PABO (Sustainable Pedagogical Academy for Primary Education)¹⁶, sharing insights, inspiration and research outcomes. Involving teachers' education in the educational transition is a necessary step. By recognizing the need for ESD, the academies increase the support base for ESD as well as educating students to bring new energy into primary education.

A final important partner for SPARK mentioned here is the Frisian Aansluitingsnetwerk Vo/Ho (Connecting Network High Schools/Applied Universities). This network seeks to connect secondary and higher education more structurally on career orientation, didactics, and student-care. Recently ESD was added to their annual planning and policy. SPARK is working together with the network to translate this policy into action, from which teachers can benefit.

The growing importance of sustainability can be seen in the fact that umbrella organizations such as this network are recognizing it as a potential linking factor, although attention to further embedding is still necessary.

Collaborations with external partners

Developing a network of non-educational partners working on sustainability, like businesses, municipalities, the province of Friesland, the water board, and many more, to work together with education is especially important to ESD, as developing a mindset for a circular economy and a sustainable society cannot be derived from methods or books. Pupils and students need to experience and learn from the reality in the regional context to develop sustainable behaviour.

SPARK stimulates mayors, policymakers, businesspeople, and employees from all kinds of organizations to live the saying: *it takes the region to raise a child*.

Some of these collaborations are outlined below. A recent assessment by Het Groene Brein shows there are more than 40 collaborations on sustainability between the Frisian educational sector and external partners (See appendix B).

¹⁶ <https://duurzamepabo.nl> (NL)



Omrin

An organisation that has been involved from the very start of SPARK is waste management company Omrin in the Northern Netherlands, also initiator and key player in Circulair Friesland. When SPARK was being conceived, Omrin used its network to connect Heleentje Swart with schools that already worked with Omrin and also conceptually thought along.

This relationship is less intensive now as SPARK has been operating for three years but occasional collaborations still happen. Omrin, in the spirit of ESD, has many connections to education, on all levels. From internship positions, to offering guest lectures on circular waste management, to contributing to events like the annual National Week for the Circular Economy, which is celebrated in Friesland very elaborately.

Biosintrum

The knowledge centre Biosintrum is also an important partner. They are a central piece of the ESD ecosystem in Ooststellingwerf and in the rest of Fryslân. SPARK is connected with the centre through a variety of projects such as the aforementioned ongoing learning line on sustainability 'Roots and Wings', but also worked together during challenges as for instance for the biobased bridge and the cattail challenge.

Arriva

Also in the works is a collaboration with public transport company Arriva. Their program leader on sustainability contacted SPARK to inquire whether there were students available to help them develop a new circular mission and vision. Through SPARK's network, connections were quickly made with NHL Stenden, and students will start on the project this semester. This interaction shows the value of SPARK as a connecting factor within the region, especially now that they are more established as a linking pin.

Province of Fryslân

The Province of Fryslân is an important partner as well, as they are co-initiators and co-founders of SPARK. In terms of funding, they have provided money in the past as well as now by funding the content manager of SPARK. One of the co-founders of SPARK is employed at the province and is in this role a sounding board for matters related to governance, but also in general.

Frisian municipalities

A collaboration is also under way between SPARK and the Vereniging Friese Gemeentes (VFG; Association of Frisian Municipalities). During several meetings, SPARK presented its philosophy and concrete approach, as well as its efforts to work on a regional scale yet embedding this into the Dutch and international networks as well.

A group of mayors has been gathered and sessions will be hosted in early 2022 to plan the next steps. Municipalities present a good opportunity to bundle different efforts structurally and connect sparks from the start.

SDG Network Fryslân

The SDG Network Fryslân is an organization, co-founded by SPARK, which aims to create a general awareness among citizens about the SDGs and inspires for more action. Examples of initiatives to this end are the Vonketon, the SDG Action XXL at the beginning of each schoolyear and SDG Congresses. The network also coordinates several WhatsApp groups for each SDG, linking people in informal communities in which information can be shared swiftly. SPARK coordinates the regional SDG 4 community, as well as the SDG 17 group for 'Young Futuremakers'.

Recently the network acquired its own SDG House in the Kancelarij in Leeuwarden. This SDG House is connected to eleven other SDG Houses in the Netherlands.

Art and culture education

In the Netherlands, there are numerous external educational organizations supplying primary schools with high qualitative curriculum and materials about e.g., nature and environment (NME), technics, science, and art and culture. While NME and technical education are often already closely connected with sustainability, the latter are not. These art and culture organizations though have a great reach. Keunstwurk for instance is an organization present at three quarters of Frisian schools, and therefore an interesting network partner for SPARK to promote ESD.

SPARK stresses the importance of creativity and imagination, to find new ways for a thriving future. The Erasmus+ project Global Roots was embraced to stimulate teachers, art professionals and thus pupils to make space for attentiveness, for emotions, for creativity and hope.

SPARK and the art & culture education in the province now closely work together, Arcadia being another program that is carried out during a 100-day long festival. Its focus is on how to build broad prosperity in the region.



National and international collaborations

Although this report focuses on the Northern Netherlands, it is worth giving an overview of SPARK's liaisons with national and international organisations. Even though SPARK's focus is on the Northern Netherlands, keeping the larger picture in mind is important in deciding which steps to take. A few such connections are expanded on below.

