

The SiLA Connection

July 2026



STANDARDIZATION IN LAB AUTOMATION

JULY 2026

Welcome our newest SiLA Core Member

We are delighted to welcome **Johnson & Johnson** as the newest Core Member of the SiLA Consortium.

About Johnson & Johnson

At Johnson & Johnson, we believe health is everything. Our strength in healthcare innovation empowers us to build a world where complex diseases are prevented, treated, and cured, where treatments are smarter and less invasive, and solutions are personal. Through our expertise in Innovative Medicine and MedTech, we are uniquely positioned to innovate across the full spectrum of healthcare solutions today to deliver the breakthroughs of tomorrow and profoundly impact health for humanity. Learn more at <https://innovativemedicine.inj.com>.

We believe open standards are key to unlocking the full potential of laboratory automation. They enable seamless integration, foster innovation across the ecosystem, and significantly reduce the risks and costs associated with deploying advanced automation solutions.

By joining the SiLA Consortium, we are proud to contribute to a growing community dedicated to interoperability and digital transformation, helping to accelerate the realization of next-generation automated laboratories and data-driven scientific discovery.

[PyLabRobot Workshop, Copenhagen, DK](#)
September 28-29

[SiLA Cyber Hackathon, Munich, DE](#)
October 6-7

[BioTechX, Basel, CH](#)
October 6-8

[SiLA Conference 2026, Basel, CH](#)
October 9

[nICLAS Forum, Tübingen/Stuttgart, DE](#)
October 20-21

[Future Labs Live, Philadelphia, USA](#)
October 28-29

[IUTA Analytik-Tag, Duisburg, DE](#)
November 2

[5-HT Innovators Club, Heidelberg, DE](#)
November 5

[London BioTech Show](#)
November 18-19

[Future Labs, Automation & Technology Europe Summit, London, UK](#)
December 1

Johnson & Johnson

Chaos Hacker Podcast: Why Lab Digitalization Fails – A Conversation with Marc Porr (TechKIT / SiLA)

Looking for an insightful listen? We recommend the **ChaosHacker-Talk** podcast, where **Marc Porr** (SiLA Director / CEO of TechKIT GmbH) joins host **Christof Layher** to discuss a common misconception in regulated industries: that laboratory IT is simply traditional IT.

Marc explains why laboratory environments have unique requirements, where conventional IT approaches fall short, and how this can affect digital transformation. The episode also covers open standards such as SiLA, system downtime, and the growing need for professionals who can bridge IT and laboratory workflows. Whether you work in laboratory automation, digitalization, or compliance, this episode offers valuable practical insights.

Please note: The podcast is available in German only.

Happy listening! <https://www.youtube.com/watch?v=2PdNo3EgmN4>

SiLA Award for Outstanding Theses – Submissions Received!

The submission deadline for the SiLA Award for Outstanding Theses has passed, and we are delighted to announce three outstanding nominations from:

- **FH Northwest Switzerland (FHNW)**
- **Rhein Main University of Applied Sciences**
- **Technical University of Denmark (DTU)**

All three submissions are Master's theses and were completed between October 2024 and October 2025, reflecting the continued innovation and academic excellence within the laboratory automation community.

Over the coming weeks, the submitted theses will be evaluated by a jury consisting of the leaders of the five SiLA Workgroups. We look forward to recognizing the outstanding contributions of the participating students and institutions. A big thank you to everyone who submitted a nomination!

If you are already planning, the next call for submissions is expected to open with a deadline around the end of May 2027 (exact date to be announced). We encourage universities, supervisors, and students to keep an eye out and look forward to receiving another exciting set of nominations next year.

More details on eligibility, evaluation criteria, and submission process are available here:

<https://sila-standard.com/sila-award/>

For questions or expressions of interest, please contact info@sila-standard.org.



Newest article in DDW: Digital sustainability – achieving more with less by adopting smart data practices

DRUG DISCOVERY WORLD
DDW
turning science into business

We are delighted to see another insightful article by **Burkhard Schäfer**, **Director of SiLA and Managing Director of splashlake**, published in the latest edition of *Drug Discovery World*.

