Citizen Science

An Introductory Workshop

Scientific Knowledge Services

Apr. 2022

Definition?

Citizen Science is a pillar of the European Commission's Open Science Policy Platform (OSPP)[1]

1) Rewards and incentives
& next-generation metrics
2) Indicators
3) Future of scholarly communications
4) European Open Science
Cloud (EOSC)
5) FAIR data
6) Research
integrity
7) Skills & education
8) Citizen
science

[1] https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?do=groupDetail.groupDetail&groupID=3436&NewSearch=1&NewSearch=1

non-scientists

active contribution to science

intellectual effort

knowledge

tools

resources

Citizen Science - Areas of Competence

Enhance Scientific Research

Address Societal Needs

Education and networking

Citizen science at universities:
Trends, guidelines and recommendations

Executive summary

Citizen Science at Universities: Trends, Guidelines and Recommendations (Executive Summary)

Full paper

Citizen Science at Universities: Trends, Guidelines and Recommendations (Full Paper)

https://www.leru.org/publications/citizen-science-at-universities-trends-guidelines-and-recommendations

What is suitable for Citizen Science?

Environmental research
Biodiversity research

Anything else?

Citizen Science in action
- just another example -

Georg Wenker and the origin of the Deutscher Sprachatlas

Georg Wenker (Düsseldorf 1852 - Marburg 1911) - German linguist, who got interested in German language dialects. From 1876 he started sending out letters to written in standardized German to schoolmasters in northern Germany, asking them to transcribe them into their own dialect.
50 000 letters were sent out. The list of sentences were later dubbed “Wenker sentences” (1880)
45 000 filled in survey sheets were sent back resulting a massive corpus which Wenker started to organise and created two sets of maps according to the data titled *Sprachatlas des deutschen Reichs*.
This was the beginning of his legacy.

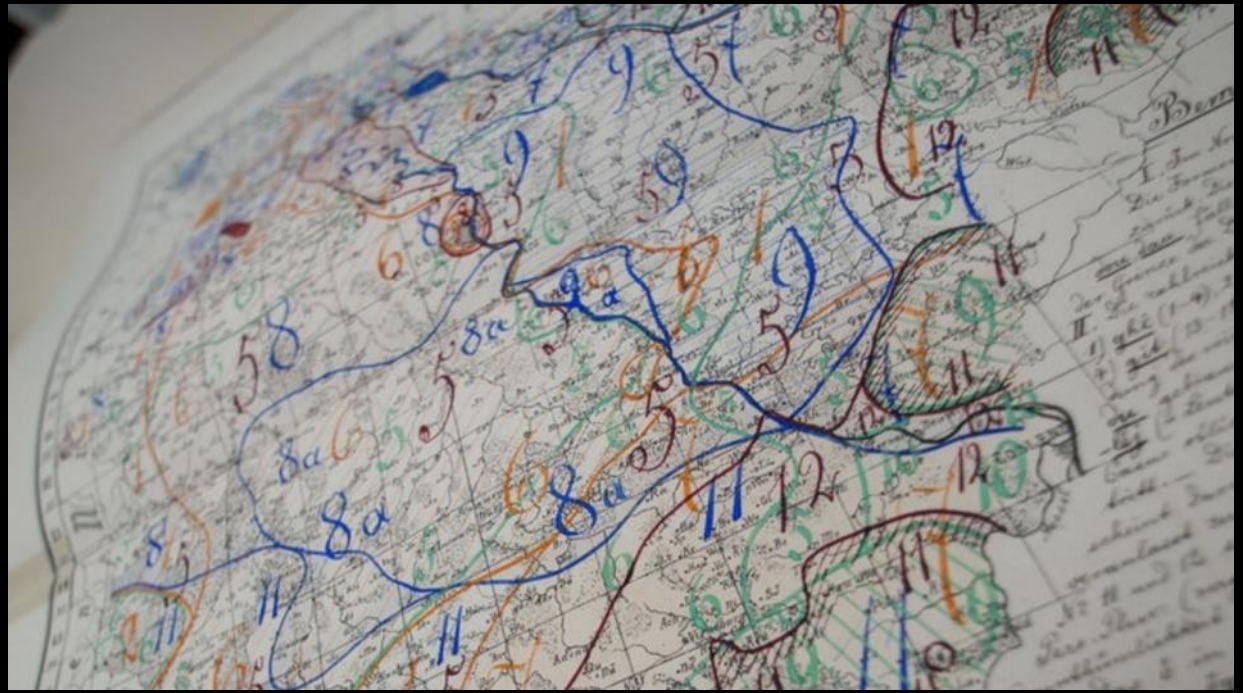
Wenker Sets [edit | edit source]