Cooperative Leren voor Morgen

Leren voor Morgen (Learning for Tomorrow) is an organization that aims to structurally embed sustainability into the DNA of education to, as the name suggests, learn for a better tomorrow. They are also the national coordinator around SDG 4 – Quality Education. LvM works with the concept of the Whole School Approach to sustainability. SPARK and several other members of LvM cocreated the Core Document on WSA. Other initiatives that are undertaken by Learning for Tomorrow are the Sustainable Teacher Elections and the Circular Skills programme¹⁷. SPARK also helped to develop a circular skills document for the construction sector¹⁸. Swart was involved in the development of Leren voor Morgen as a cooperative and is currently a board member.

NADO

The Nederlandse Academie voor Duurzaam Onderwijs (NADO; Dutch Academy for Sustainable Education) is another important national actor, focusing on the professionalization of teachers. SPARK was a board member during the initial phase and helped the develop the academy in their first year. Now SPARK is part of the Council for Advice & Inspiration.

The NADO

- Advises individuals and teams with the implementation of sustainability projects and routes
- Furthers, develops, and hosts offline and online educative programs and learning methods on sustainability in primary, secondary and secondary vocational education.
- Produces and directs livecasts about sustainable projects in education.
- Maintains a national network of teachers, scientists, entrepreneurs, and managers in the field of sustainable education.
- Advocates a high(-er) priority for education programs surrounding sustainability in education with politicians and managers.
- Notable educational programs by the NADO are the Eco safaris and the teacher-course Spark the Future. SPARK the Movement is involved in both of these programs as well¹⁹.

¹⁷ www.lerenvoormorgen.org (NL)

Versnellingshuis Circulaire Economie

The Versnellingshuis Circulaire Economie (Acceleration House Circular Economy) is an organization that helps entrepreneurs with their circular ambitions and questions. They also organize the national week of circular economy, hosting many activities relating to CE. Together with the other members and the team of Vereniging Circulair Friesland, SPARK is actively involved in organizing activities during the week and aiding educational institutions in organizing activities as well. For example, for the week of circular economy 2022, SPARK involved schools on all levels in the province and supported the developed an inspiration document for secondary education. Such action weeks create much awareness and directs energy towards new and existing projects.

European Education for Climate Coalition

The European Education for Climate Coalition (ECC) is the flagship project on education for the European Green Deal. It functions as a participatory community for students, teachers and education stakeholders, in order to act collectively on innovative education solutions for environmental sustainability. During the starting phase, SPARK was asked to help develop the platform. SPARK is now one of many organizations part of this European coalition.

Reflection

Comparing these examples to the findings of Pearls without a Chain, the difference is striking. This small selection of activities in the region already showcases that the integration of sustainability in education has advanced tremendously. There are some things that stick out in this assessment. Firstly, the difference between primary and secondary education, and the mbos and higher education. The latter being much farther along the path to phase five of the AISHE-model.

Pearls without a Chain noted:

"In a general sense, education has little support to work out circular economy and implementing it in the curriculum. In practice this means that educative actions around circular economy are developed separately and are dependent on enthusiastic, engaged teachers that integrate the theme creatively in the lessons or are done as an extra."

¹⁸ <https://circularskills.lerenvoormorgen.org>

¹⁹ www.academievoorduurzaamonderwijs.nl (NL)



Even though this report considers sustainability more broadly, this support is now very much present. While collaborations with external partners are still in development, internally, all higher educational institutions have concrete ideas on how to proceed. In primary and secondary education, while integration is often lacking, there is a much broader support network to provide information, tools, connections and good practices.

The mismatch between schools, business and government is another interesting observation. Great examples of successful collaborations can be found, but in general, interviewees indicate that on a structural level, more work needs to be done in order for the collaborations between the sectors to become part of business as usual. The next section will, among others, look at potential ways to do so.

2.3 How can activities be upscaled and mainstreamed?

There are some potential ways to upscale and mainstream, gathered from observations and from the interviewees themselves.

Research

One factor would be to enact more research on the methods used by SPARK and other organizations involved with ESD. This documentation could then be published and used by other stakeholders without the need of time-consuming communication. Such research is being done on a broader level (e.g., van der Meer, Swart & Wals, non-published, 2017) but, as far as we know, not much on a smaller scale, and especially not on newer or regional approaches. In this regard, an internship position could be used for such projects.

Thriving ecosystems

Another way is to keep making connections, an important factor in large scale transitions (van Geels, 2001). The more connections in an ecosystem between different niches and established institutions there are, the more fruitful collaborations, projects and ideas are created. SPARK is in an excellent position to provide these connections, and it should remain an important focus now that the RCE is being developed. The RCE itself is another important point. As will be discussed later, a physical location can be useful in fostering cooperation and inspire potential partners.

Political action

From a governance perspective, provinces and local municipalities can be key in implementing a broader strategy across a region as well as providing resources. Several teachers from different educational levels mentioned the potential role of local governments.

SPARK is making steps on this front, for example with the Association of Frisian Municipalities. Several interviewees mentioned institutions as obstacles. For example, the national educational profiles not including sustainability, or strict internship requirements inhibiting collaborations with new or otherwise unconventional companies. Especially on a national level, the government could provide much more space for schools to work on ESD, through allocation more time and resources, education policy and creating awareness on all levels.

