



# Using the stick and the carrot

How hard can it be to capture and measure societal and economic impact in a **Research Information System?**

Henrik S Rasmussen, Director of Open Platforms, Elsevier  
*June 2019*



København d. 20 Juni 1911.

Undersignede tillader mig at anmode om et Rejsestipendium  
paa 2500 Kr. til et etaarigt Studierophold ved udenlandske  
Universiteter

meddelt

Niels Bohr  
Dr. phil.

Til Carlsbergfondets Direktion

Copenhagen June 20<sup>th</sup> 1911

The undersigned allow himself to apply for a travel grant of  
2,500 DKK to study for one year at foreign universities

Yours sincerely  
Niels Bohr,

To the management team at the Carlsberg Foundation

# Research Information Systems (RIS)

A RIS is an application + underlying database to store, manage and exchange contextual metadata for the research activity funded by a research funder or conducted at a research-performing organisation (or aggregation thereof).



Capture & reuse of data



Validate & certify



Profile researchers



Identify experts & funding

## A System of Record - SoR



Report on the captured data



Analyse & track research process



Monitor research grant lifecycle



Research assessment support

RIS providers	Converis	Symplectic Elements	Pure	Institutional Repository based systems	Homegrown systems
	Clarivate Analytics	Digital Science	Elsevier		

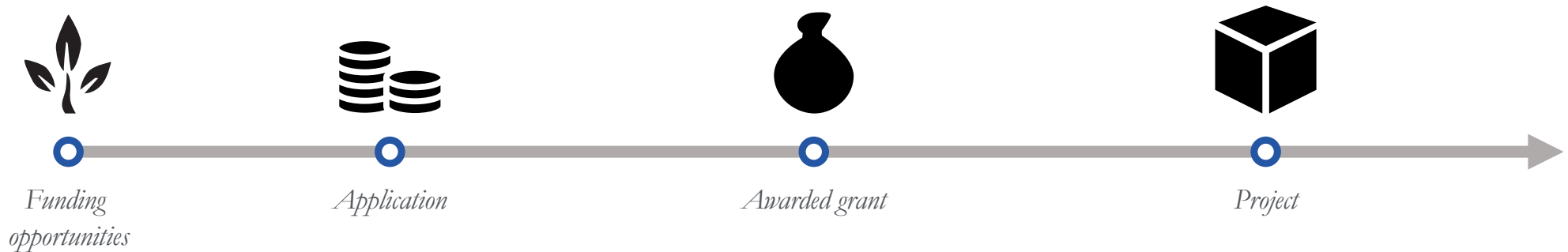
# TRACK & TRACE

*Research activity and the impact of research*



15.06.19

# A RIS offer features to interlink content in the entire research process



**Midsized UK university – 2018 data (No. of academics: 1,394)**

**1,950**

*Applications*

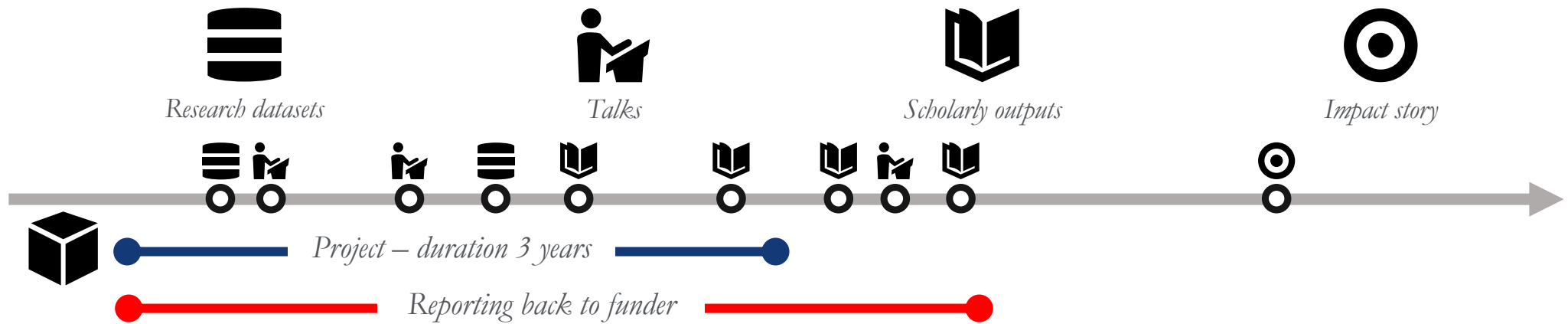
**427**

*Granted awards*

**1,255**

*Funded projects*

# ...interlink content in the entire research process



## Midsize UK university – 2018 data

6,282

*Scholarly outputs*

64

*Research datasets*

303

*Talks*

9

*Patents*

27

*Impacts stories*

*“...Systems such as Pure offer institutions the ability to collect more information about their research activities than ever before. Measuring the research activity at an institution is so much more than just citations and we are asking our researchers to record every aspect their research activity...”*

