

Powering account-to-account payments in e-invoicing with open banking APIs



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Open banking - heralding the dawn of e-invoicing with integrated payments

Since the PSD2 directive was introduced in September 2019, companies worldwide have placed increasing focus on the importance of open banking and how it can add value to their business. This paper will highlight the evolution and benefits of e-invoicing, how Neonomics has helped businesses take this to the next level, and how this will impact your own business. Neonomics has been partnering closely with several businesses that leverage e-invoicing, which is the focus of this white paper. We share the partnership between Neonomics and Kivra, a digital solution for e-invoices that is built on PSD2 enabled payments, demonstrating how it is exploiting the value of open banking.

The end of an era for paper invoices

Even today, many companies still print and send out paper invoices by post, which is not only expensive but also time-intensive and error-prone. Reports have estimated that the direct staff costs of compiling and sending out paper invoices are between €2.50 and €10 per invoice (Source: European Central Bank). According to the European Association of Corporate Treasurers, companies can save over 80% of this cost by introducing e-invoicing.

With the global digital economy on the rise each year, digitalization provides more significant opportunities to tap growth, track and prevent fraud, and increase accuracy throughout transaction processes. It also has a significant environmental impact, as making one ton of paper requires 17 trees and emits more than 1 ton of CO₂e (carbon dioxide equivalent), in addition to consuming other resources, according to the United States Environmental Protection Agency.



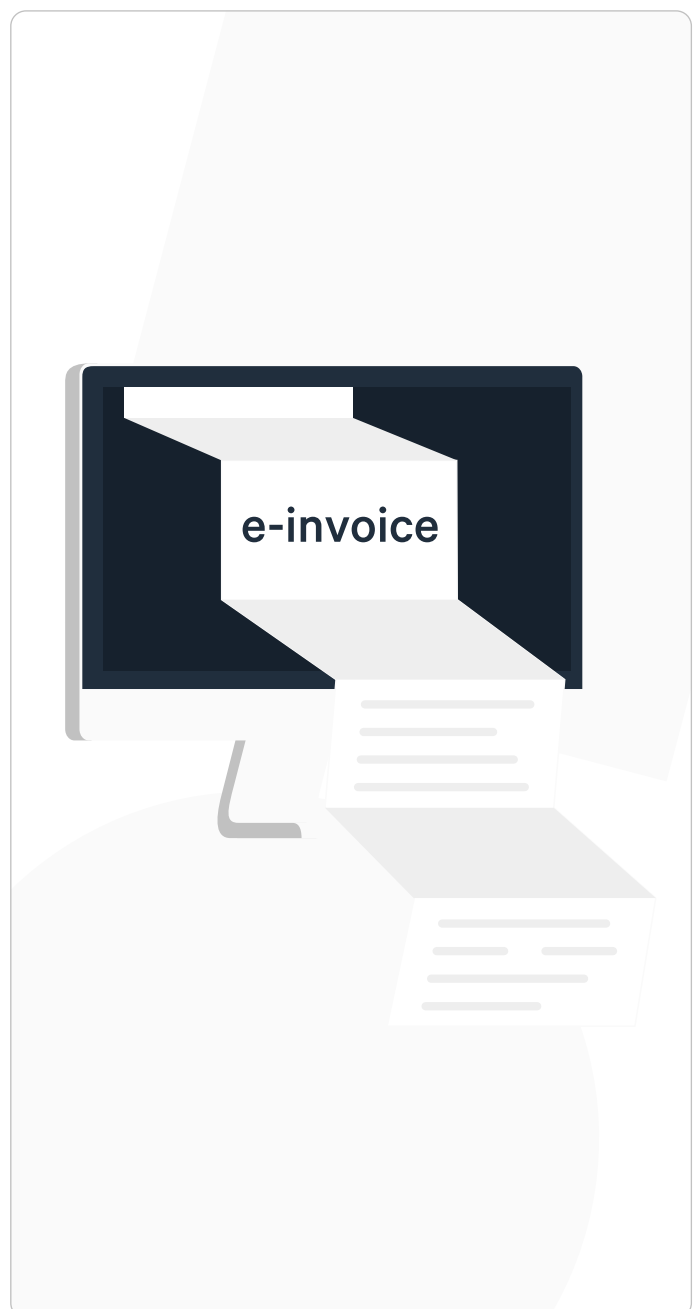
Processing cost ●

What is e-invoicing?

