# THE VELUX FOUNDATIONS

VILLUM FONDEN > VELUX FONDEN



# **Annual Report**

2016

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### **Foreword**

Anniversaries: the 75th anniversary of the VKR Group, the 45th anniversary of VILLUM FONDEN and the 35th anniversary of VELUX FONDEN

Within THE VELUX FOUNDATIONS, we can look back on 2016 as a year characterised by several major occasions. VILLUM FONDEN passed its 45th year, and VELUX FONDEN its 35th year, as a foundation.

The most significant milestone, however, was reached by the VKR Group. In 1941, Villum Kann Rasmussen founded what was to become the VKR Group, and from then on, events gathered pace over 75 years, with the VELUX roof window from 1942 blazing the trail. The year 2016 has been celebrated by several major anniversary initiatives from both the VKR Group and THE VELUX FOUNDATIONS.

THE VELUX FOUNDATIONS' biggest anniversary initiative came from VILLUM FONDEN with a grant of DKK 150 million for a new research centre at DTU - Technical University of Denmark. The VILLUM Center for the Science of Sustainable Fuels and Chemicals, in collaboration with Stanford University, University of Southern Denmark and University of Copenhagen, will be pioneering innovations in substitutes for fossil fuels, and was officially inaugurated in August in the presence of Minister for Higher Education and Science Ulla Tørnæs. In addition, VILLUM FONDEN marked the anniversary year by awarding two grant portions, each worth DKK 5 million, of the Villum Kann Rasmussen Annual Award in Science and Technology.

VELUX FONDEN also launched an anniversary initiative, 'From the humanities to philanthropy', an interdisciplinary research project that was awarded just under DKK 8 million. The purpose of this project is to map the public value of Danish humanities research, and how this value can be documented in a meaningful way.

#### New daylight award

In November, THE VELUX FOUNDATIONS conferred the international Daylight Award jointly with the Swiss foundation VELUX STIFTUNG. The aim of this award is to bridge architecture and research, and the cash prize consists of two awards, each worth EUR 100,000. The Daylight Award will next be awarded in 2018.

#### Projects and openness

The purpose of the articles in this Annual Report is to represent the great scope of the projects made possible by the EUR 154.8 million (DKK 1,161 million) awarded jointly by THE VELUX FOUNDATIONS in 2016. Our joint website is updated on an ongoing basis with new reports on promising projects, and for a general overview and more information, the website also provides a comprehensive, up-to-date listing of granted projects.

The public interest in foundations generally is on the rise, which we, for our part, have registered from the number of applications and the increased attention given to our activities. In response, we wish to be open, receptive and in dialogue with our many stakeholders. We seek to achieve that by means of increased information on our website and ongoing interaction with, for example, professional interest-groups, applicant environments and other Danish foundations.

#### FINANCIAL AFFAIRS

The proceeds from the VKR Group constitute the main source of funding for our grants. In 2016, this provided the basis for grants of EUR 120.3 million (DKK 902 million) from VILLUM FONDEN and EUR 34.5 million (DKK 259 million) from VELUX FONDEN.

Historically, management of the assets has solely been aimed at securing long-term returns. This aim has been extended with an ambition for investments to increasingly support our grant-making purposes and ensure that the areas we invest in follow a more sustainable trend.

#### A PERSONAL THANK YOU

Again this year, the selected grantees have readily made a great contribution to the Annual Report's accounts of the many promising projects.

As the chairs of THE VELUX FOUNDATIONS, we would like to thank and commend our board members, working groups, research experts and staff for their valued efforts over the year. And naturally, we would like to thank the many applicants with whom we are in ongoing and active dialogue.

Last, but not least, we would like to convey our appreciation to the employees and management of the VKR Group, since it is their work that paves the way for THE VELUX FOUNDATIONS, the non-profit, private charitable activities and the ability to make a difference.

Jens Kann-Rasmussen

Jens Kam-Rammun

Chair of VILLUM FONDEN

Hans Kann Rasmussen

Chair of VELUX FONDEN

# Behind the foundations

VILLUM FONDEN and VELUX FONDEN are non-profit, private charitable foundations that support scientific, environmental, social and cultural projects in Denmark and internationally. In 2016, VILLUM FONDEN granted EUR 120.3 million (DKK 902 million) and VELUX FONDEN EUR 34.5 million (DKK 259 million) to non-profit purposes.

Collectively referred to as THE VELUX FOUNDATIONS, they were both created by Villum Kann Rasmussen – the founder of the VELUX Group and other entities in the VKR Group, whose mission it is to bring daylight, fresh air and a better environment into people's everyday lives.

#### THE FOUNDER

MSc engineer and inventor Villum Kann Rasmussen (1909-1993) founded the VKR Group in 1941. He developed the modern roof window that opened up a whole new world of architectural options for bringing daylight, fresh air and a better environment into people's everyday lives.

In order to ensure the long-term survival of the company, in 1971, he first founded VILLUM FONDEN with an endowment of the entirety of his B-class shares. In 1981 he founded VELUX FONDEN through a cash endowment.

#### THE BUSINESS

Today, VKR Holding A/S (the parent company of the VKR Group) owns companies within four business areas:

- · Roof windows and skylights
- Vertical windows
- · Solar thermal energy
- · Ventilation and indoor climate.

The VKR Group has around 13,500 employees in more than 40 countries, and in 2015 had net turnover of EUR 2.4 billion (DKK 17.7 billion).



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#### THE VELUX FOUNDATIONS' BOARDS

The boards of directors of both VILLUM FONDEN and VELUX FONDEN are composed in accordance with the foundation Trust Deeds. According to the Trust Deeds, the members of the boards are to be 'legally competent, reputable, reliable and of mature age'. Within VILLUM FONDEN, at least four of the six board members must also be competent in business matters. For VELUX FONDEN, 'both business economics and cultural and educational insight' shall also at all times be represented on the board. The Trust Deeds of both foundations also require that their respective board should include a descendant of the founder.

#### THE VELUX FOUNDATIONS' GRANT AREAS

VILLUM FONDEN and VELUX FONDEN support a number of non-profit purposes. These comprise scientific, environmental, social and cultural projects in Denmark and internationally.

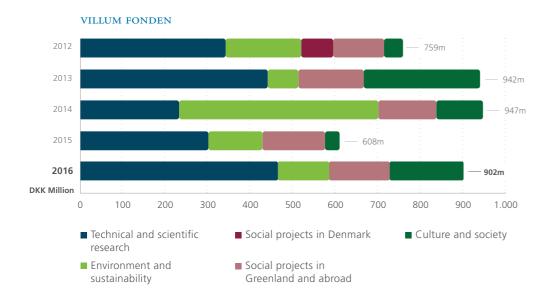


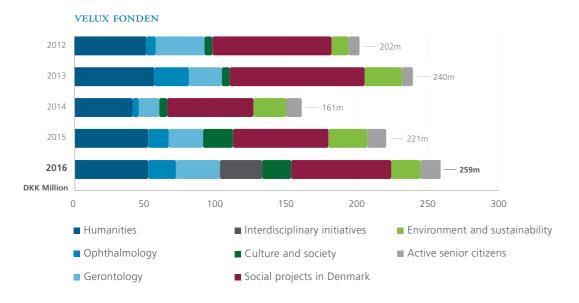


The amount EUR 154.8 million includes VELUX FONDEN's interdisciplinary initiatives and the foundations' project supervision and awards

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# GRANT TOTALS 2012-2016





#### How are the grants funded?

The proceeds from the VKR Group constitute the main contribution to THE VELUX FOUNDATIONS' grants. The companies in the VKR Group develop, manufacture and market VELUX roof windows, vertical windows and other building components. The VKR Group's approx. 13,500 global employees work day in, day out to ensure that the business evolves continually and creates value for society. This is achieved both through the Group's products, and through the proportion of the proceeds, which are granted via THE VELUX FOUNDATIONS to non-profit projects and activities both in Denmark and internationally.

#### The velux foundations are non-profit, private charitable foundations

VILLUM FONDEN is the principal shareholder of VKR Holding A/S (the parent company of the VKR Group), while VELUX FONDEN holds no shares in the company. Both are non-profit, private charitable foundations. VILLUM FONDEN has no controlling influence over VKR Holding and as such is not a commercial foundation. However, as laid down in its Trust Deeds, VILLUM FONDEN does have significant co-ownership responsibility vis-à-vis the VKR Group and its employees.

VILLUM FONDEN is required to contribute to ensuring that VKR Holding A/S has a board to exercise governance of and control the company effectively with a view to its survival and sustained reputation as a model company.

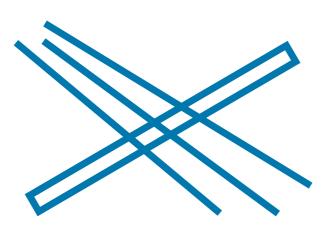
A system of checks and balances between the three principal shareholders serves to maintain the requisite stability and balance in shareholder decision-making to ensure prudent governance of the VKR Group. As the principal shareholder, VILLUM FONDEN owns more than 80% of the share capital in VKR Holding A/S in the form of shares with restricted voting rights and receives approx. 90% of the total annual profit from the holding company. The foundation shares ownership and influence with the founder's sons, Lars Kann-Rasmussen and Hans Kann Rasmussen, both of whom are A-class shareholders with extended voting rights.

VILLUM FONDEN's responsibility for the VKR Group is also expressed in the provision in the Trust Deeds that mandates the foundation to make grants to current or former employees of the company. This is honoured through the Employee Foundation of the VKR Group. The Employee Foundation funds its grants by means of the yield on invested capital from VILLUM FONDEN and VKR Holding A/S.

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#### COMMON VALUES

Neither the Trust Deeds nor the policies of THE VELUX FOUNDATIONS dictate any commercial interests in their non-profit activities. Aside from their common origin, both the VKR Group and THE VELUX FOUNDATIONS share a set of common values based on founder Villum Kann Rasmussen's Model Company Objective. An objective that requires them to demonstrate exemplary conduct towards employees, customers, grant applicants, suppliers, business partners and society as a whole.



The logo symbolises daylight piercing a sloping glass sheet. The founder of THE VELUX FOUNDATIONS and the VKR Group, Villum Kann Rasmussen, had this symbol designed in 1941 for DKK 25, and it was incorporated in his very first corporate logo. Today, the logo is part of THE VELUX FOUNDATIONS' visual identity and marks the common roots of the foundations and the VKR Group.

#### **Timeline**

1980

1981

#### 

Founded in 1971

Granted EUR 120.3 million (DKK 902 million) in 2016

The foundation supports research in science and technology and environmental, social and cultural purposes in Denmark and internationally. It also confers the Villum Kann Rasmussen Annual Award in Science and Technology.

#### VELUX FONDEN

Founded in 1981

Granted EUR 34.5 million (DKK 259 million) in 2016

The foundation supports scientific, cultural, social and environmental purposes for the advancement of a knowledge-based, enlightened, diversified, inclusive and sustainable society. The foundation's priority areas are active senior citizens, ophthalmology, gerontology and geriatrics. The foundation also confers The Daylight Award jointly with VILLUM FONDEN and the Swiss foundation VELUX STIFTUNG.

# V. KANN RASMUSSEN FOUNDATION, USA

Founded in 1991

Granted EUR 5.1 million (DKK 38.3 million) in 2016

The primary purpose of this foundation is to fund environmental projects within biodiversity, climate change and sustainable manufacturing and consumption. The foundation focuses geographically on projects in the USA and small-scale international initiatives. The foundation also supports non-profit community projects in Greenwood, South Carolina, USA, where VELUX has manufacturing and sales companies.

#### VELUX STIFTUNG, SWITZERLAND

Founded in 1980 Granted EUR 4.9 million (DKK 37.1 million) in 2016

This foundation funds research within healthy aging, daylight and people, daylight and nature, daylight technology and ophthalmology. The granted projects are expected to be able to address scientific or societal problems and contribute to solving those problems.

# THE EMPLOYEE FOUNDATION OF THE VKR GROUP

Founded in 1991

Granted EUR 1.1 million (DKK 7.9 million) in 2016

The foundation makes grants to the VKR Group's employees in various areas, first and foremost to:

- Employees or their immediate family who have had an unfortunate accident
- The education of the children of employees
- Non-profit projects in the geographical vicinity of the VKR Group's companies.

1991 —

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#### The board of VILLUM FONDEN



#### Jens Kann-Rasmussen (b. 1969), Chair

Elected: 2014

Title: MSc, Head of Department

Other boards etc.: ApS JERA, Ventilation Holding ApS, Trafalgar Estate Limited, ApS GIN

#### Steen Riisgaard (b. 1951), Vice-Chair

Elected: 2013

**Title:** Director, MSc, former president and CEO of Novozymes A/S

Other boards etc.: Chair of boards including ALK-Abelló A/S, COWI Holding A/S, New Xellia Group A/S, Egmont International Holding A/S and WWF Denmark. Novo Nordisk Foundation (vice-chair), Novo A/S, VKR Holding A/S, Aarhus University, Corbion

#### Anja Boisen (b. 1967)

Elected: 2015

Title: MSc, PhD, professor

Other boards etc.: Innovation Fund
Denmark (vice-chair), Royal Danish
Academy of Sciences and Letters, Danish
Academy of Technical Sciences, Danish
National Research Foundation and VILLUM
FONDEN's Center for Intelligent Drug
Delivery and Sensing Using Microcontainers
and Nanomechanics (manager), Anja Boisen
Holding IVS (owner)

#### Bjarne Graabæk Thomsen (b. 1946)

Elected: 2009

Title: Consultant, former CEO

Other boards etc.: Danmarks Industrimuseum, The Employee Foundation of the VKR Group

#### Eva Zeuthen Bentsen (b. 1964)

Elected: 2015

**Title:** MSc Economics and Business Administration, PhD, partner

Other boards etc.: Synoptik-Fonden, Københavns Madhus, Procordo

#### Peter Landrock (b. 1948)

Elected: 2008

Title: MSc, PhD, professor, president

Other boards etc.: Cryptomathic A/S and its group companies (chair), Technical Advisory Board of the Turing Gateway to Mathematics, Cambridge University

#### Astrid Kann-Rasmussen (b.1974),

the family's observer appointed under the Trust Deeds

Elected: 2012

Title: Nurse

Other boards etc.: V. Kann Rasmussen Foundation, USA (chair), KR Foundation (vice-chair), Partners for a New Economy

not in the photo

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#### The board of VELUX FONDEN



#### Hans Kann Rasmussen (b. 1945), Chair

Elected: 2006

Title: BSc Engineering
Other boards etc.: V. Kann Rasmussen
Foundation, USA (vice-chair)

#### Minik Thorleif Rosing (b. 1957), Vice-Chair

Elected: 2012

Title: MSc, Licenciate (PhD), professor

Other boards etc.: Chair of boards including Ilisimatusarfik - University of Greenland, Ivalo & Minik Fonden (foundation), Geological Survey of Denmark and Greenland (GEUS). Arctic Institute (vice-chair), Louisiana Museum of Modern Art, Danish National Research Foundation

#### Jens Oddershede (b. 1945)

Elected: 2014

Title: Professor, dr.scient.

