



PAYMENTS INDUSTRY TRENDS REPORT

2018

endava.com



AWARDS & RECOGNITIONS



UK'S TOP 100 DIGITAL AGENCIES

Endava was recognised as one of the top 3 UK technical agencies in Econsultancy 2017 report, and 13th in the overall ranking of UK agencies in order of digital income.



GIARTE OUTSOURCING PERFORMANCE 2017

Endava received a 100% positive recommendation score in the 2017 Giarte Outsourcing Performance study, the top IT independent benchmark study in Netherlands.



SUNDAY TIMES HSBC INTERNATIONAL TRACK 200

Endava was recognised as one of the top 25 British businesses with the fastest growing international sales in the Sunday Times HSBC International Track 200.



TOP 100 OUTSOURCING SERVICES PROVIDERS WORLDWIDE

Endava featured for the third consecutive year as a top company in the 2018 Global Outsourcing 100, an annual ranking of service providers produced by IAOP (International Association of Outsourcing Professionals).



FT 1000 - EUROPE'S FASTEST GROWING COMPANIES

We are proud to be recognised in the FT1000 list of Europe's fastest growing companies and stand out as the 7th largest company by headcount in this ranking.



ITO COMPANY OF THE YEAR IN ROMANIA

Endava was named Company of the Year at the 2018 ANIS Romania awards gala. The category celebrates the most significant accomplishments of a company in the software industry in the previous year.

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INTRODUCTION

Welcome to our 2018 version of the payments industry trends report.

This report includes the key trends that we are observing in the payment industry.

Over the last few months, we've been presenting these trends to our clients, including several of the market-leading payments organisations across Europe and North America.

These clients see Endava as a trusted IT delivery partner, as well as a thought leader to challenge their own staff and strategy. This report is evidence of this collaborative way of working.

If you have any feedback or would like to hear examples of where we've helped clients with some of the trends described in this document, we'd love to hear from you via the contact details on the back page of this report.

2018 KEY PAYMENTS TRENDS

IN NO PARTICULAR ORDER:

- **REAL OMNICHANNEL**
- **THE PAYMENTS PLATFORM**
- **MICRO-MERCHANTS AND NANOPAYMENTS**
- **CUSTOMER CENTRIC USER EXPERIENCES**
- **CHATBOTS**
- **PROTOTYPING**
- **ROBOTIC AUTOMATION**
- **FINANCIAL INCLUSION**



REAL OMNICHANNEL

... AND CONSOLIDATED PAYMENTS

We refer to omnichannel payments as the provision of a common platform for a retailer that provides seamless support for web, mobile and physical purchases.

Physical retailers are already adopting an omnichannel strategy and require payments systems support the initiative. They also need support for the payment systems that support them. Most acquirers currently have separate e-commerce gateways and physical POS acquiring systems. Larger retailers are already tying these together. The need is to provide this to smaller merchants which aspire to an omnichannel presence.

A purchase started online may need to be able to be completed in an app or in person. Most of this is the retailer's shopping cart, but there are good use cases for the authorisation or pre-auth to be completed digitally, and the transaction completed in person.

Merchants will want a pre-auth but would like to have an in-person final payment for fraud and interchange reduction purposes.

EXAMPLES

Examples include casual and formal restaurants where customers order-ahead. The restaurant requires an assurance the order will be paid for, but they want to leave the payment open for gratuity and the possibility of last minute upsells.

Hotels currently have many transactions per guest, including the booking deposit, a card guarantee on arrival, balance payment, and additional services such as food and drink. These multiple payment costs are inefficient for hotels, which creates demand to combine them and reduce payment charges. Payment companies could use mobile devices to connect multiple transactions together.

Another consideration would be larger ticket custom orders of items that are picked or delivered such as furniture, jewellery, clothes, etc.



SMART POS TERMINALS

... AND CLOUD-BASED TABLET POS SYSTEMS

This trend combines the merchant's payments with data analytics and back office support tools into a simple platform, for payments in both e-commerce and physical worlds. The service is designed to store all settings and data in the cloud, enabling a new POS terminal to be configured as quickly as a new smartphone, and all data to be available anywhere, anytime.

Until very recently, this type of integration has only been available to larger retailers.