*...But does the data we collect answer the strategic questions our institutions are asking, and do the range of systems we all use fit together well enough to enable a real, joined together, and complete picture of the research being produced?*

**Karen Kay**, Deputy Head of Research Planning, Birmingham University



# TRACK & TRACE

*Research and impact of research*



15.06.19



# TRACK & CHASE

*Busy academics*



15.06.19

# Reporting impact back to funders – two examples



## Some of the contractual obligations beside narrative & financial reports:

Promote the action and its results

Disseminate results

Ensure open access

Take measures aiming to ensure 'exploitation' of the results — up to four years after the end of the project

Acknowledge EU funding in disseminated results



UK Research  
and Innovation  
+ others

Researchfish is used by funding organisations, across the globe to capture and measure outputs and outcomes of research awards. Reporting capabilities gives an understanding of the activities of research, showing pathways to research impact.

All leading research funders and research organisations understand the need to fully report the impact of their funding. The growing repository of impact reports demonstrates to stakeholders the value of the research they perform ensuring the continuation of funding and in many circumstances an increase in funding.

*There is a standard interface to push research results to H2020 + FP7 using OpenAIRE.*

*You need you key in the project ID on the project entity and link all results to the project in your RIS and the transfer happens automatically always be up-to-date.*

*ResearchFish do not offer a standard interface and the relevant data from a RIS cannot directly be ingested.*

*You either have to gather the data in a spreadsheets and ingest it or key it in again in Researchfish*



15.06.19

**Ease the burden for all stakeholders:**  
academics, institutions, funders, providers etc.

It is all about **interoperability**:

**Legal** interoperability

**Organisational** interoperability

**Semantic** interoperability

**Technical** interoperability

Support the Open  
Science agenda with  
Interoperability & the  
use of open standards

Use a framework like **CERIF** - **Common European Research Information Format**



15.06.19

# RETURN OF INVESTMENT

*Can impact be quantified?*



15.06.19

# **A few examples how impact is measured**

**Research Excellence Framework (REF)**

**Standard Evaluation Protocol (SEP)**

**Clinical and Translational Science Award (CTSA)**



15.06.19

# CLAIM THE IMPACT

*success stories has many fathers, failure is an orphan*



15.06.19



<https://upload.wikimedia.org/wikipedia>

IMAGINE



*This image is a work of a United States D*







CMAJ, 2010 Mar 9; 182(4): E199–E200.

PMCID: PMC2831678

Published online 2010 Feb 4. doi: [10.1503/cmaj.109-3179](https://doi.org/10.1503/cmaj.109-3179)PMID: [20142378](https://pubmed.ncbi.nlm.nih.gov/20142378/)

## Lancet retracts 12-year-old article linking autism to MMR vaccines

[Laura Eggertson](#)
[Author information](#) • [Copyright and License information](#) [Disclaimer](#)

This article has been [cited by](#) other articles in PMC.

Twelve years after publishing a landmark study that turned tens of thousands of parents around the world against the measles, mumps and rubella (MMR) vaccine because of an implied link between vaccinations and autism, *The Lancet* has retracted the paper.

In a statement published on Feb. 2, the British medical journal said that it is now clear that “several elements” of a 1998 paper it published by Dr. Andrew Wakefield and his colleagues (*Lancet* 1998;351[9103]:637–41) “are incorrect, contrary to the findings of an earlier investigation.”

Dr. Richard Horton, editor of *The Lancet*, declined through a spokesperson to speak to *CMAJ* about this issue.

In the original paper, Wakefield and 12 coauthors claimed to have investigated “a consecutive series” of 12 children referred to the Royal Free Hospital and School of Medicine with chronic enterocolitis and regressive developmental disorder. The authors reported that the parents of eight of the 12 children associated their loss of acquired skills, including language, with the MMR vaccination. The authors concluded that “possible environmental triggers” (i.e. the vaccine) were associated with the onset of both the gastrointestinal disease and developmental regression.

