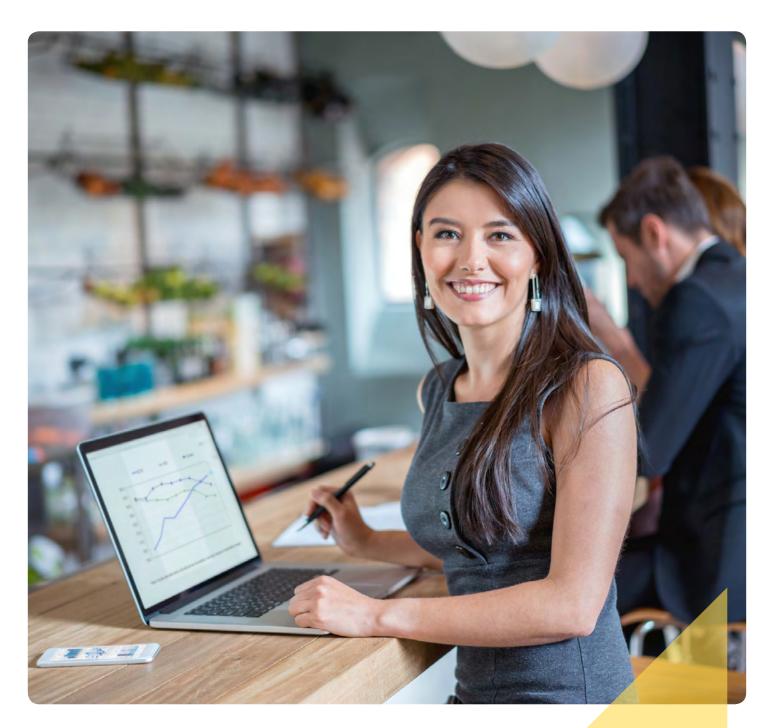
Digital products – sell online Automate identification & signature Preventing customer drop-out in the lending process Designing identification processes optimally



Achieve business goals with identity verification



IN THE FUTURE, CUSTOMERS WILL EVALUATE A BANK PRIMARILY ON THE BASIS OF ITS **DIGITAL OFFERING.**

Pentti Hakkarainen, Member of the Supervisory Board of the ECB, at the 28th RegTech Convention, November 2021

Why do financial service providers make digitization unnecessarily difficult for themselves?

75% of finance managers are dissatisfied with the digitization of their company*1. Rightly so? In many cases, yes. Because digital products in particular could have a much higher success rate.

Many of our customers feel the same way. A typical example is the case of Ben*2. Ben is a product manager for a medium-sized financial services provider. He had put together a solid loan offering to compete against growing Internet competition. The offer was good. Many customers were interested and started the lending process. But: Only a few closed. Ben had to lower the sales forecast and justify himself to management. A very unpleasant situation and associated with a lot of stress.

Ben came to us on the recommendation of a former colleague. The analysis of the lending process showed: Around 30% of customers jumped off at the identification stage because they had to switch to a video call or other tool.

Ben recognized the problem and decided to move to a **seamless process** from PXL Vision. After the integration, which took just a few weeks, the completion rate increased massively. Together we analyzed the process and made various adjustments to ensure that the regulations required for the respective use case were met and that the **highest possible conversion** rate could be achieved. As a side effect, Ben was also able to noticeably reduce costs through automation.

Today, Ben's online product division is a **flagship** for the digitization of his business. Like Ben, others of our customers learned: a product loses digitally because processes cannot be automated well - first and foremost the first. crucial point of contact: identifying and verifying the customer. This is where all our customers who have had their first experience with Identity Verification (IDV) come in: Compliance is selfevident, supporting business objectives is not.

If, like Ben, you want to increase sales and profits online, shorten the sales cycle and reduce costs, this guide will give you some initial ideas. It is an essence of our consulting process, where we share expertise on IDV and onboarding with our customers, so you can design your processes and achieve and grow business goals.

If you have questions or want to act quickly, we should talk right away. Simply arrange a no-obligation initial meeting at www.pxl-vision.com/consultwithkarim.

I am looking forward to the contact with you.

