



WIDENING THE WEB



Annual Report 2022

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inclusive digitalisation that benefits all***

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Message from our Director



We aim to widen access to innovation spaces, enabling all voices to shape a more inclusive digital world

Dear Friends,

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2022 was a transformative year for SPIDER as we set out to confront one of the most significant challenges of our time—the widening digital divide in a post-pandemic world. Inclusive digital transformation was pushed to the foreground by the COVID-19 pandemic, and SPIDER’s strategy for 2023-2027 emphasised the importance of deeper stakeholder engagement in a collaborative effort.

SPIDER serves as a centre that connects experts across sectors and countries to address the needs of partner countries. It focuses on people-centred digital solutions to bridge social gaps and promote economic development.

Thanks to Sida funding, we significantly expanded our work this past year, reaching over 12 countries and impacting underserved populations in Africa and Asia. Notably, the HADDA project in Somalia used mobile health technologies to enhance healthcare access in remote areas, particularly benefiting women and children. In education, we empowered marginalised groups by providing critical digital skills to help them transition from consumers to innovators in the digital economy.

Projects like GeJuSTA and EQUALS-EU are crucial for advancing gender equity in STEM. GeJuSTA aims to boost African women’s representation, while EQUALS-EU tackles the underrepresentation of women and minorities in STEM from European and international viewpoints.

By considering STEM inclusion from both the Global North and Global South, we acknowledge the need to adapt global standards to diverse regional realities. This approach ensures that women and marginalised groups gain access to digital tools and can contribute to our digital futures. We aim to widen access to innovation spaces, enabling all voices to shape a more inclusive digital world.

We achieved new milestones with our International Training Programme (ITP) in ICT Regulation, including a redesign to make a Team Europe Initiative with the potential to reach telecom regulatory authorities across sub-Saharan Africa. The programme will expand into French and Portuguese-speaking regions, promoting linguistic inclusivity and building capacity for telecom regulators. We are committed to providing digital access for all, regardless of background or geography. Thank you to our partners for making 2022 a significant year for digital inclusion, helping close the digital divide, and supporting a future where everyone benefits from digital transformation.

Dr. Caroline Wamala Larsson

What SPIDER Brings

SPIDER is a centre of enablement for inclusive digital transformation. We facilitate collaboration between governments, researchers, technology developers, and local communities to create human-centred solutions that meet the real needs of people. Our work is rooted in sustainability and inclusivity, focusing on health, education, and gender equality.

How SPIDER works

SPIDER promotes digital transformation by bringing together governments, researchers, practitioners, and technology developers to create sustainable solutions.

We prioritise working with local stakeholders to ensure solutions meet community needs and align with development goals.

By combining research, practice, and technology, we create practical, user-friendly solutions that integrate into existing systems for lasting impact. Through open-source technologies and training, SPIDER supports scalable innovations that improve health, education, and gender equality, contributing to the Sustainable Development Goals (SDGs).

Our Mission



Ensure appropriate and accessible digital solutions to improve the opportunities and capabilities of poor and marginalised groups everywhere.

Our Vision



An interconnected world where digital solutions enable everyone to have their needs met and their voices heard.



2022 in review

Q1 Rebranding and redefining SPIDER's role in advancing digitalisation in global development.

The highlight of this quarter was SPIDER's engagement with the ICT regulator from Mozambique, INCM, where data collection and analysis workshops were held.

The Smart City Transport and Welfare programme held its second training session in Kigali, Rwanda, in March 2022. The event brought together 19 participants from 6 state agencies, marking a pivotal moment in advancing smart infrastructure initiatives.

One of the training's most impactful outcomes was its focus on peer-to-peer knowledge exchange. Public institutions—spanning police authorities, infrastructure ministries, and local governments like Stockholm Stad and the Kigali City Authority—came together to share best practices. This collaborative approach not only accelerates learning but also strengthens the foundation for smarter, more sustainable cities by integrating diverse experiences and innovations.



The second training phase of the Smart City Transport and Welfare programme, held in Kigali, Rwanda in March 2022.

Q2 Building capacity, strengthening partnerships and driving impactful engagement.

In the second quarter of 2022, SPIDER focused on a range of initiatives aimed at enhancing digital inclusion and capacity building.