Don't stack but replace

There are many learning areas that demand attention from education; culture, nature, reading, technology, sports, citizenship and health all want to promote their interests. Currently, education does not have the capacity to deal with these offers, not to mention that they often do not match the demand from the educational sector. An interviewee from the newly established project Niet Stapelen Maar Vervangen (Don't Stack But Replace)²⁰ talked about how to address this issue. NSMV makes the case for the standardization of approach and language. This common language is the SLO supply and core learning goals, as these are already governmentally mandated to be used in education. If education uses this to voice their needs, and local governments and educational developers use this language too, new things can be integrated into education more smoothly. Not as an addition to the already stacked curriculum, but by integrating with and replacing existing education.

²⁰ <https://www.slo.nl/sectoren/po/inhoudslijnen-po/stapelen-vervangen-aanboddoelen> (NL)



2.4 How could better work be achieved?

In answering this question, this report focuses on the insights gained from the held interviews. Often, the suggestions are school or project specific and therefore outside of the purview of SPARK. Nonetheless, these are things that SPARK could keep in mind when collaborating on new projects and will be interesting for the reader. The nature of the propositions generally falls into one of two categories: improved organisation and communication or improved ESD methods.

2.4.1 Communication and organisation

Communication within the school

One interviewee mentioned that the communication within the school should be improved. One teacher for example did not know what the Green Week that was held at the school entailed, and the project in collaboration with SPARK was also not widely known within the school. This issue seems to arise more often in primary and secondary education, where most projects are ad hoc, and sustainability is not always named as such. However, interviewees from higher education institutions also noted this issue, albeit more on communication between organisations within the institution involved with sustainability.

Communication from SPARK towards teachers

Clear communication from SPARK towards teachers, who can then, with tools such as the SDG Compass relay it to colleagues, could help improve this situation. The interviewee mentioned that school management can also play a role in this as they have easier and structural ways of communicating with the entire school.

Communication between schools and companies

Another mentioned factor is the communication between schools and companies. Joint projects between businesses and education often relies on personal contact. Especially when a party is just starting on structurally involving sustainability, seeking out these connections can be very time consuming. A big part of SPARK's work is making these connections for organizations. While this is definitely useful, contact with SPARK can be time consuming as well, and is not always known to be an option at all.

Several interviewees suggested that perhaps some platform can be created to facilitate interactions between businesses and schools. One metaphor used was Marktplaats, an online demand and supply tool for secondhand goods. Instead of secondhand goods, ads could be posted for projects, research questions or internship positions. This is especially

interesting to think about in light of the new RCE and the possible new ventures that will spring from that.

Access to network partners

An interviewee noted that there are less established networks on topics such as 'nature, environment and sustainability' and technology compared to for example cultural education or organisations focused on literacy in the province. The RCE could potentially fulfil this role.

ESD implementation

From a structural implementation perspective, one teacher expressed concern about the way sustainability should be integrated into the curriculum. They explained that over the years many changes in education policy have been forced upon schools and that the frequency has not given teachers the time to adapt, making the changes ineffective or even counterproductive.

Changes to topics of existing projects or adapting these was given as an example of something that is feasible to do gradually and more effectively. The teacher also indicated that sometimes there are too high expectations on mbo students. These students do not learn much on topics such as learning goals or societal connections at the vmbo. Therefore, expectations need to be adjusted in order for programs to be effective. Starting earlier with such topics at the vmbo was hesitantly agreed upon to be a partial solution.

Ongoing Learning Lines

Another interviewee mentioned that an ongoing learning line in education with sustainability as a connecting factor could help with the retention of sustainability as a concept. SPARK's work with the connecting network between secondary and higher education supports this, although this is by no means an easy solution.

A teacher from Campus Fryslân also noted that more collaborations with other HEI in the form of cross-institution courses, dual employed teachers and joint projects would be beneficial. This is also an area that already has several initiatives that are working on this, such as the University of the North and the RUNN-EU project.

Trial and error

The final notion that will be discussed here is that several interviewees indicated that at this stage of the structural integration of sustainability, there is sometimes the tendency to keep discussing and thinking. There is now quite a considerable support base for sustainability, and starting a project that you can point to, even if it is not perfect, can energize more than endless discussion with little concrete action.



The team leader from Aeres expanded on their approach as well, touching on many of the points above. In their method, it is firstly necessary to create an ambitious mission and vision, to create a new perspective. To this new vision, you can compare what is currently happening, and identify the gaps. From there, a school can think about what is needed to bridge these gaps. First by connecting the five petals of the WSA on a procedural basis, then working on a case by case basis with a short cyclical process. Within the linear rules the school has to operate, they work to organise a circular output. The interviewee noted that this is 'people-focused'. Here, the same method of looking at what is being done, and asking if it serves the mission and vision can be used to make concrete steps. In working on ESD, asking oneself 'to what does this serve?' is a great way of challenging traditional ways of thinking and acting. We are raised in an education system that is supply focused, and if we want to work from a whole school approach, this mindset needs to be changed. Every project is a step to enact the envisioned mind shift, and can be looked at to improve the overall process.

2.4.2 Methods for ESD

The other main topic brought up concerned the question how ESD is taught. Learning for sustainability requires a holistic embedding into the whole school. As for the curriculum, it is very difficult to teach sustainability by extracting and deducing problems. To help pupils and students understand the SDGs, an understanding of societal, political and economic structures and how individuals relate to these systemic structures needs to be developed. ESD is also a topic that many teachers did not learn about in their own education, further complicating the issue.