Karim Nemr Chief Business Officer. PXL Vision

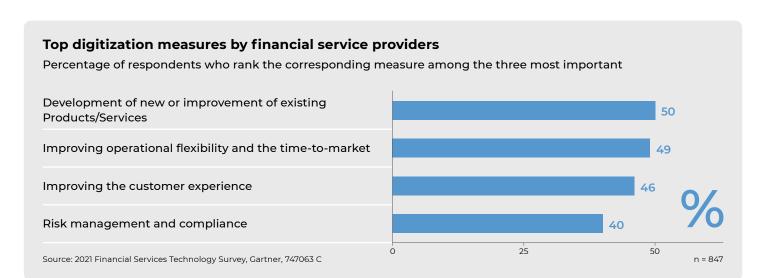


1 In 2020, Zeb Consulting found that the speed and design of processes were the main points of criticism.

2 We have changed the name to ensure confidentiality.

Challenges of digitalization in the financial sector

When the financial sector grows, it grows digitally. Fueled by an active startup scene, the pace of innovation is accelerating. The main focus is on new digital products, i.e. revenue, sales cycle, profit and performance.



Sales and profit depend on digital processes

Established organizations as well as specialized fintech startups must be able to flexibly offer new and ever better services in order to grow and remain competitive. **Speed** is an important parameter that many financial service providers have already mastered: in 2020, half could process a mortgage application in 2 days. In 2015, it was only 8%. Three-quarters of banks in Europe can grant a loan on the same day, compared to 21% in 2015.

Speed is one thing, but what if these **processes** are to run **completely remotely,** i.e. seamlessly digitally? In the foreseeable future, there will hardly be any branches left. Many bank employees will remain in their home offices. This puts **customer verification** at the top of the digital agenda^{*1}. Compliance requirements for customer identification are tightly defined in the financial sector – although they are not uniform. Each region in Europe sets its own priorities. This requires flexibility on the provider side. But while the regulatory requirements can be solved well, things look different on the business side.

The customer experience decides

Anyone who wants to sell digital products needs Automation. It must comply with the regulations but it must also meet customer expectations. After all, the biggest problem is not digitization per se or the company's own product offering, but the lack of countermeasures when customers abandon the purchasing process. Every "drop-out" shortly before the purchase can be equated 1:1 with loss of sales. On the following pages, we will show you what means are available to you for this.

What is the cost of the lack of automation in contracting for financial service providers?

Dropouts in the onboarding process have a direct impact on revenue and profit. Depending on the customer volume, revenue opportunities in the millions remain untapped. These shortfalls then have to be painstakingly reacquired. Poor performance therefore weighs twice as heavily and puts a strain on employees and budgets. A calculation example with values in the industry benchmark illustrates this.

Initial situation: lending

A financial services provider brokers **350,000** loan agreements a year, **140,000** of them online. The margin is tightly calculated. After deducting all costs, he earns **€21.03** per month per loan granted over the total term of the online business. For all credit agreements concluded online, this amounts to a total of **€245,350** per month.

Lever 1: fewer dropouts

The dropout rate in the online business in our example is **30%**. That is a Industry standard rate and it applies to many of our finance customers, including Ben and his team from the whitepaper introduction. If Ben and his team were able to reduce the loan dropout rate by **67%**, they would broker **35,219** additional loans online, increasing revenue by **25%** to **€307,071** per month.

Lever 2: higher conversion

A dropout rate of **0%** is not very likely. However, conversion is partly determined by the method in use. The predominant Video-ID method is usually limited to certain times of day and can only serve a certain number of customers at the same time.

A certain dropout rate is pre-programmed. An automated system enables completions without time or resource constraints. Even at a conservative estimate, this would mean an additional 10%, i.e. 14,000 completions. In the present scenario, this means €294,420 in additional revenue per year from more completions and €740,656 more from avoided dropouts. In other words, a total of more than €1 million in additional revenue per year.

Lever 3: Process costs – Less cost per deal

The financial services provider currently uses a video identification solution. He uses a call center with **15** employees to carry out the identifications. Ben has calculated that the personnel costs alone amount to almost €4 per identification process. Every reduction in these costs increases the profit margin. In our calculation example with 140,000 online deals, using an automated method with PXL Vision results in a total savings of **84%**.

