Digital Payment Solutions
How digital payments are evolving
G+D Digital Payment Solutions: connecting customers, transforming transactions

Corporations compete and collaborate. International traders make contacts and sign contracts. And consumers enjoy innovative products and services. Commerce makes the world go round. But the true enabler happens in the background: getting paid. Going beyond the card...

Money, credit, or points balance, the apparently simple business of debiting one party and crediting another is a complex web of legislation, standards, and technology. Giesecke+Devrient aims to make that complex web simple.

How? With a set of solutions for digital payments that’s truly end-to-end, able to answer any use case for those who serve today’s consumers. This White Paper explores the issues and their solutions... with an ecosystem of innovation.

Part 1 lists the trends affecting how payments are made worldwide. Part 2 looks at the customer journeys made by today’s consumer, and how they differ from a few years ago. Then in Part 3, you’ll see G+D’s Convego® family and beyond: the solutions that offer you an integrated, interconnected set of choices for satisfying customers in our digital world.

G+D: the original fintech.

Whatever your digital payments challenge, G+D can help you solve it. Because our experience in payments technology spans over 160 and dozens of countries. Decade after decade, G+D has delivered solutions to bank, non-bank, and financial institutions of all kinds, all over the world. In a sense, G+D is the original fintech. In this White Paper you’ll see why.
Customers using two or more
digital payments methods, a
jump of 13 points over 2019¹

Contactless card awareness
and adoption doubled
between 2019 and 2020²

Projected digital commerce
spending by end 2021³

Total cash, card, and electronic
payment transactions by 2024⁴
How digital payments are evolving

Eight factors affecting digital payments

- Global
- Multiple devices
- Multiple uses
- Mobile
- Cloud
- Experiential
- Multi-channel
- Privacy
Turning complexity into competitive advantage

Many factors are transforming the payments industry today. But eight stand out. What unites these eight: they all require the payments provider to balance complexity with simplicity.

Broadening choices with deeper integration

The proliferation of device types has created more choice. A card accidentally left at home can now live in a virtual wallet too, and, consumers make payments with their phone. And while the rise of neobanks and non-banks has made the marketplace more crowded, it’s also led to the rise of simplified standards like Open Banking. While as the number of use cases increases, so have the possibilities for customer engagement and profitable up-sell and cross-sell. Let’s take a brief look at each factor in this eight-wedge wheel.
How digital payments are evolving
G+D has all the tools in hand to enable the building of compelling digital payment mechanisms. We found that these capabilities will be critical as the impact of digital payments throughout the financial ecosystem accelerates and as less traditional vendors try to build new payment solutions for consumers.

Nick Maynard, Lead Analyst at Juniper Research
Technological trends answering customer needs

1. Multiple devices

Today's digital payments ecosystem contains a multitude of device types, from banking apps and mobile wallets in smartphones, fingerprint readers for payment authentication, to fashionable wearables like rings and watches, to preloaded wristbands – all as companions to the devices in the customer's pocket. Among these form factors, which ones should be enabled for payments, and in what way? The correct answer: whichever ones your customers want.

2. Multiple use cases

What's more, these devices are often multipurpose, fulfilling a number of use cases. A card may make contactless payments – but also collect points for a loyalty program. A wearable may authenticate a transaction – but also track your health. And countless other situations. But however complex the use case, the customer experience should be as easy as possible.

3. All going mobile

Of course, all these are mobile too, transactions taking place across many wireless networks from WiFi to 5G – usually public. Meaning it isn't enough for payment technologies to work in the idealized environment of a lab; this new mobile world needs to complete transactions reliably, securely, and repeatedly, billions of times a day.

- Average number of devices owned by a US citizen: 10+
- Of total retail payment volume in Europe is by card: 50%
- Of the world's population owns a mobile device: 67%

---

6 "Inside" industry magazine issue 18
7 https://www.bankmycell.com/blog/how-many-phones-are-in-the-world
Multi-channel

But consumers no longer limit themselves to a single method of communication, either: conversations are multichannel, with chat windows, email, and others joining the spoken word as options for communicating with their bank. Keeping those conversations consistent and relevant across channels is another challenge.

80% Increase in customer visits with a multi-channel strategy

5.2 bn People participating actively in the global economy
**5** Brand experience

Yet despite this explosion of options, consumers also want a consistent customer experience (CX). Payment choices where every step in every process feels part of the same whole, from the same trusted partner. With many banking services now commodified, the relationship with the brand matters more than ever.

---

**6** Native to the cloud

To address these challenges, financial institutions are simplifying their internal IT infrastructures by moving into the cloud, and outsourcing key competencies to SaaS providers connected by APIs. It’s a huge move – not just in scale, but in scope, incorporating new ways of working and thinking about financial applications. With G+D at the leading edge.