Final version of the Wenker sentences (1880):

- 1. In winter, the dry leaves fly around in the air.
- 2. It will stop snowing soon, then the weather will get better again.
- 3. Put coals in the oven so that the milk will soon start to boil.
- 4. The good old man broke through the ice with the horse(s) and fell into the cold water.
- 5. He died four or six weeks ago.
- 6. The fire was too hot, the bottom of the cakes burned completely black.
- 7. He always eats the eggs without salt and pepper.
- 8. My feet hurt (so much), I think I've walked through them.
- 9. I went to the woman myself and told her, and she said she wanted to tell her daughter too.
- 10. I don't want to do it again either.
- 11. I'm about to hit you over the head with a wooden spoon, you monkey.
- 12. Where are you going? Shall we go with you (go with you)?
- 13. These are bad times.
- 14. My dear child, stay down here, the evil geese will bite you dead.
- 15. You learned the most today and have been good, you can go home earlier than the others.
- 16. You're not big enough to finish a bottle of wine alone, you have yet to grow and get bigger.
- 17. Go, be so good as to tell your sister to finish sewing your mother's clothes and brush them clean.
- 18. Would you have known him! Then things would have turned out differently and things would have been better for him.
- 19. Who stole my basket of meat?

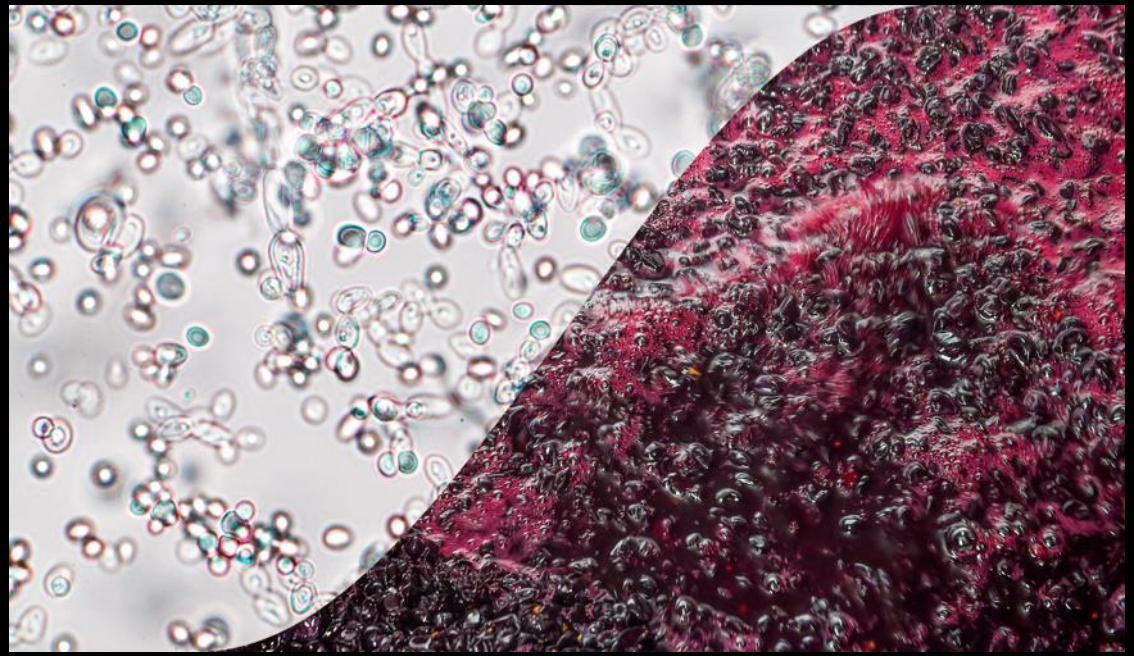
Forschungszentrum Deutscher Sprachatlas, Marburg

Impact and importance of the Deutscher Sprachatlas



Citizen Science in action
- just another example -

“Yeast catchers: Fantastic yeasts and how to find them” Program



“Yeast catchers: Fantastic yeasts and how to find them” Program

“Yeast catchers: Fantastic yeasts and how to find them” Program

Citizen Science in action
- just another example -

Become a Citizen Scientist and Donate a Yeast!

