



Digital Growth Path

Digital and Emerging Tech Accelerator
& Knowledge Sharing Programme

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WHO SHOULD READ THIS?

Are you an **investor** wanting to know more about the digital start-up ecosystem in Denmark?

A **researcher** looking for practical case stories and contacts within digital and emerging tech business?

Or a **startup** who wants to know more about how CSE can add value to your company?

Then this is for you!





COPENHAGEN SCHOOL OF ENTREPRENEURSHIP



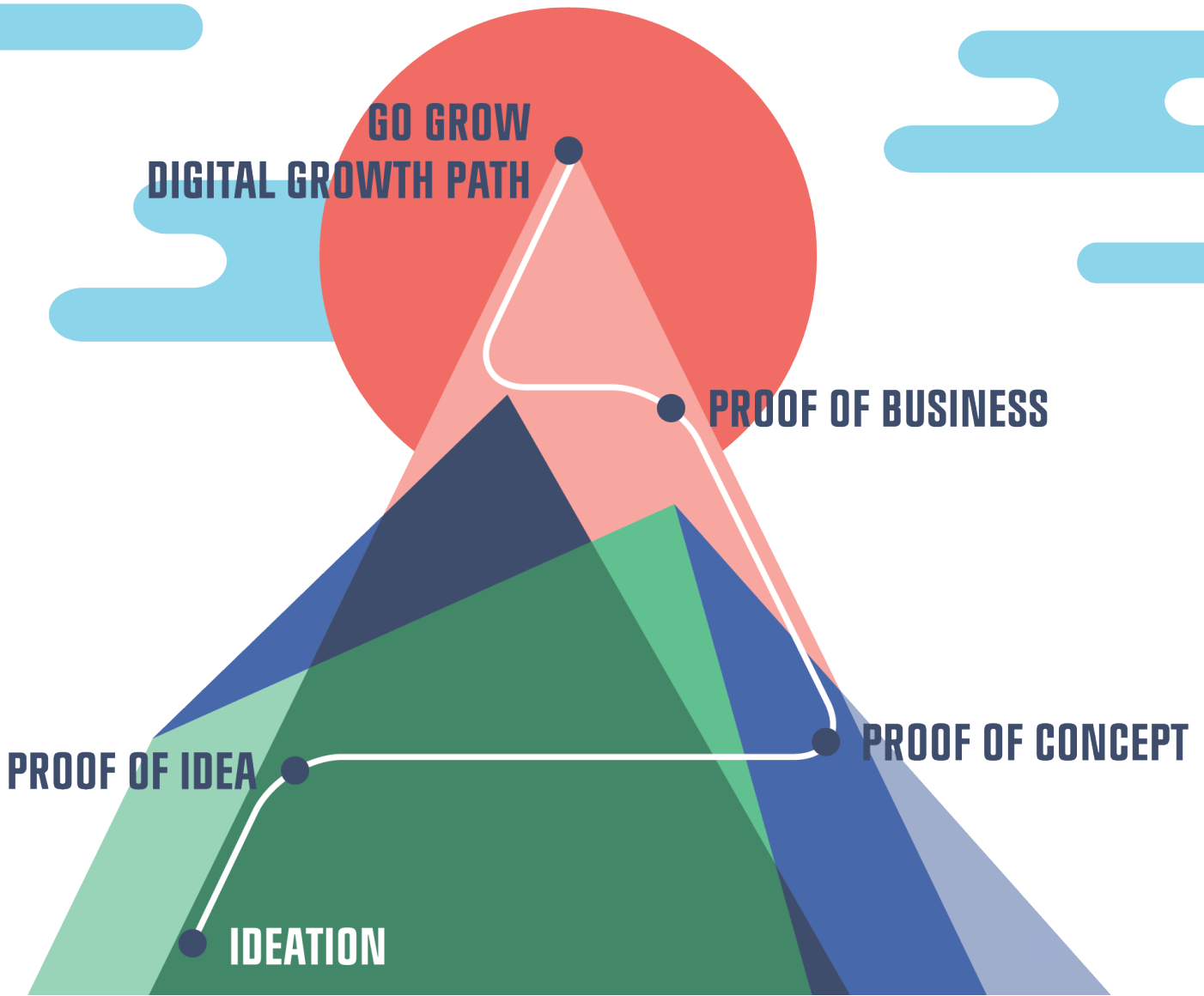
Copenhagen School of Entrepreneurship (CSE) is the unit at CBS, focusing on practical and applied entrepreneurship. CSE has had more than 700 student driven companies since it was founded in 2007, in different programmes; from basic startup, to scale and growth programmes.

students in becoming business-ready for a society undergoing rapid development and change. The entrepreneurs obtain a trained entrepreneurial mindset, and experience in creating and finding new solutions to existing needs. We do this through focused offerings, in order to strengthen the students competencies in concept development, business understanding, and collaboration.

CSE is also the entrepreneurial incubator at Copenhagen Business School. CSE was created to optimize the framework for student entrepreneurship at CBS. More than 500 new business ideas are created from CSE annually, and on a daily basis, more than 150 startups, consisting of students from all universities, come together to make emerging ideas into businesses. CSE's biggest role is to support the

At CSE, we build on the startups' academic competencies, and we are convinced that concrete experiences with the development of ideas, and the establishment of a company, help develop a mindset that creates super skilled candidates for the business market. It is these candidates who can contribute to growth, innovation, and sustainable development in established companies, as well as in own startups.

THE INCUBATOR	Office space 24/7	Peer-to-peer learning	Coffee Wednesday	Workshops and events	Business development sessions	Legal and accounting advice	Mentoring	Internship with ECTS
THE ACCELERATOR	Office space 24/7	Grow the venture	Go international	Expert mentorship	Entry bootcamp	Workshops and events	Investor pitch	Alumni network



THE DIGITAL GROWTH PATH



Digital Growth Path (DGP) is a public-private acceleration path within the Go Grow programme, supported by The Danish Industry Foundation and partners.

DGP focuses on digital and emerging tech startup companies offering solutions for industry or business process improvement. Targeted technologies include Internet of Things, Artificial Intelligence, Virtual/Augmented Reality, Robotics, 3D print, and Cybersecurity.

The purpose of DGP is to support the startups to progress their businesses and successfully face the challenges and opportunities in an area of emerging tech and digital transformation.

Both student entrepreneurs from universities and younger, established, growth-oriented companies

with an international scalable business model is qualified to participate in the program; This can create synergies between the two groups, e.g. by networks, exchange of experiences and generate new knowledge.

The DGP companies will be supported by external specialist mentors to assist the companies, covering areas of legal and technical compliance, technical sales, marketing of industrial solutions, business modelling, and pitching technical solutions for a non-technical, commercially-minded audience.