Digital sustainability is becoming a key driver of innovation in drug discovery, helping organizations achieve more from the data they already generate. In his latest *Drug Discovery World* article, Burkhard Schäfer explores how smart data practices, open standards such as SiLA and AnIML, and interoperable laboratory systems create the foundation for AI-enabled research and future self-driving labs.

Opinion

Digital sustainability – achieving more with less by adopting smart data practices

Burkhard Schaefer, Managing Director at Splashlake, looks at why labs must consider digital sustainability as a practice.

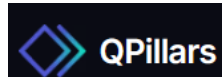
Digital sustainability is
consideration on a | timelines, higher costs, and
insights left on the table | automation environments. AnIML
revolutionize this he revolution | data; inconsistent formats
and inconsistent metadata

By improving data integration, findability, and reuse, laboratories can accelerate discovery while increasing the long-term value of their R&D investments.

<https://www.ddw-online.com/ddw-summer-2026-42356-202606/> - **PAGE 52**

We hope you enjoy the article and find it an inspiring read.

Interview with Iacob Marian from QPillars



SiLA: What specifically motivated you to add SiLA to your product?

We came to SiLA from an unusual direction. Not as an instrument vendor needing connectivity, but from the AI-agent side. We were building the infrastructure to let agents drive real lab work and kept hitting the same wall: an agent is only ever as good as the interface it acts through. You cannot build a repeatable recipe on a foundation you redefine for every instrument. We needed a standard to stand on, and the moment we found SiLA 2, a large part of the problem we had been wrestling with was already solved.

SiLA: How did you find the experience of integrating (the code base, the community, total effort etc.)?

Better than we expected, honestly. The specification is coherent: features, typed commands, properties, and defined execution errors. It is the kind of model you wish more domains had. The tooling quickly took us from a feature definition to a running server and client. The remaining effort involved some minor adjustments: proper data plumbing, ensuring correct error semantics, and making the whole thing robust enough for an autonomous system to depend on it. The community was approachable, and we got great feedback and support from its members.

SiLA: What would you say to anyone considering using SiLA?

Do it and adopt the model fully rather than treating it as a thin wrapper. The payoff is not just connectivity; it is that the interface becomes something both people and software can reason about. Modeling an instrument properly pays for itself the first time a second piece of software needs to communicate with it without a custom integration. And if you have any ambition to put automation or AI on top, a standard interface is not a nice-to-have, it is the precondition.

SiLA: Finally, is there anything SiLA could do better?

Only one thing comes to mind now. SiLA's type system is genuinely strong - structures, enumerations, ranges, schema-constrained values - but many interfaces rely on plain strings where the value is actually an enum variant. So, the one thing we would value is a linter for feature definitions, similar to clang-tidy or rust clippy, that flags weak spots and suggests the stronger SiLA type for each. Ideally that check should live inside the official code-generation and validation tools, so it runs where authors already work and reports simple typing warnings. None of it requires a change to the standard - the expressive power is already there - it just matters more as the consumers of these interfaces become software rather than people.

Looking forward - how will SiLA 2 support the agentic way of working?

This is the part we care about most. We think SiLA 2 is unusually well-positioned for the shift to AI Agents. Agents need exactly what SiLA already provides: a typed, discoverable, self-describing interface to the physical world. An agent that faces a different bespoke API for every instrument cannot be made reliable; an agent that meets every instrument through one standard can. That makes SiLA the substrate on which lab agents become trustworthy - the place where capabilities are described, actions are validated, and failures can be reasoned about consistently. Our bet is that the labs adopting a standard like SiLA now will be the ones that can safely put agents to work first. The open questions - how agents discover capabilities, how much semantic context an interface should carry, how to verify an action before it reaches real hardware - are exactly where we think the next round of standardization should go, and we would gladly help push it there.

About: QPillars is a Zurich-based startup, supported by InnoSuisse. We build the infrastructure that lets AI agents operate laboratory instruments reliably and safely. <https://qpillars.com/>

Bio: Iacob Marian is the Technical Lead and co-founder of QPillars, where he develops AI-native software and intelligent infrastructure for laboratory automation. With over a decade of software engineering experience and a background in laboratory instrument control, he is passionate about building reliable, scalable systems that accelerate scientific innovation.