Although no global standard definition of an e-invoice exists, to define it simply, whenever a purchase of a product or a service occurs, a commercial document known as an 'invoice', is created to indicate the transaction officially. E-invoicing is a rapidly growing technology globally; however, many organisations are still in the dark as to how to integrate this within their processes.

What are the benefits?

E-invoices contain all of the payment details electronically inserted, removing the possibility of errors being made on the initiator's side. It also reduces the likelihood of mistakes for the recipient when they enter details such as the amount and account number. In Norway, a customer identification of up to 11 digits (i.e., KID number) is necessary for certain types of invoices, and human errors are more likely to occur, causing unnecessary delays. Environmentally-conscious companies can also appreciate the reduced carbon footprint of e-invoices versus paper.



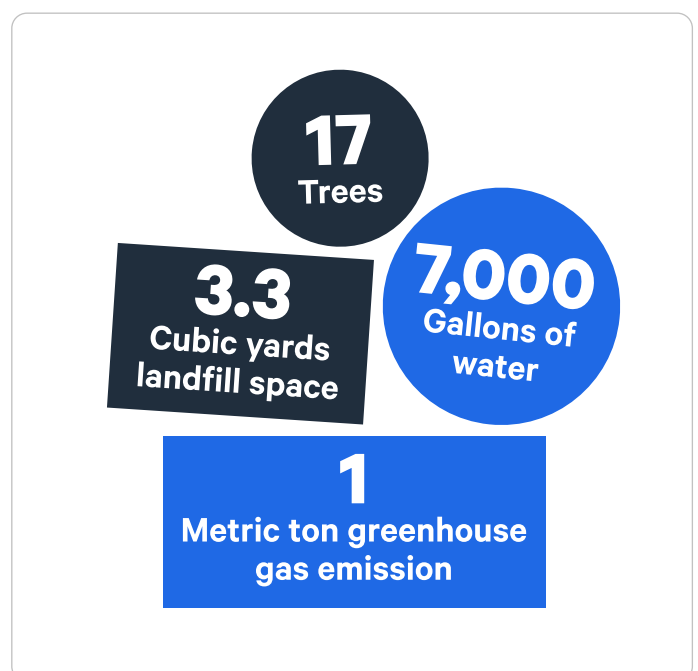
The use of e-invoicing is growing

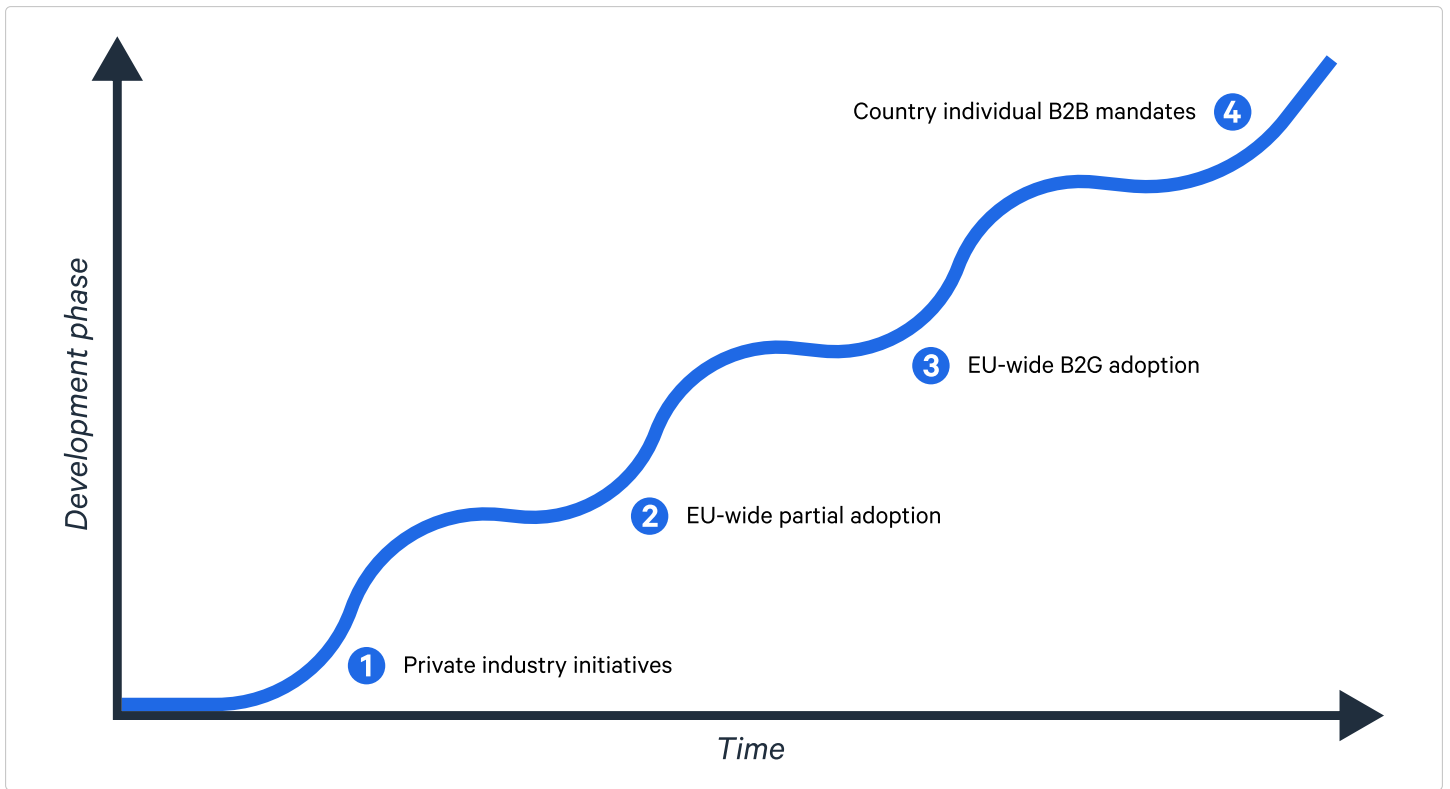
According to a recent report by Billentis, the global market of e-invoices currently stands at 550 billion invoices annually (that is 270 billion invoices to consumers and 280 billion to governments and businesses). This is expected to grow to 2,200 billion by 2035. Although the private sector initially drove e-invoicing, it has recently been firmly pushed by the public sector. With the emergence of disruptive technologies such as blockchain, machine learning, the cloud, it opens the door to new business opportunities to increase the efficiency of their processes and reduce costs. EU Public Administrations on all federal levels are adopting e-invoicing from 2020.

A KPMG report suggests a strong increase in the use of e-invoicing among government authorities to increase compliance efficiency and reduce fraud, such as tax evasion. As an example, Italy has suffered from a substantial VAT gap (the difference between expected VAT collection and actual collected VAT) that was standing at EUR 35 billion before 2018. Therefore, in 2019, Italy implemented e-invoicing mandates across B2G (Business to Government), B2B (Business to Business), and B2C (Business to Consumer) to prevent such tax evasion when it comes to collecting.

Currently, more than 55 countries either use e-invoicing within their processes or are strongly considering it. In addition to e-invoicing adoptions within governments, there is a growing trend in use of e-invoicing for B2B transactions. In some