Other boards etc.: Chair of boards including
Danish Council for Research and Innovation
Policy; Præsidiet for Reformationsjubilæet
(Praesidium of the anniversary of the Reformation
in Denmark), Faaborg Gymnasium (6th form
college), Universe Science Park. Norwegian
University of Life Sciences, Swedish Higher
Education Authority (Stockholm), Odense Zoo,
Universitetskollegiet i Odense (hall of residence
foundation), Fjord&Bælt, Naturama

#### Kamilla Kann Rasmussen (b. 1967)

Elected: 2008

Title: Educationist

Other boards etc.: VKR's Familiefond (VKR family trust fund) (chair)

#### Marie-Louise Bech Nosch (b. 1970)

Elected: 2015

Title: MA, PhD, professor, head of centre
Other boards etc.: Vice-chair of
Wissenschaftliche Beirat, Zentrum für
Baltische und Skandinavische Archäologie,
Archäologischen Landesmuseum in Schleswig
since 2009. Member of Conseil scientifique de
la Maison Archéologie & Ethnologie (MAE),
Université Paris X/CNRS, since 2015. Member
of National Key Base for Textile Conservation
Research, China National Silk Museum,
Hangzhou, China, 2013-2017. Member of
Executive Committee, International Association
of the Study of Silk Road Textiles, 2016-2020

# **Kristian H. Kann Rasmussen** (b. 1979), the family's observer appointed under the Trust Deeds

Elected: 2013

Other boards etc.: V. Kann Rasmussen Foundation, USA

**Granted Projects** 



# New research centre to solve global energy challenge

#### GRANTEE

DTU - Technical University of Denmark

#### ANNIVERSARY INITIATIVE

VILLUM Center for the Science of Sustainable Fuels and Chemicals

#### GRANT

EUR 20.0 million (DKK 150.0 million) from VILLUM FONDEN

In order to achieve the global transition from fossil fuel consumption, we need to develop new technologies to ensure that we have the electricity, fuels and necessary chemicals in place by the time fossil fuels can no longer be used.

A grant of EUR 20 million (DKK 150 million) has secured the establishment of an ambitious new research centre at the Technical University of Denmark (DTU). The centre will conduct research into catalysts and develop pioneering technologies to replace fossil fuels with renewable alternatives. Based at DTU, the centre will conduct research in collaboration with Stanford University, the University of Copenhagen and the University of Southern Denmark.





The photo from the inaugural event on 10 August shows Jens Kann-Rasmussen, chair of the board of VILLUM FONDEN; Minister for Higher Education and Science Ulla Tørnæs; Ib Chorkendorff, professor at DTU Physics and head of the VILLUM Center for the Science of Sustainable Fuels and Chemicals; and Anders Bjarklev, rector at DTU. The inscribed plaque is now mounted at the entrance to the research centre at DTU Physics.

Photo: Sven Dumelie

N ONE FINE, LATE-SUMMER'S DAY, ON 10 August 2016, a thrilled, mixed crowd of people convene to celebrate the official launch of a research initiative with ambitions to change the world. The full-house audience in the auditorium at the Louisiana Museum of Modern Art in Humlebæk, Denmark, includes a government minister, a university rector, many professors, national and international researchers and other leading lights in the field. Also present are descendants of Villum Kann Rasmussen, the man who just over 75 years earlier founded the VKR Group, of which VILLUM FONDEN is the principal shareholder.

This is both a festive and formal occasion. The many speeches and presentations emphasise and contextualise the importance of the research that will be conducted at this new centre of excellence, the VILLUM Center for the Science of Sustainable Fuels and Chemicals. Based at DTU Physics, the Department of Physics at the Technical University of Denmark, the centre has established a research partnership with Stanford University, the University of Copenhagen and the University of Southern Denmark. With its grant of EUR 20 million (DKK 150 million), this research initiative is VILLUM FONDEN's most substantial to date.

#### THE TALL CHALLENGES

Research at the centre will concentrate on solving two of the biggest challenges posed by the transition from fossil fuels to renewable energy sources:

1. more efficient storage of renewable energy

the University's vision for sustainable value creation.

Photo: Sven Dumelie

alternatives to current oil and coal-fired manufacturing of chemicals, plastics and other materials.

Common to both challenges is the need to develop better catalysts to accelerate the chemical processes. Denmark is an international leader in both the research and production of catalysts. Siting the research centre at DTU in Denmark thus provides the best prospects of achieving a scientific breakthrough in this area that can pave the way for further technological advances and ensure that our use of renewable energy in future will be sufficiently efficient for it to compete with fossil fuel use.

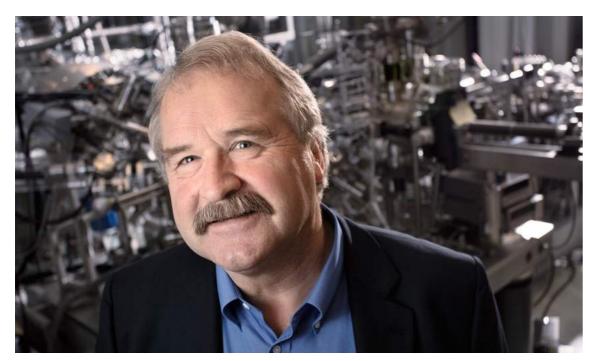
#### THE BIGGEST RESEARCH INITIATIVE EVER

The new centre is headed by Professor Ib Chorkendorff, at the Department of Physics, Technical University of Denmark (DTU Physics), who is assembling a team of elite researchers from institutions the likes of Stanford University, the University of Copenhagen and the University of Southern Denmark. Over the next eight years, the team will be concentrating on developing the high-demand technology that will ensure fossil-free energy and fuel supply as well as chemicals production.

#### A VISION FOR GROUND-BREAKING RESULTS

Denmark is a leader in catalyst know-how and production, and teamed with Stanford's strong theoretical environment in this field, the hope is to achieve ground-breaking results.

"My dream is that our work at the new centre will achieve a scientific breakthrough. It would be amazing, if, say, we succeeded in developing the



Professor Ib Chorkendorff, DTU Physics, head of the VILLUM Center for the Science of Sustainable Fuels and Chemicals

Photo: Mikal Schlosser

technology that would enable photovoltaic cells to harvest 20 times as much energy from a given site in the form of ethanol, for example, as compared with what can be generated from energy crops. Or to find a replacement for jet fuel, so aircraft can fly without using fossil fuels", says Professor Ib Chorkendorff.

He does add that it is difficult to predict the research over the coming eight years. "Our research will be venturing into unknown territory, so the good results could come within a number of fields".

## PROTECTING THE GLOBAL CLIMATE AND ENVIRONMENT

DTU's rector, Anders Bjarklev, commented that DTU is delighted by the grant, which supports the University's vision for sustainable value creation. He adds:

"The global community is facing major technological challenges that must be solved before we can achieve the energy transition in our societies. Arresting the consumption of fossil fuels today may be desirable, but it is completely unrealistic. We still lack the technology to replace fossil fuel resources in, for example, jet fuel, in chemicals production, and, to some extent, also in energy supply. Many of the green technologies we will need are either not mature or not invented yet".



"Our research will be venturing into unknown territory, so the good results could come within a number of fields".

Ib Chorkendorff, professor and head of centre, DTU Physics



On 4 April 2016, Denmark's Minister for Higher Education and Science Ulla Tørnæs opened a 'branch' of the VILLUM Center for the Science of Sustainable Fuels and Chemicals at Stanford University in California. This centre has received just under a third of the total grant of EUR 20 million (DKK 150 million) from VILLUM FONDEN. Seen behind the Minister is Professor Jens Nørskov, who will be heading up the research team at Stanford, and Director of Science Thomas Sinkjær of VILLUM FONDEN.

Photo: Anja Wolff

#### A WORLD-LEADER IN THE ENERGY SECTOR

"DTU is ranked internationally as Europe's leading, and the world's second-best, technical university in energy science and engineering. This is thanks partly to our international alliances, an eminent example of which is the new VILLUM centre of excellence. The permanent staff at the centre will comprise prominent Danish and foreign scientists alike, and the centre will be training a large number of both Danish and international experts in energy technology development", says Anders Bjarklev.

#### NEW JOBS WITH SPIN-OUTS

Over the scheduled eight years, the centre will employ 75 PhD students and postdoctoral researchers, who will be injecting the latest knowledge and know-how into industry not least.

"In addition, I'm pleased to be able to highlight the fact that the basic research in catalysts that will be pursued and intensified at the new centre has within the last couple of years provided a platform for a couple of spin-out enterprises from DTU that trade in catalytic converters, such as those for diesel engines. The hope is that the centre will continue to stimulate this form of innovation and further job creation", adds Anders Bjarklev.

# THE DANISH MINISTER FOR HIGHER EDUCATION AND SCIENCE AT THE INAUGURATION AT STANFORD UNIVERSITY

A large proportion of the research activities at the VILLUM Center for the Science of Sustainable Fuels and Chemicals will be conducted at Stanford University. The American 'branch' was



Chair of the board of VILLUM FONDEN, Jens Kann-Rasmussen: "With this initiative, VILLUM FONDEN wishes to make a significant contribution to long-term protection of the global climate and environment. The research centre will be a powerful instrument for achieving this goal. We hope that the research conducted at the new centre will be of the highest standard and that the results will provide a contribution to a future

without fossil fuels. There are no guarantees when backing basic research, but as a philanthropic foundation, it is our privilege to be able to contribute and assume such a risk", he said, adding: "A grant of this size is possible only because the employees in our Group work very hard day-in, day-out so that we, as a foundation, can support ground-breaking research. This is a source of great pride for us".

The photo shows professor and head of centre Ib Chorkendorff and Jens Kann-Rasmussen.

Photo: Sven Dumelie

formally opened in April 2016 in the presence of Denmark's Minister for Higher Education and Science Ulla Tørnæs. At Stanford University, the research activities are headed up by Professor Jens Nørskov, formerly a professor at DTU.

The inauguration ceremony nicely symbolises the value of an international research alliance. "It is vital to collaborate on research across national borders and between the public and private sectors. Given Denmark's strengths in renewable energy and California's strengths in renewable energy storage, I hope that this new consortium of Stanford University and the Danish universities will result in new, sustainable solutions to benefit us all", said Minister for Higher Education and Science Ulla Tørnæs.



"A grant of this size is possible only because the employees in our Group work very hard day-in, day-out, so that we, as a foundation, can support ground-breaking research. This is a source of great pride for us".

Jens Kann-Rasmussen, chair of the board of VILLUM FONDEN

Professor Jens Nørskov commented: "It is amazing that VILLUM FONDEN is supporting the establishment of the scientific basis at DTU and Stanford University for energy conversion research. This is crucial for a future in which we are not based on fossil resources and the associated carbon emissions, and where we develop new technology that can convert solar energy into fuel and basic chemicals. At Stanford, we are extremely pleased about the intensification of the scientific collaboration between Danish universities and Stanford within energy research".



"It is vital to collaborate on research across national borders and between the public and private sectors".

Ulla Tørnæs, Minister for Higher Education and Science

At the centre, some of the world's most talented researchers will enjoy outstanding opportunities for developing pioneering technologies to replace fossil fuels with renewable alternatives.

Professor Ib Chorkendorff, DTU, pointed out: "It is vital to establish major, targeted research projects on this grand scale for solving essential and complex technological problems. This allows us to assemble some of the leading lights in the field, each with their particular expertise, and in that way to potentiate the synergies in prospect from an interdisciplinary approach to the challenges".

## THOROUGH PROCESS FOLLOWING INVITATION TO DENMARK'S UNIVERSITIES

The anniversary grant bestowed on the research centre at DTU was preceded by a thorough vetting process. The invitation to the Danish universities was to submit a project proposal for a research or development project with the potential to make a significant contribution to long-term protection of the global climate, environment and/or biodiversity. The project proposals received were systematically assessed by an international committee of independent scientists.

# Members of the panel debate also held were: Göran Blomqvist, Director of the Swedish foundation, Riksbankens Jubileumsfond: Agnete Gersing, Permanent Secretary at the Danish Ministry of Higher Education and Science; Ulrik Haagerup, Director of the Danish broadcasting corporation's news and current affairs programme, DR Nyheder; Mikkel Bogh, Director of the National Gallery of Denmark; and Johnny Laursen, Dean of the Faculty of Arts at Aarhus University. The debate moderator was the journalist Adam Holm, who has a humanities research background. Photo: Simon Knudsen

# The significance and value of the humanities for society must be described

#### GRANTEES

Associate Professor David Budtz Pedersen and Professor Frederik Stjernfelt, Aalborg University Copenhagen

#### PROJECT

'Mapping the Public Value of Humanities'

#### GRANT

EUR 1.0 million (DKK 7.8 million) from VELUX FONDEN

Associate Professor and Research Manager David Budtz Pedersen and Professor Frederik Stjernfelt – both of Aalborg University Copenhagen – jointly received just under DKK 8 million from VELUX FONDEN as a special anniversary grant made to mark the 75th anniversary in 2016 of the VKR Group behind VELUX FONDEN; an anniversary coinciding with VELUX FONDEN's own 35th anniversary.



Associate Professor David Budtz Pedersen and Professor Frederik Stjernfelt – both of Aalborg University

Copenhagen – received VELUX FONDEN's anniversary grant of just under DKK 8 million.

Photo: Simon Knudsen

HE NEW RESEARCH PROJECT 'Mapping the Public Value of Humanities' will investigate how humanities research is disseminated within society at large, the nature of its public value and how that value may be documented in all its nuances.

The project runs until 2019 and was launched at a seminar held at Borups Højskole, a visual, performing and literary arts residential college, on 12 September 2016.

#### **FAMILIAR GROUND**

The topic is known territory for David Budtz Pedersen and Frederik Stjernfelt. The two researchers have already mapped the 'DNA' of the humanities over the last three years to reveal trends in the humanities in Denmark and channels for humanities research collaborations with researchers from other disciplines. One of the outcomes was the book 'Kampen om disciplinerne' ('the struggle for the disciplines:

on scholasticism in humanities research'). David Budtz Pedersen has this to say about the project:

"We now know a good deal about how the researchers disseminate their work, communicate and collaborate with other researchers, but we know far less about how they interact with public stakeholders".

#### **ABOUT THE RESEARCH PROJECT**

Both Danish and international universities are increasingly having to contend with requirements for their research to contribute solutions to wider issues of concern in society such as climate change, public health, economic growth and employment. The same goes for humanities research. The challenge, however, is that the value and impact of research and education are measured primarily in terms of commercialisation and technology transfer between universities and business and industry. This means that the wider contribution to society from humanities research tends to be disregarded.



The anniversary grant was originally proposed by Chair of the Board Hans Kann Rasmussen, VELUX FONDEN. The grant was officially awarded in September 2016 at Borups Højskole, a visual, performing and literary arts residential college, at an event that included presentations and dialogue with a number of humanities employers and researchers.

Photo: Simon Knudsen

#### WHY FUND THE HUMANITIES?

VELUX FONDEN started funding humanities research as far back as in 2008 in order to counteract the general deprioritisation of this area:

"Back then, we felt that science and technology research was getting its fair share of the attention, and that we could take a slightly more strategic look at the opportunities for a targeted initiative within humanities research", says Chair of the Board Hans Kann Rasmussen in connection with the anniversary grant to tie in with VELUX FONDEN's tribute to the VKR Group's 75th anniversary.

The interest in humanity and in human relations is already in VELUX FONDEN's DNA. Our founder, Villum Kann Rasmussen, said, for example: "Running a business essentially comes down to how you treat people".

"Rather interesting for a successful businessman

to put it that way. Because while we may be delighted by the thought of 'bang for the buck', this suggests that Villum Kann Rasmussen at any rate was aware that the human side genuinely contributes as much as economics and science".

"As a non-profit, private charitable foundation, VELUX FONDEN also needs to be able to demonstrate that its own activities have public value: What do our activities consist of, and are they useful to society? Appreciating the benefit of the humanities to society at large means that we regard them not only as beneficial in a rather practical sense, but also as being of value for the greater good of society", said Hans Kann Rasmussen.

