

NEXO STANDARDS  
CASE STUDY

NOVELPAY

NOVELPAY SIGNIFICANTLY REDUCES TIME TO  
MARKET FOR DOMESTIC AND INTERNATIONAL  
CLIENTS USING NEXO STANDARDS

## ADOPTING OPEN SPECIFICATIONS &amp; STANDARDS

READ ON FOR  
AN INSIGHT INTO:**The payment application  
challenges facing NOVELPAY.**

- With a developing portfolio of domestic and international clients on various markets, NOVELPAY realized that the multiplicity of protocols and interfaces inhibit innovation and growth

**Why nexo standards?**

- A standardized and open approach for building payment applications
- Solid foundation for interoperability and cross-border acceptance of cashless payments
- Focus on security requirements of the industry and pursuit of innovation

**The nexo standards business case.**

- One nexo-compliant application to cover all customers' needs and markets

**What's next for NOVELPAY?****ABOUT NOVELPAY**

Established 10 years ago by payment industry experts, NOVELPAY has fully established its position as one of the most innovative software houses in the Fintech industry.

With our headquarters in Warsaw, Poland, and sales office in Paris, France, NOVELPAY operates across Europe.

NOVELPAY is an exclusive distributor of PAX payment solutions in Poland and our developers' team constitute the largest PAX Android terminal R&D in Europe.

As an "early adopter" NEXO member, NOVELPAY has developed one of the first applications being compatible with NEXO-IS specification, and in 2017, we obtained certification for PAX Technology terminals.

NOVELPAY is the only company that has obtained nexo certification for both attended and unattended devices in accordance with subsequent versions of nexo standards specifications (nexo IS 3.2 in 2016, IS 4.0 in 2021). We have already started to work for certification according to version IS 5.0.

This case study is an exploration showcasing how specifications and protocols developed by nexo are open and standardized, help simplify development, deployment and maintenance of payment applications thus, reducing costs and enormously reducing time to market.

# The challenges facing NOVELPAY: Multiple legacy systems inhibit innovation and growth

## The challenges

Since its foundation, NOVELPAY has been providing its clients with the best software and hardware solutions in the payment landscape. Systematically working closely with both domestic and international clients, NOVELPAY noticed that legacy systems were setting lots of constraints for payments industry players. Fragmentation between different protocols and interfaces inhibits innovation and growth, making management and maintenance of payments applications more expensive.

The company wanted to identify a solution that would speed up and simplify processes whilst reducing the difficulty and risk assigned to projects. Fast and well defined deployment, whether for a new client or geographic market, is as crucial as quality of software. On top of this, NOVELPAY had to provide flexibility for future maintenance and development.

There was a need for an open and universal standard that introduces fundamental features such as full interoperability and cross-border capacity while still maintaining a very high level of payment security. It had to allow for the deployment of many functionalities and allow NOVELPAY to provide all PSP with complete payment possibilities.



## The solutions and benefits

nexo standards enables fast, interoperable and borderless payments acceptance by standardizing the exchange of payment acceptance data. nexo's messaging protocols and specifications adhere to ISO20022 standards, are universally applicable and freely available globally; this is why NOVELPAY elected to deploy nexo standards.

Through nexo standards, NOVELPAY can more effectively provide its clients with full interoperable and cross-border payment solutions while maintaining a long list of available functions. It also allows for payment processing by any nexo compliant PSP.

Using nexo standards simplifies the development of complete payment solutions. Another important factor is that nexo standards also streamlines certification processes, which decreases the cost and delivery lead time.

### PROJECT SUMMARY – comparison of 3 independent projects’ workload and duration time

	workload for development and deployment of 3 independent projects		
	Feature-rich payment application	Average proprietary payment application	nexo-compliant payment fully functional application
<b>Project workload (ManDays – total for all 3 projects)</b>			
for development and testing	2355 MD	1770 MD	1000 MD
for deployment	285 MD	195 MD	150 MD
<b>Project workload x3</b>	<b>2640 MD</b>	<b>1965 MD</b>	<b>1150 MD</b>
<b>Total project duration time until 1<sup>st</sup> productive installed terminal</b>			
<b>Project time x3</b>	<b>31.5 months</b>	<b>24 months</b>	<b>14 months</b>

Source: NOVELPAY’s data base on delivered projects

The ‘building block’ approach is far simpler which reduces overall delivery time and allows for almost instant deployment of new applications, whether this is national or regional. As a result, the development time becomes negligible for the project duration and the time needed to launch the application for a new client, or on a new market, may not even exceed 30 days.