“To help develop international entrepreneurs who are able to innovate new strategies and business models in order for their companies to thrive in the fast-changing digital age”

SUPPORTED BY THE DANISH INDUSTRY FOUNDATION AND COPENHAGEN SCHOOL OF ENTREPRENEURSHIP

Small and medium-sized enterprises in Denmark are the source of a significant share of economic growth and key to ensuring innovation and job creation. A long entrepreneurial tradition and an ambitious business environment has supported entrepreneurs in putting their ideas into practice and turning them into growing companies. Denmark is ranked as the tenth most competitive country in the world, according to the 2018 World Competitiveness Yearbook. However, to make it to the top we must continue to create conditions that spawn new companies, generating growth and new jobs.

After 4 batches with 29 DGP startups, the DGP is by now well established as a model for supporting entrepreneurs and SMEs within Digital and Emerging Tech sphere. The promising companies of DGP have received key support from mentors and partners in the commercialization and viability of their businesses.

Copenhagen School of Entrepreneurship and the Danish Industry Foundation are pleased to release this lookbook from the Digital Growth Path programme.



THE DIGITAL ECOSYSTEM IN DENMARK

THE DGP'S ROLE IN THE DIGITAL ECOSYSTEM IN DENMARK

For over 10 years, the Copenhagen School of Entrepreneurship has helped to drive Denmark's innovation ecosystem by delivering incubator and accelerator programmes for young start-ups. Back in 2015, we recognized that despite huge improvements in the calibre of student-led start-ups joining the Danish market, Denmark continued to lack growth entrepreneurs – innovative companies that had the capacity to enter international markets and thrive in the fast-changing digital age. Recent analysis from Danmarks Statistik suggests that the entrepreneurial sector in Denmark was particularly affected by the 2007 financial crisis, when the number of start-ups and new businesses fell. This decline was significant across all areas of the economy, including in the information and communication and knowledge services sectors.

Digital entrepreneurial ecosystems require not only a digital market, which is large in Denmark and across its main export countries, but also entrepreneurs and support infrastructures that enable the birth of new start-ups to disrupt the existing industry on an ongoing, sustainable basis.

The transformation of global industry through digital technologies perhaps means that this focus on developing individuals has never been more important. Using these, companies large and small with the right skills can respond to changes in the economy and markets by using digital innovations to deliver more from existing business models. Through DGP, we wanted to strengthen the Danish ecosystem responsiveness to these new challenges by offering ecosystem plug-ins, creating a stronger platform for co-creation, collaboration and partnership between entrepreneurs and Danish industry, to the benefit of all stakeholders. As an incubation and acceleration center based within Copenhagen Business School, we also recognised at Copenhagen School of Entrepreneurship that the university itself has a key role to play not only as a research and education resource for nascent companies and the people that lead them, but also in fostering the business community and collaboration in Denmark.

In 2016, The Danish Industry Foundation identified four drivers for growth and value creation: **Knowledge, Competences, Entrepreneurship & Innovation, Globalisation & Openness**. The DGP programme aimed to contribute to Denmark’s economic growth through facilitating competitiveness and additional growth and productivity among start-up countries. This growth would be achieved by boosting the value of start-ups themselves, creating new jobs – particularly in digital skills, and fostering partnerships between the start-ups and partners in the public and private sector.

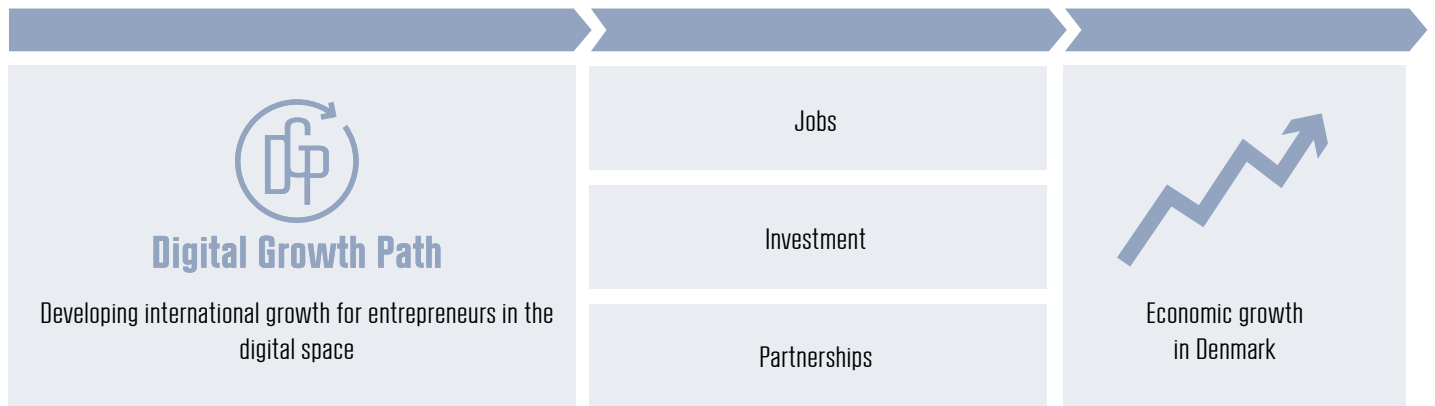
The central goal of the DGP programme is:

“To help develop international entrepreneurs who are able to innovate new strategies and business models in order for their companies to thrive in the fast-changing digital age”

Internally, we aimed to achieve this by:

Recruiting startups with digital and emerging tech solutions with international potential, pairing the companies with commercial mentor profiles, connecting with commercial experts abroad on foreign market visits, and exposure for investor networks and potential corporate business partners.

The programme included business disciplines of pitch training, branding, online marketing, sales training, working with investors, personal leadership, foreign market visit, and a final Demo Day.





"To help develop international entrepreneurs who are able to innovate new strategies and business models in order for their companies to thrive in the fast-changing digital age"



THE DIGITAL GROWTH PATH PROJECT

THE MANAGEMENT TEAM



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DGP PARTICIPANTS: BATCH ONE



VisU by NoviPel



www.novipel.com

NoviPel's first product VisU, provides a sensor for examining and storing reliable data during pelvic floor exams. Today data collection is done primarily via digital palpation (fingers), which is inexpensive, but is hard to replicate as objective data. Objective data is key to understanding the pathological traits of incontinence, a condition which is a massive taboo and cost for consumers and governments.



Aqumi by Byland



www.bylandstudio.dk

Aqumi is an IoT-connected smart maintenance system for urban nature combining sensor technology with rainwater management. By replacing fixed scheduled watering trips with data driven insights we are saving water, labour cost and reducing car emissions. Through sensor monitoring and an intuitive cloud-based dashboard, Aqumi is drastically reducing the need for maintenance and enables us to build greener, lushier and more livable cities, for a growing urban population worldwide.



