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# Midterm Evaluation of SPARK Denmark

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## PREFACE

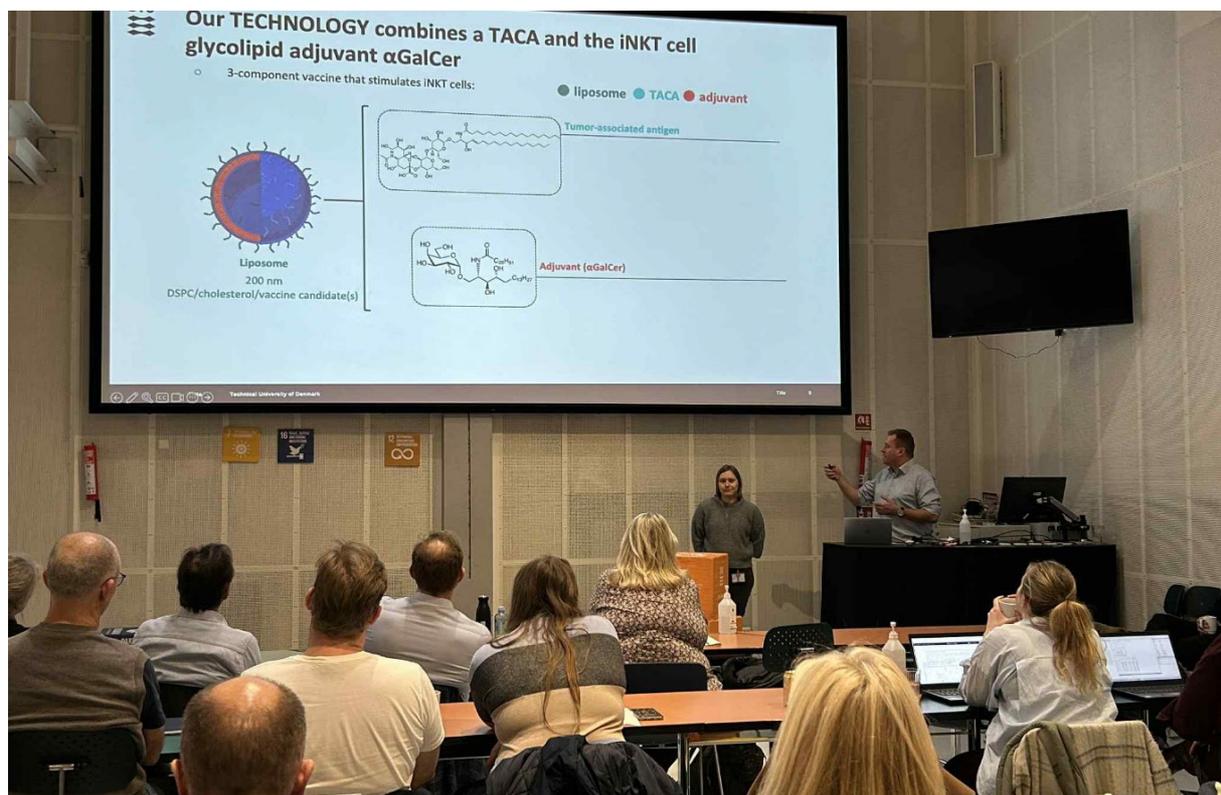
Denmark has lagged behind other leading life science regions in translating academic research into new companies and innovations. SPARK Denmark was launched in 2022 as a pilot programme running until 2027, with the primary aim of closing this gap. Funded by the Novo Nordisk Foundation, the programme links researchers with experienced industry mentors and aims to provide targeted support to accelerate early-stage life science projects emerging from Danish universities and hospitals. The SPARK concept was originally developed at Stanford University and has been adopted in several countries.

This mid-term evaluation has been commissioned by the Programme Lead at the University of Copenhagen and conducted by IRIS Group. Its purpose is to assess the outcomes and value creation of SPARK Denmark, including how the programme supports project development and how it

positions itself within the Danish life science ecosystem, particularly in relation to other programmes.

The evaluation draws on a combination of data, including a survey of project leaders (grant holders), interviews with project teams, mentors and stakeholders, and data provided by the Programme Lead. In addition, interviews with SPARK programmes in other countries were conducted to gather inspiration and enable comparisons of programme design and outcomes.

The insights presented in this report aim to inform future programme development and provide evidence on SPARK Denmark's role in strengthening Denmark's capacity for life science innovation. Furthermore, the evaluation provides an important basis for the Novo Nordisk Foundation's decision on whether the programme should be continued after the pilot phase concludes.



# 1. SUMMARY AND RECOMMENDATIONS

**This chapter summarises the key findings of the midterm evaluation. Additionally, it presents recommendations on how SPARK Denmark can be strengthened with a view to a version 2.0 of the programme.**

## 1.1 Summary

SPARK Denmark was established in 2022 with the ambition of accelerating the translation of academic life science discoveries into innovations that benefit patients and society. Inspired by the successful SPARK model developed at Stanford University, the programme supports researchers in maturing promising life science projects towards commercialisation.

The evaluation shows that most SPARK projects demonstrate solid progress across all key dimensions of successful life science innovation. Participation in SPARK Denmark is widely viewed as a major contributor to this progress. Both the financial support and access to mentoring are assessed as drivers of advancement.

In addition, several projects have benefitted from SPARK's international activities, which have contributed to network-building, early contact with potential investors, and learning from peer projects. By contrast, the value of SPARK's educational activities has been limited, and projects do not call for additional offerings in this area.

While several alternative sources exist for early-stage innovation funding, SPARK Denmark's distinctive contribution to the ecosystem lies in its unique mentoring model, where project teams pitch to a panel of industry experts. The format exposes teams to diverse perspectives in a single session, enabling more rigorous problem-solving and faster refinement of project strategies. It also functions as a shared learning arena, where projects benefit from advice given to others. The model helps teams sharpen their focus – for example, by identifying the patient groups and

markets with the greatest potential – and equips them to navigate the wider ecosystem more effectively through targeted connections and recommendations.

### **A nationally anchored programme with an international outlook**

SPARK Denmark is – like SPARK projects in other countries – fundamentally rooted in the national life science ecosystem, and its strength lies in the close interaction between researchers and a committed corps of volunteer mentors. The programme is designed around a physical format, where project teams meet industry experts face-to-face. This in-person setting is a defining feature of SPARK and contributes to a collaborative learning culture that cannot be replicated in a virtual format. Mentors consistently highlight that they participate because they want to contribute to the national innovation environment and help strengthen Denmark's pipeline of life science ventures. Their motivation is tied to a desire to “give back”, support young researchers, and reinforce the collective capacity of the Danish ecosystem.

At the same time, SPARK Denmark is firmly embedded in an international network spanning the Nordic region, Europe, and the global SPARK community. Through SPARK Europe and SPARK Global, Danish project teams gain access to international events, investor showcases, and opportunities to pitch to audiences far beyond Denmark. Engagement in these activities also enhances the visibility of Danish innovation internationally and strengthens Denmark's position within the broader SPARK landscape.

The combination of local anchoring and international reach is therefore central to SPARK Denmark's value proposition.

### **Success criteria achieved**

The evaluation finds that nine out of twelve completed SPARK projects have subsequently secured additional funding, including three projects accepted into the BioInnovation Institute (BII). 25% have advanced to the point of establishing a spin-out company.

The programme has therefore exceeded its overarching target that at least 55% of projects should achieve one or more key milestones on the path towards successful commercialisation. However, no projects have yet attracted private investment or entered clinical trials.

### **Greatest impact within therapeutics**

The SPARK Denmark mentor network covers a broad range of competencies. It is composed of professionals with extensive industry experience across the life science sector.

However, the evaluation of SPARK Denmark is most positive among projects within therapeutics, while feedback from MedTech and industrial biotechnology projects is more mixed.

This reflects the composition of the mentor pool, which from the start of the programme has been built around individuals already active in the life science ecosystem at the University of Copenhagen. Although SPARK has recently strengthened its network with new MedTech mentors, the pool still has a predominance of experts with backgrounds in pharma and therapeutics.

### **Potential to better leverage the mentor pool**

Despite the clear benefits of the mentoring model, the evaluation identifies areas where the mentoring and sparring components could be further strengthened. Interviews with projects and mentors point to the following challenges:

- In a few cases, it has been difficult for project teams to act on mentor input due to conflicting recommendations from mentors.
- There is substantial turnover in the mentor panel from session to session, resulting in varying levels of familiarity with individual projects.
- Some projects experience the group mentoring format as most valuable early in their SPARK participation, while one-on-one mentoring may be equally or more beneficial at later stages.

Many projects would likely benefit from structured follow-up with an experienced business developer or similar profile, helping them translate mentor advice into revised project plans, ecosystem connections, and concrete next steps.

SPARK Denmark could also strengthen the balance and progression between group and individual mentoring. Individual mentoring is part of the SPARK Denmark offering, but throughout most of the pilot phase it has been up to the projects themselves to initiate such interactions.

The evaluation shows that SPARK programmes abroad take a more structured approach to matching projects with mentors who fit evolving challenges throughout the project lifecycle.

In 2025, the SPARK Denmark team has begun working towards a more systematic approach to matching projects with mentors. The evaluation indicates that this development is well aligned with the identified needs and is likely to strengthen the overall value and impact of participating in SPARK Denmark.

### **Modest grant size**

SPARK Denmark differs in several respects from other programmes supporting early-stage innovation emerging from universities and hospitals:

- A strong emphasis on mentoring, particularly the group-based model.

- A two-year programme duration, which projects consider important given that much of the value lies in sustained access to mentoring and the flexibility to participate in international SPARK events when most relevant.
- A relatively modest grant size of DKK 350,000 per year.

By comparison, programmes such as InnoFounder (Innovation Fund Denmark) and the Pioneer Innovator Grants (Novo Nordisk Foundation) typically run for one year and provide grants exceeding DKK 1 million. University PoC-schemes also tend to offer higher levels of support relative to project duration.

At the same time, SPARK Denmark applies relatively strict rules not found in comparable international SPARK programmes. According to the application guidelines, projects may not receive simultaneous funding from other programmes for the same main activity/work packages (labelled “double funding”)

Because life science innovation is resource-intensive – in time, equipment, and costs such as animal studies – this constraint has, in several cases, limited project progress.

Research leaders and innovation staff at universities also note that, when advising researchers, they often prioritise programmes with larger funding opportunities. It is likewise emphasised that the SPARK grant is too small to support, for example, a postdoc position.

The evaluation further shows that the number of applicants – despite strong growth in the most recent rounds – remains lower than originally anticipated.

### **Positioning in the funding landscape**

SPARK Denmark was originally envisioned as a programme targeting very early-stage innovation projects – potentially even before an invention disclosure was filed. However, the evaluation shows that most admitted projects during Call 1-3 had

already completed initial proof-of-concept studies funded through other schemes.

In practice, Danish life science projects rely on a mix of funding sources without a clear sequential logic, but SPARK Denmark’s selection criteria and KPI’s mean that it is rarely the first grant obtained.

Furthermore, the intended “prospect track,” designed to support early and unfunded projects, has been used only minimally (likely because it **only** provides access to mentoring but not funding) further limiting the programme’s role at the earliest stages of the innovation value chain.

### **The anchoring in the national ecosystem could be improved**

The evaluation concludes that awareness of SPARK Denmark outside the universities and the current mentor corps is still relatively limited.

There is considerable potential to strengthen dialogue with leading life science companies regarding mentor recruitment. Such efforts would benefit from coordination with other early-stage programmes that also work to involve life science mentors and industry partners, including BETA.HEALTH.

SPARK Denmark – including participating universities – could also work more actively to brand and promote the programme across the wider ecosystem, from researchers to investors. This applies particularly to the mentor model and the value it creates for early-stage life science projects.

### **Satisfaction with administration and cross-university collaboration**

There is a generally high level of satisfaction with the administration of SPARK Denmark. Projects describe the SPARK team as accessible and responsive, and they feel well informed about SPARK activities both nationally and internationally. There is likewise strong satisfaction with the support and sparring provided by the SPARK team in the preparation for pitch sessions.

The evaluation also shows that collaboration across universities in the implementation of the programme and in the project selection process has worked well. In recent years, several joint initiatives on entrepreneurship and innovation have been launched across the universities, and the evaluation confirms that the institutions have built strong experience in cross-university collaboration and are well equipped to implement shared programmes. This is likewise reflected in the effective cooperation within the programme's steering committee.

Finally, the evaluation shows that the overall administrative resources allocated to SPARK Denmark are considerably lower than in comparable national innovation programmes. In similar cross-institutional programmes, operational resources are typically made available at each participating institution, financed through external programme funding. This provides a stronger local foundation than is currently the case for SPARK Denmark.

### **Strengthened Nordic collaboration**

SPARK programmes have been established in three Nordic countries – Denmark, Norway, and Finland. The Nordic SPARK organisations already collaborate through joint participation in regional events such as Nordic Life Science Days and the Nordic Innovation Fair. They also organise shared study trips for SPARK projects to Silicon Valley.

As a new initiative, the Nordic SPARKs have recently begun planning joint mentor sessions in selected thematic areas, enabling mentors and project teams from the three countries to meet in a shared forum.

These joint Nordic activities contribute positively to the SPARK programmes and hold potential for further development. At the same time, it remains essential to maintain a strong anchoring of each programme in its national ecosystem as indicated above.

Going forward, it will be important to continue the shared international activities, as they provide projects with broader exposure and create valuable opportunities for collective learning across the Nordic region. A more regular dialogue between the national secretariats is also viewed as beneficial, ensuring that experiences, tools, and review practices are exchanged to support the continuous development of each programme.

## **1.2 Input and recommendations for SPARK Denmark 2.0**

This section discusses how SPARK Denmark can be strengthened going forward. One of the key objectives of the evaluation has been to develop recommendations for a SPARK Denmark 2.0, with a focus on how the programme can create even greater value and impact.

A central challenge in this context is that SPARK Denmark is one among several programmes supporting early-stage life science innovation. As life science projects progress from research towards commercialisation, they rely on a patchwork of schemes and funding instruments that cover overlapping stages and lack a clear, sequential logic.

It is therefore difficult to determine SPARK Denmark's precise role in the ecosystem without a more comprehensive assessment of the interfaces and interdependencies between all such programmes. A deeper analysis of the user journeys of early-stage life science projects is needed to identify where SPARK Denmark (and other programmes) can provide the greatest value and how its interaction with other initiatives can be strengthened.

In addition, considerations regarding the optimal use of the SPARK grant cannot be viewed entirely independently of how funding under the forthcoming innovation track for universities will be allocated.<sup>1</sup>

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<sup>1</sup> Regeringen (2025); "Strategiske prioriteringer for forskning og innovation 2026-29"

The following should therefore be understood as input to the reflections that universities and the Novo Nordisk Foundation should jointly undertake as part of redesigning the programme.

The starting point for our reflections is that SPARK Denmark's strongest asset is its mentor model and the corps of volunteer industry mentors. A SPARK Denmark 2.0 should therefore focus on how this asset can be leveraged even more effectively.

### **The grant model**

The current SPARK grant model presents a paradox. On the one hand, the grant is an important motivation for many researchers to apply to the SPARK programme. On the other hand, the funding level is relatively low for a life science scheme – and, combined with the current rules/guidelines on simultaneous funding from other programmes, the grant size may deter some projects from making use of SPARK Denmark and its mentoring services.

There are three approaches to redesigning the SPARK Denmark grant model:

1. Maintain the current grant level but relax restrictions on co-funding with other programmes.
2. Increase the SPARK Denmark grant so that the annual funding level matches that of other early-stage programmes.
3. Remove the grant component entirely, making SPARK Denmark a pure mentoring programme.

All three models would address the shortcomings of the current set-up. However, they differ substantially in their financial implications and in the fundamental value proposition the programme offers to life science researchers.

Model 1 is the least radical option and could partly be implemented immediately. SPARK

Denmark should revise its guidelines as soon as possible to allow simultaneous funding from programmes not financed by the Novo Nordisk Foundation. However, it must be acknowledged that many Danish programmes supporting early-stage life science innovation are, in fact, financed by the Foundation.<sup>2</sup>

In Model 2, the grant would – more strongly than today – serve as the primary incentive for many researchers to apply, whereas in Model 3 the mentor model becomes the central value proposition. Model 1 maintains a balance between the two. From a budgetary perspective, Model 2 would require a significant increase in programme funding, while Model 3 would reduce financial demands.

Model 3 would also require stronger ownership from the universities than is currently the case. At the same time, it presents opportunities: innovation staff could position SPARK as a strong complement to other funding schemes rather than an alternative. More broadly, this model assumes a strengthened SPARK Denmark brand and active encouragement from ecosystem actors for ongoing projects to use SPARK as a supplementary mentoring offer.

Conversely, the challenge with Model 3 is that the mentoring component would stand alone, which may discourage some projects from applying. A related, but distinct, consideration is that one of the original rationales for establishing SPARK Denmark was the limited availability of funding for early-stage life science projects. Since then, the ecosystem has been strengthened with additional funding options, and the model therefore presupposes that projects are able – or are actively supported – to navigate the funding landscape and combine SPARK Denmark with other funding opportunities.

An argument in favour of Model 3 could be the potential to reduce the administrative burden on universities, as well as the number of times a project

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<sup>2</sup> The Novo Nordisk Foundation's internal guidelines do not allow simultaneous funding (for the same project activities driven by the same project members) from two programmes financed by the Foundation. However, the Foundation does not impose restrictions on simultaneous funding from other programmes or funding schemes.

must undergo review processes before reaching the startup stage. In this model, a simple eligibility criterion could be that a project has already secured funding from other programmes.

Finally, the principles of Models 1 and 3 can also be combined. Early-stage projects funded through other Novo Nordisk Foundation programmes could be granted access to SPARK's mentoring services – but not to its financial support. This option has already been offered to a small number of projects but could in future be communicated far more proactively to awardees under programmes such as the Pioneer Innovator Grants and BETA.HEALTH.

It should also be emphasised that none of the three models would bring SPARK Denmark out of alignment with SPARK's global profile. SPARK programmes in other countries range from pure mentoring schemes to programmes offering annual grants of up to approximately DKK 1.5 million.

### **SPARK Denmark and the value chain**

It is important to consider where SPARK Denmark should position itself in the value chain that runs from very early-stage projects (e.g., without experimental validation) to the establishment of spin-outs, clinical studies, venture investment, and beyond.

As noted earlier, we believe that deeper analysis of the user journeys of life science projects is needed. This includes understanding how very early-stage projects currently make use of local mentoring offerings at individual universities (or in other programmes), and whether SPARK Denmark could add value by contributing to the early selection of promising projects and helping to set their strategic direction.

Our assessment is that SPARK Denmark's mentoring offering is relevant across all stages leading up to company formation, and that a two-tiered structure – as originally envisioned through the distinction between “prospects” and full projects – therefore makes good sense.

If the universities agree to prioritise the SPARK model as a common framework for shaping the direction of very early-stage projects as well, the prospect model could be further developed:

- Each university could be given the opportunity to nominate a small number of projects as prospect projects.
- These projects must not yet have received innovation funding (with the possible exception of local proof-of-concept schemes).
- Business developers from the relevant university participate in the mentor sessions (potentially online) and subsequently guide the projects in applying mentor input.
- Participation is communicated as an opportunity to strengthen the project and assess its potential as a basis for applying to SPARK or other programmes.
- The track could also include a modest grant component.

If a two-tier model is not adopted, it should instead be considered whether SPARK Denmark's overall success criteria and the selection criteria for project admission should be adjusted. At present, these criteria clearly favour projects that are relatively mature and already progressing toward commercialisation. As a result, SPARK Denmark has functioned more as a programme that accelerates the advancement of existing projects than as one that helps elevate a larger number of early ideas out of academia.

### **Fewer focus areas or multiple tracks**

There is no doubt that the SPARK mentor model is an effective mechanism for guiding early-stage innovation projects in the right direction. This applies not only within life science but also in other fields where Danish universities contribute to research-based entrepreneurship. This naturally raises the question of whether the programme could be expanded to additional areas.

However, the evaluation also shows that the success of the SPARK model depends on several key prerequisites:

- A critical mass of project ideas from research institutions.
- An operational team with domain insight, capable of advising projects ahead of their pitch and ensuring an appropriate match between projects and mentors.
- A mature and robust ecosystem, enabling recruitment of a sufficiently large mentor corps with a broad set of competencies that reflects the often diverse and field-specific challenges confronted by projects.

The evaluation concludes that it is difficult to support traditional life science and industrial biotech projects under the same umbrella. The gap between “red biotech” and other biotech areas is substantial, meaning that the same mentors have not been able to provide qualified feedback on the challenges industrial biotech projects encounter.

