

SDU RIO

Annual report 2023

Research // Education // Collaboration

Value. Quality. People.

It has been a pleasure working with you in 2023!

- **2023 was a special year** in many ways. We were given new benchmarks with SDU's new strategy, the prospect of smaller youth cohorts, higher grade requirements and a far-reaching graduate reform. Changes that will be crucial for SDU and for RIO's interaction with the academic environments, students and business partners. At the same time, we were faced with cost reductions, difficult adjustments and an internal reorganisation of two teams.
- **2023 was also a year** in which we achieved a lot. For example, the initiatives in SDU's strategy for external research funding took effect, two annual reports to SDU's Board of Directors were written, increased practice involvement in teaching, and securing of external research funding reached new levels. As usual, the demand and complexity in the field legal services increased again.
- **2023 was also** characterised by collaboration and international outlook. We collaborated on SDUx Vejle, business partnerships and international university consortia. As the host of Spin-Outs Denmark's conference we put spin-outs and collaboration in the innovation ecosystem on the agenda. Now we are looking forward to the national entrepreneurship strategy and new funding for knowledge-based innovation and commercialisation.
- **2023 feels like** a long time ago in some ways. RIO's annual report therefore focuses on selected examples that we have succeeded with together throughout the year. I look forward to continuing the collaboration across SDU, with the students, under the auspices of the RI Council and our many business partners.

Happy reading!
Søren E. Frandsen, head of SDU RIO



Research

Ground-breaking

and transformative research

The year in brief:

- 57 major EU projects
- 68 research ethics applications
- 279 new users of Funding Apps
- 28 research projects supported with practice involvement

Cases

- The funding strategy is in full swing
- SDU's Research Support Hub
- Collaboration secures EU grant
- Life Science collaboration

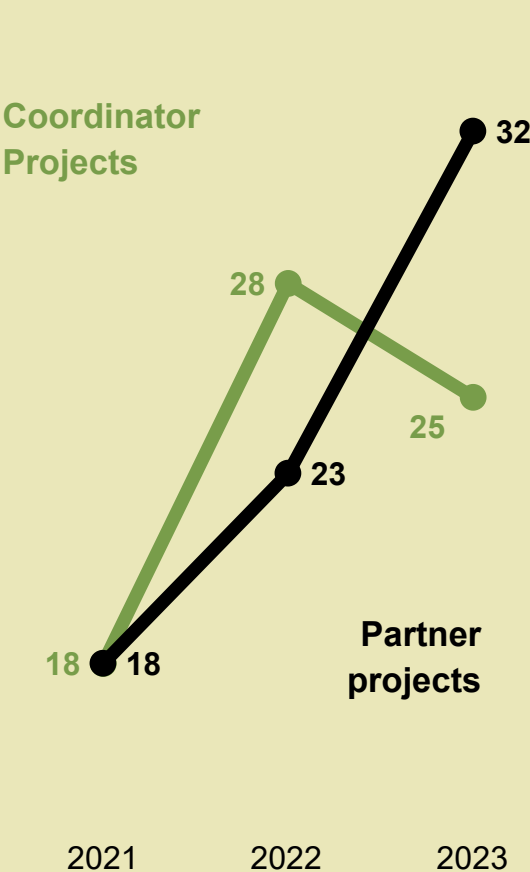
Increasing need for EU support

SDU’s engagement continues to develop in a positive direction
There is a growing interest in the instruments of the EU framework programmes. RIO therefore supports the faculties in an increasing number of cases, especially with SDU as the coordinator in large international consortia.

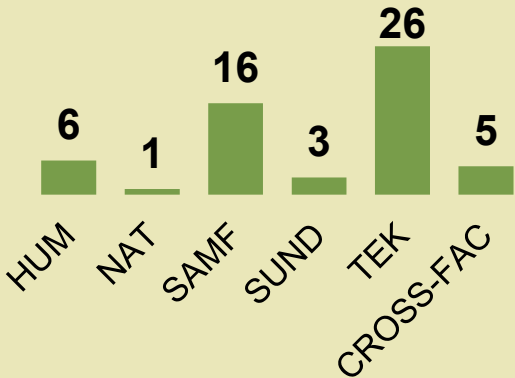
EU funding holds great potential
Since 2020, SDU has increased the consumption of EU funds by an average of 30 % per year. With SDU’s research strength, there is potential for even more international collaboration. In 2024, RIO will therefore continue to prioritise the opportunities that the EU offers SDU’s research environments in terms of large collaborative projects.



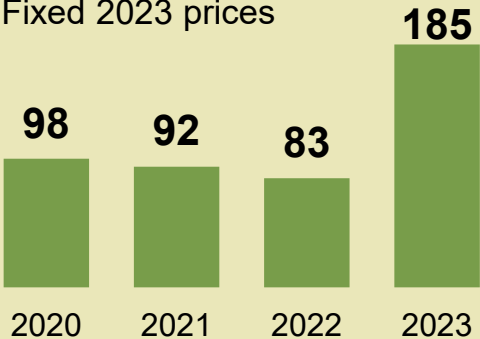
EU support cases in RIO 2021–2023
Number of support cases for coordinator and partner projects in 2021, 2022 and 2023.



Per faculty: EU support cases in 2023



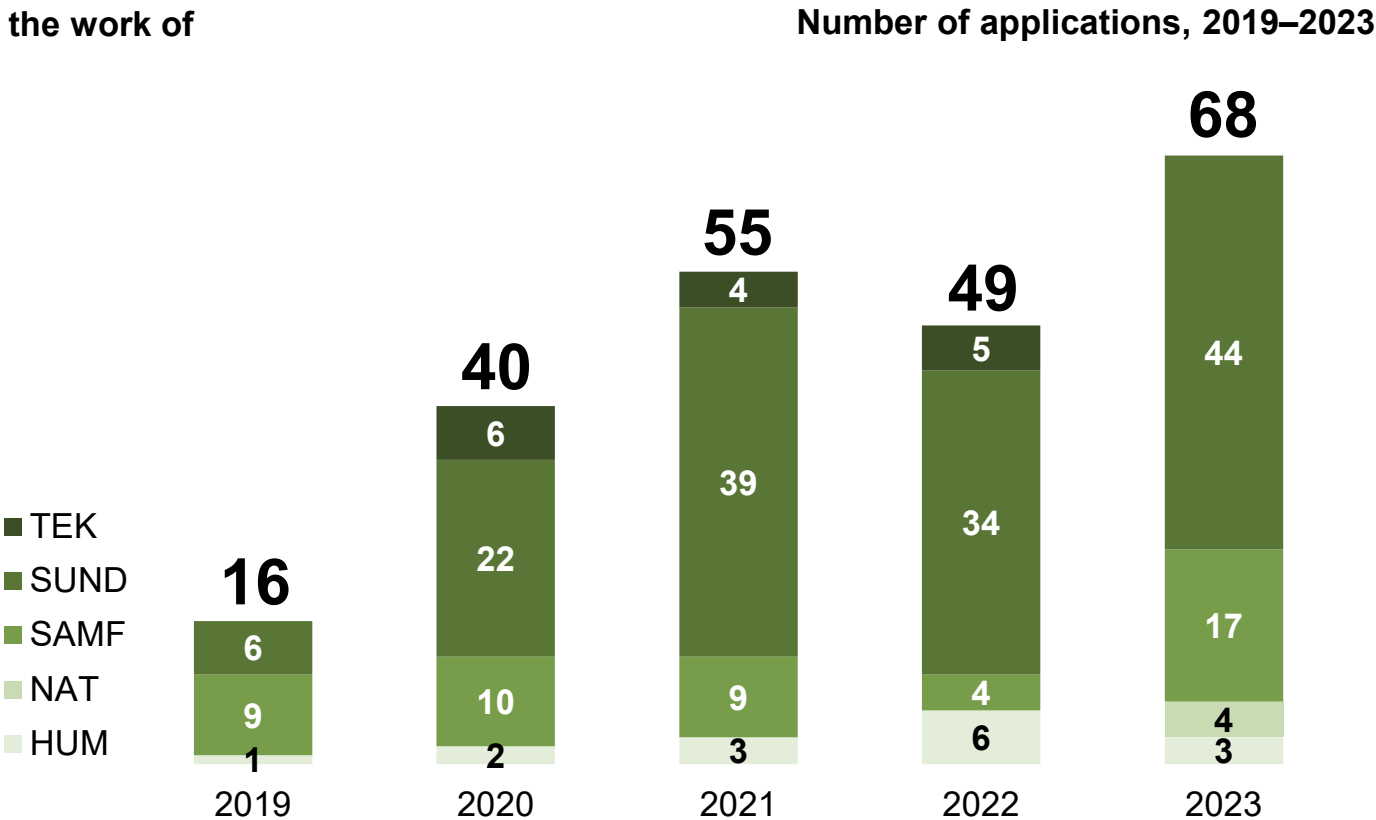
SDU consumption of EU funds
Fixed 2023 prices