SiLA Working Group next meeting dates

SiLA Core Working Group

If you are a SiLA corporate member and interested in joining the SiLA Core Working Group, led by Daniel Juchli (SiLA Director / wega) please contact info@silastandard.org.

SiLA Robotics Working Group

If you are interested in joining the SiLA Robotics Working Group, lead by Dr. Mark Doerr (Universität Greifswald), please contact info@silastandard.org.

SiLA AI Working Group

The SiLA AI Working Group meets on the first Wednesday of every month at 5:00 PM CEST. **Next meeting: August 5th, 5 PM CEST.** If you are interested in joining this Working Group, led by Tom Kissling (SiLA Director / Roche), please contact info@silastandard.org.

SiLA Cyber Security Working Group

The SiLA Cyber Security Working Group, led by Dr. Marc Porr (SiLA Director / TechKIT) meets on the second Monday of every month at 3:00 PM CEST. **Next meeting: August 10th, 3 PM CEST.** If you are interested in joining the Working Group, please contact us at info@silastandard.org. Don't miss the **special SiLA Cyber Security Hackathon on October 6–7 at ZEISS Digital Innovation in Munich, Germany.** Seats are very limited, so **register now for your free spot** here: <https://forms.gle/3crGWzT4PzLfxiFE8>

SiLA Adoption Working Group

The SiLA Adoption Workgroup continues to make strong progress in advancing SiLA integration within electronic lab notebooks (ELNs). **We are pleased to announce that the ELN Feature Descriptors have been finalized and are now publicly available, providing a clear foundation for standardized implementation.** Building on this milestone, we are currently developing connectors for RSpace and Chemotion to enable seamless SiLA-ELN interoperability.

If you feel inspired by these projects and would like to share your own ideas and experiences, please feel free to join the next working group meeting on August 21, from 14:00–15:00 CEST at www.smartlab.university, or contact SiLA Director [Tim Meyer](#) (UMG Göttingen) directly.



Review of BioProcess International Europe 2026, Vienna, A, April 27-30

Bioprocessing continues to be an essential part of the laboratory toolkit for drug development and is increasingly being applied to the production of novel chemicals, where valuable molecules are created using microorganisms.

SiLA was delighted to partner with BPI International for its European event, held in beautiful Vienna in April, which brought together around 800 delegates from across the bioprocessing community. We were highly visible throughout the conference, both at the roundtable discussion, "Digitalization, Data and Interoperability Standards: How to Get the Best Out of Your Data," and in several keynote presentations.

One of the standout presentations came from Professor Peter Neubauer of TU Berlin, who gave an excellent overview of the university's self-driving laboratories and demonstrated the central role that SiLA plays in enabling interoperable, automated research workflows.

Other conference highlights included inspiring presentations from CEPI and the Gates Foundation on tackling global health challenges, alongside a broad range of talks showcasing the latest advances in automation and digitalization from end users, technology vendors, and innovative startups.



Review of the Connectivity Excellence Showcase at London Lab Live 2026

At London Lab Live 2026, the Connectivity Excellence Showcase demonstrated how open standards are enabling true interoperability across laboratory environments.

Together with [splashlake](#), [AUROSITY](#), [Lab Donkey](#), [WALDNER](#), [essentim](#), [LabWare](#), [Sartorius](#), and [Metrohm](#), the SiLA Consortium showcased a live, end-to-end workflow connecting instruments, automation, and software from multiple vendors.



The demonstration highlighted how SiLA enables seamless communication between laboratory systems, reducing integration complexity while ensuring reliable, high-quality data throughout the workflow.

The showcase reinforced the importance of collaboration and open standards in building flexible, future-ready laboratories. We thank all participating partners for helping demonstrate how interoperability is accelerating digital transformation in the life sciences.

A video of the Connectivity Excellence Showcase can be found on YouTube: <https://www.youtube.com/watch?v=tpMgXcyVq40>

Review of Future Labs Live Basel, CH, May 27-28

Full room when Tom Kissling is on stage at Future Labs Live Basel rocking his presentation on “Lab-in-the-Loop Enabled: Needs and Enablers – AI, IT Architectures and Interoperability.”



