

Merits NISP in context of PSD2 Review

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01 Introduction

At the request of several market supply-side implementers (banks, associations, schemes and interbank processors) of PSD2 Account Access, SRC Security Research & Consulting GmbH (SRC) established NISP (NextGenPSD2 Implementation Support Program, ref. <https://nisp.online/>) in 2018 as a common program with the primary objective to achieve swift compliance to all relevant PSD2 regulatory and organisational requirements from the European Commission (EC) and the European Banking Authority (EBA). NISP provided a structured and coordinated implementation support for the implementation of the PSD2 compliant Berlin Group NextGenPSD2 Framework (ref. <https://www.berlin-group.org/psd2-access-to-bank-accounts>), used in 2022 by more than 4,000 banks and hundreds of TPPs across Europe and beyond.

The program allowed the interested participants to implement all regulatory and organisational requirements on time, meet the performance requirements and avoid implementation of a 'fall-back' interface solution. The program also helped to optimise implementations, solve interoperability issues and developer questions, share costs on resourceful activities related to implementation, and provide structured and relevant input into the change management and future evolution of the NextGenPSD2 standards. For TPPs (Third Party Providers) a NISP Portal access was provided to useful information that not only simplified the organisation of TPP testing but allowed as well insights into implementation of the Berlin Group NextGenPSD2 standards.

NISP had approximately 30 participants from more than 10 countries in Europe and beyond (e.g. Israel). NISP ran as a program from 2018 to 2020 and continued in Maintenance Mode in 2021 and 2022.

The purpose of this document is to outline how the NISP program definition and the NISP deliverables have contributed to implementation harmonisation and improved interoperability in the European market for the market supply- and demand-side implementers (i.e. banks, processors, service providers and TPPs) of the Berlin Group NextGenPSD2 Framework.

02 NISP Program Definition & Deliverables

As overall aim NISP was defined to support achieving fallback exemption for NextGenPSD2 implementers. Derived from this NISP also reduced regulatory risks of not achieving fallback exemption, created stable and sustainable implementations, created cost synergies in implementation, reduced interoperability issues, and created an efficient testing process for both market supply- and demand-side.

Based on the agreed aims, scope, deliverables, milestones and timelines, a program structure with workstream activities was defined in 2018:

Compliance Workstream	
Deliverables	
	<ul style="list-style-type: none"> • Best Practice documentation: Description of regulatory dependencies for the fallback exemption with minimum requirements, making a.o. transparent what needs to be implemented and optimised for compliant and interoperable PIS/AIS/PIIS services, how to deal with certificates, with SCA approaches, with TPP identification, with consent handling,, with transaction status, with PSU related data, with the dynamic steering processes of the banks (depending on parameters), etc. The Best Practice documentation was also input for discussion with regulatory/supervisory authorities and for the definition of testcases (see hereafter for the ASPSP & TPP Test Workstreams); • Mapping of PSD2, EBA RTS, EBA Opinions and EBA Guidelines to NextGenPSD2 API definitions and best practices; • Best practices on functional and operational aspects (to meet EBA Opinions and Fall-back Exemption Guidelines in the back-end implementations), the latter subsumes release management and reporting requirements
Activities	
	<ul style="list-style-type: none"> • Support in the interpretation of EBA RTS, security requirements and expected regulatory demands on market implementations; • Support in interpretation of the NextGenPSD2 specifications; • Support in implementation related questions; • Support early discussions with EBA on criteria for fallback exemption; • Support towards EBA/NCAs (analysis of EBA/NCA clarifications/Q&As/consultations, direct EBA/NCA contact if needed, etc.); • (later) Participate to EBA API Working Group supporting the development of high-performing and customer-focussed APIs under PSD2; • Define backend implementation details needed for the setup of a Testconcept;
Milestones	
	<ul style="list-style-type: none"> • Concurring with the regulatory process;

ASPSP Test Workstream	
Deliverables	<ul style="list-style-type: none">• Testconcept for functional, non-functional & security testing;• Requirements Definition for Testtools;• Testcase Specification;• NISP participants portal with member login access and information exchange;
Activities	<p>Testconcept:</p> <ul style="list-style-type: none">• Clarify the test architecture;• Explain how the various SCA methods are integrated into or simulated within the tests;• Define the test aims and the test coverage (incl. eIDAS certificate and certificate chain handling);• Define degree of automation ability;• Communicate about the quality measures e.g. to regulators; <p>Requirements Definition for Testtools:</p> <ul style="list-style-type: none">• Clarify the requirements with respect to testtools;• Facilitate the evaluation of different offers of testtool providers; <p>Testcase Specification:</p> <ul style="list-style-type: none">• Define testcases along the defined use cases (functional testing);• Define testcases for performance stress testing (non-functional testing);• Define testcases for penetration tests (attack vectors) during implementation (security testing);• Adjust the ASPSP Testcase Specification to new technical adaptations in the XS2A Framework and Errata, and cover missing specification functionalities; <p>Other test related products:</p> <ul style="list-style-type: none">• TPP Registry;• ASPSP Test Directory;• QTSP Test Root Certificates;
Milestones	<ul style="list-style-type: none">• Final testconcept available in August 2018;• Final requirements definition available in June 2018;• Final Testcase Specification available in September 2018;