Increasing requirements for research ethics

SDU’s Research Ethics Committee (REC) assists researchers with ethical counselling and approval of projects when ethical approval is required or requested. RIO coordinates the work of the committee.

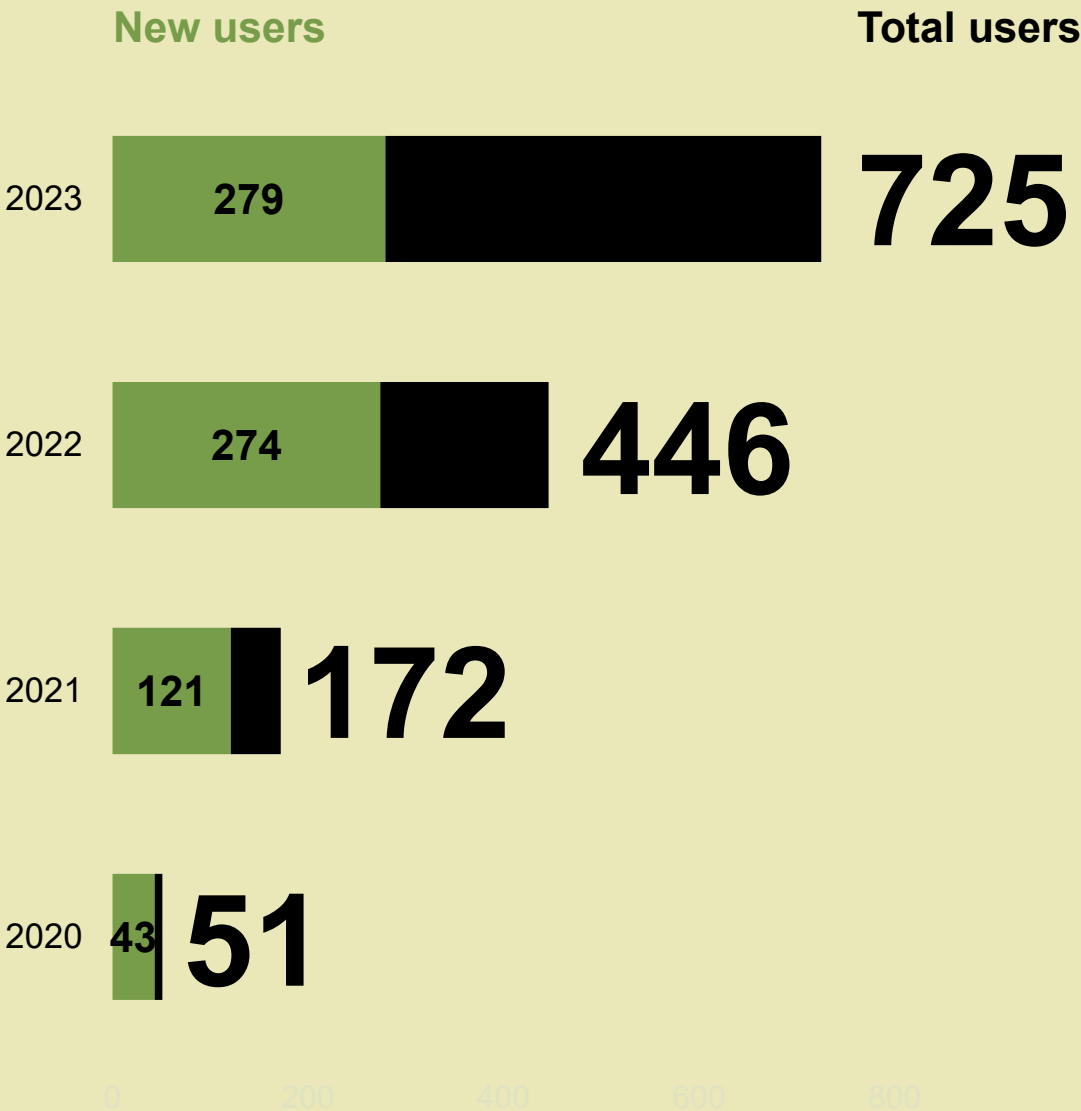
- 80 % of the approvals are granted after a **full review** where the project is thoroughly discussed by all REC members.
- 20 % are granted after a **fast-track review** which is quicker and less extensive.
- However, if the project has started without REC approval, REC can prepare statements for journals for the purpose of publication.
- Read more about [REC](#)



Funding Apps continue to gain users

Researchers use digital opportunities to find the right partners and calls.

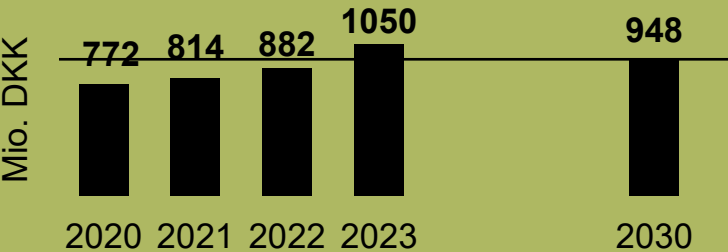
- RIO is working on several fronts to develop new digital tools for research development and researcher support.
- The digital opportunities provide SDU's researchers better and easier access to both projects and partners with the aim of increasing the securing of funding for their research.
- Several Danish and European universities use or wish to gain access to RIO's digital tools.
- [Click to see Funding Apps](#)



The funding strategy is well under way

The ambition is for SDU to secure more funding to strengthen research and career opportunities. This is supported by several initiatives that are underway and will be strengthened in the coming years in close collaboration between the faculties, service units and with RIO as the coordinator.

- SDU has increased its consumption of external research funding by 36 % since 2020.
- The external funding secured is greater than the consumption and totalled DKK 1.2 billion in 2023 (+40 % since 2020).
- The potential is still great – especially for EU funding.



Status on selected initiatives:

- Working groups with representatives from all faculties
- SDU Research Academy is fully booked
- Writing residencies for 12 researchers so far
- Concepts for collegial discussions are developed
- Easier administrative processes
- Cross-unit events for SDU's research support
- The strategy was uploaded to the [Research Support Hub](#)



Two new reports

In collaboration with SDU Analytics and FSØ, RIO published two new and annually recurring reports:

Report 1: Consumption and securing of external research funding. Published every spring.