Conversely, it may be worth considering whether SPARK Denmark could consist of multiple tracks focusing on technology areas that fulfil the prerequisites outlined above.

We consider the most promising area to be food production and ingredients (“yellow biotech”), where Denmark is strong both academically and industrially. Denmark has leading research and industry capabilities within areas such as bio-based ingredients, fermentation, new protein sources, plant biologicals, etc.

KU Food, Aarhus University Food Science, and DTU could collaborate to assess whether the three prerequisites are fulfilled and whether Denmark’s leading food tech companies are willing to help build a strong mentor corps.

It should also be emphasised that SPARK internationally is a strong life science brand with a clear focus on therapeutics, diagnostics, MedTech, and digital health. No other countries include

additional biotech branches or entirely different research fields in their SPARK programmes.

This also means that a potential track within yellow biotech would not have access to the same international SPARK events. In this light, it may be worth considering whether an initiative targeting other research areas should instead be established as an independent programme under a different name.

### **Optimising the organisational structure**

SPARK Denmark is currently managed by a well-functioning central team responsible for coordinating calls, communication, mentor sessions, mentor recruitment and development, steering committee meetings, and other core activities.

Going forward, the team and programme leadership should play a stronger role in strengthening SPARK Denmark’s visibility and positioning within the wider ecosystem. This includes deepening engagement with established companies to support the continued development of the mentor corps. In addition, a more systematic approach to one-to-one mentoring will require additional resources.

Because the SPARK team has not been fully staffed during parts of the pilot period, it is difficult to assess whether the current team size is sufficient. Future resource needs will also depend on decisions regarding the prospect model, which could imply a higher activity level.

If SPARK Denmark is to function as a national programme with strong engagement from all participating universities and hospitals, it is essential to reinforce local anchoring across regions. Experiences from other innovation programmes – such as Open Entrepreneurship and Spinout Denmark – show that strong local engagement can be achieved even when programme leadership and administration are centralised at a single university. However, this requires that dedicated resources be allocated to the task to ensure that it is prioritised on par with other operational responsibilities.

The ambition should be for SPARK's mentor model to be recognised as a valuable asset for life science projects across the country and as an offering that complements locally anchored innovation pathways. Achieving this requires that business developers at the participating institutions attend mentor sessions (potentially online in hybrid format) and take responsibility for follow-up with projects, including sparring, progress meetings, and other support activities. These tasks are naturally

situated at the local university level rather than in a national secretariat at the University of Copenhagen.

Experience from SPARK programmes in other countries suggests that, with the proposed improvements, SPARK Denmark can be operated effectively with a total staffing level of approximately five full-time equivalents.

## 2. ABOUT THE EVALUATION

This chapter outlines the purpose of the evaluation and provides details on the data sources utilised.

### 2.1 Purpose of the evaluation

The primary purpose of this evaluation is to assess SPARK Denmark's outcomes against the objectives set at the programme's inception. At the same time, the evaluation aims to provide input on how the programme could be strengthened during the remainder of the pilot phase and to inform the Novo Nordisk Foundation's decision on whether/how the programme should be continued beyond 2027.

Another important objective is to examine SPARK Denmark's role within the broader life science innovation ecosystem.

The purposes of the evaluation are summarised in Box 2.1 under four headings.

#### Box 2.1. Purposes of the evaluation

##### 1. SPARK Denmark's results and impact

- Evaluate project progress and preliminary outcomes against the KPIs established at programme inception.
- Assess the programme's potential to enhance universities' contribution to the long-term development of the life science sector.
- Examine variations in SPARK's value creation, e.g., across different life science segments.

##### 2. SPARK Denmark's design and activities

- Assess whether SPARK has implemented the activities agreed with the Novo Nordisk Foundation.
- Evaluate programme administration, governance structures, organisational set-up, programme management, and funding model.

- Review the mentor model and identify possible improvements.
- Assess the usefulness of learning and networking activities.
- Draw lessons from comparable international SPARK programmes.

##### 3. Deal flow and characteristics of SPARK projects

- Analyse trends in applicant numbers, success rates, and comparisons with similar programmes.
- Map project diversity in terms of maturity, research area, and geography.

##### 4. SPARK and the life science ecosystem

- Evaluate SPARK's role and position within universities, the broader life science ecosystem, and internationally.
- Map SPARK's integration within the ecosystem, including in relation to mentor recruitment.
- Assess interfaces and overlaps with other programmes and activities, and potential synergies with universities' and university hospitals' commercialisation initiatives.
- Explore conditions and opportunities for expanding SPARK to other research areas.

### 2.2 Data sources and activities

The evaluation draws on multiple independent data sources, including in-depth interviews, a survey of project leaders (grant holders), international case studies, and background material from SPARK. The following subsections outline the key data sources used and collected in the evaluation.

## Interviews

In total, we conducted approx. 40 interviews (see Appendix 1 for a full list of interviewees) with project leaders and a diverse range of stakeholders.

### *Interviews with project leaders*

We carried out nine in-depth interviews with project leaders (current or former grant recipients) to gain a detailed understanding of how SPARK has added value to their projects and to collect suggestions for improvement. A representative sample of interviewees was selected to reflect the diversity of life science segments. All interviews focused on projects from Calls (cohorts) 1–3 to ensure that participants had sufficient experience with the programme to provide informed feedback on the issues under review.

### *Interviews with university representatives*

In addition, we conducted interviews with members of the Steering Committee and the National Team (see Chapter 3). These interviews aimed to gather insights into SPARK's integration within the universities and how the programme complements local initiatives. Discussions also addressed programme administration and cross-university collaboration.

### *Interviews with stakeholders in the ecosystem*

Finally, we interviewed stakeholders across the Danish life science ecosystem, including representatives from other programmes funded by the Novo Nordisk Foundation and national actors supporting research-based innovation. These interviews focused on assessing awareness of SPARK, its integration and role within the broader ecosystem, and how effectively the programme addresses gaps in both funding opportunities and access to mentorship.

## Survey

A central component of the evaluation was a survey of all project leaders from cohorts 1–3. Table 2.1 provides an overview of the survey population and response rates.

**Table 2.1. Survey responses, cohort 1-3**

Type	Population	Responses	Response rate
Cohort 1	5	4	80%
Cohort 2	5	3	60%
Cohort 3	5	5	100%
<b>Total</b>	<b>15</b>	<b>12</b>	<b>80%</b>

The survey addressed all four evaluation areas outlined in Box 2.1.

In addition, a bespoke self-assessment index was developed to measure progress in life science innovation projects. Project leaders were in the survey asked to rate project maturity on a 1–9 scale (across seven dimensions), both at onboarding and at the present time (see Chapter 4).

### **Interviews with programme managers of SPARK projects in other countries**

In addition to interviews with Danish stakeholders, we conducted interviews with programme leaders from SPARK initiatives in three other countries and regions: Norway, Finland, and Berlin. The aim was twofold: first, to compare the Danish set-up with these international programmes and identify lessons that could inform improvements to SPARK Denmark; and second, to explore opportunities for closer collaboration.

### **Interviews with SPARK Denmark's programme management**

Finally, we conducted interviews with SPARK Denmark's programme management and received relevant documentation on the projects, application procedures, and university contact points. These interactions provided a detailed understanding of the programme's operations and allowed us to clarify questions as they arose. In addition, the evaluation team maintained a close working relationship with the programme management throughout the evaluation process.

## 3. ABOUT SPARK DENMARK

**This chapter introduces SPARK Denmark and its core activities. It also provides an overview of applicants and grants. Finally, it examines the profiles of funded projects, highlighting key characteristics such as life science segments and university affiliations.**

### 3.1 Background – why SPARK Denmark?

Inspired by the successful SPARK model from Stanford University, SPARK Denmark supports researchers in bridging the gap between academic research and clinical or commercial application.

Established in 2022, SPARK Denmark was developed through collaboration among Denmark's five largest universities and funded by the Novo Nordisk Foundation. The programme targets early-stage academic projects within the life sciences. For many academic researchers with innovative ideas, the path towards commercialisation is complex, time-consuming, and costly. Moreover, few researchers have prior experience in translating scientific results into business opportunities, and early-stage innovation projects often risk being deprioritised compared with research and teaching obligations.

In this context, SPARK Denmark aims to address key barriers that hinder academic researchers from realising the commercial potential of their research. The SPARK innovation model involves early engagement of industry experts in the innovation process through structured mentoring activities, combined with funding that supports technology maturation – for example, through animal model testing, prototyping, or similar activities.

A core feature of the SPARK mentoring model is its collaborative format: projects benefit from collective discussions of progress and challenges within the broader SPARK community. This approach reflects the understanding that open dialogue about strategies can be highly productive for project development.

#### Box 3.1. The SPARK Model

The SPARK model is an internationally recognised framework for accelerating the translation of academic life science discoveries into innovations. Developed at Stanford University, the model combines funding with intensive, hands-on mentoring from experienced industry experts. Its core idea is that early-stage life science projects make faster and better progress when researchers receive guidance from professionals who have brought products to market before.

SPARK programmes operate as structured, cohort-based initiatives in which project teams regularly pitch to a multidisciplinary mentor panel. This format exposes teams to diverse perspectives in a single session, helping them identify critical barriers early, refine their strategy, and focus on the most promising patient groups and market opportunities. The model is complemented by one-to-one mentoring and access to an international network of SPARK sites.

By integrating scientific, regulatory, commercial, and clinical insights from industry, the SPARK model helps bridge the well-known “valley of death” between academic research and commercial development. It has contributed to the creation of numerous life science startups, partnerships, and clinical candidates globally.

SPARK also provides funding that can be used for key experiments such as efficacy studies, prototype development, or regulatory groundwork.

SPARK operates with a milestone-based approach, helping researchers define the critical path from early scientific findings to a validated product concept. Projects typically spend two years in the programme.

## 3.2 Success criteria

According to the original application submitted to the Novo Nordisk Foundation in 2022, SPARK Denmark was established to address a gap in the Danish innovation landscape – namely, the absence of mechanisms linking early-stage academic innovation projects with subject-matter-specific mentoring. Based on this premise, it was estimated that between 100 and 150 projects per year would be eligible to apply for enrolment in the programme.

The expected project pipeline was anticipated to include:

- Projects within Technology Transfer Offices (TTOs), prior to or shortly after the filing of an invention disclosure.
- Projects originating in university research laboratories at an early stage.
- Projects emerging from other Danish innovation programmes, such as BRIDGE and ODIN.

To monitor progress towards its overall vision, a set of success criteria were defined at the time of the programme's launch. For SPARK projects graduating from the programme, the target is that 55% reach at least one of the following milestones:

- Establishment of a spin-out company.
- Establishment of an industry collaboration, such as a licence agreement.
- Advancement into clinical testing.
- Securing additional soft funding or private investment.

The success criteria were based on numbers from other SPARK initiatives. At SPARK Stanford, the track record demonstrated that 51% of the projects have met one of these criteria, and SPARK Norway had in 2022 a success rate of 80%<sup>3</sup>.

## 3.3 Programme activities

At the core of the SPARK model is tailored mentoring provided by experienced industry experts who guide researchers through scientific, regulatory, and commercial challenges.

SPARK Denmark offers a range of activities that combine mentoring, funding, and opportunities for learning and networking. Through these activities, the programme seeks to strengthen participants' ability to advance early-stage research projects towards commercial implementation.

Project teams are selected through one or two open calls each year.

### Enrolment and funding

Once selected, projects are enrolled either as full SPARK projects, which receive up to DKK 700,000 in funding over a two-year period, or as prospect projects, which are offered 12 months of mentoring without funding.

Upon enrolment, each project is assigned a project coordinator from the SPARK Team. The process begins with an introductory meeting between the project team, the SPARK Team, and - where relevant - representatives from the local university. During this meeting, the project plan is established, milestones are defined, and the level of funding support is formally confirmed.

After one year, each project must submit a mid-term report outlining its progress against the agreed milestones, including any elements that have not been achieved. Based on this assessment, the report also provides an updated budget, which forms the basis for the continuation in SPARK Denmark.

The programme includes both core elements that all participants take part in, and optional activities. Figure 3.1 provides an overview of SPARK

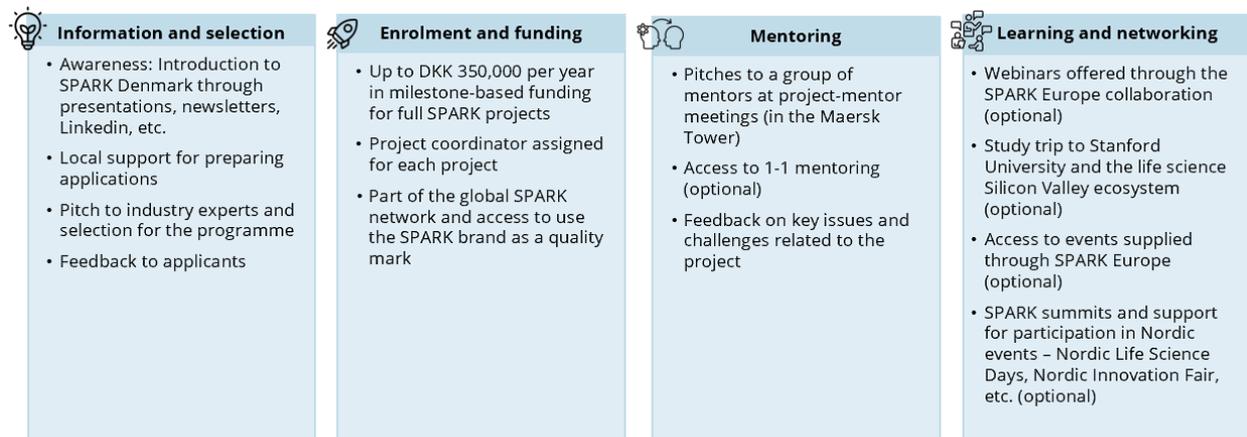
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<sup>3</sup> SPARK Denmark (2022); Application for the Novo Nordisk Foundation

Denmark’s overall value proposition from the perspective of full SPARK projects.

A brief description of the different activities is provided below the figure.

**Figure 3.1. SPARK Denmark activities**



Source: IRIS Group based on material from SPARK Denmark

### Mentoring

The key activity of the programme is its mentoring services. Each project team receives input, suggestions, and leads from a pool of experienced industry experts. These experts represent a wide range of competences (see Chapter 5).

Mentoring takes place through regular meetings between the project teams and representatives from the mentor pool. In addition, the programme offers the opportunity for projects to be matched with one or more dedicated mentors for a limited period to address specific challenges or development needs.

### Learning and networking

Mentoring is complemented by a set of broader learning and networking activities.

SPARK Denmark is part of SPARK Europe and SPARK Global, collaborative networks of SPARK programmes across the continent/world. Through this network, participants in SPARK Denmark gain access to webinars covering a range of topics relevant to early-stage life science innovation. These webinars are designed to provide additional knowledge and practical insights on issues such as

regulatory pathways, pitches for investors, pre-clinical trials planning, and business model development, complementing the mentoring and local programme activities.

In addition to mentoring and webinars, SPARK Denmark participants have the opportunity to take part in a variety of events designed to enhance learning, networking, and exposure to the broader life science ecosystem in Denmark and abroad. These include study trips to Silicon Valley and larger Nordic and European events which bring together early-stage life science innovators, industry representatives, and investors (see Chapter 5).

## 3.4 Organisation and governance

SPARK Denmark is organised as a national collaboration between University of Copenhagen, Technical University of Denmark, Aalborg University, Aarhus University and the University of Southern Denmark.

The programme is anchored at the University of Copenhagen with the SPARK Team located at KU Lighthouse. SPARK Denmark operates as a

national programme and is open to life science-focused projects from all Danish universities and hospitals.

The SPARK Team functions as a collaborative secretariat comprising three programme managers, equivalent to a total of 2.5 full-time equivalents (FTEs). These managers oversee the daily operations of SPARK Denmark and coordinate the programme's national activities.

The responsibilities of the SPARK Denmark Team include:

*Awareness activities:* Communication through presentations, newsletters, LinkedIn, and engagement with innovation officers at universities and university hospitals – both to promote general awareness of the programme and to publicise open calls.

*Project selection and management:* Coordinating the evaluating of applications, the selection of projects, and overseeing their progress throughout the programme period.

*Mentorship coordination:* Recruiting mentors and facilitating interactions between project teams and mentors.

*Educational activities:* Disseminating information and providing links to participants about webinars offered under SPARK Europe.

*Funding administration:* Managing the disbursement and monitoring of grants provided to projects.

*Events:* Organising participation in study trips, international SPARK events, and other activities designed to strengthen participants' exposure to the global life science innovation ecosystem.

### **National Steering Committee**

The strategic direction of the programme is set by a National Steering Committee composed of senior representatives from each of the governing universities, as well as a representative from the Novo Nordisk Foundation. The committee ensures

organisational support for the programme and alignment with strategies and other innovation initiatives at the universities.

### **Box 3.2. Steering Committee members**

#### **Universities:**

Thomas G. Jensen, Head of Department, Department of Biomedicine, Faculty of Health (Aarhus University)

Pascal Madeleine, Professor, Department of Health Science and Technology, Faculty of Medicine (Aalborg University)

Stine Kruse, Head of Research-Based Innovation, DTU Skylab (Technical University of Denmark)

Uffe Holmskov, Vice-Dean Research and Innovation (University of Southern Denmark)

Trine Winterø, Vice-Dean for Innovation and External Relations, Faculty of Health and Medical Sciences (University of Copenhagen)

Marius Sylvestersen, Chief Innovation Officer (University of Copenhagen)

#### **Novo Nordisk foundation:**

Karin Hultman, Senior Scientific Manager (maternity leave)

Sarah Kulahin Roed, Senior Scientific Manager (maternity leave cover)

### **National Team**

The national team consists of representatives from the universities.

The team serves as the central coordinating unit for the programme, ensuring implementation and alignment across all participating universities. It is also responsible for the management of SPARK Denmark at each university, including project selection, enrolment, milestone tracking, coordination of funding disbursements, and monitoring of projects against milestones and key performance indicators (KPIs).

University representatives are drawn from the universities' Technology Transfer Offices (TTOs). This enables coordination and integration with the universities' broader commercialisation activities,

supporting alignment between SPARK Denmark projects and institutional innovation strategies.

### **Review and selection process**

Projects are selected through a three-phase review process.

#### ***Phase 1 – Eligibility Check***

In the first phase, the SPARK team assesses applications for eligibility, verifying that they meet the formal criteria.

In addition to requiring that applications come from researchers at Danish research institutions and concerns innovation activities, one of the eligibility criteria is that the SPARK programme does not allow “double funding”. According to the application guidelines, this means that researchers cannot apply to SPARK for main activities that are already funded through another grant (even if the activities can be separated into different elements under the same work package).<sup>4</sup>

Furthermore, it is not possible to receive funding for projects that are already supported by other programmes funded by the Novo Nordisk Foundation<sup>5</sup>.

In addition, SPARK does not cover salary costs for the principal applicants.

#### ***Phase 2 – Expert Review***

In the second phase, all eligible projects are reviewed by a Review Team consisting of members of the National Team, as well as representatives from the BioInnovation Institute (BII) and Novo Holdings. The team evaluates projects against seven selection criteria:

- Medical and/or technological need
- Novelty/difference to the current “Gold Standard”
- Strength of proof-of-principles
- Commercial potential (main market/competitors)

- Project feasibility
- Team - strengths and motivation
- Likelihood to reach SPARK success criteria.

To avoid conflicts of interest, universities do not review applications submitted by their own researchers. Following the review, the National Team meets to identify the 10–15 most promising projects.

#### ***Phase 3 – Pitch to industry experts***

The shortlisted projects are invited to pitch to 10–12 industry experts. Based on these presentations, the experts recommend and prioritise projects for participation in the programme. Final approval is then granted by the SPARK Steering Group.

### **Mentor Team**

As described above, the mentor team is a cornerstone of SPARK Denmark. It comprises industry experts, entrepreneurs, and investors, drawn from both corporate partnerships and individual engagements.

The aim has been to assemble a team of mentors with expertise covering key competencies relevant to previous life science innovation projects, as well as the specific life science segments targeted by the programme.

Mentors contribute on a voluntary basis and do not receive financial compensation.

## **3.5 Applicants and grants**

Table 3.1 provides an overview of the number of applicants, grants and the granted amount for the first five calls.

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<sup>4</sup> This criterion has been established by the SPARK Denmark Secretariat and is not a restriction linked to the internal rules of the Novo Nordisk Foundation.

<sup>5</sup> This restriction has been set by the Novo Nordisk Foundation partly to ensure maximum impact and to encourage supported projects to seek additional sources of funding.