#### CIVILISATORY INFRASTRUCTURE

On the day, Niels Lyngsø, author and translator, recounted how he uses the humanities professionally in dictionaries, features on our contemporary age, and in reference works for example. He

VELUX FONDEN



Members of the panel debate: Ulrik Haagerup, Director of DR Nyheder; Mikkel Bogh, Director of the National Gallery of Denmark; and Johnny Laursen, Dean of the Faculty of Arts at Aarhus University.

Photo: Simon Knudsen

used the metaphor that he both 'consumes and supplies tomatoes' (as a writer) for 'the large ketchup factories' (publishers, the media etc.). He also coined the term 'civilisatory infrastructure' to describe the humanities.

This was followed by perspectives on the public value of humanities research from humanities stakeholders and researchers from the media, academia, ministries and the world of arts and culture.

#### A COMMON PARADIGM

The public also took part in the dialogue, and Professor Liselotte Højgaard, Chair of the Danish National Research Foundation, praised the research initiative.

"I should like to urge you to jointly (universities, foundations, ministries) establish a common paradigm for this type of mapping, and ideally

with an international or Nordic perspective", said Liselotte Højgaard.

#### THE HUMANITIES ARE ENTRENCHED IN SOCIETY

David Budtz Pedersen said: "The humanities are entrenched in society, and many of the ideas, analyses and terms of reference that characterise public debate stem from humanities research. You need only to think of terms such as 'multiculturalism', 'social cohesion' or the 'post-factual democracy'. All of these were coined and defined by humanities researchers. We want to raise awareness of that".

In the research project 'Mapping the Public Value of Humanities', the methods will comprise:

 A questionnaire-based survey among Danish humanities researchers concerning their external relations



The two researchers David Budtz Pedersen and Frederik Stjernfelt thanked VELUX FONDEN for the anniversary grant.

Photo: Simon Knudsen

- A study of the academic composition of Danish governmental and public committees, commissions, expert groups etc.
- A study of the impact of humanities research on Danish museums – collaboration between humanities researchers and museums (VELUX FONDEN's museums programme) and its impact on the visitor experience
- A study based on qualitative interviews with decision-makers, the media and companies concerning the barriers to, and benefits of, applying humanities research.

#### 'IMPACT' IS A KEYWORD

With investment in research and innovation already substantial and rising all the time, the focus is on safeguarding the relevance and societal impact of research. Equally, there is a need among decision-makers and research-financed

institutions to be able to trace and document the impact of research in society.

"Everyone is talking about 'impact'. Yet there's no consensus on how that impact should be measured. Scientists have always been adept at collecting data to demonstrate the impact of their research and its public value. We simply don't have the same tradition within the humanities. And that despite the fact that humanities researchers are frequently involved in public debate as experts on burning issues such as satirical drawings, crises, behaviour, refugees and public health. As such, humanities research has wide uptake and extensive influence on current debate. But we just can't prove it", said David Budtz Pedersen. /

VELUX FONDEN



The Board and Secretariat of the Employee Foundation of the VKR Group attend the presentation of the grant of EUR 10 million (DKK 75 million) from VILLUM FONDEN, 2016.

Photo: Carsten Andersen

The Employee Foundation of the VKR Group is there to help employees and their families in the best of times and the worst of times. A grant of EUR 10 million (DKK 75 million) from VILLUM FONDEN in commemoration of the VKR Group's anniversary has boosted the capacity for granting support now and in the future.

# In appreciation of all employees of the VKR Group



DISABILITY AIDS, REHABILITATION FOLLOWING illness, infertility treatment, the education of children of employees and community activities such as sports clubs, hospital clowns and musical bands. The purposes supported by the Employee Foundation are wide-ranging and the assistance granted is very gratefully received.

In its 25 years of existence, the Employee Foundation has made grants to more than 3,100 employees and their immediate family in connection with an illness or accident or for a child's higher education. Over the same period, more than 1,500 diverse local community projects have likewise received financial support from the Employee Foundation.

## GRANT IN COMMEMORATION OF THE VKR GROUP'S ANNIVERSARY

The commemoration of the VKR Group's 75th anniversary has also benefited the Employee Foundation in the form of a grant of EUR 10 million (DKK 75 million) from VILLUM FONDEN. This is a gift to all employees of the VKR Group in that it improves the Employee Foundation's grant-making capacity. The funds will be part of the Employee Foundation's capital base, which is currently worth EUR 47 million (DKK 350 million).

#### FACTS AT A GLANCE:

The Employee Foundation of the VKR Group was established in 1991 by VILLUM FONDEN. The Employee Foundation has three main purposes:

- to assist current and retired employees and their next of kin in the event of unfortunate situations; for the continuation of the final education of the children of employees; and to support other worthy causes in aid of employees
- to provide financial assistance for non-profit purposes within the local communities surrounding the individual companies of the VKR Group
- to confer the Villum Kann Rasmussen Award on employees for outstanding achievements reflecting the VKR Group's values.

Learn more about the Employee Foundation of the VKR Group at www.employeefoundation.com.



THE VILLUM KANN RASMUSSEN ANNUAL AWARD IN SCIENCE AND TECHNOLOGY

# "Financial peace of mind allows us to take chances"

Extraordinarily, in 2016, VILLUM FONDEN chose to pay tribute to two researchers in commemoration of the VKR Group's 75th anniversary. Normally, this award is conferred on a single researcher each year. On 22 January 2016, it was made to both Professor Lone Gram of DTU - Technical University of Denmark and Professor Jens Stougaard, Aarhus University.

JENS STOUGAARD IS A PLANT MOLECULAR biologist and ranks among the world's 1% of most-cited scientists in the field of plant and animal science.

Since 2007, he has spearheaded CARB: Centre for Carbohydrate Recognition and Signalling, a centre of excellence staffed by a 40-strong research team. The research is based on how leguminous plants engage in symbiosis with bacteria in the soil around them. The bacteria exploit the atmospheric nitrogen and thanks to their symbiosis with the bacteria, the plants essentially produce their own natural fertiliser, which allows farmers to reduce their use of artificial fertiliser.

The aim of the research is to apply this natural symbiosis to cereals such as maize, which is a staple food crop for the population of Sub-Saharan Africa, where the challenge is both the high cost of artificial fertiliser and the logistical challenge of getting it distributed to remote districts.

Jens Stougaard's growing research team is now at the cutting edge of its field internationally as a result of two factors: "It's a question of assembling a large enough team of diverse specialisms to allow us to link findings, technologies and methodologies into innovative ideas. No one can get this far alone because no single individual can keep up with the technological advances or read all the relevant publications in time. That requires a large interdisciplinary team. Another factor is financial security. You need the funds to hire people, bright minds, and achieve a sufficiently large and diversified team – and then you need the financial peace of mind for taking chances and exploring the more risky theories. Because this is where the real results are to be had". /



JENS STOUGAARD

Professor at the Department of Molecular Biology and Genetics, Aarhus University, and Head of the CARB centre of excellence. His research career has included tenure at Aarhus University, supplemented by visiting positions at universities in the UK and Germany. His PhD from the University of Sussex in the UK followed an MSc in agricultural science from what is now the Faculty of Science at the University of Copenhagen.



THE VILLUM KANN RASMUSSEN ANNUAL AWARD IN SCIENCE AND TECHNOLOGY

# On the trail of the hidden potentials of bacteria

The freezer units at DTU Bioengineering hold more than 2,000 different strains of bacteria. All of them were gathered from the ocean by Professor Lone Gram on the Galatea 3 scientific research expedition in 2006-07 and stored with two aims in mind:

- to identify properties that would benefit mankind
- to investigate their biology and significance for the cycle of nature.

By analysing all the genes of these bacteria, Lone Gram's research team discovered that the bacteria are likely to be capable of producing a far greater number of beneficial substances, such as antibiotics, than hitherto believed. Following the expedition in 2006-07, the team has demonstrated that many of the bacteria hold an antibiotic potential or produce bioactive substances that can affect the human immune system or be used in bioprocesses.

The coming years of research will discover how the bacterial genes can be 'switched on' and made to produce novel substances – greatly facilitated by the Villum Kann Rasmussen Annual Award in Science and Technology, worth EUR 670,000 (DKK 5 million).

"We have to bear in mind the ecosystem these bacteria come from. We need to understand it and mimic it if we want to derive benefit from the properties of these bacteria. Many researchers see genes as just something we can 'cut and paste'; simply transferring genes to a cell culture, which then acts as a cell factory to produce the desired substances. I believe we stand to miss out on some remarkable potentials if we fail to take account of the natural system they come from", says Lone Gram. /



LONE GRAM

Professor at DTU Bioengineering, Technical University of Denmark, and chair of the Danish Council for Independent Research | Natural Sciences.

Formerly visiting researcher at Harvard Medical School in Boston and at University of New South Wales, Australia. She holds a Danish lic.agro. (PhD) in microbiology and an MSc in food science and technology from what is now the Faculty of Science at the University of Copenhagen.





# The Daylight Award

#### AWARDEES

Marilyne Andersen ('Daylight Research') and Steven Holl ('Daylight in Architecture')

#### AWARD

The Daylight Award

#### **AMOUNT**

2 x EUR 100,000 from VILLUM FONDEN, VELUX FONDEN and VELUX STIFTUNG

On 2 November 2016, international researchers, architects and business and industry were gathered in Copenhagen for conferral of The Daylight Award.

This international Award directs focus at the interface between architecture and research – and places great emphasis on the interaction of theory and practice. In the historic setting of the Ny Carlsberg Glyptotek in Copenhagen, the outstanding achievements of two internationally acclaimed individuals, an architect and a daylight researcher, were recognised with a cash prize of EUR 100,000 for each awardee.



"Daylight plays a fundamental role in our places of living. Recognising the importance of research in this area through The Daylight Award is a very strong sign. Science goes hand in hand with architectural design and enables a foundation where knowledge and creativity are combined for a better understanding, anticipation and application of daylight in architecture and in urban development".

#### - Marilyne Andersen

Professor of Sustainable Construction Technologies and Dean of the School of Architecture, Civil and Environmental Engineering (ENAC) at EPFL (École Polytechnique Fédérale de Lausanne)

Photo: Zevegraf



Marilyne Andersen thanks jury member Stephen Selkowitz.

Photo: Zevegraf



Steven Holl receiving The Daylight Award from Kurt Stolz, Chairman of the board for VELUX STIFTUNG.

Photo: Zevegraf

N 2 November 2016, International researchers, architects and business and industry were gathered in celebration of daylight in the historic setting of the Ny Carlsberg Glyptotek in Copenhagen. The achievements of an internationally acclaimed architect and a daylight researcher were each recognised with The Daylight Award, which carries a cash prize of EUR 100,000 for each awardee.

The Award recognises the outstanding contribution of individuals to 'Daylight Research' and

'Daylight in Architecture', respectively.

The awardee for research was Marilyne Andersen, Professor of Sustainable Construction Technologies and Dean of the School of Architecture, Civil and Environmental Engineering of EPFL, Lausanne's technical university. The jury's motivation for selecting Marilyne Andersen was that she is an outstanding academic, educator and active investigator, who has excelled at initiating and leading daylight research with positive impact in the research and architectural arenas.



"When people ask me which material I favour working with, I say light! I have always been fascinated by working with light. Therefore, I am very honoured to be chosen as the recipient of The Daylight Award".

- Steven Holl, Principal of Steven Holl Architects, New York City and Beijing

Photo: Zevegraf

The architectural award went to the internationally acclaimed architect Steven Holl, who leads the architecture and urban design office Steven Holl Architects in New York and Beijing. He is known for his poetic design philosophy, his experimentation with light, his respect for the structural materials and for adapting his buildings to the local context. The relationships between structure, material and light are the cornerstone of all Steven Holl's work: he builds using daylight. These were just some of the words from the jury to Steven Holl when he received the award.

Daylight is a resource conducive to better health, learning in schools, workplace productivity and well-being in the home. It is therefore both promising and productive when architecture meets science, and when different disciplines share knowledge and experience in creating the buildings of the future. The Daylight Award aims to bridge two worlds, and the intention behind establishing this new, international award is to support the artistic, scientific and practical contributions of different disciplines towards understanding both the value and importance of daylight and its practical application in everyday life.

#### **ABOUT THE DAYLIGHT AWARD**

The Daylight Award for *Architecture* is made to an individual or a group of architects who have excelled at creating architecture or urban spaces that demonstrate a unique use of daylight with particular focus on architecture that takes into account quality of life and positive impact on human health and wellbeing, and its value for its immediate environs.

The Daylight Award for *Research* is conferred on an individual or group of scientists for their outstanding contribution to international daylight research. Particular focus is placed on interdisciplinarity and research in human wellbeing and opportunities for linking theory with practice.

The Daylight Award is a joint initiative from

VILLUM FONDEN, VELUX FONDEN and the Swiss foundation VELUX STIFTUNG. The three foundations have a long-standing tradition for recognising best practices within daylight. Accordingly, since 1980, the foundations have conferred the award on the likes of Jørn Utzon (DK), Henning Larsen (DK), Richard Perez (USA), James Carpenter (USA), Lacaton & Vassal (F), Bob Gysin (CH), Peter Zumpthor (CH) and SANAA (JP). Then in 2016, the three foundations joined forces in conferring a single, consolidated award in order to strengthen the international outlook merited by the subject. Going forward, The Daylight Award will be conferred every other year, and the award ceremony will be held alternately in Denmark and Switzerland.

The award is conferred jointly by the foundations VILLUM FONDEN, VELUX FONDEN and VELUX STIFTUNG. All three were founded by Villum Kann Rasmussen, who was keenly engaged in the positive effect of daylight on people. Above all, he saw it as important for people to have access to daylight while at work. In many respects, Villum Kann Rasmussen was ahead of his time. In his lifetime, he worked according to a hypothesis that has since been proved: that abundant daylight in the form of indirect sunlight has a vital psychological effect. Without knowing that the physiological

effect would one day be proven, he insisted that people's mood and job satisfaction improved demonstrably when they benefited from increased access to daylight. He also believed that companies were misguided in insisting that it was the intensity of the lighting that influenced work performance. Artificial light was in no way as beneficial as daylight, and as far back as in the early 30s, Villum Kann Rasmussen was already pointing to studies demonstrating that business productivity could be boosted by up to 33% by 'rationalising the lighting conditions'. /





# Strategy: the young, the experienced and the wildest idea

Research in Ice Age fauna, next-generation batteries, exoplanets, mathematical approaches to quantum physics, optical communication and convective precipitation. The list of granted projects in VILLUM FONDEN's programme for technical and scientific research funding over the past many years is striking for the diversity of research topics represented.

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NE OF THE MORE SUBSTANTIAL investments in 2016 was in aid of a significant commemorative initiative to mark the VKR Group's 75th anniversary with the establishment of an ambitious research centre. This being the VILLUM Center for the Science of Sustainable Fuels and Chemicals, which will receive total funding of DKK 150 million over the next eight years (for details of this initiative, see separate article).

In addition, VILLUM FONDEN has funded a number of research outreach initiatives to stimulate interest in science and technology among schoolchildren.

#### SCIENCE AND TECHNOLOGY FORM THE **BACKBONE**

"Science and technology research has always been focal for VILLUM FONDEN's funding activities", says VILLUM FONDEN's Director of Science Professor Thomas Sinkjær:

"Firstly, each year, we confer the 'Villum Kann Rasmussen Annual Award in Science and Technology', worth a substantial DKK 5 million, on one of Denmark's most outstanding researchers. In our anniversary year 2016, however, the award was made to two researchers. A total of 35 researchers have received this sizeable grant, which recognises the long-standing and dedicated achievements of a talented researcher within a notable field of research. And naturally we will be continuing this award!

