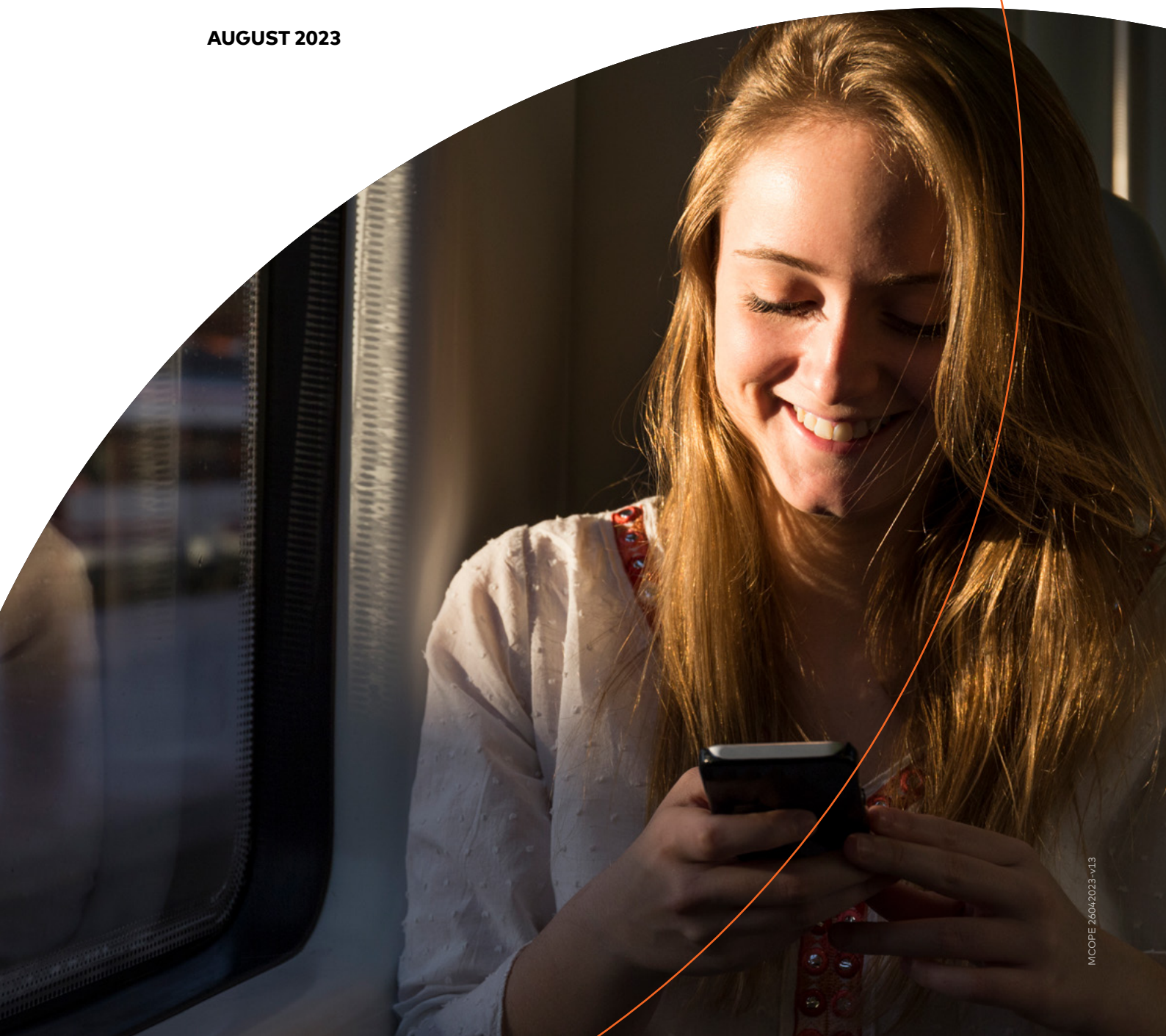




Open banking landscape in the Nordics

STUDY

AUGUST 2023



The Nordics: leading innovation in Open Banking



"Danish and Swedish consumers are, on average, around 33% more likely to want to share their data compared to German consumers.."

