



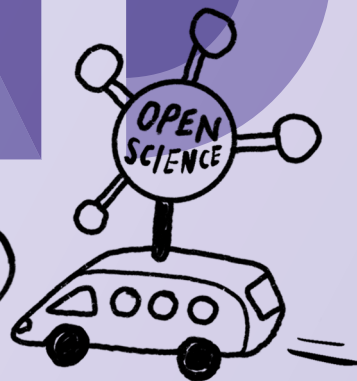
Expedition Open Science Land

SCIENCE

A travel guide for business research

LAND

IT'S A
JOURNEY



Marko Sarstedt | Doreen Siegfried |
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ZBW

Leibniz-Informationszentrum
Wirtschaft
Leibniz Information Centre
for Economics

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Foreword by the authors

The authors of this book are an interdisciplinary group of scientists in business research, psychology, and science communicators – united by the conviction that science should be transparent, reproducible, and open. One of our first meetings took place on a panel at the Annual Conference of the “Verband der Hochschullehrerinnen und Hochschullehrer für Betriebswirtschaft” [Association of University Professors of Business Administration] in 2024 at Leuphana University Lüneburg on the topic of Open Science in Business Administration. The intensive exchange led to a collaboration that resulted in a joint article for the Schmalenbach Journal of Business Research:

Soliman, M., Sarstedt, M., Adler, S. J., Siegfried, D., Genschow, O., & Imschloss, M. (2025). A Tale of Open Science: Emergence of a New Normal. Schmalenbach Journal of Business Research, Advance online publication. doi:10.1007/s41471-025-00218-5

This publication sparked the idea of presenting Open Science not only from an academic perspective, but also in a lively and accessible book. In collaboration with the illustrators Johanna Benz and Tiziana Beck, and communication designer Stefan Werner, we've created a companion volume designed to invite you, as a researcher, educator, reviewer, or doctoral supervisor, to explore and engage with Open Science in the field of business research and beyond.

The result is a travel guide to what we call Open Science Land that is intended to inspire, provide guidance and encourage you to get involved with open science. It's not a precise map of Open Science Land, but rather an abstract and playful portrayal, designed to be read with a wink and curiosity.

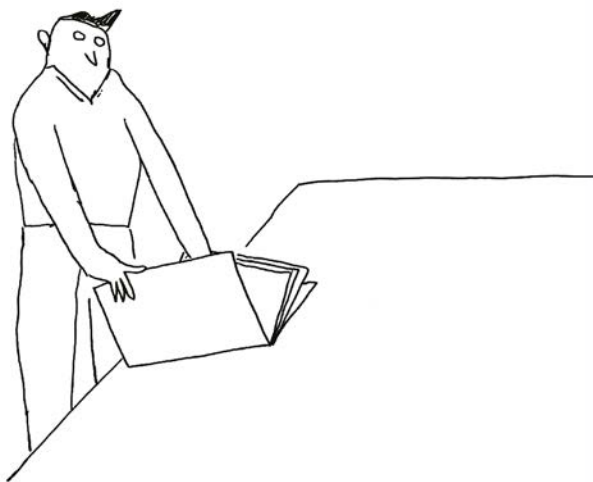
We hope you enjoy reading it.

Marko Sarstedt, Doreen Siegfried, Meikel Neumann,
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Insider tip! To accompany the book, you will find further information, practical recommendations, materials and downloads on our website expedition-open-science.org to support you in implementing Open Science in your daily scientific work.



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Welcome to Open Science Land!

Dear travellers, dear researchers,

Get ready for a journey like no other! You won't encounter age-old ivory towers or luxurious wellness retreats here – but what awaits you are countless open doors and a rich, untapped treasure trove of knowledge, ready to be shared and expanded. Open Science Land is a place of clear horizons and vibrant dialogue, where new perspectives emerge and collaboration thrives.

In business research, there is a growing demand for reliable and transparent results that can be used directly by researchers, managers, politicians, and institutions. At the same time, the discipline is increasingly being criticized for a lack of reproducibility. Open science offers valuable solutions: The disclosure of data and methods improves the reproducibility

of scientific results and strengthens research integrity. Open publication formats also promote dialogue between science and practice, a significant advantage for a discipline whose findings have a direct impact on companies, markets, and politics.

This guide will first give you an overview of Open Science Land, its geography and its cultural characteristics. We will then take you on a tour of selected locations, explain why a visit is worthwhile, before letting you explore by yourself.

Still not sure whether Open Science Land is the right destination for you? A visit is particularly worthwhile at the beginning of your academic studies or during the doctoral phase – because familiarizing yourself with the principles of Open Science early on will make your future scientific career much easier. But experienced researchers will also discover new perspectives: those who are familiar with the traditional paths of research will find exciting new routes that bring more transparency and collaboration into play.

Further tips for travelling and reading can be found on the website **expedition-open-science.org**.

Whether you come as a curious visitor or want to stay as a committed co-creator, bring your spirit of discovery and join us in shaping the science of tomorrow!

Your Open Science Travel Guide

OPEN
SCIENCE
LAND

REPLICATION
ARENA

DOCUMENTA

FALSE
LEADS

PLA

city

HOTEL





Preparing for your trip: An overview of Open Sci- ence Land



Before you set off for Open Science land, it's worth taking a quick look at your hand luggage: have you packed your curiosity? Openness? A certain resistance to glitz without substance? Good. Because this destination differs in some respects from traditional scientific routes.



History

Open Science Land was created in response to the challenges of the so-called “old world”. In this world, spectacular and surprising results and impressive publication numbers were often valued more than transparency and reproducibility. Researchers focused more on the publication of their research results in renowned journals than on the reproducibility and replicability of their findings.

Research practices such as p-hacking, HARKing (Hypothesising After Results are Known), selective reporting, lack of replication studies, small sample sizes, insufficient documentation and poor data availability are regularly reported from this old world.

But instead of being satisfied with criticism, a change began. Researchers, universities, and academic institutions broke new ground, laying the foundations for today's Open Science Land. Openness and collaboration are currently becoming the norm and are increasingly becoming a necessary condition for publishing in journals with high impact factors. Adhering to Open Science practices has also become part of recruiting requirements at top-ranked universities worldwide.

Geography

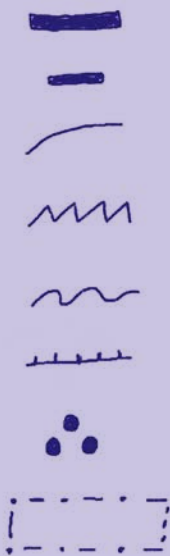
Open Science Land is divided into three central regions: Planning, Documentation and Dissemination – each with its own topography. The journey begins in the rolling hills of the Planning region, where researchers define their research questions, methods and data handling.

The journey continues in the Documentation region, the centrepiece of transparency. In this region, all research steps are mapped in a comprehensible manner, from research planning to analysis. Open research notes, versioning systems and freely accessible material and data archives make transparency and reproducibility a typical national custom here.

The final section of the journey takes us to the bustling metropolises of Dissemination, where knowledge is not hidden behind paywalls but is actively shared.



METHODOLOGY:

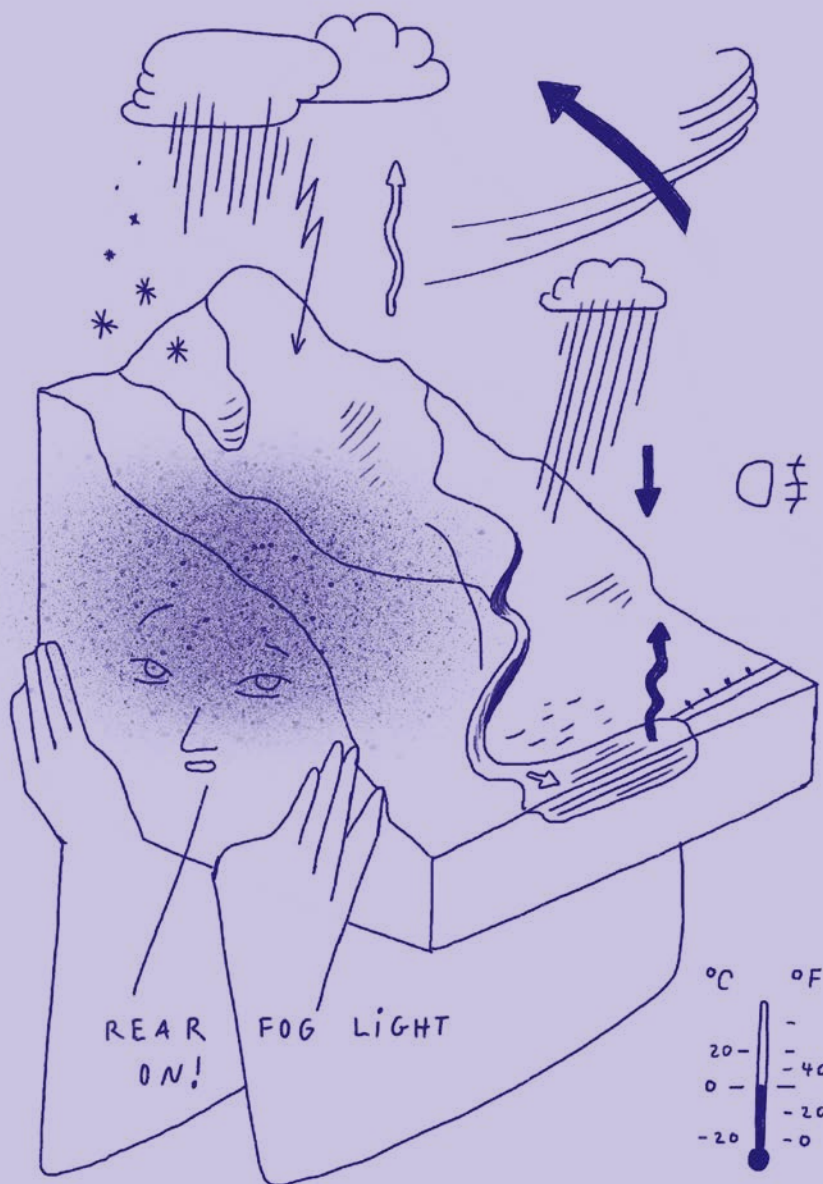


RESEARCH STEPS:



DISSEMINATION:





Climate

Open Science Land is defined by a stable and predominantly friendly climate, marked year-round by clear visibility, good circulation, and a high level of transparency. Clouds of opacity and fogs of imprecision are swiftly cleared by the Open Science Land Weather Office.

As the sun prepares to illuminate every corner of the land, some residents and especially newcomers to Open Science Land may initially look a little miffed. Please don't let this bother you: Your eyes need time to adjust to the brightness. It should be noted that cool regions of scientific rigor, especially in Planning and Documentation, can quickly be swept up in the heated winds of methodological discussion. Such air currents ensure a vivid exchange between researchers from different disciplines. The temperature of the discussions typically remains constructive.

Travelling to Open Science Land requires adaptability. Travellers should anticipate different weather conditions. The Waters of Knowledge are sometimes characterized by treacherous waves and unexpected currents. Inexperienced researchers should initially remain in the company of experienced peers. Methodological water wings are available in many places, and statistical lifeguards are often on hand.

