



# eSSIF-Lab Infrastructure-oriented Open Oa

Submitted by: @alexblom

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## Basic information

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\*Project acronym:

Project name:

Adding SSI to internet communications using Sylk Suite

Full name of the contact person:

Alex Blom

Contact person email address:

alexander.blom@bloqzone.com

Contact person phone number:

+31717110390

## Legal information

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Are you applying on behalf of a legal entity? (Choose only one):

- ☐ Teams of individuals
- ☒ SMEs
- ☐ Research or technology organisation
- ☐ Higher Education (e.g. university)
- ☐ Other Public Sector (municipalities, regions...)
- ☐ Other non-for-profit (NGO, foundation, association...)
- ☐ Other private organisation (large company...)

The legal name in the country where the company is registered.\*:

bloqzone

\*Number of people employed in the organisation. Please remember that by the official EC definition, for a company to qualify as SME, it must have less than 250 employees (see Section 3.1 of the GfA). (Choose only one):

- ☐ 0 - 1
- ☒ 2 - 9
- ☐ 10 - 49
- ☐ 50 - 249
- ☐ 250 - 1000
- ☐ over 1000

\*Website (<https://...> or <http://...>):

<https://blogzone.com>

City:

Rotterdam

Country. Please be aware that if the country indicated is not one of the countries indicated in GfA Section 3.2, your proposal will be excluded for not being an eligible country (Choose only one):

Netherlands

## Project

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Project name:

Adding SSI to internet communications

Tagline:

Achieve seamless identified communications by adding SSI to Sylk Suite, and setting standards

Brief Description:

One of the things people enjoy the most about the internet, is that it enables them to talk to others remotely almost without limit. Unfortunately, remotely often means that parties are not sure who they are communicating with. Think of the epidemic of robocalls and prank calls the telecoms industry has been battling for years, or you yourself simply trying to videoconference with your bank: the absence of an identity layer can be a huge problem.

Adding SSI to internet communications resulting in seamless identified communications is the solution to this problem. It enables people engaging in any form of internet communication to exchange presentation requests and proofs, and communicate at the same time.

\*Slide presentation. You can upload here a presentation of your component idea, if available (Max. 10MB):

\*Demo. Optional: You can include a link to a demo of your component or idea, if available.:

<https://bloqzone.com/id-call/>

Is your solution in the "SSI concept"? Please, indicate if your proposal is in line with concept explained in Annex I "Technology Description" of the GfA.

(Choose only one):

- ☒ Yes  
☐ No

\*How is your solution fitting in SSI Concept?:

The project adds SSI to internet communications by adding SSI wallets to an ensemble of communications solutions. This enables users of the system to respond to presentation requests for credentials entirely voluntarily and according to SSI principles.

The solution is designed to function within an SSI ecosystem and conform to all its principles by linking governance-as-code to the implementation to ensure the rules (as much as possible) are enforced in the source code

Is the technology you are using open source? Are you willing to provide your technology under a license which will allow others to build on in the future.

(Choose only one):

- ☒ Yes  
☐ No

\*References:

# EXCELLENCE

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## Problem / Need:

Prank calls, robocalls, hijacked videoconferences, denied customer service via a phone or chat because of missing confirmation of identity, excess of repositories with privacy sensitive personal data in the absence of SSI are just some of the problems this project hopes to solve.

Call centers are believed to spend 35% of their time on identifying their customers. Fraud through messaging apps is a widespread phenomenon.

Sofar attempts at identifying the other end during a communication session has led to cumbersome and fragmented customer experience.

## Innovation. Your component.:

This project can solve those problems by adding SSI to all types of internet communications.

This will make for a smooth efficient user experience where only one application is needed to conduct fully identified communications sessions of any type.

The addition of SSI to internet communications is also expected to foster new services, think for instance of social (business) networks with participants having the ability to fully or partially identify themselves towards each other. "Let me prove that I am fully mandated to represent a German pension fund! (but I will not tell you which one:-)"

## Innovation. Technology Description.:

An extensive description of the technology behind the different components of Sylk Suite can be found on [sylkserver.com](https://sylkserver.com), or, if needed, at their respective repo's.

An SSI wallet will be added to the Sylk Client, and we are assessing various open source React Native projects, preferably from eSSIFlab but otherwise projects like the Aries Bifold initiative, <https://github.com/hyperledger/aries-mobile-agent-react-native>.

From an SSI point of view, this effectively adds a SIP/XMPP endpoint, whose discovery and behaviour will be described in an RFC.

