CC BY NC SA

Quelles compétences pour le développement de la science ouverte ?

Anna Svenbro
Cécile Swiatek

adbs L'Association des professionnels de l'information et de la documentation

Université Paris Nanterre

BIBLIOTHE SAINTE GENEVIEVE

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

Qui sommes-nous ?

Anna Svenbro

Chef du Département de la Bibliothèque nordique, bibliothèque Sainte-Geneviève

https://orcid.org/0000-0001-9031-1686

Cécile Swiatek

Directrice du Service Commun de la Documentation, Université Paris Nanterre

https://orcid.org/0000-0003-1066-4559

Cécile Swiatek, Mc Caffrey Ciara, Thorsten Meyer, Anna Svenbro, Helene Brinken, et al.. LIBER Open Science Training Methods and Practices Across European Research Libraries: Survey Analysis. LIBER Publications, LIBER, 2020, ⟨10.5281/zenodo.3903141⟩. ⟨hal-02879689⟩

Swiatek, Cecile. (2019). LIBER Digital Skills Working Group: Case Studies on Open Science Skilling and Training Initiatives in Europe. Zenodo. https://doi.org/10.5281/zenodo.3901485

Autres références utiles en partage :
https://www.zotero.org/groups/2340674/liber_digital_skills_for_open_science

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Bases

Anna Svenbro

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Compétences et science ouverte, de quoi parle-t-on ?

- Au-delà des simples usages numériques.
- Question d'autonomie, d'usage raisonnable et responsable.
- Notions liées :
  - Sensibilisation aux questions juridiques.
  - Sensibilisation à la notion d'identité numérique.
- Ouverture sur l'*open data*.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Un distinction essentielle : accès ouvert et science ouverte

- L’accès ouvert est un mode d’accès aux contenus (parmi d’autres).
- La science ouverte est une politique.
- Les compétences en science ouverte sont plutôt à envisager comme des moyens de traduire cette politique en pratiques.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Cadre politique Stratégie nationale en matière de science ouverte

Cécile Swiatek / ReiSO

adbs L'Association des professionnels de l'information et de la documentation

Université Paris Nanterre

Bibliothèque Sainte Geneviève

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

PNSO 2018-2020

https://www.ouvrirlascience.fr/wp-content/uploads/2018/08/PLAN_NATIONAL_SCIENCE_OUVERTE_978672.pdf

PNSO 2021-2024

https://www.ouvrirlascience.fr/wp-content/uploads/2021/06/Deuxieme-Plan-National-Science-Ouverte_2021-2024.pdf

Feuille de route données publiques, algorithmes, codes

https://www.numerique.gouv.fr/actualites/donnees-algorithmes-codes-sources-mobilisation-generale-sans-precedent-15-feuilles-de-route-ministerielles/#feuilles-de-route

Anna Svensbo, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Étude pan-européenne 2020

Cécile Swiatek, Mc Caffrey Ciara, Thorsten Meyer, Anna Svenbro, Helene Brinken, et al.. LIBER Open Science Training Methods and Practices Across European Research Libraries: Survey Analysis. LIBER Publications, LIBER, 2020, ⟨10.5281/zenodo.3903141⟩. ⟨hal-02879689⟩

Anna Svenbro

adbs L'Association des professionnels de l'information et de la documentation

Université Paris Nanterre

BIBLIOTHE SAINTE GENEVIEVE

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Focus bibliothèques-documentation
Enjeux et objectifs d'une étude pan-européenne sur les dispositifs de formation aux compétences de la SO par et avec les structures documentaire

Les compétences en sciences ouvertes, tant pour les bibliothécaires de recherche que pour les chercheurs, sont au centre de toutes les évolutions vers l'« ouverture ». Le groupe de travail LIBER sur les compétences numériques du personnel des bibliothèques et des chercheurs a mené un processus de sélection en 2018 afin d'identifier les programmes de formation en sciences ouvertes s'appuyant sur l'identification des compétences.

En avril 2019, des questionnaires ont été envoyés à des contacts dans 28 pays, et des entretiens complémentaires ont été menés pour la production d'études de cas par pays sur les initiatives de compétences et de formation en sciences ouvertes en Europe.

Les premiers résultats de cette approche combinée ont été présentés lors de la conférence annuelle 2019 de LIBER, dans un atelier intitulé *Open Science Essentials : Towards a Skill Set et Showcases* au congrès LIBER de 2019. La création d'études de cas a donné lieu à la publication d'une analyse complète en 2020 : *LIBER Open Science Training Methods and Practices Across European Research Libraries - Survey Analysis*. Veuillez trouver l'analyse ici : https://doi.org/10.5281/zenodo.3903141 .