Secondly, VILLUM FONDEN has been funding research in science and technology by means of a wide array of instruments for a good many years. From 2016, we will be focusing on curiosity-driven research, meaning the ideas the researchers themselves are most taken up with investigating. We hope in this way to attract the best researchers with the best ideas, and in so doing encourage the research breakthroughs that can make a big difference to society", says Thomas Sinkjær.

#### **VILLUM FONDEN funds:**

#### • THE YOUNG:

Since 2012, the VILLUM Young Investigator programme has been a productive and vital initiative enabling no fewer than 95 early-stage researchers to set up their own first research team based on the ideas they are most passionate about, and thus allowing them to come out of the 'shadow' of well-established professors. For many young investigators, this has led to acclaimed research and thereby improved their career prospects and capacity to attract even more research funding.

The grant amount is DKK 7-10 million, it can be awarded once only, and the timeframe is five years. A large proportion of the funding is spent on salaries for the Danish and foreign PhD and postdoctoral researchers recruited to the research team.



"The Young Investigator programme gives up-and-coming scientists a valuable and substantial early kick-start to their research career. The grants enable them to consolidate their research area faster by expanding their research team with new staff. This boosts their potential for making novel and significant breakthroughs and findings that will potentially benefit society at large".

Anders Overgaard Bjarklev, Rector of DTU - Technical University of Denmark



#### THE EXPERIENCED:

VILLUM Investigator: The object of this programme is to fund researchers who gain the potential to make a significant contribution to science and technology research by establishing an international research centre at a Danish research institution. This programme is for researchers who have demonstrated considerable originality and excellent research results. The ideal applicant is an active investigator who for ten years or more has been recognised for international, pioneering research of the highest scientific standard.

This programme is advertised every other year in an open competitive call for proposals. The grant is for six years, after which period, the grantees are permitted to reapply in competition with other applicants.

The grant total is up to DKK 40 million, including start-up costs. A proportion of the grant can be used for hiring a secretary, assistant or the like to relieve the researcher of administrative burdens. If the researcher is already employed at a Danish educational institution, this may be selected as the researcher's base, but there is

also the option of relocating to another Danish institution if relevant for the research. VILLUM FONDEN hopes to receive promising applications also from international elite researchers and expects to award grants to around ten VILLUM Investigators starting from mid-2017.



"The University of Copenhagen welcomes the VILLUM Investigator funding programme. This funding instrument is an amazing opportunity for experienced and outstanding investigators from both Denmark and abroad to advance their research in science and technology".

Thomas Bjørnholm, Prorector for Research and Innovation, University of Copenhagen

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#### • THE WILD NEW IDEA:

The VILLUM Experiment: for bold research ideas that have difficulty fitting into the conventional peer-review funding system. This programme is open to all researchers regardless of nationality and may be applied for by active researchers of any age.

The programme was created in support of exceptional research projects that challenge norms and possess the potential to fundamentally alter our approach to key topics.

To ensure that researchers dare to submit their most ambitious ideas without being pilloried by their academic peers who will be reviewing their research idea, applicants are anonymous to their reviewers. The reviewers are asked to give preference to ideas they regard as being genuinely innovative. Perhaps only one in ten projects will prove capable of yielding something unique.

The granted amount is DKK 1-2 million, which is to cover a research period of 1-2 years. The funds must be spent primarily on the researcher's own salary, equipment and materials.



"Original research ideas and internationallyranked talents are imperative for the advancement of Denmark as a knowledgebased society. I greatly appreciate VILLUM FONDEN's new funding instruments centred on the investigator's personal capabilities. The VILLUM Experiment based on the nonmainstream idea blazes a new trail among grant-making bodies that will undoubtedly lead to innovation and unexpected breakthroughs".

Professor Niels Chr. Nielsen, Dean of Science and Technology, Aarhus University



#### **IDEAS MUST BE PUT TO THE TEST**

"A single experiment is worth more than 1000 expert views". This motto was conceived by the founder of THE VELUX FOUNDATIONS, Villum Kann Rasmussen, graduate engineer. As an imaginative and innovative inventor he was continually experimenting. Tables, chairs, coffee machines, wind turbines and, of course, his most famous invention, the VELUX roof window.

Villum Kann Rasmussen held bright initiatives and bright ideas in the highest regard. With the VILLUM Experiment, we hope to award funding to those bright minds that might come up with a wild new and bold research project.



#### **ALL NATIONALITIES WELCOME**

All three funding instruments are open to all researchers, regardless of nationality. The only condition is that the proposed research must be based at a Danish university or other Danish research institution.

## INNOVATIVE RESEARCH MUST BE PURSUED ON THE INVESTIGATORS' OWN TERMS

For the Director of Science, the bar is set high:

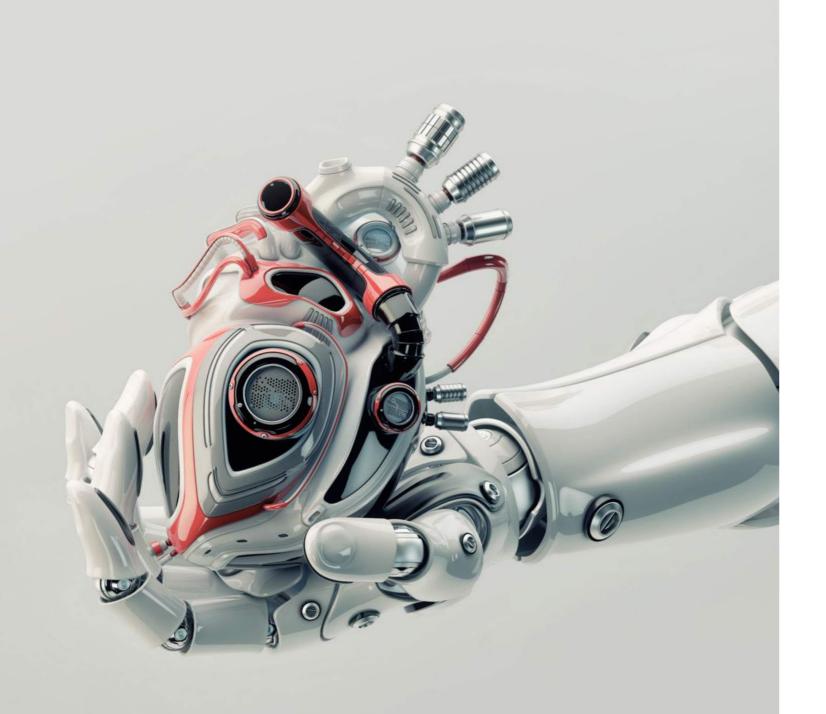
"Our goal is to incentivise world-class research platformed at Danish universities and research institutions. As a non-profit, private charitable foundation, we award 'independent' funds, and have the means to give curiosity-driven, talented researchers a secure framework for conducting ground-breaking research. By funding the most talented, we ensure that the money follows the investigator rather than the project. We are in a position to take more chances and invest in research that may fail at the first attempt or be unable to provide solutions to known challenges until well into the future.

At the Danish universities especially, scope and financial resources are needed for those creative minds that are capable of driving research breakthroughs as they are typically the ones who take the lead in delivering crucial results and blazing a trail in new fields of research. Ultimately, the aim is for those results to justify the investment and prove its worth to Danish society", says Thomas Sinkjær. /



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VELUX FONDEN awards free research funds primarily in order to promote group projects focusing on basic research at the highest academic level at Danish universities and cultural institutions.



# The Robot Revolution: who holds responsibility?

#### BY JOHANNA SEIBT

#### GRANTEE

Johanna Seibt, PhD, D.Phil., Professor (with Special Responsibilities), School of Culture and Society, Aarhus University

#### PROJECT

'As if it were a person – social robotics and human self-understanding'

#### GRANT

EUR 0.8 million (DKK 5.9 million) from VELUX FONDEN

We are currently being drawn, unawares perhaps, into a technological revolution that, according to the latest predictions, will result in fundamental changes to the labour market and in our way of interacting. Now more than ever, the humanities have a significant role to play.

Robophilosophy will help us to understand interaction between humans and robots.

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Who is responsible for devising applications for social robotics?

HE ROBOT REVOLUTION', AS IT IS dubbed by the media, is powered by social robotics that will make robots with social qualities part of society. Today, robot designers are no longer programming the machine's physical movements, but rather its social behaviour. This means that we are no longer creating culture as a product of Man's freedom of thought and volition, but starting to design and construct culture by producing artificial agents that will engage us in their programmed routines and repertoires.

## CAN ROBOT DESIGNERS ALSO BE CULTURAL ENGINEERS?

Robot developers, computer scientists and investigators within a range of different disciplines are cautioning that the robot revolution poses a threat to humanity's core values. But who has the requisite expertise for advising on this new form of cultural design? None other but humanities researchers. According to numerous new global initiatives for responsible robotics and ethical engineering, state-of-the-art engineers need humanities research right now. And it is not solely moral and ethical concepts such as dignity and justice that are at issue, but also sociocultural values associated with autonomy, flexibility, freedom of scope, the authentic encounter, individual empowerment and equality.

We face the advent of new domains, demanding a new type of social responsibility. Governments, grant-makers and researchers in the humanities, for example, each have a responsibility for shaping the robot revolution to match society's sociocultural values.

## ROBOPHILOSOPHY – A NEW FIELD OF RESEARCH

Thanks to the visionary approach of VELUX FONDEN, the School of Culture and Society at Aarhus University has been able to define and present a new interdisciplinary field of philosophical research: 'robophilosophy'.

The aim of robophilosophy is to solve the challenge posed by the robot revolution. Put in more academic terms, this branch of investigation is defined as 'philosophy of, for and by social robotics'. It includes another branch of philosophy, 'roboethics', but also mobilises the theoretical disciplines of philosophy, ontology, epistemology and philosophy of science in its ambition to understand the interaction between humans and robots. The grant from VELUX FONDEN (January 2012-March 2015) made it possible to employ four junior investigators, and, in collaboration with ATR/Hiroshi Ishiguro Robotics Lab in Japan, establish the first international interdisciplinary research team within robophilosophy.

The research team has conducted empirical studies of changes in people's attitudes to robots in a long-term project at an experimental physical rehabilitation centre, Vikærgården Rehabiliteringscenter, (2013-2014); in a pilot project among students at the SOSU Nord health college (October 2014-February 2015); and during a museum exhibition entitled 'Robot or Not – What's Your View?' at the Krydsfelt Skive museum (September 2015-February 2016). One of the study topics was what it takes to convince people that a robot is capable of conscious thought.

But more theoretical and abstract topics have also been addressed. Key questions include: Is a human interaction with a social robot actually a social interaction? And how do we need to expand our notions of social behaviour to allow for simulated and programmed interaction between humans and robots, and do we even have any sound reasons for doing so, regardless of the advances in social robot technology?

#### WHO HOLDS RESPONSIBILITY?

The research team's efforts will map and shed light on the complex areas of responsibility that arise from social robot technology, since these are focal for legislation and development policy. Because who is responsible if things go wrong? Who is going to be responsible for ensuring that only certain designs are realised, and others not? Who is responsible for addressing systemic adverse consequences of using social robot technology, and who is responsible for devising applications for social robot technology that underpin human values?

These questions are complex because they always involve at least three groups of human agents – the robotics researcher who designed the robot, the public who interact with robots, and the surrounding cultural community. A key premise of the research project is consequently that the various types of responsibility can only be separated and defined if one understands advances in robotics applications as a social group

action entailing a collective responsibility.

#### THE ROBOTIC MOMENT

To raise awareness of the extensive social and cultural implications of social robotics, in 2014, the research team organised a major international research conference entitled 'Robophilosophy 2014 – Sociable Robots and the Future of Social Relations'. The conference was such a success that additional grants made it possible to set up the recurring series of Robophilosophy <sup>1</sup>) conferences and the research network TRANSOR, Transdisciplinary Studies in Social Robotics <sup>2</sup>). The 2014 conference also generated five publications.

In addition, 2016 saw the realisation of the world's largest conference within humanities research in and on social robotics, a twinned event that included the second robophilosophy conference and a conference of the TRANSOR network. The title was: 'What Social Robots Can and Should Do'.

The decade between 2015 and 2025 has been advance-dubbed 'the robotic moment' in human history - '[the] way we contemplate [robots] on the horizon says much about who we are and who we are willing to become' <sup>3</sup>). Contributing competently and, not least, proactively, to this contemplation is not only an intriguing new challenge for the humanities, it is also an obligation with historic implications. /

#### Notes:

- 1) www.robo-philosophy.org
- 2) www.transor.org
- 3) Sherry Turkle, Alone Together



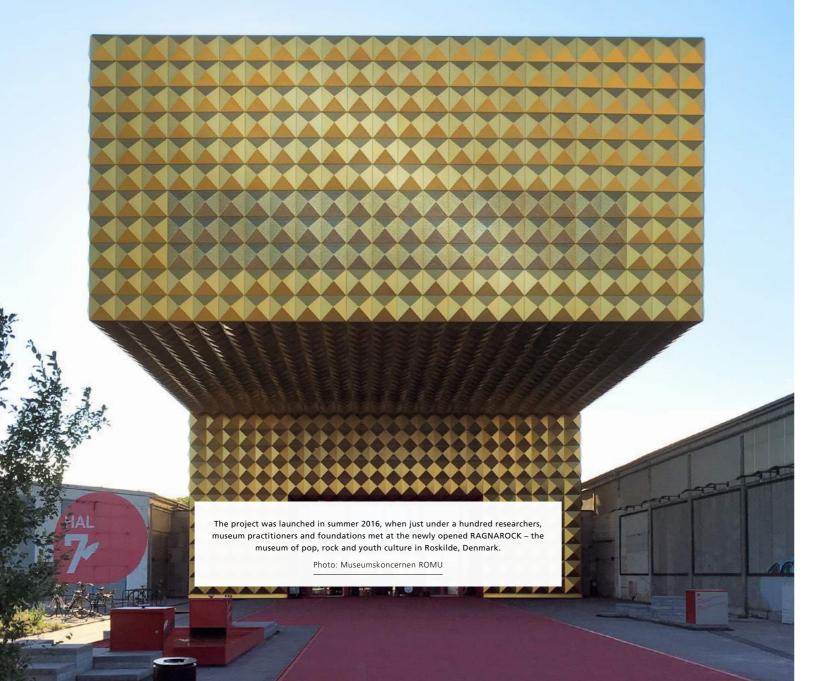
JOHANNA SEIBT

Johanna Seibt, PhD, D.Phil.,

Professor (with Special
Responsibilities), School of Culture
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VELUX FONDEN

# MUOSREEUSM



# 'Our Museum' to set a new standard for museum mediation

#### GRANTEE

#### Professor Kirsten Drotner, Department for the Study of Culture, University of Southern Denmark

#### PROJECT

'Danish museum mediation – history, design and evaluation'

#### GRANT

EUR 1.3 million (DKK 9.9 million) from VELUX FONDEN and the same amount from Nordeafonden, to a total of EUR 2.6 million (DKK 19.8 million)

VELUX FONDEN and Nordea-fonden have made the largest grant on record in Denmark for research and development of museum educational and experiential services to the 'Our Museum' project, in which eight Danish museums and five universities have joined forces to study how the Danish public can benefit more from the national museums' mediation of cultural heritage. 'Our Museum' is a four-year national research and development project on innovative and digital museum mediation. The project has also received matching co-funding from a circle of applicants.