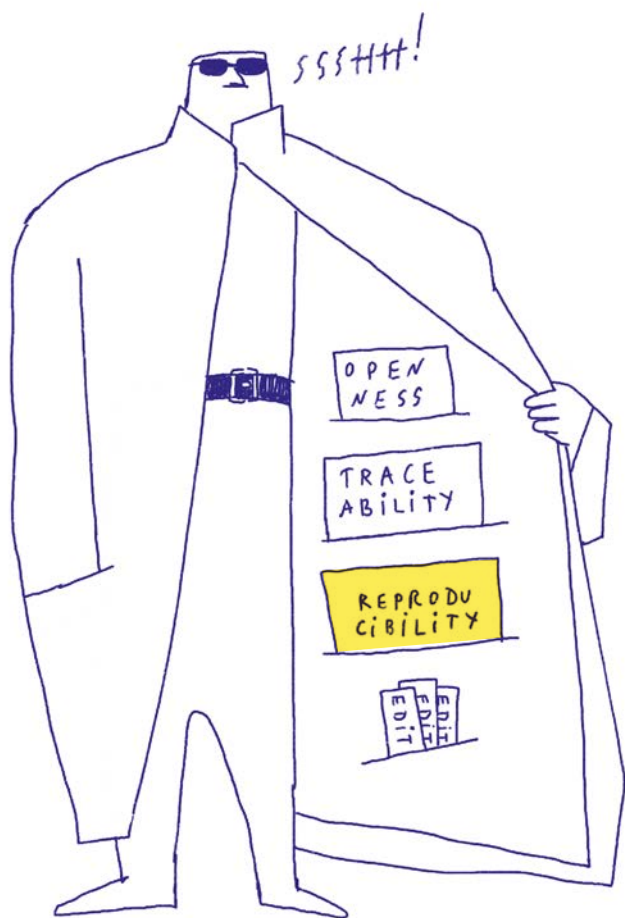
The clear air in Open Science Land can also challenge inexperienced travellers: Researchers must be prepared to disclose their data and continuously reflect on their methods. Anyone travelling in Open Science Land should accept constructive, sometimes unfiltered criticism as part of the scientific climate.

Optimal travelling time

Open Science Land welcomes travellers of all academic ages at any time of year. A visit at the beginning of your studies or during your doctorate is particularly worthwhile, as early experience with Open Science practices can make the scientific journey much easier. But the land also offers new perspectives for experienced researchers. Those who are already familiar with traditional scientific practices will discover new routes that promote transparency and collaboration.

READY FOR A HOLIDAY
IN OPEN SCIENCE
LAND





Predominant currency

Even if impact factors, prestigious publications, and high citation numbers still play an important role in Open Science Land, openness and traceability are key factors. Reputation is not only measured by the value of individual publications, but also by the quality, transparency and reproducibility of the work. Openly available datasets, research software, and activities as an editor or reviewer are also recognised as a means of payment.

Spoken languages

In Open Science Land, communication is multilingual – from the specialised dialects of business subdisciplines such as consumer research and international management to the clear, accessible language of science communication. Scientific exchange is based on clarity, comprehensibility and openness.

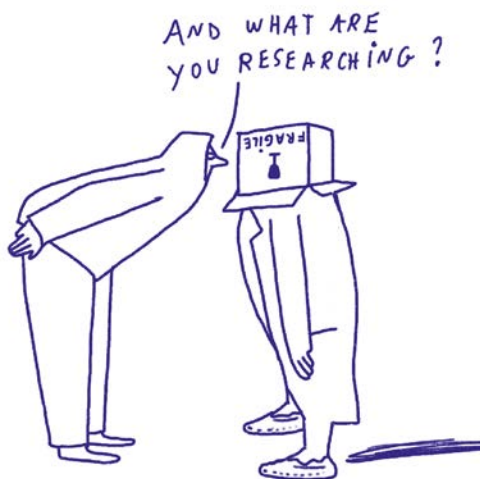
Statistical programming languages such as R and Python act as a common lingua franca in parts of Open Science Land. They enable researchers to share complex data analyses transparently, thereby fostering reproducibility across (sub-)disciplines. In the open laboratories and workshops of Open Science Land, they are important tools – not only for analysis, but also for documenting and visualising scientific findings. Their syntax speaks a universal language that machines and humans alike understand.

SCIENCE SHOULD
BE TRANSPARENT



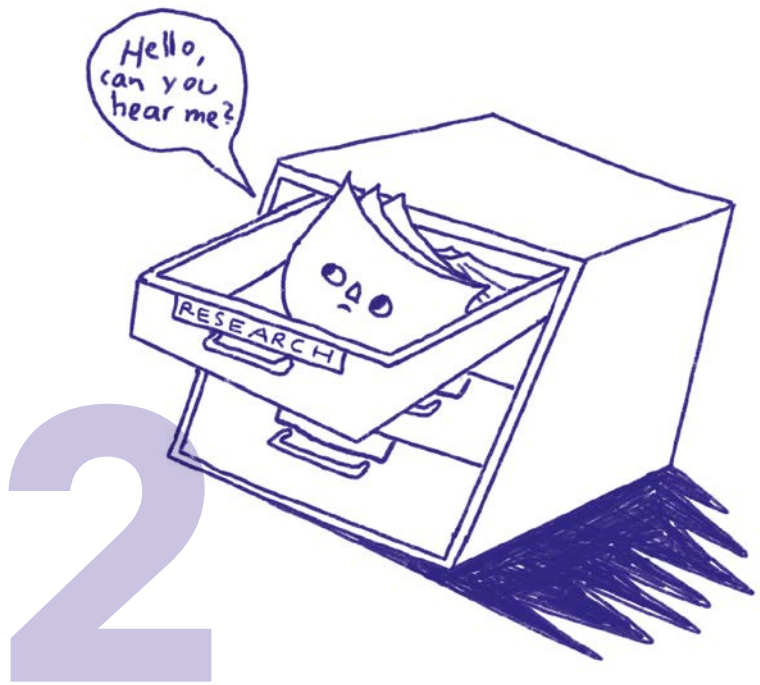
Etiquette

Anyone travelling in Open Science Land should familiarise themselves with the country's basic etiquette in order to move around safely and confidently. Here is an overview of the most important rules of behavior:



Transparency as the highest principle

In Open Science Land, there's no room for sunglasses, oversized hats, masks, veils, or hoods – transparency is key. Those who clearly document their analysis code, research data, methods, and materials, such as questionnaires, and make them publicly accessible leave a lasting, positive impression.



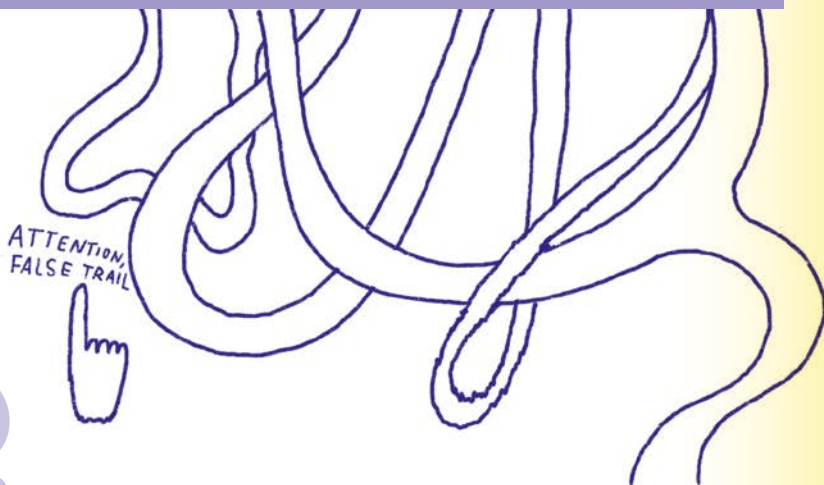
Openness towards all results

In Open Science Land, it is frowned upon when research results disappear into a drawer and are not publicly accessible, independent of being (in-)significant. The inhabitants of Open Science Land value all research results equally.



Reproducibility:

In Open Science Land, every discovery is documented so that fellow travellers can reach the same findings using the same data and methods. By describing methods precisely and thoroughly, you not only win the hearts of the locals but also help others follow scientific paths with clarity, avoiding confusion or misdirection.



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Reusability

In Open Science Land, discovered treasures are not buried, they are shared. It is considered good practice to make data, methods, and materials openly available so that others can use and build upon them. The common good and scientific progress take precedence over personal gain. Researchers who contribute to the sustainable and cumulative advancement of knowledge are held in high regard.

SCIENCE
FOR
ALL!

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Science for society

In Open Science Land, research findings are presented in ways that make them accessible not only to experts but also to policymakers, businesses, investors, NGOs, managers, journalists, and engaged citizens. Those who communicate their work with purpose and clarity quickly earn the goodwill of the locals.

Insider tip! To prepare for your first visit to the Open Science Land, visit expedition-open-science.org



Travelling through the Planning region



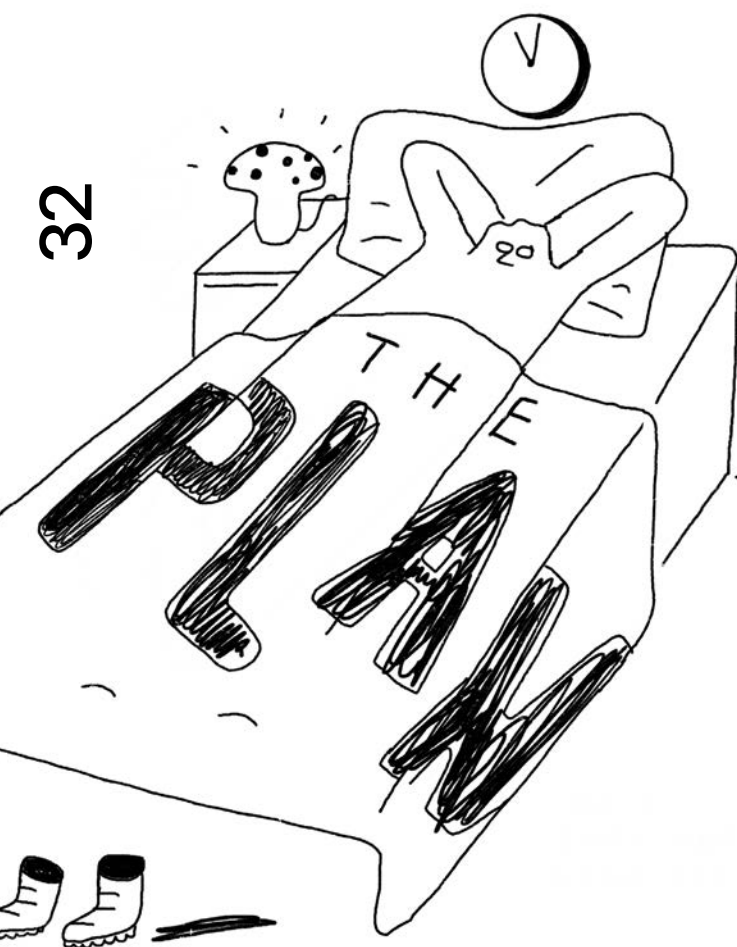
THE GRAND HOTEL
REGISTRARIUM

REGISTERED REPORTS
LAGOON

CITY BIG TEAM
SCIENCE

The Planning region of Open Science Land is characterised by clearly structured landscapes: expansive research fields where hypotheses are developed, well-charted methodological paths, and transparent data sources that require careful analysis. Those who explore this area will discover numerous points of interest essential to building a solid scientific foundation. This part of the land offers unique opportunities for experienced researchers engaged in complex collaborative projects.

**A must for anyone who
wants to put science on
a solid foundation!**



Welcome to the Grand Hotel Registrarium – an exclusive destination for researchers wishing to securely lodge their study ideas through pre-registration before venturing into the untamed wilderness of data collection.