L'objectif de cette activité est d'offrir à la communauté des bibliothèques de recherche des méthodes, des pratiques, des contacts et des mots de sagesse inspirants, couvrant des cas institutionnels, des initiatives nationales ainsi que des approches de projets européens.

Dans l'ensemble, le groupe de travail sur les compétences numériques de LIBER vise à diffuser une culture plus ouverte et à positionner les bibliothèques comme des partenaires clés dans la formation des compétences pour le concept complexe de science ouverte. Ce projet illustre la richesse et la diversité des approches européennes en matière de formation et de développement des compétences en sciences ouvertes, tant dans les bibliothèques que dans les communautés de chercheurs, qu'il s'agisse de programmes bien établis ou d'initiatives émergentes

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Enquête et études de cas

Les stratégies, les méthodes et l'impact des programmes de formation aux compétences en sciences ouvertes sont au cœur du champ d'activité du groupe de travail "Compétences numériques pour le personnel des bibliothèques et les chercheurs" (2018-2020) de LIBER.

Ce document est l'analyse d'un panel sélectionné d'études de cas à travers les bibliothèques de recherche européennes, qui comprend des informations cruciales partagées par les répondants sur la mise en place d'un programme de formation aux sciences ouvertes dans un établissement d'enseignement supérieur et de recherche avec la bibliothèque :

- les principaux défis
- les messages clés pour réussir
- comment démarrer.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

Analyse de l’enquête - étude

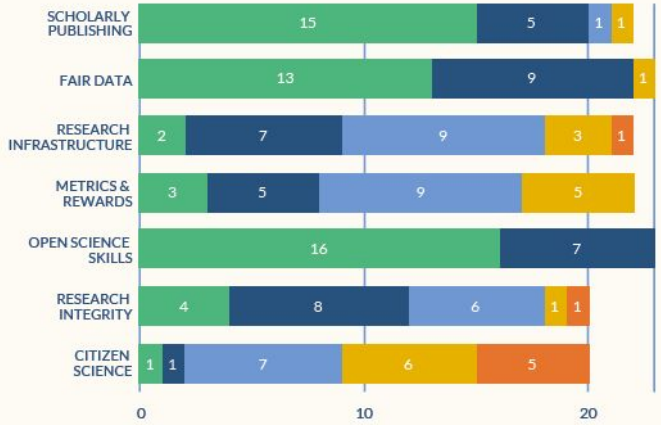
Cécile Swiatek, Mc Caffrey Ciara, Thorsten Meyer, Anna Svenbro, Helene Brinken, et al.. LIBER Open Science Training Methods and Practices Across European Research Libraries: Survey Analysis. LIBER Publications, LIBER, 2020, ⟨10.5281/zenodo.3903141⟩. ⟨hal-02879689⟩

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

Principaux constats 1/2

Topics and priorities

The topic, goal and level of training activities is quite varied. Many training efforts focus on Open Science skills in general, while topics such as scholarly publishing skills and FAIR data are also popular. Each respondent was able to provide several choices.



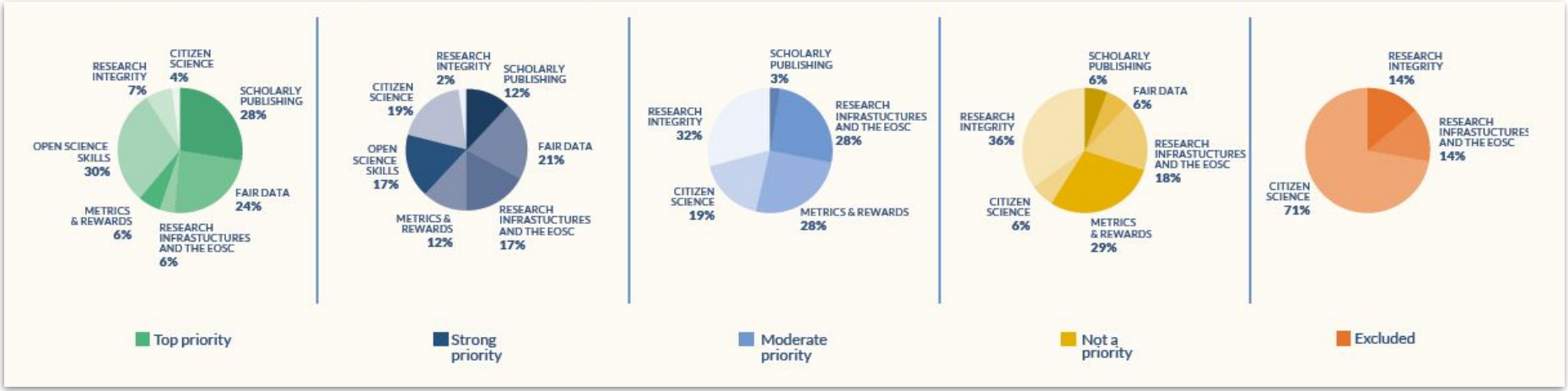
The lowest priorities are generally linked to the training calendar and a progressive skilling programme (Citizen Science, ethics). Some other skills are excluded when handled by other services than the library (data visualisation) or because of the lack of specialised trainers in the country.