Despite their relatively small population, the Nordic markets boast a large and developed economy with a strong appetite for new technologies and approaches. Long-standing cooperation between the governments of these markets and their financial institutions plays a significant role – for instance, Sweden was the first market in the world to introduce e-signatures in 2000 following their legalisation across the EU.

The Nordic markets were also the first in Europe to launch digital payments, with Sweden introducing mobile payments in 2012, followed by the UK in 2013. More recently, Nordic governments agreed a new partnership called Vision2030, aiming to position the Nordics as leaders in digitisation, ethical artificial intelligence (AI), and responsible use of data by 2030. To support this vision, the Nordic Smart Government initiative is piloting a project where businesses share digital invoices and data to improve operational efficiency. This project has created fertile ground for Open Banking to mature as confidence builds in data sharing between businesses. Coupled with the emergence of public cloud hosting and better data analytics, such governmental schemes should unlock more opportunities for Open Banking in the Nordics.

Such confidence and trust in data sharing isn't limited to businesses, either. According to Deloitte's Data Ethics Consumer Research Report, the population in these markets has expressed higher confidence in sharing their data with governments and companies than other European countries. Danish and Swedish consumers are, on average, around 33% more likely to want to share their data compared to German consumers.

Expect the next wave of developments in Open Banking across the Nordics to include instant payments for both consumer and corporate use cases, the automation of consumer onboarding, and automated credit checking via open API calls on the user's bank. As our country-by-country reports show, the Nordics are among the most dynamic Open Banking markets in the world.

Nordic Open Banking infrastructure

Digital Commerce Infrastructure	Norway	Denmark	Sweden	Finland
Internet users who bought online (%)	92%	92%	90%	81%
Last online purchase (individuals, last 3 months)	81%	82%	78%	62%
eGDP (in % of GDP 2022)	4.5%	7.3%	2.8%	2.3%
Digital Infrastructure	Norway	Denmark	Sweden	Finland
Digital banking penetration (%)	96%	95%	84%	93%
Open Banking Regulation	PSD2, GDPR implemented (Q4 2022)	PSD2, GDPR implemented (Q4 2022)	PSD2, GDPR implemented (Q4 2022)	PSD2, GDPR implemented (Q4 2022)
Digital Payment Instruments	Domestic CT realtime	Domestic CT realtime	Domestic CT realtime	SCT, SDD, SCT INST
Open API Standard	Nordic API	Nordic API	Nordic API	Nordic API



Nordic Open Banking infrastructure

Norway Open Banking Infrastructure	Q4-2020	Q4-2022	GR 2020/2022
Open Banking licenses for PISPs	4	84	2000%
Open Banking licenses for AISPs	4	85	2025%
Open Banking licenses for TPPs	6	9	50%
TPPs passported	93	100	8%
API Aggregators	19	21	11%
Open APIs active	194	194	0%

Denmark Open Banking Infrastructure	Q4-2020	Q4-2022	GR 2020/2022
Open Banking licenses for PISPs	5	20	300%
Open Banking licenses for AISPs	9	21	133%
Open Banking licenses for TPPs	13	15	15%
TPPs passported	102	116	14%
API Aggregators	20	22	10%
Open APIs active	53	53	0%

Sweden Open Banking Infrastructure	Q4-2020	Q4-2022	GR 2020/2022
Open Banking licenses for PISPs	14	12	-14%
Open Banking licenses for AISPs	28	13	-54%
Open Banking licenses for TPPs	31	38	23%
TPPs passported	105	115	10%
API Aggregators	19	21	11%
Open APIs active	44	44	0%

Finland Open Banking Infrastructure	Q4-2020	Q4-2022	GR 2020/2022
Open Banking licenses for PISPs	-	15	-
Open Banking licenses for AISPs	-	14	-
Open Banking licenses for TPPs	12	13	8%
TPPs passported	105	125	19%
API Aggregators	-	21	-
Open APIs active	-	52	-

AVARDA: Open Banking across the Nordics

Avarda is a merchant's best friend. Based in Sweden, Avarda is known for its omnichannel payments platform that offers complete white label solutions to retailers and merchants in the Nordics, Baltics, Germany, Austria and Poland.