Report 2: SDU's research. Published every autumn.

New joint Research Support Hub

Close collaboration across SDU’s research support services has made it easier to get an overview of the many research support services, such as calls, step-by-step guides to application processes, knowledge about commercialisation and legal support.

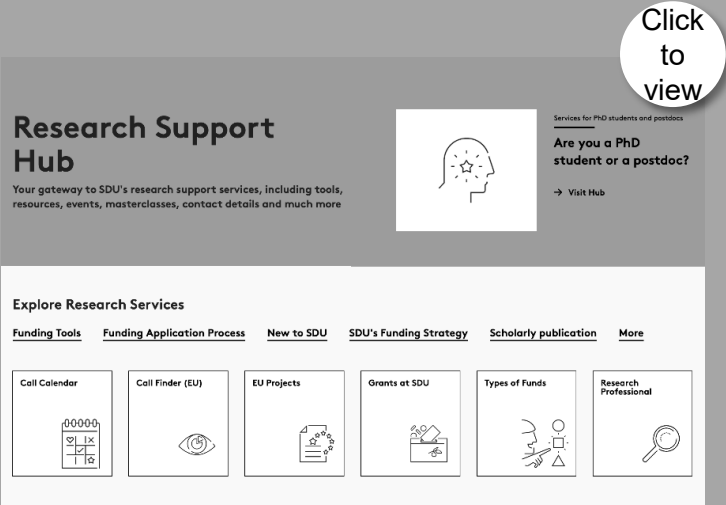
- At the end of 2023, SDU’s new, joint Research Support Hub was launched.
- It makes it easier to find research support and relevant colleagues across SDU and to utilise the many funding opportunities, but also to make e.g. application and financial processes more manageable for researchers, heads of research groups, and research support units.



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‘With a common tool we can promote collaboration at SDU, increase awareness of the large funding potential, especially in the EU area, and make services visible so that our skills are used most efficiently.’

Rector Jens Ringsmose at the launch on sdunet.dk



For example, researchers can now find films providing inspiration about collegial discussions.

Collaboration secures EU grant

Long queues of container ships are expensive and pollute the environment. An EU grant of DKK 56 million for a new international research project aims to make maritime traffic greener.

- Julia Pahl, Department of Technology and Innovation, is heading the MISSION project. RIO has provided support in the application process.
- The aim is to reduce the ships' fuel consumption by up to 23 % by rethinking their planned voyage and thereby achieving significant CO2 reductions.
- The project is headed by SDU with 30 partners, including DFDS, Maersk Mc-Kinney Moller Centre for Zero Carbon Shipping and a number of European ports and research institutions.

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‘It's been a great collaboration. It was both fun and intense along the way. Forming the consortium with over 30 partners was a big task. RIO kept track of the different parts of the process and the application, and I provided texts and spoke to potential partners. We reorganised the project at the end, so we were really busy. The application got top marks – that rarely happens. It was a lot of work, but also a great pleasure.’

*Julia Pahl
Associate professor
Department of Technology and
Innovation*

Bringing research and practice together

SDU's researchers get help from RIO in the process from planning to concrete external collaboration.

- **118 actors** from clusters, municipalities, organisations, companies and knowledge institutions were involved in research-oriented activities.
- **28 research projects** were supported with practice involvement, such as:
 - Development process with, among others, the Faculty of Health Sciences and external partners on a pre-qualification process for a potential new psychology programme in Esbjerg. Process is still ongoing.
 - Project development and application for the DANIDA project CHARM (Climate Change, adaptation, resilience, equity and development) A collaboration between the Unit for Public Health Promotion in Esbjerg, Samara University in Ethiopia, Nairobi University in Kenya, the NGO EIGRD and other local NGOs. The DKK 9.3 million project is still in review.

118
External stakeholders

28
Projects

Danish Life Science Cluster and Life Science Fyn

Life Science Funen and the national cluster Danish Life Science Cluster are collaborating to bring research closer to businesses.

RIO actively participates with responsibility for creating 'bridges of knowledge' between research and business.

This is done through initiatives that bring knowledge institutions, public institutions and businesses in the ecosystem together for innovation and growth. The focus includes:

- Knowledge sharing
- Skills development
- Matchmaking
- Internationalisation

- In 2023, 10 events were organised, and several networks were established for research, startups, spin-outs and companies to meet.
- Funding was secured for the "Green Drug" project. The parties behind the grant of almost DKK ½ million are SDU, OUH, Orifarm A/S and QNTM Labs.

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‘At Orifarm, we see the public-private partnership as a unique opportunity to not only improve our own insight into the environmental impact of pharmaceuticals, but also to be part of a larger movement towards more sustainable pharmaceuticals in Denmark.

We are excited about the opportunities that the project makes possible, and we expect it to contribute to changing the framework conditions for the production and use of pharmaceuticals, so that we can create a healthier, more sustainable future together.’

*Andreas Sødernan
Head of Medical Affairs,
Commercial Gx & Promotional Rx
Orifarm*

Education

In-demand and

value-creating graduates

The year in brief:

- 8587 participants, 123 events
- 138 education-related initiatives
- 92% are very satisfied with the counselling
- 15 ECTS courses strengthen the understanding of relevance
- 281 active student startups
- DKK 16.3 million in secured student funding
- 440 students develop innovative skills

Cases

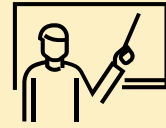
- Manufacturing company matched with humanities graduates
- New concept integrates practice
- Innovation University: Student entrepreneurship

More students take part in targeted events

- and more students meet
companies

In 2023, the focus has been on more faculty-
related offers and data-driven knowledge about
demand.

Through the events, RIO helps bring academic
environments and practitioners together in
activities where students meet companies.



Events

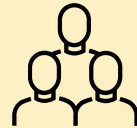
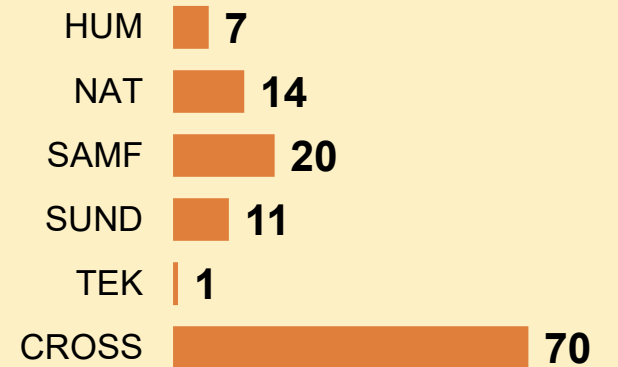
123