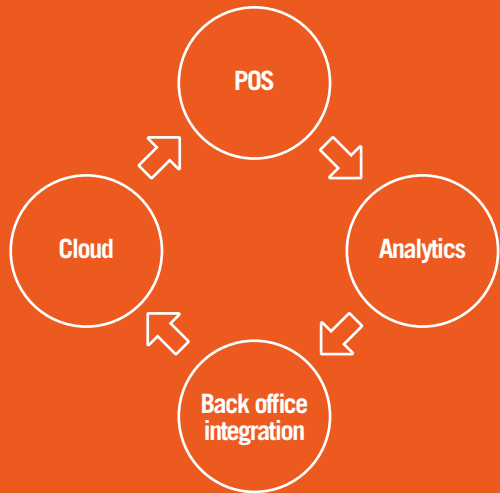
Providing this integration to the SMB (Small and Medium Business) market is critical for revenue growth of acquirers, as the needs of SMBs will drive a larger share of acquirers' transaction revenue growth opportunities going forward. This trend is also raising the bar for supporting SMBs, where supplying a lone payment device is becoming commoditised and less competitive.

EXAMPLES

This also ties into e-commerce and omnichannel for SMBs. As marketplaces run by Amazon, WalMart, and others grow, the number of e-commerce SMBs has increased significantly, and more transactions are flowing from big stores and the physical POS channel to an e-commerce channel. The same data analytics are needed, whether the purchase was from a POS or e-commerce channel.

Much of the growth in POS acceptance is coming from previously cash merchants. These businesses are counting on the low costs of cloud based systems that run securely on inexpensive and readily available mobile and tablet hardware.

Payment companies are using mobile apps for contactless payments, negating the need for a dedicated POS terminal.



MICRO MERCHANTS & NANOPAYMENTS

For payments of less than a euro, dollar or pound, which we call nanopayments, charges are too expensive for a one off payment. This is the key reason why media companies (for example newspapers and music) need customers to commit to subscriptions or prepayment wallets, and payments to rights holders need to be consolidated.

Solving the cost of nanopayments could change the way we use the Internet. Content producers could charge per page, per music track, per search, or per click through, and receive the payment nearer to real time.

Even giant tech corporations such as Google need to pay out Google AdWords revenue once earnings go over a threshold, rather than real-time payments. As we move more into the gig economy, we are approaching the point where many individuals are also micro-merchants. We see it today with eBay and marketplaces like Etsy and Facebook. Analysts predict a much larger percentage of the workforce will become “gig” participants, and many of these will become micro-merchants.

CONTEXT

Open Banking and Europe's PSD2 regulations will open up traditional banking channels, and provide the connectivity required by nanopayments. We forecast this area will erupt in a new era of micro-merchants with new ways of delivering services.

P2P (Person to Person) payments will also become more popular, and there will be a surge in the number of people needing to accept payments. The challenge is how to enable the needs of speed, ease of setup, and so on, while managing the fraud risks associated with taking on unknown merchants.



CUSTOMER CENTRIC USER EXPERIENCES

DIGITAL WALLETS AS A WHOLE HAVE NOT BEEN SUCCESSFUL SO FAR.

We need a mobile wallet which can mimic a leather wallet. It needs to store identity, loyalty, cash (an interesting one), cards, receipts, and have a nice style or design. Current mobile wallets aren't really wallets – they are “payment carousels”.

The wallet should promote loyalty, and best card selection based on rewards. Whether in a wallet or replaced by a new payment container, the winning solution will be almost frictionless, universally accepted, with an assurance of security. There is also the expectation of no cost to the consumer.

Consumers expect an audit trail back to the transaction, and the detailed components of that transaction. Customers need to trust the model because there will be no immediate confirmation of the cost in a frictionless environment.

This ties in with the chatbots trend, as the payment mechanism has to seamlessly work in the chatbot and voice controlled world as well.

CHATBOTS & MESSAGE APPS

According to BI Intelligence, in 2015 the number of monthly active users for messaging apps exceeded the number of users on social networking apps. E-commerce companies saw this as an opportunity to transact with customers using a messenger interface.

The headlines keep tracking how many billions of users are on social networks – but more users are on messaging apps. Apps in China such as WeChat have enabled, for some time, users to send digital payments, book doctor appointments, pay utility bills and traffic fines, and buy transport tickets. In the West, we have been slow to adopt this; although Apple and Facebook both launched their implementations in 2017. Do they have the right brand to make this successful?

CONTEXT

Facebook opened up its Messenger platform with more than 1 billion MAUs (Monthly Active Users) and 2 billion MAUs to third-party chatbots.

Over 45,000 developers are now using Facebook's Wit.ai chat-bot-building tool to create chatbots for Messenger.

Microsoft introduced a development tool called Bot Framework which can work on a number of platforms including Facebook Messenger, Skype, Slack, Cortana, and Skype for Business. Other major technology companies have also seen the growth in messenger apps.