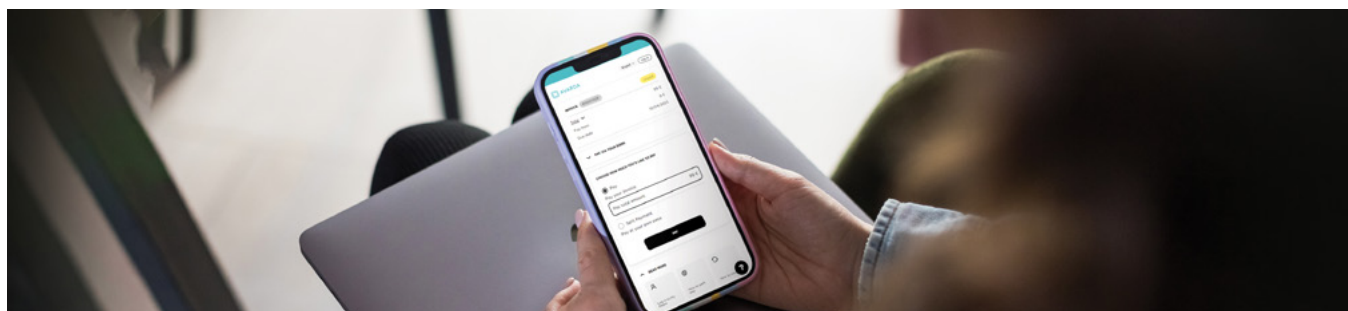
In early 2022, Avarda teamed up with Aiaa, a Mastercard company, to boost its core payment products with Open Banking and provide its customers with a smoother buying experience.

Avarda has always had a relentless focus on putting the retailer's and merchant's brand first. As Avarda's CEO, Mikael Johansson, says: "With our payment solutions, retailers can focus on building their own business and brand. We offer retailers a channel for increasing customer loyalty and driving organic sales. We believe the key to organic growth is customer loyalty. Our focus has always been to be close to the merchants and build payment solutions with them. We act as a financial and technical silent partner behind the solution. We blend in, while merchants stand out."

Avarda teamed up with Aiaa to implement Open Banking functionalities in Avarda's two core products: Checkout and 'buy now, pay later' payment solutions better known as Avarda 360. It gives merchants the opportunity to own the customer relationship throughout the entire buying journey before, during and after purchase. Every contact with customer is a possibility to build brand awareness and loyalty. Avarda 360 includes all the activities that take place after a completed purchase.

"If the customer pays with Avarda's 'buy now, pay later' payment methods, the invoice can be paid with account-to-account payments in the same place without separate login to the online bank. As Avarda's fully branded invoices are updated in real time, customers see their updated balance immediately after payment," Avarda's Development Manager, Eeva-Liisa Marjomaa, explains. "There's no doubt this is a convenient way to pay your invoices – and at the same time continue shopping with the same familiar merchant or retailer. With Aiaa, we can get account-to-account payments through one integration for all Nordic markets. That is a clear advantage when it comes to both implementation and maintenance of the services," she says.

Eeva-Liisa Marjomaa explains that finding the right Open Banking platform is all about finding a technically strong solution with an emphasis on security and compliance: "Aiaa's payment solution was easy and fast to implement. Good technical documentation saves time and increases productivity in our technical team. Aiaa's solution also supports our strategy to put the retailer's brand in focus. The better the payment experience, the better the conversion rate. It's as simple as that."



"Danske Bank opened its API set created for MobilePay to allow other developers to create apps that could be shared across borders"

Denmark

In partnership with other banks from the region, Denmark was an early adopter of an Open API standard for the region's banks. As early as 2017, Danske Bank opened its API set created for MobilePay to allow other developers to create apps that could be shared across borders. Five years on, this shared API set supports hundreds of start-ups in the region. Denmark has also led the internationalisation of Open Banking standards through its 2017 agreement with the Monetary Authority of Singapore (MAS) which allowed fintechs domiciled in one of these markets to expand their operations into the other.