Partnerships with external instructors and networks such as Carpentries, FOSTER Plus, EOSC skills or SSHOC Open Marketplace, help widen the scope. Citizen Science skills training for example benefits from co-organised workshops or from participating in local or European projects.

Some cases divide the skilling programmes between basic / advanced / expert levels. "Basic" skills for all staff implies that all library staff and research support staff will be trained in at least the most common aspects of Openness knowledge and culture. This becomes harder with training all newcomers in the research field, but early-career researchers are trained mostly through the PhD training — delivered by or with the library staff training services in all cases. Training newcomers is, however, sometimes achieved and training is conducted systematically at some institutions.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

Principaux constats 2/2



Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

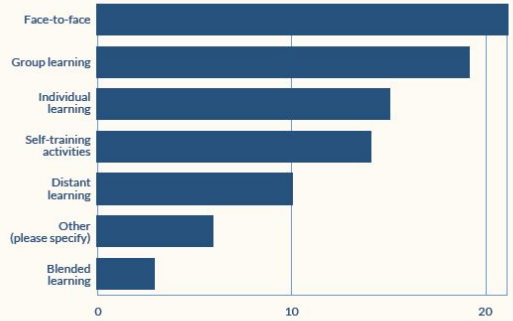
Modalités de formation, reconnaissance des compétences

Open Science training methods, formats, rewards and recognition

Training channels (face-to-face, blended learning, distance learning, self-training activities) and formats (slideshows, interactive platforms, MOOCs) vary a lot: the definition of clear learning objectives is nonetheless the most important thing. Agile approaches and adaptive models are needed to cover all types of audience and situations, and engage the trainees in Open Science practices.

As before, each respondent could select several choices from among the following categories.

Training channels:



Formal recognition and rewards are variable. Except for cases where there is an institutional or national reward that significantly impacts the researchers' careers, incentives have no real effect. Only six cases included the training sessions into a curriculum, mainly PhD ECTS / skills recognition. The most common practice is to deliver certificates of attendance, external institute certificates, Carpentries certificates and recognition for trainers. Except for certificates of attendance, there is generally no formal skills recognition, no open nor alternative recognition - and no reward.

Certificates of attendance for training sessions are used to assess the numbers of library, IT and research support staff attending training and the levels of expertise, but these barely impact on their careers. Alternative recognition (open badges for example) are not a common way of certifying skill levels.

Training appears to be a means to what is further assessed in practice: Open Science outputs and benefits *per se*.

Trainers' background

Trainers come from a range of areas, including university research support staff, institutional staff and librarians. Trainers mostly belong to a dedicated team, generally managed by the library and possessing pedagogical skills. They are part of the institution's strategic infrastructure. Some respondents mention Carpentries Instructors, of which many are PhDs or postdocs with a high turnover but who bring very valuable experience. Networking with the Open Science community across Europe enables recruiting new trainers and updating the training programmes.

Trainers also have to be skilled, and trained. Several train-the-trainer programmes are available, such as FOSTER Plus or Carpentry Instructor training. Online self-learning with OpenAIRE materials, FOSTER Plus materials, SSHOC Open Marketplace — or by following European projects and library networks, MOOCs, conferences and webinars — is a strong pathway for training-the-trainers and keeping them skilled as trainers. Participating in hackathons also gives trainers some practice, as well as providing them with examples that engage them through shared experiences. Trainers currently partner with other trainers, librarians, researchers and experts. They learn from them, and then transform this knowledge into training programmes.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Défis et messages-clefs

Cécile Swiatek / LIBER

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

The challenges

Respondents encountered many challenges when deploying their Open Science training initiatives and programmes, and positioning the library and information services as a key player is a step you don't want to miss.