...an AC/DC-style “hip hip hurray” for Tom Kissling 🙌

Review of Discovery & Development Europe, Berlin, DE

The SiLA Consortium was delighted to participate in the Discovery & Development Summit 2026 in Berlin on June 15–16.

SiLA Director David Heinz ([ZEISS](#)) moderated the panel discussion "**Smarter, Faster, Leaner: Digitalising Drug Product Development**," bringing together laboratory automation and digitalization experts from **Novartis** and **Bayer** to discuss what data readiness means in practice and how connected systems and devices can help build AI-ready laboratory environments.



David also presented "From Islands to Ecosystems: Interoperability as the Foundation for Lab-in-the-Loop IT Architectures," highlighting the IT architecture building blocks needed to integrate wet labs, data platforms, and AI platforms into closed-loop R&D environments. His talk emphasized the critical role of interoperability standards in enabling autonomous, data-driven Design–Make–Test–Analyze (DMTA) cycles.

SiLA Director Dr. Marc Porr ([TechkIT](#)) also led a roundtable on "**Automation Architecture Security for AI-Ready Data**," fostering discussions on cybersecurity requirements for next-generation laboratory automation architectures.

Although the event primarily attracted professionals from the medical and pharmaceutical sectors, it provided valuable opportunities to discuss SiLA applications, laboratory automation, interoperability, system architectures, and cybersecurity. The discussions reinforced the growing importance of open standards in enabling connected, secure, and AI-ready laboratory ecosystems.

SiLA Workshop at the AI Science Summit 2026: Closing the "Last Mile" of Lab Automation

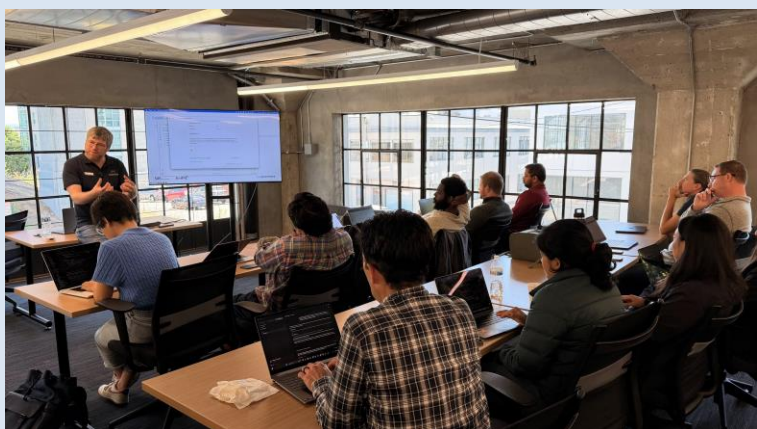
On June 16–17, 2026, SiLA was part of a sold-out session in cooperation with the AI Science Summit in San Francisco, bringing together researchers, developers, and automation experts to explore the future of connected laboratories.

Representing SiLA, Director Burkhard Schaefer ([splashlake](#)) attended the summit and spent the first day listening to presentations. A recurring theme quickly became apparent: many speakers highlighted the same persistent challenge—the "last mile" of laboratory automation. While powerful AI models and sophisticated instruments already exist, connecting diverse laboratory devices into seamless, interoperable workflows remains a significant hurdle.

This is precisely the problem that SiLA addresses. Building on these insights, **Burkhard's workshop on the second day focused on how the SiLA standard, together with AnIML, provides the missing link. SiLA enables laboratory instruments to self-describe their capabilities through standardized interfaces, while AnIML provides a standardized format for analytical data.** Together, they allow software agents and automation platforms to discover, understand, and integrate instruments into automated workflows without custom integrations for every device.

The enthusiastic participation and sold-out workshop demonstrated the growing demand for open standards that make laboratory automation more flexible, scalable, and AI-ready. **The discussions throughout the event reinforced that interoperability is no longer a nice-to-have—it is becoming a fundamental requirement for the next generation of digital laboratories.**

Due to the strong interest, additional SiLA workshop sessions are already being planned.