Just prior to its acquisition by Mastercard in 2021, AiiA teamed up with BEC, a Nordic FinTech provider, to enable 27 banks in Denmark to offer Open Banking services for their customers. The collaboration provides around one in three Danish banking customers with Open Banking. BEC's banking customers can both see and pay with accounts from other banks as well as getting a full overview of their finances across several banks. Most recently, one of the largest crypto-currency exchanges in the Nordics, Norway's Firi, has expanded into Denmark by using open APIs to enable easier onboarding and credit-checking.

Thanks to the early adoption of a shared Open API standard and its long-standing tradition of collaboration, Denmark's banks enjoy great communication, responsiveness, and willingness to solve issues. Furthermore, Denmark's regulator is active in enabling collaboration, with strong guidance on Open Banking implementation, although the creation of a specific industry body to oversee standards and implementation such as the UK's OBIE would no doubt further drive the development of Open Banking. As a fast-maturing market, Denmark has the opportunity to lay foundations for Open Finance in the years ahead, bringing in regulations that go beyond current EU stipulations. As things stand, there are currently 109 TPPs registered in the country, of which 12 are domestic registrations, according to Mastercard's Open Banking Tracker.

LUNAR

In mid-2020, Aiaa, a Mastercard company, added leading challenger bank Lunar to the list of Nordic banks that use its Open Banking technology to create value-added features.

This partnership has enabled Lunar to take an important step in becoming the primary banking interface for 650,000 users.

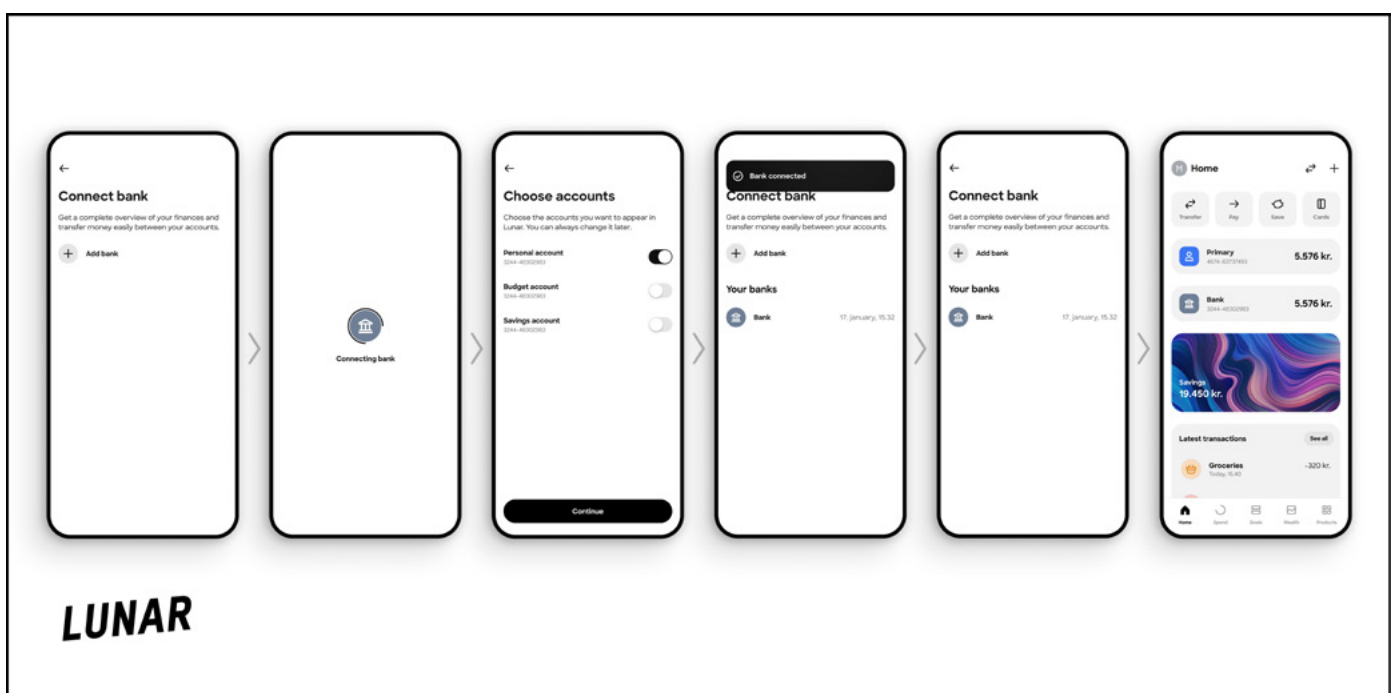
Lunar has activated multi-banking features and enabled payments across Denmark, Sweden and Norway with Aiaa. As a result, Lunar became one of the first Danish banks with a fully functional combination of both account aggregation and payment initiation.