Of these

73 companies

actively contributed with practice in teaching

Per faculty



Participants

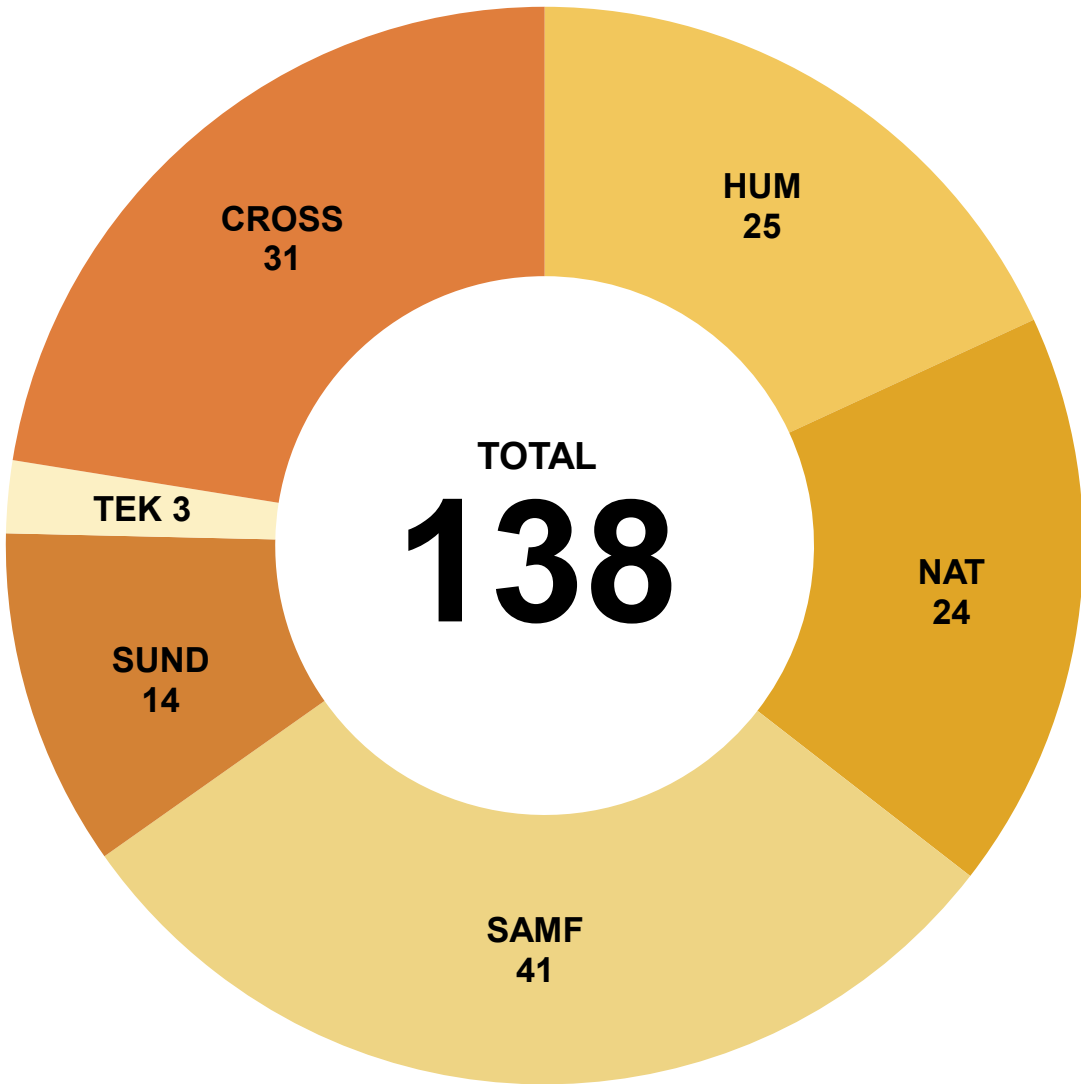
8587

As part of this, **330 companies** and **5587 students** met each other

Education-related initiatives bridges study and work life

Examples of how practice is being brought into play by lecturers and in education programmes:

- Networking events such as Business School Days
- More students in project-oriented courses
- Best practice on involving the businesses in e.g. case work, guest presentations and project work
- Targeted skills development and integration of practice in course descriptions
- Establishment of continuous collaborations between lecturers and the surrounding society.



Number of initiatives per faculty

High satisfaction with the counselling

Number of counselling sessions for students

2022



2023



■ HUM ■ NAT ■ SAMF ■ SUND ■ TEK ■ N/A

40 % of booked counselling sessions are with international students

Are you satisfied with the counselling you received?

92%
To a very great/great extent*

Has the counselling generated new thoughts, insights or perspectives for you?

91%
To a very great/great extent*

The counselling has made me ... *	%
More knowledgeable about the challenge I was looking for counselling on	63
Better equipped to apply for a job/internship/project collaboration	50
More aware of my strengths and skills	41

Number of respondents = 160
* Respondents could provide more than one answer from a range of options.

ECTS courses strengthen the understanding of relevance

In collaboration with the academic environments, RIO contributes to developing courses and participates in teaching.

In the courses, students learn how to:

- Create value with their education
- Increase their professional network outside of SDU
- Increase their business understanding

In 2023, ECTS courses were offered in 58 % of SDU's master's degree programmes.

Number by faculty

Courses



Teaching sessions



Registered participants



88 % of students from NAT experience an increased ability to assess how their expertise can be used outside the classroom*.

* From student learning reflection and post-course evaluation

Large manufacturing company matches humanities graduates

SDU Kolding and the company Abena have entered a close, education-related collaboration that bridges study and work life and brings practice into play in humanities programmes

Through a series of workshops with Abena and the heads of the IT and design programmes, needs and wishes were identified as the focal point for the new collaboration.

During the development phase, RIO has worked closely with the heads of programmes and Abena to create valuable matches, uncover and launch initiatives that are firmly rooted in academic disciplines.

A selection of key points from the collaboration:

- **Project courses and workshops**
Abena participates in project courses with cases. Students participated in a workshop at Abena.
- **Customer panels/competence insights**
Abena gives programme management insight into regional labour market conditions and skills demand.
- **Pre-graduate programmes**
Possibilities for future collaboration are explored so that students doing projects can put their knowledge into practice.

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‘The collaboration opens up new opportunities where Abena gains access to both attractive students and future graduates, while we link practice directly into the courses and strengthen the students’ understanding of relevance.’

*Marianne Wolff Lundholt
Head of department
Department of Design, Media and
Educational Sciences*



New concept integrates practice

In collaboration with RIO, the Faculty of Science is developing a new concept for making practice a natural and relevant part of teaching.

New and targeted initiatives across education programmes will contribute to educating attractive graduates, improving quality and relevance and increasing well-being.

RIO has contributed to the development of the so-called "competence portfolio". Here, all students from the first to the last semester must become aware of their own competences.

Many students come into contact with companies through projects, internships or other collaborations. The goal is to increase the number of students doing so.

In the collaboration to develop a concept that links practice directly to teaching, RIO has contributed with facilitation and process, among other things.

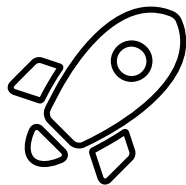
- Workshops have been organised with lecturers and students to identify how practical elements can be integrated into the teaching.
- At the moment, the concept integrates for instance company presentations or cases into the teaching.
- The concept is developed and tested at one department but subsequently disseminated to others.

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‘RIO helps us succeed in some of the things that are important to us at NAT. They are very important partners, and through their extensive experience in working with companies, they contribute to improving the quality of our efforts concerning employability and competence awareness, and not least company involvement in education programmes.’