Benchmark values at a glance

Feel free to use our sample calculation on the following pages to help you understand the numbers.

Benchmark values: Example calculation

1. calculation of the lost profit

| Number of loan agreements in 2022 in DE*1 | 7,000,000 |
|--|------------|
| Assumed market share of your company | 5% |
| Credit agreements of your company in 2022 | 350,000 |
| Of which 40% Online | 140,000 |
| Average loan amount*2 | €10,113.50 |
| Average interest rate*3 | 4.78% |
| Average term in months/years*4 | 73/6.1 |
| Profit per credit agreement | €1,539.50 |
| Profit per contract month | €21.03 |
| Total profit per month (11,666 online credit contracts × 21.03) | €245,350 |
| Dropout rate*5 | 30% |
| Lost profit per month*6 | €77,485 |
| Lost profit per year | €929,818 |

| 2. calculation of the conversion | |
|---|------------|
| Theoretical maximum realizable conversions at 0% dropout rate | 200,000 |
| Conversions at 30% dropout rate | 140,000 |
| Reduction dropout rate | 67% |
| New dropout rate | 10% |
| Conversions with dropout rate new | 175,219 |
| Conversion increase (relative/absolute) | 25%/35,219 |

| 3. calculation of the profit increase | |
|---|------------------|
| Number of additional loans extended per year due to additional business (24 / 7 availability): 10% from 140,000 | 14,000 |
| Profit per customer and month | €21.03 |
| additional profit per year (14,000 × 21.03) | €294,420 |
| Number of additional loans granted per year due to 67% less dropouts (175,219 - 140,000) | 35,219 |
| Additional credits per month (35,219 ÷ 12) | 2,935 |
| Additional profit per month (2,935 × 21.03) | €61,721 |
| Additional profit per year (61,721 × 12) | €740,656 |
| Revenue with classic Video-ID system (140,000 × 21.03) | €2,944,200 |
| Revenue with PXL Vision (175,219 × 21.03) | €3,979,276 |
| Additional revenue in total/percentage | €1,035,076/35.2% |

Cost per identification in our calculation example

Video-ID: €9.93 PXL Vision: €1.76

| 4. calculation of the profit increase | |
|---|------------------|
| Assumed cost per Video-ID employee/month | €4,000 |
| Assumed identifications per hour | 8 |
| Number of identifications per day | 64 |
| Identifications/employee/year (64 × 210 net working days) | 13,440 |
| Personnel costs per identification (4,000 × 12 ÷ 13,440) | €3.57 |
| Ancillary costs personnel/infrastructure + Classic Identity Verification/ employees and month* ⁷ | 400 |
| Cost Video-ID/year at 200,000 attempted (and 140,000 realized) identifications | 1,200,000 |
| Cost Video-ID System per attempted identification (1,200,000 ÷ 200,000) | €6.00 |
| Assumed service charges per identification (400 × 12 ÷ 13,440) | €0.36 |
| Total cost/identification | €9.93 |
| Number of employees for 200,000 attempted identifications | 15 |
| Total cost with Video-ID at 200,000 attempted (and 140,000 realized) identifications | €1,987,970 |
| Total costs with PXL at 200,000 attempted (and 184,211 realized) Identifications (excl. one-time setup fee, incl. costs for manual review of 10% of all identifications in the amount of \in 36,713) | €308,713 |
| Savings PXL vs. Video-ID absolute/relative | €1,679,25/84.47% |

1 Source: Statista "Number of new installment loan contracts concluded in Germany from 2006 to 2021"

2 Source: Statista "Average amount of new borrowing in the respective year Loans (in euros) from 2018 to 2020 by age group"

- 3 Source: Statista "Development of average interest rates for Installment Loans in Germany from 2013 to 2020"
- 4 Source: FinanceScout24 "FinanceScout24 Credit Study"
- 5 Out of 200,000 possible conversions, only 140,000 are achieved
- 6 Compared to an 80% reduction in dropout rate of 6%, resulting in 44,211 additional conversions
- 7 Source: Run My Accounts

At a glance

With 140,000 contracts potentially signed each year, dropouts result in six-figure profit losses every month.