Focus on capabilities

One way to address this challenge is to put more focus on capabilities instead of knowledge. One educational innovator for primary education focuses on fostering creative thinking, language enrichment and resilience. They note that many children (and adults) notice that something is absolutely wrong with the world but without any handholds to deal with it, children become paralyzed or apathetic. Eco-anxiety, or fear for life, is a newly defined phenomenon.

Resilience and creativity

Art can be a way to explore sustainability, to translate factual knowledge in a way that it become internalized and thereby inspire intrinsic motivation to engage with the topic. There are also no educational goals for ESD. This makes it hard for teachers to teach.

Therefore, they argue, you want to teach resilience, creativity and open-mindedness to understand complexity and different perspectives, rather than factual knowledge of for example what all 17 SDG sub-targets are. Global Roots, Arcadia and Roots and Wings are examples of Frisian programs that follow this line of thinking. In a similar manner, one interviewee argued that [ESD] projects should be visible and gamified to ensure that engagement comes easily and naturally.

Design Based Education for 2030

NHL Stenden has developed an educational concept called Design Based Thinking (DBE), which also shifts away from traditional hierarchical models of education. Attempts are also made to link DBE to the SDGs.

"Inspired by Design Thinking we defined 6 phases of DBE that align with our vision of education and in our educational context. Within these phases there is synergy between learning, designing and researching. Per phase it is about implementing suitable work forms, tools, and design and research methods. [...]

Characteristic for Design Thinking is its iterative character, where experiments take place, prototypes are developed and revised, and steps sometimes are done multiple times and in differing order. In the frame of our education and showing competence is it importance that the process and choices in this are traceable. With this way of working, we want to contribute to the solution of societal questions and innovations. Where possible linked to the focus points." (Bakker et al. 2019)



Involving students

The aspect of involving students in the teaching process is echoed by a teacher from Campus Fryslân as a way to develop better education for everyone. They did note that this might not work everywhere to the same extent, as the learning environment at Campus Fryslân is very unique. A student expressed frustration about the lack of student involvement in secondary education. They wrote their high school thesis on how to integrate sustainability into the school, but their efforts were put aside when the principal changed. In this regard, there is again a dichotomy between primary and secondary education on the one hand, and the mbo and higher education on the other, where the latter is more responsive to feedback from students.

The manner in which this feedback is structurally asked for differs per educational program. Improving student involvement in all educational levels could help shape ESD to take on a form that works better for all involved stakeholders.

Developing with education instead of for education

As mentioned in the previous discussion, empirical evidence on the efficacy of new programs is a key factor in achieving better work in the future and is worth repeating. Developing new methods for ESD should be done from the demand of the school and having a common language when doing so is very useful in this regard. In this vein, an interviewee from an mbo school noted that projects are too often developed for schools instead of with schools, even though they might be open to it. More collaborations in the development of educational tools could also close the gap between methods and their target audience.

Intersectionality of problems

When designing methods for teaching ESD, other societal issues should be taken into account. Particularly, two interviewees mentioned the role poverty and education play in the transition to a sustainable society. For example, many subsidies designed to encourage individual sustainable behaviour, such as house isolation, are more difficult to find and make use of for people do not have much money or do not speak Dutch well. This reality should be considered when developing new ESD strategies, and should also be discussed when teaching about sustainability, as to ensure that everyone is able to participate in the transition with equal opportunity.

Reflection

This paragraph was an appreciative review of activities and their effects. From this selection of activities, conclusions and lessons were drawn in order to achieve better work in the future. Notably, much has changed since the publishing of the report Pearls without a Chain.

The above mentioned recommendations were centred around communication and organization, and methods for ESD. The first being important in a newly emerging landscape, the latter for scientific field that seeks to connect to the daily routines of schools. Much can be learned from actions, programs and initiatives that have been done already.

The next chapter will do this more in depth by assessing the development and processes of a leading region in the integration of sustainability in education: The municipality of Ooststellingwerf.

DISCUSSION 3

TRANSFORMATION AND SUSTAINABILITY

Highlighting the south-eastern Frisian region, Ooststellingwerf, and explaining what it is that makes the example so successful. Following the RCE discussion structure, lessons for SPARK were drawn from this casus, such as the usefulness of a physical location for organizing activities and the potential of collaborating with local governments for the transformation towards a circular economy and a sustainable society.

3.1 Which projects reflects the success of SPARK?

A shining example of ESD integration in education can be found in Ooststellingwerf, a municipality in the south-eastern part of Fryslân. As discussed, in general, ESD integration in primary and secondary education lags far behind higher education, remaining largely in phase one, with much work to be done. However, in Ooststellingwerf, there exists a broad coalition consisting of educational institutions, companies and the municipality that



collectively works on realizing ESD as an ongoing learning line in the education system. In primary education, these efforts are visible in the form of the project 'Wortels & Vleugels' (Roots and Wings), initiated by Kunst & Coo and the municipality, and developed in close cooperation with teachers from all primary schools, the local high school, other NGO's, the aforementioned Biosintrum and several companies. Roots and Wings is a programme that aims to familiarize children with questions of sustainability and at the same time creates room for imagination and creativity.

