



Showcase programme “Secure Digital Identities”

A funding priority of the German Federal Ministry for Economic Affairs and Energy, Unit VIB3: "Development of digital technologies"

Status: June 2020

The "Secure Digital Identities" showcases aim to strengthen technological sovereignty by developing German eIDAS solutions, which are equally user-friendly, trustworthy and cost-efficient. These solutions should be easy to access for administration, businesses - especially SMEs - and the population.

The aim is to create application-oriented eID ecosystems in Germany that are characterised by openness, interoperability and simple, intuitive and barrier-free usage. Large R&D platform projects with a duration of generally 36 months will be funded.

A total of 11 consortia successfully joined the competition phase. The individual projects are presented in this paper. Selected projects of this competition phase will receive funding for the subsequent implementation phase starting in spring 2021.

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Showcase programme "Secure Digital Identities"

Innovation competition based on the "Development of digital technologies" funding framework

In the modern world, digital identities are an essential requirement for a functioning economy. Almost all economic or administrative processes require the identification of a person or object. Digital identities have thus become the entry point to modern digital administrative and economic processes.

The "Secure Digital Identities" showcases aims to develop German eIDAS solutions, which are equally user-friendly, trustworthy and cost-efficient and to make these solutions easily accessible for administration, businesses - especially SMEs - and the population. In Germany, none of the existing eID solutions has so far been able to achieve the critical mass needed for a broad application. This is to be achieved through showcases in which technology providers and local authorities work closely together. The implementation is to be practically tested in numerous use cases with relevance to everyday life. Citizens are to be involved in the development of the solutions.

With this support programme the ministry for economic affairs and energy (BMWi) is directly contributing to Germany's digital sovereignty and data security on the Internet. The measure aims to strengthen the confidence of citizens and companies in digital transformation. The envisaged proposals should also be aligned with the needs and opportunities of small and medium-sized enterprises and enable them to implement and use Secure Digital Identities.

The support programme is divided into two phases:

1. Competition phase

The aim of the competition phase is to develop convincing concept ideas for the implementation phase and to underpin them in terms of feasibility and practicability. Furthermore, they should identify obstacles and create the conditions for a fast and efficient realisation of the concept ideas in a subsequent implementation phase.

In the current competition phase, 11 selected consortia have the opportunity to develop detailed roadmaps for the implementation of their concept idea and for the formation of effective partnerships. All interested parties are invited to apply for participation in the ongoing projects. Projects with the most promising concepts will be given the opportunity to realise their ideas in the implementation phase.

2. Implementation phase

Selected projects of the competition phase will be invited to submit a formal application for funding which will be starting in spring 2021. The aim is to fund a small number of large R&D platform projects with a duration of generally 36 months.

Timeline

Competition phase (2020):

June, 1 st	Project start
October, 30 st	Submission of implementation concepts
November	Evaluation of the concepts
December, 3 rd /4 th	Expert meeting in Berlin
December	Selection of winning concepts, call for full proposals

Implementation phase (2021-2024):

January 18 th , 2021	Submission of full proposals, start of the approval process
April 2021	Project start

Overview on the projects in the Competition Phase

Showcase region	Project	Contact partner
Jena, Ulm	EMIL - eIDAS ecosystem Identity seLf-sovereign	karsten.treiber@targens.de
Mittweida	ID-Ideal – Management of secure digital Identities	ittner@hs-mittweida.de
Metropolregion Rhein-Neckar	IHRE-ID – Innovation and showcase region for secure digital identities Rhine-Neckar	marco.brunzel@m-r-n.com
State of Hessen	ONCE - Simply register online!	walter.landvogt@bdr.de
Darmstadt	PeopleID	kathlen.schroeder@verimi.com ; benjamin.spoden@verimi.com
State of Nordrhein-Westfalen, Bochum	SDI in NRW – Secure digital identities in North-Rhine Westphalia	marian.margraf@aisec.fraunhofer.de
Karlsruhe	SDIKA – Showcase Secure Digital Identities Karlsruhe	suermeli@fzi.de
State of Sachsen-Anhalt	SHIELD	tina.huehnlein@eID.AS
Gelsenkirchen	Smartphone ID +	hertlein@xignsys.com , lukas.rissel@gelsenkirchen.de
State of Nordrhein-Westfalen	SSI für Deutschland – An identity ecosystem for natural persons, businesses and things	helge.michael@main-incubator.com
Hamburg	STEREO - Secure digital identity for municipal mobility services	marcus.olszok@cartrust.com