**Table 3.1. Applicants and grants, Call 1-5**

Cohort	Applicants	Grants	Grant amount (mill. DKK)
1	23	5	3,5
2	23	5	3,5
3	17	5	3,5
4	18	5	3,5
5	41	10	7,0
<b>Total</b>	<b>122</b>	<b>30</b>	<b>21,0</b>

Source: IRIS Group based on material from SPARK Denmark

In total, SPARK Denmark has received 122 applications across the first five calls (well below the estimated potential in the application of 100-150 projects annually). Of these, 30 projects have been approved for funding, corresponding to a success rate of 25%. The total grant amount for the funded projects is 21 million DKK.

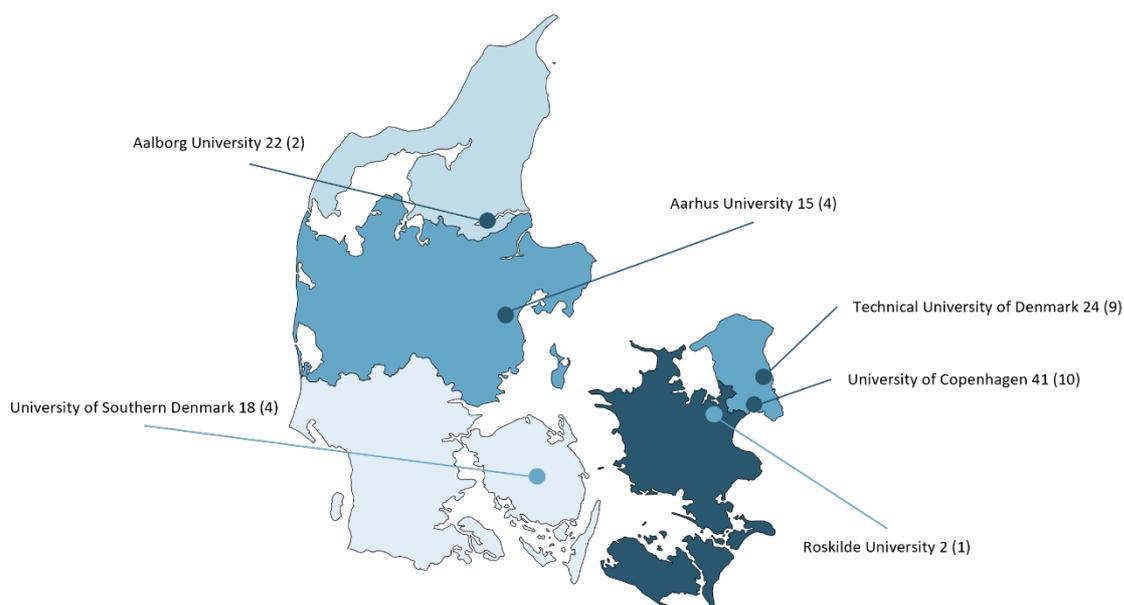
In addition to the 30 fully funded SPARK projects, the programme has admitted three *Prospect SPARK projects*.

The table also shows that during Call 5, the number of applications was roughly twice as high as in previous rounds, and that 10 grants were awarded – compared with five in earlier calls. As this report is being written, SPARK Denmark is concluding Call 6, which received 35 applications, with expectations of initiating 10 projects in January 2026. Taken together, Call 5-6 (2025) represent a significant increase in the number of annual applications.

As described in Chapter 6, 2025 saw a significantly expanded marketing and outreach effort targeted at relevant research environments, compared with the programme’s early years when Technology Transfer Offices (TTOs) were typically the primary drivers of applications. This shift likely explains a substantial part of the recent increase in application numbers.

The figure below shows the geographical distribution of SPARK Denmark applications and projects based on the main applicant’s institutional affiliation.

**Figure 3.2. Geographical distribution of SPARK Denmark applicants and enrolled projects, Call 1-5**



Source: IRIS Group based on material from SPARK Denmark

Note: The first number indicates the number of applicants. The number in parenthesis indicates the number of supported projects. The numbers include projects from affiliated university hospitals.

A total of 19 projects, corresponding to 63%, are based in the Capital Region of Denmark. The University of Copenhagen accounts for ten of these projects (including projects conducted in collaboration with university hospitals), followed by the Technical University of Denmark with nine. In total, 55% of all applications originate from the region.

The University of Southern Denmark and Aarhus University are the next most represented institutions, each with four projects (including those involving university hospitals). Two projects originate from the North Denmark Region (Aalborg University). The western regions of Denmark together account for 45% of all applications.

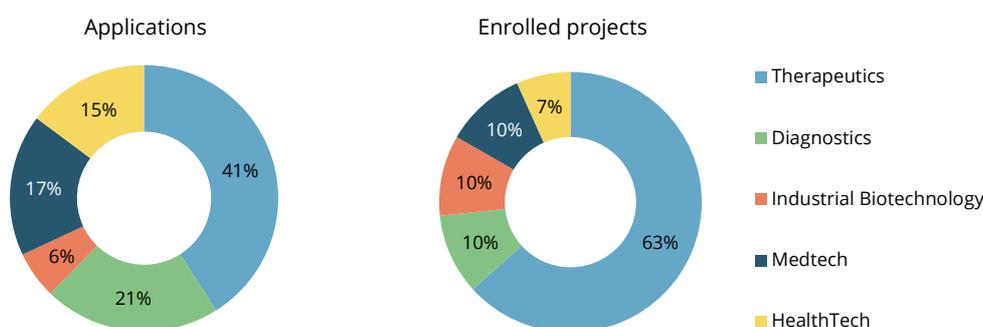
For comparison, the Capital Region of Denmark accounts for approximately 50% of all life science research in Denmark, followed by the Central Denmark Region (24%), the Region of Southern Denmark (16%), and the North Denmark Region (8%), according to recent figures<sup>6</sup>. This indicates that the Capital Region is somewhat overrepresented in

SPARK Denmark’s project portfolio, while the Central Denmark Region is notably underrepresented relative to its share of national life science research.

In Figure 3.3, the enrolled projects are distributed according to their primary focus area. The majority of projects – 63% - fall within the therapeutics area. The first two calls in particular included a large share of therapeutics projects, indicating that the early rounds were especially oriented towards drug discovery and therapeutic innovation. The remaining 37% of projects are distributed evenly across diagnostics, health technology, medical devices, and industrial biotechnology.

The distribution of applications presents a somewhat different picture with a more even distribution across life science segments. A comparison of the two figures indicates that success rates within therapeutics and industrial biotechnology have been higher than in the other three areas.

**Figure 3.3. Focus area of SPARK Denmark applications and projects, Call 1-5**



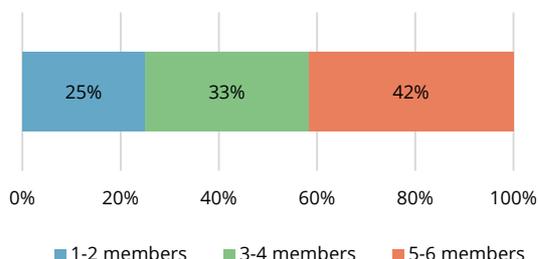
Source: IRIS Group based on material from SPARK Denmark

As illustrated in figure 3.4, more than half of the projects currently have four or five core members. A smaller share of projects counts only one or two dedicated core members, while a few involve slightly larger teams. Some interviewed projects

note that their core teams were smaller at the time of onboarding to SPARK Denmark and have since expanded as the projects have matured and additional competencies have been brought in.

<sup>6</sup> IRIS Group (2020); “Life science i Region Midtjylland – kortlægning og erfaringsudveksling”.

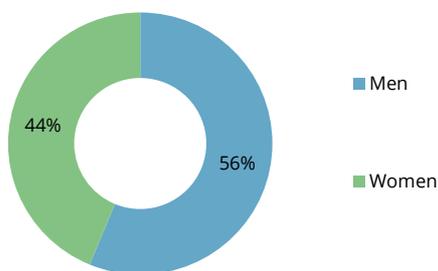
**Figure 3.4. Members of the core teams (cohort 1-3)**



Source: Survey of project leaders  
 Note: N=12.

Finally, Figure 3.5 shows the gender distribution of the project leaders (grant holders). The figure indicates that the distribution is close to gender parity.

**Figure 3.5. Gender distribution of grant holders, cohort 1-5**



Source: IRIS Group based on material from SPARK Denmark.  
 Note: N=32

### 3.6 Maturity of SPARK projects at the time of admission

According to SPARK Denmark’s original application to the Novo Nordisk Foundation, the programme focuses on the translation of early-stage academic projects. For example, the expectation was “that

projects being enrolled in the SPARK program will be at an early stage, i.e., 40–50% of the projects are to establish proof-of-concept data and have not yet filed an invention disclosure”.<sup>7</sup>

As also noted in Chapter 4 below, there is considerable variation in the maturity of projects when they onboard SPARK. All projects in cohort 1-3, for instance, have submitted an invention disclosure, and intellectual property rights are typically clarified.

Almost all of these projects have also completed initial proof-of-concept work prior to participating in SPARK, and a few have progressed significantly further in technology maturation.

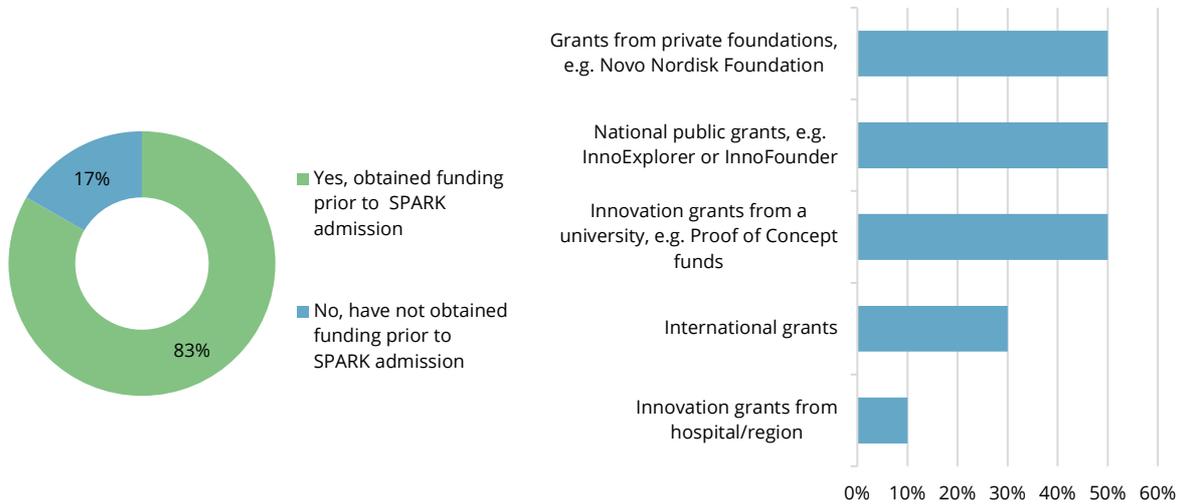
This is also reflected in Figure 3.6 on the next page, which shows how many projects had secured funding prior to receiving a SPARK-Denmark grant. For only two out of twelve projects was the SPARK-grant the first award. Some projects had even obtained multiple grants before the SPARK period.

Furthermore, the figure reveals that the Innovation Fund (e.g. the InnoExplorer-programme), local PoC-funds, and the Novo Nordisk Foundation (e.g. Pioneer Innovator Grants) are the most common sources of “pre-SPARK funding.”

Chapter 6 provides a more detailed analysis of SPARK Denmark’s position within the national life science innovation system. At this point, it is relevant to highlight that some of the current assessment criteria (commercial potential, team strength and likelihood to fulfil SPARK’s success criteria) tend to benefit projects where some of the initial risks have been removed and that have already begun moving beyond the idea or laboratory stage, supported by innovation funding from other programmes.

<sup>7</sup> SPARK Denmark (2022); Application for the Novo Nordisk Foundation

**Figure 3.6. Share of SPARK projects that has secured funding prior to SPARK admission, divided into funding sources (cohort 1-3)**



Source: Survey of project leaders

Note: N=12. The respondents were asked NOT to include research funding in the answer

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## 4. SPARK DENMARK'S RESULTS AND IMPACT

**In this chapter, the early results of SPARK Denmark are evaluated. The progress of innovation projects supported by the programme is assessed, and the programme's outputs are examined against its predefined success criteria. Finally, the chapter maps the success of completed projects in terms of their ability to attract additional funding.**

### 4.1 Introduction

An important purpose of the evaluation is to document how SPARK Denmark adds value to academic innovation projects within the life sciences and to assess the progress of the supported projects.

With only two cohorts completed so far, there are naturally limitations to what can be measured in terms of impact. Life science innovation takes time, and participation in the SPARK programme represents only one of several elements contributing to the journey from academic invention to market and/or clinical practice.

Nevertheless, Sections 4.2–4.3 provide insights into project acceleration and the role of the SPARK programme, primarily based on a survey of grant recipients from cohorts 1–3.

Section 4.4 explores the extent to which the projects have obtained additional funding.

Section 4.5 discusses how the projects as a whole are performing in relation to the success criteria defined for the programme at its launch.

### 4.2 Assessment of project acceleration

The path for a life science innovation project from idea to market and clinical practice typically takes many years, during which the project passes

through different phases and matures across a range of areas.

The SPARK programme alone is far from sufficient to carry projects through all stages of the commercialisation process. However, the ambition should be to ensure progress across all key parameters and to shorten the time from research to market and clinic compared with the alternative of not participating in SPARK Denmark.

To shed light on this, we have developed a framework for measuring the progress of life science innovation projects for the purpose of this evaluation. The framework is based on the internationally recognised KTH Innovation Readiness Level tool<sup>8</sup>, which encompasses six dimensions in assessing the maturation level of innovation projects.

For the evaluation, we adapted the KTH-tool in two ways<sup>9</sup>. First, we added a seventh factor – regulatory issues – which is a crucial element in life science innovation projects, where the regulatory regime and related considerations often need to be integrated early in product development.

Second, for each of the seven factors, we developed a 1–9 scale, with the level descriptions specifically tailored to life science projects and covering therapeutics, MedTech, and health tech.

Conversely, the formulation of the maturity levels at each stage was less applicable to industrial

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<sup>8</sup> See <https://kthinnovationreadinesslevel.com>

<sup>9</sup> In 2024, IRIS Group, in collaboration with BETA.HEALTH, developed a similar tool for measuring progress in clinical innovation projects. This tool was applied in the midterm evaluation of BETA.HEALTH and has also served as inspiration for the development of the index used in the present evaluation.

biotech projects, which are therefore not included in the measurement presented in the analysis below.

The life science framework consists of the following complementary factors or dimensions:

### Seven key dimensions in life science innovation

	Product development, testing and validation
	Users/customers
	Business/commercialisation
	Funding
	Intellectual property rights
	Team and organisation.
	Regulatory issues

The customised framework allows us to measure the innovation journey of each project, taking into account variations in starting points.

In the survey, project leaders were asked to assess the maturity level of their projects across the seven dimensions, using the 1-9 scale.

Each maturity level was accompanied by a brief explanatory text to guide respondents in selecting the appropriate level on the scale (all indicators and explanatory texts are provided in Appendix 2). Box 4.1 summarises how the different levels can be interpreted across the seven dimensions.

### Box 4.1. Life science innovation readiness level

The nine levels of maturity for each of the seven dimensions are listed in Appendix 2. Across these dimensions, the maturity levels can be summarised as follows:

**Level 1-2:** Formulation of the idea/hypothesis; initial clarification of users, funding needs, competencies required for successful innovation, and the regulatory framework.

**Level 3-4:** Initial testing and validation; early identification of lead markets/user groups; initial business plan; team for the (preclinical) development phase established; classification completed within relevant regulatory regimes.

**Level 5-6:** Preclinical development initiated; clear understanding of user needs and a well-defined commercialisation strategy; bridge funding secured; strategies for regulatory approval and recruitment in place.

**Level 7-8:** Technology validated in early clinical or equivalent real-world setting; solid business model in place; funding secured for phases leading up to clinical trials or first sale; IPR strategy implemented.

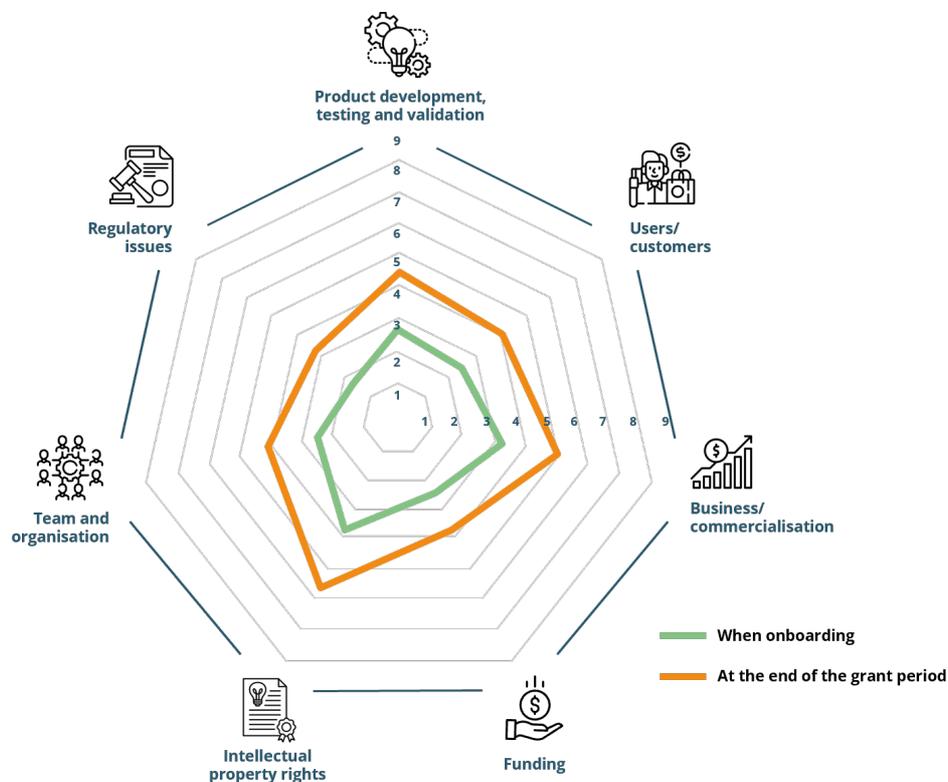
**Level 9:** Technology ready for pivotal clinical trials or first sales (if clinical trials are not required); deep understanding of clinical needs; long-term funding model in place; high-performing organisation capable of scaling or executing clinical development programme.

In the survey, project leaders were asked to assess the readiness level at two different points in time (as a self-assessment):

1. Upon onboarding with SPARK Denmark
2. At the completion of their participation in SPARK Denmark.

The results of this self-assessment are summarised in Figure 4.1.

Figure 4.1. Development in life science innovation readiness levels, cohort 1-3



Source: Survey of project leaders

Note: N=10. The figure does not include a project on hold and a project within industrial biotechnology.

The green line represents the average innovation readiness level at the time of onboarding to SPARK Denmark (across the projects).

On average, projects entering SPARK Denmark appear most mature in relation to intellectual property rights (IPR) and, to some extent, business and commercialisation, which includes early assessment of market potential. This is consistent with SPARK Denmark’s selection criteria, where project teams must demonstrate initial market insight and IPR awareness.

Conversely, most SPARK-projects are relatively immature upon onboarding when it comes to regulatory readiness – for example, clarifying which regulatory pathway applies and what is required for approval of clinical trials.

The average score across most dimensions lies between 2 and 3. This indicates that most projects have completed initial proof-of-concept studies, identified potential application areas, and perhaps conducted preliminary assessments of market potential. They also typically have an understanding of the types of competencies that are important to onboard in the process leading up to clinical studies.

**Progress during SPARK-participation**

The distance between the green and orange lines illustrates the progress of projects during their time in SPARK Denmark. On average, projects make progress across all dimensions during the two years they participate in the programme.

There is not much difference in progress across the seven dimensions. On average, projects have

advanced between 1.5 and 2 levels on each dimension.

The average maturity level at exit corresponds to, for example, having conducted larger tests in advanced animal models, identified market segments or patient groups with the greatest potential or need, and begun to establish an overall commercialisation plan.

The average score of 4 for funding indicates that projects have secured the next round of funding (typically still soft funding), but do not yet have a complete funding roadmap in place for all stages leading up to clinical studies.