Currently Billerbeck Lab's DaY collection has more than 400 wild yeast isolates.

Citizen Science in action
- just another example -

Citizen Science and Food

Food Standards Agency's areas of Research Interest

- Food Hypersensitivity and allergy
- Assuring food safety and standards
- Innovation in food regulation
- Future food systems

Citizen Science in action
- just another example -

Case 3 (2 min): Serious-ification: Citizen Science for Serious Gamers

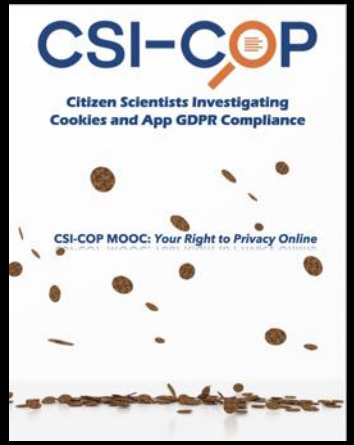
MMOS

THE HUMAN PROTEIN ATLAS

300.000 citizen scientists generated more than 33 million image classifications

Citizen Science in action
- you can be part of it! -

Case 4 (2 min): CSI-COP
YOUR RIGHT TO ONLINE PRIVACY



Find out how to protect your confidentiality when using Internet and Mobile Devices

SKS.
Scientific | Knowledge | Services

How much it worth?

338 citizen science biodiversity projects (1930-2012)
Estimated in-kind contributions
(1.3-2.3 million citizen science volunteers) up to

$2.5 billion per year

Global change and local solutions: Tapping the unrealized potential of citizen science for biodiversity research. Biological Conservation. Volume 181, January 2015, Pages 236-244. https://doi.org/10.1016/j.biocon.2014.10.021

LIBER
Citizen Science WG

LIBER
Citizen Science WG

March 2019 | Launched: LIBER Annual Conference in Dublin (June 2019).

Part of the LIBER Steering Committee Innovative Scholarly Communication

Chaired by Dr Giannis Tsakonas

https://libereurope.eu/working-group/liber-citizen-science-working-group/

11 Countries
Balances (Gender, Geographical, Seniorship)
Imbalance (Ethnicity
Research, National, Public Libraries

LIBER's Citizen Science Working Group Members

For questions about the group's work, please see the Citizen Science Working Group page or contact Dr Paul Ayris, chair of the group.

Dr Paul Ayris
Pro-Vice-Provost, University College London (UCL) Library Services
Contact →

Alisa Martek
Library Advisor, National and University Library in Zagreb
Contact →

Anne Kathrine Overgaard
Head of Development, University of Southern Denmark
Contact →

Dirk van Gorp
Open Science Manager, Radboud University Library
Contact →

Dominic Tate
Head of Library Research Support, University of Edinburgh
Contact →

Dóra Gaálné Kalydy
Deputy Director General, Library and Information Centre, Hungarian Academy of Sciences
Contact →

Dr Mia Ridge
Digital Curator, British Library
Contact →

Dr Raphaëlle Bats
Co-head, Unité Régionale de Formation à l'Information Scientifique et Technique), University of Bordeaux
Contact →

Jitka Stilund Hansen
Academic officer, DTU Library, Technical University of Denmark
Contact →

Karine Bacher-Eyroi
Head of Services and Users Support Department, Université de Pau et des Pays de l'Adour
Contact →

Mitja V. Iskrić
Librarian, Central Technical Library, University of Ljubljana
Contact →

Sabine Kunst
Head of Open Spaces, TU Delft Library
Contact →

Sara Decoster
Open Science staff member, KU Leuven
Contact →

Simon Worthington
Researcher, Open Science Lab, German National Library of Science and Technology
Contact →

Stefan Wiederkehr
Head of Special Collections and Digitization, Zentralbibliothek Zürich
Contact →

Szymon Andrzejewski
Quality assurance, Metadata editor, ICM Warsaw
Contact →

Thomas Kaarsted
Deputy Library Director, University Library of Southern Denmark
Contact →

Tiberius Ignat
Scientific Knowledge Services (SKS) Switzerland, Director
Contact →

2017-2018 Advocacy and Conferences

Insights – 31, 2018
Merry work | Tiberius Ignat et al.