### Formats:

[Article](#) | [PubReader](#) | [ePub \(.beta\)](#) | [PDF \(.632K\)](#) | [Citation](#)

### Share

[Facebook](#) [Twitter](#) [Google+](#)

### Save items

 Add to Favorites

### Similar articles in PubMed

Lancet retracts study linking autism to MMR vaccine. [Mich Med. 2010]

Relative merits of the single and triple MMR vaccines. [J R Soc Promot Health. 2005]

MMR vaccine and autism: an update of the scientific evidence. [Expert Rev Vaccines. 2004]

Measles-mumps-rubella vaccine and autistic spectrum disorder: report from the New Challenges in Childhood Im [Pediatrics. 2001]

Science finds no link between MMR vaccine and autism. [Mich Med. 2002]

[See reviews...](#)
[See all...](#)

### Cited by other articles in PMC

Quaran'anni (1978-2018) di politiche vaccinali in Italia [Acta bio-medica : Atenei Parme...]

Social inequities in vaccination coverage among infants and pre-school children in Europe and Australia [BMC Public Health. 2019]

Unsubstantiated Claims Can Lead to Tragic Conservation Outcomes [Bioscience. 2018]

*“...Last month (2018) the World Health Organization said the huge surge in measles across Europe was due to low MMR vaccination rates. More than 41,000 cases of measles were reported in the European region between January and June. Last year there were nearly 24,000 for the whole 12 months, the highest count in any year of the last decade...”*

<https://www.theguardian.com/society/2018/sep/18/take-up-mmr-vaccine-falls-fourth-year-in-a-row-england-measles>



15.06.19

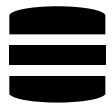
ELSEVIER

# **CAN A RESEARCH INFORMATION SYSTEM HAVE AN IMPACT ON IMPACT?**



15.06.19

# Measuring the impact and attention on a project



*Research datasets*



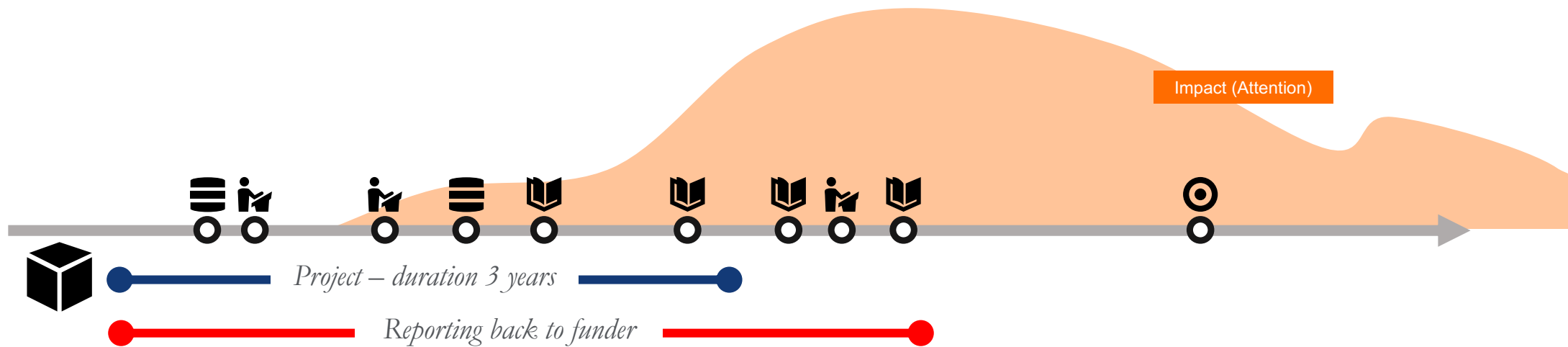
*Talks*



*Scholarly outputs*



*Impact story*

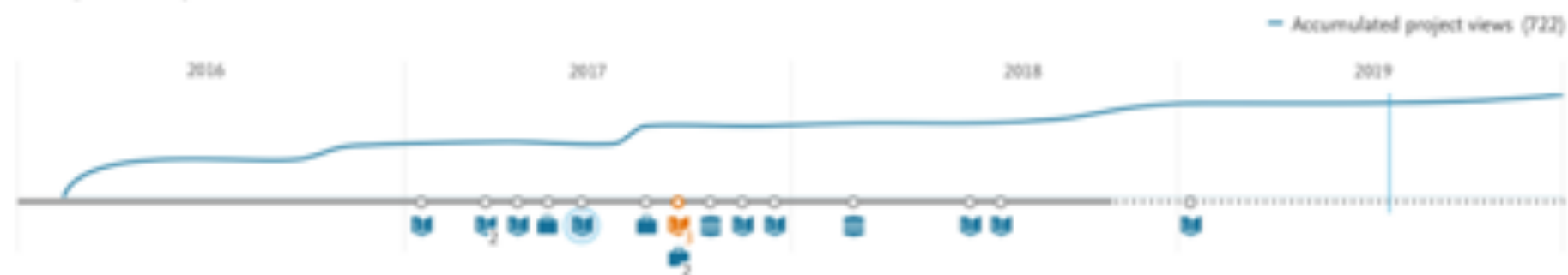
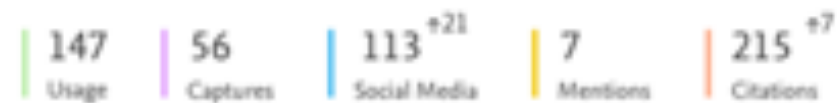




## Methodological study of Medical Devices and Health Technologies [Edit project](#)

Baker, C., Robertson & Mullin, T.