### High degree of variation in maturity levels

The starting points and progress of projects are further explored through interviews with project leaders. A few projects onboard with just an idea and a small team, lacking a clear understanding of

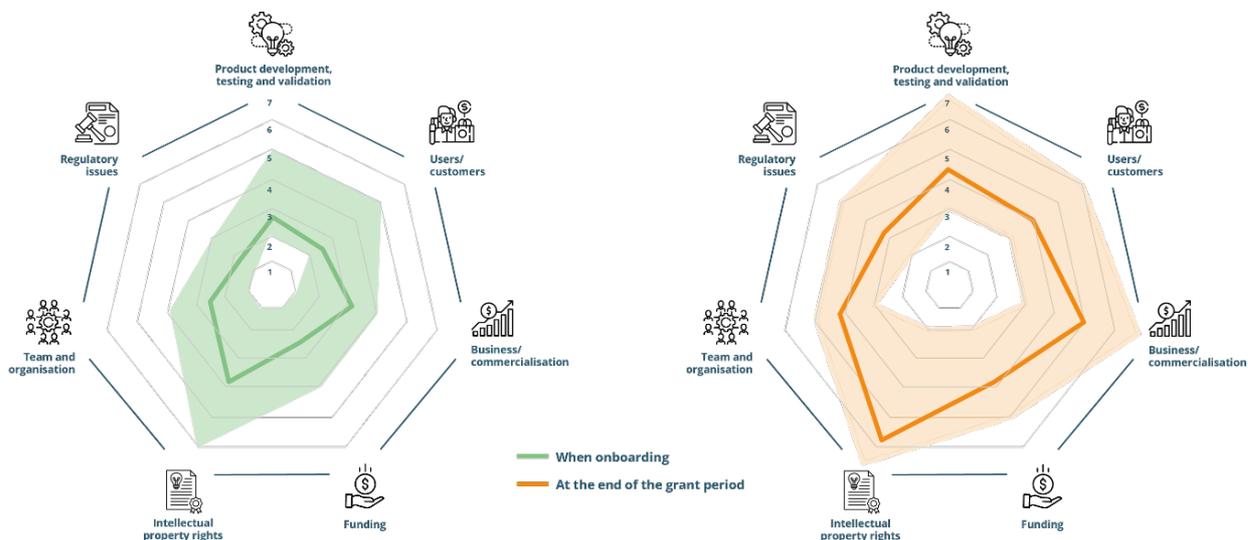
competencies or funding needs, while others enter the programme with validated technology.

To illustrate the variation in project maturity both at the time of onboarding and at programme exit, Figure 4.2 shows the range of scores across the seven dimensions. The shaded areas indicate the minimum and maximum self-assessed readiness levels for each dimension at the beginning and end of the SPARK Denmark programme.

To better illustrate the variation, the figure excludes scores of 8–9, as no projects achieved this score at SPARK completion on any of the seven dimensions.

For instance, the figure shows that on the dimension *product development, testing, and validation*, projects initially ranged between levels 2 and 5 on the 1–9 scale, while by programme exit the range had shifted upwards to levels 3–7.

**Figure 4.2. Variance in readiness levels of SPARK-projects: when onboarding and at the end of the grant period**



Source: Survey of project leaders

Note: N=10. The shaded areas highlight the highest and lowest values of the different dimensions. The lines represent the average across all projects. The figure does not include a project on hold and a project within industrial biotechnology.

At the time of onboarding, the greatest variation is observed in *intellectual property rights* (IPR)

readiness, reflecting differences in the extent to which projects had already engaged with IPR

issues prior to joining SPARK Denmark. By contrast, at programme exit, large variation is seen within *business and commercialisation*, indicating diverging progress among projects in clarifying market potential, business models, and commercial pathways.

Overall, the results suggest that projects leave SPARK Denmark at very different levels of maturity – reflecting not only the diversity of project types and starting points, but also the fact that some innovations are inherently more complex and require longer development cycles than others.

The two most mature projects at programme exit (among those that responded to the survey) are both MedTech projects. Prior to SPARK admission, each of these projects had already received three

grants, including funding from local Proof-of-Concept (PoC) pools and InnoExplorer.

### 4.3 SPARK Denmark’s impact on supported projects

The next question is to what extent participation in SPARK Denmark has accelerated the progress of the innovation projects, and whether the projects have gained from the programme in terms of stronger network, access to experts, etc.

Figure 4.3 presents seven statements regarding the impact of SPARK Denmark in relation to project acceleration, network building and development of competences relevant for commercialisation of research.

**Figure 4.3. SPARK Denmark’s impact on project progress, competences and network building**



Source: Survey of project leaders

Note: N=11. The figure does not include a project on hold.

The figure shows that, on average, one in two project leaders totally agree with the statements. The highest level of agreement concerns the statement that *SPARK Denmark has improved access to high-quality experts*, which likely reflects the programme’s strong emphasis on mentoring.

Regarding project progress, 45% of respondents fully agree that the programme *has accelerated their project and shortened the pathway to market and clinical practice*, while an additional 45% partly agree. This indicates that the progress observed across the dimensions of the Life Science

Innovation Index (see Figure 4.1) can, to a significant extent, be attributed to participation in the SPARK Denmark programme.

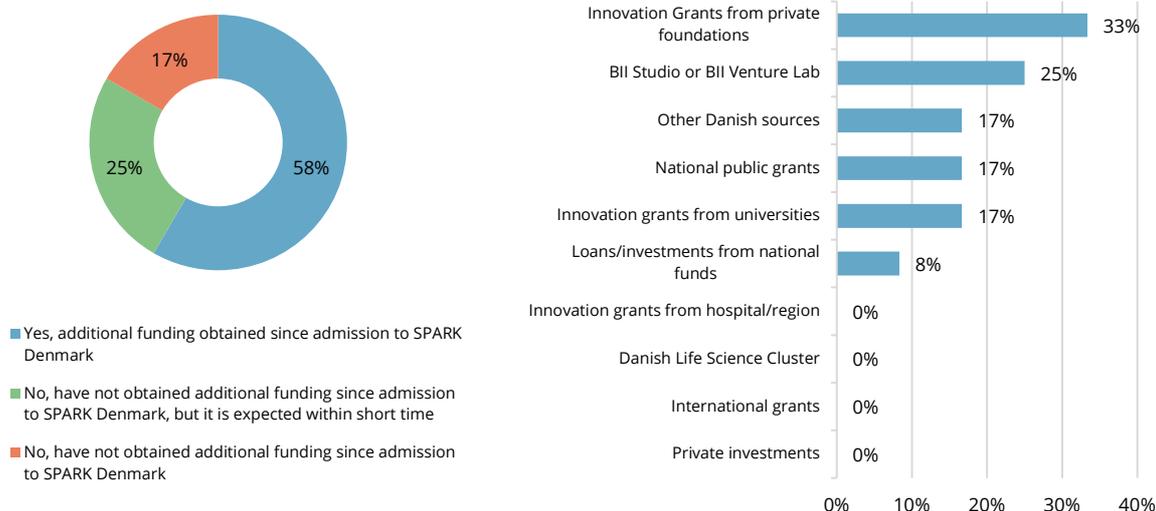
A large share also reports that participation in SPARK has expanded their commercial network, strengthened their market understanding, and enhanced the innovation capabilities within the core team.

#### 4.4 Attracting further funding

In the survey, project leaders were also asked whether they have attracted further funding to the project during or after SPARK-participation.

Figure 4.5 summarises the share of projects from cohort 1-3 that has obtained follow-on funding after SPARK admission, broken down by funding source.

**Figure 4.5. Share of SPARK-projects that has secured further funding after SPARK-admission, divided into funding sources, cohort 1-3**



Source: Survey of project leaders

Note: N=12. The figure to the right shows what percentage of all projects have received funding from the listed sources.

The figure shows that a majority of projects (seven out of 12) have successfully secured follow-on funding, while an additional 25% (three projects) expect to do so in the near future. Only two projects are not in the process of attracting further funding, one of which is on hold due to disappointing test results.

As illustrated, three projects (25%) have been admitted to the BioInnovation Institute (BII), and one third of the projects have received innovation funding from a private foundation. No projects have yet attracted venture capital or other equity investment from private investors.

Furthermore, two projects have received university funding following SPARK admission. As noted in Chapter 3, this proportion was higher prior to SPARK participation, reflecting that SPARK funding typically comes after initial financing from local Proof-of-Concept schemes and similar sources.

#### 4.5 Success criteria and outcome

As described in Chapter 3, four overarching success criteria were defined at the outset of SPARK Denmark:

- Establishment of a spin-out company

- Establishment of an industry collaboration, such as a licence agreement
- Advancement into clinical testing

Securing additional soft funding or private investment.

According to the original application to the Novo Nordisk Foundation, the overall target is that at least 55 percent of projects should meet one or more of these criteria when completing their SPARK Denmark project.

At the time of this evaluation, 12 projects have completed the programme – specifically, 10 projects from cohorts 1–2 and two from cohort 4. The status of these projects in relation to the pre-defined success criteria is as shown in Table 4.1.

The table indicates that 75 percent of the completed SPARK projects meet at least one of the success criteria – significantly above the original target of 55 percent<sup>10</sup>.

**Table 4.1. Status of completed SPARK-projects in relation to success criteria**

Success criterion	Number of projects	Share of projects
<i>Establishment of a spin-out company</i>	3	25 %
<i>Establishment of an industry collaboration, such as a licence agreement</i>	0	0 %
<i>Advancement into clinical testing</i>	0	0 %
<i>Securing additional soft funding or private investment</i>	9	75 %
<b>Total (at least one criterion fulfilled)</b>	<b>9</b>	<b>75 %</b>

Source: IRIS Group based on data from SPARK Denmark.  
 Note: N=12. The additional funding achieved by nine projects is soft funding only. No projects have achieved private funding yet.

However, the distribution across the four criteria – and the dominance of follow-on soft funding as the main success factor – raises the question of whether the current criteria are optimally defined. The two intermediate criteria, concerning clinical testing and industrial collaboration, do not fully reflect the long-term nature of life science commercialisation.

We therefore recommend that the success criteria be reconsidered. In particular, it should be assessed whether programme success ought to be measured solely at the time of project exit, or also over an extended post-exit period.

Accordingly, it may be relevant to distinguish between two types of success criteria, measured at different time points after programme completion:

- **Output criteria** (at the end of the SPARK-period): e.g. (1) share of projects progressing at least two levels on the Life Science Innovation Index, (2) proportion of projects attracting additional funding while participating in SPARK, (3) number of spinouts established.
- **Outcome criteria** (approx. two years post-exit): e.g. (1) updated number of spinouts, (2) share of projects establishing industry collaborations, (3) share attracting venture capital or other private investment, (4) projects initiating clinical trials or generating early sales.

For the output criteria, it would make the most sense to define individual targets for each of the three suggested criteria. In contrast, the outcome criteria could, as is currently the case, be measured against an overall target representing the proportion of projects that meet at least one of the criteria.

We do not consider the originally defined success criteria fully sufficient for assessing SPARK’s interim success.

<sup>10</sup> Moreover, the survey responses show that three out of five projects in cohort 3 (which has not yet concluded) have already secured additional funding, while one project has established a spin-out company. It can therefore already be concluded that cohort 3 will also meet the success criteria.

Nevertheless, the results outlined in this chapter are generally positive: the majority of projects have demonstrated tangible progress, most have attracted follow-on funding, and only one project has been discontinued.

### **Projects on a promising trajectory**

Interviews have been conducted with approximately half of the projects from cohorts 1–3. The findings support the conclusion that most projects are progressing well and demonstrate promising potential.

According to project leaders, six out of the seven full SPARK-projects have achieved positive results. For the therapeutic projects, this typically means that the technologies have been validated in animal models with convincing outcomes.

Among the projects that have not yet established a company, most expect to do so during 2026. At the same time, a few are already preparing to raise capital from investors.

While the projects are still some distance from market entry or license agreements, it is noteworthy that such a large proportion have shown strong progress. Given the inherent uncertainty of early-stage life science innovation, the fact that most projects are moving forward and appear likely to result in spinouts is a positive indicator.

This progress reflects that the selected projects have generally been of high quality. Moreover, both individual projects and ecosystem stakeholders familiar with SPARK Denmark emphasise that participation in SPARK enhances project quality and improves prospects for admission to accelerator programmes and for attracting investors.

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*“Participation in SPARK clearly strengthens the quality of prospects for BII, as the business case becomes more robust. The mentoring support contributes to a stronger go-to-market strategy by helping projects identify where their technology can make the greatest impact.”*

**Markus Herrgård,**  
CTO, BioInnovation Institute

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### **A final note**

There is likely to be a strong correlation between the maturity of projects at the time of admission and SPARK Denmark’s achievement of the current success criteria.

As shown in Chapter 3, most projects have already participated in other programmes prior to entering SPARK, demonstrating their ability to attract funding even before their SPARK application. This further supports the case for revising the success criteria, so that fulfilment is not primarily achieved through the additional attraction of soft funding.

At the same time, the existing criteria may, to some extent, create an incentive to prioritise more mature projects – those closer to spin-out formation or clinical testing – over early-stage ideas originating directly from research.

If SPARK Denmark is expected to be a programme that supports both types of projects, as discussed in Chapter 6, the success criteria should reflect this.

## 5. EVALUATION OF SPARK ACTIVITIES

This chapter evaluates the services provided by SPARK Denmark and the international SPARK community. Moreover, it assesses the administration of the programme based on feedback from project leaders and university representatives.

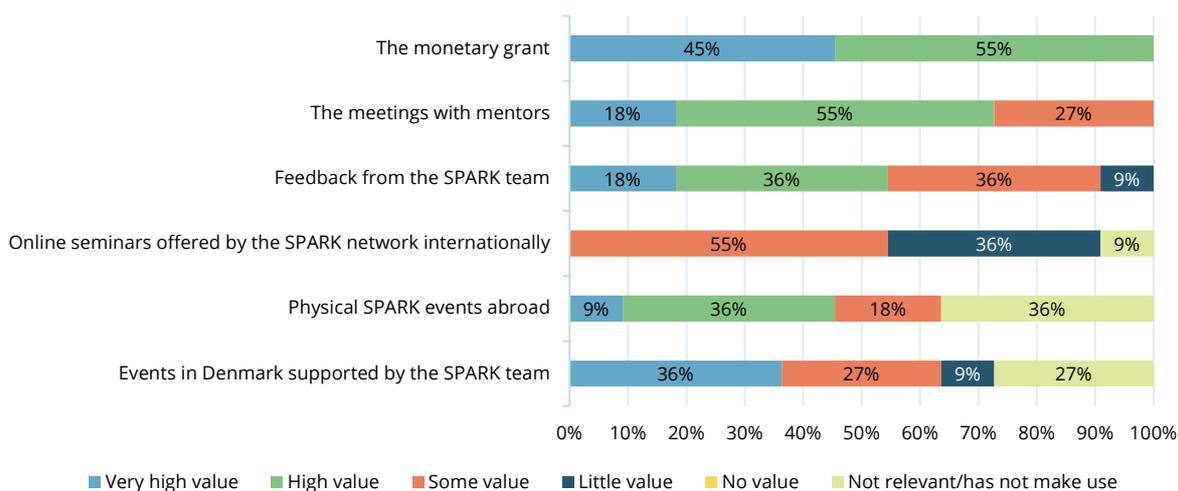
### 5.1 Introduction

In the survey, project leaders from cohorts 1–3 were also asked to assess the different elements of the SPARK Denmark programme. Specifically, they were asked to what extent each element had contributed to advancing their project.

As shown in Figure 5.1, the SPARK programme can be divided into six complementary value components:

1. The monetary grant.
2. Meetings with mentors (mentor sessions in the Mærsk Tower – for some projects combined with 1-1 mentoring).
3. Feedback from the SPARK team (including coaching and support in preparing mentor pitches).
4. Educational activities (primarily webinars offered by the SPARK Europe network).
5. International SPARK events.
6. Events in Denmark supported by the SPARK team (e.g. Tech Barbecue).

Figure 5.1. The value of SPARK offers for the progress of projects



Source: Survey of project leaders

Note: N=11

The results indicates that the financial grant and mentoring meetings, not surprisingly, stand out as the most valued components of the programme.

A clear majority of the respondents rate these elements as having high or very high value. These two

components constitute the core of SPARK Denmark's value proposition.

Feedback from the SPARK team is also highly rated, with more than half of project leaders assessing this support as of high or very high value.

By contrast, the webinars and international events are rated more variably. Roughly half of the respondents consider these activities valuable, while the remainder see them as less relevant. National events are rated positively by a smaller but still significant group, particularly for their networking opportunities and exposure to the broader SPARK community.

Overall, the results confirm that SPARK Denmark's combination of targeted funding and tailored mentoring delivers the greatest perceived value and directly supports measurable project progress. The broader learning and networking activities add complementary benefits, but their perceived impact depends on the specific needs and stage of each project.

In the following, each of the elements is discussed in more details based on inputs from the interviews.

## 5.2 The monetary grant

As shown in Figure 5.1, the grant is considered of high or very high value across all supported projects. Interviews with project leaders indicate that the funding has typically been used for activities such as compound formulation, animal studies (including purchasing of technical equipment), technology validation, and purchasing laboratory technician time.

The grant is generally perceived as small/modest relative to the costs associated with life science innovation, particularly given the two-year duration of the SPARK programme. Nevertheless, in some cases, the SPARK grant has made a substantial difference, enabling progress in for instance animal

experiments that would otherwise have been impossible.

### **SPARK funding alone is not sufficient**

A recurring finding from the interviews is that a grant of DKK 700,000 is considered insufficient to ensure satisfactory progress in life science projects over a two-year period.

Several project leaders noted that substantial progress in innovation projects often depends on the ability to employ a full-time postdoc. The SPARK grant alone does not allow for this, and some projects reported that significant technological advancement was only achieved when SPARK funding was combined with other grants that jointly covered the cost of a postdoc position<sup>11</sup>.

According to some university representatives, the relatively modest funding level has deterred some researchers from applying to SPARK Denmark, despite recognising the value of the programme's mentoring component. Competing alternatives offering larger grants – such as the Novo Nordisk Foundation's Pioneer Innovator Grant and the Innovation Fund Denmark's InnoExplorer – were mentioned as more attractive options. The rule that SPARK funding cannot be used for activities already financed by other projects (see Chapter 3) was also identified as a barrier to participation.

A few interviewees further argued that the restriction preventing SPARK funds from being used to pay existing postdocs, who are also part of the core team, is overly rigid. Since the SPARK grant is often not the first source of funding (see Chapter 4) and could serve as a means to maintain staff continuity, it was suggested that this rule limits flexibility and may impede project progress.

When comparing insights from both the survey and the interviews, the conclusion is that the positive picture in Figure 5.1 primarily reflects the importance of soft funding for enabling project maturation during the SPARK period. However, this does not imply that progress could not have been

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<sup>11</sup> The SPARK programme does not allow other funding schemes to cover the same activities. However, a postdoc may, for instance, divide their time between two technical workstreams within the same project.

stronger under programmes offering larger grants or if projects had been allowed to combine funding from multiple sources.

### 5.3 Mentoring

A majority of respondents indicate that the mentoring component of SPARK Denmark has been of high or very high value, cf. Figure 5.1. Interviews with both project leaders and mentors suggest that the mentor network has contributed to progress across a range of areas, helping to accelerate projects and reduce the time and costs associated with maturing them. Examples highlighted in the interviews include support with:

- Patent strategy
- Design of molecular structures
- Drug delivery models
- Go-to-market strategy and business model design
- Regulatory strategy
- Access to relevant contract research organizations (CROs) and clinical specialists
- Referrals to international innovation funding programmes
- Identification of potential collaborators.

In one case, a SPARK mentor also facilitated contact with an entrepreneur who is now the CEO of the spinout that emerged from the project.

Several project leaders and mentors further emphasise that the mentoring helps projects to focus. Mentors observe that projects often initially have broad scopes, and part of the mentoring process involves guiding them to concentrate on specific patient groups, markets, and target populations where clinical impact and potential are greatest.

### Mentor competencies and network

The SPARK Denmark mentor network covers a broad range of competencies. It is primarily composed of professionals with extensive industry experience across the life science sector. Many mentors have long-standing careers in leading pharmaceutical companies, with roles ranging from senior drug development positions to business development. Most members of the mentor network have direct experience in both pre-clinical and clinical development, and commercialisation, and interactions with global health authorities.

Other mentors specialise in areas such as regulatory affairs for advanced therapies, CMC, and intellectual property management. A number of mentors have hands-on experience with venture creation, fundraising, and portfolio management, supporting early-stage projects in preparing for investor engagement and commercialisation.

Several mentors have also held leadership positions in startups, contributing expertise in early-stage company formation, project and strategic partnerships.

A few have experience in product development and pre-commercialization activities for medical devices and diagnostics, including navigating regulatory and market access requirements.

Overall, the network shows a concentration of experience in therapeutics, drug development, and early-stage biotech business development, supplemented by complementary expertise in regulatory, MedTech, and investment-related aspects of life science projects.

Feedback from interviewed therapeutics projects indicates a high level of satisfaction with the mentoring they have received. Typically, only up to half of the mentor network participates in the sessions at Maersk Tower, but the large number of mentors with extensive early-stage drug development experience has ensured that projects consistently receive qualified guidance and useful input.