Krizo



www.krizo.dk

Crises are here to stay and Krizo structures your response when you face the unwanted. During 2017, it was all about programming. In the autumn, we were so fortunate to join Go Grow as a DGP and learn from other start-ups. Today, it's all about organising pilot- projects with different organisations. Thanks to input from our first signed-on reseller, we now focus on building the ultimate crisis management tool for harbours.



Blue Workforce



www.blueworkforce.com

A business with a vision of moving food production towards more sustainable manufacturing by automation. A packaging solution from BWF includes a RAGNAR Robot using our own affordable and flexible robotics platform, huginEYE vision camera, open-source MIMER control board, and biometric designed grippers. We now offer Blue Reality, a digital twin for the whole packaging system.



Octavic

www.octavic.com

When compared to similar systems currently available on the market, you immediately notice that Octavic system offers a holistic approach to the entire manufacturing process, whereas other systems address these issues only partially. For Life Sciences industries we offer assistance in digitalising the paper-based system that is required in order to be GMP compliant. The system in 4 simple steps:

- 1.** Building the bespoke hardware & software. We start by customising the hardware & software settings according to your specific needs. Together with you, we choose the relevant data to track, as well as other features that can make your production process faster and safer.
- 2.** Super simple, Lego-like data annotations. The device used for data annotations has a user interface similar to the Lego bricks. Wondering why? Its simplicity allows us to quickly and accurately develop a new flow of processes for a specific industry.
- 3.** Fast installation time.
- 4.** Cost efficient.



Operator Systems

www.operatorsystems.com

At Operator Systems we have a mission – we deliver visibility and continuous improvements to manufacturing companies aiming to improve effectiveness and competitiveness. We offer a full suite of products and services to help you meet your mission. If you are looking for Industry 4.0 including IoT and Big Data - Operator is your choice! All data in Operator come from external systems. We offer integration to all major ERP systems and OPC/PLC tags from machines, sensors, scales, barcode readers, IoT and other data collection devices. Operator Systems has a well experienced staff and established customer base of nearly 100 installations in Scandinavia and rest of Europe with +10,000 daily users. Our competitive and effective solutions meet local to global requirements. Customer examples are: Ardo, Arovit Petfood, Amcor, Vald. Birn, OSTP, Anglo Beef Processors Ltd, Continental, Exhausto, Lantmännen Schulstad and IKEA Industry.

DGP PARTICIPANTS: BATCH TWO



21

21 Risk

 21risk.com

Seeking to prevent fire related risks in factories and high safety areas, 21RISK has developed a risk robot called ROBIN - a Risk Managers' ultimate sidekick. ROBIN doesn't sleep, get sick or make mistakes, that's why Risk Managers trust him to be their support in daily operations.



GASTROFORM

Gastroform

 gastroform.net

Gastroform is a Copenhagen based food technology start-up providing an automated, modular kitchen to convenience food service operators. We have developed a hardware platform and proprietary control algorithms to address a very large market.



DRIVI

Drivi

 drivi.dk

Drivi is bringing the driving school industry into the 21st century. Through a specialized SaaS system, we digitize the industry, reducing time spent on administration by European driving schools by up to 60%. Furthermore, we turn the process of acquiring a driver's license into an enjoyable and seamless experience.



4TECH

Kelvin Tool Changer by 4Tech

 4tech.dk

Kelvin Tool Changer is a coupling device designed special for small robots. With this tool changer the robot arm can be programmed to automatically change between different tools. The tool changer is user friendly and will typically be used where the operator works very close together with collaborative robots. The Kelvin tool changer will make it ever more interesting for companies to implement collaborative robots in assembly lines where the flexible robots will make is possible to produce customized products in small batches.



Prop.Exchange



Prop.Exchange, powered by TrueMarketValue, is a digital auction platform/exchange for trading commercial real estate properties; it's where supply meets demand. The purpose of this digital tool is to efficiently trade properties at the true market value – in a time efficient manner.



RadiSurf



RadiSurf designs the adhesion technology of tomorrow. It creates nanometer-thin surface coatings on metals so they can be secured with plastics & other dissimilar materials through < 100 nm long polymer brushes. The adhesion interface is almost invisible but the material joint is very robust.



Sani Nudge



Sani nudge is a comprehensive system for preventing infectious disease transmission. It uses sensors to detect healthcare professionals' contact with patients to better track hygiene compliance.

DGP PARTICIPANTS: BATCH THREE



Patent Renewal by Company 42

www.patentrenewal.com

Patent Renewal helps IP law firms making their patent renewal service secure and profitable again. Its product, patentrenewal.com, is tailored specifically to IP law firms by automating client management, patent renewal management and the management of client billing.



DevelopDiverse

www.developdiverse.com

DevelopDiverse helps companies expand their talent pool of applicants and build a diverse workforce by providing them with an AI-based software tool to remove bias from their recruitment. Its first tool is a cloud-based service that scans job ads for bias words and proposes non-biased ones as alternatives.



Legaltech Denmark

www.legaltechdenmark.com

Legaltech Denmark (formerly DPO Adviser) provides modernized compliance solutions to help organizations comply with complex privacy laws around the world. Its engagements feature world-class interdisciplinary project teams tailored to meet the particular needs of each client.



Inniti

www.inniti.dk

Inniti makes chemical researchers innovate more and faster. With its modular IoT solution, it is connecting all lab-equipment to the cloud. By doing so, it increases the efficiency of people working in R&D and makes their use of equipment smarter, by allowing the researcher to control and monitor their lab equipment from anywhere.



MM Technology

MM Technology



MM Technology has developed a new innovative device and platform for industrial data integration and acquisition – Smart Interconnect Access (SIA) platform. SIA seamlessly makes data integration and acquisition easy a simple task due to its high flexibility to work between any connected system and device.

SARITA

Sarita



Sarita CareTech is creating hardware and software solutions to accelerate digitalisation in elderly care. Sarita aims at developing technology that benefits frail elderly and their caregivers, via automated alerting and easy communication. With Sarita products, long-term care institutions can save resources and improve their service quality.

Sense
ANALYTICS

Sense Analytics



Sense Analytics helps water supply companies lower their water wastage and create a more environment-friendly profile by alerting them when a new leak occurs on their pipes. It does so by using Machine Learning and other advanced statistical methods to efficiently analyse the companies' massive amounts of data.



SHIELD Intelligence



SHIELD provides the rocket fuel needed to build strong brand ambassadors to amplify earned media value from employees. Through its framework of engagement and proprietary API, we provide key insights and deep analytics to reinforce both strategy and execution. It enables brands to become data-driven in decision making.