How can you prevent customers from dropping out of the buying process?

Target: 67% fewer dropouts

Minimizing dropouts is a powerful lever for avoiding lost profits. Experience shows that media discontinuities in the process and poor usability in particular promote dropouts, which can be directly converted into lost sales.

Here is what matters:

- High usability
- Intuitive, convenient use
- Seamless integration into the Product range
- Broad application profile e.g., IDV, Age verification, Onboarding, Signature
- Connection of third-party systems

67% fewer dropouts mean 25% more revenue.

How can the number of dels be increased?

Target: 10% – 30% more deals

With an automated ident system, your customer can use your offer at any time - so deals are possible even in the middle of the night. The solution must therefore function reliably, be easy to use, and promote trust in your brand.

Here is what matters:

- Intuitive, convenient use
- Seamless integration into the Product range
- Availability 24/7, Web/App with secure data hosting
- Short, fast examination process

Cost savings with automated systems can further increase the profit margin. Every additional deal pays off twice.

How to reduce the costs at the time of purchase, without losing quality?

Target: 84% cost savings

Automation reduces costs: Your call center with 15 employees can now turn its attention to other issues, because the manual identification and verification of persons via video call is no longer necessary. In addition, you save on personnel, since the documentation of the verification proofs is automated.

Here is what matters:

- Personal contact/manual check only as a fallback
- Catching request peaks
- Fraud detection
- Flexible adaptation to business rules and individual requirements

Various identification methods and their potential in digital processes

Depending on the process, the depth of regulation and the region, different identity verification procedures must be used. But not every identity verification procedure achieves the same goal. The higher the effort for the customer, the higher the risk of dropouts



On-site identification:

Identification takes place on the spot with an identification document by an employee of a bank or a post office. The customer has the effort of appearing in person within the opening hours. With increasing branch closures, this is becoming more and more difficult. The time required by the customer is high. The transit times are long. The cost of On-site identification is relatively high.



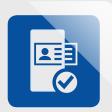
Video-ID:

Identification takes place via a video call. The costs in the call center are high. Identification is not available 24/7, but allows basic scaling. The digital process is interrupted. In fact, some customers are uncomfortable with video calling a stranger in their private space. The time required is moderate compared to On-site identification, but carries a risk of dropouts.



Payment verification:

Identification by bank transfer points the way to online identification. In combination with Auto-ID, it can enable contactless identification. This means no effort for the customer. However, this method is only possible for people with existing bank accounts within the Financial Action Task Force (FATF).



Auto-ID:

Unlike other processes, automatic identity verification is very scalable. Depending on the provider, seamless integration into the company's own processes is also possible. For strictly regulated product segments and traditional regulation, this method can also be used in combination with the other identification methods mentioned here. Verification via Auto-ID is by far the fastest and most scalable identification method. For the customer, this method entails the least effort.

How do you evaluate IDV procedures from a compliance and business perspective?

When is which method worthwhile? How does one evaluate the performance of the various identification methods? Certainly, the aspect of security and reliability of a method deserves the highest weighting, but equally, one should not disregard the associated costs, the user-friendliness and the applicability.

Security/ **Business** Ease of use Cost Applicability Compliance goals On-site identification Ð 0 Ð Video-ID 0 Payment verification A Auto-ID Ð Ð θ 0 ß Bad Medium Good

Methods compared:

Safety/Compliance:

This aspect sheds light on how secure the verification of ID documents is with the respective procedure. Automated ID verification is often more reliable than human verification. Detecting forgeries requires training, a consistently high level of concentration and, in the case of Video-ID, correspondingly good image quality.

Cost:

In addition to quality, costs determine the efficiency of testing procedures. Manual inspections carried out by humans lead to high personnel costs. Automating the process reduces these costs. The low process costs, e.g., for opening an account, promote the development of new digital business models.

Usability:

In the area of usability, we evaluate the ease of access, duration, and intuitive use of the methods. It should be possible to perform an identity verification method as simply and quickly as possible. This prevents process aborts and misapplications. Complicated and lengthy methods can lead to process aborts.