For projects in other areas, such as MedTech and industrial biotech, the feedback is more mixed. These projects have not consistently received in-depth sparring, although some have benefited from advice on funding opportunities or referrals to relevant expertise within the mentors' networks. Overall, the value of mentoring appears to be highest for projects within therapeutics.

Interviews with mentors and the SPARK Denmark team also indicate that in the first 2-3 years, relatively few resources have been allocated to actively recruiting mentors. A large part of the mentor network initially consisted of individuals already active in the life science innovation ecosystem at the University of Copenhagen. It is only since the beginning of 2025 that SPARK Denmark has actively sought to recruit mentors in underrepresented areas, particularly within MedTech.

Finally, a notable strength of the mentor network, according to the interviewed projects, is that it is largely composed of professionals who remain active in the industry. This provides projects with access to the mentors' ongoing networks and ensures up-to-date knowledge of actors and developments within the life science ecosystem.

The motivations expressed by mentors for contributing pro bono to SPARK Denmark are broadly consistent. They typically emphasise:

- A desire to contribute to the development of the Danish life science ecosystem.
- Existing ties to universities – several mentors have previously worked in academia or completed a PhD and therefore maintain close relationships
- A wish to support more companies emerging from academic research and to help researchers realise their ambitions.
- The opportunity to strengthen their networks with other mentors and ecosystem actors.

In addition, some mentors employed in larger companies note that contributing to the Danish life science ecosystem forms part of their company's policy or strategic objectives.

It is therefore important to underline that the SPARK concept has a strong local or national anchoring. Whereas some mentoring programmes have a broader international orientation, SPARK's value proposition to mentors lies largely in the opportunity to contribute to the national ecosystem. This is also linked to the risks and very early stage of the projects, which makes it more challenging to generate interest in cross-border mentoring.

### **The mentor model**

Overall, the "Stanford model," in which projects pitch to a panel of mentors and receive feedback on their challenges, is perceived by both the interviewed project leaders and mentors as highly valuable. This is particularly the case for therapeutics projects, although the interviewed MedTech projects also regard the model as relevant for early-stage innovation projects.

Key aspects highlighted include:

- The value of collective reflection among the mentors.
- Complementarity of mentors' expertise, which is particularly useful in early-stage projects where there may be considerable uncertainty regarding direction and prioritisation.
- Exposure to perspectives and suggestions that projects had not considered prior to the meetings.
- Opportunities to observe other projects' pitches and feedback, which in some cases has prompted reflection and learning for their own projects.

Despite these perceived benefits, both project leaders and mentors indicate that the mentoring component of the programme could be strengthened. Central points raised in interviews include:

- In some cases, following up on mentor input has been challenging due to differing directions suggested by various mentors.
- There is considerable turnover in the mentor panel from session to session, leading to variations in mentors' familiarity with projects.
- Some mentors emphasize that they struggle to recall the projects they have previously engaged with.
- Certain projects perceive the model as most valuable early in the SPARK period, when project direction is being set, while one-on-one mentoring may be more beneficial in later stages.
- In some sessions, both projects and mentors noted that all mentors tended to participate actively in the discussion, including those whose expertise was not fully aligned with the project's current challenges.

Some of these challenges appear inherent to the model and may be difficult to eliminate entirely. However, there are also issues that could be addressed.

Firstly, many projects would likely benefit from structured follow-up sessions with an experienced business developer or equivalent, helping them translate mentor input into adjusted project plans, milestones, and contacts within the ecosystem. Several project leaders expressed that guidance on implementing insights from mentoring sessions could have been beneficial.

Secondly, it may be useful to create a brief summary of the mentor meetings for each project, outlining the project's objectives, key challenges, and feedback received from mentors. This summary could be distributed to participating mentors ahead of the next session.

Thirdly – and most importantly – SPARK Denmark could work on balancing and transitioning between collective and individual mentoring. Some projects have engaged in one-on-one mentoring,

but this has generally been ad hoc and initiated by the projects themselves, for example during informal dialogue in the coffee breaks at Maersk Tower meetings. Both mentors and project leaders emphasise in interviews that the value of the SPARK Denmark mentor network could be significantly enhanced by fostering stronger, more continuous relationships between projects and specific mentors.

In the first years of the programme, it was largely up to the projects to seek one-on-one sessions, meaning that the value derived from the mentor network was closely linked to the initiative of the projects themselves.

Potential next steps include:

- Making the relevance of one-on-one mentoring an explicit point of reflection during Maersk Tower sessions.
- Discussing follow-up needs (including mentoring) with a business developer, as outlined above.
- Conducting a mid-term discussion with each project, facilitated by the SPARK Denmark team or a business developer at the host institution, to review milestone progress and determine which mentoring formats should be prioritized for the remainder of the project.

Overall, the programme's value creation could potentially be enhanced by maintaining the Maersk Tower group sessions, while providing more structured follow-up and jointly assessing whether the greatest benefit forward is derived from new collective sessions or more targeted input from one or a few mentors – or both.

## 5.4 Educational activities

In addition to funding and mentoring, educational activities were also foreseen as a core element of SPARK Denmark. The purpose was to strengthen researchers' understanding of commercialisation

pathways and to build key skills related to life science innovation.

According to SPARK Denmark's application to the Novo Nordisk Foundation, it was planned to offer "Educational SPARK meetings" once a month in the form of webinars of 1–1.5 hours' duration. The ambition was that these webinars would be open to all employees at Danish universities with an interest in innovation. Suggested topics included drug development, diagnostics and device development, drug repurposing, intellectual property rights, regulatory considerations, and business model development.

However, such a dedicated national seminar series has not been implemented, for several inter-related reasons:

- The SPARK Europe network supplies webinars (1-2 per months) open to all SPARK projects across participating countries (covering several of the themes mentioned above).
- Several Danish universities have, to an increasing extent, developed their own course offerings in these areas.
- Due to staff turnover, SPARK Denmark has for part of the programme period not been fully staffed, and educational activities have therefore been deprioritised in light of the two factors above.

Instead, the SPARK Denmark team has focused on disseminating information and links to the international SPARK Europe webinars to participating projects, as well as a few seminars under the SPARK Global frame.

The assessment presented in Figure 5.1 therefore reflects the perceived value of these international webinars among the project leaders. As shown, the perceived value is relatively modest.

In interviews, several project leaders stated that many webinars appeared less relevant to their projects or were too theoretical, with limited focus on practical tools. There were, however, examples of webinars considered useful – such as one focusing on designing investor pitch decks. Some project leaders also mentioned that scheduling conflicts had prevented them from participating.

Overall, the demand for additional educational activities appears limited among the interviewed project leaders. Given the existing university-level offerings, it does not seem essential for SPARK Denmark to provide broader training activities targeting researchers in general (due to potential overlaps).

Looking ahead, it may nevertheless be relevant to consider the following actions to strengthen the educational component of SPARK – while avoiding overlap with university activities:

- Ensure that SPARK Europe webinars are recorded and made available for later viewing.
- Offer one annual webinar on the structure and opportunities within the Danish life science ecosystem<sup>12</sup>.
- Organise 1–2 annual webinars on topics of particular relevance to early-stage life science projects, potentially involving mentors as contributors. One example could be "pathways to regulatory approval."

In summary, while education has not been a central feature of SPARK Denmark to date, international webinars and university-level offerings meet part of the current demand. A small number of targeted and highly relevant sessions could further strengthen the programme's value.

## 5.5 International events

SPARK Denmark is part of the international SPARK network originally initiated by Stanford University.

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<sup>12</sup> Many projects lack an overview of key actors and programmes within the broader Danish life science ecosystem, including access points such as hospitals and contract research organizations (CROs). It appears relevant to offer a course on the Danish life science ecosystem specifically aimed at early-stage startups, as a national initiative under SPARK Denmark – potentially in collaboration with BETA.HEALTH.

Through its membership in both SPARK Europe and SPARK Global, SPARK Denmark gains access to a broad community of partner institutions, experts, and events.

Thus, a particular value of the SPARK programme lies in this international dimension, which provides participants with opportunities to pitch their projects and connect with other projects, industry experts, and investors.

In addition, there is close collaboration between the three Nordic SPARK programmes, which jointly participate in regional events and organise study visits to Silicon Valley (see also Chapter 7). The table below provides an overview of some of the major events that SPARK projects have had access to over the past year.

**Table 5.1. International SPARK events – examples (2025)**

Events	Description
<i>SPARK Europe Showcase (Mar. 2025, Birmingham)</i>	Pitch to top-tier investors, networking with industry leaders and like-minded entrepreneurs and 1-1 mentoring breakout rooms.
<i>11th Annual SPARK Global Meeting (Sep. 2025, Berlin)</i>	Brought global SPARK participants together to share progress, best practices, and collaborative opportunities.
<i>SPARK Investor Showcase (Oct. 2025, Basel)</i>	Connected startups with investors, presenting funding opportunities and facilitating venture partnerships.
<i>Nordic SPARK Silicon Valley Tour (Apr. 2025)</i>	Exposed Nordic startups to Silicon Valley's ecosystem, networking with investors, mentors, and industry leaders.
<i>Nordic Life Science Days (Oct. 2025, Gothenburg)</i>	Highlighted breakthrough Nordic projects, fostering partnerships, investment, and cross-sector collaboration.
<i>Nordic Innovation Fair (Sep. 2025, Copenhagen)</i>	Highlighted Nordic startups and innovations, fostering networking between industry, academia, and investors.

As shown in Figure 5.1 at the beginning of this chapter, around two-thirds of projects have participated in international events or study visits. Among these, most report that the activities were of high or very high value.

The specific benefits of participation vary across projects, but the interviews highlighted several key value-creating elements:

- Meetings and networking with international investors.
- Effective pitch training, although several projects noted that follow-up and feedback for some events could have been better organised.
- A broader understanding of life science ecosystems.
- Improved insight into the types of companies/business models that attract investor interest.
- Establishing connections with projects in adjacent technology areas.

While the impact of these activities is naturally smaller than SPARK Denmark's core activities, they are nonetheless experienced as value-adding. The international dimension should therefore be considered an integral part of the SPARK programme.

## 5.6 Collaboration and input from the SPARK Denmark Team

As shown in Figure 5.1, more than half of the project leaders assess that feedback and interaction with the SPARK Denmark team have been of *high* or very high value to their project.

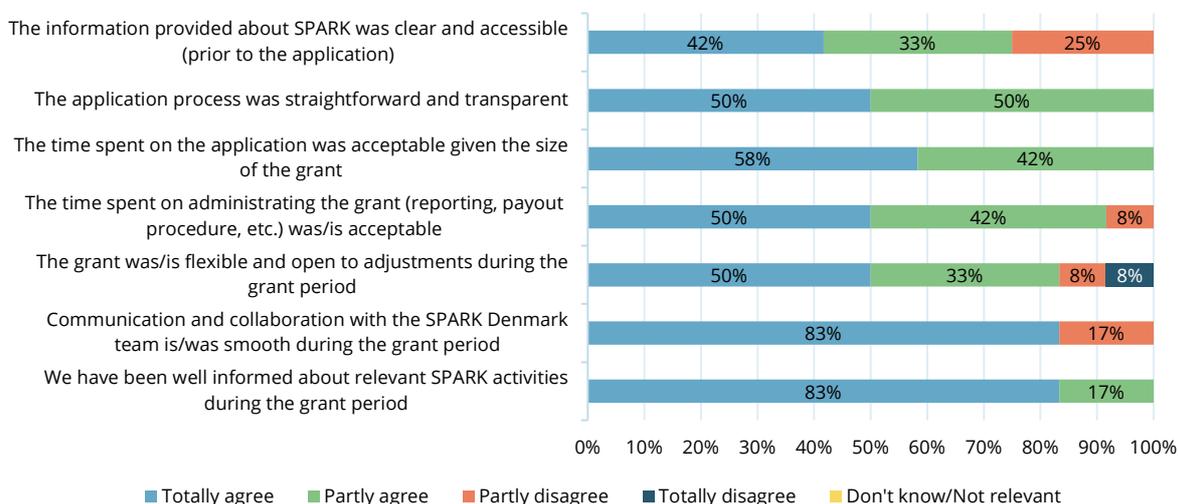
SPARK Denmark's ongoing contact with the projects is relatively limited, reflecting the programme's small team size and the fact that projects are anchored at different universities and research environments across the country.

In interviews, some project leaders emphasised that the SPARK team provided valuable feedback during pitch preparation, helping them to clarify key challenges and identify critical questions to address. For these projects, the preparatory dialogue was seen as particularly useful for ensuring that projects gained the maximum benefit from their mentor sessions.

## 5.7 Administration of SPARK Denmark

There is a generally high level of satisfaction with the administration of SPARK Denmark. This is reflected in Figure 5.2, which summarises project leaders’ assessments of the programme’s administrative processes, covering both the application and project phases as well as overall communication efforts of SPARK Denmark.

**Figure 5.2. Project leaders’ agreement with statements concerning the administration of SPARK Denmark**



Source: IRIS Group based on a survey targeting project leader  
 Note: N=12.

The figure shows that project leaders are most satisfied with the administrative processes during the project phase, particularly the collaboration and communication with the SPARK team. Most respondents fully agree that communication has been clear and constructive, while two projects (17%) express partial disagreement. This variation may reflect that SPARK Denmark, due to staff turnover, was not fully staffed throughout the entire period, which may have affected communication with some projects.

Further analysis indicates that the projects expressing partial disagreement belong to the first

two cohorts, whereas all projects in cohort 3 report satisfaction with the ongoing communication.

The figure also shows that project leaders perceive the application process as transparent. This is confirmed in interviews with researchers, mentors, and partners, who consistently describe the selection process as transparent, professional, and fair.

At the same time, the lowest satisfaction score concerns the information provided about SPARK Denmark prior to application. This suggests potential to improve the visibility and clarity of the programme’s objectives, structure, and expectations at the pre-application stage.

Interviews with project leaders also suggest that awareness of SPARK Denmark has been relatively limited across many life science research environments during the pilot phase. In most cases, participating projects learned about the programme through their department heads or through staff at the Technology Transfer Offices (TTOs).

However, as shown in Chapter 3, there has been a substantial increase in the number of SPARK applications in 2025. This coincides with the SPARK team, in collaboration with TTO units at most universities and university hospitals, conducting information events targeted at researchers from relevant departments.

In 2025, the SPARK team also strengthened its outreach through the project's LinkedIn profile and via information screens at universities and university hospitals.

Prior to 2025, communication activities were more limited and indirect (mainly call material directed towards TTOs and a list of innovation officers at universities and university hospitals).

It is therefore likely that projects in the most recent application rounds have experienced a higher level of information than the cohorts participating in the survey.

As discussed in the next chapter, a wide range of programmes support early-stage life science innovation. The interviews indicate a broader need for improved communication about the overall funding landscape for life science innovation projects – and how different programmes relate to one another.

### **Strengthening communication of the value proposition on the website**

In general, SPARK Denmark's website appears user-friendly for potential applicants. However, if the aim is to increase awareness among life science researchers and improve information about the programme's content for other ecosystem stakeholders, the website could be strengthened in the following ways:

- **Refocus the landing page.** The current *About SPARK Denmark* section begins by describing the broader rationale for the programme (the gap between research and commercialisation), which primarily addresses political or strategic stakeholders rather than the main target group – researchers. The introduction could more directly highlight the concrete opportunities and value proposition for researchers.
- **Clarify and showcase the mentor model.** The unique mentor model is central to SPARK Denmark's value proposition and could be presented more prominently, supported by testimonials from alumni.
- **Enhance communication about international opportunities.** The international dimension of SPARK is currently conveyed mainly through a link to *sparkglobal.io*, which provides limited information about the specific benefits for participating projects – such as access to international events where teams can pitch to investors and connect with related projects.

## **5.8 Key performance indicators**

In addition to the success criteria for project outcomes presented in Chapter 4, a set of Key Performance Indicators (KPIs) was defined at the launch of the programme as part of an overall impact framework. The KPIs reflect expectations regarding the programme's activity level during the pilot phase.

The KPIs and their associated targets are presented in the table below, alongside the actual results achieved so far (last column).

In the impact framework, annual targets have been established for each year up to the programme's conclusion. The table primarily focuses on the KPIs for 2025, while for certain indicators we have also included the accumulated targets, calculated as the sum of annual KPIs for the period 2022–2025.

The KPIs in the top of the table concern the number of supported projects, followed by indicators related to the growth of the mentor network and

project use of mentors. Finally, a series of KPIs covers the number of SPARK activities and participation levels in these activities.

**Table 5.2. SPARK Denmark KPI's**

<i>KPI</i>	<i>Target at the midterm evaluation (2025)</i>	<i>Expected 2025</i>
Mentor network	60-80 experts (mentors) in the SPARK network	Approx. 30 <sup>2</sup>
Mentor sessions	5-10 mentor meetings/project (annually)	2-3 mentor meetings/project (annually)
SPARK projects (annually)	10 full projects + 2 prospects	10 full projects + 0 prospects
Spark projects accumulated	35 full projects + 7 prospects	30 full projects + 3 prospects
Educational sessions	5-8 sessions per year	30 sessions <sup>1</sup>
SPARK researchers/projects at educational events	20 projects, 20-30 researchers	10 projects, 15 researchers <sup>2</sup>
Other researchers attending educational events	100+ annually	0
Network events	Up to 5 / year	5
Network events accumulated	Up to 15 (2023-25)	Approx. 15 <sup>2</sup>
SPARK researchers/projects participating at SPARK network events	20-30 project representatives per event	1-11 per event

Source: The SPARK Denmark team and SPARK Denmark (2022); "Application for the Novo Nordisk Foundation"

<sup>1</sup>SPARK Europe (20 webinars), SPARK Midlands (2), SPARK Global (4) and Masterclass UCPH (4). <sup>2</sup>Estimated.

As shown, some of the activity KPIs have been met, while others have not.

SPARK Denmark is slightly behind target in terms of admitted projects, but the plan is to admit an additional 10 projects at the end of 2025, with a start in January 2026<sup>13</sup>. This will close the small shortfall in the number of full SPARK projects.

As indicated in the last column, the number of active mentors is expected to be around 30 by the end of the year, which is considerably below the target of 60-80.

The significance of this relatively small number of mentors for SPARK Denmark's activities can be discussed. For projects within therapeutics, the

assessment in Section 5.3 indicates that the current mentor pool has been sufficient both in terms of numbers and coverage of relevant topics. However, if the ambition is to offer projects more one-to-one mentoring, there may be a need to expand the mentor pool to accommodate the increased activity.

On the other hand, as mentioned in Section 5.3, there are gaps in the mentor pool outside of therapeutics. From this perspective, it is a relevant critique that, given the size of the Danish life science ecosystem, there is a considerable difference between the target and the actual number of mentors.

<sup>13</sup> Source: SPARK Denmark

Regarding the number of mentor sessions per project, the original application assumed that more projects would make use of one-to-one mentoring. This explains the difference between the KPI target of 5–10 annual meetings and the actual number of sessions. As noted in Section 5.3, SPARK Denmark could work to link individual mentors to more projects.

The target for the number of training sessions has been met, although the target was formulated with respect to activities offered by SPARK Denmark, while the majority of sessions have been

provided by SPARK Europe. As mentioned previously, the evaluation does not point to a general demand for an increased number of training activities.

The target for the number of networking activities has been achieved, while participation per event is below the target. The final KPI also appears very ambitious. SPARK Denmark has had an average of 15–20 active projects, and participation of 20–30 project representatives at international events seems unrealistic.

## 6. SPARK DENMARK'S ROLE AND ANCHORING IN THE LIFE SCIENCE ECOSYSTEM

**SPARK Denmark is part of a comprehensive Danish ecosystem for life science innovation. This chapter focuses on how SPARK Denmark is integrated in the ecosystem. It also provides an overview of the value chain for supporting research-based life science innovation and SPARK Denmark's current position in this value chain.**

### 6.1 Introduction

Denmark hosts a strong ecosystem for life science innovation. We have world leading companies, numerous startups and scaleups, a strong research base, advanced hospitals, private funds investing heavily in research and innovation, as well as incubators focusing on life science. The role of SPARK Denmark in relation to the ecosystem is twofold: to bridge the gap between research and commercialisation; and to tap into the ecosystem in order to match early innovation projects with experienced industry mentors.

This chapter sheds light on these aspects. Section 6.2 provides an overview of key programmes along the value chain – from promising discoveries in research to the financing of life science startups. Section 6.3 discusses how well SPARK Denmark has become embedded in the life science ecosystem, as well as opportunities for strengthening collaboration with other actors. Finally, Section 6.4 discusses potential for expanding the SPARK-model to other research areas.