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Professor Kirsten Drotner, Department for the Study of Culture, University of Southern Denmark, has established the large joint project which will focus on museum mediation, both past and present.

Photo: Ole Munksgaard

HE PROJECT WILL BE LED FROM A secretariat at the University of Southern Denmark, which will be responsible for the comprehensive coordination of the many stakeholders involved. The project group staffing totals eight senior researchers, two postdoctoral researchers, 11 PhD fellows and eight museum practitioners. In 13 sub-projects, they will be analysing and mapping parameters and opportunities for museum mediation, both past and present, to shed light on how cultural mediation practices have changed and can change going forward for the benefit of even more users.

For VELUX FONDEN, this project builds on its existing museums programme, under which it has made grants to a number of collective research and cultural mediation projects at museums in Denmark. 'Our Museum' addresses the basic conditions and problems that constrain museums generally. In this way, it is similar in nature to the foundation's metaprojects under its humanities programme. At the inauguration, Executive Director, Ane Hendriksen, VELUX FONDEN, said:

"This is a significant project for us because it builds on dialogue and partnership between the institutions we support. We have every confidence that this project will not only achieve excellent outcomes for the museums, but also serve to bridge divides, and foster partnerships and new insights that will hold great benefits for the museums and their visitors. We look forward to following you and making use of the results".

#### 'Our Museum'

#### THE FIRST YEAR - IN BRIEF

The project's focus in the first six months was to coordinate all the parties involved (staffing, partnership agreements and organisation). In June 2016, the entire project group met for its initial residential conferencing sessions on the project's vision, value, outputs and benefits.

#### AUGUST: KICK-OFF

In August 2016, the research-oriented unit of the project group convened for a one-day seminar themed 'The Effective Research Plan'. The focus here was centred around the 13 research plans that will be charting the course for the coming four years. The seminar served as a kick-off meeting for the newly appointed PhD fellows' and postdoctoral researchers' research planning.

#### OCTOBER:

#### FINE-TUNING THE RESEARCH PLANS

In October, the senior researchers, postdoctoral researchers and PhD fellows worked to refine the research plans to delineate the research questions with a view to ensuring cohesion and joint progress within the project. All the research plans were approved at the respective universities by Christmas 2016.

#### DECEMBER:

## ELABORATION OF THE EDUCATIONAL AND EXPERIENTIAL CONCEPTS

All the project participants convened for a seminar on concept mapping to draw up a common foundation for research activities going forward. The project's main hypothesis is that by tradition, museums are created and designed at the interface of the perception of museum services as being both a 'means' and 'end' in public educational outreach and visitor experiences, respectively. But what do the two concepts of educational and experiential entail, and how have they been interpreted and implemented in the past, and now, in the present?

#### MAY 2017:

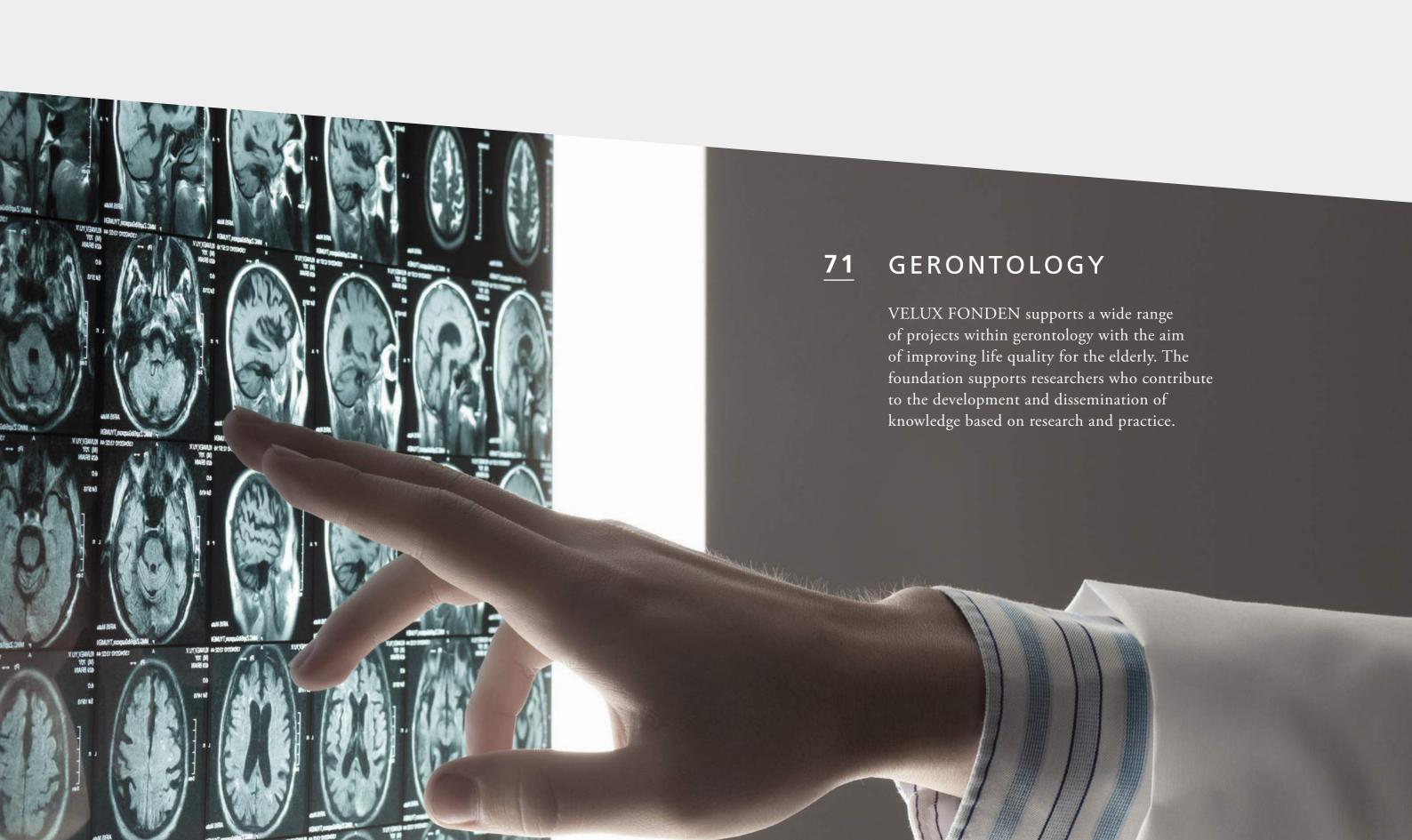
#### **INTERNATIONAL CONFERENCE IN MAY 2017**

'Our Museum' has timetabled a series of seminars and workshops for the coming years. The first major public event will be an international conference on 17 May 2017 held in Copenhagen at the Natural History Museum of Denmark. At this event, Danish and international researchers and museum practitioners will be discussing the project's focal questions and themes.



Museum employees, researchers, politicians and others with an interest in museum mediation, digital engagement and user involvement are invited to follow the project's progress, findings and outputs at www.voresmuseum.dk and @voresmuseum on Facebook and Twitter.

VELUX FONDEN



# Twins have been photographed and their ages determined in Kaare Christensen's research.

## Putting Danish gerontology on the world map



Professor Kaare Christensen has been fascinated by the concept of age for much of his life. He is a medical doctor and researcher, and most recently author of 'Skarpe hjørner & runde dage' ('Sharp corners & round days').

Professor Kaare Christensen is in many respects a seasoned scientist. He is 57 years old and has lived a good and already relatively long life, and has devoted virtually the whole of his career to the concept of age. With funding from VELUX FONDEN, he has established Denmark's first research centre devoted exclusively to aging, and ever since then has helped to place crucial insights into aging on the world map, while receiving both national and international grants.

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A project to assess the age of twins put Kaare Christensen on the trail of defining a new biomarker for aging.

Photo: Det Danske Tvillingregister

GING HAS ALWAYS BEEN A FOCAL INTEREST for VELUX FONDEN. As far back as in 1981, when Villum Kann Rasmussen founded VELUX FONDEN, age and aging was a recurring theme in the foundation's grants.

On the one hand, the decision was made to support 'active senior citizens' who make a contribution for their own and others' benefit. And on the other hand, Villum Kann Rasmussen was personally concerned about society's general 'youth fixation'. As he grew older himself, he was much taken up with the role of senior citizens in society – what did it mean to have lived a long life? Was it not possible to contribute to society in later life? How did advancing age affect physical functioning and mental faculties?

Both research into old age (geriatrics and gerontology) and 'support for active senior citizens' were inscribed as two of the priority areas in the foundation statutes.

### COINCIDENCE BECAME A CAREER PATH

As a medical doctor, Kaare Christensen worked at hospitals in Southern Denmark from 1989 to 1992. He became taken up with 'why some people succumb to disease, but others do not?', and 'why are some babies born with congenital deformities?'. While starting his own family, he now set about studying the field of reproductive epidemiology. He was interested in making this field comprehensible to others than himself, and by something of a coincidence, he started researching why some twins were born with a cleft lip and palate, and others not. An American professor, with an interest in life-expectancy, learned of Kaare Christensen and invited him to join an American project.

This study of life-expectancy in twins that ran from 1995-2005 effectively launched Kaare Christensen's career in aging research. In this project, many thousands of twins from the whole of Denmark were to be interviewed, and in 2000, VELUX FONDEN came on board with

### DARC I

5-year DARC I project - 'Why do we age so differently?'

The centre has made it possible to set up an interdisciplinary alliance at the national level in which well-established research centres in epidemiology, social epidemiology and molecular gerontology collaborate on equal terms. The alliance has made it possible to study the

significance of genetic and environmental factors for the cognitive and physical level of functioning of the elderly.

Funding: EUR 3 million (DKK 22 million) from VELUX FONDEN, 2007-2011

### DARC II

5-year DARC II project - 'Are the years added to life, quality years?'

Findings from this study demonstrate that not only are more individuals attaining the highest ages, but that they do so at a higher level of functioning, not least intellectually, than in the past, and that there are grounds to expect this positive trend to continue.

Other positive findings have been evidence that older persons do not in the long term suffer cognitive damage from being under general anaesthesia for surgical interventions.

DARC II is looking for more genetic factors and mechanisms which in an interaction with environmental factors influence human biological aging. The outcomes of this research will ultimately also have applications in the care of elderly patients.

The centre continues to give interdisciplinarity pride of place, for example: all PhD projects are attached to two different institutions and have two supervisors. In this way, the centre is well on the way to training the coming generation of investigators in aging research with a broad basis.

Funding: EUR 3.4 million (DKK 25 million) from VELUX FONDEN, 2012-2018

a grant for 100 digital cameras. This was because the twins also had to be photographed, so that a number of nurses and others could determine their ages.

The results were significant. Researchers around the world had for many years been trying to find an effective marker of aging, that is, an indicator of a person's biological age, which may be higher or lower than their actual age, and is closely connected with life expectancy. Until then, researchers had largely focused on the body's molecular building blocks, but without much luck. But the photographs worked! Not only were the nurses largely in agreement in their assessment, but the estimated age had the attributes of a good marker: it linked physical and intellectual function, disease and life-expectancy. Disadvantaged living conditions and an unhealthy lifestyle were also evidenced by an

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### FIVE POINTS FROM KAARE CHRISTENSEN'S AGING RESEARCH

- 1 Aging can be influenced, even among the oldest old.
- Many more people are attaining the highest ages with their cognitive faculties relatively intact.
- 3 The old of the future can be expected to be even better functioning.
- Physical appearance is a good biomarker of aging processes among the elderly.
- Genetic factors significantly influence life-expectancy and functioning.

elevated estimated age. Overall, it proved to be more risky to look a year older than to be a year older. At the present time, testing is ongoing in medical practices, in which images of patients are incorporated in disease history and prognosis.

### A FIRST CENTRE OF EXCELLENCE DEVOTED TO AGING RESEARCH

A couple of years later, Kaare Christensen launched the Danish Aging Research Center (DARC I) at the University of Southern Denmark, as the first of its kind in Denmark.

"I had received research funding from both the US and the EU for a good many years, and did wonder why I hadn't yet succeeded in securing funding from Denmark", says Kaare Christensen about the early years.

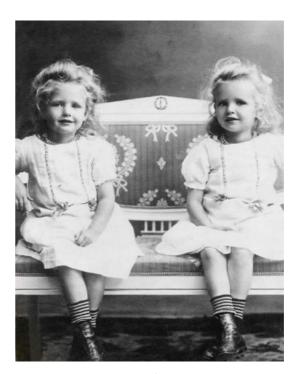
This made VELUX FONDEN the first in Denmark to give credence to aging research. This was implemented by a substantial grant from VELUX FONDEN of EUR 3 million (DKK 22 million). Five years later, this was followed up by yet another EUR 3.4 million (DKK 25 million) for the creation of DARC II.

### **GENERAL INTEREST IN THE FIELD**

Since then, the original Danish Center for Aging Research has been joined by the Danish Center for Healthy Aging, and other foundations have also funded aging research. And society has generally had to embrace a shift in assumptions about the capabilities of its older population in terms of their activity level (travel, sports etc.), the later pensionable age and the value of retaining experienced older employees on the labour market. Society has gone from focusing on the young to waking up to what senior citizens have to offer.

### THE FUTURE OF AGING RESEARCH

In the grand scheme of things, Kaare Christensen believes that aging research is poised for even



In DARC I and DARC II, studies of twins born through the 20th century played a key role. These twin studies have revealed, for example, that genetic factors greatly influence survival and functioning in the oldest old.

Photo: Det Danske Tvillingregister

more breakthroughs. As our average life-expectancy increases, it is still interesting to look at the quality of added life years, and the state of the individual's cognitive faculties.

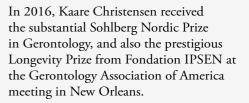
"I am interested in the idea of a 4th age, meaning childhood, prime, old age and then the life years now being added to our life expectancy. Happily, our research indicates that the added years are 'good years' and not merely 'life-prolonging'. However, attaining a high old age is rarely without its challenges, which makes it meaningful to research the key factors for maintaining quality of life among relative 'high-fliers' in old age. The aim is to work towards a better understanding and prioritisation of our initiatives

and services for the elderly and the oldest old. Perhaps we should concern ourselves less with cholesterol counts and more with overall quality of life for the oldest old. And how does society treat its senior citizens, and what can it do better in relation to under- and overmedication of the elderly. There is certainly enough for researchers to be getting on with in the years ahead", says Kaare Christensen.

For VELUX FONDEN's executive director, Ane Hendriksen, the focus on aging research will be maintained as a priority theme.

"We are keen to support projects that dig deeper into the situation of elderly people who are lonely and lacking physical energy, and not least of the infirm elderly. How can we best assist them when they live longer? To that end, 2017 will also see us allocating funds in support of research projects within rehabilitation, medicines consumption in the elderly and cancer care for the elderly", says Ane Hendriksen.









## Tailored laser therapy for diabetic retinopathy

BY JAKOB GRAUSLUND

### GRANTEE

Jakob Grauslund, clinical professor, Department of Ophthalmology, Odense University Hospital

### PROJECT

'IMPETUS 2018'

### GRANT

EUR 0.7 million (DKK 5.0 million) from VELUX FONDEN

20,000 Danes have diabetes. Around one person in ten with type 1 diabetes goes blind due to a complication called diabetic retinopathy, in which tiny new blood vessels form on the light-sensitive tissue called the retina that lines the back of the eye. These blood vessels are very fragile and can bleed into the eye's vitreous body or cause retinal detachment.