Project profiles

EMIL - eIDAS ecosysteM Identity seLf-sovereign

Showcase regions: Jena, Ulm

Objectives

The focus and core motivation of the project is the establishment of mobile, universally applicable and universally recognized digital identities in a level of trust appropriate to the application in accordance with eIDAS for natural and legal persons and objects. The identities are managed by a natural or legal person or by the owner of an object (SSI). EMIL creates an open ecosystem for digital identities and trust services using blockchain/DLT, which can be used at least throughout Europe and thus opens the market for many other service providers. For a user, the possibility to freely choose his identity provider is offered (interoperability).

EMIL highlights three different use cases: Platform for central master data management, eGovernment and mobility - the most important application areas for digital identities. The focus is thus on the average citizen. The project addresses research questions, the definition and updating of national and international standards, the creation of trustworthy ecosystems and the testing of G2B2C business models. The aim of EMIL is to achieve a self-determined and everyday use of more secure digital identities by involving well-known industrial companies and local authorities.

Consortium

targens GmbH (consortium leader), Robert Bosch GmbH, Fraunhofer IAO, Deutsche Telekom AG, City of Jena, Jolocom GmbH, msg Systems AG, ZF Car eWallet GmbH;

Associated Partners: City of Ulm, 0711 Digital GmbH, YAEZ GmbH

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ID-Ideal - Management of secure digital identities

Showcase region: Mittweida

Objectives

Modern man has an average of about 70 digital identities. With the current technologies, both the management of these many digital identities and the sovereignty and security of the data associated with these identities are impossible for most people to maintain. We aim at replacing these many IDs with a single secure digital ID. This idea faces the following three challenges: the technological feasibility of a secure, trustworthy and privacy-compliant solution, the intuitive usability of this solution by users without special technical understanding and incentives for ID holders and interaction partners to implement and use such a solution. The ID-Ideal showcase project will address these challenges, but will focus on the management of secure digital identities by the respective identity holder. It will develop and demonstrate technological solutions that enable the holders of a digital identity to regain control over their own data.

Consortium

Mittweida University (consortium leader), Volksbank Mittweida, Mittweida City Council, KAPRION Technologies GmbH, SALT Solutions GmbH, Dresden University of Applied Sciences

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IHRE-ID - Innovation and showcase region for secure digital identities Rhine Neckar

Showcase Region: Rhine-Neckar Metropolitan Region

Objectives

The progress in digitisation and networking enables new opportunities significant efficiency and organizational potentials for the economy and the society. The development of these potentials requires but a nationwide availability, comprehensive awareness and wide use of secure digital identities. The legal and technical framework conditions required for this are now largely available – which offers the basis for launching a broad-based initiative to exploit the potential of secure digital business processes for citizens and businesses, and at the same time for promoting additional digital innovations in all sectors.

On the basis of a culture and institutional structure that is unique in Germany for cooperation between administrations, businesses and science across all states and sectors, the Rhein-Neckar metropolitan region (supported in partnership by its three federal states of Baden-Württemberg) intends to develop into an "innovation and showcase region for secure digital identities" on a national and European scale in the coming years. In doing so, the metropolitan region can build on a large number of valuable preliminary conceptual work, ongoing projects in the field of intelligent networking and, above all, on a particularly dense and resilient network of established and proven cooperation structures. The focus of the planned innovation and showcase region is the establishment, testing and regional rollout of open eID infrastructures. For this purpose, a large number of partners and multipliers are to be involved from the beginning in approx. 5-8 application domains / industry clusters (energy, transport, health, administration, etc.,).