Here, study protocols, research questions, hypotheses, study designs, variables, and data analysis plans are stylishly accommodated on public platforms such as the Open Science Framework (OSF) or AsPredicted. Checking in at the Grand Hotel ensures a well-organised start to your research project and guards against impulsive, post hoc changes at the buffet of methods and analyses

Upon arrival at the reception, guests are asked to choose an appropriate room category. To begin, we recommend the standard AsPredicted room. Before handing over the keycard, the hotel staff will ask a few essential questions:

- _What is to be investigated?
- _What assumptions and hypotheses will be tested?
- _Which methods will be used?
- _Which variables and metrics will be considered?
- _How much data should be collected?
- _How will the data be analysed?
- _What additional analyses are planned?



In addition to the standard AsPredicted room, a room upgrade can also be booked as OSF-pre-registration. Before settling into this room, guests must answer a few more detailed questions to ensure a thorough understanding of their planned stay in the OSF-pre-registration room. This is for those who prefer more detail.

An important ritual takes place at check-in at the Grand Hotel Registrarium: each pre-registration receives an official time stamp at reception. This time stamp ensures that the research plan is finalised (ideally) before data collection begins – preventing the later adjustment of hypotheses or alteration of analyses to achieve desired outcomes.



For researchers who are not yet ready to publicly disclose their pre-registration room, the Grand Hotel Registrarium offers discreet Embargo Suites, private accommodations where preregistrations remain behind closed doors until researchers choose to release them. Once data has been successfully collected and analysed, researchers return to the hotel to awaken the preregistration from its slumber and make it public.

After their stay, well-rested researchers stroll through the lobby, ready for the final step: check-out. This typically occurs through a research paper that includes the preregistration. The final documentation clearly outlines methodological degrees of freedom and any deviations from the planned procedures. Changes – whether self-initiated or suggested by reviewers – can be documented separately as exploratory, allowing readers to interpret and contextualise the study's findings accordingly.

Yet not all departures are joyful. Occasionally, researchers leave the hotel with heavy hearts, their carefully planned studies having failed to produce the hoped-for results. Sometimes, only the quiet sobs of unfulfilled scientific aspirations echo through the hotel lobby. In such cases, the Transparency Elevator offers a lifeline, helping researchers publish non-significant results and findings that do not confirm their hypotheses.



Safety tip!

Not every room of the Grand Hotel Registrarium is suitable for every research trip. Some travellers find that the straight lines and fixed guard rails of deductive research can be restrictive:

_Difficult navigation for exploratory researchers:

Those who prefer to work inductively and generate theories from data may feel constrained in Open Science Land. While the emphasis on confirmatory hypothesis testing may not always align with open, data-driven approaches, it is still possible to preregister open-ended hypotheses and exploratory analyses.

_Unclear terrain for complex data sets:

In some cases, it is difficult to plan analyses in advance, especially if data structures only emerge as the study progresses. If you choose to pre-register, it is important to clearly label any exploratory analyses as such during the research process.

A haven of peace for scientific integrity – where quality triumphs over sensationalism!

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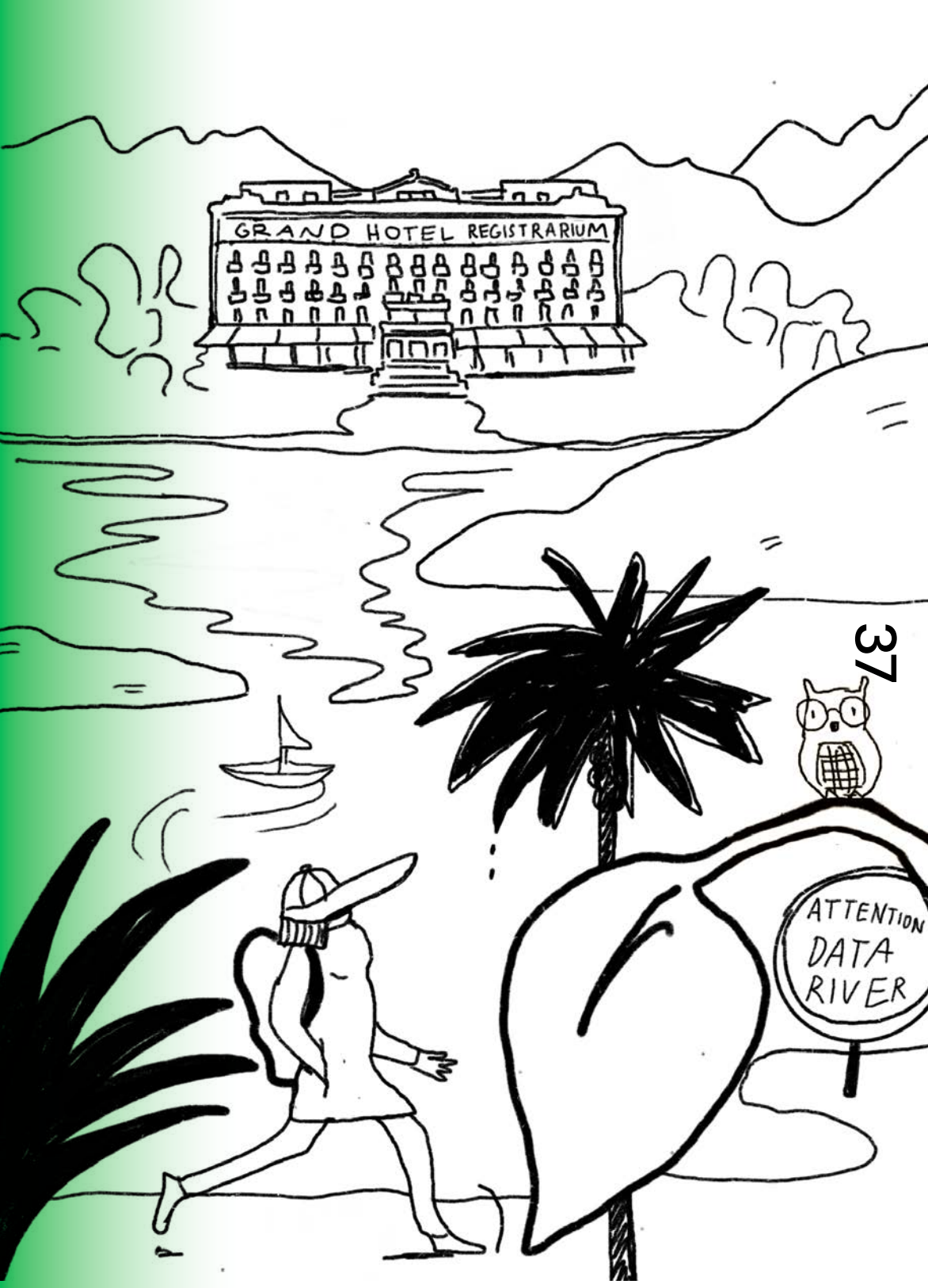
The Registered Reports Lagoon is located in the centre of the Planning section, not far from the Grand Hotel Registrarium. Our journey now leads to a place where scientists are deeply committed to conducting their research with a high degree of transparency. Studies are not judged by their outcomes, but by the quality of their theoretical framework, research design, and methodology. Those who venture into these salty waters follow a rigorous two-stage review process – the first stage taking place before data collection begins. This approach strengthens the robustness, reliability, and reproducibility of research.

The lagoon welcomes not only seasoned travelers but especially early-career researchers and PhD students. A visit offers valuable lessons in working with theoretical frameworks, identifying research gaps, and addressing them through sound methodological design. Successfully completing a Registered Report early in the process eases publication pressure and provides a strong tailwind for future scientific expeditions.

What you can discover

The Shipyard of Confirmatory Research

First, you should make your way to the Shipyard of Confirmatory Research – where research teams construct the vessels they use to set sail across the “Sea of Knowledge.” Visitors are not only impressed by the variety and ingenuity of the ships, they are also fascinated by their careful design and assembly.



GRAND HOTEL REGISTRARIUM

ATTENTION
DATA
RIVER

Each ship corresponds to a so-called Stage 1 manuscript. This manuscript contains:

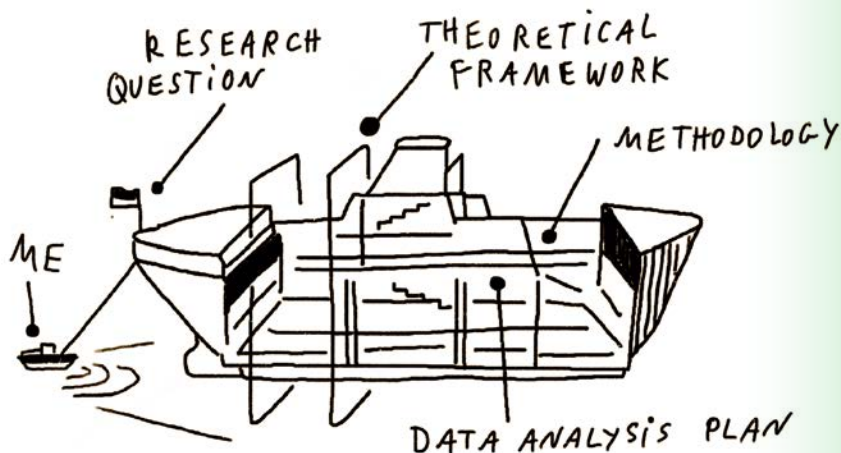
- _ **Theoretical framework:** What are the underlying models and assumptions?
- _ **Research questions:** Which hypotheses will be tested?
- _ **Methodology:** Which study design, sample size, and data collection strategy will be used?
- _ **Data analysis plan:** How will the data be analysed?

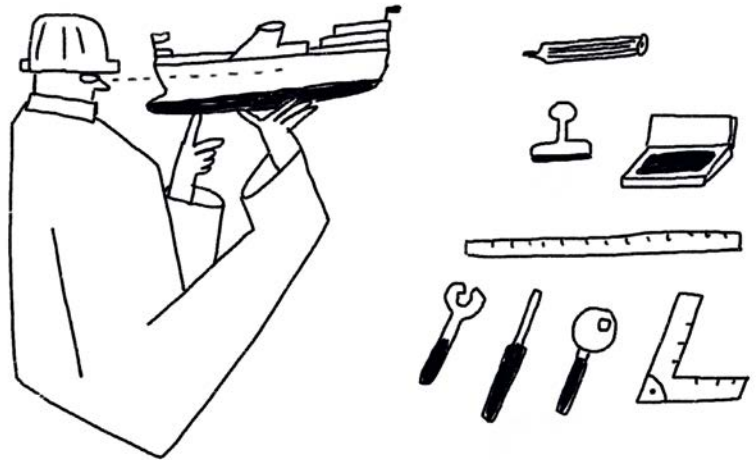
The designers and crew of a research ship know precisely what questions they seek to explore and what gear they'll need for the journey. Once their ship is crafted and the expedition meticulously planned, it's time to face the peer review quality inspection, the gatekeepers of the sea, who decide whether the ship is fit to sail into the vast and unpredictable waters of scientific discovery.

The peer review quality inspection

What makes the lagoon truly special is its two-stage peer review system. At its heart lies a modest-looking pier structure—easy to overlook, yet vital – where Stage 1 manuscript ships undergo rigorous inspection before they ever touch open water.

Expert reviewers conduct a thorough quality check to ensure that only the most promising expeditions, with well-equipped and seaworthy





ships, receive clearance to sail. Because the methodology, analyses, and sampling plans are charted and approved in advance, pitfalls like under-powered studies can be spotted and avoided early on. This approach strengthens the integrity of the project and helps ensure that the discoveries brought back meaningfully contribute to scientific knowledge.