---

**7** Combining security with privacy

Of course, with Europe's GDPR and the USA’s patchwork of privacy legislation, staying compliant and secure is another complex task. The world of mobile payments carries its own set of complexities, from PSD2 security standards to differences in API implementation. Again, G+D has it covered, with safe and compliant portfolio based on secure open standards.

---

**8** On a worldwide scale

Finally, all this is happening everywhere – with a street vendor in rural China as likely to accept digital wallet payments as a retailer in Manhattan. And that's another G+D strength: present in 32 countries, with decades of expertise covering even more, it’s a trusted partner for any venture seeking to maximize their opportunities for success in this exciting new world.
$500 bn 779 bn 13%

- Expected financial services spending on cloud services for 2021\textsuperscript{11}
- Number of digital transactions worldwide in 2020\textsuperscript{15}
- Expected growth rate in digital transactions\textsuperscript{16}

\begin{itemize}
  \item \textsuperscript{1} https://www.business2community.com/customer-experience/16-statistics-on-why-omnichannel-is-the-future-of-your-contact-center-and-the-foundation-for-a-top-notch-competitive-customer-experience-02326116
  \item \textsuperscript{15} Statista quoted by Bloomberg at https://sponsored.bloomberg.com/article/nutanix-this-technology-helps-bring-financial-services-to-the-world
  \item \textsuperscript{16} Federal Reserve Report figures
  \item \textsuperscript{12} Source: CapGemini World Payments Report 2020
  \item \textsuperscript{14} https://www.credit-suisse.com/about-us/en/reports-research/global-wealth-report.html
  \item \textsuperscript{15} https://www.capitalontap.com/en/blog/posts/the-rise-of-digital-wallets/
  \item \textsuperscript{16} https://www.capitalontap.com/en/blog/posts/the-rise-of-digital-wallets/
\end{itemize}
How G+D lets you take advantage

The risks of one-size-fits-all...

Amid this infinity of choices, there’s a temptation to settle on a single source for all payments infrastructure. But choosing a monolithic provider with a proprietary solution carries its own risks of being locked in to long-term contracts. Of discovering their product mesh has gaps. And of their coverage not matching where your customers are.

... versus do-it-yourself

Faced with this, another choice is to self-build. But that means upfront investment and long implementation timetables. And even if you go cloud-only, APIs between different applications take time to connect and test. That’s a hard problem in today’s fast-moving financial services markets.

G+D offers a third way

Fortunately, there’s a solution that takes the best of both worlds – and combines them into one. G+D’s product portfolio offers depth and breadth from a single partner, yet keeps your solution fully under your control, with Open Banking and other standards that make integrating applications and APIs simpler and customization easier. Here’s what you can expect from adopting G+D as your digital payments partner.
2020

Year in which digital payments became the most common payment method – worldwide.
Customers are everywhere, and payments need to work both in domestic markets and across borders. But every payments customer has different needs. A small retailer needs a QR code payment solution for inclusivity regionally; a global bank needs tokenized rails to schemes and payments worldwide. There are different ways to address these needs – and G+D, active in 32 countries, can offer solutions that make most sense for every geography.

From the consumer’s perspective, the best solutions are seamless, letting them move between services as simply as possible as they execute their goals in their payment customer journey. That may mean speeding up card activation by making use of their mobile phone; it may mean collecting loyalty points with a simple terminal tap as they pay. Rather than just functionality and features, G+D thinks in terms of complete customer journeys, and how to improve them.

Increasingly, payments and the way we pay are moving into mobile devices that aren’t Phones: wristbands, rings, even sporting goods. Few payment service providers need to offer all of them – but many will need more than one. With G+D, the right mix of solutions is there for you when you need it, waiting to be integrated into existing systems and processes.

There are many players in the digital payments space, with many roles. But few have 160 continuous years of experience, touching every distant corner of the global payments ecosystem. In those decades, G+D has built an unparalleled depth of insight into what the challenges are, how customers behave… and what works.

1. True global reach
2. End-to-end product range
3. Integrated customer journeys
4. Longterm experience

- Customers served: 400+
- Integrated solutions: 60+
- Countries with a G+D presence: 32
- Years in business: 160+
About Giesecke+Devrient

Giesecke+Devrient (G+D) is a global security technology group headquartered in Munich. As partner to organizations with highest demands, G+D engineers trust and secures essential values with its solutions. The company’s innovative technology protects physical and digital payments, the connectivity of people and machines, the identity of people and objects, as well as digital infrastructures and confidential data.

G+D was founded in 1852. In the fiscal year 2020, the company generated a turnover of 2.31 billion euros with around 11,500 employees. G+D is represented by 74 subsidiaries and joint ventures in 32 countries. Further information: www.gi-de.com.