

# DANISH TECH CHALLENGE

DTC Magazine 20/21

## EMIL NORUP

*Last year's winner is scaling up and focusing on electric bikes with a built-in locking system*

### **Former participants**

*The highs and lows from six years as a startup*

### **Investing**

*Return on investment is all about the right team*



## LEARN FROM OTHERS

The DTC Magazine has asked participants from each former year since 2014 about their challenges and learnings along the way.

## DANISH TECH CHALLENGE IN NUMBERS

Get a quick overview of the DTC accelerator programme with numbers from the latest report.

# 18

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### MAY WE PRESENT ...

Get to know all of this year's 20 participants in their own words.

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## THE ORGANISERS BEHIND DTC ARE LOOKING TO IMPROVE THE ECO SYSTEM

Funding is one of the hardest challenges when working with deep tech, and although funding has become easier, the CEOs behind Danish Tech Challenge spot room for improvements.



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## PENTALOCK IS HEADING FOR THE MARKET

Last year's winner is taking on mass production of its unique locking system for bikes.



## The bridge builder 10

When investing in strong teams, investor Kathrine Stampe Andersen is looking to bridge the corporate world with deep tech entrepreneurs.

## THE DANISH INDUSTRY FOUNDATION

An independent private foundation aiming at strengthening the competitiveness of the Danish industry. The foundation initiates projects focusing on topics such as entrepreneurship, innovation, and internationalisation.

## DTU SCIENCE PARK

Denmark's leading deep tech community where startups as well as established companies develop and become businesses. Together with the Danish Industry Foundation, DTU Science Park organises Danish Tech Challenge, Denmark's only hardware accelerator.



# THERE'S NO SUCH THING AS A FREE LUNCH

Danish Tech Challenge participants spend around 30–50 per cent of their time looking for funding in one way or another. The ecosystem around hardware startups is getting stronger and bigger all the time, but there is also room for improvement, the CEOs behind the programme believe.

TEXT BY JULIE RING-HANSEN HOLT  
PHOTO BY RICKY JOHN MOLLOY

Becoming an entrepreneur within hardware and deep tech is a long and complex process that requires funding over a longer period of time than software, for example. But there is generally a greater willingness to take risks in investing in precisely this type of startup here in Denmark, as the organisers behind the Danish Tech Challenge believe.

"A lot has changed over the years. Now, more capital is available to these early-stage companies. Events, initiatives, and TV shows have stimulated a broader interest, and it is no longer only the rich who invest," says CEO of the Danish Industry Foundation Thomas Hofman-Bang. Together with DTU Science Park, the foundation is behind the Danish Tech Challenge (DTC). CEO of DTU Science Park, Steen Donner, also believes that the willingness to take risks stems from the fact that programmes such as the DTC are beginning to make an impact.

"There is a great interest when we host pitch events for investors, as they know that a lot of work goes into these cases, and the fundamentals are in order," he says.

### Bigger feeding channels for DTC

The ecosystem surrounding deep tech entrepreneurs is being strengthened all the time, and Thomas Hofman-Bang points out that feeding channels for the Danish Tech Challenge – such as the Open Entrepreneurship initiative, where the universities' knowledge is brought into play and commercialised, and Skylab at DTU, which has just been expanded – are helping to reinforce the interfaces and collaboration.

"These initiatives mean that, when we're sitting here in three years' time, we will have an even greater feeding channel for a programme such as DTC," says the Foundation CEO.

Steen Donner also observes that the ecosystem has become larger in general, and more people want to start a business and make a potential career out of it. So now, according to the CEO, it is about not changing too much of what works but doing more of the same thing. But he also has something new up his sleeve:

"We're attempting to strengthen the alumni network, and so we would like to combine the Danish Tech Challenge with another project, Deep Tech Alliance, on which we're also working together with the Danish Industry Foundation. We are involved in collaborative alliances with different partners in Europe, and it could be a good idea to bring these into play for some of the DTC participants."

### An elimination race

During the course of the DTC, participants have their entire business section strengthened, and are also trained to pitch to investors. But funding is often found to be the most difficult element for the companies, because prototypes, tests and the like

are an expensive and long-winded affair, and money frequently has to be raised. In the most recent annual report for the Danish Tech Challenge, alumni participants responded that they spend 30–50 per cent of their time procuring funding.

"Venture capital and willingness to invest have always been the challenge. This is also the case in Silicon Valley – and so it should be, because it's an elimination race," says Thomas Hofman-Bang.

"But a lot has been done with public and private funding sources. And there are many good accelerators, where the Danish Industry Foundation is supporting the creation of good conditions, to make the barriers more palatable for all parties," he says.

Steen Donner believes, as a starting point, that the newly established deep tech companies spend too much time on funding, but that they cope nevertheless.

"If they spend so much time on funding, they risk having a low valuation, and when raising money a little at a time, they soon have to start again on a new round of investment," he says.

However, it has not been totally impossible for the still-existing 106 companies that have participated in the DTC programme to raise money, as the DTU Science Park CEO points out.

"They have raised two billion Danish kroner in total. Part of the explanation is, of course, that some of the first companies have started to raise quite a lot of money, but this shows that all companies are on the right path," emphasises Steen Donner.

### Forget the unicorns

The area where Steen Donner believes the ecosystem needs to be strengthened is when startup companies that have come a little further in life and have to be scaled. Larger amounts are needed here, and the CEO believes there is a lack of venture capitalists with a focus on deep tech – those who don't just chase unicorns.

"We're not determined to create unicorns. On the other hand, we're capable of creating a broader portfolio of small and medium-sized companies," he says.

"If you only look for the company that takes off, you miss a huge number of solid companies, and I think it would be a shame for Denmark if we missed out on a company that has 400 employees, for example, and a turnover of a billion Danish kroner, although a venture capitalist would typically steer away from it," says Steen Donner, who believes that a fund is needed that is able to provide support at the time when the companies are lacking 15 or 20 million Danish kroner at a time.

Thomas Hofman-Bang agrees.

"This is the reason we started the Danish Tech Challenge in the first place: Because there is a need for extra help in the deep tech and hardware area, where scaling is only harder and more complex." ■



Steen Donner  
CEO, DTU Science Park

Thomas Hofman-Bang  
CEO, Danish Industry Foundation

# FROM 8 TO 0.7 SECONDS IN FOUR YEARS

After eight or nine iterations, last year's winner is now ready to scale up production to let the first bicycles with their built-in lock system get on the street.

**TEXT BY** JULIE RING-HANSEN HOLT  
**PHOTO BY** RASMUS DEGNBOL

If Emil Norup and Thomas Martin Jessen were allowed, they would keep developing perpetually, because that is what they love about their work. However, they have reached the point where their product – with which they won the Danish Tech Challenge – is ready for production and sale.

“We have locked the design for now and expect to have the first bikes on the street in the spring of 2021,” says Emil Norup, CEO of PentaLock.

The company has developed a bike lock that requires neither large biceps to carry it around nor a key that may get lost, because it is integrated into the frame. PentaLock has spent the past two to three years optimising the mechanism and maturing the product, which they have so far been able to produce in small numbers in Randers. However, the young company is now seriously working on scaling up and initiating production in China.

“After we got new investors this year, we decided to shift focus, so now we have full focus on electric bikes. It is a fast-developing segment and is at a price level where it pays to incorporate our solution,” Emil Norup says.

“OUR AMBITION IS TO HAVE IT APPROVED AS A STANDARD LOCK SO IT WILL AT LEAST BE IN ALL MIDDLE-CLASS BIKES - AND PREFERABLY IN ALL OF EUROPE





Emil Norup  
CEO and co-founder  
Thomas Martin Jessen  
CTO and co-founder



### 'Used to' is dead

PentaLock's lock system is integrated between the pedals and is not a unit the consumers can install themselves. Therefore, PentaLock is a sub-supplier to the bike producers, who are to build the lock into the frame.

However, since the bike industry is rather conservative, the most difficult thing for Emil Norup personally has been having to force a restructuring of the trade while being met by an 'it is easier to do what we have always done'. However, in general, the industry has delivered useful feedback for Pentalock to build on. And to create cooperation with bike producers, last year's winner has tried both to enable integration of the lock easily and at low cost, and also expended great effort on the end-user experience. The starting point is to make locking your bike as painless as possible. Therefore, PentaLock has brought in inspiration from the car industry, which has made great strides compared with the bicycle industry.

"No one finds it odd to use a remote control to lock a car, and this is what we have replicated," Emil Norup explains regarding the remote control that has ended up being the key to the locking system.

As participants in the development process, the entrepreneurs have also included a former bike thief, who, among other things, has been able to tell them how easy it is to cut a lock. In addition, the former bike thief told them that it would stop him if he could not resell the bike, because then it would not be worth the trouble. PentaLock has used this knowledge to a bike lock that no bike thief can unlock without precluding resale.

### Surrounded by scepticism

In 2016, the two students from Aalborg University initiated a master's thesis project about a bike lock that

no bike thief could circumvent. This was in spite of the fact that they faced a certain amount of scepticism and claims that it could not be done. But this scepticism only whetted Emil Norup and Thomas Martin Jessen's appetite even more, and they both finished their thesis and established a company in 2017. During the first year, the two partners worked on completely redesigning the product so that, among other things, it went from taking eight seconds to unlock the mechanism to the 0.7 seconds it takes today.

Early on in the process, an investor joined them, and in 2018 a bag of money followed, allowing them more peace in their development work.

"There was a lot of learning in that process, because very soon there were demands for responsibility and the operation in general. This has pushed us towards thinking big. For example we would have saved the money instead of applying for a patent, had it not been for the investor," Emil Norup says.

"The point is, that is shouldn't just be an uncle who invests, but someone from the business world who is able to make demands."

Through the following years, the challenges changed over the course of time. After a privileged start with good backup, also from Innovation Fund Denmark, PentaLock entered 2019 without loans or other means of financing and the founders were not paid any salary for a year. That same year, the company participated in Danish Tech Challenge.

"The course of events gave us a break from the development work, and instead we could focus on all the other things around our product: strategy, legal matters, customers and sales. It is easy to get tunnel vision, so the break from the development work was the best thing about DTC," Emil Norup says.