DGP PARTICIPANTS: BATCH FOUR



NIHAX

www.nihax.dk

Our vision at NIHAX is to make sensor measurements more intuitive, and engaging, while reducing both bulk and cost of equipment, all by integrating commercial sensors with smartphones. Our focus is water quality measurements, including conductivity, pH, and oxygen measurements, but with our hardware and software package, interaction between smartphones and sensors as well as other electronic components is highly versatile.



Walk With Path

www.walkwithpath.com

Walk With Path

Walk With Path is an innovative health-tech start-up specialising in wearables. Our objective is to revolutionise the mobility and falls prevention space, with two products Path Finder and Path Feel. Our products enable people with chronic conditions and the older population to maintain or regain independence.



Senmos

www.senmos.dk

Senmos, which is an abbreviation for “Sensor Monitoring System”, is a structural health monitoring data platform for structures such as bridges, tunnels, power pylons, buildings, wind turbines, and more. Senmos has recently become a part of our partner Krabbenhøft & Ingolfsson (K+I), and provide full monitoring solutions, with sensors such as strain gages (measuring forces on steel), accelerometers (providing valuable insight into motion, and vibrations), temperatures, and much more. We then feed the data into our cloud platform powered by AWS, where the client gets our powerful tool to look at the data in customized user interfaces.



Creative Sight

www.creativesight.eu

In Creative Sight we specialize in finding innovative solutions for industries that will benefit from drone technology. We have operated and assembled drones since 2010 and gained valuable experiences in solving different challenges and tasks.



Rel8



rel8.dk

Rel8 has developed a new Direct Part Marking technology for strong traceability in injection moulding, marketed under the tradename imZERT. It enables low-cost integration of machine-readable barcodes on almost any type of plastic part, regardless of colour or size.



Arbit Cyber Defence Systems



arbitcds.com

Arbit Cyber Defence Systems offers a complete range of certified and accredited Cross Domain Solutions for high security networks using data diode technology. The Arbit Data Diode and the Arbit TRUST Gateway solves the challenges of running high security networks and/or disconnected/air-gapped networks as we ensure a seamless transfer of data including Multi Engine Virus scanning and Data Sanitization.



VRMultiviewer

VR Multiview



vr-multiview.com

VR Multiview is a medtech company aiming to increase quality of life for people suffering with dementia. Using the newest VR technology VR Multiview provides a therapeutic treatment tool. The VR Multiview product has been developed in co-operation with the academia (Københavns Professionshøjskole) and the customer (Rødovre Municipality). This ensures the product to meet the needs and demands of both user and customer. With VR Multiview the elders can not only get great immersive experiences - but also, uniquely for VR Multiview, share a group experience in the moment with other users.

COPENHAGEN TRACKERS

Copenhagen Trackers













cpntrackers.com

At Copenhagen Trackers, we develop smart GPS trackers for everything. We are determined to help people locate their belongings and companies their assets. It's simple, practical, cheap and it comes with no extra fees, subscriptions or hidden costs: once you purchase a device it is yours, and you can use it as much as you like, at no extra expense. Our first product is COBBLESTONE GPS tracker - the first true GPS tracker with long battery life and no monthly fees. We have developed a solution ready for "White Labeling" and with an open API, we allow customers to connect with their data in their own systems, rather than being "yet another system".

FOREIGN MARKET VISITS

Purpose & Format

During each batch, the startups were offered an opportunity to join a Foreign Market Visit to explore opportunities beyond Denmark's borders and get a hands-on feeling of what it would take to make it there. Itineraries would include common activities and individual days. Common activities aimed at getting a feel for marketing, funding, workspaces, connecting with "hub-managers" and share insights with local startups. Individual days gave the startups time to meet with potential clients or partners on their own.

Monday	Tuesday	Wednesday	Thursday	Friday
COMMON DAYS			INDIVIDUAL DAYS	
 <p>Berlin Partner für Wirtschaft und Technologie</p> <p>Introduction to the Startup Ecosystem Germany</p>	 <p>KPMG</p> <p>START SMART Germany, KPMG's offerings</p>	 <p>PIABO PUBLIC RELATIONS</p> <p>PR in Germany</p>	<p>INDIVIDUAL TIME 1-on-1: Meet clients, investors, organisations, etc.</p>	<p>INDIVIDUAL TIME 1-on-1: Meet clients, investors, organisations, etc.</p>
	 <p>V14</p> <p>Legal Advice, Distributor/Agent Agreements</p>	 <p>Factory</p> <p>Factory Berlin Europe's Largest Club for Startups</p>		
 <p>Technische Universität Berlin</p> <p>Centre for Entrepreneurship Networking</p>	 <p>IBB Beteteiligungsgesellschaft Ein Unternehmen der IBB</p> <p>Investment Climate & Trends Working with German investors</p>	 <p>EY</p> <p>Ernst & Young Startup Support</p>	<p>INDIVIDUAL TIME 1-on-1: Meet clients, investors, organisations, etc.</p>	<p>INDIVIDUAL TIME 1-on-1: Meet clients, investors, organisations, etc.</p>
	 <p>Freie Universität Berlin</p> <p>Profound Innovation Networking</p>	 <p>wework</p> <p>Tour of the House, Creator Awards</p>		

THE MARKETS

Each of the batches included a foreign market visit to a country of common interest to the startups. The market visit trips went to Berlin, Munich, London, and Leeds, each with their pros and cons for startups.

Germany

Germany has established various technology clusters across the country, specializing in AI, IoT, Digital Health and more. These can be market entry starting points for startups in each respective industries, either to test/confirm the solution or to actually initiate the first business.

Berlin is considered a scene and hub for creatives and startups and is the political capital. >50% of the German startups are located in Berlin, and 68% of the VC invested in German startups in 2017 was spent in Berlin. In 2017 Berlin Startups raised close to €3bn.