Here are six of the challenges to be considered when building an Open Science training project, together with pieces of advice provided by the respondents.

Including training programmes in the structure's overall Open Science implementation strategy
When launching an ambitious Open Science Programme, training researchers and staff in new scholarly communication models and FAIR data stewardship is critical. It has to be planned and progressive, in order to spread efficiently into the broad university community. A dedicated team (and time) is necessary to build the project, and then ensure a continuous training and upskilling activity.

Identifying the Open Science training programme key players
Libraries are sometimes not visible enough to influence policy-making when planning an Open Science roll-out. When underway, library services appear to be a major Open Science leverage for the institution since the library staff has developed Open Science skills, and has an expertise to value on the topic. Library Open Research support services should be integrated into the researchers' daily practices and routine, to ensure continuity with the Open Science training activity.

Recruiting well
Staffing is crucial for launching the project, and the first year is essential to set the dynamic. A project leader is needed, as well as an identified steering committee. It is hard to establish a long-lasting team, train everyone and recruit experts, but with the first results benefits grow quickly. Staff who are not taking a direct part in the Open Science implementation process can be kept informed about Open Science issues.

Cultural changes take time
Time management is always a challenge. However, allowing time is imperative for providing efficient training, aligned with the institution's overall Open Science strategic direction. Assessing training time is important for planning the process and its preparation. Training the trainers and support staff also takes time. There is a lot to learn – and to consolidate. Setting researchers and librarians up as partners when building training content is a key lever for identifying how to draw the audience's interest, understanding the disciplinary specifications, and adopting the best pedagogical approach towards raising the audience's awareness regarding Open Science.

Managing a large range of trainings
Being structured and systematic is the goal: ideally, everyone in the institution should have access to a training session (researchers, students, librarians, staff). Defining deliverables is a good way to manage a diversity of tracks. To simplify this and make people feel comfortable, try to offer a range of training at various levels, from basics for everyone to high expertise (Open Science beginner / intermediate / advanced learners, and even the opening of an expert discussion group. Personalising a training session helps to catch the audience's attention, and engage people: even with distance learning, a "face-to-face" effect and active training are very rewarding.

Reaching the audience
It is hard to reach the entire scientific community. Using various channels of communication is a challenge. The whole Open Science training offer must remain consistent, finding the right words to pursue an Open Science strategic aim. This implies the training programmes are integrated with the institution's overall Open Science implementation strategy (see first challenge). Career progression is always the best incentive but as this is not always possible, exploring communication and marketing channels can be influential. Finding Open Science "ambassadors" amongst senior researchers can work as a driver for encouraging university communities to attend the workshops and training sessions, and to commit to Open Science.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

CC BY NC SA

TAKEAWAYS: SEVEN KEY MESSAGES

Discover the key recommendations from the respondents: put a library in your Open Science engine!

Skills are part of an overall Open Science implementation strategy
Link training with an existing concrete research support activity and tailor your events according to your university's already existing OA/RDM programmes: insert the training as a support for a practical daily routine.

Library teams are good at coordinating Open Science training for researchers and staff
Libraries are a powerful "skilling hub". They have been managing academic knowledge issues for centuries. They possess demonstrated technical competence as well as strong soft skills and pedagogical skills. Libraries know how to plan training programmes, and possess demonstrated leadership and management skills. They are skilled with Open Science, they lead and manage many Open Research support services and they easily partner with researchers and experts.

Plan, plan plan
Systematic and inclusive programmes need to be planned years in advance to show results.

Train, train, train
Mix formats and channels, from massive online training to small target-groups, from discipline-focused to interdisciplinary approaches, from online to blended or face-to-face presentations, from general presentations to focused conferences, seminars and hands-on workshops. And share your material openly.

Build a network
Build a network of ambitious people, grow your contact book and innovate with new training methods, course perspective and content. Train and reward the trainers.

Open a dialogue
Communicate towards your audience, generate leads, report key achievements and impact to policy makers. Open Science is a heated subject. It is good to open spaces for discussion amongst peers during the training sessions.