### 6.2 The value chain for research-based life science innovation

The journey from idea generation in research to market and clinical practice is long and costly. While SPARK funding may support part of this journey, bringing life science innovations to market requires substantially more funding and time.

The success of SPARK projects is therefore highly dependent on the availability of complementary grants and funding opportunities. In recent years, the number of such programmes has grown, including several schemes developed and/or funded by the Novo Nordisk Foundation. Figure 6.1 provides an overview of the main programmes and their positioning along the life science innovation value chain.

As illustrated, some programmes are specifically targeted at life science or particular subsectors, while others support research-based innovation more broadly but still play an important role in financing life science projects.

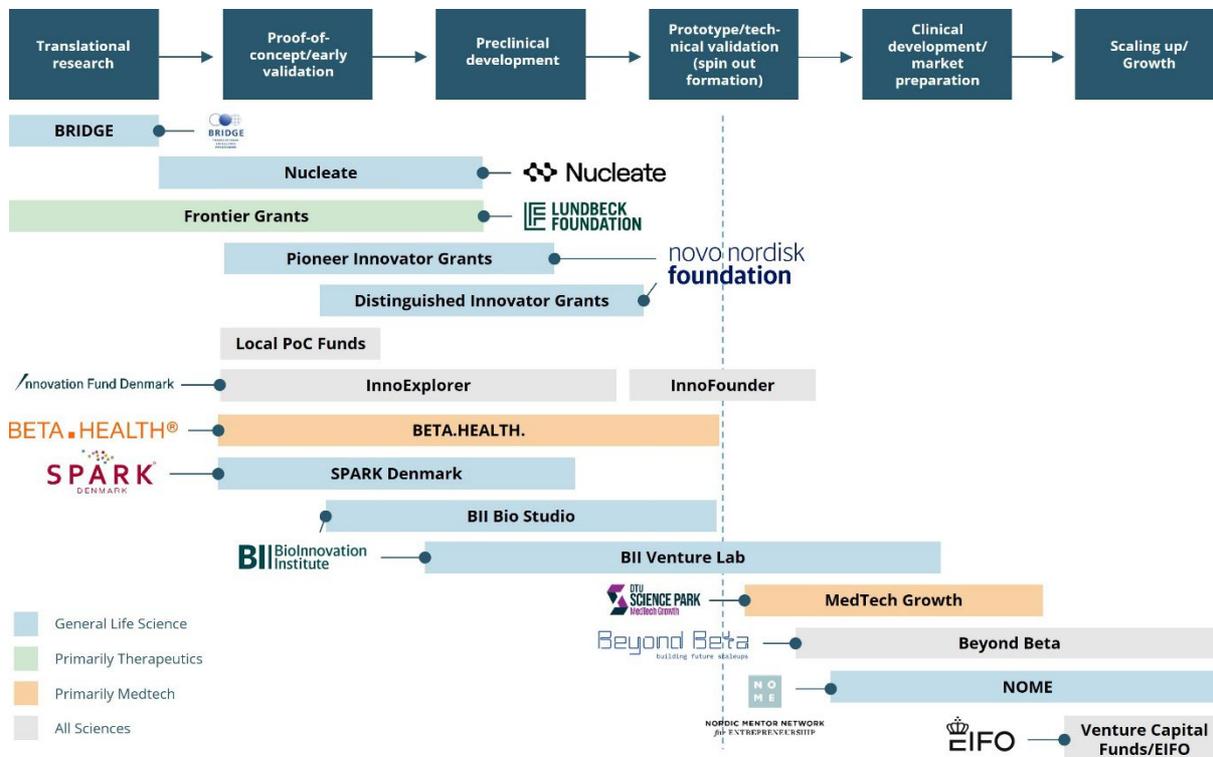
It is important to note that positioning the programmes along the value chain is challenging, as there is considerable variation in the maturity of projects supported by each scheme. The placement is primarily based on the programmes' assessment criteria and insights gathered through the data collected for this evaluation.

Furthermore, the figure only includes programmes that can be applied for directly by individual researchers or companies. Several other programmes also support innovation collaborations between companies, research institutions, hospitals, and other partners<sup>14</sup>. These programmes are likewise important for bringing research-based life science projects to market.

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<sup>14</sup> Examples are Grand Solutions (Innovation Fund Denmark and The Innovation Project Fund (Danish Life Science Cluster)).

Figure 6.1. Programmes supporting life science innovation projects



Source: IRIS Group

Life science innovation projects at universities and university hospitals can, of course, originate from many types of research activities. On the left side of the figure, only programmes with a specific focus on translational research are included – that is, programmes that support research activities with a commercial orientation. An example is Frontier Grants at the Lundbeck Foundation supporting activities to advance and consolidate basic research projects, with significant potential, into attractive prospects for investors.

As illustrated, several programmes and funding schemes provide support to researchers from the proof-of-concept phase and forward. There are no strict boundaries between these programmes, but Pioneer Innovator Grants, InnoExplorer, and the local Proof-of-Concept funds at universities can support projects based on early indications or preliminary findings from research.

SPARK Denmark can in principle also support projects at this stage. However, as described in Chapter 3, the assessment criteria of SPARK Denmark mean that most projects have already received initial funding from one of the aforementioned programmes.

In the subsequent phase, BII Bio Studio, BII Venture Lab or InnoFounder can provide support in/before the company formation phase. Finally, a range of programmes and foundations offer soft funding and equity funding in the later stages to support clinical trials, commercialisation, and the growth of startups and scaleups.

Several of these programmes also offer mentoring services. This applies to Nucleate and NOME, which are purely mentoring and capacity-building programmes, both of which are international initiatives providing participants with access to an international mentor pool. Frontier Grants, Medtech

Growth, BETA.HEALTH, and several university PoC-schemes likewise provide access to mentoring support.

### Comparison of early-stage programmes

Figure 6.1 illustrates that several programmes are relevant for funding the journey from research to company formation. However, these programmes differ in several key respects.

First, there are notable differences in the maximum grant size. *University Proof-of-Concept (PoC)* funds typically provide up to DKK 500,000 per project, while *InnoExplorer* offers up to DKK 1.5 million. This is roughly comparable to the Novo Nordisk Foundation's *Pioneer Innovator Grant*, which provides a maximum of DKK 1.1 million. The *Distinguished Innovator Grant* clearly stands out with a ceiling of DKK 7.6 million over a three-year period. Frontier Grants (the Lundbeck Foundation) provide support of up to DKK 5 million, but this grant both support research and innovation activities.

With a maximum grant of DKK 700,000, SPARK Denmark is positioned mid-range in terms of total funding volume. However, given its two-year programme duration, it provides the lowest level of annual financial support compared to the other initiatives, which – except for the *Distinguished Innovator Grant* – typically fund projects for up to 12 months.

Second, the programmes differ in what types of costs are eligible for funding. SPARK Denmark stands out by not allowing salary expenses for main applicants (including postdocs). The same restriction also applies to some university-based PoC funds.

Third, there are differences in programme profiles and thus in the types of life science projects eligible for support. *BETA.HEALTH* focuses exclusively on projects originating from clinical research in hospitals, while the *Distinguished Innovator Grant* is open to a broad range of life science areas, but places particular emphasis on cardiometabolic

and infectious diseases, as well as related preventive solutions.

Fourth – and most importantly in relation to SPARK Denmark – the programmes differ in their overall value proposition. In both SPARK Denmark and BETA.HEALTH, the monetary grant represents only part of the total offer.

SPARK Denmark's unique DNA lies in its access to high-level industry-mentoring – provided through a structured model not available elsewhere in the Danish ecosystem.

Several universities have also established networks of mentors and entrepreneurs linked to their PoC funding schemes. However, these networks, particularly in the field of therapeutics, do not match SPARK Denmark's mentor corps in size or breadth of expertise. That said, the Technical University of Denmark has invested considerable resources in developing its own mentor network and offers, among other things, a pre-startup mentoring programme.

A final important difference concerns programme duration. Most early-stage programmes (prior to company formation) support projects for a period of six to twelve months. SPARK Denmark and the *Distinguished Innovator Grant* stand out with significantly longer durations of two and three years, respectively.

Interviews conducted for this evaluation indicate that this extended duration is an advantage in programmes where much of the value derives from ongoing access to mentoring and the ability to participate in international SPARK events at the points in time when they are most relevant and valuable for each project.

### A patchwork of funding

The evaluation shows that, for most projects, the path to the first investment from, for example, venture funds is paved with multiple grants. Most projects have received innovation grants prior to joining SPARK Denmark, and a majority also obtain soft funding after SPARK participation, before

reaching a level of maturity where venture funds or private investors are ready to provide equity financing. Only the Distinguished Innovator Grant (and perhaps Frontier Grants) stands out as a single award that can cover a substantial part of the journey towards investor capital.

Given that SPARK Denmark is a two-year programme, that the mentorship model provides strong added value, and that the annual funding is modest, it makes limited sense to prohibit concurrent funding from other programmes for the same main activities.

Of course, it is important to avoid double funding for the same tests or experimental activities. However, if the goal is rapid progress and a shorter route to the clinic and market, the costs of testing, validation, and documentation far exceed DKK 350,000 per year.

Furthermore, and as noted in Chapter 5, a SPARK grant combined with other funding could for example enable the hiring of a postdoc – which can have a significant impact on the progress of an innovation project.

Finally, it is worth noting that the same projects are often evaluated repeatedly by different panels throughout the journey toward successful commercialisation. Substantial time and resources are spent on preparing applications for soft-funding programmes and on undergoing multiple review processes along the way.

### **SPARK Denmark's position in the life science value chain**

As outlined in Chapter 3, the original proposal to the Novo Nordisk Foundation envisioned SPARK Denmark as a programme targeting very early-stage innovation projects, potentially even *before* an invention disclosure was filed.

However, as already mentioned: most SPARK projects have already secured funding from other programmes before entering SPARK. Some of the assessment criteria described in Chapter 3 – combined with the KPI's and overarching goals of the

project – also tend to favour projects that have completed, for example, initial proof-of-concept studies and are therefore more mature.

SPARK Denmark operates with two entry pathways, including the possibility of admitting very early projects as “prospects.” Yet since the programme launched, only three projects have been accepted through this route – and all three had already obtained external funding before joining SPARK. In two cases, the main reason for *not* awarding a monetary grant was that the projects were funded by other Novo Nordisk Foundation programmes and therefore did not meet SPARK's eligibility rules for full financial support.

In practice, this means that SPARK Denmark in reality has not made use of the prospect track to date.

In this regard, it is interesting to compare with other SPARK programmes. Our desk research reveals that most programmes use criteria similar to those applied in Denmark, but some operate with only a few, broad criteria that intentionally leave more room for immature projects - projects that carry high risk but also potentially high reward.

For example, SPARK Poland assesses applications based on just three questions:

- Does the project address an unmet clinical need?
- Is the project globally innovative?
- Is the proposed project plan feasible within two years?

This illustrates how the positioning of each SPARK programme in the life science innovation chain depends on its selection criteria.

However, it is important to emphasise that Figure 6.1 is based on our comparison of programme criteria. Within the ecosystem, there is no shared understanding of the interfaces between programmes or of which programmes naturally serve as the starting point for innovation projects. Nor is there any dialogue across programmes aimed at

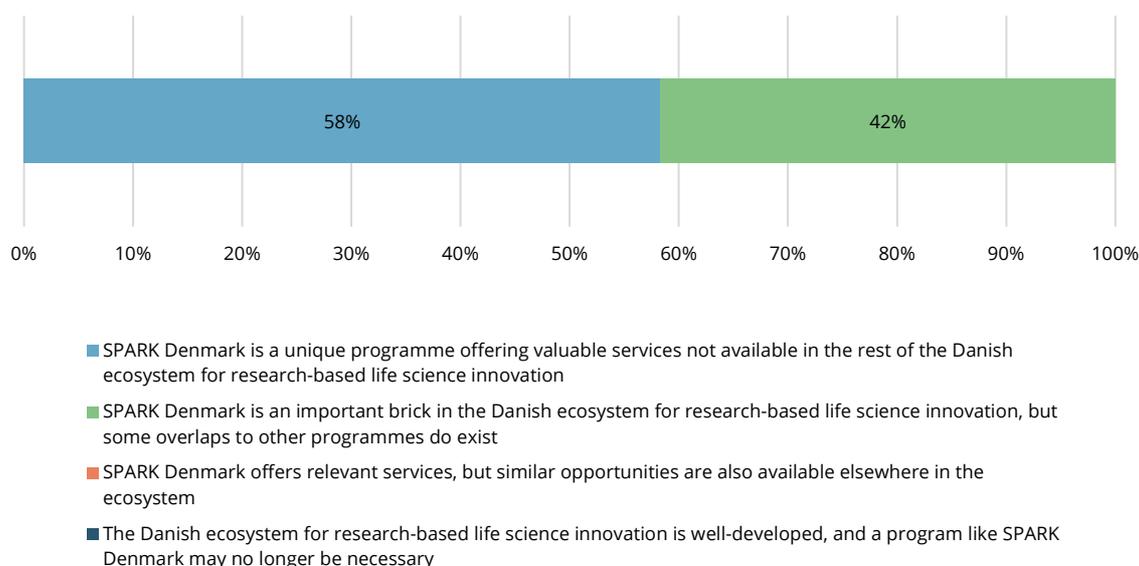
ensuring smooth transitions, fast tracks, or similar mechanisms.

In this context, it is also worth considering whether the SPARK programme – with its strong industry network – could play a greater role earlier in the value chain by helping to assess the potential of life science projects.

### Overall assessment of SPARK Denmark’s relevance and additionality

In the survey, project leaders were asked to assess SPARK’s role and position within the Danish life science ecosystem – by choosing between four statements about the programme. These statements ranged from describing SPARK Denmark as a unique initiative with no overlap with other programmes to suggesting that its services do not stand out compared with alternative offerings. The results are presented in Figure 6.2.

**Figure 6.2. Project leaders’ assessment of SPARK Denmark’s place within the Danish life science ecosystem**



Source: IRIS Group based on a survey targeting project leader

Note: N=12

The figure shows that some project leaders consider the programme unique in its value proposition, while others regard it as important but note certain overlaps with other initiatives.

These responses align with the analysis above, indicating that the mentoring component is what sets the programme apart, whereas the funding dimension overlaps significantly with other schemes supporting the transition from research to company formation.

### 6.3 SPARK Denmark’s embedment in the life science ecosystem

SPARK Denmark’s impact and long-term success depend on how well the programme is positioned and integrated within the national life science ecosystem. This matters for several reasons:

- It influences the programme’s ability to attract promising projects.

- It strengthens the capacity to recruit mentors with the right skills and expertise.
- It improves the projects' opportunities to secure additional funding and gain admission to incubation programmes (particularly if SPARK participation is perceived as a mark of quality).
- It enhances the potential to connect projects with complementary initiatives and, for example, international investors interested in their technologies.

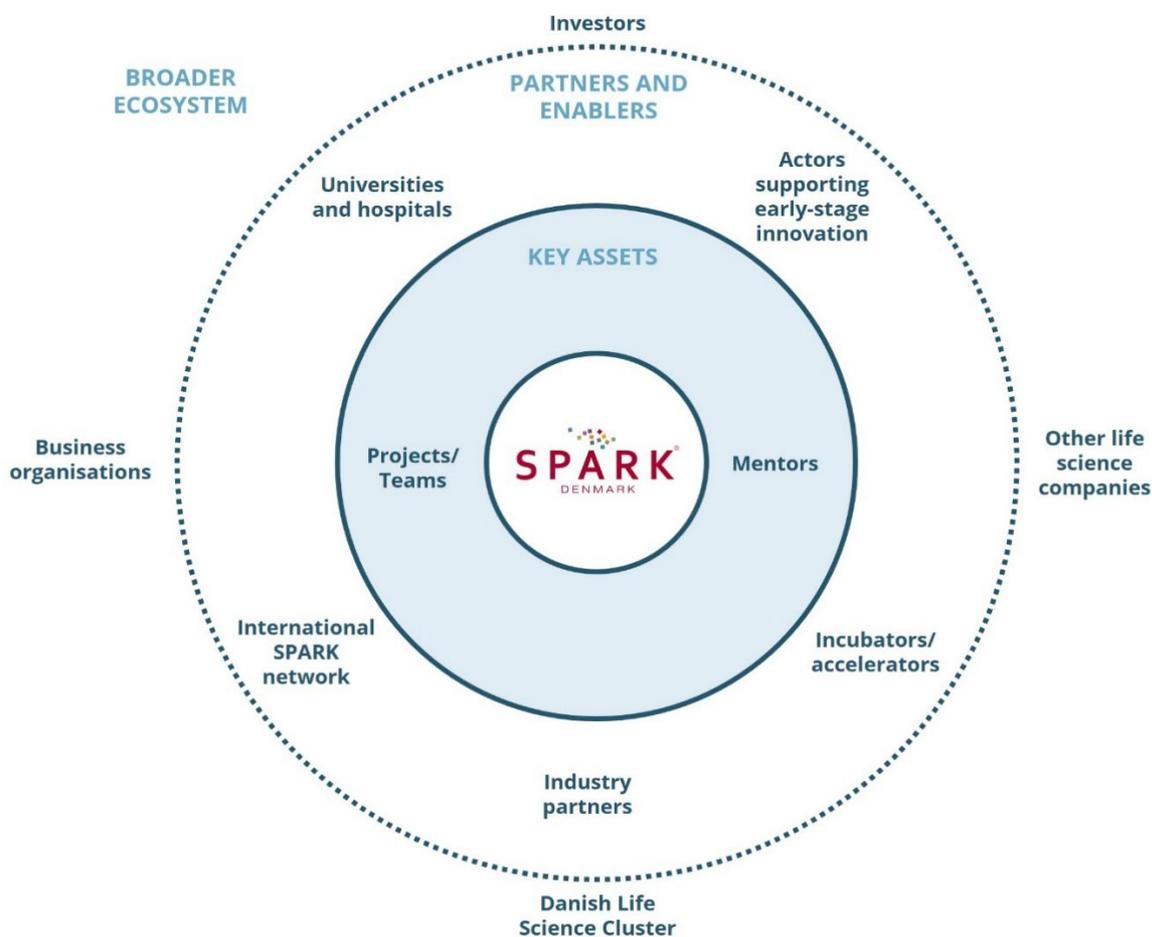
A strong degree of embedment ensures that SPARK can more effectively bridge the gap between academic research and commercialisation, leverage synergies with other initiatives, and support collaborations across the broader ecosystem.

Figure 6.3 provides an overview of the stakeholder landscape. The inner circle consists of the programme's core: the projects and the mentor corps.

The middle circle comprises central stakeholders who are important both for ensuring a pipeline of qualified applications and mentors, and for offering programmes that in synergy with SPARK Denmark support early life science projects.

The outer circle includes actors in the wider ecosystem who are not directly involved in early-stage life science projects but who can function as ambassadors for SPARK Denmark and open doors to partnerships, investors, and other opportunities as projects mature.

Figure 6.3. SPARK Denmark stakeholder map



Source: IRIS Group

The overall picture emerging from the stakeholder interviews is that SPARK Denmark is not yet firmly embedded in the national ecosystem.

Awareness of the programme remains limited – or entirely absent – among several actors, and universities in Western Denmark have, to some extent, not regarded SPARK as a key programme when communicating funding opportunities to life science researchers. As noted earlier, the majority of mentors are individuals already connected to the ecosystems surrounding the universities in Eastern Denmark.

The extent to which SPARK Denmark is anchored across different parts of the ecosystem is elaborated in the following sections.

### **The Universities**

Overall, collaboration across the five universities on the administration and governance of SPARK Denmark is functioning well. Members of the Steering Committee report constructive dialogue – both in relation to the final approval of projects and in discussions about the programme’s strategic development and management. Cooperation at the operational level is also positive, although the administrative burden of reviewing all applications is considered substantial. This burden is growing as application numbers increase, even though the process is viewed as important for ensuring that the strongest projects are selected across universities.

However, the degree to which the programme is embedded within each university varies significantly. At the University of Copenhagen – and increasingly at the Technical University of Denmark – SPARK Denmark is viewed as a core instrument in the life science value chain and an important complement to local PoC funding schemes. The fact that mentoring sessions are held in Copenhagen, and that the SPARK Denmark team is anchored at an East Danish university, naturally reinforces this position.

At the Western Danish universities, the size of the monetary grant plays a more prominent role in

how the programme’s overall value proposition is assessed. Representatives from the National Team emphasise that the grant is relatively modest, and that participation in SPARK prevents researchers from drawing on several other funding schemes (as outlined in Chapter 5). This makes competing opportunities more attractive when advising researchers.

At Aalborg University, the mentor team’s orientation towards therapeutics has also been a barrier in the first years. However, the university recognises that more MedTech-oriented mentors have recently joined the SPARK mentor pool, and there is a clear ambition to increase the number of Aalborg University projects entering the programme.