Merry work: libraries and citizen science

This article highlights important new opportunities for libraries by analysing the roles they could potentially play in citizen science projects. Citizen science is one of the eight pillars of open science identified by the Open Science Policy Platform, an EC Working Group. The authors of the article suggest that roles for libraries wishing to support or engage in citizen science could include contributing to specific skills development; building and maintaining collections of protocols, data forms and educational materials; contributing to making data FAIR; supporting new communication roles; participating in recruitment and helping volunteers to participate in projects; participating in marketing activities; building further advocacy and developing or implementing a toolkit for citizen science projects. Several of these roles are illustrated by contributing authors in case studies from their institutions, where citizen science has already been embraced: University College London, the University of Barcelona, the University of Southern Denmark and Qatar National Library. This article thus presents a snapshot of what libraries have so far achieved in this sphere and the challenges and opportunities which remain.

Keywords
Citizen science; University College London; University of Barcelona; Qatar National Library; University of Southern Denmark; research libraries; open science

TIBERIUS IGNAT
Director
Scientific Knowledge Services

PAUL AYRIS
Pro-Vice-Provost (UCL Library Services)
University College London

IGNASI LABASTIDA I JUAN
Head, Office for the Dissemination of Knowledge
CRAI Universitat de Barcelona

SUSAN REILLY
Director, Digital Content & Engagement
Qatar National Library

BERTIL DORCH
Library Director
University of Southern Denmark

THOMAS KAARSTED
Deputy Library Director
University of Southern Denmark

ANNE KATHRINE OVERGAARD
Head of External Projects, Faculty of Health Science
University of Southern Denmark

doi.org/10.1629/uksg.431

DE GRUYTER
Open Information Science 2018; 2: 1–22

Review Article

Paul Ayris*, Tiberius Ignat

Defining the role of libraries in the Open Science landscape: a reflection on current European practice

https://doi.org/10.1515/opis-2018-0001
Received October 27, 2017; accepted December 23, 2017

Abstract: This collaborative paper looks at how libraries can engage with and offer leadership in the Open Science movement. It is based on case studies and the results of an EU-funded research project on Research Data Management taken from European research-led universities and their libraries. It begins by analysing three recent trends in Science, and then links component parts of the research process to aspects of Open Science. The paper then looks in detail at four areas and identifies roles for libraries: Open Access and Open Access publishing, Research Data Management, E-Infrastructures (especially the European Open Science Cloud), and Citizen Science. The paper ends in suggesting a model for how libraries, by using a 4-step test,

doi.org/10.1515/opis-2018-0001.pdf

LIBER Open Science Roadmap (2018)

Citizen Science, or the participation of the general public in the scientific research process, is an important element in establishing new links between science and society.
It is thus essential to implementing Open Science, can contribute to innovation tailored to the needs of society, lead to reciprocal learning and foster a scientific culture across society as a whole.

LIBER Open Science Roadmap (2018)

1. Promote the library as an active partner in Citizen Science and develop the necessary infrastructure to effectively support public researchers in their work.

LIBER Open Science Roadmap (2018)

2. Use the library's role as an organising and managing body to ensure that responsible conduct and good scholarly practice are respected when participating in Citizen Science.

LIBER Open Science Roadmap (2018)

3. Develop a set of guidelines including methodologies and policies for Citizen Science activities involving the library.

LIBER Open Science Roadmap (2018)

4. Develop the necessary skills to be a strong and active partner in Citizen Science, including skills in the areas of scientific communication, information technologies and project management. These skills should be attained not only internally in libraries but in collaboration with researchers and the public.