New presentation recordings available on the SiLA youtube channel:

[Secure Software Development Life-Cycle for Lab Automation](#) presented at analytica 2026 by Dr. Marc Porr, CEO of and Director of the SiLA Consortium.

[Bridging the Bioprocess Visibility Gap with Raman Chemometrics for Real Time PAT](#) presented at analytica 2026 by Charles Freeman ([Hyperspectral](#)).



Meet SiLA at the PyLabRobot Workshops in Copenhagen

On 28–29 September, the PyLabRobot Hands-on Workshops will take place at the Comwell Copenhagen Portside Hotel in Copenhagen. Led by PyLabRobot founder Rick Wierenga and long-time contributor Camillo Moschner, the workshops offer a unique opportunity to learn how to program liquid handlers, plate readers, robot arms, and other laboratory equipment using the open-source, hardware-agnostic PyLabRobot framework.

Stefan Maak (Uppsala University) will attend the event on behalf of the SiLA Consortium. If you're participating, be sure to connect with Stefan to learn more about SiLA standards and interoperability in laboratory automation.

With only 25 workshop seats available, early registration is recommended. For registration details and the event brochure, see the LinkedIn post: https://lnkd.in/p/eEHCpk_k



PyLabRobot Workshops
Featuring: The Hamilton Mikrolab Prep and Opentrons Flex

With instructors: Rick Wierenga & Camillo Moschner
Where: Hotel Comwell Portside, Copenhagen, DK
When: September 28+29, 2026

Learn hands-on how one system can be used to program and control all your lab equipment with the open-source and system-agnostic PyLabRobot!*

SiLA Cyber Hackathon - October 6-7, Munich, DE

Join fellow SiLA developers, integrators and cybersecurity experts for two hands-on days focused on building secure laboratory automation infrastructure with SiLA 2.

Taking place on **6–7 October 2026 at Zeiss Digital Innovation in Munich**, the hackathon will bring together experts to develop a practical reference implementation for secure SiLA deployments. Topics include authentication and authorization, identity management, network segregation, TLS and certificate management, secure SiLA gateways, and command-level authorization.



SiLA Rapid Integration

SiLA Cyber Hackathon 2026
Building Secure Lab Automation Infrastructure with SiLA 2

6–7 October, 2026
at Zeiss Digital Innovation, Munich (DE)

SEATS ARE VERY LIMITED!
First come, first served!

BUILD
Build secure lab automation infrastructure with SiLA 2 through hands-on development, integration, and collaboration.

LEARN
Work with SiLA experts, explore real-world use cases, and apply best practices for secure implementations.

COLLABORATE
Connect with developers, integrators, and cybersecurity professionals to solve real integration challenges.

DELIVER
Create practical, documented reference implementations that benefit the entire SiLA community.

ORGANIZED BY
TechKIT GmbH on behalf of the SiLA Consortium Cyber Security Working Group

SiLA **TECHKIT** Sponsored by: **ZEISS** **wega**

Register here: 

HELP SHAPE THE FUTURE OF SECURE LAB AUTOMATION!
Bring your expertise. Share your ideas. Build the foundation for secure, interoperable and trusted laboratory ecosystems.

For further information contact info@silastandard.org

Seats are very limited and available first-come, first-served — register now!

Whether you are a SiLA developer, cybersecurity specialist, integrator, or simply interested in secure lab automation, this is your chance to **share expertise, collaborate with the community, and help shape the future of secure, interoperable and trusted lab automation.**

SiLA at BioTechX, October 6-8, Basel, CH

SiLA at BioTechX Europe 2026 SiLA is excited to be a partner of BioTechX Europe 2026, taking place in Basel from October 6–8.

We'll be there to connect with the community and share how open standards make data more FAIR, interoperable and ready for AI. On October 6th, SiLA Board members Dr. Patrick Courtney and Tom Kissling will present "From FAIR to Interoperability: How Open Standards Unlock Scalable Data Integration in the Lab." The talk will explore why interoperability is critical in today's multi-vendor laboratory environments and how collaborative open standards can enable scalable integration across instruments, software and technology stacks.