### PROJECT DETAILS – comparisons of clients’ requirements

Sample client’s requirements	Payment application developed and deployed		
	Feature-rich payment application	Average proprietary payment application	nexo-compliant payment fully functional application
nexo IS- compliant	NO	NO	YES
<b>Minimal card schemes</b>			
Visa V-Pay Visa debit	Contact Contactless	Contact Contactless	Contact Contactless
Mastercard Maestro Mastercard Debit	Contact Contactless	Contact Contactless	Contact Contactless
Amex	Contact Contactless	NO	Contact Contactless
<b>Optional card schemes</b>			
JCB / CUP / UPI	Contact	NO	Contact Contactless
Diners	Contact Contactless	NO	Contact Contactless
Supported transaction types	Purchase (with cashback) Void	Purchase Void Refund	Purchase (with Tip and Cashback) Void

Sample client's requirements	Payment application developed and deployed		
	Feature-rich payment application	Average proprietary payment application	nexo-compliant payment fully functional application
	Refund Preauthorization (Initial, Increment, Cancel, Completion)	Preauthorization (Initial, Cancel, Completion)	Refund Preauthorization (Initial, Update, Cancel, Completion) No-show Card Verification Token request MO/TO
Cash register protocol	Proprietary	NO	nexo retailer
DCC	YES	YES	YES
Authorization protocol	custom ISO8583 Binary	custom ISO 8583 Binary	nexo ISO20022 XML
Documentation	High level proprietary functional specification + custom ISO8583 spec provided	High level proprietary functional specification + custom ISO8583 spec provided	nexo Fast specification available
Testing	no functional test cases, standard card scheme test tools	no functional test cases, standard card scheme test tools	FIS test tool

Source: NOVELPAY's data base on delivered projects

Besides an enormously reduced "time to market" to launch an application for new clients or any new geographic market, the adoption of nexo's open specification and standards, produces a long list of other tangible business and technical benefits:

- **Ease of development**
  - Through nexo standards, NOVELPAY was able to benefit from a full package of well-defined, comprehensive, and documented protocols and implementation guidelines, which overcome the difficulties experienced when using legacy specifications. While nexo is XML-based, which is easily readable to reduce the burden on developers. nexo TMS's support for remote key injection is another major advantage. By removing the need for human intervention, it dramatically simplifies this crucial security element.
- **Develop once - deploy multiple times**
  - International standards enable building a universal solution that can be deployed repeatedly while minimizing the time needed for testing and design. The solution developed by NOVELPAY and deployed on PAX Android Terminals, is the first 'off the shelf' POS payment application available for merchants using Android solutions.
- **Certified against highest security standards**
  - nexo standards certification requires rigorous testing and certification processes; any certified application must meet the highest quality criteria, especially with regards to its integrity and the security of payment provided. Once a developed application obtains certification according to standards set by an independent, payment industry organization, such as CB, PCI, Giro etc. This confirms NOVELPAY's dedication to compliance with the highest security standards.