*Poul Nielsen
Vice Dean for Education
The Faculty of Science*

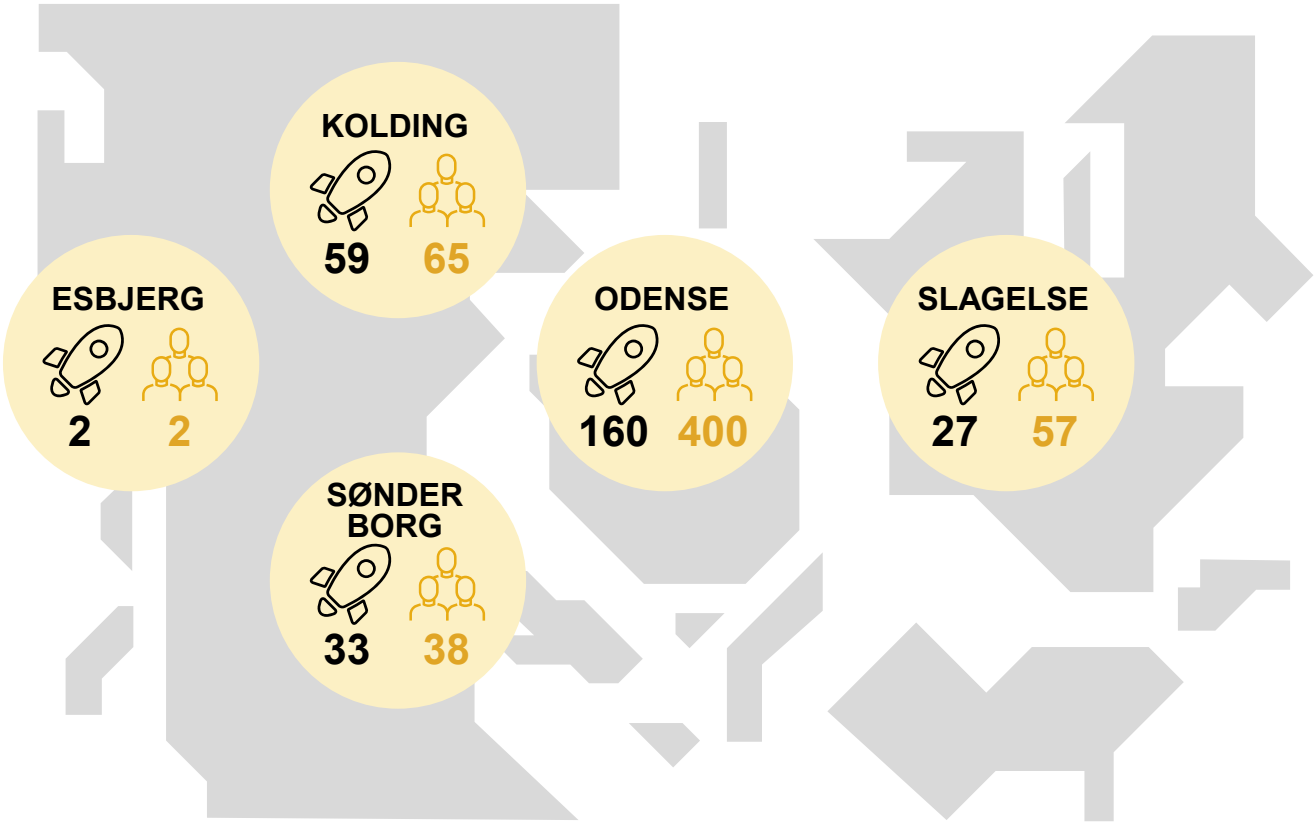
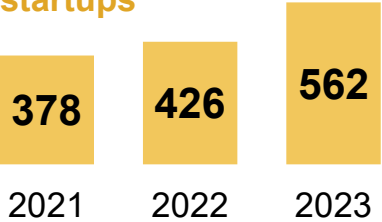
Increasing interest in SDU Startup Station



Active startups
in total*



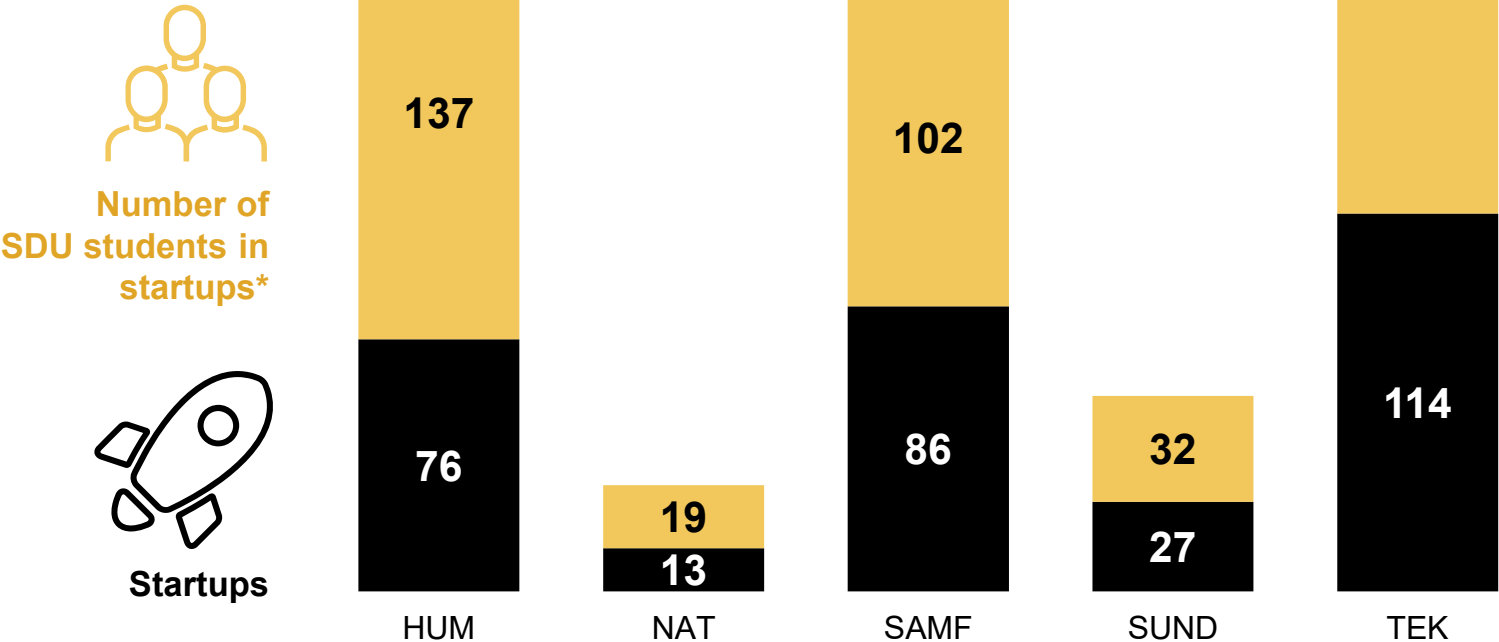
Active people
affiliated with
startups*



**Startups are created across cities, faculties and students. A startup can be represented in more than one city but is only counted in the total number once. Students can join multiple startups, but they are only included in the total number of active people once. The figures represent startups that had access to Startup Station in the course of the year.*

Active startups and affiliated students per faculty

The term startups is used to describe teams or individuals who are working on starting their own business and thus includes startups with and without CVR registration and turnover.



* Out of the total of 562 active people in startups, 487 are SDU students.