## PEN TA LOCK

Began as a master's thesis  
at the Aalborg University in 2016.

Established as a company  
in 2017.

Patent application  
in April 2018 in Denmark  
with positive feedback;  
sent to the EU,  
the US, China, and Taiwan  
in September 2020.

Won the Danish Tech Challenge  
in 2019

Today it includes:

**Emil Norup**  
CEO and co-founder;  
**Thomas Martin Jessen**  
CTO and co-founder;  
**Nisse Jakob Krenchel**  
Business Development Director;  
**Christian Thomsen**  
Business Developer Scandinavia;  
**Ole Heinrichs**  
Business Developer  
DACH & Benelux;  
**Marie Johannsen**  
Marketing Manager;  
**Hans Jakobsen**  
R&D Developer;  
**Jesper Mortensen**  
Product Engineer;  
**Casper Knudsen**  
Software Engineer.

Winning the Danish Tech Challenge came with half a million Danish kroner in prize money to the company. After that, PentaLock managed to raise six million Danish kroner in funding and loans and about one million kroner in soft funding.

### Boosting each other

Along the way, there have been times when the two entrepreneurs did not believe at all that their project was feasible; for example, when they encountered greater challenges such as insurance issues.

"No test for our product exists, so it cannot be approved, because it is an entirely new system. Fortunately, we have enjoyed good cooperation with an insurance company, which gave us good feedback," Emil Norup tells us.

With scepticism from all directions ever since the time of the master's thesis, Emil Norup and Thomas Martin Jessen might have given up a hundred times along the way.

"But we work so well together that we can boost each other and solve the problems. If I had been working alone, I would have given up a lot of times, so one of the most important things about being an entrepreneur is the team," the CEO says.

"Creating a deep tech product is not all roses. I have pitched a lot of times without getting any money and have had months without pay. You just have to forget the cumbersome things, or you won't get over the next hill."

### An extra run through the wringer

Now that the next step is setting up production in China, this also means a new step in the business. The startup phase has required more competences in

the team – including extra production know-how – and a phase has been entered where production methods and components have had another run through the wringer, because it is necessary to produce the lock at a lower cost.

"We have made reductions in the parts and looked for cheaper standard components, and we have also taken a look at production methods. We started out with CNC-processed parts, but now we have changed to injection moulding and the like, which has led to changes in the design," says Emil Norup, who, in addition to setting up the production, is also working on sales and marketing, where the company has already now started expanding its team and still requires new competences.

The first batch from China will consist of 1,000–2,000 lock units for PentaLock to test with a bike producer. After that, it will be easy to increase the numbers.

Obviously, the coronavirus epidemic has stood in the way of expanding production, and Emil Norup and the rest of the team have had to draw on investors and networks, who themselves operate in China.

"However, we will have to go to Hong Kong several times in the near future, and will also need a employee there," he says.

According to the CEO, it takes about ten years to replace all bikes on the market, and Emil Norup is not so naive that he thinks PentaLock locks will be mounted in the entire new fleet.

"Our ambition is to have it approved as a standard lock so it will at least be in all middle-class bikes – and preferably in all of Europe," the CEO states with a smile. ■

# INVESTING IN PEOPLE WITH FIRE IN THEIR EYES

SHE HAILS FROM THE ESTABLISHED CORPORATE BUSINESS WORLD HERSELF, BUT HAS A SOFT SPOT FOR HARDWARE STARTUPS, WHICH IN HER EYES CAN REALLY MAKE A DIFFERENCE IN THIS WORLD. THAT'S WHY KATHRINE STAMPE ANDERSEN HAS INVESTED IN EVERYTHING FROM AI TO MED TECH.

TEXT BY JULIE RING-HANSEN HOLT  
ILLUSTRATION BY MIA MARIE OVERGAARD

If Kathrine Stampe Andersen is able to build bridges between the large, established companies and startups, this would make her extremely happy.

She belongs to the established corporate world herself, and believes that the two worlds can learn a lot from each other.

"In the startup environment, there are people with fire in their eyes, and they move fast – without having to go through 17 bodies and a governance forum. This is something that large corporate groups can learn a lot from, and I would really like to contribute to giving something back to that ecosystem," says the investor, who also acts as a mentor at DTU Science Park and is a member of the panel of jury for the Danish Tech Challenge semifinals.

As an angel investor, she is currently investing in a robot enterprise, an e-commerce firm, a platform technology, artificial intelligence and med tech.

"The most tempting area of investment is software, because that's where the fast money is. But we are being forced to transform Europe within the framework of sustainability, health and so on, and we won't get there without developing hardware," she maintains.

## THE TEAM CLOSSES THE DEAL

Kathrine Stampe Andersen wants to make a difference with her investments. But it's a tough 'game', and the Danish deep tech startups have a lot of competitors.

"As an investor, you need to strike the ball the right way. But once you do, you can really make a difference," she says.

Striking the ball the right way requires hard work on the part of the entrepreneur, and Kathrine Stampe Andersen never invests until the startup has entered into proper agreements, established commercial work streams, and received initial funding from the right persons.

When the young company has thus awoken the angel investor in her, it's the team behind it that 'closes the deal'.

"The people I invest in are people who have risked everything and opted out of a comfortable life with a detached house, a dog and a stable income," she explains.

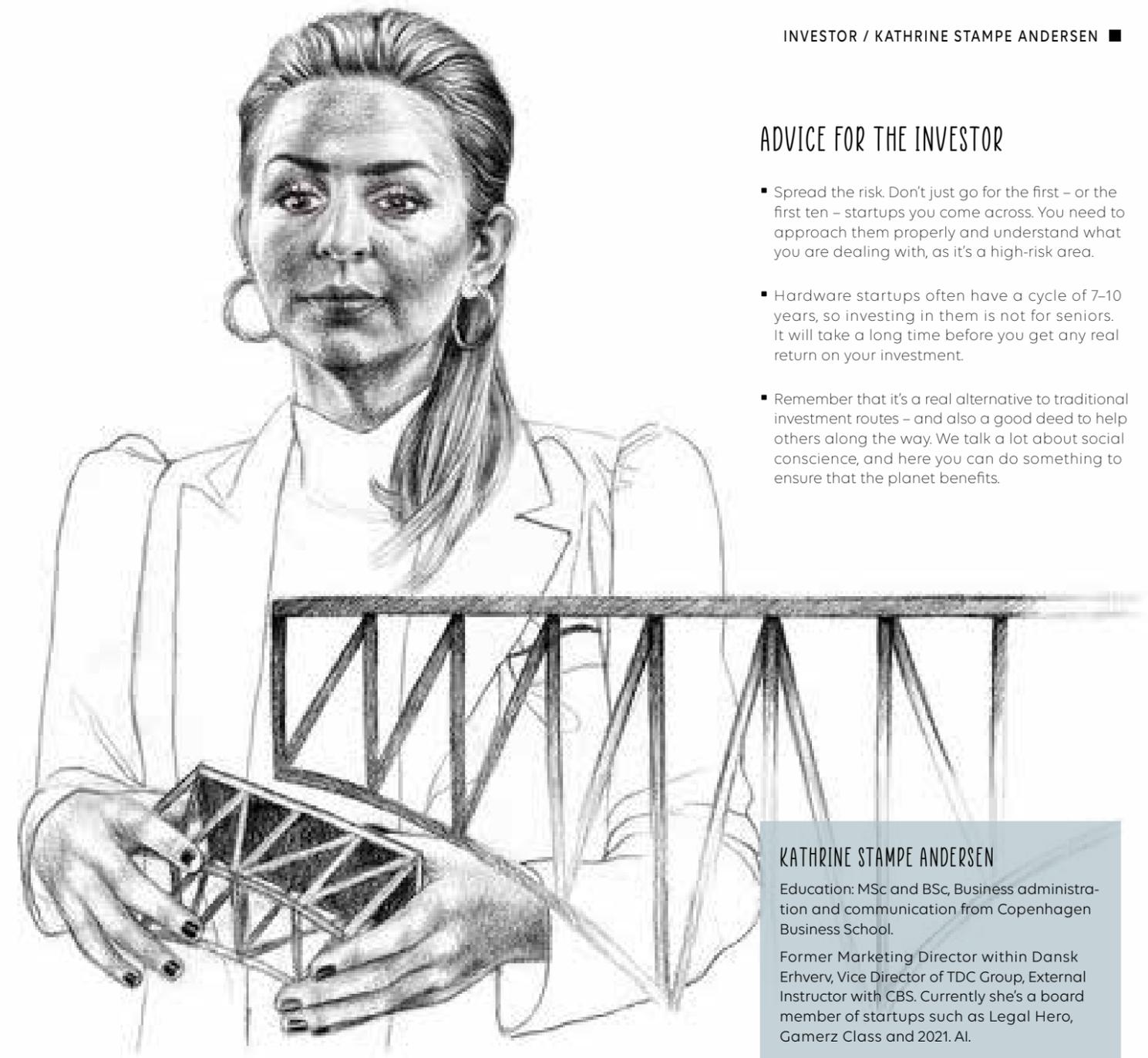
This is because the right people go the extra mile, according to the investor, and have a

determination that ensures their project is a success. Kathrine Stampe Andersen therefore spends a long time conducting conversations with the teams she is considering investing in, and she also obtains references and tests them out with scenarios that put pressure on them.

"The founder team has to have the capability and the desire to succeed, and you have to agree with them on what kind of activity they are involved with," she says.

But she also insists – perhaps a little controversially, she admits – that the people should be healthy.

"I find out whether they have a stable background, practise sport, and whether they respond to emails 24/7 or are able to switch off the computer. They need to keep going for many years, and they can't do that if they rush ahead at 200 kilometres an hour."



## KATHRINE STAMPE ANDERSEN

Education: MSc and BSc, Business administration and communication from Copenhagen Business School.

Former Marketing Director within Dansk Erhverv, Vice Director of TDC Group, External Instructor with CBS. Currently she's a board member of startups such as Legal Hero, Gamerz Class and 2021. AI.