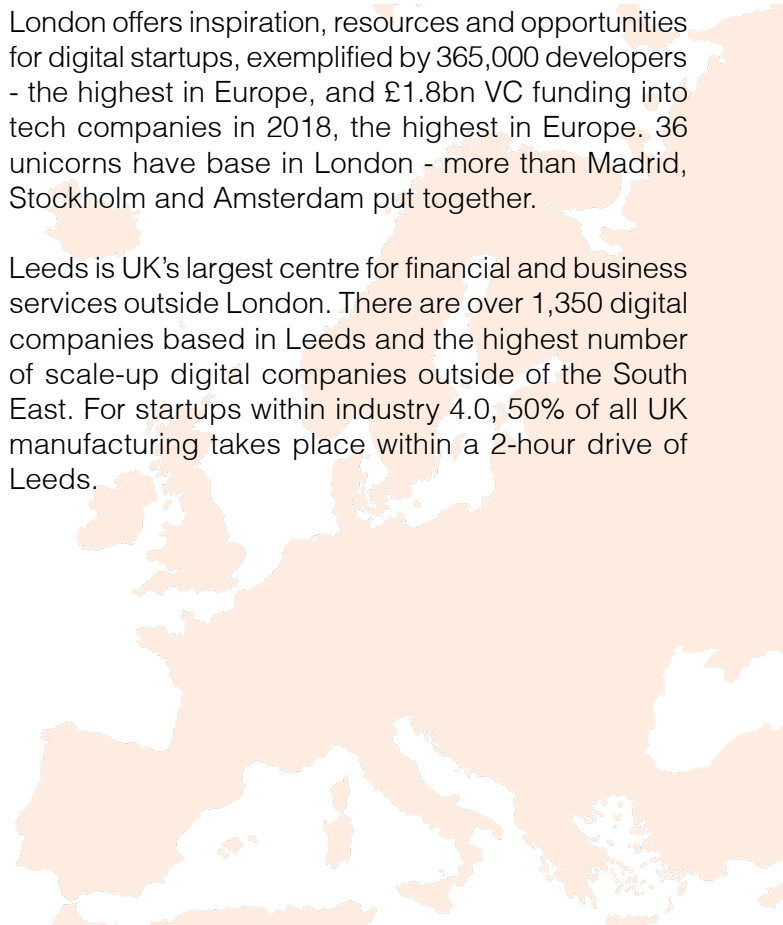
Munich in Bavaria ranks first in several surveys of digitization, affluent region, close to industry, and is also home to one of Denmark's foreign Innovation Centers, a great starting point for a digital startup.

The United Kingdom

Language-wise, UK is obviously easier to deal with than Germany, but regulation wise Brexit is now a significant joker to .be considered if expanding to UK.

London offers inspiration, resources and opportunities for digital startups, exemplified by 365,000 developers - the highest in Europe, and £1.8bn VC funding into tech companies in 2018, the highest in Europe. 36 unicorns have base in London - more than Madrid, Stockholm and Amsterdam put together.

Leeds is UK's largest centre for financial and business services outside London. There are over 1,350 digital companies based in Leeds and the highest number of scale-up digital companies outside of the South East. For startups within industry 4.0, 50% of all UK manufacturing takes place within a 2-hour drive of Leeds.



KEY TAKEAWAYS FROM MARKET VISITS

There is something bigger than Denmark

The scale of Germany and UK is obvious from the very beginning of entry. Just getting from the airports to the city centres take +1 hour straight transport. 1) Higher competition, 2) expertise, industrial focus, and distributors/agents may be geographically clustered, and 3) funding requirements are larger to cover countries geographically 5-10 x Denmark, and populations 10-15 times Denmark. This scale needs serious consideration of where and how to enter the market. Is the right entry point in capital cities or will you have a better chance if starting in a less costly area with high concentration of your corporate partners? How shall you divide the market between multiple distributors/agents?

Using local partners to break through

Unless you have money for establishing your own local office, local partners can be critical for getting your name and services out in European countries. They have local language skills, established networks/sales channels, understanding of legal framework, keeping up to date on competitive news etc. Besides distributors/agents, local partners can also include consulates, trade organizations, legal experts, PR/marketing agencies, universities and others.

Connecting with local partners requires “humble assertiveness”

Coming from a small country as Denmark and being a small startup at the same time can be a “difficult sell” to foreign contacts. Language barriers, cultural differences, and not being “just around the corner”.

Understand that “power distance” is often higher in other countries than in Denmark, so you need to balance Assertiveness and humbleness while not being arrogant or inferior.

You need to demonstrate Credibility, Seriousness, and Relevance to a potential contact from your first phone/email contact, during your personal meeting, and in your follow up actions. Before contacting, plan and practice how you can convey Credibility (know your 30 second intro pitch, and convey your traction well, e.g. naming big brand business partners), Seriousness (how you talk, dress, conduct a meeting), and Relevance (what’s in it for them to deal with you) to the foreign partner.

“Concrete Relevance” is a Winner

Preparing for the market visit is not a “1-day task”. Time is limited, and travelling is costly. Do not spend time on “general info” like GDP growth, population growth and similar. That can be checked from home. Instead, consider carefully what should be the outcome and understanding of any meeting: Access to industrial networks/member-base? Understanding costs for better budgeting? Legal requirements for setting up? Where and how to market your products well? Pitfalls in working with local distributors or agents? Any funding sources / investor networks for your particular business?



93% of startups responded to have improved leadership skills during the program

MOST VALUABLE LEARNINGS

The ability to pitch technical solution in commercial perspectives

CRITICAL GROWTH INHIBITORS

Funding, indentifying and persuading leads, getting international contacts



KNOWLEDGE SHARING SEMINARS

Purpose and Format

A sequence of Knowledge Sharing Seminars were held with the purpose of broadening the understanding of emerging technologies and connecting respective practitioners with each other.

Audience

The audience for the seminars were broad, including board members, c-level managers from public and private sector, researchers, educational institutions, students and startups.

Format

The seminars were conducted in collaboration with different partners with expertise and network within the specific technological field. This enabled greater reach both when it came to attracting audience and

for recruiting expert speakers with interesting cases. In order to have a relevance for the many types of audience and to keep true to the foundation at a business school, the agendas were set with an aim to convey practical user cases in a commercial perspective. Thus, not deep diving into the technological aspects

Incorporating Digital Startups

The new technologies are not only being developed and adopted by large corporations and large-scale public projects. The Digital Growth Path accelerator program in fact had a number of digital startups offering services based on the respective technologies, and thus also became part of the agenda speakers.



INTERNET OF THINGS SEMINAR

On November 20th, 2018, a seminar of IoT was held in collaboration with Force Technologies and inQvation about Internet of things. IoT is one of the high-potential emerging technologies, and is estimated to include approximately 20 billion communication units globally today. Technically, the tradeoff of wireless communication is between range and bandwidth, but several interesting user cases are coming out, both for public and private sector.

Public Sector: Smart Cities & Institutions

Potential is found e.g. in indoor climate optimization, science documentation, health, building and road condition diagnostics, waste handling, and traffic planning. Challenges to establishing smart cities include unclear investment returns, lack of technical overview and resources, citizen scepticism and lack of sharing of data. Progress is sought by connecting IoT to other development strategies and by horizontal information sharing among system actors.

Private Sector: Manufacturing

IoT w. sensors offer great benefits in the private sector, e.g. for industrial discrete manufacturing of food, furniture, automotive, plastics etc. Live check of production processes enable improved quality, output speed, predictive maintenance, warehouse handling and traceability.