Next to the transfer of knowledge, the programme focuses on the creation of awareness and on the sense of responsibility for the earth, starting in the direct environment. Schools are in a complex situation, where new developments are not always taken up into the curriculum easily. This was taken in mind when establishing Roots and Wings. In this way, it creates a way for, among others, businesses to bring their knowledge about sustainability into education.

At the Stellingwerf College, sustainability, especially circular design, is an important aspect of the curriculum. The course Research and Design, part of the technasium (technical gymnasium), includes topics such as the origin of materials, what happens when a product is thrown away or the finality of resources in the existing course content.

But also on vmbo and havo-level teachers and students discuss for instance about new paradigms for the economy and how new sustainable products or practices can exist in the current market. In their approach there is a focus on projects that collaborate with companies and institutions, bringing theory into practice and vice versa. In this way, more and more factors of sustainability are integrated into the curriculum.

All schools in the municipality, both public and Christian, are committed to work on the ongoing learning line, placing them as a frontrunner in Fryslân.

3.2 Which transformations regarding knowledge and practice are apparent?

In Ooststellingwerf, a much larger network of knowledge exchange and collaborative action has been created, the Biosintrum at Ecomunity Park playing an important role as a physical location to meet and share insights.

Compared to other regions, collaboration is initiated more often, with more available parties and on a much more structural basis. Schools have formally integrated sustainable

projects for all students, and are collaborating between primary and secondary education, including the local mbo as well.

There is a growing demand from companies and educational institutions for collaborations and projects around sustainability, mostly centred around nature-inclusive agriculture, soil improvement, building technology, circular plastics and biobased materials as cattail and hemp. Part of this trend is an acceleration of knowledge surrounding this topic.

3.3 What has changed and how this change is evident?

With more actors involved, projects are much easier to initiate. With the existing infrastructure, much less groundwork needs to be done to get stakeholders active, acquire funding, find a place for projects to take place, and so on. Creation of new initiatives happens much more organically and network-partners find each other faster.

3.4 What resources and governance have enabled success?

A common issue when analysing successful ESD projects is that a lot of collaboration relies on personal ties and contacts that are organically initiated and maintained. While this is of course an important factor to keep in mind and such contacts can, and should, be actively fostered, it is difficult to formulate good practices solely based on this.

Interviews with involved people in the ecosystem in Ooststellingwerf highlighted several aspects that played a role that could be used in other areas as well.

Knowledge hub Biosintrum is BREAAAM Outstanding Certified and located at the Ecomunity Park of Ooststellingwerf, and an important link in the ESD ecosystem within (and outside) the municipality. It connects companies, schools and governments that want to work on a sustainable future together. It is more than an appealing location in a beautiful and sustainable building, The Biosintrum forms a learning network where knowledge about sustainability, circular and biobased economy, soil and energy questions in the broadest sense are being exchanged and where educational institutions take up contemporary problems of companies and governments as important cores in their education and research.

This summary exemplifies the structural collaboration that SPARK pushes for. While intrinsic motivation of all people involved still is a factor, they are ahead of many



other networks and its model is already successful. For example, the aforementioned programme Roots & Wings takes place at the Biosintrum.

The local government in Ooststellingwerf also plays an important role. They are actively contributing to current projects, both in terms of money and other resource allocation, and take the initiative in connecting stakeholders and developing policy.

In light of this, one interviewee mentioned that workshops hosted by House of Design were used to convey ESD on a deeper level than just presenting the standard talk. Creativity is thus not only important in education itself, but also in communicating its value outwards. They also noted that in communicating with civil servants, appeals to agreements and collaborations and subsequently showing how certain projects work towards these can help in convincing them to participate.

All these partnerships are informally structured in a network of companies, institutions, and representatives of the schools that meet every six weeks to discuss matters surrounding ESD. This creates another layer of commitment to keep stakeholders motivated and also synchronize activities, focussing and bundling the efforts in the region. The following chapter will evaluate the learning and strategy of SPARK.

DISCUSSION 4

STRATEGIC AREAS AND LINKAGES

Exploring the strategy of SPARK the Movement and possible future avenues. An exploration of what has been done and the way it has been done. Learning from the effectiveness of the initiatives undertaken and exploring new areas.

4.1 Which strategic focus areas, partnerships, and activities have been key to the successes of SPARK?

The overarching focus of SPARK is that of transition management in education. SPARK subscribes to the multi-level innovation perspective as outlined by Geels (1997). This perspective distinguishes three levels: micro (niches), meso (regimes) and macro (landscape). See also page 18 for an illustration of this theoretical framework.

Geels argues that the interplay between these levels is very influential in regime change. Similar to the five phases, SPARK aims to propel ESD from its current niche to being part of the landscape of education.

Since exchange between different levels is so influential, one of the main focuses of SPARK is connecting these levels. In the early days of SPARK, this would be done by highlighting individual projects and trying to get these implemented in a regime, for example a school or school system. Now, the focus has shifted more to connecting different regimes in the business sector to educational institutions and assisting with regime changes inside a school or school system, working towards embedding ESD in the landscape accordingly.

With the establishment of a RCE in Fryslân, SPARK aims to create a new regime surrounding ESD in the Northern Netherlands in order to facilitate connections and create a new knowledge base in the region.