It is also important to note that Western Danish universities in recent years have invested in building their own networks of mentors and experts willing to support early-stage innovation projects pro bono. At Aarhus University in particular, the Department of Biomedicine has attracted several experienced life science entrepreneurs who now support local projects.

As noted in Chapter 5, direct outreach and communication into the research environments have been limited prior to 2025. As a result, SPARK Denmark’s project pipeline (before 2025) has been highly dependent on technology transfer units (TTO’s) actively promoting the programme to researchers – both during general scouting activities and when researchers disclose inventions. Likewise, securing a broad pool of high-quality applications requires effective dissemination of each new call to the most relevant research environments.

Interviews indicate that strengthening ownership and commitment across all universities will require adjustments to the programme’s design, particularly:

- Larger project grants or fewer restrictions on parallel participation in other programmes (see Chapter 5).

- A (small) budget allocated to each university to support programme administration and communication to research environments.
- Greater emphasis on one-to-one mentoring as a supplement to the group mentoring sessions held in Copenhagen.

Currently, the universities' involvement in SPARK Denmark is primarily centred on the collaboration around project selection. Business developers from the universities' incubation environments participate only to a limited extent in the mentoring sessions held in the Mærsk Tower.

As noted earlier, they could play a larger role – for example by providing follow-up support on how to apply the input from the mentor sessions. However, according to the universities, this would require formalising their involvement and integrating it into SPARK Denmark's budget, as a substantial share of staff time and salaries is financed through externally funded projects and programmes.<sup>15</sup>

### Industry partners

When SPARK Denmark applied to the Novo Nordisk Foundation in 2022, the programme was supported by a total of 13 major life science companies, all of which provided Letters of Support. A small number of these companies have since engaged with SPARK Denmark at the leadership level and have contributed mentors to the programme.

However, as noted earlier, the majority of SPARK mentors have been recruited from existing networks around the University of Copenhagen. This suggests considerable potential for involving large companies more actively – to strengthen the programme and to help narrow the gap between the KPI target for the size of the mentor pool and the actual number of active mentors (see Chapter 5).

Although this evaluation has not included interviews with senior industry executives, such

interviews were conducted in the evaluation of BETA.HEALTH. Those interviews revealed a strong interest among companies in contributing expertise from senior staff, combined with a wish to stay more closely informed about innovation activities emerging from the hospital sector<sup>16</sup>. There is no clear reason why similar interest would not extend to innovation originating from universities.

Interviews with SPARK mentors from large companies (e.g., Novo Nordisk and Lundbeck) also confirm this. They emphasise that part of their motivation is precisely the opportunity to follow research activities with strong commercial relevance (see also section 5.3). In addition, a mentor from Novo Nordisk explains that contributing to the Danish life science ecosystem is an integral part of the company's strategic ambitions.

### Other programmes and incubators

Among other actors and programmes operating in the phases from academic research to start-up formation, awareness of SPARK Denmark varies considerably. The BioInnovation Institute (BII), for example, has in-depth knowledge of the programme due to its participation in SPARK Denmark's Review Committee from the outset (see Chapter 3). A number of SPARK-projects have since been accepted into the BII Studio programme, and the assessment is that SPARK participation strengthens a project's likelihood of being admitted to BII.

There is also a more general level of awareness among operators of other Novo Nordisk Foundation-funded initiatives, including BETA.HEALTH. By contrast, it is noteworthy that the Innovation Fund Denmark was not aware of SPARK Denmark's existence at the time of the interview.

Across the interviewed stakeholders, there was broad recognition that programmes in the ecosystem do not sufficiently refer projects to one another. BII is widely perceived as one of the important goals or milestones for many projects, but

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<sup>15</sup> In the government's proposal "Strategic Priorities for Research and Innovation 2026–2029," a dedicated funding stream for innovation activities at the universities is introduced. This could strengthen the universities' ability to contribute to externally funded programmes.

<sup>16</sup> IRIS Group (2024); "Midterm Evaluation of BETA Health"

cross-programme dialogue and interaction beyond that point remain limited.

Part of the challenge stems from the lack of a shared understanding of where programmes operate along the innovation value chain, and which programmes can complement each other on the pathway toward spinout formation. In that context, SPARK Denmark – with its distinctive mentoring offer – is an obvious complement to other initiatives, particularly if the criteria for parallel participation are adjusted as discussed earlier.

Interviewees also reflected on the potential for closer collaboration in the recruitment of mentors and experts. The perceived relevance is highest between programmes operating in similar stages of the innovation chain. For example, SPARK Denmark's mentor profile differs substantially from that of the NORwegian Mentor network of Entrepreneurship (NOME), which consists primarily of senior executives, whereas SPARK mentors are mainly specialists and managers in areas such as drug development.

Moreover, while SPARK Denmark due to its physical mentor events is more naturally anchored in the regional/national ecosystem, programmes such as Nucleate and NOME are more international in their profile.

Two areas of potential collaboration stand out:

- Greater involvement of the mentor networks being developed at the Western Danish universities, potentially through arrangements where these mentors join group sessions (in the Mærsk Tower) online and continue as 1:1 mentors.
- Closer coordination in outreach and recruitment of mentors from MedTech and Health Tech companies. BETA.HEALTH has developed a partnership model with established companies that contribute to the programme's advisory boards. Joint efforts could ensure that opportunities to engage with both programmes are presented to top management in a coherent way.

### **The broader ecosystem**

Unsurprisingly, awareness of SPARK Denmark is lowest in the broader innovation ecosystem (the outer circle of Figure 6.3). This is maybe less critical, as maturing SPARK projects are expected to build their own understanding of the ecosystem – identifying where to seek support and which actors to involve in a long-term commercialisation strategy.

At the same time, it remains relevant that the wider ecosystem develops a clearer understanding of the different programmes and how they operate. A stronger SPARK Denmark brand would make it easier for projects to engage with investors, gain admission to accelerator programmes, and establish contact with clinical environments interested in testing new technologies.

### **The global SPARK-network**

An important feature of SPARK is the global network spanning numerous countries. SPARK Denmark collaborates closely with the SPARK programmes in Norway and Finland, and maintains strong links both to other European programmes and to SPARK's parent institution, Stanford University.

Several projects report that they have gained valuable contacts through this network – including, in some cases, connections to mentors and investors who may become interested in supporting their technologies over time.

### **SPARK Denmark as a gateway to the ecosystem**

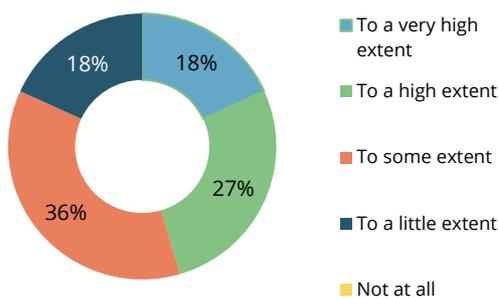
One of SPARK Denmark's key strengths is the mentor corps' extensive and well-established network. Several of the interviewed projects report that the mentor sessions have opened doors to CROs, hospitals, patient organisations, and mentors outside SPARK Denmark's own mentor group.

Naturally, this also helps increase broader ecosystem awareness of SPARK Denmark.

The figure below illustrates the extent to which projects in cohorts 1–3 perceive that participation

in SPARK Denmark has strengthened their access to other parts of the ecosystem.

**Figure 6.4. The extent to which SPARK Denmark's has enhanced project's ability to access other parts of the ecosystem**



Source: IRIS Group based on a survey targeting project leader  
Note: N=11

Approximately half of the projects report that this is the case to a high or very high degree, while only two out of eleven projects indicate that it applies to a lesser extent.

## 6.4 SPARK Denmark's focus areas

As described in Chapter 2, one of the evaluation questions concerns whether the SPARK Denmark programme could potentially be expanded to other research areas.

There is no doubt that SPARK Denmark's mentor model is an effective mechanism for guiding research-based innovation projects in the right direction. Early-stage sparring with experienced industry professionals is highly relevant for researchers working with promising ideas for new companies and technologies.

However, the success of the SPARK model depends on several key prerequisites:

- **A critical mass of project ideas** from research institutions (to ensure a steady flow of mentor sessions and to support mentor recruitment).

- **An operational team with domain insight**, capable of advising projects ahead of their pitch and ensuring an appropriate match between projects and mentors.
- **A mature and well-functioning ecosystem**, capable of supporting a sufficiently large mentor corps with 1) expertise within the technological domains covered by the programme, and 2) a broad competence base reflecting the diverse challenges projects face.

The relatively small number of applications within industrial biotechnology, combined with more mixed assessments from projects, suggests that these prerequisites have not been fully in place within this specific area. The gap between "red biotech" and industrial biotech is substantial, meaning that the same mentors have not been able to provide qualified feedback on the challenges industrial biotech projects encounter.

At the same time, both the operational team and the steering committee consist primarily of individuals with deep expertise in health-related innovation. For this reason, it would not be meaningful to expand the current set-up to include other technological fields.

This raises the question of whether there is potential to establish parallel programmes or additional tracks under SPARK Denmark.

In this context, it is important to note that pharmaceuticals, MedTech, Health Tech and diagnostics are characterised by a large and complex ecosystem – particularly in Eastern Denmark. Not only is there a significant number of established companies and entrepreneurs; SPARK Denmark can also draw on a wide range of specialised advisors in areas such as drug development, clinical trials, and regulatory affairs.

It is difficult to identify other research-based industries in Denmark where there are both the same critical mass of startup projects and a sufficiently mature ecosystem from which a broad and competent mentor corps could be recruited.

In a potential version 2.0 of SPARK Denmark, it may be relevant to separate industrial biotechnology from the current SPARK structure. The coming year could be used to examine whether there is a basis for establishing a parallel track in areas where the three prerequisites are met.

We consider the most promising area to be food and ingredients (yellow biotech), where Denmark is strong both academically and industrially. Denmark has leading research and industry capabilities within<sup>17</sup>:

- Bio-based ingredients
- Fermentation
- New protein sources and the use of microbial cultures
- Probiotics and microbiome-based nutrition
- Plant biologicals.

This field includes several large Danish companies capable of contributing to a mentor corps and is characterised by shared innovation challenges such as scaling, access to regulatory sandboxes, and access to facilities. Moreover, it seems reasonable to expect that Danish research institutions can produce a critical mass of spinouts.

KU Food, Aarhus University Food Science, and the Technical University of Denmark could collaborate to assess whether the three prerequisites are fulfilled and whether Denmark's leading food tech companies are willing to help build a strong mentor corps.

Another candidate could be energy technology. However, the challenge in this area is that the Technical University of Denmark and Aalborg University are the clearly dominant institutions. The geographical distance between these environments may therefore pose a barrier to establishing a national track with joint mentor sessions.

It should also be emphasised that a key element of SPARK Denmark's value proposition is its international network and collaboration with similar programmes in other countries (see Chapter 5). The Danish programme is already the most technologically broad within SPARK Global, where the common denominator is a focus on therapeutics, MedTech, and diagnostics. No other SPARK programmes include industrial biotechnology or other research-based industries.

For most other deep-tech areas, our assessment is that it would be more appropriate to work with one-to-one mentoring programmes either anchored locally at individual universities or across universities.

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<sup>17</sup> Se IRIS Group (2021); "Biosolutions i Danmark - Analyse af bioøkonomiens potentialer og vækstbetingelser"

## 7. BENCHMARKING AND INTERNATIONAL PERSPECTIVES

**This chapter places SPARK Denmark in an international context and benchmark the programme against European SPARK-programmes, as well as other Danish programmes supporting research-based innovation. The chapter also discusses opportunities for strengthened Nordic collaboration.**

### 7.1 Introduction

Since it was founded at Stanford University in 2006, the SPARK programme has expanded well beyond the United States and now operates at more than 40 institutions across 25 countries. Despite local variations, all SPARK programmes share a common ambition: to bridge the gap between academic research and its commercial or clinical application within the life sciences.

This chapter places SPARK Denmark in an international context, comparing it with three European counterparts: SPARK Finland, SPARK Norway, and SPARK Berlin.

In addition, the chapter compares SPARK Denmark with selected Danish programmes that aim to promote innovation and research-based entrepreneurship across universities and hospitals in Denmark.

Finland and Norway are included because they represent the two other Nordic SPARK initiatives,

making it relevant to examine both commonalities and opportunities for closer regional collaboration. SPARK Berlin, by contrast, is the most established European programme and therefore provides a useful point of reference.

Although all SPARK programmes are built around the same core principles, they differ in several aspects of their design and organisation. The table below summarises key characteristics of the three selected international programmes.

Across all four programmes, a number of shared features stand out. Each supports early-stage, high-risk projects and relies heavily on the engagement of experienced mentors.

All programmes have a clear translational focus, targeting academic discoveries with potential for clinical or commercial application. Most projects run for roughly two years, and each programme draws on a mentor pool of around 25–40 experts from industry.

**Table 7.1. Comparison of SPARK programmes**

	Berlin	Finland	Norway	Denmark
<i>Start year</i>	2015	2016	2018	2022
<i>Focus areas</i>	Pharmaceuticals/therapeutics, medtech, diagnostics, vaccines, biologics	Medtech, diagnostics, healthtech and therapeutics	Health-related topics in the life science domain	Therapeutics, diagnostics, health tech, medtech, industrial biotech
<i>No. of universities &amp; hospitals</i>	1 (Charité/BIH)	7 universities and hospitals across 4 Finnish regions	1 (University of Oslo) and two hospitals	5 universities and all hospitals
<i>Annual budget</i>	€2.0 million	325.000 €	€680.000	€1.2 million
<i>Grant amount</i>	Track 1: Early stage projects: up to €50,000 for one year Track 2: Advanced projects: €50,000+ for two years	€ 0	€ 86,400	€93,850
<i>Duration of project</i>	12 or 24 months	24 months	24 months	24 months
<i>Annual no. of applications (last year)</i>	Approx. 40 with 7 accepted annually (Track 1) 2 accepted annually (Track 2)	Approx. 60 with 15 accepted annually	Approx. 15–20 with 5–6 accepted annually	Approx. 75 with 20 accepted annually
<i>FTE in secretariat</i>	5	3	1*	2,5
<i>No. of mentors</i>	Approx. 25	Approx. 40	Approx. 25	27
<i>Financing of the programme</i>	Private research foundation	Participating universities	UiO:Life Science (University of Oslo)	Private research foundation

Source: IRIS Group based on desk research and interviews

\* The FTE refers to the national director. SPARK Norway also reimburses project coordinators from the participating universities' TTOs for their work on individual projects (see Section 7.2), but these positions are not included in the FTE figures.

Despite these similarities, the programmes differ considerably in both scope and scale. Whereas the Danish and Finnish programmes operate at national level with multiple universities and hospitals involved, the Norwegian programme and SPARK Berlin are anchored at a single institution.

Annual budgets also differ significantly, from around €2 million in Berlin to approximately €325.000 in Finland. The budget variations partly reflect different funding models: the Finnish programme operates purely as a mentoring scheme with no direct project grants, while the other programmes provide financial support of varying sizes.

SPARK Berlin (BIH) is also backed by the largest organisation, with around five full-time staff compared with 1-3 in the Nordic programmes.

In Finland, the decision not to offer direct project funding reflects a deliberate strategy to prioritise mentoring, networking, and educational activities. Projects can however apply for small travel grants of up to around €2,000 to support participation in events, fairs and other relevant activities. The aim is to strengthen researchers' translational capabilities and position them to attract external investment at a later stage, while soft funding is provided by other schemes.

SPARK Berlin has taken the funding model a step further by introducing two tracks that distinguish

between different stages of project maturity. Track 1 supports early-stage projects with up to €50,000 for one year, while Track 2 offers more than €50,000 for two years to more advanced projects.

The two-track structure reflects differences in project maturity. Track 1 usually provides the first funding for an early idea, whereas track 2 supports projects that have already secured initial proof-of-concept funding – either through Track 1 or other programmes.

The variation in funding limits becomes even more pronounced when compared with SPARK programmes beyond those included in Table 7.1. Grant sizes range from €20,000 in Pisa to €216,000 per year for up to two years in Pittsburgh. In addition, a few universities apply the Finnish model, where SPARK activities consist solely of mentoring<sup>18</sup>.

We did not identify any SPARK programmes that, like the Danish programme, prohibit simultaneous funding of projects or main activities from other schemes.

Finally, the table shows that SPARK Denmark has the broadest scientific scope, as it is the only programme that also includes industrial biotechnology. The other programmes cover largely the same life science domains, even if the categories are labelled somewhat differently.

## 7.2 Comparison of SPARK-programmes

This section compares the four SPARK programmes across three themes:

- How the programmes are organised.
- The level of engagement in individual projects.
- The approach to mentoring.

These themes have been selected because they speak directly to the issues highlighted in Chapters

5 and 6 – in particular, how international SPARK programmes ensure strong local anchoring, provide tailored support to individual projects, and match mentors effectively with project needs.

### 7.2.1 Organisation of SPARK programmes

Across the four programmes, there are marked differences in how the SPARK-programme is organised and anchored institutionally, as indicated in the overview table.

In Norway and Germany, SPARK operates within a single institution, the University of Oslo and Charité Berlin Institute of Health, and does not extend to other universities in the country.

In both cases, the programme is closely embedded in the environments where the core research and clinical activities take place, and the secretariat is naturally situated within the host institution.

The two programmes differ in scale, with SPARK BIH employing five full-time staff compared to one in Norway, but both benefit from close integration with their local research and hospital settings.

#### Decentralised structure and strong local anchoring in SPARK Finland

Like Denmark, Finland has adopted a multi-site model that involves several universities and hospitals. The Finnish team is slightly larger than Denmark's, corresponding to roughly three full-time equivalents.

However, SPARK Finland differs in its organisational setup. The programme combines a central secretariat in Helsinki with part-time managers embedded at each of the four regional sites. The regional managers each dedicate around 20–25% of their time to SPARK activities, typically as part of broader responsibilities in university technology transfer.

The regional managers play a central role in identifying promising early-stage projects, supporting

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<sup>18</sup> Source: Desk research

applicants, and aligning SPARK activities with existing innovation services at their institutions. This structure enables both national coordination and strong local anchoring: ideas can surface close to the research environments where they originate, while still benefiting from shared national mentoring and training.

According to the national director, having SPARK staff embedded within the local institutions is a central feature of the Finnish model. The regional managers help strengthen local ownership, support early project scouting and ensure sustained engagement from researchers and innovation staff. Their presence also enables a much closer and more continuous dialogue with individual project teams than would be possible without locally based SPARK staff.

### **7.2.2 Level of engagement in projects**

All four SPARK programmes support early-stage ideas emerging from research environments. Most projects run for up to two years and typically involve small teams working on translational proof-of-concept activities.

However, the programmes differ significantly in how deeply the SPARK team engage with individual projects.

As described in Chapter 5, the SPARK Denmark team is only involved in Danish projects before their pitches for the mentoring sessions, where the team provides feedback on draft presentations. At the university and hospital level, business developers (for example, from the TTOs) are typically only involved to the extent that the projects are part of local initiatives or programmes.

In the three international programmes, by contrast, SPARK teams provide much more hands-on support, including sparring on project plans, key milestones and overall progress.

### **Active project management in SPARK Berlin**

Among the four programmes, Berlin has adopted the most ambitious model for hands-on sparring and project management. Each SPARK Berlin project is assigned two dedicated project managers from the SPARK secretariat, who work closely with the teams throughout the entire funding period.

These managers bring substantial experience from academia, industry, or start-ups. Their combined scientific and commercial expertise enables them to support projects from early discovery through to translational readiness.

At the outset, the SPARK team and the project managers co-develop a detailed milestone plan, which is incorporated into the funding agreement. Each milestone outlines expected deliverables, experimental outcomes and clearly defined stop criteria, ensuring accountability and a strong focus on translational progress.

Projects are monitored continuously, and funding can be paused or discontinued if key milestones are not achieved. This model allows flexibility while maintaining scientific rigour and efficient use of resources.

The project managers stay in regular, close contact with the teams, review data and help build connections to mentors, technology transfer offices, regulatory specialists, etc. According to the programme director, this sustained, hands-on interaction between SPARK staff and the project teams has been essential for advancing project maturity and delivering concrete translational results<sup>19</sup>.

### **Project coordinator in SPARK Norway**

SPARK Norway applies a lighter but conceptually similar model to that in Berlin. Rather than employing in-house project managers, the programme relies on project coordinators drawn from the university's Technology Transfer Offices (TTOs).

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<sup>19</sup> The model shares many similarities with Danish acceleration programmes such as BETA.HEALTH and the programmes offered by the BioInnovation Institute (BII).

These coordinators are partially seconded to support specific SPARK projects and are reimbursed by the programme for their time. Each coordinator typically works around 10 hours per month on one or several projects and receives up to NOK 150,000 per year for this work.