They will also join the Data Integration + FAIR track in the panel "Data structures and FAIR processes" on October 6, contributing to the discussion around practical approaches to FAIR data and data integration.

And there's more: we're currently working on a SiLA booth presence at the show. **Stay tuned for more updates—and cross your fingers for the chance to meet GoodSiLA live in Basel!**

We look forward to seeing you at BioTechX Europe 2026!

BioTechX

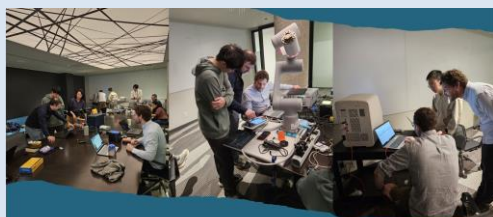


Workshop - Acceleration Event, Oct 20–22, Toronto & Online

Hosted globally | Co-organized by SiLA Consortium, Acceleration Consortium, UniteLabs & partners. **Following the success of our first global hackathon in April ([see LinkedIn post](#)), the SiLA Consortium is excited to invite the community to the next Acceleration Event, taking place October 20–22.**

One of the biggest challenges in building Self-Driving Labs is device integration. This three-day, hands-on event brings together researchers, developers, and automation experts to tackle this challenge by building SiLA-based device connectors using UniteLabs' open-source Python CDK. The goal is to improve interoperability between laboratory devices and workflow orchestration software, lowering the barrier to scalable lab automation.

The event begins with an introduction to the SiLA standard and hands-on tutorials, followed by two days of connector development, collaboration, and demonstrations. Anyone with basic Python experience is welcome. Participants are encouraged to bring a device to integrate, but low-cost alternatives will also be available for learning.



Images of the Workshop in April 2026

The event will be hosted globally, with hubs including Argonne National Laboratory (USA), the University of Liverpool (UK), the Acceleration Consortium (Canada), and additional communities.

Interested in joining? Register here:

<https://airtable.com/appYBjHgttvBuz3XR/paga3fOK3rkLzXhYc/form> Contact info@silastandard.org in case of questions.

Join Us at the SiLA Conference 2026, October 9, Basel, CH

Registration is open for the SiLA Conference 2026, taking place on October 9, 2026, at the Novartis Campus in Basel, Switzerland.

This year's conference, "**Growing Lab Automation for the Next Generation**," focuses on preparing future scientists to embrace laboratory digitalization and automation.

The program brings together experts from academia and industry to discuss topics ranging from self-driving laboratories and open laboratory workflows to automation education and the future of the lab automation market. In addition to inspiring keynote presentations, attendees can look forward to real-world SiLA use cases presented by vendors and users, interactive roundtable discussions and networking opportunities.



Participation is free of charge, making it an excellent opportunity for researchers, students, technology providers, and laboratory professionals to connect, exchange ideas, and help shape the future of connected laboratories. **We look forward to welcoming you to Basel!**

Agenda at a Glance

08:30 Registration & Coffee → **09:30** Welcome & Talks → **12:00** SiLA Award 2026 → **12:15** Lunch · Networking · Posters · Exhibition → **14:00** SiLA in Action · Vendor & User Use Cases → **15:00** Coffee Break → **15:20** Academia–Industry Roundtables → **16:50** Wrap-up → **17:15** End

Morning Talks:

Pascal Miéville · EPFL | Michael Kuhnert & Dami Akinyemi · Opentrons | Stefan Maak · Uppsala University | Benedict Diederichs · OpenUC2

SiLA in Action:

QPillars | BigChemistry & Synchron Lab Automation | Neveso & JAG | UniteLabs

Sponsored by:



OUR SPEAKERS



Pascal Miéville
EPFL



Michael Kuhnert
Opentrons



Dami Akinyemi
Opentrons



Stefan Maak
Uppsala University



Benedict Diederichs
OpenUC2



Stefan Gelten
Synchron Lab
Automation



Joost van der Tol,
Big Chemistry



Iacob Marian
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Vincenzo Scamarcio
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