Another focus area that has recently come to the attention of SPARK is that of art as an educational tool. One problem with communicating ESD to stakeholders is that a lot of abstract concepts are involved. Sustainability is often a nebulous concept, especially when it is about its integration in education. Art can help to visualize the future we want to live in, thereby broadening our horizon and the ways to get there. For example, the newly minted Ministry of the Future, calling for long-term thinking and citizens participation.



4.2 What could be done to improve learning and effectiveness?

SPARK is always learning while doing. As shown by the focus shift from phase one to phase three of the structural anchorage of sustainability and the new areas that are being explored, adaptations are done as necessary. One aspect that can improve this reflexive learning process is a more structural way of evaluation, possibly through more evaluations such as this report.

4.3 How can existing linkages, processes and programs be strengthened?

SPARKS success is founded on making connections and inspiring people in and around education to think and act sustainably. For the past years, this network was built upon personal connections. As noted, the RCE could be a way to formalize connections, processes and programs, establishing a more robust network in Leeuwarden.

4.4 What new strategic links and capacity development could be explored?

In order to strengthen existing linkages, processes and programs, as well as exploring new strategic links, increasing capacity at SPARK would be advisable. Possible avenues to do so include structural internships, hire more people or other collaborations with higher education institutions such as Living Labs.

A strategic link that could be explored more is the link to politics. In the Netherlands, the national strategy for the implementation is focussed on supporting bottom-up initiatives. At the same time, from the bottom there are indications that increased support, especially in the form of policy, could substantially improve the efforts surrounding ESD. Strategic links to national ministries, as well as advocating for ESD in local politics can aid bottom-up approaches, in turn creating a bigger support base for national politicians to look to.

One interviewee argued that in curricula, more attention should be paid to alternative, circular forms of economy and how a local circular economy would interact with the global economic system. Connections could be made with existing initiatives on this topic, such as the Knowledge Centre Business Innovation.

Another domain that should get more attention according to interviewees is that of technology and digitalisation. These two factors will play a big role in the future, and it should be understood what role they will play in a sustainable future.

SPARK is well under way as some of the conclusions are already being worked towards as of writing the end of the report. This reflection is also important to the next discussion, which focuses on the consequences of having been acknowledged as an RCE and the repositioning that is a part of that.

DISCUSSION 5

GLOBAL RCE SERVICE CENTRE

Discussing what it means to become a RCE and be part of an international network. Appreciation of networking activities with the Service Centre and other regional RCEs, based upon the insights of SPARK and its Youth Coordinator Max Eisenbart as well as on the interviewer's insights gained during the internship period.

5.1 What have been the benefits of being acknowledged as an RCE?

SPARK the Movement has only recently been recognized as an RCE. Nonetheless, many advantages have already become apparent. The connection to the international network of RCEs and the community of practice they form is the clearest. In the Netherlands, there are not yet other RCEs that we can learn from, so international ones such as RCE Scotland are a big source of inspiration.

During a co creation session with local RCE-stakeholders, we noticed that the concept of a RCE galvanizes energy in the ESD field. Because ESD is something that many people do



DISCUSSION 6

on the side, and often voluntarily, energy and motivation sometimes drops. This was also apparent in the interviews. Knowing that you belong to a worldwide network of regions and educators that are working on ESD is stimulating and supporting.

5.2 How are you interacting with the regional RCE Service Centre?

RCE Fryslân (RF) consulted the service centre often during the application process. The digital platform was very useful as well. Due to the youth of RF, there have not been many other opportunities to interact with the Service Centre.

5.3 How are you working with other RCEs and what are some of the activities, successes and challenges?

Right now, little collaborations exist. RF did have contact with RCE Scotland about governance structures. In the co creation session, their use of a code of conduct sparked much discussion about what to demand from aspiring members and how to ensure proper participation.

RF is looking forwards to start new projects in the coming year. A project with RCE Ruhr, Pocket Gardens, is currently running Campus Fryslân. Although in the initial phase, SPARK was not yet recognized as an RCE, contact was made during the regional conference in Midlands, showing the effectiveness of the network.

5.4 How has your RCE participated in regional and global RCE conferences and undertaken follow up activities?

RF participated in several global RCE-conferences. In working sessions, RF talked about the work of SPARK in Fryslân, and took inspiration from other RCEs. RF also participated in a regional session organized by RCE Scotland, which was also energizing. Such meetings provided a sounding board in orienting ourselves as a new RCE.

RF hosted a two days online European RCE Meeting in February 2022, with a physical follow up later in the year if the pandemic allows for this. Coverage of this conference will be available on the SPARK website. Youth Coordinator of RF, Maximilian Eisenbart, noted that in Europe, not many students are involved in conferences. According to him, youth participation could help focus the conferences more on concrete actions. This is also taken into consideration for the regional conference organized by RF.

VALUE CREATION AND ASSESSMENT

Concluding the report by discussing the difference that SPARK the Movement has made, and what this means for the (near) future. Reflecting on the report and the internship as a whole.

6.1 What were the most meaningful SPARK activities discussed?

SPARK aims to realize a broad transition in education. In this effort, one project is not more meaningful than another. While some have perhaps a clearer exemplary function, such as the projects in Ooststellingwerf, all efforts contribute to the same thing.

Mistakes can be learned from and should not deter anyone from creating their own sparks. Declaring RCE SPARK Fryslân a community of expertise reflects that we are not after the success of an organization, but the success of the community we inhabit, and ultimately, the entire world. In this sense, the most meaningful thing encountered during the internship was the ESD community in Friesland, and all the motivated and inspiring people that make up this growing movement.