TPP Test Workstream	
Deliverables	
	<ul style="list-style-type: none">• A Testconcept describing the requirements for providing a sandbox which enables (semi) automated testing by TPPs;• Integration Test Case Specification;• Sandbox documentation;• A document describing how to facilitate testing between participants;• TPP Portal for registration and information exchange;• Test progress report;• Interoperability issues report;
Activities	
	<ul style="list-style-type: none">• Collect comprehensive testdata from participants (TPPs and NISP participants);• Discuss interoperability issues and how to resolve them; <p>Integration Testcase Specification:</p> <ul style="list-style-type: none">• Define testcases along the defined use cases;• Adjust the Integration Testcase Specification to new technical adaptations in the XS2A Framework and Errata, and cover missing specification functionalities; <p>Sandbox documentation:</p> <ul style="list-style-type: none">• Define sandbox requirements• Define data configuration to enable harmonised testscenarios for provoking error situations in a mockup system
Milestones	
	<ul style="list-style-type: none">• Concurring with the ASPSP Test Workstream;

ASPSP Implementation Certification	
Deliverables	<ul style="list-style-type: none"> • Implementation Evaluation & Certification Policy (initially based on self-assessment).;
Activities	<ul style="list-style-type: none"> • Create transparency on evaluation & certification criteria and results, supporting a smooth process to acquire fallback exemption towards NCAs/EBA; • Describe evolutionary path into possible accredited lab testing and certification or ultimately in extension to a Europe-wide formal Certification / Approval Scheme; • Discuss certification procedures to support exemption process with NCAs and EBA; • Define a Compliance/Implementation Conformance Statement template
Milestones	<ul style="list-style-type: none"> • Concurring with the ASPSP Test Workstream;

Securing Program Results	
Deliverables	<ul style="list-style-type: none"> • Updated deliverables of all workstreams;
Activities	<ul style="list-style-type: none"> • Secretariat support; • NISP Website Portal Support (incl. hosting/user management, respond to participant implementers questions / FAQ) for both ASPSPs and TPPs; • Feed the changes or needed extensions to the program results which have come up during implementation;
Milestones	<ul style="list-style-type: none"> • Concurring with the other Workstreams;

Each participant had a seat in a Steering Committee which operated as the monthly program progress monitoring, budget control and decision-making body of the program.

NISP maintains a test register with approximately 2,200 ASPSP entries and more than 220 TPPs are registered in the portal environment.

03 NISP Evaluation

The benefits of NISP can be described on several dimensions:

- As one of the NISP objectives, NISP supported ASPSPs in meeting the legal requirement to publish their dedicated interfaces and configurations documentation. NISP offered a central communications platform that helped both banks and TPPs in the PSD2 services onboarding and operational rollout.
- As an indispensable complement to available standards, NISP as an implementation support project provided a perfect basis for the implementation and rollout of the NextGenPSD2 open banking framework. Standards alone are never sufficient: market supply- and demand-side implementers need support in ensuring that PSD2-compliant and interoperable PIS/AIS/PIIS services are provided that meet the requirements of the available laws, regulations and the detailed technical standards.
- To ensure that requirements of the available laws, regulations and the detailed technical standards were met and to guarantee maximum consistency between implementations, the NISP testing support with testcase specification was the instrument to prove compliance towards internal and external stakeholders. For PSD2-compliance, the National Competent Authorities (NCAs) were responsible for the implementation conformance assessment, which is why NISP restricted to evaluation and testing based on self-attestation. Since not all ASPSPs and TPPs were participating to NISP, a full consistency between all PSD2 market implementations could not be provided.

The value of a testing process based on self-attestation is for both banks and TPPs limited to the extent that an independent arbitration in case of non-interoperability disputes is left to the NCAs who may not always have the proper resources and competencies to perform such arbitration: the detailed technical standards are highly complex and it would be nearly impossible for NCAs to stay updated on all the details of the technical standards. In such cases an arbitration mechanism based on highly automated testing with approved testtools would already be a huge improvement.