Consortium

Rhein-Neckar Metropolitan region (consortium leader), Giesecke+Devrient Mobile Security GmbH, GiroSolution GmbH, Sparkassen-Finanzportal GmbH, Fraunhofer Institute for Secure Information Technology (SIT), German Research Institute for Public Administration (FÖV)

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ONCE - simply register online!

Showcase region: State of Hessen

Objectives

The ONCE project develops and implements application scenarios for secure digital identities in the fields of government, mobility and the hotel industry for the region of Hessen. The application scenarios are under the motto "Digital ID - easy access to mobility in the city and the country" and "Digital ID - convenient and secure access to administration". For citizens and customers, processes of high everyday relevance are to be simplified with the help of secure mobile digital identities. The ID systems used in ONCE should meet the security and trust requirements of the application scenarios. This refers to administrative processes in the service portals of municipalities and districts in Hessen, to business processes in municipal companies, to the conclusion of contracts with car rental companies and to registration processes in hotels. In addition, the smartphone is to be transferred into a secure mobile eID platform for various application areas such as public transport ticketing or car sharing.

ONCE is investigating whether ID systems based on different levels of trust and technical architectures such as "Verifiable Credentials", "Decentralized Identifiers" and "Self-Sovereign Identity" can be merged in a meaningful and easily understandable way for citizens and customers.

Consortium

Bundesdruckerei GmbH (consortium leader), Fraunhofer Institutes AISEC and IAO, ekom21 - KGRZ Hessen, Governikus KG, regio iT GmbH, Jolocom GmbH

Associated partners: Better Mobility GmbH, Giesecke + Devrient Mobile Security GmbH, Hessische Landesbahn GmbH, Vodafone GmbH, Telekom Deutschland GmbH, Telefonica Germany GmbH & Co. OHG, Samsung Electronics GmbH, Robert Bosch GmbH, Deutsche Post AG, Sixt GmbH & Co. Autovermietung KG, Motel One GmbH, AKDB, VW AG, Behle Hochheide GmbH & Co.KG, HelloGuest Solutions GmbH

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PeopleID

Showcase region: Darmstadt

Objectives

The success of the digital transformation of economy, administration and society depends on the digital identities of citizens. Only by means of these identities, end-to-end processes can be digitized trustworthily and mapped adequately. To date, the market has produced a large number of specific ID solutions, but these lack either user-friendliness, sectoral, geographic or demographic reach or the necessary security. In order to increase user acceptance and achieve a critical mass of users, the project partners of the "PeopleID" showcase will combine their existing approaches, align them in a user-friendly way and develop them further in an interoperable way. This will demonstrate the possibilities of using secure and user-friendly digital identities in everyday use cases for selected user groups, such as students, people starting their careers and pensioners, based on their typical needs and use cases. The Digital Life Journey will be fully mapped. Parallel to the use cases, the project will demonstrate the interoperable use of different identity sources. Only linking and the parallel use of a large number of identity sources allows for addressing a truly broad user group and at the same time for ensuring different use cases with their specific requirements. The aim of the project is to implement a concept developed in the Darmstadt region in an exemplary manner and thus lay the foundation for an eID system usable throughout Europe.

Consortium

Verimi GmbH (consortium leader), Digitalstadt Darmstadt GmbH, Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Optica Abrechnungszentrum, Authada GmbH, T-Systems International GmbH

Associated Partners: AOK-Bundesverband Gbr, BITMARCK GmbH, DAK-Gesundheit Zentrale, gematik GmbH, Buergerservice.org e.V., procilon Group GmbH, Deutsche Renten Information e.V., Darmstadt University of Applied Sciences

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SDI in NRW - Secure digital identities in Nordrhein-Westfalen

Showcase region: State of Nordrhein-Westfalen, Bochum

Objectives

Secure digital identities (SDI) are essential drivers for the successful transfer of business processes to the digital world. This applies to both the economy and administration. However, there are currently still many challenges on the part of all target groups that prevent that SDIs are widely used.