6.2 What potential values are the SPARK activities producing?

SPARK creates awareness, energy, connections and participation. Sometimes these values are the explicit goal of a project, for example the Global Roots programme focussing on awareness among children. But more often than not, projects contribute to all four of these values. Awareness creates energy and inspires participation, connections create energy and participation, and so on. SPARK the Movement builds upon what is already present in people and communities; from sparks a torch is lit, and from the torch now springs a roaring fire.

6.3 What difference has this made that would not happen otherwise?

Without the discussed values that SPARK created, Fryslân would be less advanced in the transition to a circular economy and sustainable society, especially in the field of education. As mentioned before, measuring this difference is hard to quantify, but from this report it is evident that this difference is significant. This difference can be felt in the number of new ambitions, projects and coalitions, but also in the increased level of dialogue in the community where these take place.



References

6.4 What difference has this made to the ability of SPARK to produce what matters through its ESD projects?

SPARK is contributing to a virtuous cycle in the region. Starting in phase one three years ago, SPARK can now focus more on phase two and three. As sustainability in education is more widely accepted as a necessity, SPARK is able to focus more on how to shape this and to ensure it has the desired impact.

6.5 What new understandings of what produces value are becoming evident?

The community around ESD is what creates value. This means that new understandings about this community is what is important for value creation. This community is growing, and SPARK is growing with it. In this complex and shifting landscape, collective evaluation and reassessment are what is most important to ensure that we keep heading into the right direction, towards a better future for us all.

6.6 Conclusion

This report was made to assess the state of Education for Sustainable Development in the Northern Netherlands, to evaluate it and to learn from it. Since the publishing of Pearls without a Chain in 2017, much has changed.

All involved stakeholders have expanded their activities and knowledge on ESD. From all higher education institutions including sustainability in their missions and visions, to sustainability being a connecting factor between secondary and higher education, to leading regions like Ooststellingwerf establishing an ongoing learning line.

These transformations are the efforts of the thriving community in Fryslân. This report has also shown the significant roles SPARK has played in this community. This reflection also showed that there remains a lot to be done, especially in primary and high schools. And in connecting SDG-related learning questions of businesses in a rewarding and fruitful way to educational courses, creating expertise to build towards a liveable 22nd century together.

The fact SPARK has become an RCE unleashed a lot of energy to continue being a changemaker in this inspiring region. For me personally, compiling this report has been incredibly interesting. I have learned a lot. Not only about ESD, but also about the processes surrounding it, and how to work in an organization such as SPARK. For this, I am especially grateful towards my supervisor, Helena Swart. I am truly impressed by the amazing people working together for a better future. I am hopeful for the future of Fryslân and believe they will play a big role in the future of the world.

Association Circular Friesland. (2020, December 18). *Circular economy: The definitive guide - 2021 edition*. Retrieved January 31, 2022, from <https://circulairfriesland.frl/en/circular-economy/>

Bakker, R., & Sinia, C. (2019, June 26). Strategisch Onderwijsbeleid NHL Stenden 2019-2024. NHL Stenden Hogeschool.

Coöperatie Leren voor Morgen. (2021, June 10). *Whole School Approach To sustainable development*. Retrieved October 29, 2021, from <https://wholeschoolapproach.lerenvoormorgen.org/en/>

Faber, N., van der Gaast, W., Gelderblom, L., de Graaf, L., Hofman, E., van Leeuwen, N., Siderius, K., & de Giorgio, M. (2017). (rep.). *Parels zonder ketting*. JIN Climate and Sustainability.

van der Meer, S., & Wals, A. E. J. (2017). Leren voor Duurzame Ontwikkeling, een verkenning van een learnscape: Gebaseerd op interviews met uiteenlopende experts op het gebied Van Leren voor Duurzame ontwikkeling. <https://doi.org/10.18174/406796>

SPARK the Movement. (2021). *Ontwerpprincipes*. Spark design toolkit - voor de duurzame beweging. Retrieved October 29, 2021, from https://sparktoolkit.convident.website/featured_item/ontwerpprincipes/

Fadeeva, Z., & O'Donoghue, R. (n.d.). Open Framework for Evaluation of the Multistakeholder Initiatives in Education for Sustainable Development (ESD). Tokyo; United Nations University.

Roel. (n.d.). De 7 kenmerken van een circulaire economie - Roel Circulaire Catalogus. Retrieved December 22, 2021, from <https://roel.cc/de-7-kenmerken-van-een-circulaire-economie#ondersteun-van-biodiversiteit>

Swart, H., Remmerswaal, A., & Damstra, G. (2016, February). Het Groene Kompas voor duurzame ontwikkeling in het MBO. NRO.

United Nations University. (n.d.). RCE Concept | RCE NETWORK. Retrieved December 22, 2021, from <https://www.rcenetwork.org/portal/rce>



Appendices

Appendix A - Explanation of the Dutch education system

Primary education

In the Netherlands, A pupil can follow primary education at a primary school from ages four to twelve. When a child is four, they go to Group 1. Education is compulsory from age five. Primary education goes up to Group 8, after which they go to secondary education. The level of secondary education depends on the advice from the primary school and the results from the final test.