The coordinators act as advisers who complement the voluntary mentors. While mentors provide strategic and scientific guidance, the coordinators offer continuous operational and business development support helping project teams refine their development plans, identify markets, connect with industry partners and investors, and ensure alignment with regulatory and IP requirements.

Their dual role as TTO professionals and SPARK advisers ensures that projects benefit from individuals who already understand institutional procedures for IP, contracts, and spin-out creation. They also help project teams follow up on mentoring sessions, as the coordinators stay closely engaged with the projects and ensure that advice from the mentors is effectively integrated into the ongoing development.

According to the programme director, the close and flexible interaction between coordinators, mentors and project teams has been an important feature of the Norwegian model. It enables the programme to stay closely connected to the projects and provides teams with continuous guidance as they develop.

### **7.2.3 Mentor models**

Mentoring sits at the heart of all SPARK programmes. Each of the four programmes relies on a broad mentor community composed primarily of professionals with extensive industry experience across the life science sector, supplemented by experts in regulatory affairs, clinical and translational development, and early-stage venture creation.

All SPARK programmes use a group-mentoring format as a central approach to sparring. These meetings promote peer learning and expose

project teams to a wide range of perspectives within a single setting (see Chapter 5).

All four programmes also offer access to one-to-one mentoring, although the structure surrounding this varies. Finland and Norway apply a more formalised approach to matching mentors with project teams. In Berlin, programme managers partly assume roles that mentors typically fill in the other countries, although one-to-one mentoring is also widely used there.

#### **Early one-to-one matching with mentors in SPARK Norway**

SPARK Norway applies a mentoring model in which each project is matched with an individually assigned mentor. Every new project is matched with a dedicated mentor, selected jointly by the management team and the project participants to ensure the right professional and personal fit.

The aim is to identify a mentor with the right combination of technical expertise, sector experience and personal fit, ensuring that the project has access to someone who can engage actively and pragmatically with its development needs.

The dedicated mentor functions as a close adviser who understands the project in depth, meets with the team regularly and helps them work through scientific, strategic and commercial challenges as they arise.

The individual mentor also supports the project in following up on the input received during the group mentoring sessions, ensuring that key points are acted upon and translated into the project's ongoing work.

The one-to-one engagement helps provide continuity between mentoring sessions and can support teams in maintaining focus and progressing in a coherent direction.

#### **Flexible one-to-one matching between mentors and projects in Finland**

Like SPARK Norway, SPARK Finland also provides one-to-one mentoring as part of the programme.

Finland uses a flexible model where projects connect to different mentors as their needs change.

When a project enters the programme, the management team reviews its maturity, technical field and main challenges and selects relevant advisers from the shared mentor pool. As the project develops and new needs emerge, the SPARK team helps identify and introduce additional mentors who are better placed to support the next steps in its development.

The group mentoring sessions also play a role in shaping the follow-up support a project receives. The input from these discussions often highlights new questions or areas where more specialised expertise could be helpful.

After the session, the SPARK team discusses the feedback with the project to identify which issues merit further exploration and what type of specialist insight would be relevant. On this basis, potential new one-to-one mentors are identified from the mentor pool.

According to the national director, the combination of group and one-to-one mentoring helps

ensure that support remains closely aligned with each project's development.

### 7.3 Comparison of SPARK Denmark with other Danish Programmes

Building on the comparisons presented in Section 7.2, it is also relevant to assess SPARK Denmark in relation to other Danish programmes. In recent years, several national initiatives have been launched with the aim of promoting innovation and entrepreneurship at Danish research institutions, many of which are implemented through collaborations across universities.

Table 7.2 provides a brief overview of these programmes in terms of their purpose, budget, funding of operational resources, and the key functions of the teams responsible for delivering them.

Across all programmes, project management is anchored at one of the participating institutions – although in the case of BETA.HEALTH, it is shared between two institutions.

**Table 7.2. Comparison of programmes fostering innovation and entrepreneurship at research institutions**

	SPARK Denmark	Spinout Denmark	Open Entrepreneurship	BETA.HEALTH
<i>Purpose</i>	Supporting early-stage projects within life sciences	Fostering spinouts among young researchers	Fostering commercialisation and research-based start ups	Fostering clinical innovation at Danish hospitals
<i>No. of key institutions involved</i>	5	8	8	5
<i>Annual budget (approx.)</i>	DKK 8.8 million	DKK 15 million	DKK 20 million	DKK 25 million
<i>Project management FTE</i>	2,5	2	2	9
<i>FTE locally anchored</i>	0	8	20	3
<i>Key tasks of team</i>	Administration, manage mentor network, match with mentors, feedback on pitch material, training programmes, SPARK events	Administration, scouting, ongoing sparring, manage network of mentors and experts, training programmes	Administration, scouting, ongoing coaching, manage network of entrepreneurs (E-corps), national events	Administration, hands-on sparring and coaching, bootcamps, training of clinicians, manage network of experts
<i>Sponsors</i>	Novo Nordisk Foundation	Villum Foundation	Danish Government	Novo Nordisk Foundation

Source: IRIS Group based on desk research and interviews

As shown, SPARK Denmark is the smallest of the four programmes, with a budget roughly half the size of the average for the others. However, SPARK Denmark stands out most clearly in terms of operational funding: the allocated staff resources are significantly lower, and no dedicated resources are placed locally at the participating institutions.

This also means that the other programmes follow their projects more closely and offer far more hands-on support, including regular status meetings and assistance in building relationships with experts and mentors.

It should be noted, however, that Table 7.2 focuses solely on the budgets and the activities financed through external funding. The universities contribute in-kind resources to SPARK Denmark related to administration and project selection.

Across all programmes, governance is ensured by a steering committee composed of senior managers from the participating institutions.

The overall impression from evaluations and interviews with programme managers and ecosystem actors is that the three other programmes are more firmly embedded outside their host environments. Besides the benefit of dedicated operational resources, this is also driven by a stronger emphasis on *national events* that bring together projects, affiliated experts and mentors, local business developers at the institutions, and the broader ecosystem.

In addition, several initiatives have been introduced to strengthen coordination and collaboration among actors:

- Spinout Denmark organises site visits where business developers meet and learn from one another.
- Open Entrepreneurship has established a management group (referring to the steering committee) that makes joint decisions on activities and on the implementation of the programme's strategy.

## 7.4 Nordic collaboration

The final element of the evaluation has been to identify opportunities for strengthening collaboration across the Nordic SPARK programmes.

The three Nordic SPARK organisations already engage in joint activities through their joint participation in regional events – such as Nordic Life Science Days and the Nordic Innovation Fair. Moreover, they arrange shared study trips to Silicon Valley, as described in Section 5.5. In addition, the programmes are in the process of establishing a more formalised regional collaboration under the name SPARK Nordic.

As a new initiative, the Nordic SPARKs have recently begun planning joint mentor sessions in selected thematic areas, enabling mentors and project teams from the three countries to meet in a shared forum. The aim is to leverage the combined expertise within the Nordic region and provide projects with access to a broader range of perspectives. These sessions are expected to be held 1-2 times a year and will focus on projects and themes where access to specialised knowledge within each ecosystem is relevant.

In interviews with the programme directors from Finland, Norway, and Denmark, we explored further opportunities for expanding the collaboration. Overall, there is a shared view that a Nordic perspective is relevant and could add value to the national programmes in selected areas.

Going forward, it is considered important to maintain the joint international activities, as these offer projects wider exposure and create valuable opportunities for collective learning across the Nordic region. A more regular dialogue between the national secretariats is also regarded as beneficial, ensuring that experiences, tools, and review practices are shared and can support the continuous development of each programme.

Finally, there is interest in developing a shared Nordic mentor pool within selected thematic fields, particularly if the planned joint sessions

prove valuable in giving projects access to expertise that may not be available nationally.

Although the programme directors recognise the benefits of strengthening Nordic collaboration, they emphasise that such activities should be viewed as an add-on to the national SPARK programmes.

A defining feature of the SPARK-concept is the physical group mentoring format and the expectation that mentors participate in monthly sessions within reasonable distance of their workplaces.

This means that local, geographically anchored engagement remains a core element of the SPARK

model – especially compared to other programmes where mentors can easily be connected across borders because most meetings are held online.

Taken together, the shared Nordic activities contribute positively to the SPARK programmes and hold clear potential for further development. At the same time, it remains crucial to sustain the programmes' strong anchoring in their regional ecosystems, and equally important to strengthen engagement among the Danish universities that host the projects (see Chapter 6).

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# APPENDIX 1: INTERVIEWEES

## Project leaders

Name	Title	Organisation
Alireza Rezaniakolaei	Associate Professor	Aalborg University
Grith Sørensen	Professor, Deputy Head of Department	University of Southern Denmark
Jens Leipziger	Professor	Aalborg University
Mads Hartvig Clausen	Professor	Technical University of Denmark
Marcela Alejandra Mendoza Suárez	Assistant Professor	Aarhus University
Mariam Noor	Postdoctoral Researcher	Aarhus University Hospital
Simon Bekker-Jensen	Professor	University of Copenhagen
Sofie Helvig Eriksen	PhD Student	Technical University of Denmark
Søren Lykke-Andersen	Academic Staff Member	Aarhus University

## Mentors

Name	Title	Organisation
Ana Hidalgo-Simon	Associate Professor	reNEW
Anita Osborne	Senior Director	AstraZeneca
Christina Guldborg	Senior Director	Initiator Pharma
Claudia Blomgren-Hansen	Partner, lawyer	Life Science Plus Advokater
Itai Kela	Director	Novo Nordisk A/S
Jesper Frank Bastlund	Senior Director	Lundbeck
Kamilla Rolsted	Chief Operating Officer	Pephexia + Andet
Koray Karakaya	Senior Innovation Lead	Noble Corporation
Marie Skovgaard	Associate Director COO	Eli Lilly and Company
Michael Møller Jensen	Independent advisor	
Niels Skjærbæk	Independent advisor	
Pernille Hemmingsen	Chief Technology Officer	Adcendo

## Universities

Name	Title	Organisation
Anne Prener	Business Developer	University of Copenhagen
Jakob Ellegaard Larsen	TTO Technology Specialist	Aalborg University
Lene Aarenstrup Nielsen	Business Developer	University of Southern Denmark
Morten Holmager	TTO Business Developer	Aarhus University

Pascal Madeleine	Professor	Aalborg University
Peter Conrad Ottesen	Innovation Partner	Technical University of Denmark
Stine Kruse	Head of Research-based Innovation	Technical University of Denmark
Thomas G Jensen	Head of Department	Aarhus University
Uffe Holmskov	Vice-Dean Research and Innovation	University of Southern Denmark

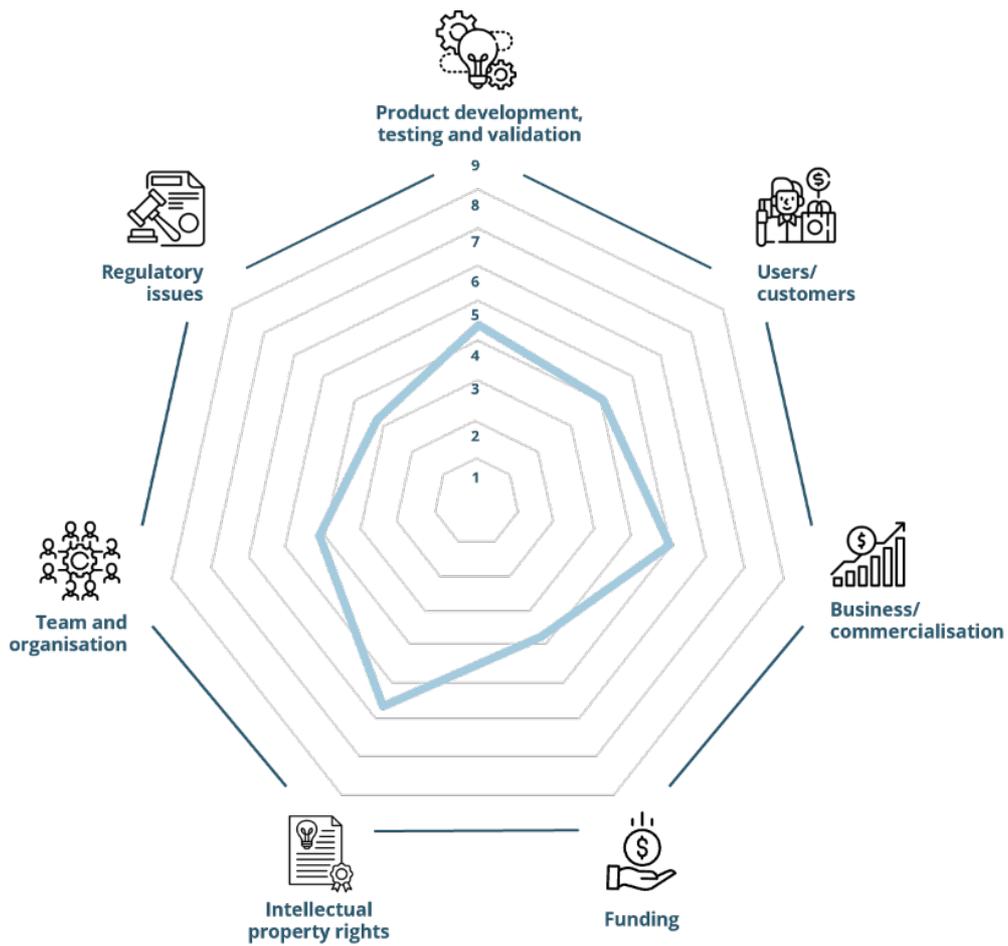
### **Broader ecosystem**

<b>Name</b>	<b>Title</b>	<b>Organisation</b>
Christoffer Merrild	Co-Managing Director	Nucleate
Helle Nielsen-Elgaard	Programme Manager	Open Entrepreneurship
Markus Herrgaard	Chief Technology Officer	BioInnovation Institute
Peter Birk	Head of Business Development	Accelerace
Rune Holdt	Co-Director	BETA HEALTH
Steen Bennike Mortensen	Investment Officer	Innovationsfonden
Susan Henriksen	Program Manager	Spinout Denmark
Sys Zoffmann Glud	Managing Director	Biomedical Design

### **International SPARK-programmes**

<b>Name</b>	<b>Title</b>	<b>Organisation</b>
Morten Egeberg	Founder & Director	SPARK Norway
Pasi Sorvisto	Founder & Director	SPARK Finland
Tanja Rosenmund	Director	SPARK BIH

# APPENDIX 2: THE LIFE SCIENCE INNOVATION INDEX



## 1. Technology development

- 1 Early concept stage – scientific idea or hypothesis formulated; no experimental validation
- 2 Initial proof-of-concept in lab (in vitro, prototype sketches, or preliminary computational models)
- 3 First experimental validation in relevant models (e.g. in vitro disease models for drugs, prototype bench, basic assay)
- 4 Expanded testing in more advanced models (e.g. in vivo for drugs, functional prototype for devices, assay validation with patient samples)
- 5 Demonstrated feasibility and reproducibility in relevant setting; critical risks identified and mitigation strategies defined
- 6 Preclinical development initiated – GLP studies for drugs, advanced prototype testing for devices, clinical-grade assay development for diagnostics.
- 7 Regulatory-enabling studies underway – e.g. IND/IDE-enabling studies for drugs/devices, validation under diagnostic guidelines (CLIA/IVD)
- 8 Technology validated in early clinical or equivalent real-world setting (Phase I/IIa for drugs, pilot clinical use for devices/diagnostics)
- 9 Robust, validated technology ready for pivotal clinical trials, regulatory submission, or large scale market introduction

## 2. Users/customers

- 1 Very vague ideas about possible clinical needs. No validation or segmentation

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- 2 First hypotheses about clinical relevance discussed internally. Needs remain broad and unstructured

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- 3 Initial segmentation of potential user groups or patient populations

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- 4 Early identification of lead markets or clinical contexts where the need might be greatest

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- 5 Preliminary external feedback from clinicians or end users collected

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- 6 Systematic exploration of clinical needs across segments; clearer picture of user priorities

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- 7 Deeper dialogue with lead users and clinical experts. Initial co-creation activities initiated

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- 8 Strong evidence and validation of clinical need across multiple settings. Alignment with clinical workflows considered

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- 9 Deep and nuanced understanding of clinical needs, with clearly prioritised use cases and strong clinical endorsement

### **3. Business/commercialisation**

- 1 First reflections that the research results may have commercial relevance. No insight into market or value.

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- 2 Early ideas for possible applications outlined. Market potential unclear and untested.

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- 3 First desk-based assessment of market potential conducted. Still highly uncertain.

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- 4 Development of an initial business case with simple assumptions about value, customers, and competition.

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- 5 Draft commercialisation plan emerging. Initial considerations on IP, regulatory requirements, and possible market routes.

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- 6 More robust business case supported by validated market data. Clear commercialisation strategy (e.g. licensing, spinout, partnership).

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- 7 Strong business model developed, including understanding of regulatory requirements, clinical evidence needs, and investment requirements. Strategy can attract partners.

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- 8 Solid and actionable business model in place. Serves as a foundation for active fundraising, partnerships, or initial sales/agreements.

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- 9 Business model proven in practice — attracting significant funding, partners, or early revenues, and supporting further scaling or clinical trials.

## 4. Funding

- 1 No clear view of funding needs or options beyond SPARK Denmark (or similar programmes funding early-stage innovation).
- 2 Funding needs identified for further development (preclinical studies, prototype development, etc.); potential sources mapped.
- 3 Preparing of funding applications or pitch material in progress.
- 4 First external funding obtained; sufficient to test feasibility or strengthen IP.
- 5 Funding roadmap for full development phase/preclinical tests established and supported by preliminary results.
- 6 Bridge funding secured, enabling additional testing and documentation to prepare for investors, VCs, or industrial partners.
- 7 Preparation of sustainable funding model initiated; due diligence package ready for investors/partners.
- 8 Comprehensive funding secured for all phases leading up to first sale or clinical trials.
- 9 Long-term sustainable funding model in place – significant investment, strategic partnership or licensing deal secured to progress to clinical or commercial stages.

## 5. Intellectual property rights (IPR)

- 1 IPR not yet been considered for the project/technology.

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- 2 Invention disclosure submitted to TTO; invention documented.

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- 3 Preliminary novelty/patentability assessment conducted; ownership clarified with TTO.

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- 4 Possible IPR described; initial freedom-to-operate (FTO) review started; conflicts of interest addressed.

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- 5 First protection filed by the university or the team (e.g. provisional patent); initial commercialisation strategy defined.

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- 6 Full patent application filed (national, PCT, or equivalent).

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- 7 Broader IP strategy under development (jurisdictions, regulatory exclusivity, design rights) or potential licensing agreements explored with industry partners.

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- 8 IPR strategy implemented; active IP management established (either in spinout company or with industrial partner).

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- 9 IP portfolio fully aligned with commercialisation pathway; freedom to operate confirmed in key markets; patent life cycle strategy in place (either in spinout or with industrial partner).

## 6. Team and organisation

- 1 Lack of necessary competences/resources; little insight into team needs related to develop and commercialise the solution.

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- 2 Limited competencies present; first idea of additional team needs.

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- 3 Some competences in place; needed competencies identified.

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- 4 Team in place (with clearly defined roles) that enables development and initial test of the solution.

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- 5 First mapping of necessary competences and partnerships needed to take the solution to the market or to phase 1 clinical trials.

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- 6 Clear strategy for recruitment and/or partnerships that secure onboarding of competences/resources needed to take the solution to the market/phase 1 clinical trials.

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- 7 Most competences in place and resources committed in order to make the solution ready for operation or for preclinical development programme.

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- 8 A professional and efficient organisation is in place, capable of supporting a market launch or the successful execution of a preclinical development programme.

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- 9 High performing, well-structured organisation that enables scaling of the solution or to carry out clinical development programmes.

## **7. Regulatory issues (drug approval, medical device regulation, etc.).**

- 1 No or limited knowledge of regulatory framework in relation to the product/technology.

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- 2 Potentially regulatory regime identified; no or limited knowledge of processes leading to regulatory approval.

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- 3 Initial dialogue with advisors and/or authorities; basic understanding of pathways to regulatory approval.

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- 4 Classification completed within relevant regulatory regimes; explicit justification if solution is outside certain regimes.

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- 5 Regulatory strategy and communication plan in place; exclusions argumentation with feedback from experts/authorities documented.

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- 6 Evidence gathering, verification, and compliance documentation underway.

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- 7 Documentation complete for at least one regime; submission or review initiated.

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- 8 Approval certification, or formal compliance confirmation obtained; monitoring established.

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- 9 Full ongoing compliance (Post Market Surveillance) across all relevant regimes and markets.

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