Source: United States Environmental Protection Agency ●





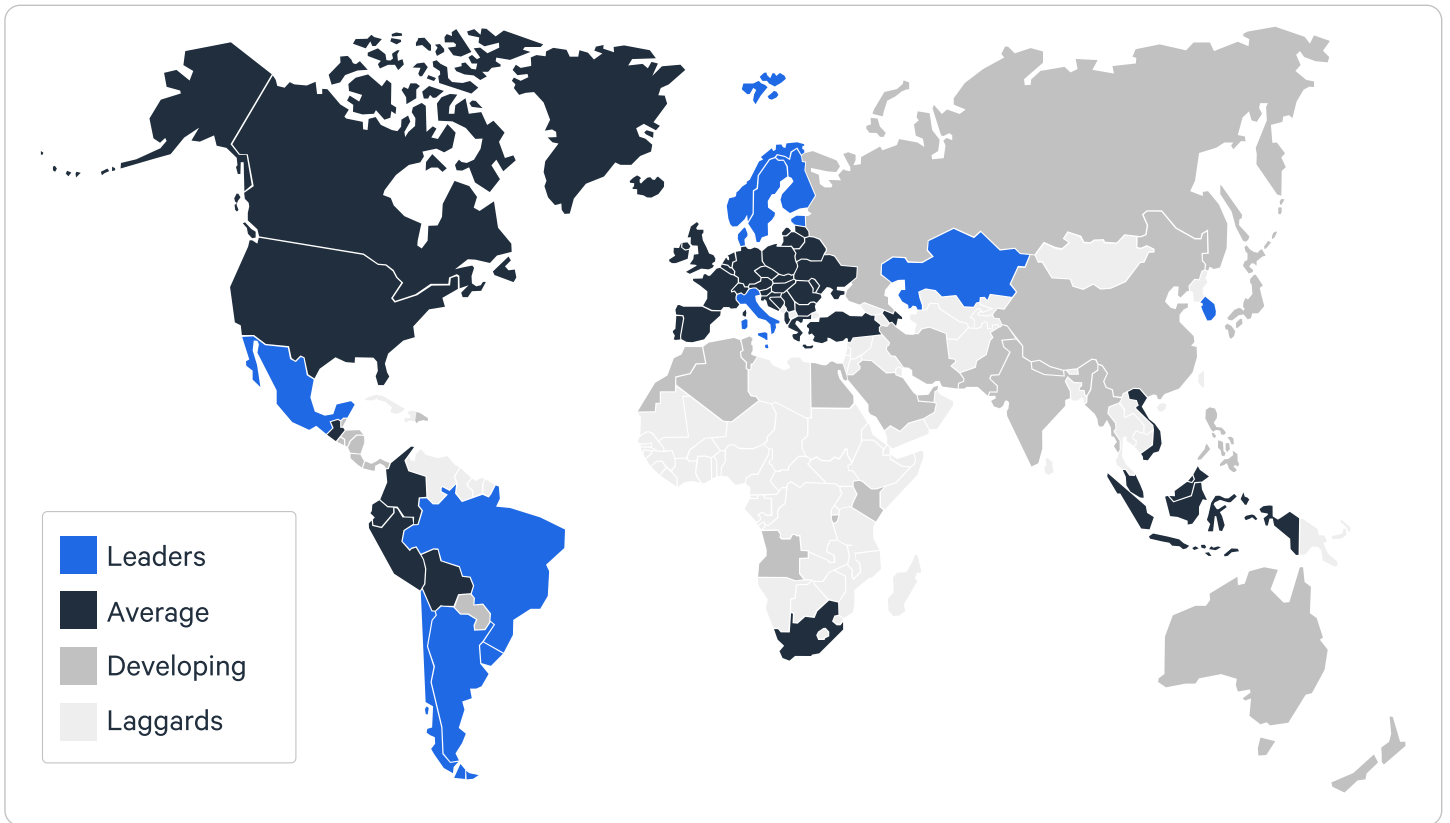
European countries, such as Ukraine and Belarus, B2B e-invoicing has even become mandatory. Within the EU, e-invoicing has gone through a step by step process for adoption and optimization (see figure above).

Source: Billentis, 2019

Trends indicate that the B2B segment is at the forefront of adoption, with adoption within this segment moving faster than within the B2C segment. When it comes to distribution channels, e-mails have been by far the most preferred way to receive e-invoices; however, there is an exception in the Nordic countries where the majority are distributed through online banking portals.

Segment	Estimated annual volume to be at least
B2C/G2C	270 billion
B2B/B2G/G2B	280 billion
Total	550 billion

Source: Billentis, 2019



Source: Billentis, 2019

Who's leading?

Across Europe; Norway, Denmark, Sweden, Estonia, Iceland, Switzerland, and Italy have been identified as leaders within the international e-invoicing market in 2020, with a predicted adoption rate greater than 40% by the end of 2020. Closely following, Germany, UK, Belgium, Netherlands, Spain, France, Portugal, Croatia, and Slovenia have a predicted adoption rate of e-invoicing between 20-40% by 2020. A challenge for tracking which countries are at the forefront of adoption is that it is frequently measured differently across the world. A common way to track is to look at how many e-invoices are exchanged per person each year.

As the Billentis report highlights, China ranks highly in this metric with 150 per person per year. However, a key factor is that in China there is a limit on how much can be charged per e-invoice, meaning some things are split into several invoices. It also must be noted that the European market makes for a difficult comparison against other advanced markets such as the U.S. or Latin America, as Europe is a combination of 40+ countries and legislations, and over a hundred different languages.

E-invoicing in the Nordics

It is no surprise to find the Nordics amongst the leaders in the e-invoicing market in Europe. This is helped in no small manner by strong government backing and public authorities pushing the e-invoicing initiative as the superior alternative to more traditional methods. In Sweden, e-invoicing among government authorities has been mandatory as early as 2008. The Finnish government administrations have been accepting e-invoices since 2010, and have been on the rise amongst private companies, although not yet mandatory. Norway has been increasing its use of e-invoicing across public administrations between 2011 and 2015, with several providers to choose from. However, many e-invoicing systems, such as NemHandel in Denmark, can only be used on a national level.