Help people enjoy working on Open Science
Let's offer people enjoyable moments and focus on the challenge to be "Open Science skilled", the benefits are amazing. Trusting people with sharing knowledge and skills is the path towards Open Science!

libereurope.eu

Ligue des Bibliothèques Européennes de Recherche
Association of European Research Libraries

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Cécile Swiatek, Mc Caffrey Ciara, Thorsten Meyer, Anna Svenbro, Helene Brinken, et al.. LIBER Open Science Training Methods and Practices Across European Research Libraries: Survey Analysis. LIBER Publications, LIBER, 2020, ⟨10.5281/zenodo.3903141⟩. ⟨hal-02879689⟩

Swiatek, Cecile. (2019). LIBER Digital Skills Working Group: Case Studies on Open Science Skilling and Training Initiatives in Europe. Zenodo. https://doi.org/10.5281/zenodo.3901485

Sharing useful references on
https://www.zotero.org/groups/2340674/liber_digital_skills_for_open_science

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Divers moyens d’y parvenir

Anna Svenbro

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

Ouverture des savoirs qui peuvent l'être, au bénéfice de tous

Il n'y a pas qu'une seule approche : diversité de modèles, de méthodes, de pratiques

- Des principes d'ouverture et de partage **à adapter aux besoins et limites** de chacun en fonction des sujets, champs disciplinaires, modes de collecte des données, aspects industriels, confidentialité…
- **Des niveaux divers**. Sensibilisation, acculturation, bon sens : du généraliste à l'expert il y a de la place pour tout le monde.
- Deux **recommandations pour nous guider** dans le "capacity building" (acquisition et construction de compétences partagées):
  - 2019 Ressources éducatives libres https://unesdoc.unesco.org/ark:/48223/pf0000373755/PDF/373755eng.pdf.multi#page=11
  - 2021 Science ouverte https://unesdoc.unesco.org/ark:/48223/pf0000379949_fre

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

Focus : aspect “chercheurs”

Commission européenne, Direction générale de la recherche et de l’innovation, O'Carroll, C., Hyllseth, B., Berg, R., et al., *Providing researchers with the skills and competencies they need to practise Open Science*, Publications Office, 2017, https://data.europa.eu/doi/10.2777/121253

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

Des compétences multiples, c'est vertigineux !

https://en.unesco.org/sites/default/files/open_science_brochure_fr.pdf

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

Un très grand écosystème

https://en.unesco.org/sites/default/files/open_science_brochure_fr.pdf

ıro, Cécile Swiatek

17 mars 2022 - “Jeudis de l’Open Access” ADBS

https://zenodo.org/record/6353871

Il n’est jamais trop tard pour se lancer

ADVICE FROM THE RESPONDENTS

HOW TO GET STARTED

1. Identify the institution's Open Science priorities.
2. Identify your target audiences and their specific needs concerning digital skills and Open Science.
3. Reflect upon the needs you have identified to develop your strategy.
4. Keep in mind the following questions: how can you remove misconceptions and fears about Open Science and about the difficulties that can arise in the digital skill acquisition process? How can you make researchers use library services as an integral part of their research activities?
5. Prioritise the skills your audiences have to acquire when you build the training programmes: researchers, librarians, staff.
6. Don't work alone. You will have to establish a regular and constant dialogue with the board and the other central services of your institution (IT, vocational training); you will also have to build bridges between departments and disciplines.
7. Use various channels and learning types (face-to-face, self-training as group activities, gamification activities).
8. Set a budget that includes human resources, train-the-trainer, and events costs. Case reviews show that once the service is created, budgets vary from a few hundred euros to approximately €20,000. A specific and substantial budget is recommended for covering training fees and organising workshops with invited speakers or instructors but also covering staff costs, rooms, equipment, basic catering, travel fees, and time.

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Commencer par construire son projet

Cécile Swiatek

adbs L'Association des professionnels de l'information et de la documentation

Université Paris Nanterre

Bibliothèque Sainte Geneviève

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

Intégrer les principes de la science ouverte dans les routines

La pratique effective de la science ouverte (SO) engage un éventail de connaissances, d'aptitudes et de compétences si large qu'il peut déconcerter les bibliothécaires et les chercheurs, en particulier lorsqu'ils sont novices en matière de concepts et de pratiques de la science ouverte. Identifier les compétences nécessaires est la première étape à suivre pour qui souhaite mettre en place un programme individuel ou collectif de perfectionnement dans le domaine de la science ouverte.