- **Simplify international deployment**
  - Cross-border functionality is a key element of nexo standards. It addresses the requirements of existing payment standards and network requirements – both domestic and international. nexo offers a simple, harmonized way to operate borderless, and seamless deployment in the new geographic market and cuts the cost of compliance. The ‘building block’ approach as part of the nexo FAST Specifications simplifies the development process while ‘adding’ acceptance of additional networks – whether at the national or regional level.
- **Global partnerships to speed up innovation**
  - A cross-border payments infrastructure, which is globally interoperable and secure, empowers merchants to select best-in-class suppliers. This is a solid foundation for fair collaboration, reducing the scope for “vendor lock-in”. Being truly open for global competition, markets with greater choice enable vendor/suppliers to minimize costs, and effectively facilitate innovation.
- **Ease of maintenance and upgrades**
  - Managing one application on a standardized platform is far simpler and cost effective. It reduces the time, resources and costs associated with evolving a solution and troubleshooting any challenges with updates and bug fixes. The ‘building blocks’ approach makes adding new VAS (Value Added Services) and features much easier, so application is easily maintained and up-to-date. The TMS protocol helps to effortlessly propagate any new features on any terminals in the network.
- **Reduced operating and integration costs**
  - Implementation of nexo FAST Specification and nexo protocols reduces operating costs for acquirers and merchants. This allows greater flexibility when choosing business partners, without bearing the cost of multiple integrations. Furthermore, with nexo’s well-defined TMS standards, together with a nexo-compliant payment application, NOVELPAY’s clients obtain a complete solution and can therefore also use nexo-compliant standardized TMS, which is proved to be well designed, thus providing security assurances.
- **Increase reliability and trust**
  - nexo standards are becoming an increasing part of RFPs. Its standards are recognized for quality and an assurance of interoperability. With the application built based on the nexo open specifications and standards, each subsequent implementation draws from the previous ones which increases the reliability. This reliability also translates to reduced risk and the associated expenses of damage to customer trust.

**nexo standards allow for the wide use of the complete portfolio of NOVELPAY payment solutions across various market segments and payments scenarios, such as: retail, SME as well as in the consumer services sector, city transport, self-service kiosks and many more.**

**These features of NOVELPAY payments are exactly what is needed by clients across some of the fastest-growing market segments, such as the vending industry, e-car charging stations and unattended convenience stores or deliveries.**

## What's next for NOVELPAY?

### Complete nexo-standards adoption by domestic & international clients

The enormous reduction of time and resources necessary to develop, deploy and maintain any new payment applications achieved, due nexo IS specification, is already evident with NOVELPAY completing projects for its clients with an international scope of operations.

NOVELPAY continues to be an early adopter and promoter of nexo's standards with the company already starting work for certification according to version IS 5.0. Longer-term, NOVELPAY is looking to concentrate on the implementation of projects utilizing the full-stack of nexo specification and protocols.

The certification for the most innovative (both attended and unattended) payment devices as well as the wide adoption of the nexo standards amongst both domestic and international clients remains a strategic priority for NOVELPAY.

*"We recognized that legacy systems set visible limits to innovation. The lack of standardization increases the complexity of the payment ecosystem, thus increasing the costs of development, deployment and maintenance of a growing number of applications. We identified nexo as a very promising initiative for the entire payment industry.*

*Because of nexo's pursuit for setting the foundation for a payment solution that meets the cross-border and interoperability needs of merchants, whilst maintaining the highest levels of security, we decided to deploy our payment software with compliance to these standards.*

*We believe it was the right choice to go for nexo. As we work upon the Android platform to make it even more versatile and with the wider spread – nexo plus Android is definitely a win-win solution. Today we see many (more and more) of NOVELPAY's international customers shifting towards the adoption of nexo's open specifications".*

*Jean Paul Hildebrandt, Chairman and CEO at NOVELPAY*

## Who is nexo standards?

nexo standards is the association dedicated to removing the barriers present in today's fragmented global payment acceptance ecosystem. It enables fast, borderless and global payments acceptance by standardizing the exchange of data between all payment acceptance stakeholders. The nexo specifications and messaging protocols adhere to ISO 20022 standards, are universally applicable and fully open.

nexo is a not-for-profit, open association; its membership represents the full spectrum of payment stakeholders including merchants and other payment acceptors, processors, card schemes, payment service providers and vendors.

ISO 20022 defines a broad scope of transaction messages for the financial services world that aim to harmonize and optimize numerous functions in the industry. Already live in over 70 countries, it is seeing widespread adoption for several innovation initiatives such as faster payments models. It offers huge potential to promote greater efficiency and interoperability across the industry and internationally.

nexo standards defines the payment acceptance arm of ISO 20022, with a mission to avoid repeated fragmentation by agreeing a consistent mode of implementation and testing among payment acceptance actors. Its membership incorporates all these stakeholders to ensure the full industry's expertise and needs inform its work.

For more details and offers contact:

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