Applicability:

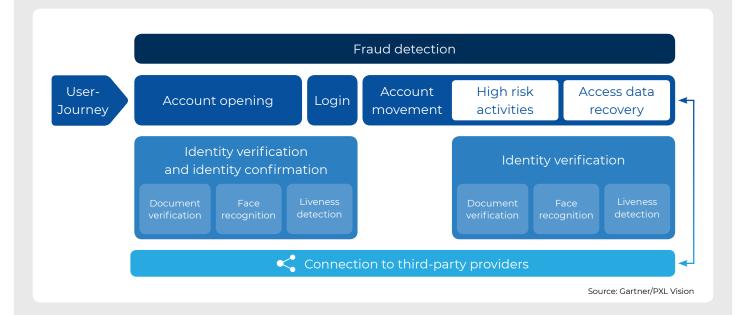
Applicability shows how flexibly the method can be used within business units, regions and time. Access independent of location and time is of great importance for the industry. Recognized methods should also be applicable to different areas of use and testing and be easily scalable, e.g., for identity verification in different regions or age verification.

Impact on business goals:

This aspect sheds light on how long a process takes and how well it can be scaled. From this follows the level of effort required to adapt to customer growth.

Integrate identity verification productively into processes

People are quick to assign identity verification to the initial contact with a new customer. This includes, for example, opening an account, registering for online services or applying for a loan. But equally, high-risk self-services such as password recovery or credit line increases require accurate, verifiable identification. Both areas offer tangible cost savings and growth opportunities.



This is how automatic identification works

A customer is interested in an offer and clicks with the intention to buy or take action. If identification is mandatory, the solution from PXL Vision fits seamlessly into the existing process - without media disruption. As part of the identity verification process, the identification document is first checked. In the process, the machine-readable security codes are read and checked. Thanks to AI, the system is constantly learning. Then the person is checked using facial recognition. Liveness recognition based on PXL Vision Passive Liveness technology ensures that customers do not have to adopt unnecessarily artificial and uncomfortable postures during this process, nor do they

have to hold still for an unnaturally long time. Now, the information on the ID document is compared and **validated** against the information in the customer's account. For address validation, a **document** can also be **photographed** directly via the PXL Vision app, for example a bill from an electricity provider. If certain ID documents are excluded or if a verification criterion is not met, a **manual verification process** can be connected. The collected data and the verification documentation can be transferred directly to third-party systems. The product offering for the customer then continues seamlessly.

Important – The onboarding process can be influenced by specifying or excluding certain review criteria. Depending on the product segment or region, these can be adapted.

Must-have – Seamless integration into corporate identity, app and web

An identity verification solution has to build trust. It must therefore not interrupt the onboarding process, but should fit seamlessly into the overall process. This requires, for example, optimal branding options, company-typical user guidance that customers already know, or direct technical integration.

Do not forget – Easy integration of manual checks or other procedures

Contactless identification has the highest efficiency. It is therefore worth starting all checks with it. Check criteria are defined in the process, for example the minimum remaining validity of an ID card of six months or the validity of explicitly defined ID documents. If a request does not meet these criteria, a manual check can be offered, thus avoiding a process abort. In this way, costs can usually be saved and the time-consuming manual check is only used in previously defined exceptional cases.

Markets with and without Auto-ID certification

In many markets, Auto-ID can already be certified as a solution on its own or in combination with Payment verification or a similar process. The markets benefit from the solution. In markets where legislation stipulates Video-ID, the introduction of Auto-ID is worthwhile for non-regulated product segments and for selfservices. Here, too, there are worthwhile cost savings in digital customer processes. Use can then be expanded as soon as legislation in these markets catches up with the European or international standard.



Regulations and certifications of automatic identity verification

With the right certifications and services, the process can be designed end-to-end right up to the electronic signature. In addition to KYC and AML guidelines, eIDAS and QES are also important for financial service providers.

eIDAS is the uniform European regulation for electronic identification. It standardizes and regulates digital identification in the EU area. PXL Vision has this certification and can therefore be used in all European markets.

Qualified Electronic Signature (QES) is required for digital contracting. PXL Vision offers identity verification services that are module-certified as eIDAS compliant and can be deployed by trust service providers.