## ADVICE FOR THE INVESTOR

- Spread the risk. Don't just go for the first – or the first ten – startups you come across. You need to approach them properly and understand what you are dealing with, as it's a high-risk area.
- Hardware startups often have a cycle of 7–10 years, so investing in them is not for seniors. It will take a long time before you get any real return on your investment.
- Remember that it's a real alternative to traditional investment routes – and also a good deed to help others along the way. We talk a lot about social conscience, and here you can do something to ensure that the planet benefits.

If a startup is lucky enough to have Kathrine Stampe Andersen on board, she can contribute in return, with her knowledge and experience of what stages entrepreneurs need to go through to scale, and often knows the customers they need to approach.

"I can take the founders by the hand on the journey of scaling."

## DIGGING IN POCKETS

Although there is an increasing interest in investing in hardware, which has prompted more 'regular' people to invest, it is not an easy exercise, as Kathrine Stampe Andersen points out.

"You need to be careful, it's not the Dragon's Den. You risk your money and often have to dig into your pockets several times along the way. Most people – including myself – have made mistakes, and you need to be able to afford to do so," she recommends.

If she has got her fingers burnt herself, it's because her due diligence regarding the founder team was not in place, she says.

"In the unbearably clear light of wisdom, I later realised that I fell in love with the project or the technology, and was therefore careless with the assessment," she explains, and compares it to being pregnant.

"There are a great many things that have to run flawlessly in parallel from the start, for a child to come out of it."

Fortunately, it's not all that rare for a 'child' to come into the world, and Kathrine Stampe Andersen is proud of the entrepreneur environment she experiences in Denmark.

"Each time I come into contact with the young entrepreneurial companies, I see a great many solutions that look towards the future in a healthy way – and help to pull Europe in a direction we can be proud of." ■

# MEET PARTICIPANTS FROM THE PROGRAMME'S FIRST SIX YEARS

## LISTED WITHOUT A PRODUCT

After more than six years, Audientes is ready with a self-fitting hearing aid after its stock exchange listing and consequent capital injection of DKK 40 million.

TEXT BY JULIE RING-HANSEN HOLT

Audientes is a first mover in terms of the Danish Tech Challenge. The startup participated in the very first DTC, but still does not have a product on the market, which accurately encapsulates what DTC is all about.

"It is widely recognised that tech hardware development takes time, and we have been met with great understanding for this, which means that it is the idea and the future value creation that people have invested in," CEO Steen Thygesen explains regarding the money injection, that the company recently obtained by means of the listing in September.

"It makes a huge difference that we now have the capital for the many aspects involved in going from developing to selling and marketing the product – sales, e-commerce, building elements of the business that makes that possible, etc. – and now we have received DKK 40 million to do exactly that," says Steen Thygesen, who believes that the company would have gone on to crowd-funding if the listing had not become a reality.

### Modern design wanted

The idea leading up to listing was to make smart, high-quality hearing aids accessible and affordable to everyone who needs them. According to Audientes, 500 million people suffer from disabling hearing loss today. By 2050, that number is expected to reach 900 million.

This shows that the market is big, and although coronavirus initially made investors a little nervous about the situation, the epidemic has also created additional interest as ear specialists and clinics have shut down.

Over the years, the concept of Audientes' product has evolved from initially being a hand-held device or a device, carried in the pocket with a cord to the ear, to being a brace that rests behind the neck.

"We visited India to test the idea and explore the market. We found that they wanted a more modern design because our concept was too close to existing so-called 'pocket hearing aids', which are quite widespread in the lower end of the market," Steen Thygesen says. Therefore, the company landed on the current design and is currently waiting for the prototype, which should most likely go into production in 2021. Meanwhile, the IPO has also helped prepare an FDA approval for the US market.

"There is a market of about 25 million Americans that we are able to help, and together with the new economies in Asia, for instance, the potential is really big," he says.

### Sale before investment

When Steen Thygesen and founder Hossein Jelveh look back, the biggest hurdle has been going from investments from potential angel

PARTICIPANT 2014 / AUDIENTES ■



### 2014 | AUDIENTES

- **Founded in 2014**
- **Is making high-quality and affordable self-fitting hearing aids accessible by everyone**
- **Company:**  
Hossein Jelveh, founder and CTO  
Steen Thygesen, CEO  
Catherine Conlon, CMO  
+ 6 employees within operations, wholesale, online sales, design and development

investors and the former Markedsmodningsfonden to raising enough capital to test and manufacture a final product.

"We have been met many times with a, "We want to invest but would like to see a sale first", It would probably have been easier if we had been located in Silicon Valley, where there are more risk-averse investors with deeper pockets," he says. He draws a comparison with Eargo from Silicon Valley, one of Audientes' fellow innovators in the field of new hearing solutions, who raised around DKK 2.5 billion since being founded at the same time as Audientes.

"But we have done it in a sensible way without quickly throwing away many millions – which you may call the Danish method."

With the listing, Audientes gained nearly 2,800 new investors and was even oversubscribed by 89 percent, which strengthens Steen Thygesen's belief in the fact that they still have a "super" idea.

"In Denmark, you may say that it is crucial to be persistent and be able to operate in calm waters, where you drive with a moderate expenditure base and still move forward," he says. ■

## TIME TO FACE THE SALES

Fluidan has launched a measuring device that automates quality control of liquids online in the production of paints, lotions and chocolates. But as Fluidan has acknowledged, the device does not sell itself.

TEXT BY JULIE RING-HANSEN HOLT

Right now, Fluidan is in the midst of the most difficult period for a startup: Selling the product.

"You think the whole world wants your product, and then it turns out to be harder to sell than you expected," CEO Anders Landeira Østergård acknowledges.

Fluidan has developed measuring equipment for measuring viscosity online in the production process. With the existing process, you sample the liquid to measure it manually and then go back to mixing, for example, paint – and maybe you need to repeat the process two or three times before achieving the desired result. Fluidan's measuring device, RheoStream, has its natural use in paint manufacturing, but the company has also sold to manufacturers of liquid detergents and lotions.

"Right now, we are looking into the chocolate production. Chocolate is available in many different varieties, and viscosity means a lot in terms of the end result," Anders L. Østergård says.

### A perfect match

He himself has worked as a chemical engineer and in sales, marketing and innovation for 30 years at companies like Novozymes and Dupont, and has always had an entrepreneurial dream.

But not the right idea.

Then, six and a half years ago, he met Fridolin Okkels, who worked with liquids at DTU and had the idea for automated viscosity analysis – and their dreams and ideas matched.

The first investment came in January 2015. Later that year, Fluidan participated in the Danish Tech Challenge, where the startup mainly used the process to sharpen the business and launch an investor round.

"We got a huge boost in terms of presenting ourselves properly. We have been through a couple of investor rounds since and have used the basics of what we learned," says Anders L. Østergård, who will soon set up another investor

round to raise capital to incentivise 20–25 customers to move from testing to actually buying and implementing RheoStream.

The feedback from customers is: "This is what we've been dreaming of!" Therefore, there is no doubt in Anders L. Østergård's mind that Fluidan is on the right track.

"But because of the coronavirus epidemic, we have been delayed by half a year. Our experience is that we have to supervise customers closely for one to two weeks, but now we have to think in other measures and maybe do tests via FaceTime."

"Uncertainty is a norm for a startup, but now that we are so dependent on moving on with customers, it is particularly frustrating," says the CEO.

### Challenges and hard work

Since 2014, one of the biggest challenges along the way has been to be allowed to 'disrupt' by implementing new equipment in an ongoing production – although the measuring equipment will be able to reduce manufacturers' errors and thus save them money.

Another challenge has been reliability, which has required a little more iteration – because the equipment has to 'chew' on liquids all day.

On the whole, it has been a difficult process throughout development, testing together with customers, and testing at the workshop. The process has required a full range of competencies, because according to Anders L. Østergård, you cannot launch a hardware beta version in the same way as with software.

"My advice to other hardware startups is therefore to be focused and work hard. It is fun and challenging, but it also brings many sleepless nights." ■

PARTICIPANT 2015 / FLUIDAN ■



### 2015 | FLUIDAN

- **Founded in 2014**
- **Develops and produces RheoStream for online measurement of viscosity in liquids in manufacturing processes**
- **Company:**  
Anders L. Østergård, CEO  
Fridolin Okkels, CTO  
+ 6 employees within development, customer support and sales

2014

FIRST EDITION OF DANISH TECH CHALLENGE. THE FIRST STARTUPS MOVE IN ON THE 1ST OF SEPTEMBER 2014 IN BUILDING 356 AT CENTRIFUGEVEJ.

2014

FIRST AWARD SHOW IS HELD IN MARKTENDERIET IN VALBY. THE CROWN PRINCE ATTENDS THE SHOW.

2014

DTC MOVES TO ANOTHER FLOOR IN BUILDING 356, BUT THE PARTICIPANTS HAVE TO WAIT TWO DAYS FOR THE FURNITURE.

2015

A NEW SCORING SYSTEM IS INTRODUCED. RED/YELLOW/GREEN ON THE BOARD AND WEEKLY TOPICS

# IN THE LAND BETWEEN TECHNIQUE AND IMAGINATION

Shape Robotics is riding the wave of new technology for class rooms around the world. With a modular robot, the new company has gone public and has become an ‘actual’ company.

TEXT BY JULIE RING-HANSEN HOLT

Schools around the world need to teach with 21st century skills, and Shape Robotics’ bid for a solution is the small robot, Fable, that can bridge the gap between technology and science on the one hand and imagination and ingenuity on the other.

“The robot is built in modules and with programming, which gradually becomes more complicated. Therefore, Fable is suitable for teaching mathematics, physics and English from the third grade of primary school up to the university level. It is easy to use for the inexperienced, but you can also dive deeper if you have coding experience,” CEO David Johan Christensen explains.

The company has today sold the robot system with its associated software to 500 schools worldwide. In 2019, it exported 75 percent of its products, with Russia being the largest market.

## A common vision

The journey began in 2011, when David J. Christensen and Moises Pacheco were employed at DTU as robot researchers in a project together with the Lego company. Soon after, their shared vision of developing an easy-to-use system

for school pupils became a three-year development project. And in 2015, they founded Shape Robotics.