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After this meticulous review, researchers whose proposals pass muster are awarded a sailing license and a provisional promise of publication (so-called in-principle acceptance). This means that if the ship embarks as planned, follows its approved course, and returns to port with valid findings, regardless of whether the results confirm expectations or not, the findings are published. In this lagoon, it's not the direction of the wind that matters, but the strength and clarity of the course set from the start.

The Freedom to Publish Bay

In the Freedom to Publish Bay, returning ships are proudly exhibited, regardless of the treasures they bring back from their journey. Their logs, materials, and blueprints are openly displayed, inviting future crews to study, learn, and build upon them as they prepare their own expeditions.

But there's one key requirement for entry into this prestigious harbour. Only ships with carefully maintained logbooks are granted a place in the exhibition. The research crew must demonstrate that their journey followed the charted course laid out in advance. Detours, whether due to unexpected storms or intriguing bycatch, are allowed, but must be clearly marked and transparently reported.

This commitment to openness addresses a long-standing challenge in science: publication bias. In Freedom to Publish Bay, findings don't vanish into file drawers simply because they're non-significant or fail to confirm a hypothesis. Every journey has value here, whether it confirms a theory or uncovers the unexpected.

The Island of Credibility

At the heart of the lagoon lies an exhibition dedicated to scientific integrity. The Island of Credibility illustrates how Registered Reports help combat questionable research practices – such as p-hacking and HARKing – and contribute to greater reproducibility in science.

Among the standout exhibits is the influential conceptual article by Ioannidis (2005, PLOS Medicine), which argues that many published findings are likely false. Visitors can also explore a more recent contribution by Lakens et al. (2024), published in Evidence-Based Toxicology, where the authors examine how separating theory development from data analysis can reduce publication bias and strengthen scientific credibility.

This exhibition offers insights into why an increasing number of journals are adopting the Registered Reports format – and why more than 300 journals now support



What you should know before visiting the Registered Reports Lagoon

The lagoon is an impressive place – but not easily accessible for everyone. There are some challenges that travellers should be aware of:

Challenging for exploratory research

Those who prefer to dive into the data first and develop their theorising later may find the lagoon somewhat confining. Its calm waters are primarily reserved for hypothetico-deductive journeys – expeditions where expected effects are clearly charted in advance.

The challenge of complex data sets

Not all analysis steps can be precisely charted in advance. When key aspects of the data structure only emerge during the study, rigid pre-specification can become a constraint. Researchers must navigate such deviations with flexibility – ideally anticipating them early on and documenting them transparently.

High level of preparation

Spending time in the Registered Report Lagoon calls for careful preparation. Fluctuating water levels, murky ground, and shifting currents demand well-adapted equipment and thoughtful planning. Researchers must immerse themselves in the study design and analysis methods long before setting out on data collection. While this can slow the pace of the journey, it pays off in the long run – these steps are essential for any successful research expedition.



this model. It's a compelling reminder that transparency and rigorous planning are at the core of trustworthy research.

The coastal town of La Transparenta

The coastal town of La Transparenta lies on the edge of the Registered Report Lagoon. Unlike other seaside destinations, there's no judgment here based on flashy beachwear or branded sunglasses – glossy, significant results take a back seat. Travellers can rest easy knowing that research in La Transparenta is valued not for its superficial shine, but for its structure, clarity, and resilience.

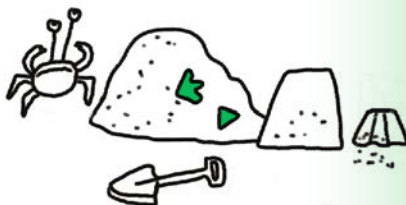
For the especially brave, a visit to the nearby Data Nudist Beach offers a look at raw datasets in all their unfiltered glory. Only here does one truly appreciate the effort behind a clean dataset: the careful documentation, the thoughtful preparation, and the aesthetic of transparent presentation. Visitors often stumble upon unexpected variables that never made it into the final analysis or enjoy unusual distributions basking in the sun.

42 Occasionally, researchers from the Replication Arena (see region: Documentation) can be spotted combing the shores. They often admired polished datasets in glossy journals – but now seek the unretouched version: Where exactly was that effect observed? Were the findings in the paper larger and more glamorous than what the raw data suggests? Did the interventions truly have the reported impact?

Seasoned visitors to La Transparenta will notice the growing presence of academic publishers setting up shop. Most recently, even the Journal High Society has erected elegant new buildings in town – proof that transparency is not just a trend, but a movement gaining ground.



Further valuable content on
expedition-open-science.org





#NOFILTER



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A vibrant science metropolis – where knowledge grows on a grand scale!

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If you are looking for a vibrant place in Open Science Land where collaboration takes place on a large scale, you should definitely visit the City Big Team Science. This dynamic city is the centre of large-scale scientific collaboration. Researchers from different institutions, disciplines, and countries come together here to work on major research questions.

The city is an impressive example of the spirit of Open Science Land: Instead of researchers working in isolation, interdisciplinary networks thrive, sharing data, methods, and analyses to achieve robust and reproducible results. Collaboration is the norm, and yes, fun is guaranteed.

Everyday tips for travellers to City Big Team Science

Network early

Big Team Science projects require long-term planning. If you're interested in joining, start by connecting early and becoming involved in relevant scientific communities.

Standardise your own data and methods

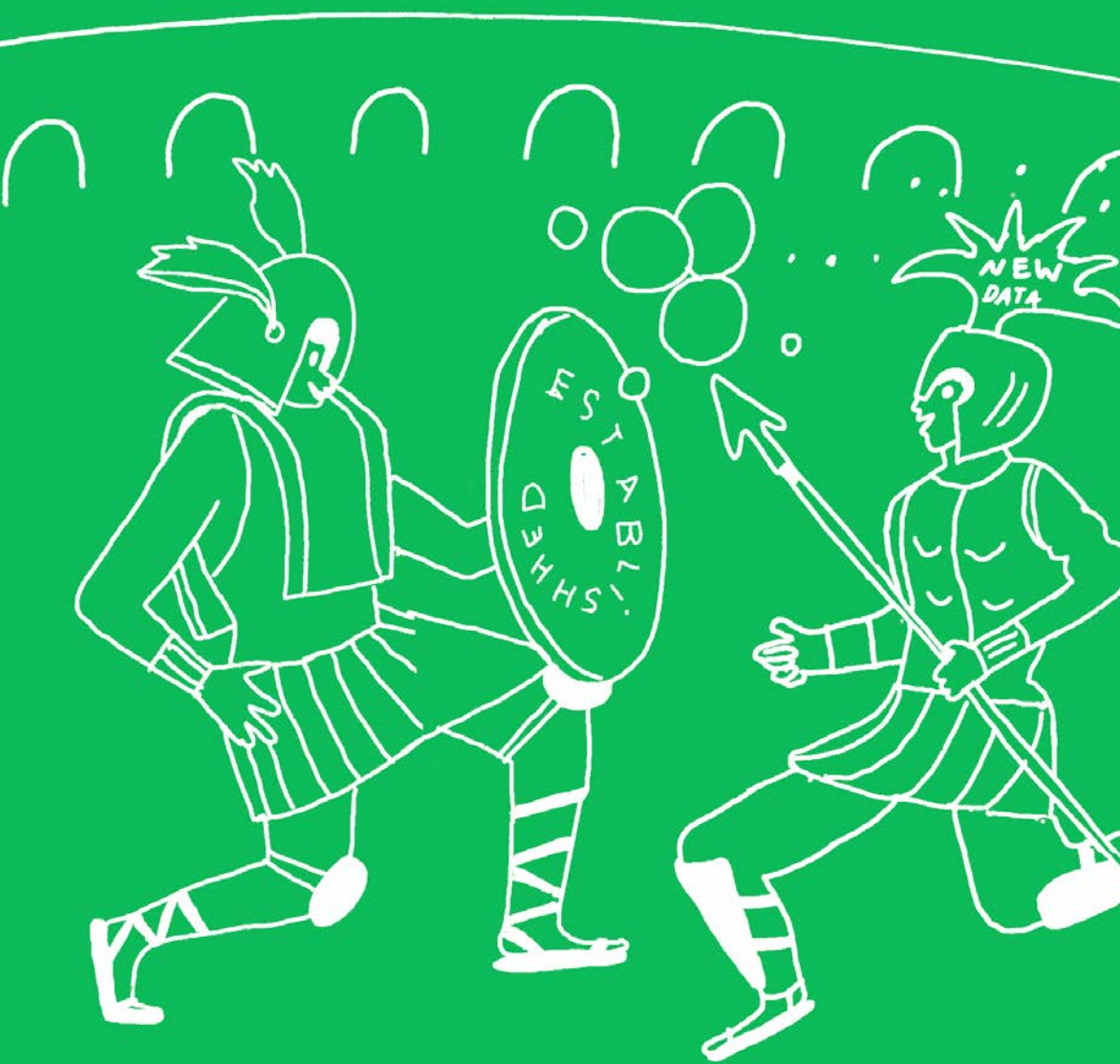
Successful large-scale research depends on three pillars: standardised protocols, clear documentation, and open, transparent analyses.

Practice effective communication

Regular updates, clearly defined responsibilities, and transparency throughout the entire workflow are key to ensuring smooth and efficient collaboration.

Develop a flexible mindset

In large teams, differing opinions and diverse methodological approaches are part of the process, and it's precisely this diversity that strengthens the robustness of the research.



What is there to explore here?

The Many Labs neighborhood

In the busy Many Labs neighborhood, numerous research groups work in parallel on the same research question. The aim is to test a research question at different locations, with different samples and under different conditions. The goal is not only to generate results that can be generalised beyond individual labs, but also to reveal how effect sizes vary across different research groups, contexts, and samples. To participate in a Many Labs study, researchers receive standardised materials such as questionnaires or research plans and then collect primary data at their location. These data are then centrally compiled and analysed to produce collective insights.

The Multi-Analyst Centre

At the Multi-Analyst Centre in the heart of the city, the same dataset is examined by different research teams using a variety of analytical approaches. It's a fascinating place that reveals just how much analytical decisions can shape research outcomes. Curious? Come and see

for yourself! Visitors will discover why open data and freely accessible code are essential for scientific reproducibility, and how transparency in statistical methods plays a vital role in trustworthy research.

The Megastudy Arena

In the Megastudy Arena, visitors can explore large-scale scientific studies that often tackle pressing societal issues. Some of the most well-known megastudies have examined nudging techniques in vaccination campaigns or consumer behavior in digital markets. But the arena isn't limited to headline topics, there's also space for niche questions and the investigation of lesser-known effects. In this diverse and dynamic environment, scale meets depth, and even small ideas can make a big impact. The Megastudy Arena offers a front-row seat to how multiple research teams design interventions for a single question, test them on large samples, often in real-world settings, and bring together results from diverse perspectives.

The Reproducibility Tower

One of the city's most iconic

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Insider tip! Bring plenty of time with you – most visitors like to stay longer in City Big Team Science.

→ landmarks is the Reproducibility Tower – a powerful symbol of the importance of scientific testing. It was here that the renowned Reproducibility Project: Psychology took place, replicating 100 experimental studies and revealing that only 39% of the results could be

successfully replicated. This large-scale effort marked a pivotal moment for the Open Science movement and underscored the value of big team science in strengthening research reliability.