Lunar is building Open Banking applications using Aiaa's infrastructure to create a financial 'super app' for its rapidly growing customer base across the Nordics. By utilising Aiaa's account aggregation and payment initiation services, Lunar provides customers with Open Banking features that allow them to not only view but also move money between accounts, as well as pay bills from accounts with other banks, all in one app.

Commenting on the partnership, David Österdahl, Director of Product at Lunar, said: "We have a strong ambition to create

a financial super app to let our users manage all their finances across banks in one place and become the go-to interface for handling everything related to our users' financial life. To deliver the future of banking services, we're creating a digital banking experience that is second to none and we are excited to work with Aiaa especially to offer payment initiation for our users. They bring extremely high quality and have proven high deliverance in a wide range of Nordic financial services."

Jonas Vogt Rasmussen, Vice President, European Open Banking Product Sales, Aiaa added: "We're very happy to see that Lunar is taking its next step in the Open Banking journey with Aiaa. By leveraging Open Banking with our platform, Lunar will be able to fulfil their ambitious Nordic plans and create value with the best Open Banking capabilities the Nordics have to offer. We're heavily focused on empowering Lunar on its journey to becoming the preferred banking choice by letting their customers experience the true value of Open Banking".





"Norway's Open Banking ecosystem follows a similar trend to the rest of the Nordic countries"

OB TREND:

eID-compliant, digital ID services such as Norway's BankID have been significant drivers of digitization

"Swedish consumers are ready to embrace Open Banking."

Norway

The same collaborative model that delivers success in Denmark is also active in Norway, from digital wallets to groundbreaking digital ID services. In June 2018, the merger of the three Norwegian domestic payments services (Vipps, BankID and BankAxept) was announced, designed to prepare Norway's domestic payment schemes for an Open Banking ecosystem. Before implementing PSD2, Norwegian online and mobile banking initiatives were already focused on pan-Nordic banking services, credit transfer payment initiation, digital ID authentication and mobile P2P payments. Norwegian banks provide Open Banking API access in combination with aggregators, which provide connectivity between Nordic banks and between banks and independent PISPs/AISPs. At present, Mastercard's Open Banking tracker reveals 109 TPPs registered in the country, of which nine are domestic entities.

Norway's Open Banking ecosystem follows a similar trend to the rest of the Nordic countries, with a healthy consumer appetite for technology and a strong domestic payment scheme - Vipps – creating great opportunities for Open Banking. Norway's eID-compliant digital identity service, BankID, has also been a significant driver of digitisation in the country.

Sweden

Along with its Nordic partners, Sweden is building a mature Open Banking ecosystem. Home to some of the world's leading fintech companies, Sweden has long set an example in both innovation and collaboration for the rest of Europe and the world to follow. For instance, the use of cash is among the lowest in the world, at less than five percent of all transactions. As early as 2018, the Swedish fintech startup Open Payments Europe provided a PSD2-compliant infrastructure platform to offer users a single point of access to diverse bank APIs across the EU.

According to the European Commission's Digital Economy and Society Index (DESI), Sweden is one of the most digitised societies in Europe. Combining this rate of digitisation with the high levels of public trust mentioned in this overview, it's clear that Swedish consumers are ready to embrace Open Banking. Examples of successful implementations to date include Sweden's real-time account-to-account transfer platform, Swish. Introduced in 2012 as a result of a collaboration between six of Sweden's largest banks, Swish is now used by eight in ten Swedes for their daily payment needs¹.