Under the DiMHA (Digitalising Mental Health) project in Uganda, SPIDER trained peer support workers and showcased project highlights at the Digital Futures Seminars, reinforcing the role of digital tools in mental health support.

As part of the EQUALS-EU project, SPIDER supported the Järva Innovation Camp, which identifies and mentors emerging tech talent across 22 EU and associate countries, helping winners develop their start-ups.

At Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania, a comprehensive systems review and network audit assessed the existing IT infrastructure. This evaluation identified outdated systems for retirement while streamlining digital services and support at the institution.

In Rwanda, SPIDER brought together telecom regulators from Tanzania, Kenya, Uganda, and Malawi for the International Training Programme (ITP). This initiative strengthened peer-to-peer learning among national regulatory authorities, fostering collaboration, harmonising regulatory frameworks, and developing coordinated responses to shared challenges in the telecom sector.

Additionally, SPIDER facilitated several key visits, including:

Study Tour in Sweden for Rwandan Authorities participating in the peer-to-peer programme Smart City Transport and Welfare

Field Visits to Stockholm by the General Director of Butabikka Hospital and Researchers from Makerere University to explore Swedish digital solutions for Mental Healthcare Access

A visit from the Federal Ministry of Health Somalia and WHO to advance collaboration on the Health Alliance for Digital Development and Action (HADDA) programme in Somalia.



Smart City Kigali



Järva innovation camp at Rinkeby Folkets Hus, Stockholm. May 2022

Q3 Launching new projects and partnerships, expanding networks through high-level meetings, field visits and hands-on knowledge exchange.

In the third quarter of 2022, SPIDER strengthened its partnerships and launched significant initiatives across various sectors. A key highlight was a workshop with senior management from the AMRTP National Regulatory Authority in Mali, focusing on consumer protection and strategic telecom regulation.



The GeJuSTA programme was launched to advance gender equity in STEM across Africa by identifying the barriers and enablers for women pursuing careers in STEM fields.

SPIDER issued an open call for projects aimed at enhancing digital education, a sector severely impacted by the global pandemic. The initiative seeks to leverage digital solutions adopted during COVID-19 to bridge the resulting education gap.

Additionally, the HoliCare project was launched at SciLifeLab in Stockholm to address lower tract respiratory infections, including COVID-19. Funded by the EU and developed in collaboration with partners in Senegal, Ethiopia, and Uganda, the project focuses on creating holistic diagnostics at the point of care. These infections, often linked to poverty, require early diagnosis to enable timely interventions, reduce the strain on healthcare systems, and significantly improve patient outcomes.

A delegation from the Royal University of Phnom Penh, Cambodia, including the Vice Chancellor and senior management, visited Sweden to strengthen bilateral research cooperation with Stockholm University, SPIDER, Uppsala University, and the Swedish University of Agricultural Sciences.

The SPIDER team also visited Butabika Mental Hospital and Makerere University in Uganda, where they launched the Digitalising Mental Health Services project, marking the beginning of its proposed activities.

The quarter concluded with the final Smart City Transport and Welfare workshop in Kigali, showcasing results from strategic smart city projects initiated as part of the peer-to-peer programme.



SPIDER welcomed a delegation from the Royal University of Phnom Penh for a study visit in August 2022, aimed at informing and strengthening their bilateral collaboration with Sweden.

Q4 Forging partnerships and driving digital impact worldwide.

In the final quarter of 2022, SPIDER played an active role in high-level discussions and collaborations aimed at shaping strategies for digital inclusion.

At the Global Impact Investment Network Forum in The Hague, SPIDER participated in dialogues on sustainable digital transformation. Additionally, SPIDER reaffirmed its commitment to health sector digitisation by hosting a delegation from the Somaliland Ministry of Health to explore digital health solutions.

SPIDER also engaged in high-level meetings with WHO Somalia to discuss the development of a Health Information Management System (HIMS). Furthermore, SPIDER organised a Data Management Workshop in Nairobi for Somali government authorities, in partnership with Swedish institutions, as part of the HADDA programme.