Pitfalls of the big city: How to make your visit to City Big Team Science a success

City Big Team Science is an exciting place – but like any large metropolis, there are some challenges that travellers should be prepared for.

High coordination effort

Large teams mean a lot of coordination. Communication, clear guidelines, and effective organisation are important in order to achieve the common goal.

Deviations in methodology and data quality

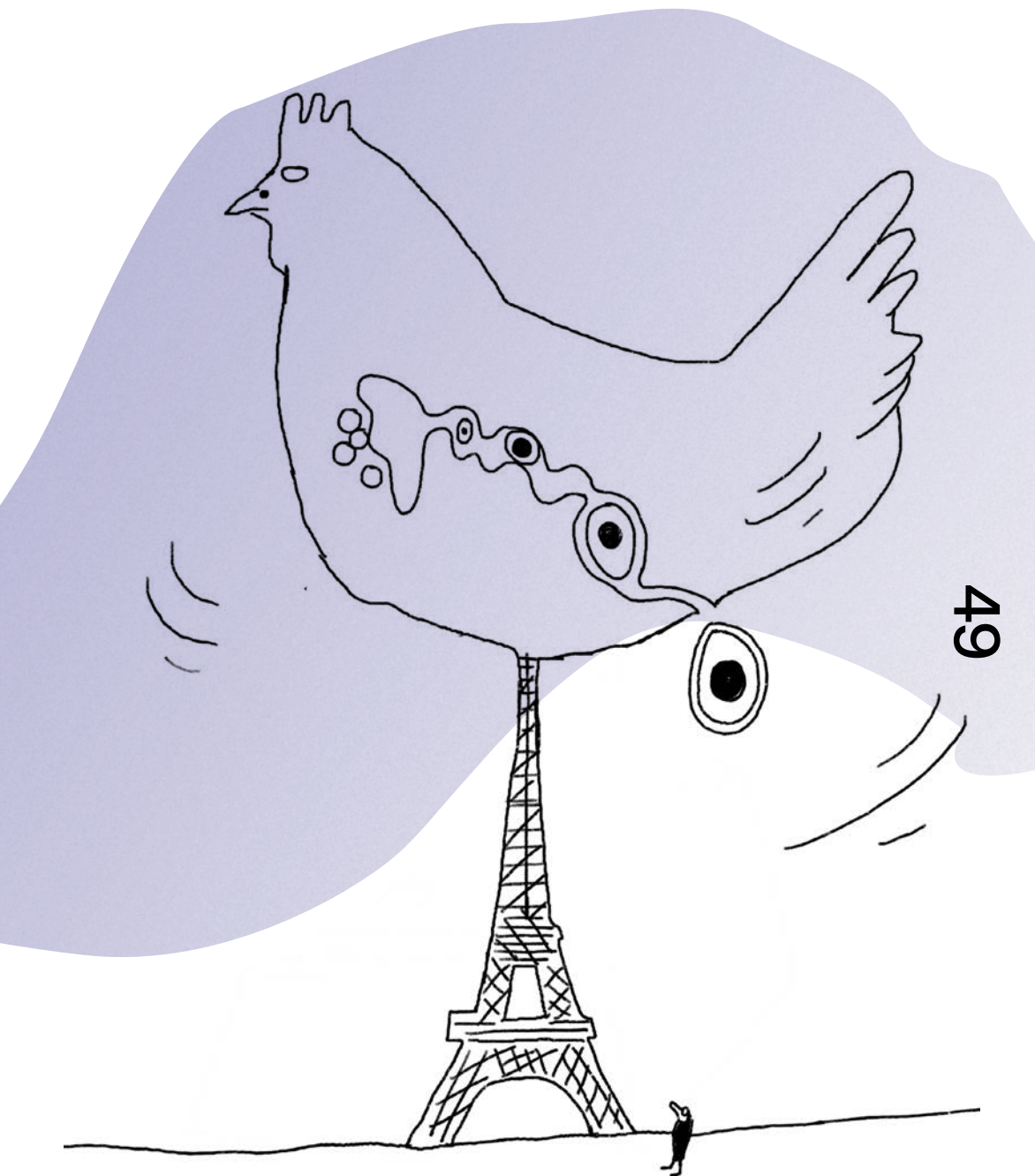
While standardisation is the goal, it comes with its challenges. Different working conditions, cultural contexts, and technical variations must be carefully considered and addressed.

Participation requires commitment

Participation in big team science projects requires full transparency – sharing materials, data, and analysis code. It also calls for a collaborative mindset and a readiness to have one's own assumptions openly examined and constructively challenged.

Those who embark on this adventure may face challenges, but above all, they will be rewarded. When many brilliant minds come together, remarkable insights are sure to follow!





Travelling through the Documenta- tion region



Welcome to Documentation – a region of expansive data plains, branching trails of methodological transparency, and vibrant marketplaces where researchers openly share their findings. Travellers through this region quickly discover how Open Science fosters greater transparency, reproducibility, and long-term sustainability in research.

A dynamic hub for dialogue – fostering the exchange of ideas, advancing scientific discovery!

The Marketplace of Research Treasures lies at the heart of the region Documentation, a busy, vibrant place where researchers make their materials, datasets and codes freely available. Knowledge is not hoarded, but rather shared and further developed. Anyone interested can come, browse, reuse, and build on existing knowledge.

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The marketplace is a winding maze of streets and alleyways – a vibrant crossroads where high-tech meets low-tech, and historical documents and handwritten surveys mingle with cutting-edge algorithms and advanced data management systems. Sleek flagship stores stand side by side with flea market stalls, rare collector's items sit next to niche research tools. Some visitors stumble upon unexpected treasures; others pause and wonder: is this data a masterpiece, or ready for the archive?

What you can discover

The Data Stands – Open Research Resources for All

At the bustling market stalls, researchers offer a wide array of valuable materials, including:

- _ **Questionnaires and interview guides:** To ensure consistent data collection
- _ **Raw and processed datasets:** Provided in open formats (e.g., CSV) for easy access and analysis
- _ **Experimental Stimuli:** Ready for reuse in new experimental setups
- _ **Codes and algorithms:** Clearly documented to guarantee reproducibility

All materials are shared according to the FAIR principles (Findable, Accessible, Interoperable, Reusable), making them easy to discover, access, and build upon for future research.

RDM Travels & Guided Tours

At the entrances to the Marketplace of Research Treasures, you'll find the welcoming offices of RDM Travels & Guided Tours. Here, it's well understood that Research Data Management (RDM) can be a journey filled with uncertainties. Fortunately, the knowledgeable staff are on hand to help travellers navigate the marketplace, locate valuable research data, and set up their own data stands. They offer expert support in preparing, documenting, and archiving data—making a visit worthwhile for both first-time explorers and seasoned data sharers. Renowned for their expertise and friendly advice, the team makes data management feel less like a chore and more like a shared adventure.

RDM Travels & Guided Tours also runs branches in cities and libraries around the world. Many research institutions host their own travel agencies in the form of RDM specialists, statistical consultants, and



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other research support services, ready to guide you every step of the way.

The Open Research Workshop

In this environment, researchers can work together on new projects. They draw on existing materials, test alternative methods and analyses, as well as improve existing procedures. Open Science practices such as material, data and code sharing allow everyone to benefit from the work of others.

Insider tip! Discover how to efficiently navigate the diverse offerings on the marketplace of research treasures, avoid pitfalls, and get the most out of your journey. expedition-open-science.org



Challenges for travellers

The Marketplace of Research Treasures is an inspiring place, but not all paths are easily accessible. Travellers should be aware of a few key hurdles:

_Lack of recognition for data sharing

Providing datasets and code is time-consuming and often undervalued. While publications typically receive citations, re-searchers rarely gain formal credit for making their data openly available.

_Legal and ethical pitfalls

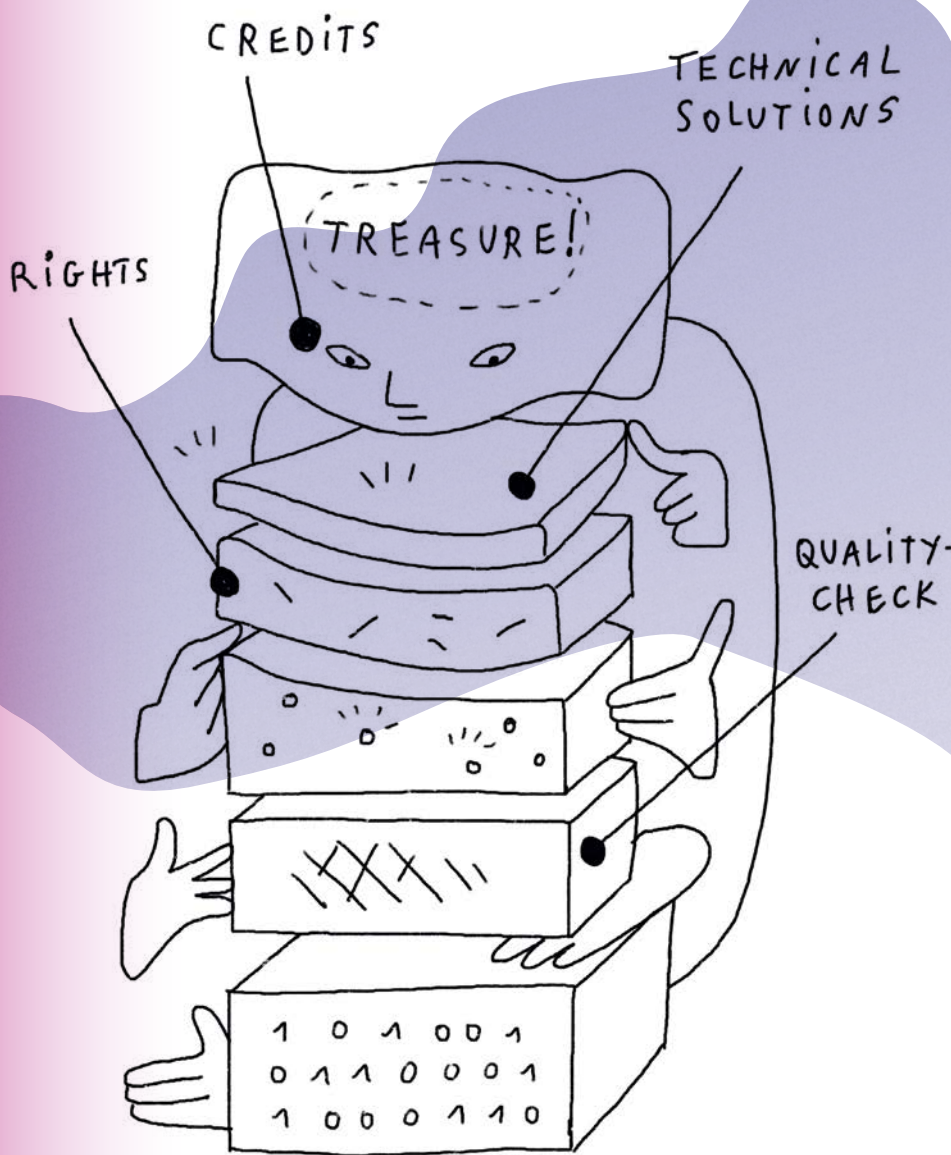
Not all data can be shared without restrictions. Data protection laws, intellectual property rights, or the presence of sensitive information may limit public access. Careful attention to ethical and legal frameworks is essential.

_Technical barriers

Different tools, software, and programming languages can hinder reuse. Incompatible file formats and poorly documented code add to the challenge. Clear metadata, comprehensive RE-ADME files, and open formats go a long way toward overcoming these obstacles.