Since 1976, retinal laser therapy has been used to remove the new blood vessels (see figure). All patients receive the same treatment, which means that some are under-treated, and others overtreated. Under-treatment can cause severe vision loss and over-treatment will give many patients a decreased visual field, loss of night vision or vision loss.

The 'IMPETUS 2018' project aims to develop an individualised laser therapy method to optimise the desired effect and minimise adverse effects.

After following 65 patients over six months, the initial results show a link between oxygen saturation of the retinal blood vessels and the benefit of the laser therapy. Patients with a decreasing oxygen saturation appear to respond best to laser therapy. This observation will be a cornerstone in the subsequent trial of individualised laser

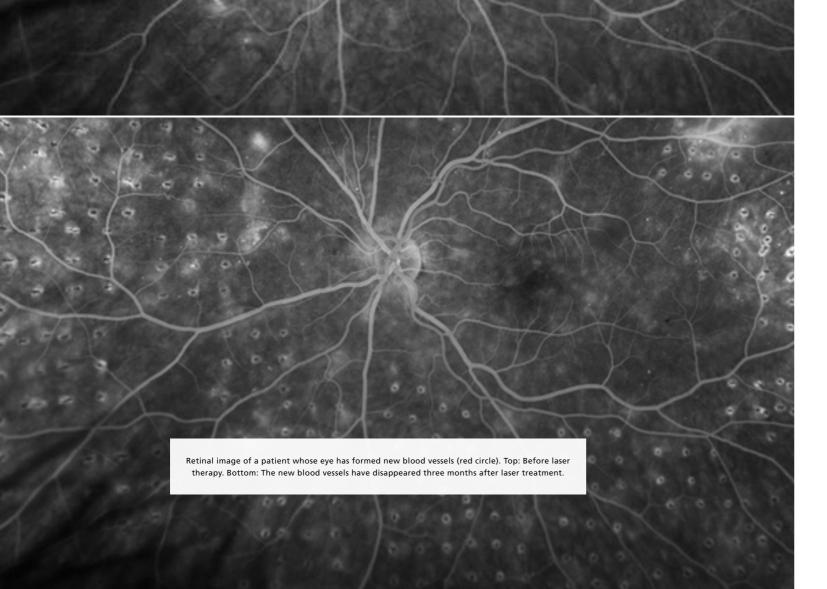
therapy. In the trial, the patients will receive either individualised or conventional laser therapy, and if the individualised therapy proves to have the same desirable effect as conventional therapy but with fewer adverse effects, it will be possible to use this finding for significantly enhancing future therapies. /

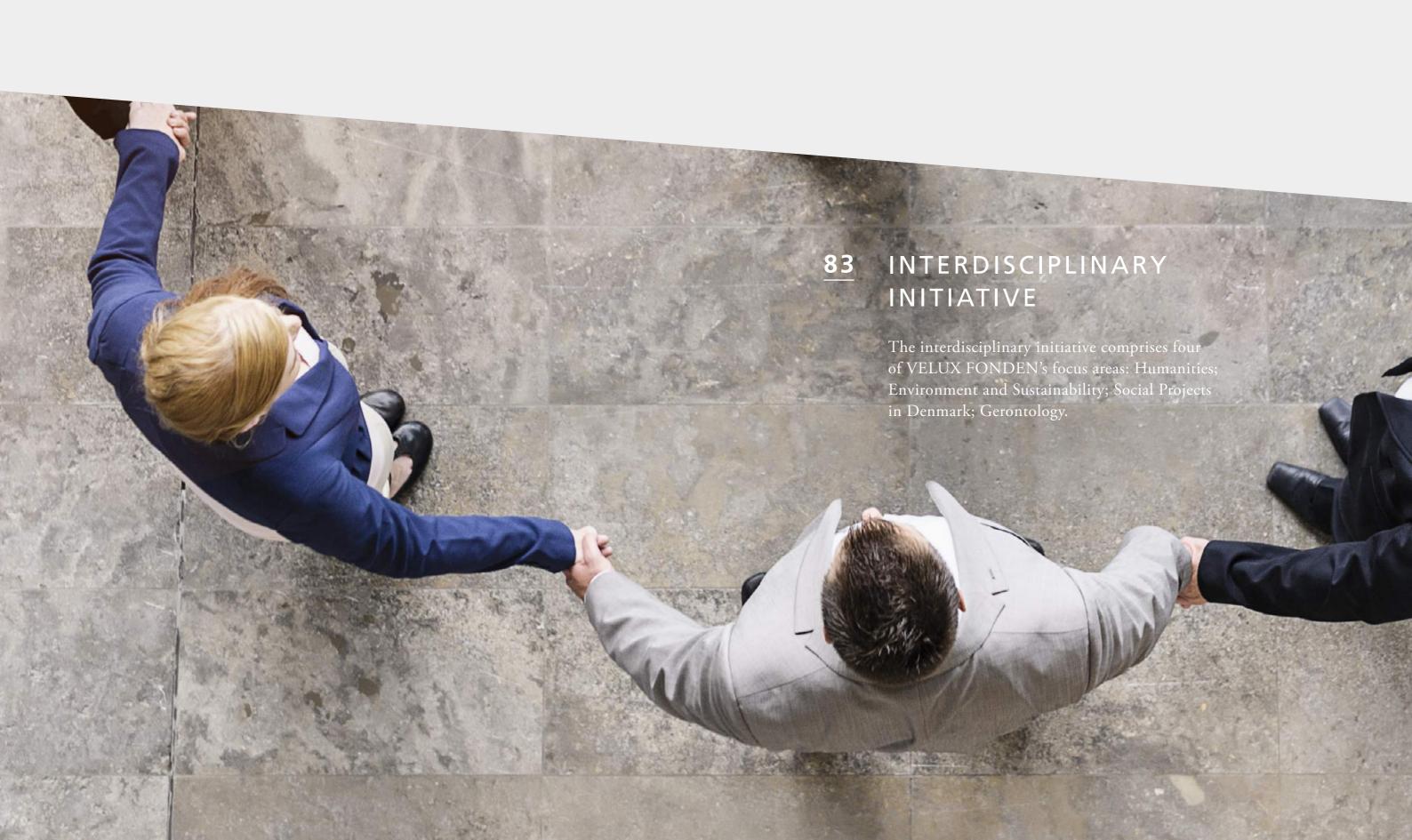


JAKOB GRAUSLUND

Jakob Grauslund (b. 1977) is a professor and senior consultant physician at the Department of Ophthalmology at Odense University Hospital (OUH) and University of Southern Denmark. His PhD thesis (2010) and doctoral thesis (2011) addressed visual long-term complications in type 1 diabetes, and in recent years he has conducted intensive research in patient-friendly investigative methods for determining individual risks of diabetic vision loss. Since 2013, Jakob has been the research manager at the Department of Ophthalmology at OUH and the main supervisor to eight PhD students and 27 students writing their master's thesis.

'IMPETUS 2018', the Department's 'flagship project', is staffed by two PhD students and has an international advisory board.







## New interdisciplinary initiative within VELUX FONDEN

### INTERDISCIPLINARY PROJECTS

### GRANTS

The interdisciplinary initiative comprises four of VELUX FONDEN's focus areas: Humanities; Environment and Sustainability; Social Projects in Denmark; Gerontology

Up to EUR 4 million (DKK 30 million) from VELUX FONDEN

A new initiative within VELUX FONDEN will promote collaboration between humanities researchers and practitioners within the social, elder-care or environmental sectors.

OCIETY FACES A NUMBER OF MAJOR challenges that require cross-cutting practical and theoretical research. Environmental problems, societal concerns and the aging population are just some of the challenges for which the common denominator is that they cut across disciplines.

This naturally places interdisciplinarity high on the political agenda. The EU Framework Programme for Research and Innovation, Horizon 2020, and the Danish FORSK2020, for example, are based on the policy of offering funding geared to major societal challenges rather than individual disciplines.

### THE SIGNIFICANCE OF THE HUMAN FACTOR

At the same time, there is growing recognition that the 'human factor' is crucial in accounting for the root causes of, and providing potential solutions to, the major societal challenges. The challenges cannot be understood or overcome solely by means of technology or financial acumen, but must also incorporate insights into human behaviour, values, norms, culture, social conditions etc. And this is precisely what the humanities and social sciences have expertise in and a long-standing tradition for researching.

Given this fact, it is remarkable that the humanities secure such a relatively modest share of the above-mentioned research funds.

### **VELUX FONDEN'S SCOPE IS A STRENGTH**

With its new interdisciplinary initiative, VELUX FONDEN will make the diversity enshrined by its statutes a platform for funding projects that cut across sectors to address some of the tallest challenges facing society.

This is possible because VELUX FONDEN's programme areas are wide ranging in that they comprise the social sector, gerontology/active

senior citizens, the environment and the humanities. The first three being the focus for some of the most serious challenges facing society – and the last, the humanities, holding the potential for contributing research to these.

Taking humanities research as its main instrument, the new initiative will serve to foster collaboration and knowledge exchange between researchers and practitioners in the social, gerontological or environmental areas.

### **EQUITABLE PARTNERSHIPS IN FOCUS**

A key principle for the initiative is to fund projects in which the research environment and practice environment engage in an equal partnership.

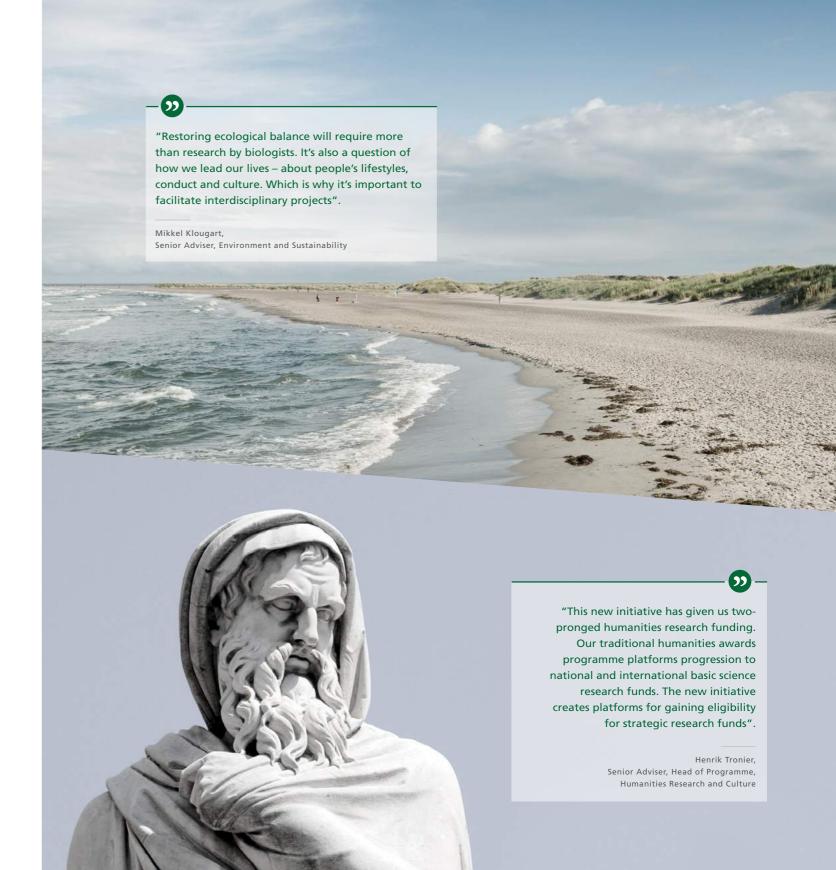
Strictly speaking, this means it is not enough for a researcher to investigate a problem in practice so that practice is merely an object of research. Practitioners in the field must also have raised the problem and recognised that it calls for the theory and methodology of academic research, while the practitioners' know-how and insights, experience and vocational skills are expected to synergise with the theoretical approach of the researchers.

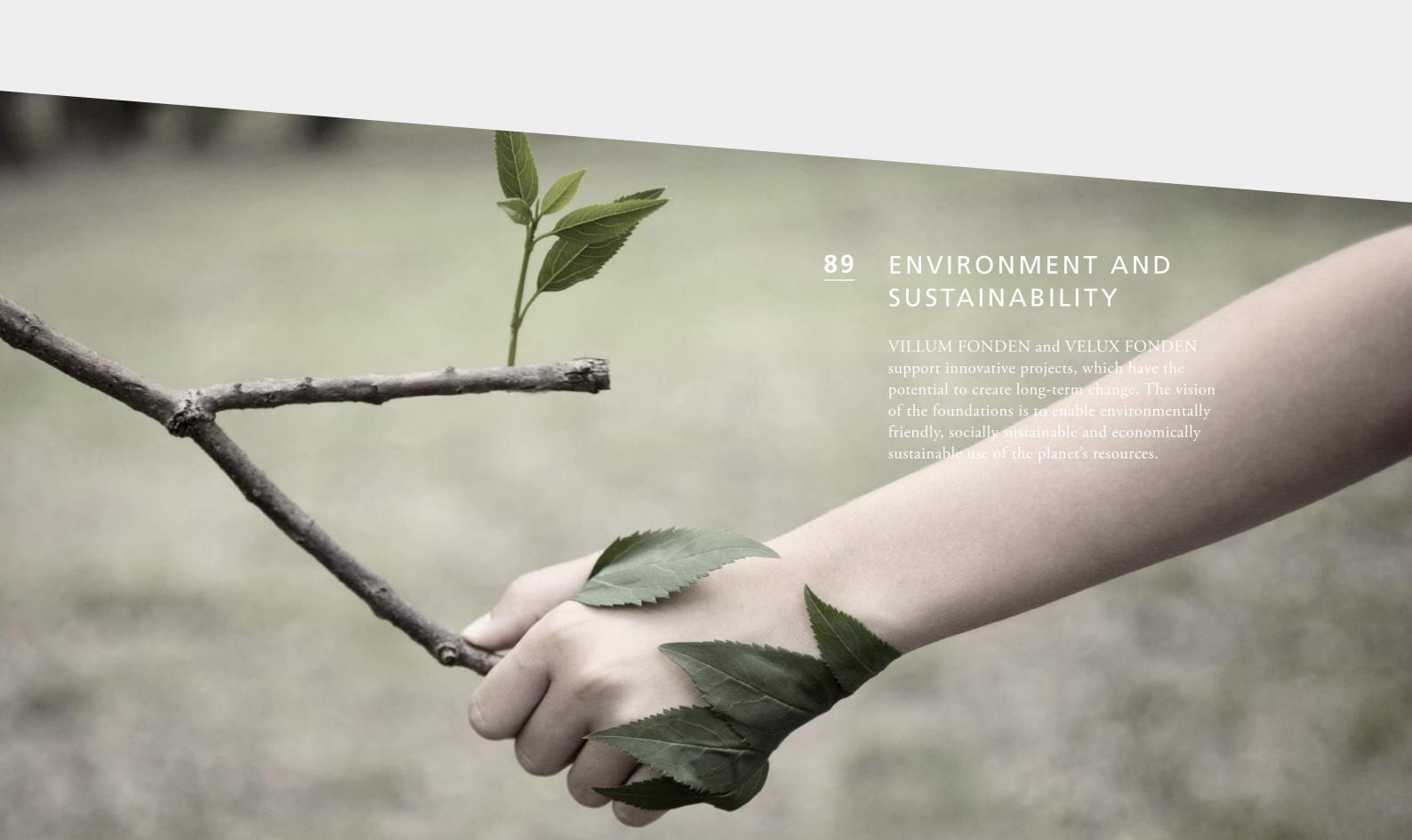
Overall, such projects are expected to help to overcome specific challenges in the given areas, for advances in practice and for new basic-research insights with contributions to international research.