While SPIDER focuses on leveraging digital solutions to combat cervical cancer, the timing of the launch underscores the heightened risk women living with HIV face, highlighting the critical need for innovative digital health solutions

The DANCCE initiative, aimed at eliminating cervical cancer in Africa, was launched on World AIDS Day—drawing attention to the well-documented link between HIV and cervical cancer. While SPIDER focuses on leveraging digital solutions to combat cervical cancer, the timing of the launch underscores the heightened risk women living with HIV face, highlighting the critical need for innovative digital health solutions.

The year concluded with key international engagements, including SPIDER's participation in IGF 2022 in Addis Ababa and the EQUALS-EU General Assembly Meeting in Valencia, Spain. This marked the first in-person meeting since the project's inception in January 2021, following a period of virtual interactions. SPIDER also hosted a regional regulatory workshop for African National Regulatory Authorities (NRAs) in Riga, further demonstrating its commitment to bridging digital divides and fostering inclusive innovation.



SPIDER and PTS participated in a workshop on regional regulatory collaboration alongside four African regional regulatory organisations—ARTAC, CRASA, EACO, and WATRA—as well as the BEREC Office of the EU



Widening Healthcare Access Through Digital Solutions



1. HADDA - Strengthening health systems for wider access

SPIDER's digital health programme is committed to building resilient, interoperable, and sustainable health systems using scalable, open-source digital solutions tailored to local contexts.

Did you know? **Somalia faces a severe health crisis, with a maternal mortality ratio of 692 deaths per 100,000 live births and an under-5 mortality rate of 117 per 1,000. Only 32% of births are attended by skilled health providers, and 1 in 20 women faces a lifetime risk of dying from pregnancy-related causes**

(Source: WHO EMRO)

In Somalia, the Health Alliance for Digital Development and Action (HADDA) enhances healthcare delivery by integrating existing health technologies into a unified system. This initiative includes a mobile solution that centralises health data, improves patient records management, and streamlines clinicians' access to real-time information, enabling better clinical decisions. These advancements elevate daily practice and provide critical data for policymakers to shape equitable healthcare policies.



The Somali delegation visits SPIDER for insightful and productive discussions.



2. HOLICARE - Wider Access to Diagnostic Solutions

Respiratory tract infections (RTIs) are a leading cause of mortality worldwide, particularly in Sub-Saharan Africa, where they account for 40% of infectious disease-related deaths. The HoliCare project, an EU-funded initiative, seeks to address RTIs by implementing a holistic approach that delivers innovative diagnostic solutions to low- and middle-income countries (LMICs).



Holicare Project partners at the kick off in September 2022

The HoliCare consortium aims to transform healthcare delivery practices in Sub-Saharan Africa, with Ethiopia, Senegal, and Uganda serving as pioneer countries. The consortium includes:

Healthcare aid and research organisations from the three African countries will serve as "early adopters."

Academic partners with expertise in health diagnostics and management, particularly in diseases most prevalent in Africa, will contribute their research knowledge.

One of Europe's largest clinical development organisations, specialising in clinical trials and full-service delivery across an expanding range of therapeutic areas, will play a key role.

SMEs and private non-profit organisations, globally recognised leaders in lateral flow tests, microfluidic technologies, digital communications, and Artificial Intelligence solutions, will bring cutting-edge innovations to the project.

SPIDER leads the knowledge management of the EU Horizon 2021-funded HoliCare project, fostering expertise-sharing among PhD students and healthcare professionals. Central to this is the [HoliCare Academy](#), an open-source platform ensuring sustainable, accessible knowledge-sharing beyond the project's 36-month timeline, which began in September 2022.

3. DiMHA - Wider Access to Mental Health Care Services

SPIDER is also working to digitalise mental health services in Uganda through patient-centred initiatives. Digitalising Mental Health Services in Uganda (DiMHA) developed an Interactive Voice Response (IVR) system to provide multilingual mental health support, allowing patients to share their experiences and receive guidance.

This approach has proven essential in a country where linguistic diversity and the lack of digital access can hinder mental health service delivery. With funding from Digital Futures, SPIDER is addressing the growing need for digital solutions to support mental health, and the calls to scale up this initiative highlight the importance of expanding both human and technological resources to meet rising demands.

