The SiLA Connection
October 2025

STANDARDIZATION IN LAB AUTOMATION

October 2025

[smartlab Lecture: Towards a Traceable Pharmaceutical Robotic Platform](#)
October 15th, online

[Future Labs Live USA 2025](#)
Oct 15-16, Philadelphia, USA

[SiLA Hackathon](#)
Oct 16, Berlin, Germany

[ELRIG's Drug Discovery 2025](#)
Oct 21-22, Liverpool, UK

[IUTA Analytik Tag](#)
Nov 10, Duisburg, Germany

[Future Labs, Automation & Technology Europe 2025](#)
Dec 2, London, UK

Welcome our newest member: HyperSpectral

We are delighted to welcome HyperSpectral as the newest member of the SiLA community!

HYPERSPECTRAL

Who we are
HyperSpectral is a U.S.-based deep-tech company pioneering AI-powered spectral intelligence. Founded in 2020, we are redefining how industries detect, diagnose, and decide — making the invisible visible.

What we do
Our SpecAI™ platform combines advanced spectroscopy with machine learning to deliver real-time insights. Hardware-agnostic by design, it detects contaminants, pathogens, and anomalies across healthcare, food safety, and manufacturing, enabling faster, more reliable decision-making.

Why it matters
Invisible threats—like bacterial infections, microscopic food contaminants, or hidden defects in industrial materials—carry enormous human and economic costs when missed.
HyperSpectral's technology closes this gap by turning complex spectral signals into immediate, actionable intelligence. The result: improved safety, reduced waste, stronger public health protections, and higher quality across industries

What Labs Can (and Can't) Learn from Automation in Other Industries

The latest issue of Drug Discovery World features an insightful article by Dr. Patrick Courtney, Board Director at SiLA, exploring the intersection of automation and drug discovery.

In "What Labs Can (and Can't) Learn from Automation in Other Industries," Dr. Courtney examines how lessons from manufacturing, automotive, and electronics sectors can be applied to drug discovery labs — and where those lessons fall short. He highlights strategies like standardization and modular design, while also addressing the unique challenges faced by laboratories, including variability, regulatory constraints, and scale limitations.

For anyone interested in how automation is reshaping the future of drug discovery, this article provides both practical insights and thoughtful considerations.

DRUG DISCOVERY WORLD DDW turning science into business

Read the full article online (page 53).

Securing SiLA: The Triple Defense Approach

As Laboratory equipment communication grow more complex, implementing comprehensive security testing becomes essential to protect sensitive research data and ensure operational integrity. As SiLA aims for increasing the Cyber Security of the implementations, we now integrate three complementary security testing methodologies:

Static Application Security Testing (SAST) examines the source code without executing it. SAST identifies potential vulnerabilities in how the implementations handle data encryption, authentication mechanisms, and input validation.

Software Composition Analysis (SCA) focuses on third-party components and dependencies within the software components. SCA enumerates all third-party packages and compares their versions with databases of known vulnerabilities. This ensures that a compromised library doesn't create a backdoor in the SiLA implementation. It is essentially a supply chain audit for software components, which is mandatory for example to be compliant with the EU Cyber Resilience Act (CRA).

Dynamic Application Security Testing (DAST) tests a running application by simulating real-world attacks. Unlike SAST's code review approach, DAST operates like a penetration test, sending malformed data packets, attempting unauthorized access, and testing how the system responds under attack conditions.

Integrating these three testing approaches creates multiple layers of protection. SAST catches design-level vulnerabilities early in development, reducing costly post-deployment fixes. SCA ensures that third-party components don't introduce hidden risks, particularly important given the complex dependency ecosystems in modern software engineering. DAST validates real-world security performance, confirming that theoretical protections work under actual operating conditions.

We implemented blueprints for SAST and SCA in the sila_python reference implementation and aim to extend the usage of these methods to the other implementations in the future. As DAST can only be performed on running applications, the SiLA-Universal-Client was used as an example implementation for this technique.

All of these methods are implemented using open-source components and/or freely available tooling. This makes the automated pipelines a blueprint for usage by adopters and SiLA users. All security testing measures can be used as templates to enhance the security of SiLA based implementations or applications.

For laboratory operators, this approach means enhanced confidence in data integrity, reduced risk of research theft or manipulation, and improved compliance with regulatory requirements. Equipment manufacturers benefit from standardized security requirements that create consistent expectations across the industry while reducing liability risks. These methods - especially SCA and the Software Bill of Materials (SBOM) approach it is utilizing - helps with CRA (Cyber Resilience Act) compliance for manufacturers using SiLA for their devices.

Building a SiLA Server for ROTATE : REGRIP - Q&A with Alex Bashich from Aurosity

"If you care about integration, scalability, and future-proofing your products, SiLA is the way forward."