_Guaranteed quality check

Unlike the rigorously reviewed studies in the Registered Reports Lagoon (see region Planning), many materials, datasets, and code in the marketplace are not independently verified. Travellers must assess the quality themselves—peer support, input from data stewards, or reproducibility checks can be extremely helpful.



The touchstone of science

The Replication Arena is a central attraction in the Documentation region. Both new and established research findings enter an open contest of reproducibility and replicability. This is where researchers face one of the greatest trials in empirical science: Can their results withstand independent re-examination? Are their data and methods documented clearly enough to be reproduced by others?

The arena regularly hosts scientific showdowns – from the replication of individual studies to large-scale, collaborative efforts led by Big Team Science initiatives, such as those emerging from the Planning region. Here, transparency is put to the test, and only the most robust findings prevail.

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Reproduction or Replication – What's the difference?

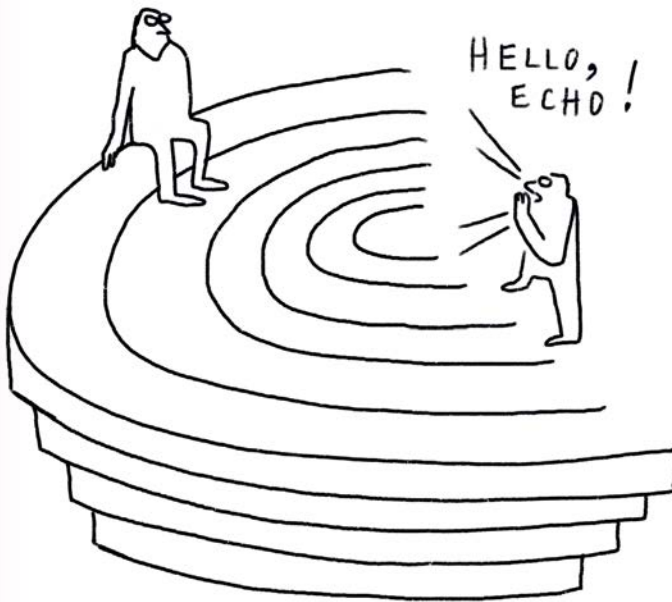
In the Replication Arena, you will encounter two terms that are often confused: Reproduction and Replication.

_Reproduction refers to reanalysing the original data using the same analysis scripts and methods to verify whether the published results can be confirmed. The aim is to check the accuracy and transparency of the original work..

_Replication goes a step further. It involves applying the same methods to new data or contexts to test whether the findings hold up beyond the original study. Replications can take two main forms:

- Direct replications, which repeat the original study as closely as possible using the same methodology.
- Conceptual replications, which test the same underlying effect but with slight variations in methods, samples, or context.

A particular highlight each year are the numerous Replication Games, in which teams attempt to systematically replicate existing studies in a structured format. Blending learning, networking, and hands-on scientific practice, these games offer a playful yet powerful approach to reviewing research, demonstrating how methodological rigor and teamwork can drive better, more reliable science.



Safety tips!

Anyone stepping into the Replication Arena should come well prepared. Thorough documentation and an open mindset toward all outcomes, especially those that defy expectations, are essential. But the effort is worth it. Replications strengthen the reliability of scientific claims by providing a clearer picture of measured effects. Do the effects truly exist? And if so, how strong and consistent are they across studies and contexts? Replication helps us find out.

Travelling through the Dissemination region



OPEN ACCESS
LIBRARY

OPEN PEER
REVIEW MUSEUM

THE BRIDGE OF OPEN
DIALOGUE

Welcome to the Dissemination region! Step into a vibrant landscape where scientific knowledge is shared openly, clearly, and with purpose. Wander along winding paths and over sturdy bridges, explore libraries filled with insights, galleries of data stories, and bustling cities that foster dialogue between business research, politics, and industry. Openness and transparency bring science to life, making it tangible, relevant, and above all, impactful.

A place where knowledge is accessible to all – without barriers!

At the heart of Open Science Land, just steps away from the bustling Marketplace of Research Treasures, stands one of its most important institutions: the Open Access Library. Here, scientific knowledge isn't locked behind paywalls. It's freely available to all. Whether it's peer-reviewed articles, books, or preprints, anyone can browse, read, and share the wealth of knowledge housed within these open shelves, without barriers, without restrictions.

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What you can discover

The Preprint Room

Researchers can publish their work at an early stage, long before it has gone through the traditional review process. Preprints are uploaded to platforms such as EconStor, arXiv, PsyArXiv or SSRN and can be read, commented on and further developed immediately. The advantages are obvious: Preprints accelerate scientific exchange, free digital access increases the visibility and reach of research results and often leads to more citations. In contrast to traditional publication models, the Preprint Room is tolerant and open to all visitors. Visitation is open to everyone and free of charge.

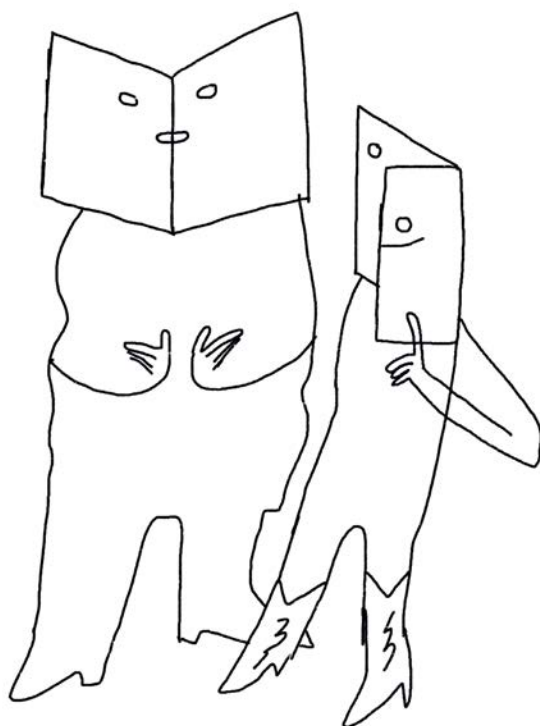
Preprints are typically not peer-reviewed, which means they lack a crucial layer of quality assurance. Without this review process, there's a greater risk that incorrect or premature conclusions may be disseminated. While preprints allow for rapid sharing, they should be read with a critical eye, as they have not yet undergone formal validation.

The Open Access Forum

In this section of the library, scientific articles and research findings are available via open access, completely independent of your travel budget or institutional affiliation. You're free to read, download, print, share, or take materials with you.

Researchers who frequent this area report increased public visibility. Visitors from beyond the research world especially appreciate the timeliness of the content and the open-door policy – everyone is welcome, including those simply curious about the field.

OPENNESS,
THE CONNECTING
ELEMENT.





Everyday tips for travellers in the Open Access Library

To publish your research strategically and effectively, it's worth knowing a few well-travelled routes and clever short-cuts:

_ Use preprints wisely:

If you want to make your research visible quickly, consider a brief detour through the Preprint Region. Preprints offer early visibility – but beware: not all journals accept work that has already been posted as a preprint. It's a good idea to check in advance which journals allow this. A helpful compass for this journey is the [Open Policy Finder](#), which shows you where preprints are welcome.

_ Use Open Access funding programs:

Some Open Access journals charge significant publication fees. Before reaching for your wallet, check if your institution offers Open Access funding. Many universities and research institutes provide library-managed funds to cover publication costs for open and transparent research. A quick inquiry could save money.

_ Choose trustworthy destinations:

Not every journal is a safe harbour for your research! Predatory journals may lure you with promises of fast publication, but they undermine scientific credibility. Use trusted navigation tools like the [Directory of Open Access Journals \(DOAJ\)](#) or the checklists from [Think. Check. Submit](#) to steer clear of risky waters.



This is where peer review becomes visible – open, comprehensible, discussable

In the Open Peer Review Museum, you won't find dusty masterpieces hidden behind velvet ropes. Instead, you'll witness vibrant discussions unfolding in golden, glass-framed windows of science. Open Peer Review is a model where elements of the review process are made publicly accessible, either before or after an article is published.

In this light-filled hall, visitors are invited to explore three interactive exhibition areas, each shedding light on how transparency can reshape scientific evaluation.

What you can discover

The Hall of Open Identities

In the Hall of Open Identities, you step into an extraordinary exhibition where experts don't operate in the shadows, their names and expertise are fully visible. Transparency and accountability take center stage, as anonymous reviews and behind-the-scenes power dynamics have no place. Instead, the focus is on open dialogue, constructive critique, and mutual respect.

DOES MY RESEARCH
REALLY CONTRIBUTE
ANYTHING?



Warning: Not everyone feels comfortable in this hall. Knowing that one's identity is visible can encourage fairness and accountability, but it may also lead to hesitation or introduce bias into the review process.

The Archive of Open Reviews

In this striking archive, peer reviews are freely accessible to all – a quiet revolution in the world of scholarly publishing. Anyone can trace how critiques shaped a publication, seeing exactly which comments led to which revisions. The guiding principle is simple: Science thrives on open dialogue, not on reviews hidden away from all but editors and authors. This transparency reveals how articles evolve throughout the review process.

Some reviews on display are exemplary – thoughtful, rigorous, and contributing meaningfully to scientific progress. Others, however, are of lower quality or seem more driven by ego than by a desire to improve research. This serves as an important reminder: Transparency is a vital step forward, but it does not automatically guarantee objectivity.

Why it's worth a visit

The Open Peer Review Museum is designed to prevent anonymous reviews from being misused for personal or academic rivalries. By making the entire journey of a manuscript – from initial submission to final publication, visible, it protects authors from having their ideas quietly appropriated. The museum champions open dialogue and fosters collaboration across disciplinary boundaries. It also serves as an invaluable learning space: Curious early-career researchers can observe how constructive scientific critique is formulated and exchanged. And the best part? Admission is free – discussion is not only welcome, it's encouraged!

One of the museum's key advantages is its efficiency. In the traditional publication system, rejected manuscripts are often sent to multiple journals, triggering repeated rounds of review for the same paper. The Open Peer Review Museum centralises this process: Peer review happens once and is openly documented, saving time and reducing redundancy while maintaining quality.

An increasing number of journals are choosing to exhibit their work. For example, all Nature journals now publish reviewers' reports and authors' responses alongside accepted articles—proof that the spirit of openness is gaining momentum.

Where research meets society – a place for exchange and visibility

As you journey through the Dissemination region, you'll inevitably encounter one of Open Science Land's most iconic landmarks: the Bridge of Open Dialogue. This impressive structure connects the world of science with broader society. Crossing it reveals how your research can extend beyond academic circles—informing business, shaping policy, and making a meaningful contribution to the public good.