Digital mailbox as an e-invoicing companion

Following the growth of e-invoicing in Europe, a digital mailbox that electronically collects and archives regular invoices has become increasingly common. For example, Denmark has mandated creating a digital mailbox as early as in 2011 as regular emails are not a sufficiently secure method of receiving letters, especially sensitive letters from government agencies. As of today, more than 5 million people in Denmark receive letters via their digital mailbox from more than 30,000 registered companies and public authorities.

There is no doubt that private companies and governments benefit from digitized service offerings with increased efficiency and substantial cost savings. Conversely, whilst it has become much easier for consumers to organize their regular invoices digitally, they must still endure the same tedious process of settling invoices by manually inserting payment details via their banks' mobile or web interfaces. Some digital mailbox providers offer integrated card payment systems. Still, this option comes at the expense of interchange fees (credit card: up to 1.81%, debit card: up to 0.3%) collected by card networks.

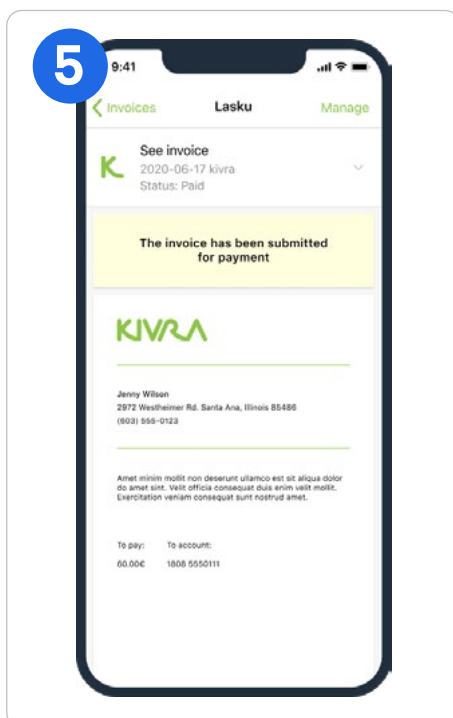
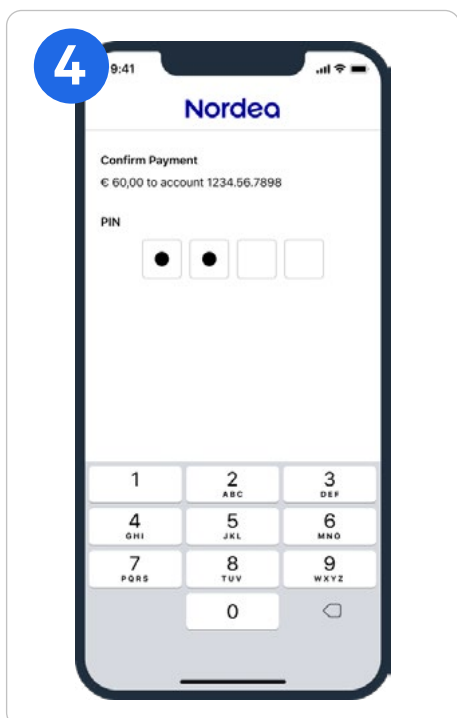
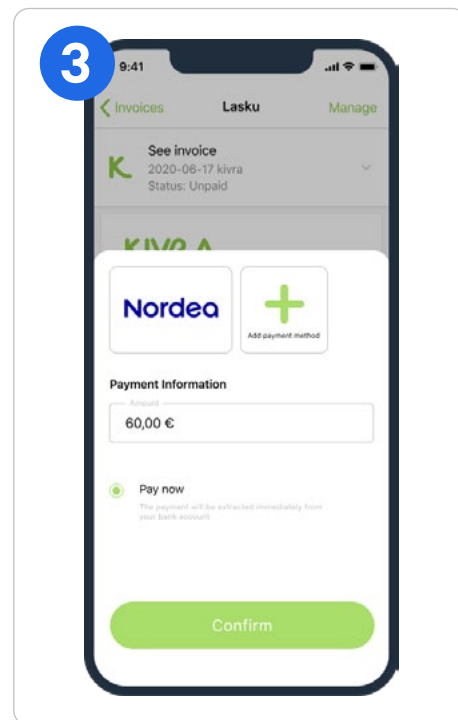
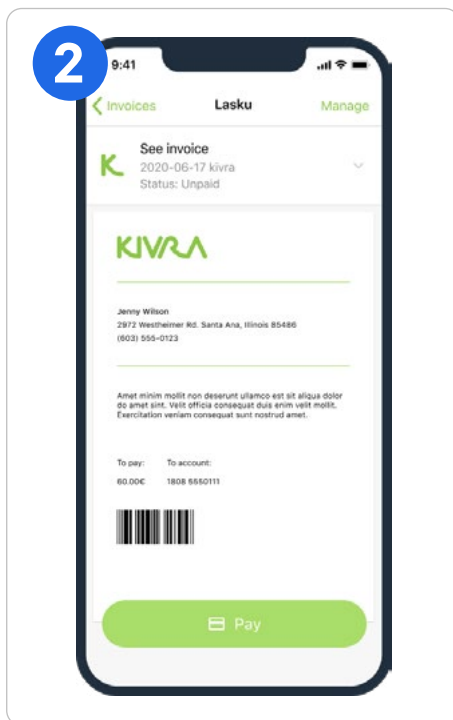
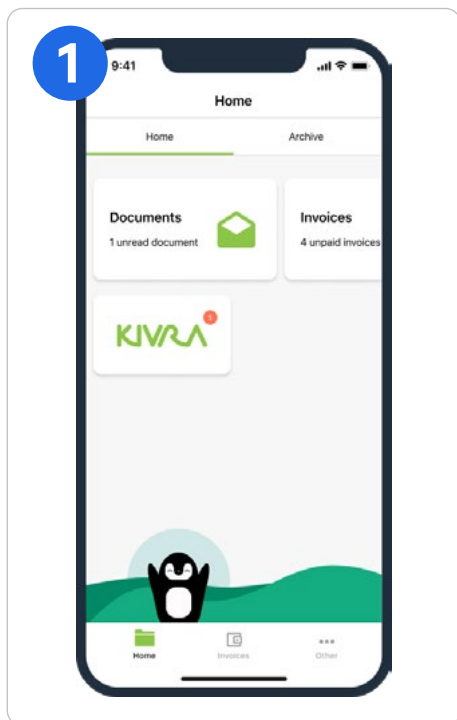
Neonomics & Kivra to let Finnish consumers pay regular invoices directly from their digital mailbox