At the end of their participation in the Danish Tech Challenge in 2016, they received their first investment, which was enough to get the product on the market. In mid-2017, this enabled the company to supply Fable to Danish primary and secondary schools, and after the summer holidays the same year, Shape Robotics entered into agreements with international resellers.

“From there, it was primarily about scaling up and developing Fable further into a more integrated product with more modules and more content,” the CEO says.

Following analysis from the board of directors, Shape Robotics chose to go public. In June 2020, the listing went through and added DKK 25 million to the company.

“Where previously we had money for six months at a time, we can now think more long-term,” says David J. Christensen.

But Shape Robotics now also has 1,500 investors instead of five.

“It means we need to be more transparent and outgoing. There has been more structure to the whole thing, and one big advantage is that we do not have to spend our time on talking to new, potential investors all the time,” he says.

## 2016 | SHAPE ROBOTICS

- **Founded in 2015**
- **Delivers a robot system with magnetic modules for school classes from third grade to high school. The robots can be used in teaching e.g. mathematics, physics and English**
- **Company:**  
David J. Christensen, CEO  
Moises Pacheco, CTO  
Steen Lund, CCO  
André Fehr, CFO  
+ 20 employees in sales, marketing, development, purchasing and production

## Sold products as validation

Although Shape Robotics is already established and flying, the company still has contact with Jan Rosenbom from Keystones, who is one of the consultants in the DTC programme, just as they also use one of the previous participants as a consultant.

“The DTC programme gave us a lot of relevant feedback especially about business development and pitching to investors. We benefitted a lot from the whole mindset,” David J. Christensen recalls, and advises new participants and startups to talk as much as possible with potential customers from the beginning.

“Get customers to buy your product as soon as possible, because it is the absolute best validation. We had sold Fable in advance for a few hundred thousand Danish kroner, which enabled us to attract investors, I believe.”

After such a long journey, it may come as a surprise that the startup has not capitulated along the way. But for David J. Christensen, this was not an option.

“We knew that we had a great product that worked. Our customers have been overly excited and willing to pay for it, so it would have been a shame if all the other things, such as supply chain and so on, should knock us out,” he says.

Now that coronavirus has shut down large parts of the school system, Shape Robotics dealers are having a hard time. Therefore, the company has launched a new concept: a tele presence solution. If a pupil is missing school for a longer period, a robot is placed in his seat so that he can follow class online.

“In Denmark alone, 75,000 children are absent for a minimum of one month during a school year, so the need is huge – even after the corona crisis.” ■

# THE MORE THE SUN SHINES, THE BETTER THE BUSINESS CASE

Solar energy is enjoying huge international interest, – therefore, Heliac is now building its second plant, which is going to prove that the teething troubles have been overcome and sales can begin.

TEXT BY JULIE RING-HANSEN HOLT

It all began with structured plastic surfaces for yoghurt – and has now a full-scale solar plant, able to produce 1,600 MWh of district heating annually, covering 20 per cent of the heating consumption in Lendemarke on the island of Moen, where the plant was built.

In cooperation with Arla, Heliac CEO Henrik Pranov at that time developed a method of producing the structured plastic surface in large quantities at another company. In 2014, together with Maria Matchuk, he went on to found Heliac, which would concentrate on developing an alternative to the existing solar panels.

“Our technology is different, in that we need a smaller area to produce the same amount of heat, and we can produce high temperatures – effectively 200–300° C. In addition, it is cheaper in the long run,” Henrik Pranov explains.

Heliac’s goal is to have supply companies as customers, but at the beginning the startup will have to engage in more direct selling, targeting e.g. breweries, paper product factories, and refineries abroad, where there is more sunshine.

## Everything but a niche

According to Henrik Pranov, the decision was made to apply the technology to solar energy because it is so important.

“It is about saving the world,” he says. At the same time, the advantage is that there definitely is a market – if you are technically successful.

“And we are not talking about a niche market. Here we are talking about spending a huge amount of money on the heating market.”

Another flow-on effect is that it has been easier to raise money for the entrepreneurs behind Heliac, because they have not had to explain the importance of their product.

Financing has come from the former Markedsmodningsfonden, the Danish Ministry of Climate, Energy and Utilities, private investors, and now also from a European fund. In total, Heliac has raised about 50 million Danish kroner and is currently speaking with large industrial players about further speeding up the technology.

## Water in 600 contacts

The Lendemarke plant opened in the spring of 2019, after Heliac had spent 18 months finding a farmer willing to sell some land, and applying for permits. The plant was built in cooperation with the energy company E.ON, which has its own district heating plant in the town, so Heliac has a purchaser close by.

With the Lendemarke plant, Heliac should prove that the technology can work on a large scale. Since the opening, the company has taken the time to determine what teething troubles would follow.

“A minor challenge that has cost us a lot of our time is the control electronics. A sub-supplier had chosen a wrong cable, so water ran into all 600 contacts. At first, we thought it was because of a copy part, but after we replaced them all and the originals also rusted, we discovered the failure,” the CEO explains.

Another piece of learning was the lens material itself, which was not as durable as expected.

“So, when we were replacing the contacts, we could also change all the lenses from plastic film to a more weatherproof material,” Henrik Pranov says resignedly. He further points out that things just take longer when you’re developing hardware – especially hardware that must be able to resist all kinds of weather.



## 2017 | HELIAC

- **Founded in 2014**
- **Has developed and built a large-scale solar plant with concentrated sunlight for production of district heating.**
- **Company:**  
Henrik Pranov, CEO  
Maria Matchuk, CTO  
Jakob Jensen, CCO  
+ 14 in development etc.

## Steaming hot technology

The ambition is to build the next plant in North Zealand in the spring-summer of 2021 to demonstrate that the company has overcome its first teething troubles and that the alternative solutions, they have come up with, are working.

“We hope we are ready to deliver commercial plants in the spring of 2022,” says Henrik Pranov, who already feels the demand, although the company has not begun actual sales work yet.

“There are many potential customers who grab hold of us because they want cheap, green energy. They know they have to be green, but there are no solutions for the industrial companies who use steam, for example. So, obviously, there is a huge potential for our technology,” he says. ■



2015

THE PROTOTYPE WORKSHOP IS HEAVILY UPGRADED.

2016

DTC PARTICIPATES IN TECH BBQ IN THE ROYAL DANISH OPERA.

2018

DTC MOVES FROM CENTRIFUGEVEJ TO FUTUREBOX AT ELEKTROVEJ.

2018

THE PARTICIPANTS GO ABROAD ON A FIELD TRIP FOR THE FIRST TIME. THIS TIME TO BERLIN.

# THE RIGHT KIND OF 'DOWN THE DRAIN'

**Measurelet has taken up the fight against cumbersome and time-consuming workflows of measuring urine and faeces in hospital settings, and the young startup has just sold its first scales to Danish hospitals.**

TEXT BY JULIE RING-HANSEN HOLT

Hospitals in Denmark spend DKK 163 million a year on fluid balance measurements alone. The fluid balance relates to measuring what a patient ingests against what the body defecates.

Normally, the patient takes a bedpan to the toilet, after which a nurse carries it carefully down to the room where the measuring equipment is located and weighs the contents. Approximately 15 percent of all patients encounter such a fluid measurement, and each time it takes an average of 13 minutes.

"It is an unhygienic and cumbersome procedure, which is done in much the same way all over the world," nurse, entrepreneur and CEO of Measurelet Marie Lommer Bagger says regarding the reason why she set out to optimise the process.

Together with an engineer, she has developed Measurelet Scale, a user-friendly scale that the patients can operate themselves on the toilet, where the measurement is also taken – resulting in more dignity for the patient and less bedpan balancing for the nurses.

## Scaling down

Before Measurelet participated in the Danish Tech Challenge in 2018, the idea was actually to develop an entire toilet with built-in sensors. But over the course of the process, the entrepreneurs were challenged to solve a part of the problem in the easiest way in order to start testing the need.

"It turned out to be a very good idea. So we decided that the first product should be a special scale that patients could operate themselves, and that stored the data for the

doctors and nurses," Marie L. Bagger says.

This does not mean that the idea behind the toilet model has been rejected or that the development of the scale model has been easy. It has still required the development of hardware and software, along with clinical trials to ensure that the process is safe and reliable and does not lose data.

"But now the scale has been developed, and we have sold the first ones to Køge Hospital and Rigshospitalet," the proud CEO says.

## Thought-provoking course

For Marie L. Bagger and Measurelet, it has been a long and difficult process to reach the finalising of the first sale. In particular, the challenges of establishing a collaboration with nurses and wards at the hospitals have been enormous. It was only when a nurse at Rigshospitalet took the scale under her wing that the team could start testing and collecting all the valuable knowledge and feedback they needed.

The introduction to the Danish hospitals came after having participated in the Danish Tech Challenge in 2018, which Marie L. Bagger describes as a challenging experience.

"It was insanely thought-provoking for me to participate. I had to Google several of the topics that we were tested in because I had no idea what they were. As a nurse and part of the world of health care, it also challenged me that I had to figure out the number of nurses that could be cut if a hospital saved time with our product. That was not our objective, so I had to practice presenting the business case in the right way," she says.



## 2018 | MEASURELET

- Founded in 2017
- Makes digital fluid balance measurements for the health care sector
- **Company:** Marie Lommer Bagger, nurse and CEO Morten Bo Søndergaard Svendsen, CTO + two employees and a trainee in R&D and manufacturing, support and it
- **Awards:** Winner of the Capital Region of Denmark's innovation competition (2017), Winner of Berlingske Business Boost (2017), Milestone Innovation Award (2018)

The company still has an office in Futurebox – with four employees and a trainee – because Futurebox brings great value, says the CEO.

"The Futurebox team will tap us on the shoulder if they have something like an event relevant for us to attend."

And from this office, work is currently being done on the next product, Measurelet Toilet, while the first sales of the Measurelet Scale have already gone through.

"To reach a point where someone wants to pay for our product feels so cool!" Marie L. Bagger says. ■

# FAST MOVERS

**Less than a year after finishing the Danish Tech Challenge, Aim Robotics is already on its sales mission. The company has deselected investors to focus on finishing the product and getting it out on the market.**

TEXT BY JULIE RING-HANSEN HOLT

Imagine having worked fast and around the clock on your product – mainly because you cannot afford to do anything else – and that you are about to start selling the product and thus earning money. And then COVID-19 comes along!