Startups featured in the seminar

Sarita , Operator Systems, SaniNudge

DGP, in collaboration with The Danish Industry Foundation, inQvation, and Force Technology presents:

IoT applied Commercial Aspects for Industry and Government

7th of February, 2019

10:00-15:00 at inQvation (Erik Husfeldts Vej 7, 2630 Taastrup)

- 10.00** Welcome by DGP, inQvation, and Force
- 10.30** "How does a wireless IoT network look?" an introduction by Jeppe Pilgaard Bjerre from Force
- IoT in Practice**
- 11.00** "Smart City" by Morten Koed Rasmussen, Klimamedarbejder in Høje Taastrup Municipality
- 11.20** "Eldercare" by Rasmine Rasmussen, CMO of Sarita CareTech
- 11.40** "Smart City" by Hasse Hauch, GIS- og digitaliseringschef in Frederiksberg Municipality
- 12.00** Lunch + Tour of the house at inQvation
- IoT in Practice**
- 13.00** "Signal technology" by Michael Karlsen, CEO & Co-founder of Onomondo
- 13.20** "IoT for hospitals" by Morten Egholm, CTO of SaniNudge
- 13.40** "Optimizing manufacturing" by Tommy Vincentz Larsen, CEO & Partner at Operator Systems
- 14.00** Break
- Future Perspectives**
- 14.10** Espen Gregersen, Senior Business Development Manager at IoT Denmark
- 14.25** Birger Hauge, CIO at Zibra Group
- 14.40** Panel QA



INDUSTRIENS
FOND
FREPPER DANX
SKUMREDELSE
The Danish Industry Foundation

inQvation



ARTIFICIAL INTELLIGENCE SEMINAR

On February 7th, 2019, we held a seminar about AI in collaboration with Alexandra Institute. 85 attendees showed the high interest the topic has in today's business world.

Various definitions of AI exists, but one is "Artificial intelligence is that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment." (Nils J. Nilsson). Or in other terms, a computer aided simulation of human behaviour. It includes Machine Learning and Deep Learning.

A current challenge is the hype of AI, but this is expected to fade over time, as many fail due to improper implementation. But "live cases" start to show real benefits in industrial image recognition for increased production yield, fraud detection in banking and public sector, text recognition, and predictive maintenance. To get started with AI, the advice is to start small and get the first learnings in your organization. Implement what you can understand, and do not develop a "blackbox" in your business processes.

Denmark/EU seek to develop AI while keeping eye on Ethical algorithms, transparent responsibility, anti-Bias, and Data Protection.

Startups featured in the seminar:
Develop Diverse, Sense Analytics

A seminar arranged by Digital Growth Path, in collaboration with The Danish Industry Foundation, and Alexandra Institute

AI applied

How companies and governments can use AI

7th of February
10:00-15:00 at PHRs20, Råvarebygningen (Porcelænshaven 22, 2000 Frederiksberg)

10.00 Arrival

10.15 Welcome by Claus Birkedal, DGP, and Anders Kofod, Alexandra Institute

AI applied: Supplier/User Cases, Legal and Technical Limitations

10.30 "About AI: Terminology, History and How to get started" by Anders Kofod, Deputy Director at Alexandra Institute

11.00 "Quality Optimization" by Tue Moerck, Managing Director of IH Foods

11.20 "Implementing an AI solution" by Mikael Munck, Founder & CEO of 2021.ai

11.40 "The hard-to-crack tasks. What CAN'T be done yet by AI" by Thomas Bolander, Associate Professor at DTU Compute

12.00 Lunch

12.30 "Fraud-detection" by Carsten Ingerslev, Office Manager of Danish Business Authority (Erhvervsstyrelsen)

12.50 "Water-leakage detection in Utilities" by Jeppe Johansen, Co-founder of Sense-Analytics

13.00 "Talent recruitment without bias" by Jenter Clausell-Tormos, Founder of Develop Diverse

13.10 "AI in Customer Service" by Johan Walldius, Managing Director of IBM-Bluewolf


13.30 Break

13.40 "AI standardization and Data Ethics" by Kim Skov Hilding, Consultant at Dansk Standard


13.55 "Optimizing Logistics" by Klaus Kähler Holst, Principal Scientist at Maersk Transport & Logistics

14.10 Panel QA

14.30 Mingling




Go Grow



Digital Growth Path



INDUSTRIENS FOND
FRIHEDSBOEN
KONKURRENCEVÆRNE
The Danish Industry Foundation



ALEXANDRA INSTITUTE

CYBER SECURITY SEMINAR

On June 27th, 2019, a seminar about Cyber Security was held in collaboration with The Board Leadership Society. 74 attendees represented boards, C-level management from public and private sector, academia and startups.

The relevance come from the increased use of IoT and AI in society and business and outsourcing process to externals, including across boarders. Danish Industry Foundation and Board Leadership Society aims to make Cyber Security a competitive advantage for Danish companies and society in general.

A complex area where management in the future may be trained in a new virtual cyber risk simulator. Cyber espionage and Cyber Crime is high on the agenda vs. Cyber Activism and Cyber Terrorism. One structured method for companies to work with Cyber Security is a “maturity model”, showing Progress vs. Goal on identified security parameters.

Due to organizations’ increasing complexity, advice on handling security include:

Defining a “baseline of good behavior”, perform regular security testing as part of the security management system, remember to scale your hardware for security monitoring, automate security tests, using machine learning to detect anomalies in business processes, define awareness criteria for the staff and train the staff with e-learning, workshops, and VR.

A seminar organized by Digital Growth Path, in collaboration with The Danish Industry Foundation and The Board Leadership Society

Cyber Security

Insights to practical implementation

13th of September
10:00-15:00 at PHRs20, Råvarebygningen (Porcelænshaven 22, 2000 Frederiksberg)

10.00 Arrival

10.20 **Welcome** by Claus Birkedal, Project Manager of Digital Growth Path and Troels Ørling Jørgensen, Senior Advisor to the Cyber Security for Boards Initiative, Board Leadership Society & Chairman of the Advisory Board, Centre for Cyber Security, World Economic Forum

10.30 **“Threat Overview in Denmark”** by Thorsten Foldager, Head of Threat Assessment at Centre for Cyber Security

11.00 **“Risk assessment in a global manufacturing company”** by Morten Pars Simonsen, Head of IT Security at Danfoss

11.20 **“Industrial Security Journey with Machine Intelligence”** by Anders Greve, Head of Cyber Security at ATOS Nordics

11.40 Lunch

12.10 **“Testing your company for vulnerabilities”** by Jacob Herbst, CTO - Chief Technical Officer at Dubex