The plan is to add a machine readable ecosystem to the setup along the lines of <https://github.com/hyperledger/aries-rfcs/tree/master/concepts/0430-machine-readable-governance-frameworks>.

We will be happy to provide diagrams of how the different components will work together.

## Innovation. Technology Readiness Level. Which of the following best describes

your current status at a technological level? (Choose only one):

- ☐ TRL 1 – basic principles observed
- ☐ TRL 2 – technology concept formulated
- ☒ TRL 3 – experimental proof of concept
- ☐ TRL 4 – technology validated in a lab
- ☐ TRL 5 – technology validated in relevant environment
- ☐ TRL 6 – technology demonstrated in relevant environment
- ☐ TRL 7 – the system prototype demonstration in operational environment
- ☐ TRL 8 – system complete and qualified
- ☐ TRL 9 – actual system proven in operational environment

## IMPACT

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Current progress or traction. Please select the most appropriate description the current stage of your development. (Choose only one):

- ☐ We plan to launch a beta/pilot within next 12 months.
- ☒ We plan to launch a beta/pilot within next 6 months.
- ☐ We already have users/pilots.
- ☐ None of the above.

Investment Readiness Level. Select the option which best describes your current status in the preparation for investment. (Choose only one):

- ☐ IRL1: Complete first-pass business-model canvas
- ☐ IRL2: Market size / Competitive analysis
- ☒ IRL3: Problem / Solution validation
- ☐ IRL4: Prototype low- fidelity Minimum Viable Product
- ☐ IRL5: Validate product / Market fit
- ☐ IRL6: Validate revenue model
- ☐ IRL7: Prototype high-fidelity Minimum Viable Product
- ☐ IRL8: Validate value delivery
- ☐ IRL9: Identify and validate metrics that matter

Proven experience in the SSI domain. Please indicate the years of experience in the SSI domain by the most experienced member of the team (e.g. if one has 2 years, and another has 4 years, then mark "3 to 5 years" - and not "More than 5

years") (Choose only one):

- ☐ Less than 1 year
- ☒ 1 to 3 years
- ☐ 3 to 5 years
- ☐ More than 5 years

### SSI Expertise:

Project lead Alex Blom:

Contributed to Verify the Verifier article, <https://bloqzone.com/who-wants-to-know/> and hyperledger aries rfc

<https://github.com/hyperledger/aries-rfcs/tree/master/features/0024-didcomm-over-xmpp>.

Convenor of CCI-UC11 Verify the Verifier working group. Built MicroMandate POC for Dutch Chamber of Commerce.

Endorsements from 4 industry experts, among which from Maarten Everts, Senior Research Scientist at TNO, Assistant Professor at University of Twente, on a collaborative project fusing realtime communications and blockchain, and Guus der Kinderen, Openfire contributor on our SSI implementation.

Lohan Spies, our technical advisor, has been the project lead for various Sovrin monitoring tools in use today, besides his SSI Yoma project, already mentioned elsewhere.

Explain how your component may contribute to a human-centric evolution of the Internet.:

By its nature, the project ticks many of the boxes where the goals of a human centric internet are concerned.

Information Flows, in this case internet communications, become more trustworthy when the identity of the participants are known.

The same quality makes online environments safer and SSI stands for personal data control.

And a final example, identified video conferencing is an excellent way of helping the environment, while at the same time maintaining the same safety standards.

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### \*Competitiveness.:

The project provides both an open source implementation as well as proposals for the standards for identified communications.

The implementation is also open in the sense that it implements the federated nature of the SIP and XMPP protocols. That means that other developers can take parts or all our implementations, run them on their own servers and still be able to setup identified communication sessions with our solutions.

This provides the perfect background for the development of new applications and is dramatically different from the walled garden implementation that have more and more become the nature of the internet.

Contribution to eSSIF-Lab ecosystem and framework. Please, provide a declaration

showing that you are willing to interact with other participants in eSSIF-Lab to further concretize our SSI vision. (Max. 10MB):

[https://fundingbox-files.s3-eu-central-1.amazonaws.com/alex/ttMYQs3wfw/bloqzone\\_declaration.pdf](https://fundingbox-files.s3-eu-central-1.amazonaws.com/alex/ttMYQs3wfw/bloqzone_declaration.pdf)

### Collaboration with other communities / industry:

Project lead Alex Blom has extensive roots in the Dutch internet and telecoms community, as well as in Sovrin, where he is an active steward. Sylk Suite has a strong reputation of cooperating with developer communities around NLNet, SIDN and the ISOC.nl. It is an industry veteran supporting large telecoms operators with its different platforms. Lohan Spies has founded the SSI-Yoma project and leads different steward working groups within the Sovrin community.