This is roughly the situation that Mie Haraldsted and Aim Robotics, the developer of a dispensing module for a Universal Robots arm, are in right now.

"We had big plans and grand gestures in the pipeline, but we have not been able to meet with the distributors, so we have had to restructure the entire sales strategy," the former DTC participant says.

Rather than personally presenting their dispensing tool abroad, the launch is now performed by sending the dispensing tool to distributors for internal tests. This leaves them without an on-site introduction and training in the dispensing process using Aim Robotics' products.

"We have had plenty of 'knock backs' on our journey, from late or faulty product deliveries to lack of test product and personnel onboarding due to COVID-19 restrictions, where companies have been closed for external meetings. We have embraced our new reality as we aim to deliver a positive first-time experience – despite the lack of personal meetings. That is why we are focusing more on delivering online training and making more videos showcasing our product. We even invite potential customers to send material to us for in-house pilot testings."

## Makes sealant work flexible

Aim Robotics has made a dispensing solution for the process application industry for collaborative robots. As for now, it has been UR+ certified for the Nordic countries and Europe (UR+ is a certification programme operated by the Odense-based company Universal Robots) and has five distributors in China, England, Denmark, Sweden and South Africa.

The solution may, among other things, be used with grease for sealings or with sealants in electronics, windows or aquariums. With the Aim dispensing unit mounted on a Universal Robots arm, the solution allows for a flexible production setup that is easy and cost-efficient to programme and change.

"We feel the demand from end clients right now, so it is a shame that we cannot go and visit. It makes our sales process more complicated. What usually would take a week now takes a month," she explains.

## No time to waste

Compared to other hardware startups, Aim Robotics has been very fast off the starting blocks with their product – for a reason.

"We have received funding from the Danish Innovation Fund (Innobooster and Innofunder) but are primarily self-financed. Because of our low funding, and because we chose not to spend all our development time chasing down investors, we have been under pressure to deliver in a short timeframe," Mie Haraldsted says.



## 2019 | AIM ROBOTICS

- Founded in 2019
- Delivers precision automated fluid dispensing solutions that are accessible, user-friendly and versatile for small scale manufacturers
- **Company:** Mie Haraldsted, machine engineer and CEO Karlis Akis, CTO + 2 employees and 4 trainees within development and sales

She finds that the process is a balance raising money, building the product and making the product fast.

"We could cut down on time-to-market with more money, but it takes up a lot of my time to talk to potential investors, so we have to focus our efforts."

"As an engineer and developer, finding a point at which the product is mature enough to be sold is a tough decision. We would like to improve forever, but we have to complete in order to sell," she says.

But the strategy seems to work for the company, which has grown from two to four full-time employees in the last six months. Aim Robotics have two products in their portfolio and another one on its way; by Q1 2021, Aim Robotics should have entered into a partnership with 30-40 different Universal Robots distributors, bringing on "a lot of sales", Mie Haraldsted concludes. ■

2018  
HRH CROWN PRINCE FREDERIK VISITS THE PARTICIPANTS IN FUTUREBOX FOR THE FIRST TIME.

2019  
THE STARTUPS GET THE OPPORTUNITY TO PITCH IN FRONT OF INVESTORS IN TEL AVIV, ISRAEL.

2019  
DTC HOSTS AN OPEN HOUSE AT HIGH TECH SUMMIT.

2019  
TV2 LORRY DOES A SERIES ON DANISH TECH CHALLENGE.

# DTC IN NUMBERS

EVERY YEAR THE DANISH TECH CHALLENGE TEAM REPORT THE STATUS OF THE PROGRAMME. HERE, WE PRESENT SOME OF THE HIGHLIGHTS.

**120** STARTUPS HAVE PARTICIPATED IN THE DANISH TECH CHALLENGE SINCE 2014

**91%** OF THE 120 COMPANIES ARE STILL ACTIVE AT THIS POINT

**100%** ARE WILLING TO RECOMMEND DANISH TECH CHALLENGE TO OTHER STARTUPS

**69%** COOPERATE WITH DTU

**800+** MILLION DKK IN FUNDING HAS BEEN RAISED

**81%** OF THE STARTUPS ARE IN CONTACT WITH OTHER DTC COMPANIES

**700+** EMPLOYEES WORK IN DTC COMPANIES

**43%** HAVE PARTICIPATED IN THE MENTOR PROGRAMME AT DTU SCIENCE PARK AFTER DTC

*MAY WE PRESENT ...*

# THE PARTICIPANTS 2020

AMINIC

ARCTIC SYSTEMS

BIRANALYZERS BRAINCAPTURE

COALESCENT MOBILE ROBOTICS

FLOWPLAN GLYSIOUS IMP SCANDINAVIA

GO-PEN JUNE SYSTEMS

KVASIR TECHNOLOGIES

LOTUS MICROSYSTEMS SECOND SUN

SIDEKICK STARTAK SYNCSENSE

SWIMCAM VAERKS ZENZE

UDU

*MEET THEM ALL  
ON THE FOLLOWING PAGES!*



## AMINIC

### CONTACT

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aminic.dk

**AmiNIC is developing a tool that measures the freshness of meat and fish within seconds, and also predicts an exact expiration date. Reducing food waste as a result.**

### Which problems does your product solve?

We are developing a handheld sensor that within seconds measures freshness and predicts the correct expiration date of meat and fish. This will replace subjective evaluations conducted with the use of human senses or rules of thumb applied by the industry today. This will help prevent unnecessary food waste and assure the food processing companies that their incoming and outgoing goods are of high quality.

### Is it hard to be in the DTC? In what ways?

The DTC programme has given us an inside-out view on all aspects of our business and helped us identify key focus areas for us to succeed. It has been hard work getting into the absolute details, and a lot more time and effort has been put into selling than what we anticipated for this autumn.

### Why did you sign up for DTC?

We signed up for the prestigious DTC programme, which is the only Danish hardware startup accelerator, in order to gain insight into all the aspects of being a hardware startup and commercialising products that, to a large extent, do not yet exist.

## ARCTIC SYSTEMS

**Arctic Systems aims to help companies and cities reduce rodent numbers without the use of rodenticide. Instead, Rune Barslund and Alistair David Morton are developing an intelligent platform and mechanical traps to handle the rising numbers of rodents in the big cities.**

### CONTACT

Rune Barslund  
CEO & Founder  
rb@arctic-systems.com

arctic-systems.com

### What is the biggest experience you have had during DTC?

There have been several experiences. The mentoring process and sales training have been extraordinary.

### Who should buy your product?

Customers who want to fight rats more effectively without the use of poison.

### Why is it great to be a part of the DTC?

The 12 disciplines ensure that you get your business reviewed from A to Z by competent experts. The DTC course is therefore a very useful education, where you get many effective tools. I can really recommend DTC, and we are really happy to have obtained the knowledge and tools from the disciplines.





## BIRANALYZERS

**BIRanalyzers empowers data-driven fermentation management. The company develops a high-end, low-cost solution for continuous monitoring and remote control of fermentation processes with a current focus on the beer industry.**

### **When and why did you start your company?**

The company was officially created 01/04/2019. All members of the founder team craft beer, science and technology together during their studies. From their extensive network within the craft beer scene, they came to realise that most microbreweries are struggling to keep their heads above water, with one of the main reasons being the lack of innovative, affordable and customer-centric instrumentation.

### **How did you get the idea for your product?**

The idea naturally arose as a combination of the founder team's scientific/technological understanding of both the brewing process and sensors/electronics, coupled with their extensive network and understanding of problems within the industry.

### **What do you hope to get out of the DTC?**

Compared to many other accelerators, DTC captures all the relevant pillars that are required to become an investable company. What we hope is to get DTC's (including all mentors and partners) guidance to go green in all pillars and thereby become ready to raise our first investment round.

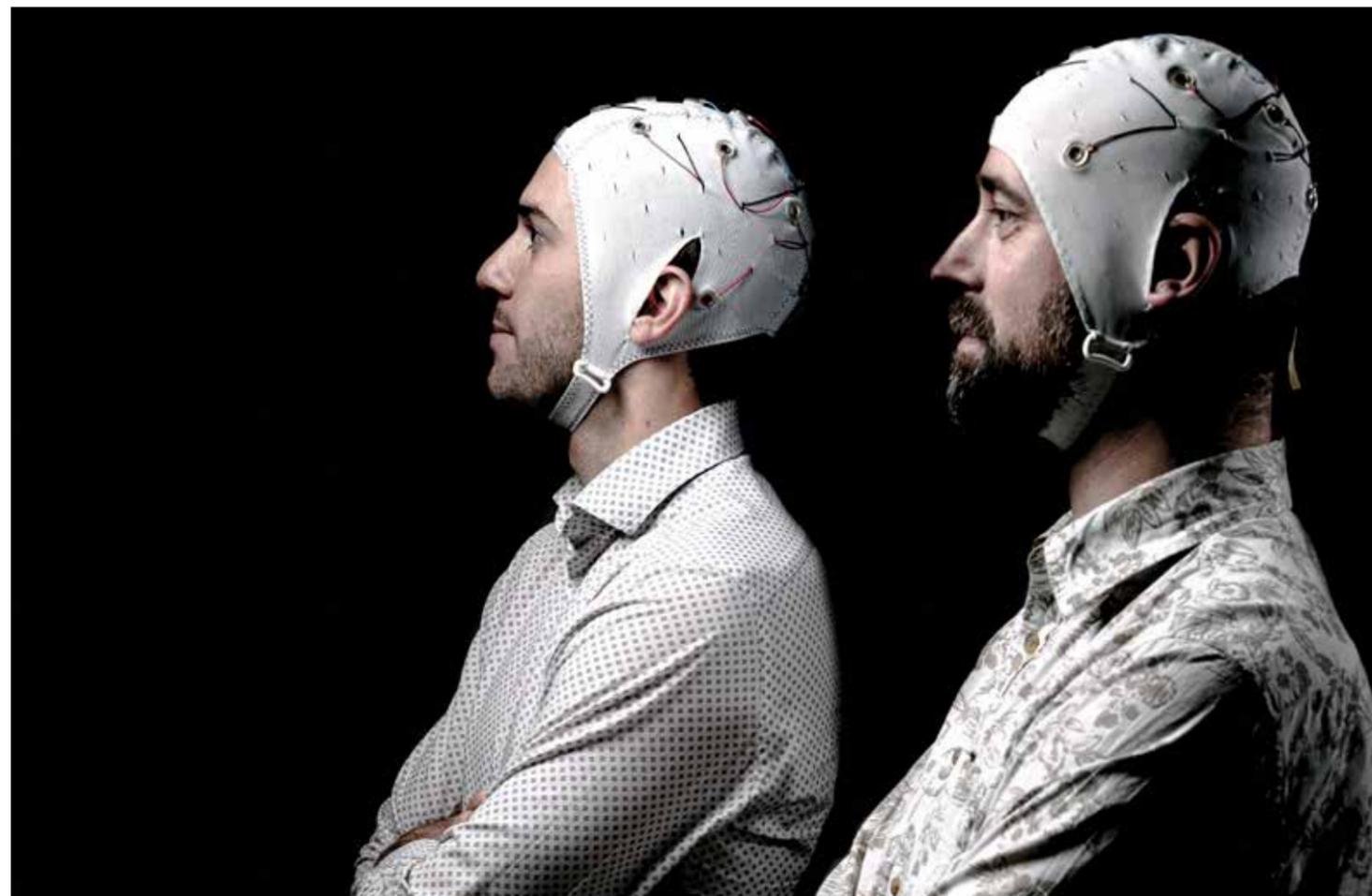
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## BRAINCAPTURE