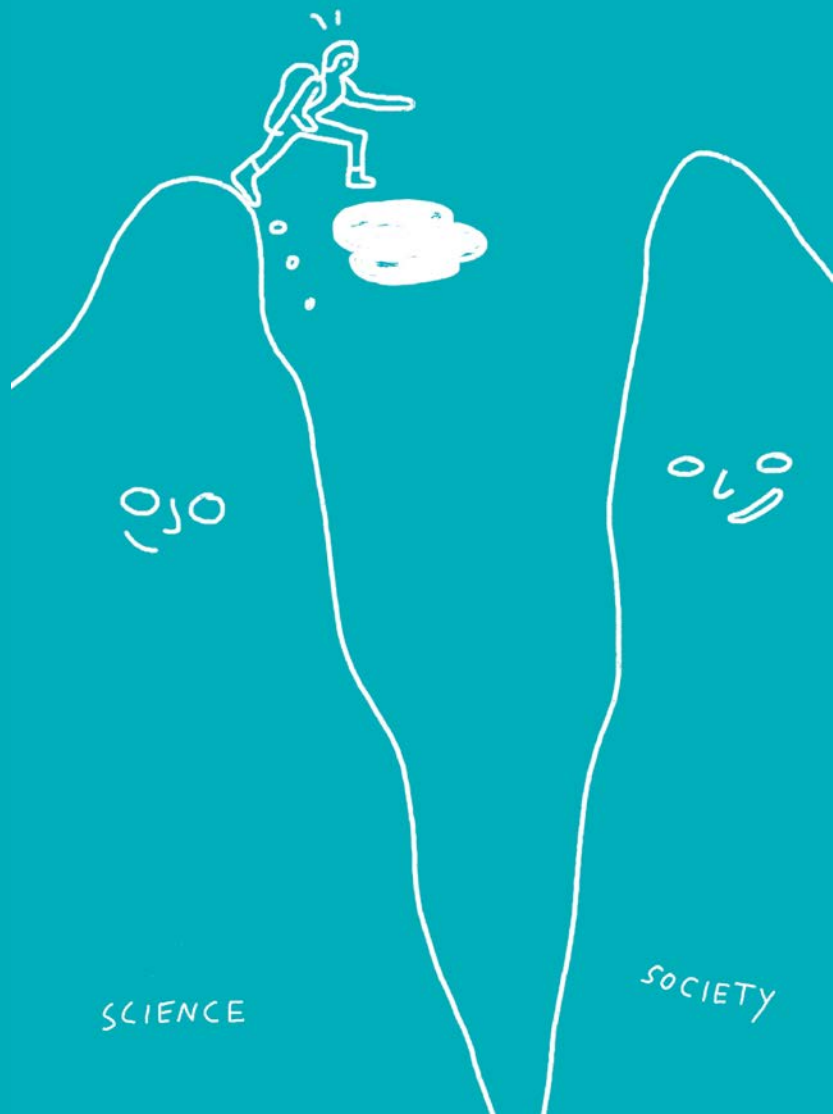
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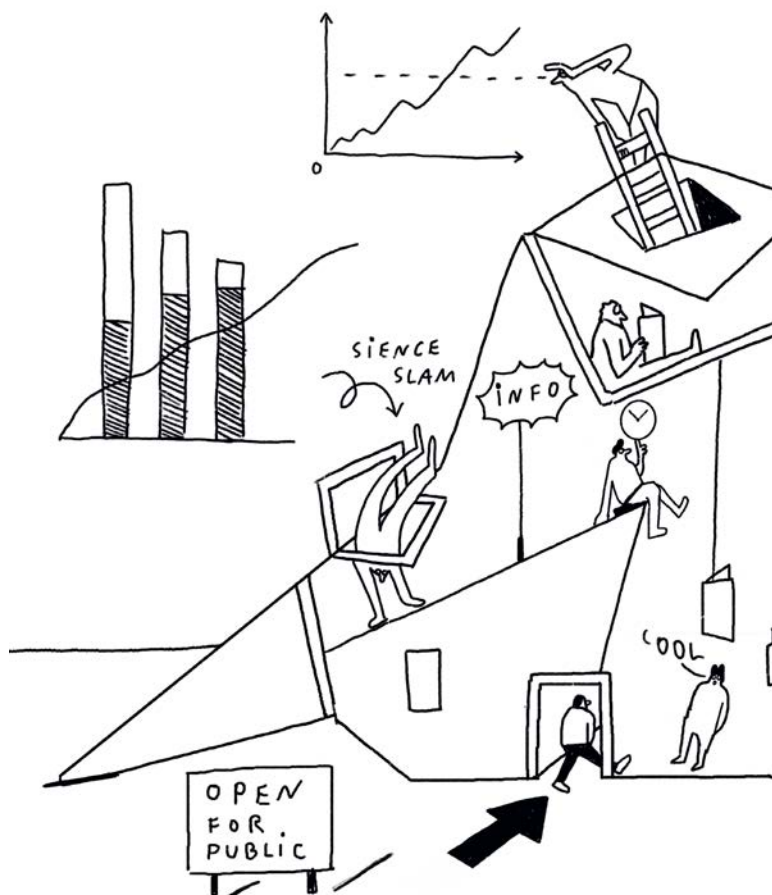
In addition to the open access publications and preprints showcased in the region of Dissemination, this bridge offers many paths for sharing knowledge and fostering dialogue – through podcasts, blogs, social media, and more. It invites researchers to communicate openly, clearly, and with purpose.

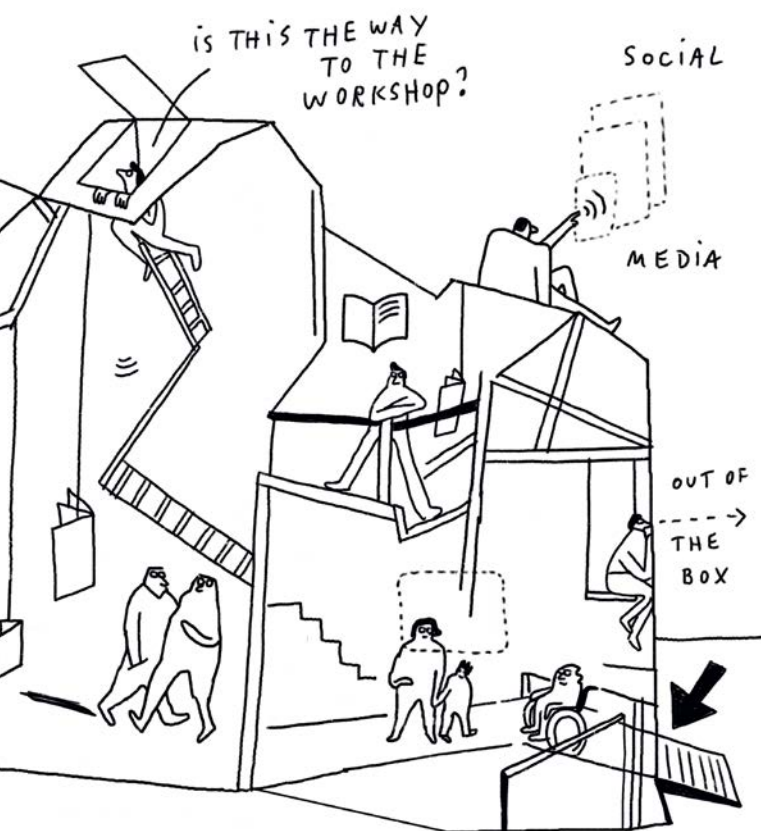
It stands as a symbol of Open Science Land's core belief: that scientific knowledge should be freely accessible to all, without paywalls or barriers. This openness amplifies dissemination, ensuring that not only fellow researchers, but also policymakers, industry leaders, and curious citizens can access and benefit from scientific findings.



Insider tip! Visit expedition-open-science.org for practical recommendations and concrete tips on how to improve your science communication.







What can you discover

The Science Communication Pavilion

This glass-walled pavilion is dedicated to communicating science to the broader public. Inside, you'll find a vibrant array of channels for sharing research – from podcasts, blogs, and infographics to comics, specialist magazines, popular science journals, and public events.

A particular highlight of the pavilion is its live, in-person formats: conferences, festivals, science slams, meet-ups, symposia, and workshops where science and practice come together in real time. These events bring research to life, sparking dialogue, curiosity, and connection beyond the academic world.

The social media platform

Science doesn't end with publication, the conversation continues on the Bridge of Open Dialogue. Especially on social media platforms like Bluesky, LinkedIn, or X, researchers can share their work, engage with the community, and receive valuable feedback.

Along this vibrant promenade, you'll discover why it's worth maintaining a personal website or research blog, how webinars and online courses can make knowledge more interactive, and the benefits of presenting findings through infographics or short videos. With so many ways to connect, communicate, and create, a fresh breeze of inspiration is always in the air.





Watch your step – There are tripping hazards on the bridge!

As impressive and valuable as the Bridge of Open Dialogue may be, the path to effective science communication comes with a few challenges:

Translating science in layperson's terms

Writing for the general public requires a different approach than academic publishing. Clarity is key: be concise and precise, avoid jargon or explain it and use relatable, real-life examples to bring your research to life. Simplify your language, not your concepts. These are essential skills for strong science communication. But you don't have to figure it out alone – visit the communications office at your university or research institution. They often offer hands-on support or even personalised media training.

Dealing with public criticism

Sharing your research openly means being ready to respond to questions, critiques, and occasional misunderstandings. Clear, honest, and transparent communication helps keep the conversation constructive. One of the most important tips from seasoned travellers: stick to the facts, avoid speculation – or clearly label it as such.

Misconcep- tions and myths



FALSE TRAILS ON THE
JOURNEY THROUGH OPEN
SCIENCE LAND

TRUSTY TRAVELLING
COMPANIONS

Every journey comes with its share of misleading signs and false trails. In Open Science Land, too, myths and misconceptions can make navigation difficult. Here are ten common misunderstandings – along with explanations of why they don't hold up.

The 10 myths



The legend of “completely open luggage”

“Anyone travelling to Open Science Land must immediately disclose all of their research data without restriction.”

False! Open Science does not mean unrestricted openness at all times. Many areas of Open Science Land are equipped with access controls, embargoes, and safeguards for sensitive data. Researchers retain full control over when, how, and what they share.

2



The myth of the “scientists-only zone”

**“Open Science Land is mainly for biologists and physicists.
Business researchers have no place here.”**

Not true! Open Science Land is interdisciplinary by design. Business researchers and, indeed, all researchers benefit from open data, transparent methods, and improved reproducibility. The city of Big Team Science shows how collaboration and openness enhance research in every field.

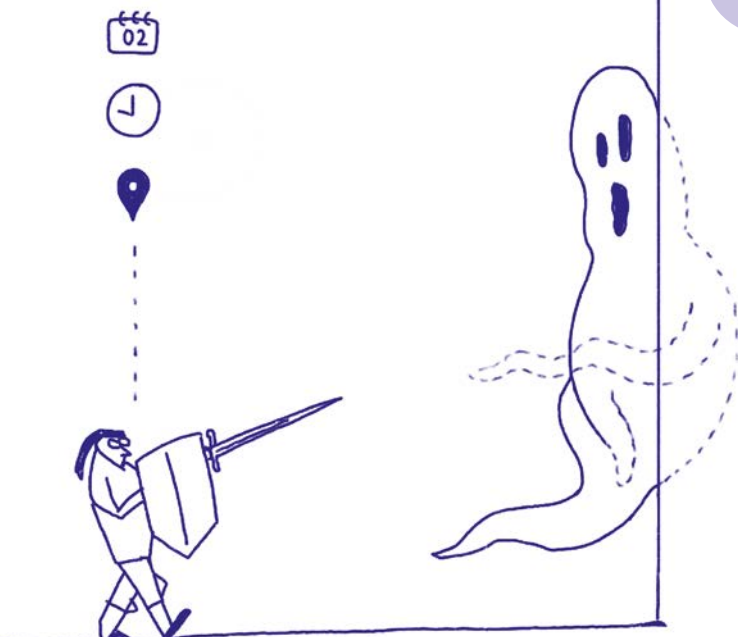
The spectre of “scooping”

“If you share your research openly, someone might steal your idea and publish it first.”

A persistent rumour, but unfounded. Open Science acts as a protective shield. Timestamped entries in public repositories establish authorship. Many researchers even report increased collaboration and visibility as a result of open practices.