External funding and turnover of startups

Funding

2023 **16.3 DKK mio.**

2022 **16.5 DKK mio.**

Turnover

2023 **13.6 DKK mio.**

2022 **7.5 DKK mio**

Accumulated on active startups*

Accumulated funding

2023 **45.9 DKK mio.**

2022 **30.6 DKK mio.**

Accumulated turnover

2023 **24.3 DKK mio.**

2022 **13.9 DKK mio.**

**The 2023 figures are for the startups that had access to Startup Station in the course of the year as of 31/12/2023. I.e. accumulated funding raised and realised turnover during the entire lifespan of 281 active startups in 2023*

Students develop innovative skills

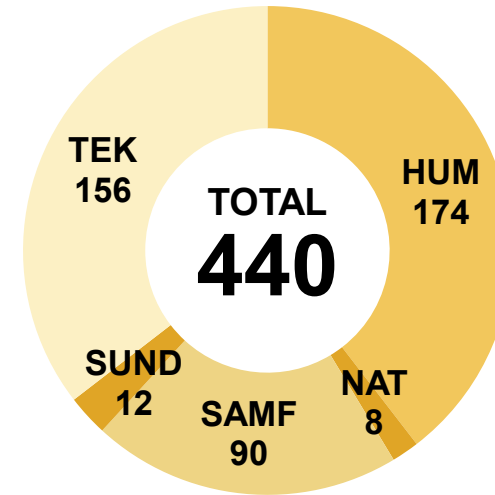
In MakerSpace and MakerLab, students from all study programmes can develop skills in design thinking and prototype development

The workspaces in Odense and Kolding play a central role in SDU Startup Station, offering workshops in the academic environments, practical courses and free access, so that ideas can be turned into reality.

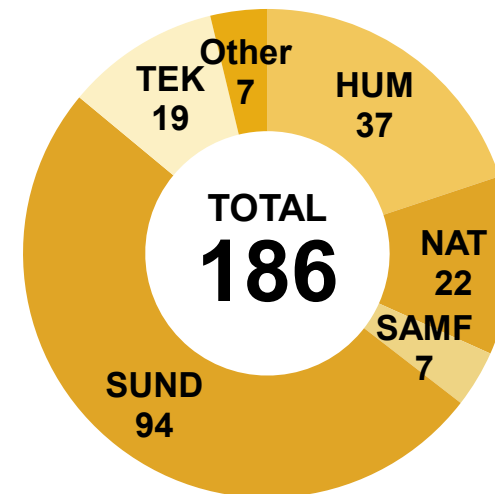
Examples:

- The Civil Engineering programme used MakerSpace in the course 'Digital Fabrication Fundamentals'.
- General Business Economics (Business Administration) boosted an entrepreneurship and business understanding course through a series of workshops with MakerLab.

Students who participated in workshops in 2023



Number of new unique users in 2023



A university of innovation: Students as entrepreneurs

Student startups from SDU Startup Station reap great honours and awards, marking SDU as one of the leading universities in Denmark in terms of student entrepreneurship.

In terms of awards and honours, 2023 was another great year for startups from SDU Startup Station.

- **HumAid** returned to the World Cup for Startups and won for the second year in a row – this time in the more mature category of Social Growth.
- **Mewalii** convincingly won the grand prize of DKK 250,000 at Odense's new sustainability event.
- **EcoVise** won the award in its category at Odin Awards at this year's Ignite event.

Startup Night 2023 celebrated the young, mature and recently graduated startups. Some of 'our own' were awarded the top prizes:

- **ARIS Robotics** won the SDU Climate Hero award
- **Nordic Phantoms** won the SDU Society Hero award
- **Ocean Wide SeaWeed** named Best Startup.

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‘SDU Startup Station was a great help to us and a crucial factor in getting us started. Among other things, we received help with business development and applying for funding, which ultimately enabled us to fully focus on our business. Knowing that we always had support and a network gave us security and has enabled us to focus on pursuing our goals.’

*Ann-Mia Ambjerg
Co-founder, CCO, ARIS Robotics*



Collaboration

Innovative force

that builds bridges

The year in brief:

- 32 reports of new inventions
- 12 commercialisation agreements, 1 spin-out
- DKK 26 million in soft funding secured
- 3,204 legal cases
- 1,350 collaboration agreements

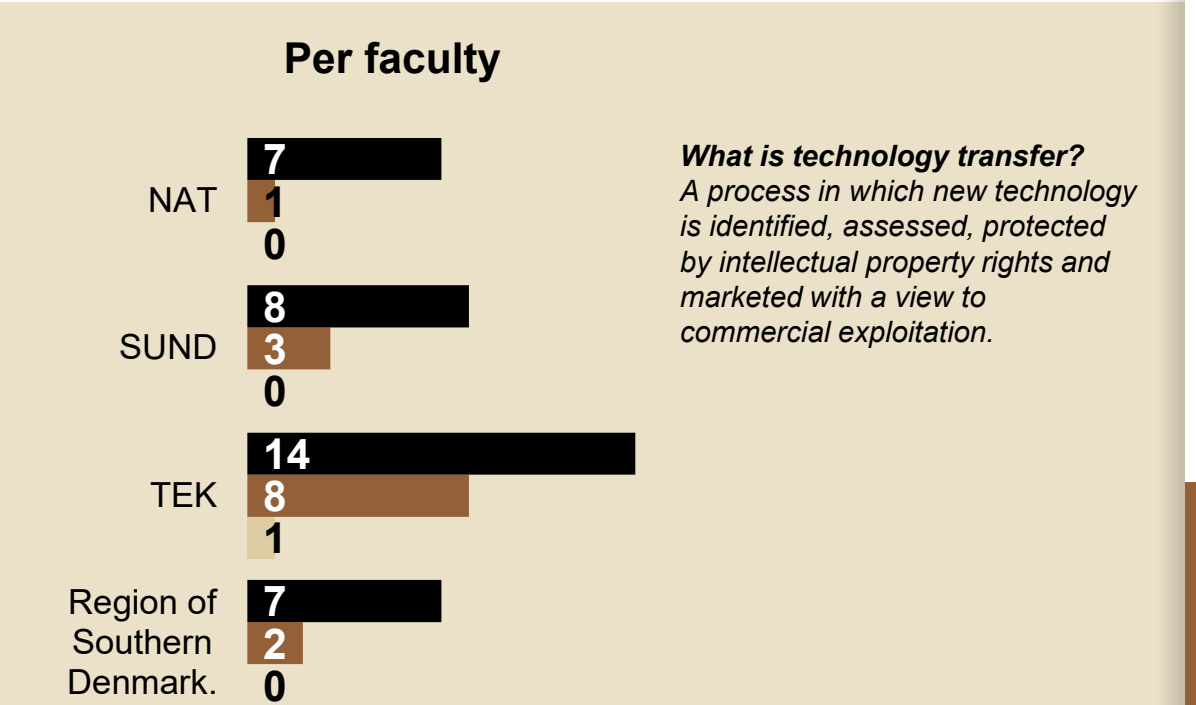
Cases

- Industry profiles help new spinouts
- Unique organisation helps researchers
- Legal counselling is more than research services
- Collaboration on digitalised case management

Commercialisation of inventions and technologies

	2019	2020	2021	2022	2023
Reports of new inventions	28	37	24	28	32
Commercialisation agreements	10	7	13	11	12
Spin-outs	5	4	3	2	1

The indicators follow definitions from Universities Denmark's Commercialisation Statistics 2023



*Some inventions, agreements or spin-outs are cross-faculty.
The individual unit figures may therefore be larger than the total for SDU as a whole.
There has been no activity at SAMF and HUM in 2023.

Soft funding helps researchers progress from an early stage

In 2023, RIO, in collaboration with SDU's researchers, secured a total of DKK 26 mio. in soft funding from foundations, programmes and companies for commercialisation purposes.