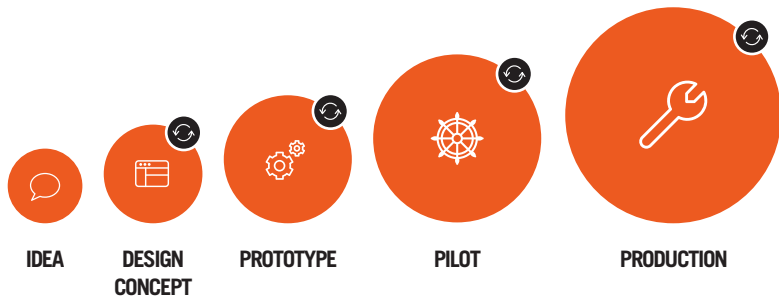
Payment companies are starting to release their bot integrations, with PayPal announcing Slack, Siri and Outlook integrations in the last few months.



What can I help you with?



PROTOTYPING



Innovative products require a new product development approach. The traditional approach of creating an idea, writing a long requirements document and asking a team to develop the product is too risky, takes too long, and by the time it's in the market, the idea may be obsolete.

THE PRODUCT LIFECYCLE

1. **Create an idea.** Make sure it's a business or customer focus rather than a technology challenge.
2. **Create a design concept first.** Before writing any code, design the user interface and show it to end users. Ask for their feedback before writing any code.
3. **Create a prototype.** Choose the top two or three killer features of the idea, and develop those first. At this point, you can fix the delivery timetable to focus your development team.
4. **Pilot the idea.** At this stage you should have a part-working prototype. Invest just enough to get the product to the first set of users. Make it clear this is an early version. Get as much insight from analytics and user behaviour at this stage. At this stage you should get as much insight from analytics and user behaviour.
5. **Keep developing the pilot.** Be humble with the analytics – some of the original killer features may not appeal to users in the real world. Ask for user feedback.



ROBOTIC AUTOMATION

The physical production of repetitive physical tasks was the first wave of robotics. We're now already in a second wave of repetitive non-physical tasks. As an example, think of "copy and paste, with some simple rules, from one spreadsheet into a PowerPoint".

This second wave is **already** being followed by intelligent task production, mimicking highly skilled, highly experienced professionals. It's already happening with financial investment advice in banking and actuaries in the insurance industry.

Intelligent task production can learn from its own experience. We work with a major bank in the Netherlands which is using machine learning in its legal department to process and analyse tens of thousands of contracts written by different lawyers over time. The more contracts the system reviews, the quicker and more accurate it can process the next contract.

Robotic automation and machine learning are already being used in payments for fraud detection, customer support, and many other processes. This will become more common in the near future.

FINANCIAL INCLUSION

LOW INCOME USERS

With the exception of some Scandinavian countries, there are people in every country who don't have a bank account. Some because they choose not to, and others because they cannot afford an account. There are people on low-incomes who cannot afford an Uber-style, frictionless, variable payment because they need to account for every cent or penny.

There are also those who use frictionless payments, such as Uber instead of owning a car, as part of their life, but have little or no use for a traditional bank.

We, as a collective industry, need to provide inclusive systems which cater for people on low-incomes. Payday lending is a short-term measure, and we need to provide more sustainable (and moral) solutions for everyone.

EARLY ADOPTERS

A new group of bank customers has emerged recently, setting a new trend, who don't want a traditional bank, and are content with a cash reloadable pre-paid card and a P2P (Person to Person) account.

FACTS AND FIGURES

- 1.5 million adults are unbanked in UK today.
- Only about half of the unbanked would like a bank account.
- Some 50% of the newly banked have incurred penalty fees, with those affected averaging 5.6 charges per year. 26% of the newly banked are 'net losers', incurring more in penalty charges than they have gained in savings.
- An estimated 2 million people took out high-cost loans in 2012 as they were unable to access any other form of credit.
- The payday lending market grew from £330 million in 2006 to £3.7 billion in 2012.



REMAINING UNBANKED DUE TO A LACK OF TRUST

There is a group of users who do not trust banks and choose to use cash. This group of users may be inclined to move to the same products as the early adopters described here.

SUMMARY

As data analytics on people habits grow, and social status becomes more important, the ability for a lender to determine the amount, and repayment strategy (i.e. daily pre-set push payment reminder from a P2P platform) will improve, reducing the need for payday and pawn loans. An interesting concept involves the definition of a current account. Yesterday's account requirement for cheques, wire transfers, and other banking services, meant costly legacy system support. The modern consumer only needs a way to access money in a physical (card) and digital capacity, with the ability to allow funds to be pushed or pulled into the account. That can be done today with the equivalent of a pre-paid card platform. This dramatically lowers the barrier to entry for new players and challenger banks.