Strategic Directions:

1. Projects
2. Staff development
3. Partnerships and participation
4. Advocacy and policy
5. Building Citizen Science Infrastructure at Libraries
6. Creating a Librarian's Guide to Citizen Science

BESPOC Prototype

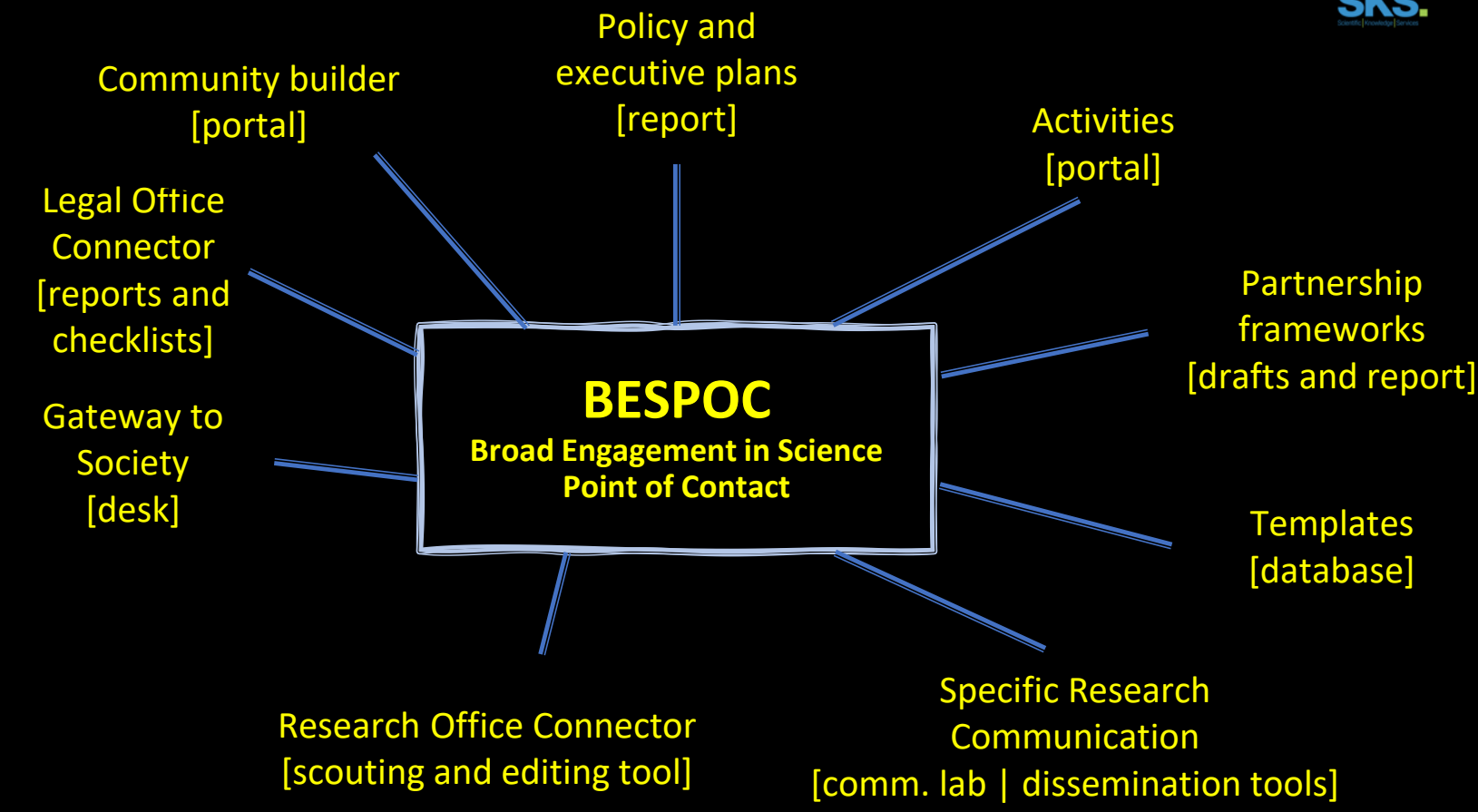
SKS.