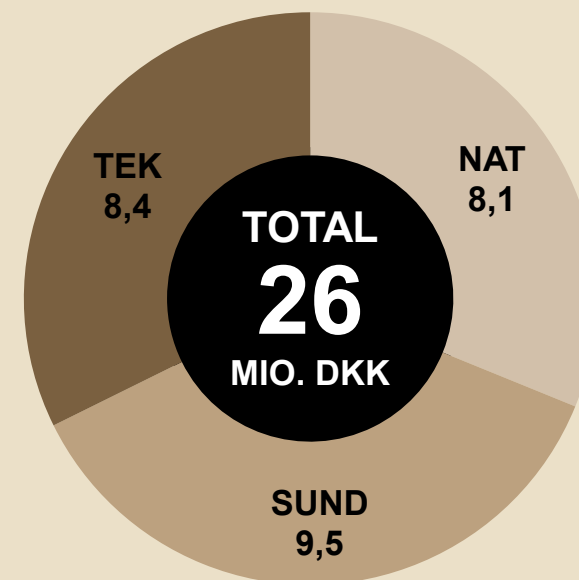
- Soft funding is often crucial for creating successful commercial projects in the early stage.
- Therefore, RIO is working to raise awareness of soft funding, so that more researchers can benefit from the funds.
- Professor Brage Storstein Andresen is one of the researchers who has worked with RIO to raise funds for the further development of his research project.

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‘Through close collaboration and a huge joint effort, we have succeeded in raising money for the project several times. This opens a lot of opportunities, even though we’re at an early stage. In addition to adding value to the research we have also been considering the next steps in the process so that we can eventually establish a company.’

*Brage Storstein Andresen
Professor
Department of Biochemistry and
Molecular Biology*

Total soft funding at SDU and per faculty in 2023



Soft funding is characterised by the fact that the grant is typically awarded at an early stage of development, as a proof of concept of the research project, with no repayment or ownership requirements.

Strong profiles from the industry help new spin-outs

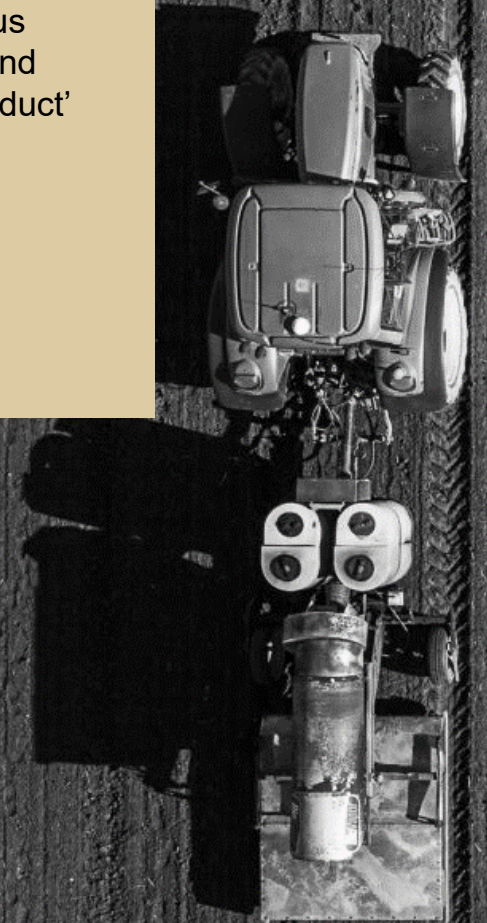
In 2023, RIO developed a new programme, Entrepreneur-in-Residence, to strengthen the transition from research to business.

- The aim of Entrepreneur-in-Residence is to match private entrepreneurs with future spin-outs from SDU.
- The private profiles don't know much about research. But they do know how to build a business and get on the market faster.
- In collaboration with RIO, entrepreneur Nick Laursen has therefore initiated a collaboration with Professor Henrik Karring and Assistant Professor Simon Svane from the Department of Green Technology.
- The two researchers are developing a product that limits the formation of ammonia, methane and odour from pig slurry.
- As Entrepreneur-in-Residence, Nick Laursen will help realise the great potential that the invention has within the green transition in agriculture. Henrik Karring and Simon Svane contribute with the science behind the technology and by further developing and optimising future products.

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‘We are delighted to have started working with Nick Laursen. He will help us establish a business and commercialise our product’

*Henrik Karring
Professor
Department of Green
Technology*



Unique organisation helps entrepreneurial researchers

SDU's subsidiary Science Ventures Denmark (SVD) makes it possible to develop and found companies based on research results from SDU.

- The use of SVD as an active holding and investment company is unique in Denmark and of great value to SDU's entrepreneurial researchers.
- Through SVD, SDU engages in projects and companies that SDU would not otherwise be authorised to do.
- As a company, SVD can apply for several different types of funding for the further development collaboration between the newly founded spin-out and SDU.
- SVD works closely with RIO, which uses SVD to establish spin-outs that investors and companies can invest in and collaborate with.
- In addition to investing money directly in new spin-outs, SVD can also help with company formation and can provide professional management and board members for the company.
- SDU usually founds two to four spin-outs per year via SVD.

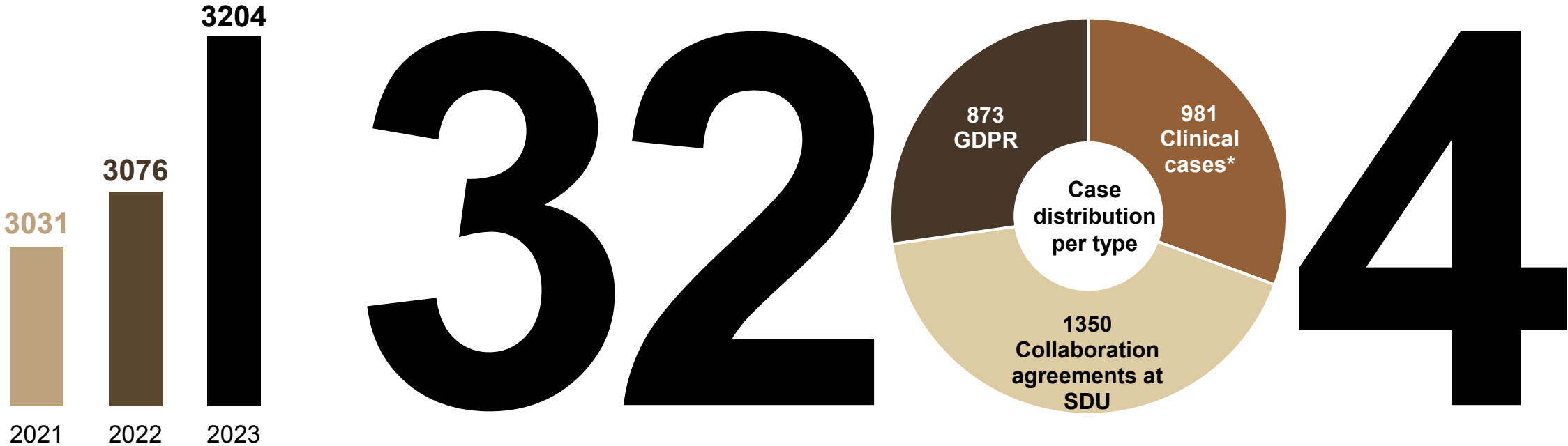
9 DKK million

CellCap Solution is one example of a newly founded spin-out, which secured a DKK 9 million investment from Salling Fondene in 2023 via SVD. A foundation that does not typically provide funding to a single researcher, but where the organisation of SVD has made it possible to apply for this type of softfunding.

CellCap is the result of a collaboration between a researcher at the Department of Molecular Medicine, the Danish Cancer Society and a doctor at Herlev Hospital.