Traditional banks will need to completely rethink how they define a current account. For example, they may want to completely drop the "current account" mindset for their competitive products, and just start selling "immediate access" accounts, with retail partnerships for cash loading of the accounts.

OTHER TRENDS OF NOTE

WE CONSIDERED SEVERAL OTHER TRENDS WHICH WERE NOT INCLUDED FOR VARIOUS REASONS:

Blockchain often requires multi-party engagements, and most organisations are still focussed on their own business models. There are very few reasons to build an "internal Blockchain solution". Some of our clients have also remarked that they anticipate quantum computing making significant progress in the medium to long term, and quantum computing will quickly (or, immediately) crack the Blockchain security methods.

Until the **Cryptocurrencies** stabilise, it's unlikely that we'll be use them as a payment currency.

Security & regulations are more than trends, they are a necessary strategy. The threat from hacking grows each year. GDPR will make penalties more severe, despite the regulation being a series of common sense best practices.

PSD2 could be a revolution for payments. However, our research with retailers suggests that they either don't know about it or they aren't using it creatively yet. We believe that retailers should act quickly because consumers will realise they own and control their data, and will offer it to new entrants for use in exchange for monetary value. Retailers and financial institutions may soon find that new market entrants have superior methods of monetising consumer data.

For acquirers, **open APIs** for merchant sign-up, additional product features, and self-service data analytics are quickly moving from being a differentiator to being standard efficiency offerings. The testing and performance complexities added by open APIs need to be a key part of the product roadmap strategy.



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COMPANY OVERVIEW

LOCATIONS



WESTERN EUROPE:

LONDON | FRANKFURT | AMSTERDAM | COPENHAGEN

NORTH AMERICA:

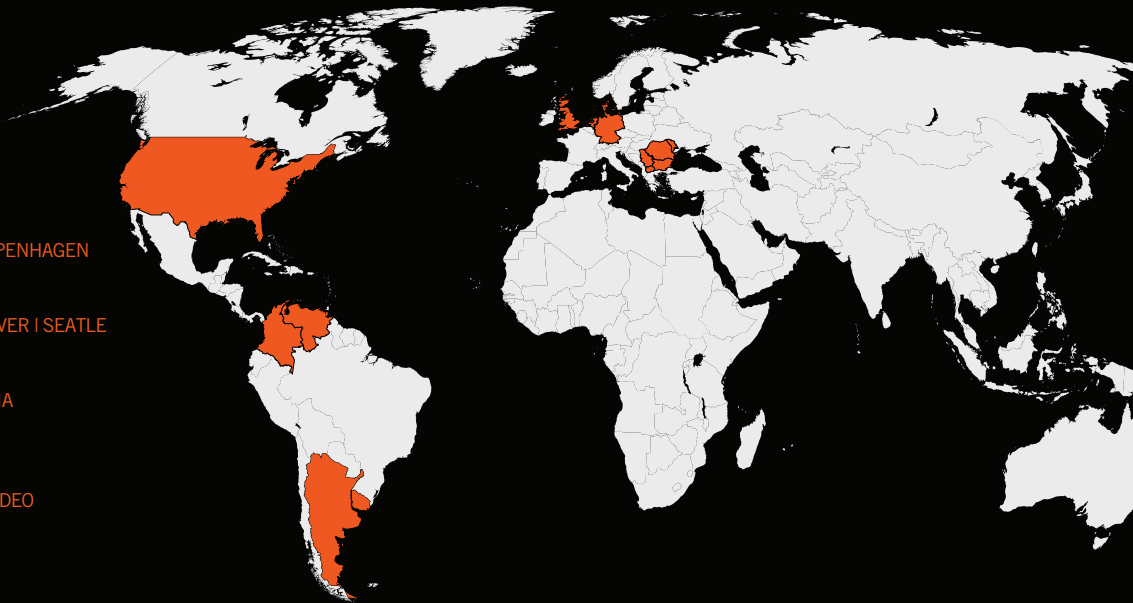
NEW YORK | ATLANTA | NEW JERSEY | DENVER | SEATTLE

CENTRAL EUROPE:

BUCHAREST | CLUJ | IASI | CHISINAU | SOFIA
BELGRADE | SKOPJE

LATIN AMERICA:

BOGOTA | MEDELLIN | CARACAS | MONTEVIDEO
BUENOS AIRES | ROSARIO | PARANA



BUILDING A GLOBAL TECHNOLOGY COMPANY

WE WORK WITH SOME OF THE **WORLD'S LEADING COMPANIES** IN:



PAYMENTS



INSURANCE



MEDIA



RETAIL



BANKING



HEALTHCARE



TELECOMMUNICATIONS



TRAVEL



ASSET & WEALTH
MANAGEMENT



TECHNOLOGY

PAYMENTS EXPERIENCE

20+
PAYMENTS
CLIENTS

160+
ONGOING
PROJECTS

1,300+
PEOPLE IN PAYMENTS
PROJECTS

32%
OF REVENUES
(FY 17-18)

P2P PAYMENTS

**ECOMMERCE
GATEWAY BUILD**

**MERCHANT
PORTALS**

REGULATION

**LOYALTY /
REWARDS**

POS

**IN STORE
INNOVATION**

AUTHORIZATION

**E-WALLETS /
MOBILE**

**MOBILE
PAYMENTS**

**PAYMENTS
INTEGRATION**

**SCHEME
INTEGRATION**

**FUTURE OF
BANKING**

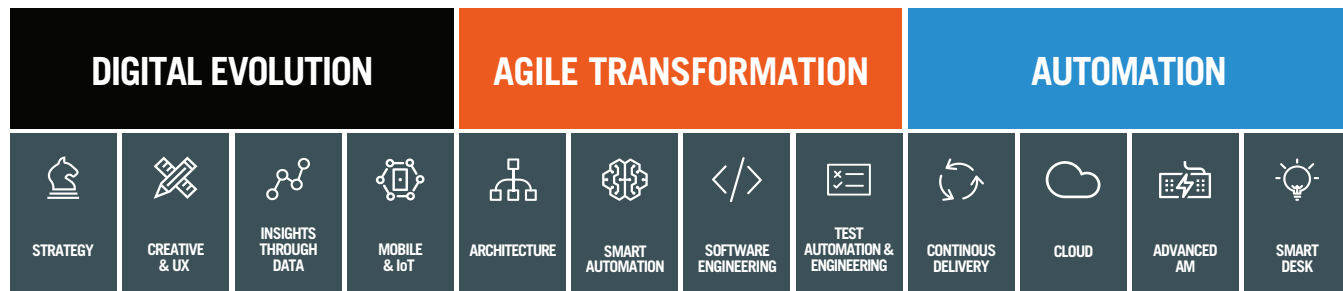
**REAL-TIME
PAYMENTS**

**ALTERNATIVE
PAYMENTS**

**CLEARING &
SETTLEMENTS**

OUR SOLUTIONS & SERVICES

WE MAKE OUR CLIENTS **MORE ENGAGING, RESPONSIVE, AND EFFICIENT** THROUGH:



ENDAVA LABS



IDEA GENERATION

orchestrate workshops, coordinate innovation councils, and organise hackathons to generate new ideas and concepts.

ENGAGEMENT	OUTPUT
IDEA WORKSHOPS	Help build upon current concepts and/ or generate new ideas
INNOVATION COUNCILS	Nurture and fund new ideas
HACKATHONS	Create new ideas within 48 hours and generate prototypes



RESEARCH + DEVELOPMENT

Research and report on industry trends, create videos and marketing materials, and host lunchtime seminars to keep everyone up to speed.

ENGAGEMENT	OUTPUT
TREND REPORTS	Provide commissioned trend reports for a company, or its customers
VIDEOS & MARKETING MATERIALS	Support sales teams with thought leadership
LUNCHTIME SEMINARS	Host and present lunchtime seminars to help generate thought leadership



RAPID DISCOVERY PROCESSES

Conceive, develop and test prototypes in six weeks, and establish dedicated innovation scrum teams for continuous advancement.

ENGAGEMENT	OUTPUT
FIRST PROTOTYPE	A six week fixed price labs team to work on a first prototype to prove how Endava can engage in this capacity
DEDICATED INNOVATION SCRUM TEAMS	Dedicated innovation scrum teams to prototype further concepts

"We have been discussing this project internally for the last 18 months and you built the prototype in only 6 weeks."

- **CEO**, Insurance Company

Endava Labs was set up to help our customers navigate through the challenging environments of increased competition and new technologies.

Innovation is one of our three main tenets, along with quality and productivity.

All successful concepts should see the light of day. Endava Labs nurtures these concepts through a prototype and into a pilot phase. Using agile methodologies, continuous testing, and validation, we guide an idea through the formative stages of the Innovation Lifecycle.



IDEA



**DESIGN
CONCEPT**



PROTOTYPE



PILOT



PRODUCTION

ENDAVA LABS

GET IN TOUCH

If you'd like to further discuss these trends and hot topics, let's have a chat:



endava.com/Payments