Did you know? **Mental Health is an important but continuously neglected global public issue. 1 in every 8 people in the world lives with a mental disorder.**

(Source: World Health Organization)



4. DANCCE - Mobilising against Cervical Cancer in Africa

Did you know? **Cervical cancer is the fourth most common cancer in women globally, with around 660,000 new cases and around 350,000 deaths in 2022?**

(Source: World Bank)

SPIDER has been committed to tackling cervical cancer in sub-Saharan Africa since 2016. And now, through the Digital Africa Network for Cervical Cancer Elimination (DANCCE) initiative, Inspired by the Lancet Oncology report on fragmented efforts in the region, DANCCE creates a coordinated approach to prevention, diagnosis, treatment, and care, supporting the WHO's call to eliminate cervical cancer as a major public health threat.



An illustration of DANCCE's approach to cervical cancer

DANCCE uses technology to improve health outcomes, emphasising a multi-sector approach that maps existing initiatives, builds international capacity, and fosters cooperation over competition. Aligned with the Digital Investment Principles, the programme advocates for inclusive, sustainable, technology-driven healthcare solutions. The acronym "DANCCE" reflects unity, symbolising the cultural importance of dance in Africa as a tool for collective expression and social change, uniting stakeholders to ensure women receive the care they deserve.



African Ambassadors, regulators, medical experts, development advocates, and cancer care specialists joined SPIDER at its KISTA offices for the launch of the DANCCE initiative.



Widening Access to Public Services with Digital Solutions

Widening access to public data about key industries

SPIDER's initiatives in Cambodia have advanced access to information, strengthened partnerships, and supported data-driven actions. Collaborating with **Open Development Cambodia (ODC)**, SPIDER has enabled better monitoring of industries like mining and oil, contributing to greater transparency. Notably, ODC played a vital role in drafting Cambodia's **Open Data Policy (2026–2035)**—a key step toward open governance, especially in a country without formal access-to-information laws.

Widening the reach of women leaders through digital solutions

Another highlight is the development of an online platform for female leaders in water management. Created with the East-West Management Institute, this platform fosters knowledge-sharing and collaboration, empowering women to lead sustainable resource management efforts.

Exploring the future direction of the ICT4D Cambodia network

SPIDER also convened a workshop with the **ICT4D Cambodia Network** to shape its future, ensuring it continues to meet current digital needs. This network, founded by SPIDER in 2013, creates a collaborative space for digital innovation and resource sharing, driving Cambodia's journey toward transparency and digital empowerment.

Influencing the open data policy landscape

A key achievement in supporting data-driven action is ODC's involvement in helping draft Cambodia's Open Data Policy for 2026-2035. As one of the few civil society organisations invited to participate, ODC's contribution is an important step toward creating a more transparent and open government, especially since Cambodia does not yet have an official Access to Information law.





Widening Access to Education through Digital Solutions

Did you know? **Due to COVID-19, education spending across Africa dropped significantly, with per capita spending declining by an average of 8% in 2020 and up to 25% in some countries. As of 2022, investment levels in education remained lower than pre-pandemic levels, effectively pushing education funding back a decade.**

(Source: UNICEF)

Digital content can be a game changer for schools in low-resource settings. It can provide materials that would otherwise be unavailable. Or ease teacher workload with self-paced lessons and automatically graded quizzes. SPIDER issued an open call for digital education projects. There were two possible areas for projects to focus on: making digital learning content available for children in primary or secondary school or training teachers to use digital tools in their classrooms. By focusing the call on Cambodia and Zambia, SPIDER widened the education programme to Asia and re-established its presence in rural communities in Southern Africa.

Organisations of all types and sizes submitted proposals. The projects selected work to bring digital learning materials and the skills to use them to rural areas and vulnerable communities.



Utilising tablets for teaching during the ICT4D Solution Incubator in Cambodia.

Widening Access to Shaping the Digital Landscape

The underrepresentation of women and minority groups in STEM (Science, Technology, Engineering, and Mathematics) continues to reinforce digital inequalities across the world. This lack of inclusion in innovation spaces limits the diverse perspectives necessary to drive transformative and equitable digital futures. SPIDER is addressing this challenge through two key projects: GeJuSTA (Gender Justice for STEM in Africa) and EQUALS-EU, both of which focus on creating more inclusive ecosystems for STEM engagement and innovation while tailoring global standards to local socio-political realities.