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**BrainCapture provides low-cost, mobile EEG recording equipment with AI-assisted remote diagnostics. This will make it easier to diagnose epilepsy in low-income countries.**

### **How did DTC help you along the way?**

DTC provided a great environment for growing and developing our ideas with other companies in a similar development phase.

### **Which of the 12 modules have been hardest to get green? Why?**

The most challenging module for us was the market and customers. As our target market is low- and middle-income countries, a lot of work has gone into identifying the customers and understanding the ecosystem we are supplying to.

### **Which problems does your product solve?**

30 million people live with untreated epilepsy in low- and middle-income countries; of these, 70 percent can be treated with cheap medicine if they can be diagnosed. BrainCapture provides a low-cost, AI-enhanced, mobile EEG solution to facilitate the diagnosis.



## COALESCENT MOBILE ROBOTICS

### CONTACT

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Moira Mastrone  
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Coalescent Mobile Robotics has developed a system consisting of a fleet of autonomous mobile robots that can be used for automating all areas of transportation within a store. This solution can drastically increase the efficiency of supermarket operations.

### What do you hope to get out of the DTC?

When we applied to the DTC, we wanted to get help with putting together our business plan, model and the financial and costing side of things. We also wanted to use this opportunity to network and get to know other startups that were going through the same things as us.

### Which problems does your product solve?

According to our customers, 40 percent of employee time is spent walking around the store carrying out different transportation tasks, such as restocking, order fulfilment and so on. Our product automates transportation around stores, which frees up time for employees to spend attending to the supermarket's customers, needs, increasing shopping experience and reducing costs.



## FLOWPLAN

### CONTACT

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We've all been there. Monday morning and the coffee machine is out of order once again. Everything from coffee- to ice-machines use water filters that remove scale and help to prevent machine breakdowns. These filters must be replaced and the machines maintained depending on consumption levels. Today, filter changes and maintenance are in the best case conducted at fixed intervals, but most often after the machine is broken down, due to lack of filter changing or preventive maintenance. This is expensive for all parties, as well as bad for both the environment and customer satisfaction. Flowplan has developed an IoT solution for the optimisation of maintenance and filter change on all industrial kitchen appliances, based on water consumption data, AI/ML and exhaustive industry knowledge. The Flowplan Solution is plug-n-play, works on all brands and ensures that all machines and filters are maintained on time.

### What are the three key factors that motivated you to join DTC?

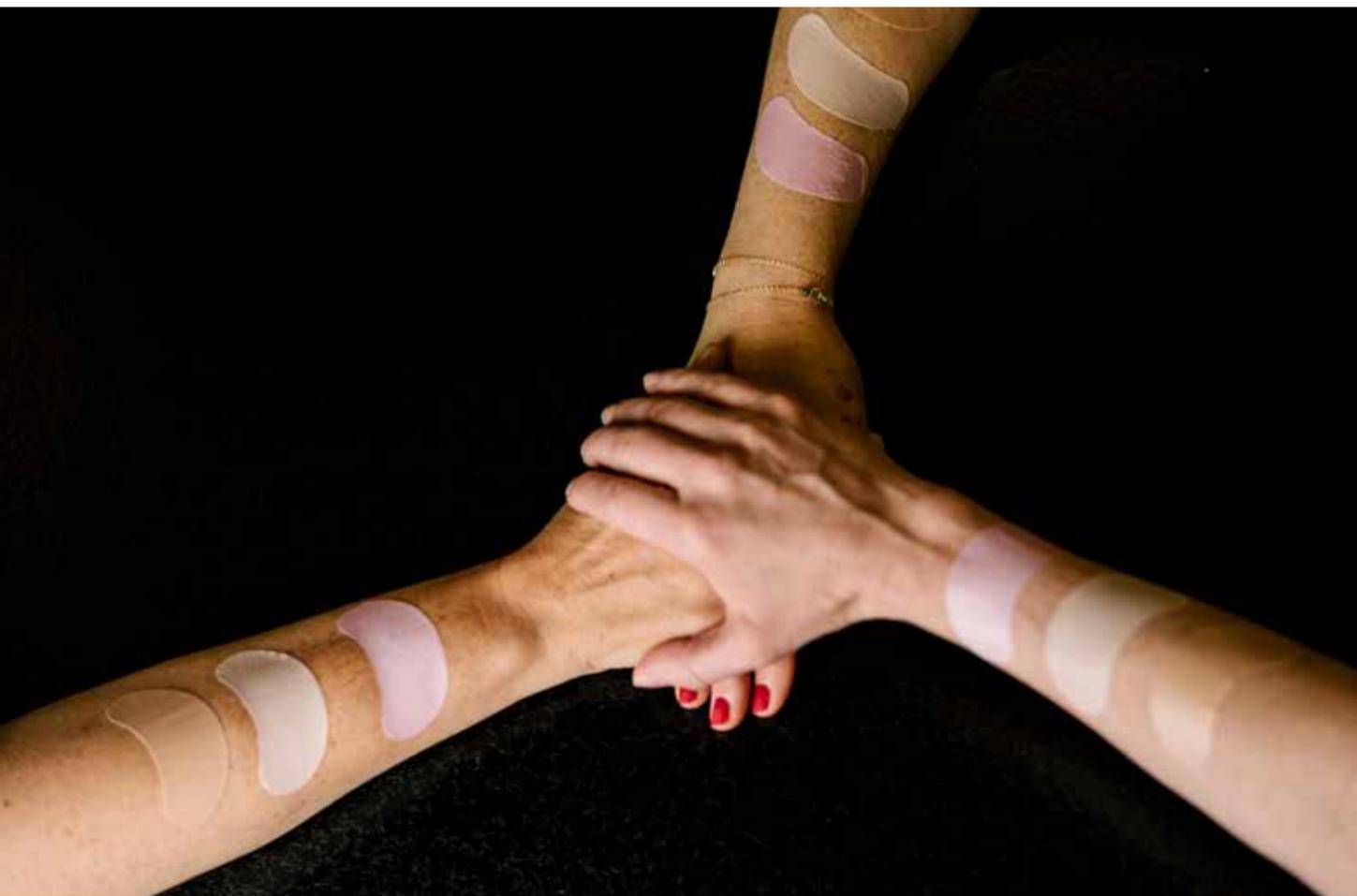
1. To make our setup even more professional
2. To expand our network
3. To make our business more ready for scaling

### Why did you sign up for DTC?

We were asked by Danish Tech Challenge if we wanted to apply, and it simply sounded too good not to be a part of.

### When and why did you start your company?

We started in May 2018. I worked in a company servicing coffee machines, and we had the exact same problem – unfortunately, we could not find an existing system that could solve it, so we did it ourselves.



## GLYSIOUS

### CONTACT

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Stina Bjerg Nielsen  
CEO & Co-Founder  
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Science-based glycerol-silicone eye masks delivering continuous doses of hyaluronic acid and vitamin C to the skin throughout the night – with documented effect. With the Glysious eye masks, you are beautified while asleep and wake up feeling rejuvenated, healthy and attractive.

### Which problems does your product solve?

Today's eye care products do not deliver on their promise to diminish wrinkles and moisturise the skin.