12.30 **“Incident Response - Contain, Eradicate, Recover, Learn”** by Christian Dinesen, Security Architect at NNIT

12.50 **“Industrial Cyber Security”** by Michael Weng, Technical Sales Engineer, Nordics Region at Nozomi Networks

13.10 **“Staff awareness training”** by Helge Fraes Skov Djernes, Managing Cybersecurity Consultant at NNIT

13.30 Break

13.40 **“Cyber Security Standards in Denmark and Pros & Cons”** by Anders Linde, Chief Consultant at Dansk Standard

13.55 **“Future Perspectives & Technologies for Cyber Security”** by Alessandro Bruni, Assistant Professor at IT University

14.10 Panel QA

14.30 Mingling



Digital Growth Path



BOARD LEADERSHIP SOCIETY
The Network for Board Chairpersons and Good Governance



INDUSTRIENS FOND
FRIERHEDER DANSK
FOND FOR HUMANRESURSCEN
The Danish Industry Foundation



CBS GSE
Growth resources
in society

ONLINE ACCELERATOR

Go Growww

The Go Growww Online Accelerator is an online learning platform designed within the Digital Growth Path (DGP) project at the Copenhagen School of Entrepreneurship (CSE). It is designed as a blueprint for building and scaling a company and hence is best suited for founders and entrepreneurs, who want a crash course on how to get from startup to international company. Go Growww is hosted on the online learning platform CanopyLab.

Phase 1 - How to start an online accelerator

In the first two months of developing the Online Accelerator, the focus was on understanding what the target users – startup founders – need in order to grow and scale their business. Taking knowledge

and experience from CSE and Go Grow – the current accelerator programme at CSE –, best practices from current online learning courses and feedback and insights from startup founders into account, we finally decided to design six courses addressing the most important topics a founder needs to consider when founding and scaling a startup:

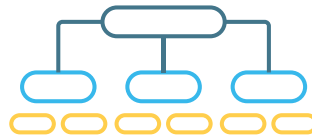
- Strategic Business Modeling
- Branding, Marketing & Sales
- Leadership & Management
- Funding & Legal Aspects
- Pitching
- Going International

Go Growww

The Online Accelerator



Online learning platform
Videos + Readings + Exercises



Aligns with
Go Grow + DGP structure



Supplement to Go Grow + DGP
Theory + Alumni cases + Peer2Peer

Phase 2 - Creating content and testing

Having set the foundation of the Online Accelerator, it was now up to test, evaluate and adjust the platform and content as needed. Design - Test - Evaluate - Repeat. That was our mantra from February to September 2019. In this period, we beta-tested course by course with the Go Grow and DGP batches 2019 as well as earlier stage startups from the CSE Proof Programme. Getting constant feedback from the testers, we further developed and fine-tuned the content to match our target user's needs.

The result is a full-scale online learning programme that guides founders within 6 courses through the jungle of building and scaling a company in Denmark and abroad. Each course consists of a range of units that contain short and inspiring videos, brief articles and exercises that support founders on their journey. Featuring industry experts, CBS professors, and CSE startup alumni, all units deliver practical and scientific knowledge that has already helped hundreds of founders grow their business at CSE.

THE COURSE STRUCTURE						
	Strategic Business Modeling	Branding, Marketing & Sales	Leadership & Management	Funding & Legal aspects	Pitching	Going international
UNIT 1	Understanding your customer	How to build a strong brand for your customers	The art of leadership	Sources of funding	Pitch prep	When and why to go abroad
UNIT 2	Understanding your customer	Online marketing tools	Assessing your team quality	Winning a deal with investors	Your killer pitch deck	Choosing your entry mode
UNIT 3	Sharpening your Value Proposition	How to be a great sales person	Smart hiring	Structuring for the future	Owning the stage	B2C: Understanding the foreign consumer
UNIT 4	Your metrics for success	Sales Process 360	Employment contracts that make you happy	Managing your investor relationship		B2b: Partner search & selection
UNIT 5	Cost and revenue planning	Nailing your next sales meeting	Management tricks that ease your day	The legal aspects of funding		Go-to market plan

DIGITAL GROWTH PATH

STARTUP CASES

Sense Analytics



Artificial Intelligence

Sense Analytics' mission is to reduce waste and streamline processes in utilities. Using machine learning and advanced statistical analysis, flow-data is analysed and new water leaks in pipes can be identified easily. This helps water utilities to react faster and save both money and water.

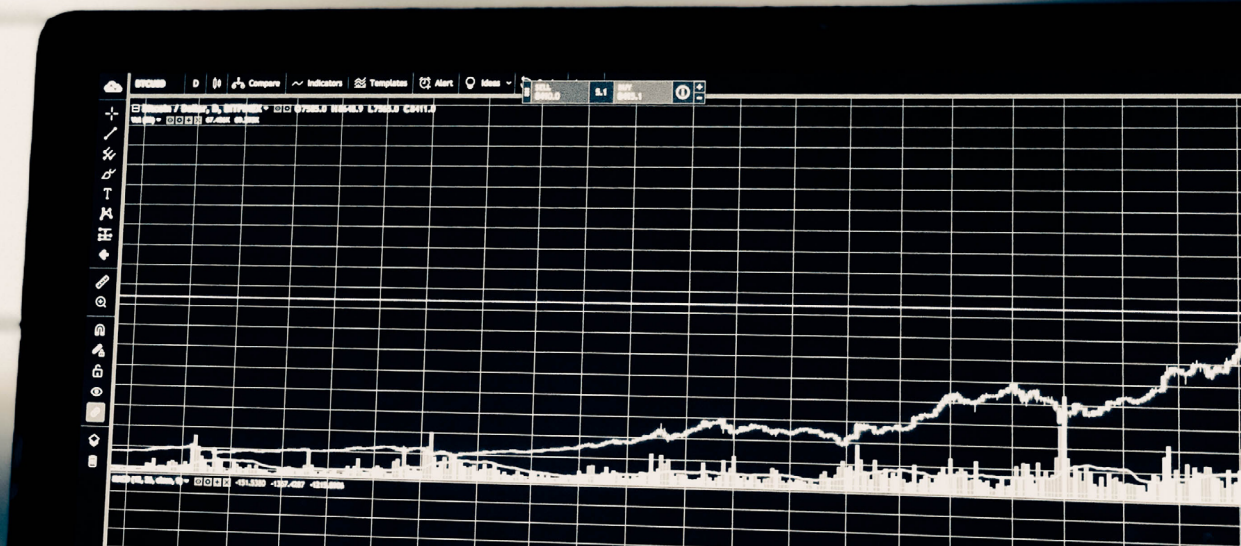
Nowadays, utility companies have a great amount of data on how their systems perform. However, they rarely have an effective way of making use of that data. For example, in 2016, a Danish water utility noted a great loss of water but could not uncover the source. The leakage went unnoticed for about a year. With Sense Analytics, water leakages like this can be detected within 1-2 weeks, resulting in a great amount of water saved!