Continued increase in the amount of legal cases

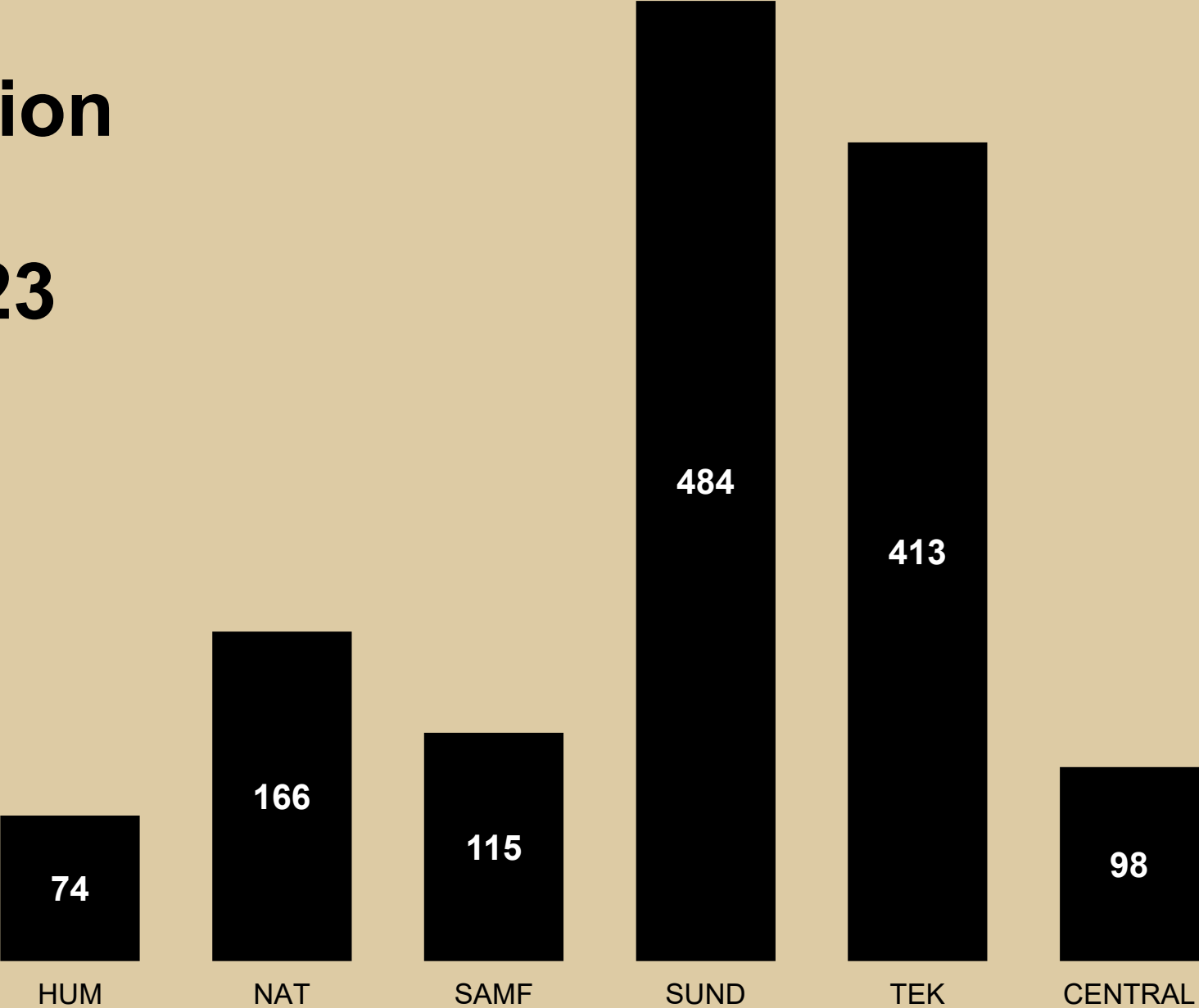
– and more people are seeking legal counselling where no actual cases are created



* Region of Southern Denmark and Region Zealand

SDU’s collaboration agreements per faculty in 2023

**Some cases involve multiple faculties, which is why the individual unit figures listed are larger than the total for SDU as a whole.*



Legal counselling is more than just services for researchers

Every year, RIO helps researchers in thousands of cases. But they also help in many different projects and cases across SDU.

- In 2022, Maersk granted funds for the construction of the new Centre for Large Structure Production (LSP). It is expected to be ready for use at the Port of Odense in 2025.
- It is a complex project with many different legal issues. That is why RIO has been involved as a legal consultant for the Faculty of Engineering and Technical Services, which are responsible for the construction.

RIO has provided counselling:

- In connection with construction contract negotiations regarding agreements, terms and conditions, and contracts.
- Regarding the terms of the lease agreement between SDU and the Port of Odense, which owns the site where LSP is being built.

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‘In general, there is no doubt that the strengthened collaboration with Legal Services has ensured a better foundation for our contractual terms. The fact that the legal basis is under control means that we can concentrate on our core competences in connection with construction, lease agreements, major procurement contracts, etc. This creates value not only for Technical Services, but also for SDU as a whole.’

*Henrik Mørkenborg Ravn
Head of Division
Technical Services*

Collaboration on efficient and digitalised case management

Over the past year, RIO has been testing part of the new WorkZone journalizing and case management system. The test period is meant to ensure that the rest of SDU's users will experience fewer problems when SDU switches to WorkZone.

WorkZone - in brief

- The WorkZone collaboration is part of the process of digitalising and automating SDU's systems.
 - The transition to WorkZone means that journalizing and case management is done in one system.
 - I will make it easier and more efficient to create, archive and retrieve cases. It also allows you to get an overview and pull statistics.
- The testing period has aimed to make the system ready for operation at the University in 2024. This has required close collaboration with, among others, Programme Manager Thomas Friis Gjesing from SDU Digital.

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‘Overall, we have made good progress with Workzone, even though we have occasionally had to build the car while driving it. Despite challenges along the way, we have had a good and constructive collaboration and dialogue throughout the process.’

*Thomas Friis Gjesing
Programme Manager
SDU Digital*

The year in brief: RI Council

The RI Council is SDU's research and innovation council

2023 has seen many and valuable discussions between the RI Council and the different areas of RIO. The focus areas have included discussions on:

- Development and realisation of:
 - SDU's strategy for external research funding
 - SDU's joint Research Support Hub
 - SDU Research Academy
- Best practice for recruitment and talent development
- Roadmap for research infrastructure
- International collaboration
- SDU Research Ethics Committee
- Ambitions for SDU Business School
- Innovation and external collaboration
- Collaboration across the researcher support services
- Open Science
- ... and more topics of common interest



Members of the RI Council

Dean Henrik Bindslev (Chair)

HUM: Head of Department Per Krogh Hansen

NAT: Head of Department Jakob Møller-Jensen

SAMF: Vice Dean Kristin B. Munksgaard

SUND: Vice Dean Uffe Holmskov

TEK: Head of Department Kasper Hallenborg

REC: Head of Department Kirsten Ohm Kyvik

University Director Thomas Buchvald Vind

SDU RIO: Head Søren E. Frandsen

The collaboration is already off to a good start in 2024

/ Sønderborg Municipality: The university as the hub of entrepreneurship

/ MedTech: The SDU-OUH innovation centre of the future

/ Guidance of younger researchers

/ Collaboration on Cand. Merc on education-related practice involvement

/ SDU's Internationalisation Project

/ Yerun - digitalisation project across 23 universities

/ Implementing research and information security

/ Entrepreneurship in Esbjerg

/ WorkZone – new workflows in the legal area

/ ... and many other projects



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