SiLA: Thanks for joining us, Alex, to start, can you tell us a bit about the product you were working on and why Aurosity decided to implement a SiLA server?

Alex: Absolutely. The product is a compact module that reorientates SBS/ANSI plates from 0° to 270° with precision-calibrated alignment. It is designed for collaborative automation and features smart safety functions like collision detection and maintain-position logic, all within a space-saving footprint and flexible control interface. We chose to implement a SiLA server to ensure seamless integration with other lab systems and to future-proof the platform for evolving automation needs. SiLA's standardized protocol makes it much easier to connect with third-party software and devices.

SiLA: What was your experience like developing the SiLA server from scratch?

Alex: It was a rewarding challenge. SiLA 2 is well-documented with some tutorial videos on YouTube which helped us get up to speed quickly. Because SiLA is open source we were able to draw from other servers to help write our feature definitions and implement key device functions. Whenever we hit a problem the SiLA Slack community offered their expertise and helped us overcome it. The most satisfying part was seeing our product work flawlessly with the SiLA universal client.

SiLA: Were there any unexpected hurdles or learning moments?

Alex: The biggest hurdle was probably getting everything set up before I could use SiLA due to there not being much documentation for the precursors. Once SiLA was downloaded using it to create the Server was the easy part!

SiLA: How do you see SiLA shaping the future of lab automation?

Alex: SiLA is a game-changer for interoperability. It reduces vendor lock-in and encourages modular system design. For integrators like us, it means faster integration with devices that become plug and play. For labs, it means more flexibility and scalability. I think we'll see SiLA adoption accelerate as more vendors recognize the value of open standards.

SiLA: Final question: what would you say to other engineers or companies considering SiLA?

Alex: Do it. The upfront investment in time pays off quickly.
The SiLA community is supportive, and the standard itself is robust yet flexible. If you care about integration, scalability, and future-proofing your products, SiLA is the way forward.

About Aurosity:
Aurosity designs and builds advanced automation systems and devices for lab and biotech teams. By adopting SiLA standards, we're helping labs move faster, integrate smarter, and innovate with confidence.

5-HT Innovators Club in Karlsruhe, Germany, September 11th

SiLA joined partners 5HT at their 10th innovation club day on September 11th at the impressive Karlsruhe Institute of Technology (KIT) Campus Nord / Zeiss Innovation Hub.

5HT runs a startup community with a focus on chemicals and lab industry under public and corporate sponsorship. Some 100 delegates joined to hear ten startups pitching including SiLA members Unitelabs as well as motivating insights from leaders at Boehringer Ingelheim and BASF plus, **tours of the two (2!) closed loop labs** now running on the campus helping take material science to the next level of lab automation.

Thanks go to Alex and Corinna from 5HT for organization and Prof. Dr. Stefan Bräse (Institute of Organic Chemistry and Institute of Biological and Chemical Systems – Functional Molecular Systems) for making us feel so welcome.

ILMAC 2025: Innovation, Collaboration, and Lab Automation in Action

We were delighted to partner for the first time with ILMAC 2025, held in Basel, Switzerland, from September 16–18.

A highlight of the event was Tom Kissling's presentation, **"How Standards Rock Lab Automation @ Roche"**. Tom's talk prompted discussions, with several attendees showing interest in SiLA and its role in lab automation.

Tom noted: *"We raised a lot of interest with respect to SiLA!"*

Thank you to everyone who stopped by and attended Tom's presentation.

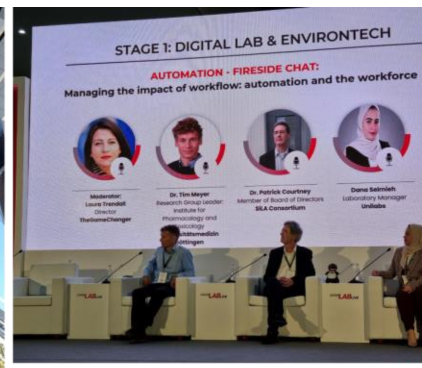
We look forward to seeing you at the next event

SiLA at ARAB LAB Live 2025, September 23rd-24th - first time Dubai!

As many of you know, SiLA has a long-standing partnership with Future Labs LIVE organizers, terrapinn. So it was with great pleasure that this September, **SiLA directors Burkhard Schaefer, Tim Meyer, and Patrick Courtney were invited to speak at the ARAB LAB Live conference in Dubai**.

ARAB LAB Live has been a well-established yearly trade show for over 40 years, and now, with the addition of a conference, it's bringing high-quality content from both local and international speakers. The level of scientific activity and investment in lab facilities in Dubai is truly impressive, and our work on interoperability standards, automation, and robotics fits right in.