"DGP is a great programme for young startups and entrepreneurs to learn some of the essential tools needed to start a company. CSE further provides a good hub for idea exchange and networking."

– Mathias M. Stephensen, Co-founder



**Want to know more?
Check out this video!**



Sani Nudge



Internet Of Things

Sani Nudge is a wireless hygiene monitoring technology designed to help healthcare institutions improve hygiene compliance and processes. How?

- 1)** Each employee has a sani ID sensor that tracks the employees location inhouse
- 2)** The sani sensor on the dispenser records all dispenser usage and reminds with nudges whenever compliance drops low.
- 3)** The patient sensor creates a zone around the treatment area to detect whenever patient contact has occurred.

In a one-year study with a Danish hospital, hand hygiene compliance was more than doubled using Sani Nudge, resulting in a decrease of hospital-acquired infections & making the hospital a healthier place.



**Learn more about how
Sani Nudge works!**



4Tech **4TECH** Robotics

Kelvin Tool Changer is a device that allows small robots to automatically change between different tools. This is especially useful for smaller manufacturing companies using robots. When the same robot can perform more than one task, it gives a faster payback for the company. Programmed changing of tools eliminate the production stop between batches and customized made products can now be produced as effective as in large series production.

What's more? In collaboration with the Danish Technological Institute, 4Tech is 3D printing all the main parts for the tool changer – with great success! Day after day the test robot was switching between different tools over and over again. Even after more

than 100,000 shifts, the tool changer is still performing at its best.

“The Digital Growth Path gave the business know-how to the tech company that made it possible for us successfully to bring our new product to the robot market”

– Henning Forbech, Founder of 4Tech Robotics



**Want to know more?
Watch the changer
in action!**



Creative Sight



Drones

Creative Sight is specialised drone company developing state of the art drone technology and provides automated industrial inspections for various sectors, from district heating to wind turbines.

In the Danish maritime sector there is a substantial need for shipowners to digitalise their operations and work processes, in order to optimise operations, improve safety and provide reliability through robust documentation methods. Hull inspections are carried out manually taking 96 hours and requires 12 persons, performed on a bi-annual basis, where the inspection categorises damages to the surface, coating and paint. This is an expensive, inefficient and unsafe method.

Creative Sight can provide drone assisted inspections of ships in less than 2 hours, as well as providing a

detailed 3D model of the ships. This data collection method offers accurate markings of the ship's damages, hull-optimizing, the state of the paint and an opportunity to follow the ships damages over a period of time.

There is a significant cost reduction of 37,5% for shipowners, by using Creative Sight's automated method compared to manual inspection. Leading companies within the sector, such as DFDS, Maersk Tankers and Uni-Tankers have shown interest in our solution, through trial projects.

"The DGP program provided us with a great mentor, who with his decades of experience in the shipping sector provided us with valuable advice on a broad set of topics, such as product pricing and putting together a robust commercialisation plan."



VR Multiview



Virtual Reality

VR Multiview is a medtech company aiming to increase quality of life for people suffering with dementia. Using the newest VR technology VR Multiview provides a therapeutic treatment tool. The VR Multiview product has been developed in co-operation with the academia (Københavns Professionshøjskole) and the customer (Rødovre Municipality). This ensures the product to meet the needs and demands of both user and customer. With VR Multiview the elders can not only get great immersive experiences - but also, uniquely for VR Multiview, share a group experience in the moment with other users. The market size is currently 100 mio \$ annually and growing due to demographic development.

With VR Multiview, 360° videos can be shown on multiple headsets at the same time. Specialising

in MedTech, VR Multiview has already helped treat dementia and anxiety by allowing patients to experience VR videos with a Care Taker who safely guides them through the experience step by step.

“The GDP programme helps us understand our product better, which is essential for execution and scaling.”

– Daniel Dasic, Partner at VR Multiview



LEARNINGS & FUTURE

HOW TO ACCELERATE DGP'S?

Observations from the management team

Although all participating startups deal with digital emerging tech, they have different challenges. Some offering products and services with long sales cycles, some having highly technical but less commercially profiled teams, some are looking for funding, while others have most potential beyond Denmark. The DGP accelerator addressed the topics.

The Value of an Accelerator

Findings from surveying the startups show the following factors to have been most valuable to the startups: Ability to pitch the technical solution in a commercial perspective, Understanding branding and how to implement it in the marketing and/or recruitment, How to work with investors, Input from experienced mentors, and Networking with similar startups.

Additionally, 93% replied agree or strongly agree to having improved skills and experience in Leadership. 93% also agreed or strongly agreed to have developed skills and experience not encountered through their formal educational studies.

Recommendations for Accelerating DGPs

- Investigate foreign markets, and preferrably go on a foreign market visit in person to experience the scale, network, opportunities and challenges beyond Denmark. Only then will you know if your solution has international scalability. Guessing can lead to business concepts/models not optimized for international expansion.
- Join an accelerator to train the classic business disciplines, access network, brand stamp, and to get structured input from external experts. Everyone can learn from others, and network effects help you to get known and out in the market. Participating in a branded accelerator opens doors a startup cannot open on its own.
- Practice selling the solution orally, face to face, and communicate commercial benefits.
- Ensure your website communicates benefits “within 2 seconds”.
- Ensure the team has commercially minded people who thinks and talks “business before tech”.

QUOTES FROM OUR PARTICIPANTS



"The best experience was to get connected with the right mentor, who had tremendous experience and network from the maritime sector. This gave us an deep understanding how to sell and price our product to the maritime sector and our mentor also connected us to important contacts to the industry too."

"We participated 2 persons in the DGP program. We have very different backgrounds but we concluded that during the program we got a much better common understanding of what to do in terms of growth."



"The DGP is a great programme for young startups and entrepreneurs to learn some of the essential tools needed to start a company. CSE further provides a good hub for idea exchange and networking."



"High quality speakers at the boot camp and training sessions. Great physical environment for working and growing your business. Flawless execution and communication from the DGP team."

"The DGP programme has allowed us to revisit our business development materials and refine our pitching skills."

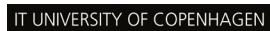
"The introduction to the German market and eco systems was very useful. Prior the session we had many questions of which we got answered. It was also a great "pep talk" to do business in Berlin"



PARTNERS, CONTRIBUTORS & ENABLERS



PARTNERS, CONTRIBUTORS & ENABLERS







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