En 2019, le groupe de travail de LIBER « Digital skills for library staff and researchers » s'est lancé dans un projet visant à définir les compétences numériques nécessaires au personnel des bibliothèques et aux chercheurs engagés dans la science ouverte en les alignant sur la stratégie 2018-2022 de LIBER. Cette visualisation des compétences en science ouverte, obtenue après plusieurs mois de travail, identifie les compétences et les connaissances nécessaires pour pratiquer efficacement la science ouverte.

La visualisation est disponible en anglais et en français. La traduction française a été assurée par Cécile Swiatek, Marlene Delhaye et Christophe Pion. La traduction grecque a été assurée par Iro Frantzi et Vasiliki Strakantouna.

Pour en savoir plus sur la manière dont la visualisation a été créée, veuillez consulter le site web de LIBER (page en anglais).

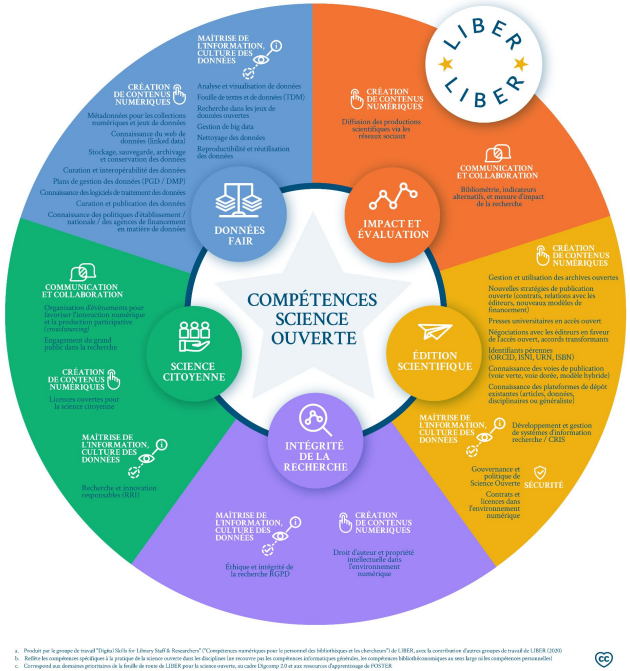
adbs L'Association des professionnels de l'information et de la documentation

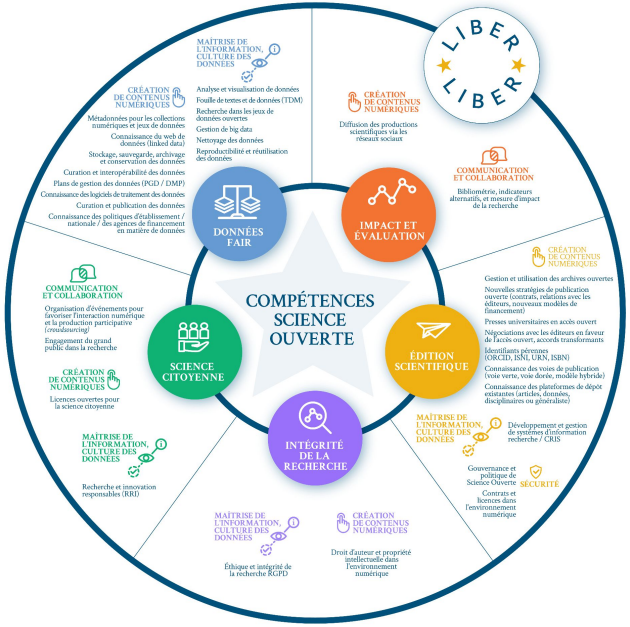
Université Paris Nanterre

BIBLIOTHE SAINTE GENEVIEVE

Anna Svenbro, Cécile Swiatek
17 mars 2022 - "Jeudis de l'Open Access" ADBS
https://zenodo.org/record/6353871

Dessiner son parcours en fonction de ses points forts et de ses priorités





McCaffrey, Ciara, Meyer, Thorsten, Riera Quintero, Clara, Swiatek, Cecile, Marcerou-Ramel, Nathalie, Gillén, Camilla, Clavel, Karin, Wojciechowska, Anna, Brinken, Helene, Prevoo, Mariëlle, & Egerton, Frank. (2020). Open Science Skills Visualisation - Visualisation des compétences en science ouverte (Version 2). Zenodo. https://doi.org/10.5281/zenodo.4727592

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871

CC BY NC SA

À bientôt !

Anna Svenbro, Cécile Swiatek
17 mars 2022 - “Jeudis de l’Open Access” ADBS
https://zenodo.org/record/6353871