EQUALS-EU-General Assembly-Valencia-2022

1. GeJuSTA - Gender Justice for STEM in Africa



GeJuSTA is an IDRC-funded programme, coordinated by the University of Cape Town, that seeks to increase the representation of women in STEM across Kenya, South Africa, Uganda, and Zambia. By focusing on creating pathways for women to pursue STEM careers, GeJuSTA aims to close the gender gap in research and innovation within the African context. In 2022, the programme developed research tools to guide data collection on the enablers and barriers women face when entering STEM fields. This research is crucial for understanding how to dismantle systemic inequalities and create more inclusive opportunities for women in the global STEM ecosystem.

GeJuSTA's approach goes beyond mere access; it strives to ensure that women have the resources, networks, and support necessary to thrive in STEM disciplines. By prioritising gender justice, the programme acknowledges the socio-political challenges women face and aims to develop sustainable solutions that empower women to make meaningful contributions to STEM research and innovation across Africa.



As women in tech, we have high expectations for ourselves and sometimes focus only on the next achievement. But the reality is that our careers are not always linear. Sometimes, we take unexpected detours, and sometimes, we pause altogether. But we are allowed to reevaluate what's right for us in a given season. Some seasons are for stretching and challenging ourselves. Some seasons are for learning new skills. And some seasons are for resting. Be kind to yourself whatever season you're in

Chisenga Muyoya,
Research Director - Asikana Network.



In a World where Imposter Syndrome is pervasive, having someone hold your hand as you navigate the career/professional ladder is no longer a luxury!

Fiona C. Ssozi,
Information Systems Analyst & ICT4D Researcher at Makerere University.

2. EQUALS-EU - Inclusive Social Innovation Ecosystems

EQUALS-EU, an EU-funded initiative, aims to address the underrepresentation of women and other minority groups in STEM from both European and international perspectives. This project works to build inclusive social innovation ecosystems by promoting gender equity through capacity-building initiatives. In 2022, the project expanded SPIDER's network into the European Union, enabling SPIDER to lead the research work package that investigates gender equality and innovation networks in 22 countries across Europe and beyond.

This research forms the foundation of the EQUALS-EU project's efforts to make the innovation sector more inclusive, ensuring that women and minorities have the tools and support needed to innovate within their communities. EQUALS-EU's work is crucial in creating smart, sustainable, and inclusive innovation hubs, particularly in local communities and cities in both the Global North and South.

Did you Know? According to ITU's latest data, the proportion of women using the Internet globally amounts to 48 per cent, compared to 55 per cent of men.

(SOURCE - ITU)

In 2022, EQUALS-EU organised over 20 innovation camps and hackathons across Europe, structured as ideation workshops aimed at discovering and nurturing ideas from women and other minorities. These events provided a space for participants to brainstorm, refine, and develop their ideas, focusing on fostering innovation and entrepreneurship among individuals who typically lack access to resources and opportunities to bring their concepts to life.

In Sweden, SPIDER ran an innovation camp around the theme of inclusive and accessible cities. Partnering with a community-based organisation for outreach, SPIDER brought together young women to discuss and document ideas on how to make their cities more inclusive and accessible. The focus on accessible and safe infrastructure dominated the discussions, with the winning team presenting a concept for a mobile app that consolidates public safety tools in one dashboard, helping users navigate their city and ensuring they arrive home safely. This innovation, along with others from across 20 countries, fed into a six-month incubation programme where winning teams received training in business development, technology, and fundraising to help turn their ideas into viable projects.



Järva Innovation Camp- May 2022

Strengthening Regulatory Collaboration for Sustainable Digital Transformation

National Regulatory Authorities (NRAs) are government agencies responsible for overseeing digital and telecom services to ensure fair access and transparency. They play a key role in enabling digital transformation and social development. However, many NRAs in sub-Saharan Africa face challenges like limited resources and expertise, which can result in unequal access to technology and missed growth opportunities.

As digital transformation accelerates across sub-Saharan Africa, collaboration among National Regulatory Authorities (NRAs) is key to achieving regional goals. SPIDER connects regulators, experts, and stakeholders to strengthen regulatory environments. By facilitating knowledge-sharing and policy development, SPIDER helps NRAs create frameworks that enable equitable digital growth and sustainable development.