The project "SDI in NRW" addresses these challenges. It places a special emphasis on usability. Another focus is the development of attractive services. For example, it should be possible not only to submit legally binding applications, but also to view the processing status regularly. This requires extensive adjustments to the IT systems of the service providers, which are also being considered. With yes® and Governikus two established identity providers are available. The integration of municipal institutions is carried out by two companies, Bol Systemhaus and Form-Solutions, which are providers of software solutions for these institutions, as well as by the associated partners Kommunale ADV-Anwendergemeinschaft West (umbrella organisation of municipal IT service providers) and the CIO of the state of Nordrhein-Westfalen. The city of Bochum takes part as an associated partner. With Fraunhofer AISEC a renowned research institute is involved.

The results achieved in the project focus on public authorities as well as on the banking and insurance sector.

Consortium

Fraunhofer AISEC (consortium leader), Governikus KG, YES Payment Services GmbH, Form-Solutions GmbH, Bol Systemhaus GmbH

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SDIKA - Showcase Secure Digital Identities Karlsruhe

Showcase region: Karlsruhe

Objectives

The aim is to build a modular ecosystem for the use of secure digital identities across services and solutions. This will enable citizens and organisations to use their digital identities for services of public administration and private industry without media discontinuity, independent of location and across different applications. The focus of the competition phase is the conception of the implementation phase: infrastructure, interoperability between central and decentralised identity solutions, use case conception (including mobility, interoperability of regional offers) as well as the development of corresponding demonstrators that make the simple end-user-oriented use of digital identities visible to citizens. Organisational (ecosystem governance structure), economic (business models) and legal issues (e.g. eIDAS conformity, necessity of real laboratories) will also be addressed. The concept is to be developed with the participation of the Karlsruhe residents (Citizens' Forum, Karlsruhe Participation App) and local organizations in order to achieve high acceptance. The work will be carried out together with associated partners (other identity providers, network partners, domain and standardization experts).

Consortium

FZI Research Center for Information Technology (consortium leader), City of Karlsruhe (Office for Information Technology and Digitization), CAS Software AG, INIT GmbH, ISB AG, Jolocom GmbH

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SHIELD

Showcase region: Sachsen-Anhalt

Objectives

The aim of the SHIELD project is the design and development of an open ecosystem for secure digital identities as well as the design, development and testing of innovative and broadly effective value-added services based on it from various application areas. The project will address e.g. the municipal sector, the real estate industry, mobility, tourism, sports, nutrition, trade and logistics, social and health services, telecommunications, financial services, education, and industry 4.0.

Consortium

go.eIDAS e.V. (consortium leader), Dataport AöR, DATEV eG, ecsec GmbH, Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., State of Sachsen-Anhalt

Numerous associated partners

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Smartphone ID +

Showcase region: Gelsenkirchen

Objectives

Today, the smartphone is the most important supplier of information and it bundles many of our daily tasks such as scheduling, reminders, messages, payment processes or airport check-in. Therefore, the Smartphone ID+ should also be used to handle official business communication with companies and Smart City applications reliably, easily and securely. Via a platform, security features are to be linked to an app (Smartphone Citizen ID) and also be able to communicate. With this platform solution the user can easily and securely identify and authenticate himself up to the security level "substantial" according to eIDAS. The NRW lighthouse project "Smartphone-Citizen-ID", which is being implemented jointly by the City of Gelsenkirchen, XignSys GmbH, and the City of Aachen as a model in NRW with the support of MWIDE NRW, serves as the basis for the project. Through the platform created in the project, this technology will be meaningfully linked with other applications. Online payment processes are to be carried out via defined payment interfaces (PSD2-compliant). By combining a legally valid digital signature (eIDAS qualified remote signature), documents can be reused in a single process without media discontinuity. In addition, secure video ID procedures ("video-supported eID" procedures) are to be integrated. With Smartphone ID+, citizens can use their smartphones to access digital services on the Internet and in the real world in a trustworthy and media-free manner. The focus is on a simple and secure user experience for all use cases. The orientation towards international norms and standards promotes the easy transferability of the results.