### What are the three key factors that motivated you to join DTC?

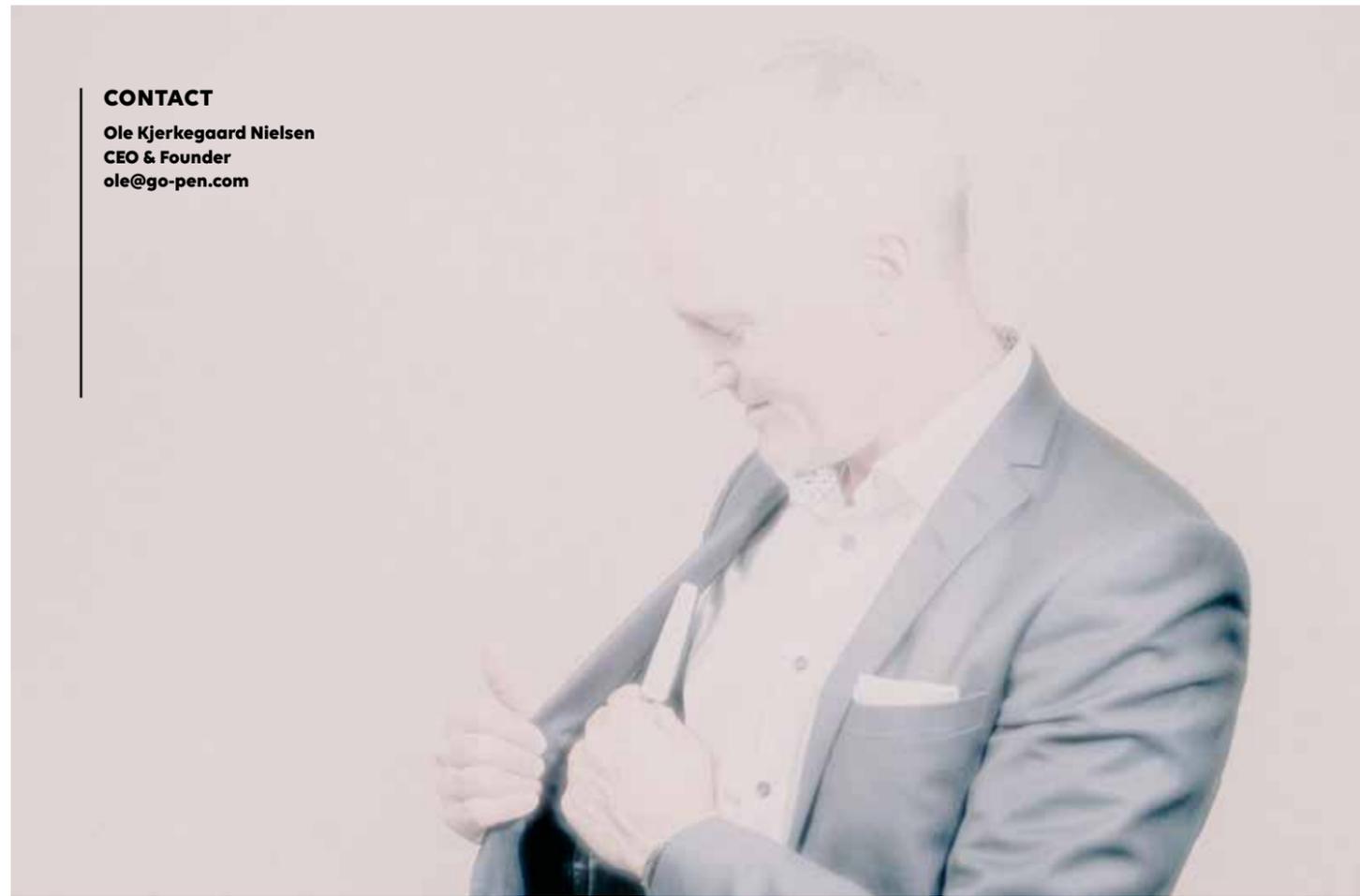
1. Get from technical proof of concept to product in the market
2. Prioritise having a drug delivery platform that is relevant in several industries, e.g. cosmetics, wound care and pharma
3. Be part of a dynamic and inspiring community

### What challenges do you have right now?

To build a strong advisory board for the future and to execute IPR strategy and manoeuvre in the regulatory space.

### CONTACT

Ole Kjerkegaard Nielsen  
CEO & Founder  
ole@go-pen.com



## GO-PEN

GO-Pen, with CEO Ole Kjerkegaard Nielsen in charge makes affordable insulin pens for all. GO-Pen's goal is to make affordable medical devices with an insulin pen as the flagship product.

### What are the three key factors that motivated you to join DTC?

1. Access to advice on how to set up a successful company
2. Working in a community of friends that will challenge and co-create with us
3. Ability to engage with a wider network of friends that wish to help GO-Pen be a success

### What have been the biggest benefits of engaging in DTC?

Invaluable advice on setting up and managing a company. The essential disciplines, so to speak. Having fun with other peers in the same situation that I am in – people to share the ups and downs with. Access to networks, the 'African drums' effect: one person speaks to the next, who has a friend, and so on.

### How did you get the idea for your product?

As the global director for sustainability in Novo Nordisk, I came back from a field trip where I saw that the poorest patients use old generations of okay insulin but inject with the worst devices. Basically, their devices have not improved over the last 100 years. If they were resource-poor, blind, had arthritis, or other access challenges, they were basically left with a very difficult task of managing diabetes. I asked my friend, who has 29 patents on insulin devices and has been working for 20 years as a supplier to Novo Nordisk device innovation, why no-one had ever invented an appropriate insulin device that is affordable for all. He had asked the same question many times. That afternoon, he drew a sketch of what he saw as the solution, on the back of a napkin, and identified a solution that was not patented. GO-Pen is basically what was invented on the back of a napkin.

## IMP SCANDINAVIA

### CONTACT

**Jeppe Damgaard**  
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**Brian Christensen**  
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**Oliver Karlsson**  
Co-Founder  
Oka@impscandinavia.com

**IMP Scandinavia digitise the manual procedures within the healthcare setting with user-friendly embedded technology and human analytics.**

### What challenges do you have right now?

We are currently in the process of establishing a sales organisation. We are engineers and know a lot about the technology. So finding the right competencies for the commercialisation phase can be quite difficult.

### What is the biggest experience you have had during DTC?

Kill your darlings!

### When and why did you start your company?

We started the company in February 2020, based on a desire to make a difference for vulnerable people and leave no one behind.



## JUNE SYSTEMS

### CONTACT

**Andreas Chr. Tuxen**  
Co-Founder  
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**Two million children are born brain damaged each year. This usually occurs when, during birth, the child's lack of oxygen goes unnoticed until too late. June Systems is developing a blood sampling device that is used to collect a sample from the child during birth. Analysis of this blood sample enables doctors to decide whether the birth can proceed naturally, or an acute cesarean section must be initiated.**

### What are the key factors that motivated you to join DTC?

We joined DTC in pursuit of challenging our business and maturing our technology. A great network of advisors, the co-startup community and a mentoring team has provided the best playground for this purpose.

### What have been the biggest benefits of engaging in DTC?

The biggest benefit from DTC has come from our fantastic mentoring team, which Lotte Bonfils from DTC has been carefully matching to our needs and business arena.

### How did you get the idea for your product?

As design engineers we had never heard of 'foetal monitoring' before. We were coincidentally introduced to a specific problem area in this field by a doctor, which sparked our curiosity. This led us to travel around Denmark visiting birth clinics in order to learn and study foetal monitoring procedures. Eventually we identified the need for a new generation of sampling devices.



## KVASIR TECHNOLOGIES

### CONTACT

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Anders B. Kristoffersen  
COO & Co-Founder  
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kvasirtechnologies.com

**We are developing a production method to convert low-value biomass, such as cereal straw or wood residue into a climate-friendly fuel for shipping. There is a global supply of more than 500 million tons of this type of biomass, which is underutilised.**

### What do you hope to get out of the DTC?

We have a solid understanding of our technology and the market we are selling to. Through DTC, we hope to meet people who have tried designing, financing and building large process plants.

### What future plans do you have after DTC?

We are continually improving the process design for the plant that will ultimately produce our fuel in large quantities; this work will be ongoing throughout 2021. We will also seek the partnership necessary to build the first production plant.

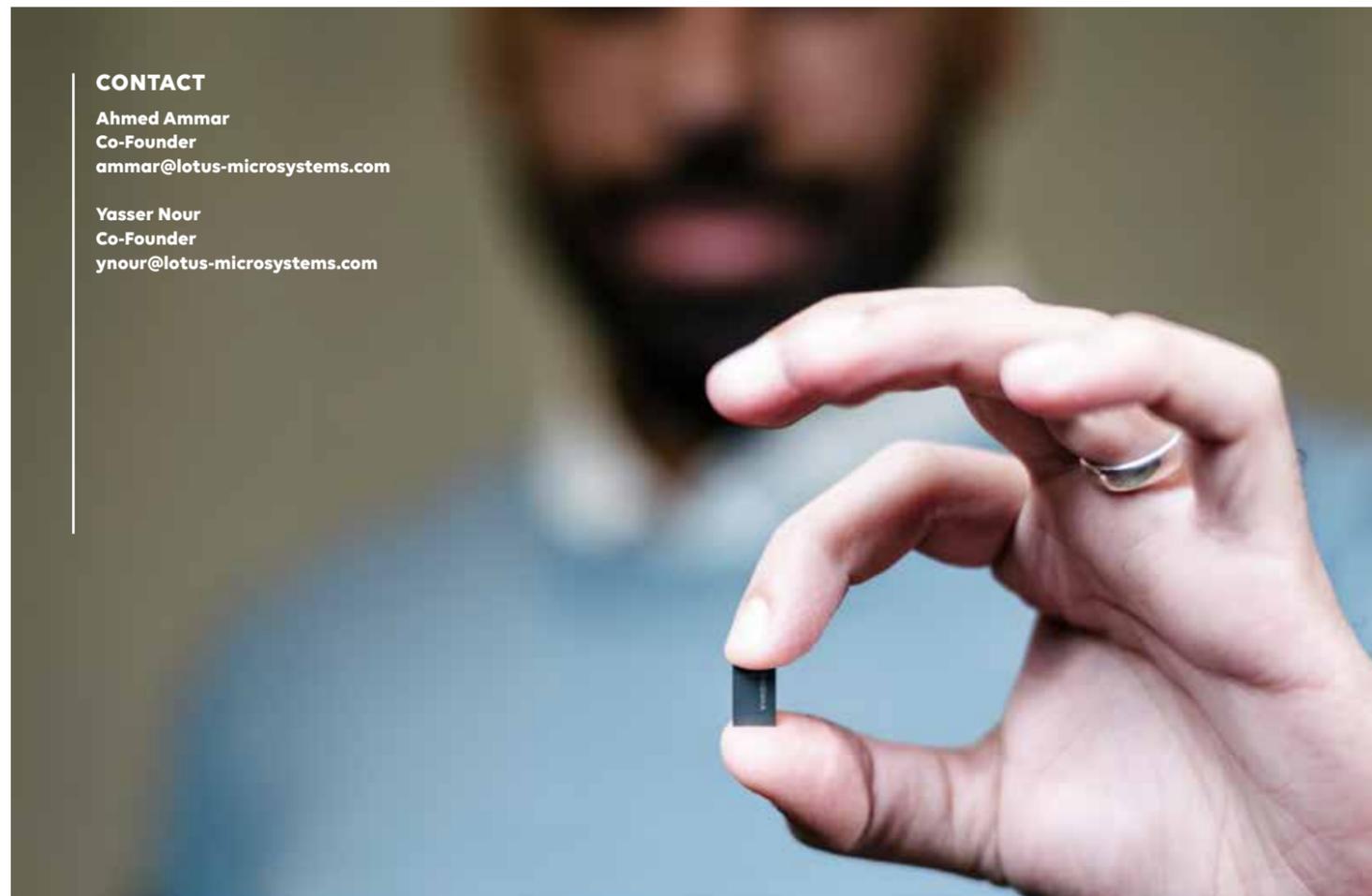
### Which problems does your product solve?