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3





The myth of the “trendy capital”

“Open Science is just a fad – soon everyone will move on.”

On the contrary! A look around Open Science Land reveals a growing, thriving scientific ecosystem. Major funders, journals, and institutions are embedding Open Science into their long-term strategies. The foundations are solid, and the momentum is building.



The myth of “ineffective measures”

“Open Science is just for show. It doesn't actually improve research.”

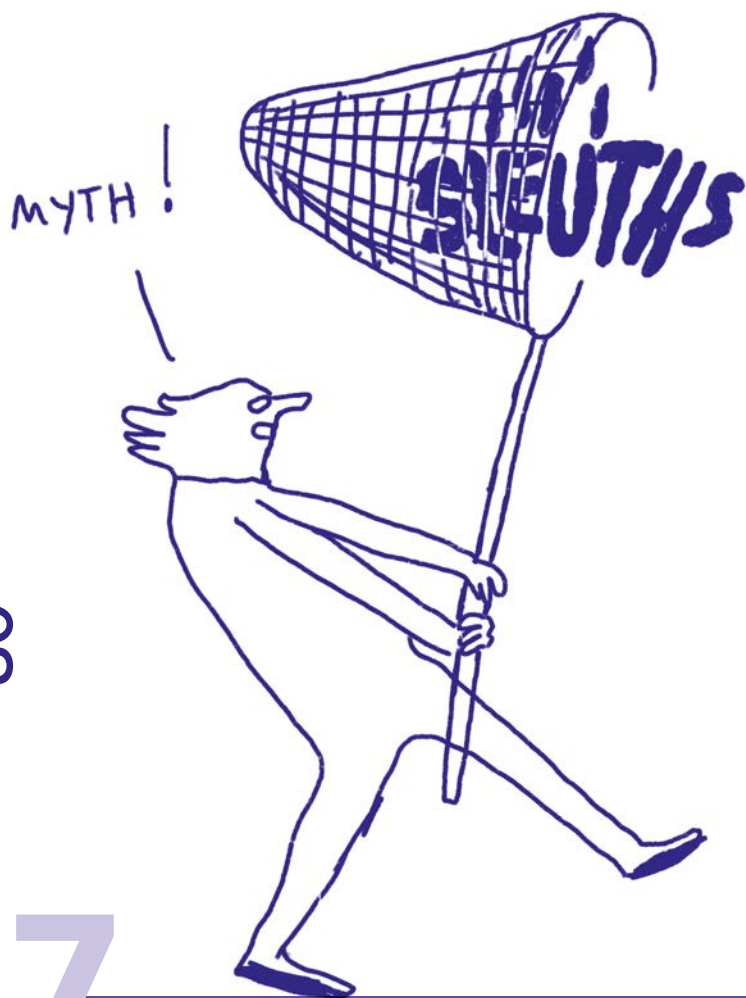
Incorrect. While no system is immune to misuse, the evidence is clear: Open Science practices improve transparency, encourage better planning, and promote research quality. When used responsibly, they offer the right incentives and tangible benefits.

The ghost town of “low-quality open access journals”

“Open Access journals are lower in quality than traditional journals.”

Wrong. The Open Access Library is filled with high-quality publications, many of which undergo rigorous peer review and are indexed in respected databases. Some even outperform their closed-access counterparts in reputation and impact.





The myth of the “time-consuming detour”

“Open Science just creates more work, with little benefit.”

Only at first glance. The Replication Arena and Open Data Marketplace show that Open Science can actually save time and resources in the long run. Standardised data formats and transparent methods prevent duplication and promote collaboration.



8

The monster myths: “Sleuths and saboteurs”

“Open Science invites nitpickers who hunt for errors and destroy careers.”

A spooky tale, but misleading. While feedback in Open Science Land is often direct and unfiltered, it's grounded in a culture of constructive improvement. Mistakes are part of science – and openly addressing them builds trust. As long as errors are not deliberate, they're met with understanding, not punishment.

The crystal ball of “only pre-registered analyses”
“Only preregistered analyses are allowed in Open Science.”

Not so. Pre-registration is a tool for structured planning, not a limitation. Exploratory analyses are absolutely welcome, as long as they are transparently marked as such. What matters is clarity about what is planned in advance and what emerges later.

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SHOW ME ALL
ANALYSES PERFORMED

9





10

The dead end for early-career researchers

“Open Science hurts your academic career.”

A widespread fear, but the opposite may be true. While Open Science can require extra effort (like preparing data or sharing materials), expectations around openness are rising. Leading journals and universities now value these skills. Getting familiar early is a smart investment in a future-proof academic path.



Travel without preconceptions

Many myths fade when you take a closer look. An open-minded journey reveals a scientific culture that's not only more transparent, but also more efficient, inclusive, and collaborative. So pack your bags, leave your assumptions behind – and set out on your adventure through Open Science Land!

Trusty travelling companions

Who will help along the way?

Even the longest journey begins with the first step. Colleagues and institutions provide valuable help for the journey:

_Experienced Open Science pioneers: Researchers who already practise Open Science successfully can be invaluable guides. Connect with them—through your institution, conferences, or on social media—and build a community of practise.

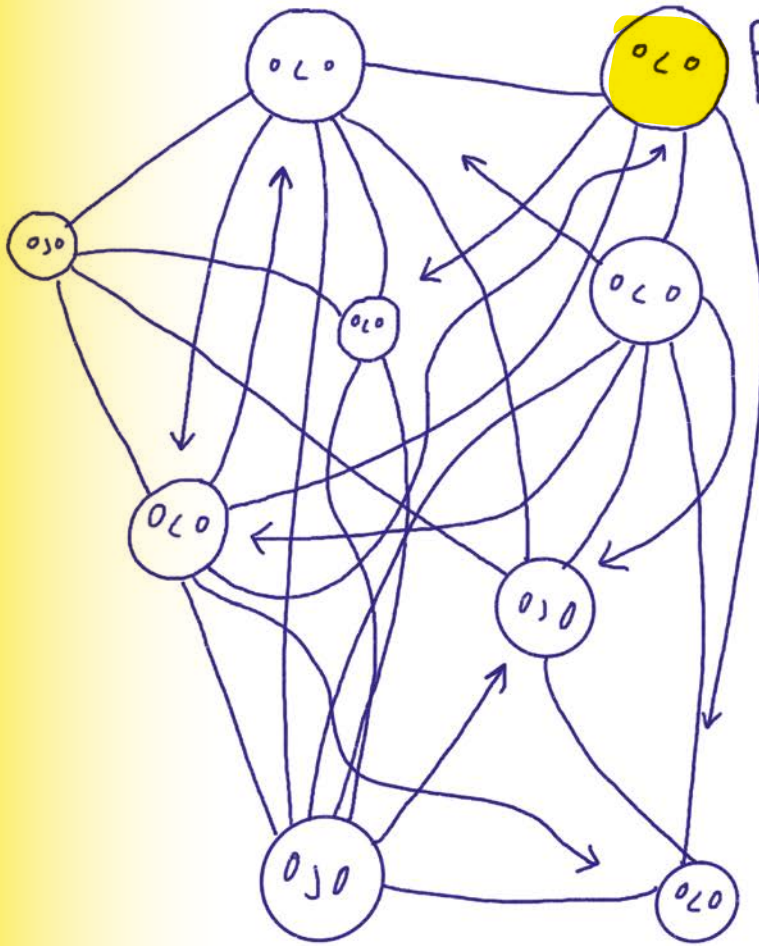
_Research networks and initiatives: Join Open Science workshops, disciplinary working groups, or collaborative projects. They offer both practical guidance and a sense of shared purpose.

_Institutional support: Open Science centres, academic libraries, and discipline-specific platforms can help you navigate the rich and varied landscape of Open Science. Don't hesitate to reach out—they're there to help.



You can find specific addresses and contact persons on our website expedition-open-science.org

PEN
SCIENCE



COMMUNITY
OF PRACTISE

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The Oasis of Reflection



At the end of our journey through the land of Open Science, we arrive at the Oasis of Reflection. Beneath the shade of ancient wisdom trees, researchers gather to contemplate the progress, challenges, and future of Open Science.

This is a space for thoughtful pause – but also for strategic insight: What does Open Science truly mean for business research? What potential has already been unlocked, and what barriers still stand in the way of broader adoption? The oasis invites reflection, dialogue, and renewed vision for the road ahead.

What does Open Science mean for business research?

Open Science in various disciplines

Travellers entering the neighbouring field of psychology encounter a landscape that has undergone significant transformation in recent years. Sparked by the so-called replication crisis—an event that cast doubt on the reliability of many established findings – the foundations of research practices have been critically re-evaluated. Today, the terrain is marked by new structures: Preregistration signposts at nearly every crossroads, open data expected along well-travelled research paths, and alternative publication formats offering new routes for scientific communication. The result is a region that seeks to be more transparent, structured, and accessible than before.



Not far from this area lies the field of business research. Travellers here report the early formation of milestones pointing toward Open Science. While much of the terrain remains under construction, signs are emerging that this discipline, too, is beginning to align with the broader Open Science network.

A journey through Open Science Land not only reveals fresh perspectives on research – it also provides valuable guidance for navigating your own scientific path.

Routes through this land vary depending on the research tradition. In experimental and quantitative territories, open science practices like preregistration and data transparency are often easy to implement—the trails are clearly marked. In qualitative or application-oriented regions, however, the terrain calls for more customised navigation. Sensitive or hard-to-access data require careful handling, and openness must be adapted accordingly.



ON THE TRAIL OF
OPEN DATA

At the boundaries between disciplines, new questions emerge: How does scientific collaboration evolve when openness becomes a shared value? The journey through Open Science Land remains rich and multifaceted – filled with both challenges and opportunities for building lasting connections.



Overcoming structural challenges

One of the key obstacles to the widespread adoption of Open Science lies in the current incentive structures within academia. Research performance is still largely evaluated by the number of publications in high-impact journals – where impact factor and journal rankings often reign supreme.

At the same time, it's clear that some disciplines, including business research, approach Open Science with caution. Sharing data and research materials invites external scrutiny, which can feel risky, especially for early-career researchers navigating a highly competitive landscape. The fear of criticism or being "scooped" remains a concern. Yet there is also growing recognition that the long-term credibility of science depends on transparency, openness, and reproducibility. A further source of tension lies in the role of professional societies and academic journals. Organisations such as the Association of University Professors of Business Administration (VHB) and other scholarly bodies play a pivotal role in setting research norms and expectations. The question is: How willing are they to challenge traditional publishing models and actively support Open Science as a new standard?

Prospects for the future

Open Science is often seen as a response to the replication crisis, but its significance goes far beyond correcting past scientific missteps. At its core, Open Science holds the promise of strengthening the social acceptance of research by making scientific knowledge more accessible to stakeholders outside academia and easing the transfer of knowledge into practice.

However, practices of open science alone are not enough to ensure a broader societal impact. If research findings are not communicated clearly and accessibly, their relevance may remain limited. Effective science communication, delivered at eye level with the intended audience, and support for developing user competencies are essential companions to openness.

That's why the Oasis of Reflection is not just the end of this journey, it's also the beginning of new thought experiments. Researchers leave this part of Open Science Land with a keener awareness of its tensions, its opportunities, and its transformative potential. They carry an essential question with them: How do I want to position myself in this evolving landscape?

Only by engaging with this question, individually and collectively, can Open Science Land continue to grow.

Imprint

SEE YOU SOON
IN OPEN
SCIENCE!
LAND



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