"Finland boasts
a tech-savvy population
and a forward-
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innovation"

The large Swedish banks have their own Open Banking API sets at a group level. AiiA has played an active role in facilitating Open Banking in Sweden, delivering an Open Banking API set that enables Swedish banks and merchants to connect with each other as well as independent PISPs and AISPs. This approach will eventually enable the creation of a full Nordic cross-border payment and banking infrastructure.

In Q4 2022, there were 12 payment initiation providers and 13 AISPs licensed in Sweden by Finansinspektionen. In total, 38 domestic Open Banking third-party providers and 115 foreign third-party providers with EU passports could connect to Swedish banks via that bank's API set, according to Mastercard's Open Banking tracker study.

Finland

Like its Nordic neighbours, Finland boasts a tech-savvy population and a forward-thinking approach to banking and payments innovation. Almost nine in ten Finns use online banking services, and the country has shown the same strong appetite for regulatory innovation as its Nordic partners.

In October 2019, the Finnish Financial Supervisory Authority published its supervision release on the deadline for the migration to strong customer authentication (SCA) for e-commerce card-based payments. Electronic SCA involves the use of means of electronic identification that provide a substantial or high level of confidence in the claimed or asserted identity of a person and fulfil certain technical specifications and standards. In mid-2020, the Finnish Government set up a working group to examine the creation of a single Open API standard for the country's financial institutions, but to date no single national API standard has been adopted. Mastercard's Open Banking tracker study for Q4 2022 says there are 138 TPPs registered in Finland, of which 13 are domestic.

PAYTRAIL

In July 2022, Paytrail – the largest online payment company in Finland – announced that it would enable large-scale Open Banking payments every month led by European Open Banking leader Aiaa, a Mastercard company.

Since 2019, Paytrail and Aiaa have collaborated on the acceleration of Open Banking powered payments at e-commerce checkout. Powered by Aiaa's Open Banking platform, Paytrail enables e-commerce for more than 20,000 merchants and online shoppers, providing greater choice with new payment options and providing a more hassle-free online checkout experience.

This arrangement allows anyone with a bank account to initiate swift and secure digital payments that arrive as soon as possible and in some countries almost immediately in a retailer's account. Compared to other methods, this Open Banking solution requires fewer steps to complete a payment, as the payment is initiated directly from the bank without the need to manually fill in payment details or switch between applications or interfaces.

Through this collaboration, merchants can also offer a solution fully integrated in the checkout environment and aligns to Paytrail's and Mastercard's shared vision of continuously increasing convenience for consumers and enhancing security. Commenting on the collaboration, Joni Rautanen, Chief Operating Officer of Paytrail, said: "We've been working with Aiaa for some time and we're happy to see the results of the collaboration today. Without this cooperation we would have had to build the interface integration with the banks ourselves and it would have been a very challenging task. The simple integration with Aiaa has made it possible for us to get the solution up and running fast to offer thousands of merchants the opportunity to leverage Open Banking powered payments."





The most experienced open banking platform in Europe, with more than a decade of experience in fintech and hundreds of clients servicing both businesses and consumers with open banking empowered services.

Based in Denmark, the company's mission has always been to empower people to bring their financial data into play safely and transparently. AiiA's platform allows businesses and financial institutions to integrate financial data and to offer account-to-account payments directly in their services to an estimated reach of 337 million European citizens.

Today, AiiA has more than 2,700 connected banks across Europe, processes more than 10 million bank logins and more than a million account-to-account payments every month for large banks and e-commerce payment gateways.

The open banking platform has received backing from Danske Bank and DNB to build a leading pan-European open banking infrastructure to support financial innovation in the rapidly changing financial services industry.

AiiA provides open banking services to a long list of financial institutions, including Lunar, Danske Bank, Santander, OP Financial Group, DNB, Resurs Bank, BEC, Bankdata and Pleo and won the award for Best Mobile Payment Solution at Finovate Awards in 2020 for its immense work on open banking payments with multiple clients.

Visit the website:

www.aiia.eu

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- 1 See Swish, 16 June 2022: "Swish reaches historical milestone": <https://www.swish.nu/nyhetsrum/nyheter/historical-milestone-for-swish-now-more-than-8-million-users?lang=en>