The fuel produced using our technology will enable the shipping industry to comply with CO2 reduction requirements without changing anything on board. The alternative solutions require massive changes, both on board and in the supply chain that delivers the fuel.

### CONTACT

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## LOTUS MICROSYSTEMS

**Lotus Microsystems develops miniature power converters for battery-operated devices such as hearing aids, headsets, medical and IoT devices, and mobile phones. Our power converters offer up to 72 pct. size reduction compared to the current solutions, along with up to 10 pct. less power loss. That enables more features to be added on the device platform, or otherwise the adoption of a larger battery for longer battery life.**

### What do you hope to get out of the DTC?

We are currently working on the adoption of missing business competences in our skills portfolio, expanding our network out to prospective customers, and spreading the word about Lotus converters on different media platforms. Also, we are seeking investments and/or collaboration opportunities to meet our product development goals. These are the three main takeaways we would like to get out of DTC.

### What have been the biggest benefits of engaging in DTC?

Our learnings from our collaboration with the DTC partners. From guidance in legal and tax considerations to product development and supply chain management expertise, we have been introduced to numerous helpful resources that helped complete the picture and have highlighted the most important development objectives in our business.

### Which problems does your product solve?

Currently, electronic power delivery solutions take up a large amount of space (up to 40 %) on the platforms for different consumer electronics. That space could otherwise be used to add more functions (e.g. sensors, more chips for more functions, ...) or for a bigger battery (i.e. longer battery life). The current power converter technologies cannot physically be compressed any further – but Lotus' can, and we are therefore much better positioned to address the industry's increasing demand to drive new functions, higher performance and greater user experience into existing or smaller form factors.



## SECOND SUN

**Second Sun is providing a sustainable and cost-efficient solution to improve the quality of grass pitches inside sports stadiums.**

### **What are the three key factors that motivated you to join DTC?**

We were lucky to be a part of Futurebox before joining the Danish Tech Challenge, so we had already seen what an impact the Futurebox community could have. And as Danish Tech Challenge is an accelerator programme, we expected the same perks and benefits as we had seen in Futurebox to be present – being surrounded by collaborative startups, introduced to leading experts in relevant fields and exposed to external financing opportunities.

### **What is the biggest experience you have had during DTC?**

We were surprised by how many bright-minded fellow startups could be brought together under the same roof and how much we could actually draw upon each other's experiences. We have been able to take some 'shortcuts' and avoid a lot of pitfalls by leveraging the knowledge of our neighbours in DTC.

### **How did you get the idea for your product?**

The idea to our product originated from a nice cup of coffee enjoyed in the spring sunshine on a busy sidewalk café, while looking across the street to where a similar café in the shade was completely empty of customers due to their unfortunate lack of sunlight. We discussed the option of redirecting the sunlight onto the sidewalk of that café, as well increasing the likelihood of people wanting to enjoy their coffee there. Our discussion continued on to where the redirection of sunlight could be used, and as we had just seen the huge artificial light rigs that are used inside stadiums the week before, the appropriate application was suddenly obvious.

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## SIDEKICK

### **CONTACT**

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**Sidekick is making the first affordable, plug-and-play sports prosthetics empowering amputees to live an active life.**

### **What challenges do you have right now?**

Currently, we are lucky enough that the requests for our products are larger than our supply, so we are working on scaling our production even further.

### **What is the biggest experience you have had during DTC?**

Access to an established investor network is speeding up the process of finding relevant investors.

### **How did you get the idea to your product?**

Traditional sports prosthetics are very expensive. When Lasse (Founder) needed a new sports prosthesis himself, we developed a series of products and a business model around it in order to give every amputee the possibility of becoming active again.



## STARTAK

### CONTACT

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**Startak is a manufacturer of controllers for solar trackers. They have more than 10 years' experience in designing solar tracking controllers and more than 80 installations. They provide customers with a simple-to-use, modern and reliable hardware and software solution that is designed to give peace of mind and control of the lifetime of the solar plant.**

### What surprised you the most about being in the DTC?

DTC is a great environment for startups. Here, you can learn everything about how to develop a business, how to approach customers, and how to understand their needs. You get legal and financial advisers. In DTC you go straight to the point – straight to what is important for your business.

### Which of the 12 modules has been hardest to get green? Why?

Probably the hardest for us has been the legal part. We know how important it is to have good written contracts in order to protect our business, but at the same time, we are not lawyers. Thanks to DTC, we got the help we needed to check our documents and contracts.

### When and why did you start your company?

Startak was founded in 2015, but it was only at the end of 2017 that we started to work full time on it. We started the company to pursue innovation in the solar industry, to make it more competitive against fossil fuels. Our mission is to make our active contribution to accelerate the energy transition.



## SWIMCAM

### CONTACT

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**SwimCam develops a cost-efficient camera solution for video feedback for elite swimmers.**

### What challenges do you have right now?

Right now, we are focusing all our efforts and energy on selling and delivering 10 products to our customers before the year ends. In less than seven months, we have then gone from the initial idea on the back of an envelope to a hardware product with a customised software solution on top. That will be a huge milestone for us as a company and will ensure us funding for our next quantum leap.

### How did DTC help you along the way?

DTC is a great programme for three reasons. First and foremost, it is a great network of like-minded entrepreneurs whose perspectives and concrete experiences are a found of inspiration and knowledge. Second, the programme and the disciplines creates a structure around a lot of the issues you have to deal with when you start a company. Third, DTC provides a great office space with workshops and development facilities for rapid prototyping.

### How did you get the idea for your product?

Anders was working with an idea for camera-assisted training in other sports, and Thomas was helping out reviewing the business model and financing. Then Thomas began to think of the opportunities within swimming, since his own daughter is a former competitive swimmer who stopped swimming in part due to feeling a lack of progress. Which is the core of our idea: to help athletes progress with their technique by using video feedback.



## SYNCSENSE

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With a specially designed intelligent sensor and a VR platform, MOVR, as the first solution of its kind in the world, convert boring training equipment into engaging digital exergaming experiences that prevent and treat illnesses related to inactivity for patients and the elderly.

### How did you get the idea for your product?

The idea arose in 2018 when Simon saw that his grandparents had been hospitalised and admitted into a nursing home. In the period before they passed away, they suffered unnecessarily from physical and social under-stimulation. This experience led to the idea of developing MOVR (Move with Virtual Reality).

### Have you made any changes in your company during DTC? Which and why?

Basically, we have been through a complete transformation, where we become even better equipped hospitalised and admitted into for the future. We work more with commercialisation, impact and the needs of users/customers than we talk about new features of the product. The world's best product comes by being out among the customers and further developing the solution together with them.

### How did DTC help you along the way?

They have given us in-depth and competent advice every step of the way – and also helped us to pressure test the business model. They have accelerated our innovation from development to market launch, such that today we have paying customers. In addition, we have a product roadmap and a supply chain that enables us to commercialise.



## UDU

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UDU introduces a completely new way of gaming by developing the world's first motion controller for mobile gaming. Say goodbye to your sofa and hi to an outdoor active gaming experience with your friends.

### How did DTC help you along the way?

Having access to experts within all areas of being a hard tech startup has helped us to grow as a company. Also, exchanging knowledge with 19 other startups facing the same challenges as us has been extremely valuable.

### What plans do you have after DTC?

During Q1 of 2021, we will finish our market validation. By then, we'll be ready to take in investments and get our product ready for production. By summer 2021, we will go to market and launch with a kick-ass crowd-funding campaign.

### Which problems does your product solve?

Almost every child is a gamer nowadays, and for good reason – gaming is challenging, fun and an incredible play tool. However, gaming is a passive activity, and the world is facing a huge problem: 81 percent of children and teens are not physically active enough. That is why we invite mobile gaming into the physical world, showing that games are more fun and engaging if they are played in an active way, outdoors.



## VAERKS

Vaerks is developing a Plug&Play CNC machining platform, with a unique hardware and software package, that empowers anyone to manufacture high-quality components in metal and plastic. This enables companies to easily manufacture components in small batches and allows engineers or designers to instantly test and validate their designs.

### What are the three key factors that motivated you to join DTC?

We joined DTC to learn more about business development and how to attract investments, and saw the opportunity to get advice from experienced professionals and become part of a like-minded community, which would boost our company.

### What have been the biggest benefits of engaging in DTC?

We've learnt a lot and used our new skills to arrive at a proper market validation, which has enabled us to focus our development efforts on a product that fits the market.

### Which problems does your product solve?

Vaerks' solution reduces the required manual labour and knowledge barriers of manufacturing processes, which in turn reduces time-to-market for companies developing new products.

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## ZENZETECH

In ZenzeTech, we believe in empowering people with Parkinson's Disease to improve their quality of life. We do that by measuring patients' walking symptoms with smart insoles. The data enables patients to walk better and improve their treatment with physiotherapists and neurologists.

### Why is it great to be a part of DTC?

DTC has a great atmosphere and community where startups share and help each other. DTC challenges startups in twelve disciplines with tight deadlines, which accelerates the business exponentially.

### What surprised you the most about being in DTC?

The vast diversity of startups who are at different stages, which boosts the learning experience. Also, the many doors that DTC and the partners opens to investors, experts and networks.

### How did you get the idea to your product?

Our adventure started with Dansih pharmaceutical company Lundbeck, who challenged us. But when we met the patients, we felt an urge to improve their quality of life, so we changed direction to improving treatment for Parkinson's patients.



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