In the future, if EBA/NCAs would require, NISP would be able to support a more formal PSD2-compliance process in a 3-step gradual approach:

1. starting with highly automated testing with approved testtools where the output of the testtool would provide the proof of implementation conformance. NCAs would then be able to rely on the quality of this mechanism, which would especially be useful for the continuous delta- and regression testing.
2. accredited lab testing and certification^{*}: assign dedicated accredited labs who would perform the testing and certify implementations. The responsibility for assigning accredited labs is typically the role of a scheme but for the PSD2-compliant services the NCAs could also decide to do this or delegate this responsibility to NISP.

^{*} Steps 2 and 3 would most probably require a governance change within NISP

3. extension to a Europe-wide formal Certification / Approval Scheme: In a last step a Europe-wide formal Certification / Approval Scheme could be built, with or without the support of schemes, and with or without the support of NCAs and EBA.
- With all the deliverables that NISP already provided for the PSD2 Open Banking compliance, a perfect basis is available for extension into Open Finance and Open Data services. Schemes operating such Open Finance and Open Data services may be able to re-use some of the NISP components should the NISP participants allow this.

NISP enjoyed external exposure and coverage from several public publications in newsletters, blogs and presentations (in chronological order), a.o.:

- 20181017: NISP presented to EBA and all NCAs in the EBA Supervisory Workshop in London.
- 20181205: Finextra article on PSD2 API standardization initiatives (“Berlin Group’s NextGenPSD2 has emerged as the leader..”) and testing (“...NISP to help save banks from potential fallback.”).
- 20181114: NISP presented on the Berlin Group Conference 2018.
- 20190111: NISP Workshop with NCAs and EBA in Frankfurt to discuss and present a.o. the NISP functional and operational aspects.
- 20190227: NISP explained to ASPSPs in a Dutch Central Bank workshop.
- 20190626: The ECSAs responses to a questionnaire among their membership on the implementation process of the RTS was reported to EC FISMA and included several positive references to NISP.
- 20190710: EC FISMA meeting with ECSAs show the results of a survey within the ECSAs membership on the status and readiness of PSD2 API implementations where respondents indicated NISP as one of the used options to engage with TPPs.
- 20190726: Joint Statement ECSAs and TPPs mentions NISP as a good example of a transparency initiative that provides a central transparency register (directory service).
- NISP participated in 2019-2020 to several EBA ‘Working Group on APIs under PSD2’ meetings, thus contributing to further EBA Clarifications.
- Several press releases to international media during 2018-2020.

EBA and the NCAs have consistently been updated of every new publication and deliverables.

04 NISP 2022

In 2022, NISP continued in Compliance Maintenance Mode, assuring that any new applicable regulatory clarifications are properly absorbed by the market and updated in the NISP deliverables.

The 2022 Compliance Maintenance activities were based on the NextGenPSD2 Framework until Version 1.3.x and errata documents.

Annex A – List of Participants

- adorsys GmbH & Co. KG | 2018 - 2022
- Aegean Baltic Bank SA | 2019 - 2022
- Asseco SEE d.o.o. | 2018 – 2019
- Attica Bank SA | 2019 – 2022
- Bank of Israel | 2020 - 2021
- Bank of New York Mellon Corporation | 2018 - 2022
- BdB (Association of German Banks) | 2018 - 2021
- Credorax Bank Ltd. | 2018 - 2019
- Deutsche Apotheker – und Ärztebank eG | 2018 – 2019
- Deutsche Bank AG | 2022
- DSGV (German Savings Banks Association) | 2018 – 2022
- Dutch Payments Association | 2018 - 2019
- equensWorldline SE | 2018 – 2022
- Eurobank Ergasias SA | 2019
- Fiducia & GAD IT AG | 2018 - 2021
- Finanz Informatik GmbH & Co. KG | 2018 - 2022
- FIME SAS | 2019 - 2021
- Medifin Leasing Ltd. | 2018 – 2019
- Pancreta Cooperative Bank SA | 2019
- Piraeus Bank SA | 2019
- Privredna Banka Zagreb d.d. | 2018 - 2022
- Raiffeisen Bank International AG | 2018 - 2022
- Redsys Servicios de Procesamiento S.L. | 2018 – 2022
- Santander Consumer Bank AG | 2018 - 2021
- SIA S.p.A. | 2018 - 2021
- Société Générale SA | 2018 - 2021
- Sparda Datenverarbeitung eG / Sopra Financial Technology GmbH | 2018 - 2022
- STUZZA Association for Cooperation in Payment Transfers Austria | 2018 - 2019
- Trionis cvba/scrl | 2018
- UniCredit S.p.A. | 2022

- Secretariat & Project Support: SRC Security Research & Consulting GmbH