Recommendations for institutions

For universities, the recommendations are to:

1. Recognise citizen science as an evolving set of research methods, as well as its societal and educational benefits;
2. Consider creating, where viable, a single point of contact for citizen science within the institution, to advise scientists and ensure liaison with national and regional citizen science initiatives;
3. Raise awareness amongst researchers of criteria for successful citizen science, including community management, pedagogical practices, open science standards and social, intergenerational and gender diversity policies issues.
4. Ensure that proposals to granting bodies for citizen science projects include long-term commitment for infrastructures and data repositories, in line with other research projects with long-term scientific or societal benefits;
5. Ensure that project participants comply with ethical, legal and privacy regulations relevant to the scope of a given citizen science project, and have access to professional advice for this purpose;
6. Adapt research evaluation and reputation systems to include metrics that can characterise projects with a high societal impact, such as successful citizen science projects, and develop ways of assessing citizen participation.

LERU
ADVICE PAPER no.20
(2016)


Policy and executive plans [report]
Community builder [portal]
Activities [portal]
Legal Office Connector [reports and checklists]
Partnership frameworks [drafts and report]
BESPOC
Broad Engagement in Science Point of Contact
Gateway to Society [desk]
Templates [database]
Research Office Connector [scouting and editing tool]
Specific Research Communication [comm. lab | dissemination tools]

BESPOC Consultations

Denmark, Nov. 2021
(Roskilde Univ., Copenhagen Univ., Aarhus Univ.)

The Value of BESPOC

- nurtures a community of curious minds
- educates people
- consolidates trust in research

Evidence vs Misinformation
Sustainable Development vs Manipulation

Researchers:
better citizens, contributing more.

Why Citizen Science is good for your Library?

Why Citizen Science is good for your Library?

1. It better connects you with your patrons

Why Citizen Science is good for your Library?

1. It better connects you with your patrons
2. You contribute to educating people

Why Citizen Science is good for your Library?

1. It better connects you with your patrons
2. You contribute to educating people
3. You become a stakeholder of trust (as you are one for knowledge)

Why Citizen Science is good for your Library?

1. It better connects you with your patrons
2. You contribute to educating people
3. You become a stakeholder of trust (as you are one for knowledge)
4. You join the fight against disinformation

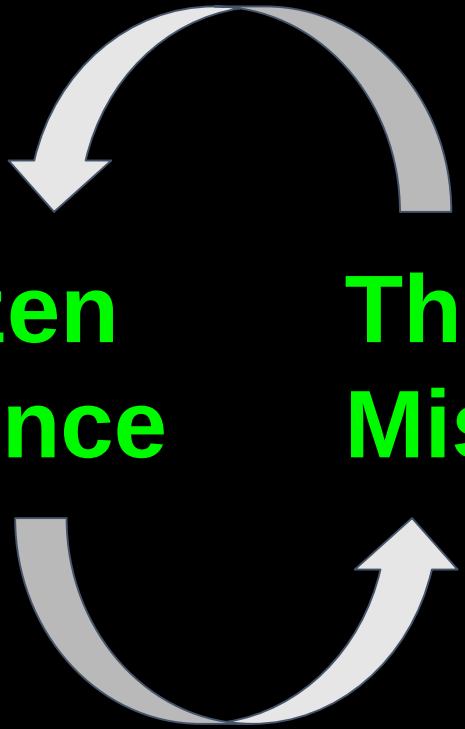
Why Citizen Science is good for your Library?

1. It better connects you with your patrons
2. You contribute to educating people
3. You become a stakeholder of trust (as you are one for knowledge)
4. You join the fight against disinformation
5. Consolidate your leadership position in Open Science

Education Research **Third Mission**

The economic and social mission of the university and its contribution to communities and territories.

SKS.
Scientific | Knowledge | Services



Science is an absolutely essential tool for any society with a hope of surviving well into the next century with its fundamental values intact.

Not just science as engaged in by its practitioners, but science understood and embraced by the entire human community.

And if the scientists will not bring this about, who will?

- Carl Sagan

SKS.
Scientific | Knowledge | Services

Köszönjük!

Katalin Angyan, Damla Bal, Tiberius Ignat

Scientific Knowledge Services
www.knowledge.services