Consortium

City of Gelsenkirchen (consortium leader), XignSys GmbH, identity Trust Management AG, D-Trust GmbH, FintecSystems, Institute for Internet Security - if(is)

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SSI - Self Sovereign Identity for Germany – An identity ecosystem for natural persons, companies and things.

Showcase region: State of Nordrhein-Westfalen

Objectives

The project "Self Sovereign Identity for Germany" includes a block-chain-based, self-determined identity system, so-called Self Sovereign Identity (SSI), which allows end users to store and manage their own identity information on their own, and the establishment of an identity network distributed throughout Germany. The goal is to develop a decentralized identity ecosystem for secure digital identities that is interoperable with other European and international networks.

With the planned project, solutions for business, administration and citizens are to be made accessible, which are equally user-friendly, trustworthy and economical. This identity system should allow all institutions ("identity issuers") to store their verified identity data on the users' end devices (especially mobile phones) and allow users ("identity holders") to identify themselves with this data at other institutions ("identity verifiers"). Identity holders can be both natural and legal persons as well as objects (e.g. vehicles). The verification of the data is done via a DLT network. The system will not be limited to the exchange of identity data, but will also allow the exchange of any identity, authentication and authorization information. Examples herefore are: transfer of registration data, creditworthiness information, certificates, user IDs, tickets of any kind, but also access to websites (single sign-on or "SSO") or buildings. Interfaces to existing standards such as OpenID Connect are to be offered in order to enable rapid acceptance and dissemination also in the SSO area. Furthermore, a connection of sovereign ID documents is to be realised, especially the use of the eID function of the identity card. The ecosystem will be based technologically on the open source frameworks Hyperledger Indy and Hyperledger Aries, which are managed by the Linux Foundation. The DLT network to be established will be set up with limited write and public read rights.

Consortium

Main Incubator GmbH (Commerzbank AG) (consortium leader), TU Berlin, Bundesdruckerei GmbH, esatus AG, Robert Bosch GmbH, Ministry of Economic Affairs, Innovation, Digitisation and Energy of the State of NRW

Associated Partners: DB Systel GmbH (Deutsche Bahn AG); Telekom Innovation Laboratories (Deutsche Telekom AG); ING-DiBa AG; Siemens AG; Deutsche Börse AG; regio iT gesellschaft für informationstechnologie mbh, Verband der Vereine Creditreform e.V.

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STEREO - Secure Digital Identity for Community Mobility Services

Showcase region: Hamburg

Objectives

Identities form the basis for trust by reflecting the certainty of knowing a trading partner. In order to avoid misuse, however, not only the identity of the owner but also the identity of the triggering object must be electronically verifiable without any doubt. This is where the STEREO project comes in by generating and linking secure digital identities of cars, of their owners and users. Car owners can identify themselves completely digitally via their smartphone or tablet. They use an ID solution of their choice and - with the resulting digital right of disposal over the car - pass through the entrance gate. The digital identity of the cars thus created serves as the basis for a variety of usage scenarios in the mobility world of the future. These include the use cases addressed in the project, such as the digital application registration and deregistration processes of the cars.

Consortium

Christoph Kroschke GmbH (consortium leader), Landesbetrieb Verkehr Hamburg (LBV), Hamburg Ministry of Economic Affairs, Transport and Innovation (BWVI), Osborne Clarke PartmbB, Chainstep GmbH, Hamburg University of Applied Sciences (HAW), Blockchain Research Lab gGmbH

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