[Kivra](#) is a free and secure digital solution and payment service provider, where one can send and receive several important mail such as e-invoices, contracts, and government mail in one place. Kivra AB was founded in Sweden back in 2011, and currently

more than one in three Swedes use their solution. One of the benefits is time-saving and efficiency, (i.e. you can pay invoices in one click), rather than having to fill out details such as payment date, amount, recipient, and so on. Reducing costs and human-error, whilst simultaneously offering a sustainable solution are also essential benefits in Kivra's solution.

In February 2020, Neonomics launched its live PSD2 payment solution in Finland together with Kivra and is one of the first practical applications of PSD2 in payment API's across Europe. Kivra's digital mailbox solution now enables their Finnish customers to make payments using Neonomics' open banking API, triggering payments directly from their bank accounts rather than via debit or credit cards. The Neonomics API is connected to all of the major banks in Finland, giving businesses the opportunity to make the most of open banking while reducing the cost of payments compared to card payments. On a customer level, this provides an easier way to pay their invoices.

The payment process on the Kivra app, powered by Neonomics:



Step 1: Go into Kivra app and check unpaid invoices.

Step 2: View invoice, click 'pay', and confirm.

Step 3: Confirm details.

Step 4: Go to the banks' app (example: Nordea).

Step 5: The invoice is paid.

What this means for your business

So far, we have looked at how European businesses embrace the digitization of invoicing, with an increasing number of countries mandating a digital mailbox. Without a doubt, moving from paper to digital processes will increase efficiency, reduce cost, enhance the user experience, and make a positive environmental impact. We demonstrated with Kivra how we can help you take it to the next level by letting users settle their regular invoices through their digital mailbox using open banking APIs.

For businesses that have previously used card-based payment schemes, we can help initiate invoice payments directly from the user's account to yours at a fraction of cost. To learn more about the opportunities that we provide, or to take initiative towards a similar solution for boosting efficiency and productivity in your business, don't hesitate to contact us at sales@neonomics.io

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