## IMPLEMENTATION

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### Team introduction:

The team consists of a project lead, Alex Blom, both a seasoned professional and successful entrepreneur in telecoms and SSI, Lohan Spies, initiator of the yoma project (<https://trinsic.id/decreasing-unemployment-verifiable-credentials/>), and the team from AG Projects, a leading supplier of real-time communication systems, led by Adrian Georgescu, longtime business associate of Blom.

### Team member - Coordinator (Contact person):

- Name and surname of the team member: Alex Blom
- Gender. Select one option, please.: Male
- Role.: Project lead
- CV Link (e.g. LinkedIn Profile). It will be used by Reviewers as your CV.:  
<https://www.linkedin.com/in/alblom/>

### Team members:

- Name and surname of the team member: Lohan Spies
  - Gender. Select one option, please.: Male
  - Role.: Technical advisor all matters SSI
  - CV Link (e.g. LinkedIn Profile). It will be used by Reviewers as your CV.:  
<https://www.linkedin.com/in/lohanspies/>
- 
- Name and surname of the team member: Adrian Georgescu
  - Gender. Select one option, please.: Male
  - Role.: Technical project lead
  - CV Link (e.g. LinkedIn Profile). It will be used by Reviewers as your CV.:

<https://www.linkedin.com/in/adigeo/>

- Name and surname of the team member: Tijmen de Mes
- Gender. Select one option, please.: Male
- Role.: Chief architect
- CV Link (e.g. LinkedIn Profile). It will be used by Reviewers as your CV.:  
<https://github.com/tijmenNL>

- Name and surname of the team member: Dan Jenkins
- Gender. Select one option, please.: Male
- Role.: mobile developer
- CV Link (e.g. LinkedIn Profile). It will be used by Reviewers as your CV.:  
<https://github.com/tijmenNL>

- Name and surname of the team member: Petar Bozin
- Gender. Select one option, please.: Male
- Role.: Server developer
- CV Link (e.g. LinkedIn Profile). It will be used by Reviewers as your CV.:  
<https://github.com/tijmenNL>

**\*Press the green button + below to add next partner:**

## Team:

- Is your team gender balanced? Select "Yes" option if the team taking part in the project includes the same or a very similar number of males and females (e.g. 2:2, 2:1,...): No
- Dedication to project: The development team will spend a total of 19 man months on the project.  
This includes the technical project lead.  
Technical advisor Spies is expected to contribute an average of 2 days/month and project lead 12 hours per week.
- Team skills: Project lead: telecoms entrepreneur, SSI contributor and volunteer at Sovrin, experienced project lead, holder of EU-patent on identified communications.  
Technical advisor: entrepreneur, SSI expert, chair of Sovrin Steward council.  
Development team: broad technical skillset, see [sylkserver.com](http://sylkserver.com) and their many software packages related to real-time communications available in the public domain, among which are Blink, CDRTTool, MediaProxy, MSRP Relay, OpenSIPS, OpenXCAP, SylkServer, Sylk client.

**\*Resources to be committed:**

- Resources: SERVER SIDE Design of server side API specifications/ Implementation of SIP server or and/or XMPP server modules/ Web server modules/ Push notifications service/ CLIENT SIDE Design of Mobile client API/ Development of Mobile client UI/ Mobile database and encryptions/ Mobile notifications/ INTEGRATION Integration with third-party providers API/ Mobile and server testing/ Software packaging/ Branding/ COSTS Man power - 19 man/months with a total of 112,000 EUR/ Data center costs for a 9 months period: 3,150 EUR/ PROJECT LEAD 15 working weeks with a total of 23,000 Euro/ TECHNICAL ADVISOR 5 working weeks with a total of 7500 EUR

## TRANSVERSAL CRITERIA



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Will your solution contribute to Environment and low carbon economy? (Choose only one):

- ☒ Yes  
☐ No

Explain how\*:

Identified communications reduces the need for in person meetings, thus lowering travel.

Will your solution contribute to Equal opportunities? (Choose only one):

- ☐ Yes  
☒ No

Will your solution have any Social impact? (Choose only one):

- ☒ Yes  
☐ No

Explain how\*:

The fear of abuse, fraud, identity related crimes etc damage the trust in the internet as a means for communication. This project hopes to change that for the better.