Project



### UPDATES IN PLUMX METRICS SINCE LAST LOGIN

#### Acceptance lowers stress reactivity: Dismantling mindfulness training in a randomized controlled trial.

Lindsay, E. K., Young, S., Smyth, J. M., Brown, K. W., Creswell, J. D. 17 Feb 2015 in : Psychoneuroendocrinology. 87, p. 663-73 11 p.

Research output: Contribution to journal - Article





**AALBORG UNIVERSITY**  
DENMARK

**U.S. News** & WORLD REPORT

According to **US News World Ranking**, Aalborg University ranks as no. 260 in the overall world university rankings and as no. 4 in the world, and best in Europe, within the field of Engineering.

**AAU GETS FIVE OUT OF FIVE STARS**



Aalborg University participated in a very comprehensive QS rating-project and gained five out of five stars, which puts AAU on a par with Harvard, Oxford, Cambridge and Stanford.

**MIT** | **School of Engineering**

The global state of the art  
in engineering education

In a 2018 MIT report, Aalborg University is considered to have the best engineering programme in Europe - a programme that takes fourth place in the world!



15.06.19



AALBORG UNIVERSITET

vbn

Home Profiles Projects Publications Activities Research Units Press / Media Prizes

Search by keywords, name or



### Frede Blaabjerg

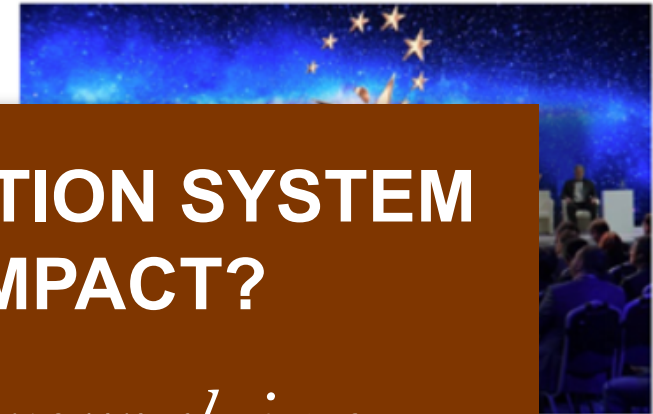
Ph.D., 1995, Aalborg University. Ph.D. awarding: Modelling Power Electronic Components and Circuits. ISBN 87-89179-18-2  
Professor, Department of Energy Technology  
Professor, The Faculty of Engineering and Science  
Power Electronic Systems  
<https://orcid.org/0000-0001-8311-7412>



## The winners of the Global Energy Prize were scientists from Denmark and the USA

BY STEVE COWAN MAY 30, 2019

383 VIEWS



# CAN A RESEARCH INFORMATION SYSTEM HAVE AN IMPACT ON IMPACT?

*it certainly does not weaken your claims*

Research  
He was awarded the PhD degree in Electrical Engineering at Aalborg University in 1992. He became an Assistant Professor in 1992, an Associate Professor in 1996, and a Full Professor of power electronics and drives in 1998. From 2017 he became a Vilum Investigator. He is honoris causa at University Politehnica Timisoara (UPT), Romania and Tallinn Technical University (TTU) in Estonia.

effekteltronik elektriske maskiner energibesparelse motorstyringer netkvalitet  
solceller solenergi vedvarende energi vindkraft

### Fingerprint

The fingerprint consists of automatically generated concepts related to the associated persons. It is updated automatically, when new content is added.

85

Similar Profiles



- Electric potential ENGINEERING & MATERIALS SCI...
- Power electronics ENGINEERING & MATERIALS SCI...
- Power converters ENGINEERING & MATERIALS SCI...
- Topology ENGINEERING & MATERIALS SCI...
- Wind turbines ENGINEERING & MATERIALS SCI...
- Capacitors ENGINEERING & MATERIALS SCI...
- Modulation ENGINEERING & MATERIALS SCI...
- Insulated gate bipolar transisto ENGINEERING & MATERIALS SCI...

natural gas  
a renewable energy source is  
all electric vehicles

The Dane Frede Blaabjerg and American Khalil Amin received the award "Global Energy"-2019 for significant contribution to the development of technologies that provide new opportunities in energy development.





Thank you