Secondary education

Secondary education in the Netherlands is divided into different levels:

vwo (voortgezet wetenschappelijk onderwijs; continued scientific education)

The vwo normally takes six years and knows three different forms: gymnasium, lyceum and atheneum. The first three years are standardized for each form, after which a pupil chooses a profile: nature and science, nature and health, economy and society or culture and society. A vwo diploma offers access to the universities (wo).

havo (hoger algemeen voortgezet onderwijs; higher general continued education).

The havo takes five years. After the first three years the pupil chooses a profile (see: vwo). A pupil with a diploma can continue to vwo or choose a hbo education.

vmbo (voorbereidend middelbaar beroepsgericht onderwijs; preparative secondary vocational education)

The vmbo takes four years and consists of four learning tracks. Every track has a different level and curriculum; from very practical to mostly theoretical. After two years, the pupil chooses a specific sector (science, care and wellbeing, economics, or agriculture). After passing the final exam, the pupil can continue to the havo or choose a mbo education.

Within the vmbo there exists a subdivision:

- The theoretical track
- The mixed track
- The framed vocational track
- The basic vocational track

Vocational and higher education

Higher education in the Netherlands is comprised of the higher vocational education (hbo; hoger beroepsonderwijs) and the scientific education (wo; wetenschappelijk onderwijs) or simply 'university' colloquially. Hbo students can complete a full time hbo education in four years at the bachelor level. Wo students can obtain this level after a minimum of three years. After which these students can obtain the level of master after another minimum of one year.

Mbo (Middelbaar beroepsgericht onderwijs; secondary vocational education)

The mbo offers vocational education for all sectors. Most educations take four years. A lot of attention is paid to practical and work experience. Mbo educations are offered at four different levels:

- level 1 entry level (EQF 1)
- level 2 basic vocational training (EQF2)
- level 3 full professional training (EQF 3)
- level 4 middle-management and specialist training (EQF 4)

From <https://www.rijksoverheid.nl/onderwerpen/themas/onderwijs> (NL)



Appendix B - Additional list of Frisian initiatives

Vereniging Circulair Friesland	Hub	Circulaire Economie (CE)
Centrum Duurzaam	Centrum	Duurzaamheid
100% Duurzaam	Mbo-initiatief	Duurzaamheid
Biobased Economie Fryslân	Mbo-initiatief	CE
Fossielvrij Fryslân	Samenwerkingsverband	Energietransitie (ET)
SPARK the Movement (RCE Fryslân)	Samenwerkingsverband	CE /Duurzaamheid
Milieu Advies Bureau Hoge Bomen	Centrum	Duurzaamheid
Practoraat Duurzaam Doen & Denken	Kennis & skills ontwikkeling	CE / ET / Klimaatadaptatie (KA)
Gas 2.0	PPS	ET
Circulair Ambacht Centrum	Samenwerkingsverband realisatie Milieustraat 2.0	CE
Global Land	Jaarlijkse manifestatie rondom Global Goals	CE / ET / KA / SDGs
SDG House Fryslân	Hub	Duurzaamheid / SDGs
Biosintrum	Kennishub	CE/Biobased Economy/ET
Fjildlab	" triplehelixOnderwijs.Overheid.Ondernemers	Duurzaamheid
CEW Water & CIV Water&WAC & Wetsus	Doorlopende leerlijn	Duurzaamheid / CE
BOWINN centrum voor duurzaam bouwen	Hub	CE
Nationaal Testcentrum Circular Plastics	Centrum	CE
Duurzame Kunststoffen	Lectoraat	CE
Betekenisvol Ondernemen	Lectoraat	CE
Green Logistics	Lectoraat	CE
Smart Sustainable Manufacturing	Lectoraat	CE
Sustainability in Hospitality and Tourism	Lectoraat	Duurzaamheid
Watertechnologie	Lectoraat	Duurzaamheid / CE
Global Responsibility & Leadership	Bachelor opleiding	Duurzaamheid / SDGs
Climate Adaptation Governance	Master opleiding	Klimaat
Sustainable Entrepreneurship	Master opleiding	Duurzaamheid / CE
Circulaire landbouw	Onderzoek/onderwijs	CE / Duurzaamheid / KA
Voeding en voedsel	Onderzoek/onderwijs	CE / ET / KA / SDGs
Biodiversiteit	Onderzoek/onderwijs	CE / Duurzaamheid / KA
Duurzaam bodembeheer	Onderzoek/onderwijs	Duurzaamheid / KA
Water/ Better Wetter	Onderzoek/onderwijs	CE / Duurzaamheid / KA
Onderwijsakkoord Friesland	Kennis & Skills ontwikkeling	SDGs / CE
Aansluitingsnetwerk VO-HO	Samenwerkingsverband	Duurzaamheid als vast thema
Wad van Waarde	Samenwerkingsverband	CE
Circulair Hospitality De Friese Doorlopers	Community	CE
Community Plasticvrije Waddenzee	Community	SDGs / CE
Circulair Kwartier	Samenwerkingsverband	CE
O3 Leeuwarden	Leerwerkbedrijf	Duurzaamheid / SDGs
Wortels en Vleugels	Po/vo/mbo samenwerking met projecten	Duurzaamheid / CE / biodiversiteit / energie
LIS / Global Goals TV	Leerwerkbedrijf	Duurzaamheid / SDGs