The aim of the interdisciplinary initiative is both to strengthen efforts in the three first programme areas – Social, Gerontological, Environmental – via the alliance with research – and to strengthen the humanities programme area by allying it with practice in the field. The expectation is also to help to create platforms for humanities basic research centres to facilitate their progression to the major national and international research funds geared to the major societal challenges. /



In the process surrounding grant allocation, a number of the best letters of interest are invited to submit applications. For each application, two external peer reviews will be obtained. The grant maximum is EUR 4 million (DKK 30 million).







## Socially beneficial agriculture

BY JOACHIM PLAETNER KJELDSEN
Organic Denmark

GRANTEE

Organic Denmark

PROJECT

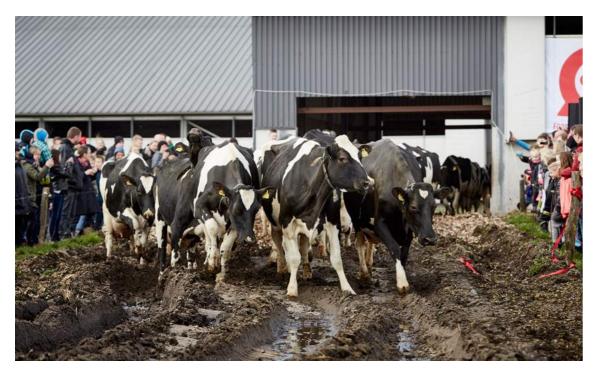
New sustainable business models for Danish agriculture

GRANT

EUR 2.2 million (DKK 16.1 million) from VILLUM FONDEN

The agricultural sector has the potential to contribute a number of social benefits over and above affordable produce. Countryside stewardship, social enterprises, civic engagement and the repopulation of rural districts are just some of the areas in which growers and farmers of the future can contribute wider societal benefits. This article outlines the Danish project 'Det Samfundsnyttige Landbrug' ('Socially Beneficial Agriculture'), which is devising and describing sustainable agricultural models for Denmark's future.

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Organic cattle are put out to pasture in spring. An event more than one million Danes have shared with dairy herds and organic farmers over the years.

Photo: Moment Photografi

ARMING WAS ONCE THE ECONOMIC d backbone of Denmark. Now, while farming is still an essential source of foreign currency for Denmark, its exports are continuously diminishing. At the same time, Danish agriculture is under pressure from the ravages of a structural trend that has reduced the number of farms by 85 per cent in just half a century, while those that remain are vast in size and burdened by vaster debts. Efficiency improvements and the industrialisation of agriculture have put the countryside, the environment and animal welfare under pressure and resulted in large-scale holdings and debts, which make it virtually impossible for beginning farmers to buy into the sector. All of these adverse impacts are the result of the agricultural sector's trends and consolidated structure and do not benefit society at large.

How can we achieve a Danish agricultural sector that in the future will benefit society by doing more than supplying affordable produce? This question formed the basis for a large-scale development project on 'Socially Beneficial Agriculture' initiated two years ago by the national organic farming and food advocacy organisation, Organic Denmark, with funding from VILLUM FONDEN. An essential aim of the project has been to improve access for the next generation of organic farmers to the sector and to develop resources for solving society's major challenges surrounding the countryside, protection of drinking water, depopulation and the social needs of citizens with mental, social or physical challenges. In practical terms, the project has worked with 11 cases: 11 widely differing organic grower/farmer enterprises and initiatives,



Bettina and Lars Westergaard run the retail nursery Westergaards Planteskole, which employs citizens from Kerteminde local authority on work-capacity clarification programmes.

Photo: Økologi & Erhverv

each representing innovations in Danish agriculture.

On Samsø, shares in the island's land have been sold to the public with a guarantee that it would be leased to young organic farmers. In Northern Jutland, an organic grower and two beginning farmers have concluded Denmark's first sharemilker agreement, a form of sharefarming in which the dairy farmers own their herds, but lease a stable and purchase feed from the grower. At Egholm Folkefarm, a 'community-co-owned' farm on the Limfjord island of Egholm, a few kilometres from Aalborg city centre, the city-dwellers co-own and work on the farm to produce their own foods. On the island of Funen, an organic retail nursery also serves as an employment centre for people on

work-capacity clarification programmes, and just outside the city of Aarhus, a 45-hectare holding is being converted into an organic farm and social enterprise employer.

The 11 cases represent a diverse range of innovative initiatives from generational change in farm ownership, financing and ownership structure to nature conservation, environmental protection and repopulation of rural districts.

### **NEW ALLIANCES ARE KEY**

Organic farms that do not use pesticides and medicate livestock less are intrinsically socially beneficial. But in addition, organic farms also have the potential to benefit society through better countryside ecology, civic engagement and employment, including for disadvantaged groups.

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### 11 SOCIALLY BENEFICIAL AGRICULTURAL ENTERPRISES

- SamsØkologisk an agricultural foundation in which Danes buy shares in organic farmland on the island of Samsø, the aim being to lease and sell to beginning organic farmers and to increase the share of organically farmed land on the island.
- Bundgård Sharemilker sharefarming in which beginning dairy farmers lease existing buildings from a grower.
- Egholm Folkefarm an island farm five minutes from Aalborg city centre in a cooperative between the farmer and a social enterprise that engages citizens at social enterprise workplaces and as shareholders.
- Hegnsholt Hønseri a cooperative between a poultry farmer, citizens and restaurants on production of broiler chickens and eggs.
- Almende ApS cooperative farmers allied with a pension company as the owner of land and buildings.
- Westergaards Planteskole a retail nursery and social enterprise run jointly with the local authority benefitting citizens on work-capacity clarification programmes.

- Topkær Økologi a farm undergoing conversion to organic farming and providing workplaces as a social enterprise.
- Skyttes Gartneri a Danish pioneer enterprise in organic growing has secured its future by transferring family ownership to a limited company and forming a cooperative venture with the neighbouring landowner.
- Livssalling a cultural alliance of farmers to revive ten smallholdings in a cluster around the Thise Dairy.
- St. Vildmosens Naturgræsningsfællesskab IVS – a cooperative project between farmers and a state landowner on stewardship and conservation of unique natural features of Store Vildmose, one of the largest contiguous areas of raised bog in Denmark, and increased public access.
- Bisgaard Delelandbrug a sharefarm to facilitate farm transfer.

According to Lone Andreasen, project manager of 'Socially Beneficial Agriculture' within Organic Denmark, one of the keys to achieving socially beneficial agriculture is new alliances between the various stakeholders who are directly and indirectly involved in growing and farming.

"Cooperative ventures between growers/farmers, landowners, citizens and, for example, local authorities, are focal in creating new openings for setting up agricultural enterprises that solve challenges for the sector and for society. Social enterprise agriculture, countryside stewardship and sharefarming are examples of the new cooperative ventures", says Lone Andreasen.

### **FOUR BOTTOM LINES**

The project focuses on networking and helping each of the 11 cases to facilitate new joint ventures, and with business and concept development. One project-wide theme is the 'quadruple bottom line' model: the financial, environmental, social and managerial bottom lines.

The project gathers experience from the 11 cases on a dedicated website to serve as inspiration

for others who might be interested in engaging in new agricultural businesses based on joint ventures. The project is also developing a strategic tool for socially beneficial agriculture – based on the four bottom lines. Another output is an online forum, where beginning and established farmers, citizens and others can interact and connect to form alliances, negotiate a farm transfer or jointly develop new agricultural enterprises.

In addition to the 11 cases in the project, in autumn 2016, a networked development scheme was carried out with five new agricultural businesses. This included a drop-in centre for war veterans.

### NATIONAL ORGANIC FARMING FOUNDATION

One mission in the project is to develop a model for a national organic farming foundation, as a joint venture between citizens and agriculture stakeholders. The purpose of the foundation will be to acquire farmland and lease it to organic farmers and sharefarmers; both existing organic farmland and conventional farmland which will subsequently be converted to organic farming.



### ORGANIC DENMARK AT A GLANCE

Denmark's association of organic farmers, businesses, professional kitchens and eco-aware consumers. Founded in 1981. The association promotes the interest of its members professionally, politically and commercially, working with all of Denmark's retail chains to improve their organic range and ambitions. Organic Denmark, in association with Danish dairies, hosts the 'Økodag' organic event-day, when the nation's organic cattle are put out to pasture in spring; an experience more than one million Danes have shared with dairy herds and organic farmers over the years.

VILLUM FONDEN



### Grassroots ecology – 'More Life in Gardens'

BY SANDRA VILLUMSEN Landsforeningen Praktisk Økologi

GRANTEE

### PROJECT

GRANT

Landsforeningen Praktisk Økologi 'More Life in Gardens'

EUR 0.4 million (DKK 3.0 million) from VELUX FONDEN

A GREAT MANY PEOPLE IN DENMARK WANT more life in the nation's gardens. They want to cultivate, understand and work with the land that surrounds them, embracing a more sustainable way of life. But how to achieve this? For nearly three decades, Landsforeningen Praktisk Økologi, the Danish national association for the promotion of practical ecology in homes and gardens, has been gathering and sharing practical information on organic best practices in residential gardening. In 2014, the association launched its 'More Life in Gardens' project with a grant from VELUX FONDEN. The project aims to create more life on several levels.

One aim is to encourage people to spend more time in their gardens. Practically, their gardens should be put to use; the patios removed, the lawns tilled and cultivated, and composting established.

Another aim is for garden owners to create more scope for more life: hedgehogs, birds, insects, worms, beetles, fungi and bacteria.

More people should get together in their gardens. Sharing good advice, undertaking projects collectively, coming up with new ideas and enabling initiatives for more ecology in everyday life to flourish.

A third aim is for more associations, institutions and businesses working in partnership to disseminate and boost ecology in practice. Through campaigns, green strategies and education.

Community organisation of gardener networks and educating garden ambassadors have been the cornerstones of the project. After just under three years, the association has put in place 35 community gardener networks, 74 garden ambassadors and professional networks engaged in small-scale farms, school gardens and wild bees. And the activities are blooming: education in organic gardening, starting up school gardens, refugee gardens and communal gardens, pesticide-free gardens, open garden gates and lectures, excursions and festivals in aid of practical ecology. /



## Both children and adults have made new friends through the network formed by the project. The Danish Red Cross, The Church Army, Danish People's Aid charities and the NGO Mødrehjælpen ('Mothers' Aid') are co-funders of the project: 'Follow-up assistance to families who have received Christmas aid'. Photo: Sarah Williams

## Windows onto the future – find new paths in your life

BY LARS LYDHOLM

### GRANTEE

The Salvation Army
- Denmark

### PROJECT

'Windows onto the future – find new paths in your life'

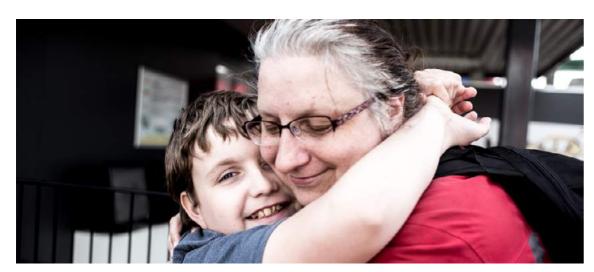
### GRANT

EUR 0.3 million (DKK 2.0 million) from VELUX FONDEN

### **WORK TO EAT?**

The saying 'he who does not work shall not eat' emphasises the individual's responsibility and obligation towards society. But what of those who have suffered genuine hardship and are unable to work and be 'productive' in society? Do we not have a responsibility towards them? Many socially at-risk families have suffered more than most of us could cope with. One common complaint is that they do not feel heard or understood by the very system that should be supporting them.

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Counselling and supporting at-risk families breaks the code for getting them back into the 'productive' group. Both children and adults tell us that their communication has improved, and they have had positive experiences of daring to 'be themselves'.

Photo: Sarah Williams

find new paths in your life' has addressed this problem and aims through counselling and support for the families, and through partnerships with public-sector bodies, to find a method of breaking the code for bringing families back into the 'productive' group. The adults among them desire nothing more than to end their reliance on welfare benefits, and in so doing to be able to give their children the same opportunities as other children.

The project is an extension of The Salvation Army - Denmark's existing family-support programme for the target group. The focus is on building the entire family's resources, empowering them to break with ingrained patterns of distrust of society around them and despondency about their prospects. Instead, the families learn that they are genuinely good enough and capable. They are also coached in taking responsibility for their lives.

Most of the family units consist of single mothers with one or more children, and the families have often been on cash benefits for a long time. Many of the families also have mental health problems, and some also alcohol or drug dependency problems. In addition, 50-70% of the families have an ancestry other than Danish and come from an Arabic, African or Asian background. The families hear of the project when they apply for Christmas aid from The Salvation Army - Denmark or its partner organisations. Others find their way to the project by word of mouth.

### BUILDING TRUST AND EMPOWERING THE FAMILIES

Communication, finances and health are the key issues. The project's families have until now experienced major communication challenges and often feel inadequate in interviews with social services and job centres. But in everyday life too, frustrations and a lack of parenting skills may cause marginalised young single mothers to 'shout at the kids'. Financial deprivations and poor health also cause problems. A lack of money and unhealthy food-shopping result in overweight children at risk of early lifestyle disease.

In order to be able to address these aspects, the project's corps has to gain the trust of the families. By employing methods such as 'Love yourself', 'You decide' and a narrative approach, the families discover new potentials and gain the hope of a better life. But this takes time, and the general perception is that social services have neither the time nor the resources for an approach of this kind.

### MENTORING SCHEME GETS RESULTS

The families are also offered a volunteer mentor to assist them in many different situations, right from problems of domestic violence to homework, employment and education. In addition, the project has set up a volunteer-staffed advisory unit to assist the families with financial, social and legal matters and employment and education.

The volunteer staff represent a wide diversity in terms of age and education. Common to them all is that they have the necessary professional insight and receive training in citizen relations, non-disclosure and the challenges faced by the target group. The results show that families with a mentor make faster progress than unmentored families, but not all families can cope with letting a mentor into their lives.

### BRIDGING THE GAP BETWEEN PRIVATE AND PUBLIC-SECTOR PARTNERS

Is it possible to arrive at a format for public-private partnerships that can make a real difference? The initial results of the project show that local authority social services and job centres (in Copenhagen and Sønderborg) are keen to meet to learn about the project. Equally, volunteer companions can attend formal meetings with the families, who say this support makes a difference. For this reason, continued development of partnering schemes between public-sector bodies and The Salvation Army - Denmark takes high priority.

### IS THERE HOPE FOR THIS GROUP OF SOCIALLY AT-RISK FAMILIES?

Over a two-year period, more than 20% of the adults have gained a work-experience placement, employment or enrolled in a training programme, while adolescents have been coached to hold down a spare-time job. In the same period, the adults have improved their relations with the job centre and social services and been more active in seeking employment.

Both the children and adults tell us that their communication has improved, and they have had positive experiences of daring to 'be themselves'. The youngsters also report that they are better off at school and with classmates, and both the children and the adults have made new friendships through the network formed by the project.

The children and adults have also become more aware of healthy food options and the benefits of weight-loss, but are still finding it difficult to stick to the dietary advice.

The biggest challenge of the project is to help the families to keep up the progress they have made. This makes 'After-care' all-important. This follow-up facility allows the families to continue to attend the project's activities even after the adults have enrolled in a training scheme or have gained employment. Interviews with the families on when they are ready to take new steps to improve their situation is an ongoing project. The slightest setback can cause relapse and prolong the time it takes for a family to join the group of 'productive' citizens. But there have been cases of adults who have spent decades on welfare benefits gaining a job.