This truly international meeting place gave us the chance to connect with users and vendors from across the region — and as far afield as India, China, and beyond.



Call for Contributions: Share Your SiLA Story!

Share your experiences, insights, and lessons learned from using or implementing SiLA. Tell us what worked well, what could be improved, and where the "Stolpersteine" (stumbling blocks) were along the way.

Whether through a poster, a presentation, or an interview, your story can inspire others and help shape the future of lab automation. Contact us at info@sila-standard.org

Reflections from Lab of the Future, Amsterdam

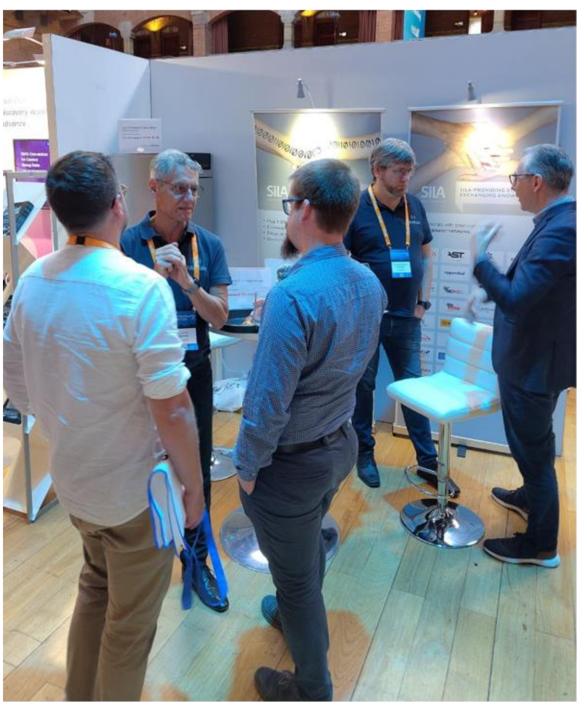
October kicked off with the Lab of the Future event in Amsterdam.

Around 500 delegates and speakers came together to explore the latest in digitalization—both in pharma and beyond.

We had a blast at the SiLA booth, showing off our Brezel baking demo—this time with Dutch savory snacks! It was a fun way to demonstrate how different lab devices—oven, balance, LIMS—can work together seamlessly, and it sparked a lot of great conversations.

There were some interesting takeaways from the sessions. Investment in digitalization is still strong, but increasingly focused. We heard compelling use cases from pharma leaders at Sanofi, Servier, Novo Nordisk, and Johnson & Johnson, as well as fresh perspectives from Accenture and others.

One concept that stuck with me was the **Sciborg**—a hybrid of scientist and cyborg, working alongside AI to handle lab data and accelerate results. It's amazing to see where technology is taking us.
All in all, it was a fantastic event—full of energy, great ideas, and lots of inspiration for the labs of tomorrow.



Follow SiLA on youtube!

....and don't forget to like and leave a comment!

Join the SiLA Hackathon at BAM Akademie in Berlin (DE), October 16th

Connecting laboratory devices offers huge opportunities – but is often complex. The open-source standard SiLA 2 provides a solution: it simplifies instrument and software integration, improves data quality, and enables the FAIR principles (Findable, Accessible, Interoperable, Reusable).

SiLA Consortium in partnership with BAM Akademie invites you to a free of charge, hands-on hackathon on October 16th in Berlin, Germany. Seize your chance to explore the SiLA 2 standard and join us for a day of information exchange and learning-by-doing.

With SiLA Director Dr. Patrick Courtney and Stefan Maak (University of Uppsala).

Get to know the basics of SiLA, build small applications, and connect devices in a collaborative environment.

Highlights:
- Introduction to SiLA 2 & practical exercises
- Interactive sessions: from Hello World servers to the Toy Lab
- Work with Arduino, 3D printers, plate readers & more
- Exchange with experts and peers

Who should join? Students, PhD candidates, postdocs, researchers, and developers in life sciences, material sciences, pharma, and engineering (basic Python knowledge recommended).

Don't miss the chance to experience the future of laboratory automation!