KYC and AML stand for Know your Customer and Anti Money Laundering. They contain the specifications for customer identification and against money laundering.

Why is a leading financial services provider switching to a digital identification process?

When opening a bank account, purchasing an investment product or life insurance, a leading financial services provider (hereafter simply "the financial services provider") needs to verify the identity of their customers in a legally secure manner. This costs time and disrupts the onboarding process.

Why switch to a digital process

Thanks to the use of PXL Vision, the financial services provider prevents fraud, reduces the costs of the verification process, and relieves the workload of the branch staff. The application is thus significantly superior to checks by a customer service representative. A video call to a call center or presentation at a branch is no longer necessary in some countries. Thanks to the fast and simple process for customers, the number of dropouts drops and the conversion rate increases: The number of transaction dropouts is in the low single digits. Employees can use the time gained for sales.

What does artificial intelligence do in the identification process?

Automated identity verification increases the ability to act, improves performance and reduces costs. The financial services provider is so convinced by the system that it wants to expand its use: In the meantime, the regulatory requirements for averting money laundering have increased. Since 2022, the financial services provider has had to regularly recheck the identity of each customer. That would be impossible to do manually, without a multichannel access app. The app knows no opening hours and is available around the clock, 365 days a year.

What has changed?

The financial services provider has customers in the six-figure range. Around 20 percent now use the mobile app for digital identity verification – and the trend is rising: employees receive very positive feedback from their customers, and the advisors who use the system in the branch are also pleased. The standardized process allows them to regain valuable customer time.



Identity verification in finance: the three most frequently asked questions

We offer support in verifying the identity of individuals. In doing so, we ensure that the process complies with the relevant regulations and requirements in each case. We answer three of the most frequently asked questions here. Do you have any other questions? Our consultants have a wealth of experience and are available to answer any questions you may have about identity verification.

What drives up the cost of identity verification?

Many of our customers generate avoidable costs, especially at the beginning. This is because they perform too many manual identity checks, even when they are actually already able to verify their customers' identities digitally and automatically.

At the same time, there are two other factors to consider. Either the inspection criteria are too strict and many customers have to be additionally inspected, or the inspection criteria may be too lax. This then means payment defaults if necessary, which in turn has a negative effect on the operating result.

The cost issue must therefore be considered individually and always in the context of compliance and risk. Flexible systems are a very good way to collect and evaluate data. However, one should not forget the analyses and the documentation of the checks for the proof of compliance.

Everything about IDV

More information on the market and customer situation, on the selection of providers and solutions, as well as information on terms and trends relating to IDV.



What are my levers for identity verification in the onboarding process?

Many solutions on the market are preconfigured. This means that the barriers to entry and the business logic are already predefined. If gaps then open up in the onboarding process or opportunities for cost savings arise, you can't take advantage of them. Important levers are: Defining verification criteria for identity documents, e.g., minimum validity period, type of document, or acceptance of a different registration address

What factors influence conversion and dropout?

The design of the onboarding process has a big impact on conversion. Consistency and duration make a big difference.

Trust and data protection are also important. If the customer is left with a queasy feeling after the identity check because they don't know which server their data has ended up on, this certainly doesn't have a positive effect on customer loyalty. Trust is built primarily through a well-designed, seamless process that accurately continues the company's typical user experience. Experience shows that you can easily lose 30% of customers during onboarding if you change platforms or media.



PXL VISION'S PLATFORM IS **FLEXIBLE** AND CAN BE ADAPTED TO DIFFERENT **REGULATORY REQUIREMENTS** AND **BUSINESS PREFERENCES.**

Roger Huber, Project Lead Multichannel Management, Zurich Cantonal Bank

What are your business goals?

Which use cases fit best?

What technologies and regulatory requirements do you need to consider?

Take advantage of our free initial consultation.

Karim Nemr would be pleased to help you:



info@pxl-vision.com

Find out more about PXL Vision:

www.pxl-vision.com



Karim Nemr, Chief Business Officer and expert consultant for the areas of finance, insurance and e-commerce

Identity verification expert, **Karim Nemr** from PXL Vision, will help you with all your questions about IDV and discuss your organization's unique requirements: regulations, cost reduction, integration, process design and implementation.