## STATISTICAL SECTION

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How did you hear about eSSIF-Lab? Select from the options the one describing the first time you learnt about this call. (Choose only one):

- ☐ eSSIF-Lab project site  
☐ Social media  
☒ Mailing  
☐ NGI portal  
☐ NGI Community Portal  
☐ Participant Portal of EC

- ☐ FundingBox newsletter or communities
- ☐ Events
- ☐ Friends
- ☐ Other

Are you new to H2020? (Choose only one):

- ☒ Yes
- ☐ No (Select 'No' option if you have received previously H2020 / other EU funding or financial support to third parties.)

Did you receive NGI funds (as legal entity) or work on NGI funded project (as individual)? (Choose only one):

- ☐ Yes (Select 'yes' option if you have received funding from NGI or any of the projects linked to it.)
- ☒ No

Did you receive other EU funding (as legal entity) or work on EU funded project (as individual)? (Choose only one):

- ☐ Yes (Select 'yes' if you have received any funding under any other EU programme different from H2020 or NGI.)
- ☒ No

\*Potential User Benefits. Select the most important benefits of your product / service. (Choose one or more):

- ☐ Reduce Cost to Users
- ☐ Increased quality
- ☐ Reduces User's current time commitment
- ☐ Increase ease of Use of technology
- ☒ Increase accessibility of technology

\*Potential Economic Benefits. Select the most important benefits of your product / service. (Choose one or more):

- ☐ Creates jobs
- ☐ Stimulates economic growth
- ☒ Increases Knowledge based economy
- ☐ Reduces vendor lock-in
- ☒ Increases European innovation-based assets

\*Potential Societal and Environmental Benefits. Select the most important

benefits of your product / service. (Choose one or more):

- ☐ Create jobs
- ☐ Reduce digital divide
- ☐ Increase Quality of Life
- ☒ Increase Citizen participation
- ☐ Reduce energy consumption
- ☒ Reduce emissions
- ☒ Reduce traffic
- ☐ Increase environmental awareness

\*Tags for your project. Please, select from the list the tags that best describe scope of your project (Choose one or more):

- ☐ Trustworthy hardware & manufacturing
- ☐ Network & Transport infrastructure incl. routing, P2P & VPN
- ☐ Software Engineering (incl. Protocols, interoperability and fundamentals e.g. cryptography, algorithms, proofs)
- ☐ Operating Systems, firmware and virtualisation
- ☐ Measurement, monitoring, analysis & abuse handling
- ☐ Middleware, distribution, deployment, operations, DNS, Authorisation, Authentication, Reputation systems
- ☒ Decentralised solutions, blockchain, distributed ledger
- ☐ Data & AI
- ☐ Services & Applications (e.g. email, instant messaging, search, video chat, Collaboration, Community)
- ☐ Vertical applications
- ☒ Trustworthiness including: Transparent, auditable and secure
- ☐ Resilient, robust and dependable
- ☒ Privacy and confidentiality
- ☐ Empowerment and self-determination
- ☐ Inclusiveness, accessibility diversity and democracy
- ☒ Permissionless innovation, decentralisation and level playing field
- ☐ Social good, fairness and ethical behaviour
- ☐ Sustainability/Eco-friendliness
- ☐ Well-balanced economy

## Informed Consent Form

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By submitting this proposal I confirm that I have read and understood the information about the project, as provided in the Guide for Applicants. (Choose

one or more):

☐ Yes

By submitting this proposal I confirm that I have been given the opportunity to ask questions about the project and my participation via helpdesk address.

(Choose one or more):

☐ Yes

By submitting this proposal I confirm that I voluntarily agree to participate in the eSSIF-Lab project. (Choose one or more):

☐ Yes

By submitting this proposal I confirm that I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn. (Choose one or more):

☐ Yes

By submitting this proposal I confirm that the procedures regarding confidentiality have been clearly explained to me. Only anonymised data will be shared for statistical purposes. (Choose one or more):

☐ Yes

By submitting this proposal I confirm that the use of the data in research, publications, sharing and archiving has been explained to me. (Choose one or more):

☐ Yes

By submitting this proposal I confirm that I understand that researchers and European Commission will have access to the anonymised data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form. (Choose one or more):

☒ Yes

By submitting this proposal I confirm that I understand that EC will have access to the anonymised statistical data collected within the open call. (Choose one or more):

☒ Yes

## Processing of personal data

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I confirm that I read and understood the information clause concerning processing of the personal data provided above: (Choose one or more):

☒ Yes

Please, enter your name::

Alex Blom

I confirm that I passed the information clause provided above to all team members mentioned in the application form: (Choose one or more):

☒ Yes