Towards a Traceable Pharmaceutical Robotic Platform - Key Insights from the TraceBot Experience, online, October 15th

Organizers: TG Laboratory Robotics (euRobotics aisbl), smartlab.network, SiLA Consortium
Speaker: Dr. Anthony Remazeilles, Senior Researcher and Project Manager, Fundación Tecnalia Research & Innovation

Registration now for free:
https://www.eventbrite.com/e/tracebot-towards-a-traceable-pharmaceutical-robotic-platformkey-insights-tickets-1707634212899?aff=oddtdtcreator

Abstract:
Integrating robotic systems into laboratory settings is a promising solution to enhance working conditions and improve the competitiveness of pharmaceutical industries. However, many complex processes still demand capabilities beyond those of existing commercial systems.
The EU-funded TraceBot project was initiated to address this gap, focusing on the sterility testing process. It delivered significant advancements in perception, manipulation, reasoning, and control technologies—all while ensuring compliance with the traceability requirements inherent to regulated processes.
About euRobotics: https://eu-robotics.net/laboratory-robotics/

SiLA at Future Labs Live USA 2025

We are excited to share that SiLA has been invited to join Future Labs Live USA as an official partner! The event will take place in Philadelphia on October 15–16, 2025.

October 15th, 1:40pm - Cheaper, faster, smarter automation: How can we get them all at once?

On the panel:

- Julie Novak (Merck), Melis Hazar (Guardant Health), Yousef Baioumy (Adaptive Biotechnologies Corp), Dhanuka Wasalathanthri (Bristol Myers Squibb) moderated by Burkhard Schaefer, SiLA / splashlake

October 16th, 1:40pm - Leveraging instrument data in large language models using SiLA and AnIML standards presented by Burkhard Schaefer, SiLA / splashlake

For more information and free registration: https://secure.terrapinn.com/V5/step1.aspx?E=10975&utm_source=partner&utm_medium=silaconsortium&utm_campaign=part&trc=part

SiLA Partners with ELRIG Drug Discovery 2025

We are excited to announce that SiLA is partnering once again with ELRIG's Drug Discovery 2025, taking place this October in Liverpool, UK.

As part of the event, **SiLA will co-host a dedicated session on Tuesday, October 21st at 11:00 AM, themed:** ***"From Sample to Data to Insight – How Robotics and Automation Enable the Science of Discovery."***

This session will highlight how cutting-edge automation strategies and open standards are accelerating scientific discovery — from streamlining workflows to generating and leveraging high-quality data.

Featured Talks Include:

- Gabriella Pizzuto (University of Liverpool) - Transforming Lab Automation with Intelligent Robotic Scientists
- Ian Riley (Labman Automation) - Developing End-to-End Automation for Chemistry
- David McClymont (Horizon Discovery) - Lessons from a Life of Workflows: Solution Finding and Connected Processes in Workflow Development
- Andrew Mitchell (Unilever) - Modern Lab Architecture: OT and IT
- Ben Deadman (Open Reaction Database) - The Open Reaction Database: Translating Lab Workflows to Reaction Data and Enabling New Insights
- Gareth Langley (Charles River Laboratories) – 1536-Well Assay Development and Transfer, Spanning Multiple Locations and Automation Platforms, Made Robust and Hassle-Free Using a DoE Approach

We look forward to seeing you in Liverpool! Register here: https://elrig.eventsair.com/drug-discovery-2025/delegate-registration/

SiLA at 9. IUTA-Analtytik Tag, Duisburg, Germany, November 10th

We are delighted, that SiLA Director, Tom Kissling (Roche), is invited to hold a keynote speech at this year's Analytik-Tag at IUTA in Duisburg on November 10th.

Title: SiLA 2 Standard rockt die Labor-Automation
Time: 09:45 am

In addition, SiLA Director, Tim Meyer (University of Göttingen) will present:
Title: autoOrgan.3R: PoC für einen automatisierten, tierversuchs-freien Medikamentenscreen mit künstlichem Herzgewebe
Time: 14:00 pm

Please note, presentations are held in German language only. To register visit:
https://eveeno.com/357846282

Don't miss the opportunity to join and hear from renowned experts in industry, science, research, and practice as they share insights on the latest trends and developments shaping their fields.

Future Labs, Automation & Technology, London, UK, December 2nd

SiLA is delighted to be again a partner of this year's Future Labs, Automation & Technology Event on December 2nd in London, UK. **Our member benefit from a 15% discount on event passes!**

Agenda:

4:30pm – Roundtable discussion: Lowering Barriers for Lab Robotics: Exploring Accessible, Cost-Effective, and Simplified Paths to Integration at Scale, moderated by Dr. Patrick Courtney, Director SiLA Consortium

5:30pm – Panel discussion: Digitally Transforming Tomorrow's Labs with Disruptive Technologies for Smarter, Faster, More Precise Science
On the panel: Ilaria Ferlenghi (GSK), Bethan Howells (AstraZeneca), Kevin Gonzales (NovoNordisk)

Moderated by Dr. Patrick Courtney, Director SiLA Consortium

Don't miss out on this great event — register today and save with our discount rate:

www.amg-world.co.uk/future-labs-europe/?utm_source=SILA&utm_medium=SILA&utm_campaign=FLATEurope2025-SILA

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