To tackle this, SPIDER's International Training Programme (ITP) helps strengthen NRAs by building their skills and creating better frameworks for digital growth. In 2022, the programme supported regulators in Tanzania, Kenya, Uganda, and Malawi. Highlights included expert knowledge-sharing sessions in Rwanda and a study visit to Ericsson Imagine Studio in Stockholm, where participants explored the future of digital technology and its potential to transform lives.

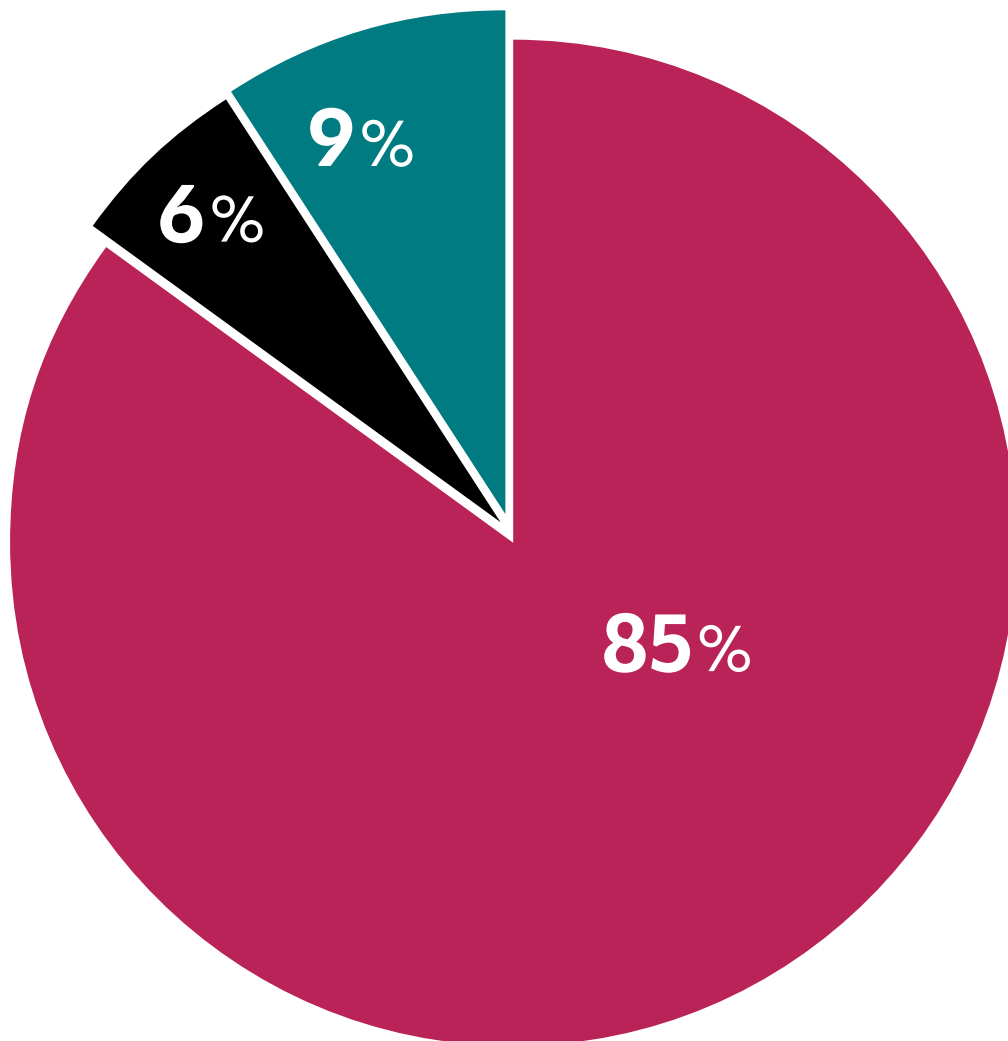


In May 2022, regulators from Tanzania, Kenya, Uganda, and Malawi participated in the ITP training held in Rwanda.

Did you know? **5.3 billion people – or 66 per cent of the total global population – are online, while 2.7 billion are still offline.**

(Source: ITU)

2022 Financial Overview



2022 Funding Sources

Sida **EU Horizon** **Swedish Institute** **IDRC**



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<https://spidercenter.org>