Political patience, trust, support and empowerment through public-private partnerships is the way forward.



### LARS LYDHOLM

Lars Lydholm (b. 1968) is Head of Business & Administration, Communication and Fundraising at Frelsens Hær, The Salvation Army - Denmark. Since 2014, The Salvation Army - Denmark has benefited from VELUX FONDEN's funding for support and counselling for socially at-risk families.

VELUX FONDEN



Just after I was diagnosed, I was very frustrated, angry and upset. I felt it was so unfair. But as time went on, I started to accept my situation, and I've resolved not to waste the rest of my life crying. Which means I'm now able to appreciate all the many great things I still have in life. But I still miss 'me', the way I was.

Bjørg – who has dementia

### Dementia changes life

### BY ULLA THOMSEN AND STEEN KABEL

Kallerupvej Rådgivnings- og Kontaktcenter for demensramte og pårørende

### GRANTEE

### Ulla Thomsen, Kallerupvej Rådgivningsog Kontaktcenter (advisory and contact centre)

### PROJECT

'Family Life in Flux – when families are affected by early-onset dementia'

### GRANT

EUR 0.2 million (DKK 1.1 million) from VELUX FONDEN



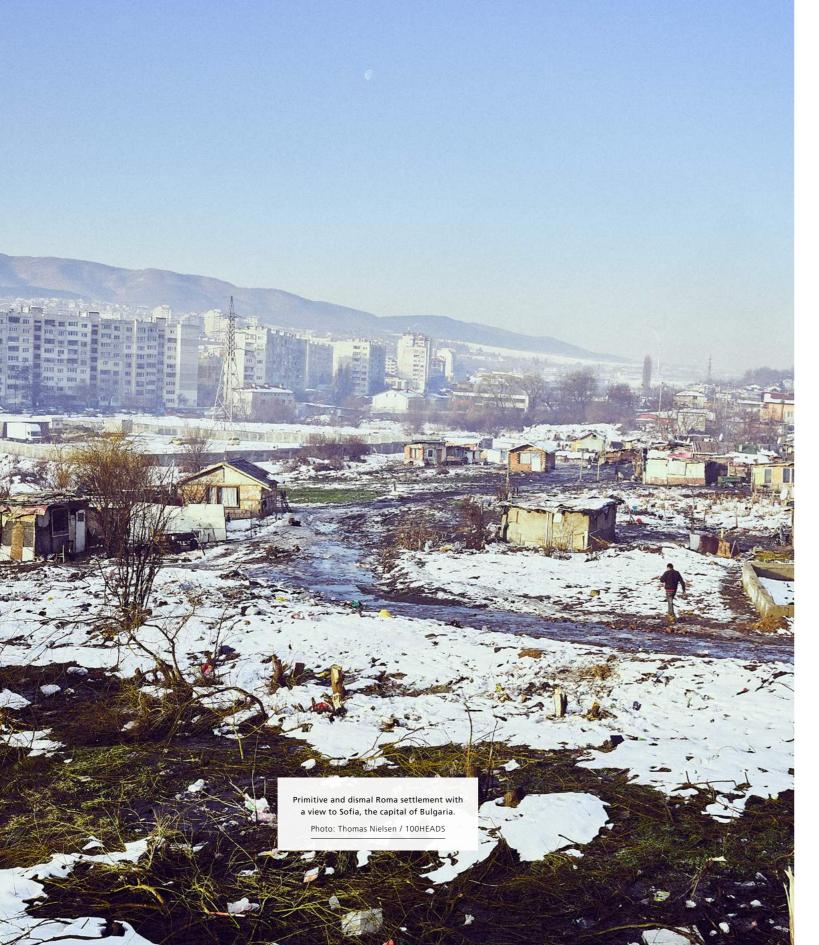


The whole family faces a colossal challenge if a spouse and parent develops dementia. Every aspect of family life is upended. Everyday life is different. Love changes. Interaction with one's children is affected. Relations with family and friends are altered. The family's finances have to be revised. Nothing is the way it was.

'Dementia changes life' is a handbook for families coping with early-onset dementia. In the book, a series of people with dementia, their spouses, their grown or young children and other close relatives give their open and honest account of the grief, loss and complex of emotions experienced when a loved one is diagnosed with dementia. But the handbook also describes the joy, hope and potentials for achieving an active and meaningful life – in spite of dementia.

An app, 'ungtildemens', created for young people with a parent diagnosed with dementia, has also been released. Young people use the app to communicate to other young people what it is like for them having a parent with dementia. /





# Roma to break with their disadvantaged social heritage and be integrated in European societies

GRANTEE

Central European University (CEU), Budapest, Hungary **PROJECT** 

'Roma in European Societies Initiative' GRANT

EUR 2.0 million (DKK 15.0 million) from VILLUM FONDEN

A Hungarian university is taking the lead in a large-scale project to gather facts and studies on Roma people in European societies. A joint project across universities in Europe will be weaving a social and education net under a disadvantaged and criticised population group which only a few have been willing to invest any resources in: the Roma.

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Kiriulka with her oldest son. Together with her two boys she is visiting the house of her mother-in-law. Her husband is in Great Britain working – as many other Roman men.

Photo: Thomas Nielsen / 100HEADS

THE EUROPE THAT LARGELY TAKES GREAT pride in its democratic reforms, demolished walls and significantly improved living conditions is also home to a population group untouched by the positive trends of all eras: the Roma. In the most deprived ghettos, on the fringes of the law and on the poverty line, and without immediate prospects of being able to send the next generation out of the vicious circle, they scrape by in what scarcely any other Europeans would call a decent existence.

### **ROMA IN EUROPEAN SOCIETIES**

One way of improving Roma living conditions and integration in society is to help the young into and through a higher education system, and gather expertise and experience across universities. This is the focal aim of the 'Roma in European Societies Initiative' project.

This initiative, the first of its kind within higher education, is orchestrated by the Central European University (CEU) in Budapest, Hungary. The university will serve as an academic

hub for research and development efforts to promote Roma integration within Europe, and the means to that end consist of education, research, leadership development and social outreach activities.

Former President and Rector of CEU, John Shattuck, has looked forward to launching the initiative, which is a long-held ambition. He says: "VILLUM FONDEN's management and guidance leverages CEU's unique policy-oriented academic perspective and builds upon the University's considerable strength in promoting Roma opportunity and achievement in higher education".

### BETTER LEADERS TO SUPPORT THE ROMA

The initiative is built up around an interdisciplinary network of universities, government entities, enterprises and civil society organisations. Together, they will each bring their approaches and unique competencies to bear in advancing and supporting this initiative to empower and integrate Roma in societies.



Dancing in the afternoon at Mitko and Annie's place. Antonia and Rasa are performing a dance from X Factor for their grandparents.

Photo: Thomas Nielsen / 100HEADS

This multiannual project with a total budget in excess of EUR 4.7 million (DKK 35 million) will engage in training leaders who can design effective methods and guidelines for breaking down stereotypes and supporting progress for the Roma people. This will support and intensify the efforts that can be made to achieve a more successful integration of the Roma locally, regionally and nationally, and will train the next generation of talented Roma, who will make a difference in their area of responsibility, whether in the private or public sectors, in academia or in government. This will pave the way for theoreticians, practitioners and leaders alike. The provisional timeframe for the project funding is five years.

### **EXPERIENCE YIELDS RESULTS**

The project is based on experiences from CEU's own programmes for Roma and education. Known as Roma Access Programs, they have existed for 11 years, and their primary focus has been to ensure that Roma people have access to higher education on an equal footing with

any other population group. As a result of these efforts, more than 220 students have now gained a university degree, and more than half of those have progressed to masters or PhD degree level. After passing their exams, these young Roma have gained positions with organisations such as the Council of Europe; the European Commission; the World Bank; the Office for Democratic Institutions and Human Rights (ODIHR) under the Organization for Security and Cooperation in Europe (OSCE); and 'Roma Education Fund', a special trans-European programme, which for a decade worked specifically for Roma inclusion, and a partner in this project.

### PARTNERING CONSOLIDATES STRENGTHS

With this project, VILLUM FONDEN has extended its partnership with CEU and two institutions – 'Roma Education Fund' and 'Roma Initiatives Office' – under the Open Society Foundation.

Chair of the Roma Education Fund, Andrzej Mirga, commented: "I cannot emphasise enough

VILLUM FONDEN



### Target highlights OVER 5 YEARS

• 50+ Roma receive master's scholarships

• 10+ Universities in the Roma In European Societies network

• 30+ PhD student mentors

• 40+
Internships with governments, businesses and civil society

• 140+
Leaders participate in the executive fora

the relevance of joint action in accelerating access to practical opportunities which will be fostered by the hub being created at CEU. Building on REF's work in 16 countries, this collective initiative will not only create a clear path to

tertiary education for young Roma, but it will also include career-preparedness components that help young Roma hone their skills to achieve their academic and professional potential".

Andrzej Mirga continues: "In the past, others supported our costs in order to help us to develop. Now we are supporting this development as individuals and as a community. That we shoulder some of the costs is something new. For this idea to spread, we need more Roma intellectuals and academics to join this process. This is a natural course of development similar to other minorities who have sought to challenge mainstream society for the full recognition of the social, economic and human rights".

### MISSION: AN OPEN SOCIETY BASED ON EQUALITY AND SOCIAL JUSTICE

CEU's mission is to foster an open society with a fundamental obligation to ensure equality and social justice. From the platform of this mission and mindset, the partners in the project maintain daily contact. This will serve to ensure exchange and development of the programme contents, and guarantee the high standards of the academic activities that will help the Roma to pursue higher education and successful careers.

"This initiative has the potential to shift the landscape for Roma in Europe, serving as a European hub for integration excellence", says Jens-Jørgen Pedersen, Senior Adviser and Head of Programme for VILLUM FONDEN's Social Projects Abroad programme. "The aim is in future for public authorities or governments to be able to turn to CEU if they have problems with Roma group integration. Expertise and experience will be consolidated here and applied throughout Europe. Integration is not a question up for debate, but an imperative. The CEU initiative is part of the solution". /

BY MONIKA SAJKOWSKA AND MARIA KELLER-HAMELA Empowering Children Foundation

### GRANTEE

### GRANT

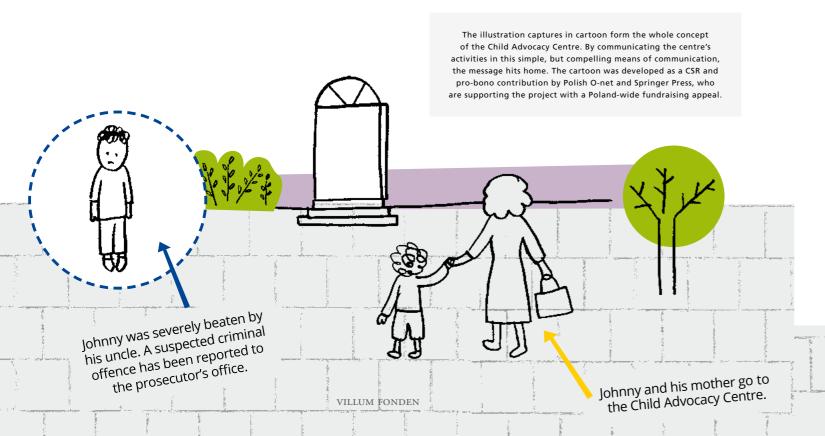
Empowering Children Foundation, Poland

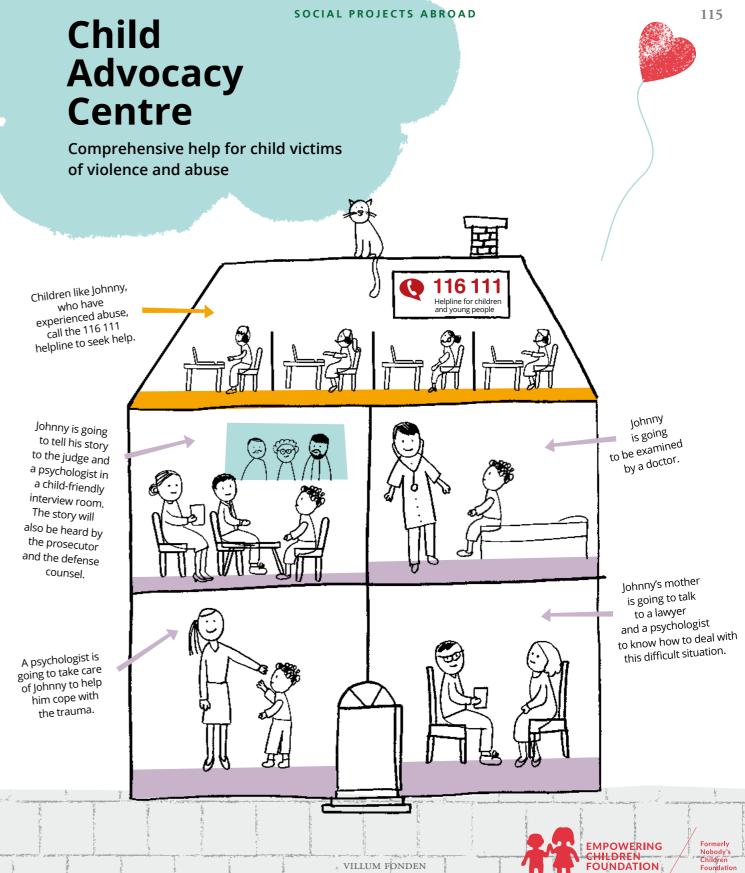
Child Advocacy Centre – assisting child victims of violence and abuse

**PROJECT** 

EUR 2.0 million (DKK 15.0 million) from VILLUM FONDEN

The efforts to prevent abuse of and violence against children in Poland will be strengthened by the establishment of four children's centres spread across the entire country. The Child Advocacy Centres represent almost a decade of development activities, and take their inspiration from the Swedish 'Barnahuset' concept.









### A new lease of life for the playhouse muses

### GRANTEE

The Royal Danish Theatre, Copenhagen

### **PROJECT**

Refurbishment of the auditorium ceiling and chandelier shaft

### GRANT

EUR 1.1 million (DKK 8.1 million) from VILLUM FONDEN



A VISIT TO THE ROYAL DANISH THEATRE IN Copenhagen is always an evocative experience: the atmosphere, the lighting, the sense of a bygone age. Following radical restoration in 2016, the grand ceiling appears even loftier in the exquisite Gammel Scene ('old stage') auditorium.

Nine colourful muses of the performing arts, who until recently led a shadowy existence on the vaulted ceiling of the house, are once again visible in all their glory, now that the enormous chandelier can be lowered to cast its light above and below. The chandelier itself led a static existence for more than a century in its 'cupola' because the manual hoisting mechanisms were jammed by rust.

Under the supervision of experts from the National Museum of Denmark, the ceiling has been given a new lease of life following its restoration. The painted muses have been cleaned so their bright colours radiate, and they are once again surrounded by gleaming gilded stucco. Gone is the grey film from the fat cigars that in an earlier age were lit, smoked and savoured during the performances. The beholder can now see why the ceiling of the Gammel Scene stage at the playhouse is known as 'Museloftet', the muses' ceiling.

What the audiences will be blithely unaware of high above their heads is the replacement of the chandelier's suspension structure from the ancient timber loft above, right up under the theatre's roof, with steel and modern hydraulics, and that this upper recess has now also been securely fire-proofed.

The new and the old have been united to perfection for staging new sensations at this heritage playhouse. /

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