

Payment Design for a Consumer API World

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Table of contents

Good design can be subjective _____	3
What do consumers want? _____	3
User Experience should drive payment design _____	4
Don't just regulate, innovate _____	5
What does an Open API Payments Platform look like? _____	5
In conclusion _____	5
Resources _____	6
About the author _____	6

Good design can be subjective

I find minimalist (and ruinously expensive) Eames-designed Aluminium chairs to be very comfortable. Others may prefer some more avant-garde seating from the impressive Delft University collection. Architecture can be similarly divisive; the unusual lines of ING bank headquarters are a big contrast with traditional buildings in Amsterdam, but they all seem to function well.

When creating payments systems, do designers and architects face harder and more objective constraints? What are the key influences on design for a new era of payments? And what does a well-functioning, Open API Payments platform actually look like?

A presentation¹ I recently offered explored a new era of payments, where retailers and consumers are being presented with an expanding range of techniques shaped by new platforms and access models. Despite the fear of chaotic disruption, the conclusions are positive...

Consumer payments have evolved through simplification and standardization, resulting in the dominance of international card scheme brands. But the current trends of mobile and digital banking have challenged this old era of ubiquity, re-shaping the world of consumer payments with a broader palette of styles and techniques. Retail businesses and consumers are adopting new user experiences and platforms (exemplified by companies like Amazon, Concur, Uber and Airbnb) that accommodate new methods of payment. Payments systems architects now find themselves in an epoch when it is crucial to understand how to incorporate diverse new influences on consumer behaviour.

New payments technology concepts seem to be coming from all directions. A quick look at this year's Money 20/20 conference (over 10,000 attendees) or the roster of FinTech companies (over 6,000 start-ups globally with over \$11 billion raised in 2015 alone) indicates there is no shortage of investment behind these ideas. Even regulators seem to be innovative in their encouragement of new entrants. But established financial institutions are not typically associated with this wave of innovation. The payment architectures they use were efficient in the era of consolidation and volume-based economics, but they can lack the flexibility to adapt to new demands of retailers and consumers.

What do consumers want?

Much of the payments industry – old and new – tries to answer this using old-school economic arguments, based on the notion that consumers are rational beings moving towards, what appears to be, beneficial new ways of behaving. In reality consumers are far more unpredictable and curiously opinionated.

My own views on consumer adoption are clearly subjective; for example, I have an unhealthy dislike of QR codes. Although I could attempt to justify this based on metrics, I prefer the view taken by Behavioural Economists that we are driven primarily by the unconscious, "automatic" part of the brain, ahead of the rational, thinking part which normally allows us to ponder and rationalise our actions. Clearly I have an emotional aversion to QR but I can understand that this is not the case for some other payment users, just as I understand some people actually enjoy eating Brussels sprouts. So designers have an

¹ This presentation was given by the writer at the [Cards and Payments Innovation Conference](#) in Amsterdam on 23 November 2015.

immediate invisible problem of trying to predict behavioural aversion in payment systems that outwardly look perfectly reasonable.

A familiarity with the behavioural economist's toolbox can help payments designers overcome aversion and other consumer biases. If pushed, rewarded or overly embarrassed, I may eventually eat my Brussels sprouts. And payments users too will be subject to biases and social influences that will cause them to adopt new forms of payment.

Psychologists can list hundreds of specific biases but two of the most powerful are (1) habit and (2) the bandwagon effect. Habit is a simple, default behaviour of "nothing bad happened last time, so I will do that again". Overcoming this inertia, for example, when navigating a new web site, or adopting a new payment method can be difficult. Sticking to what you can use with unconscious fluency is usually preferable. Which is why plastic payments cards are likely to be with us for another generation.

But consumers do sometimes see a bandwagon and copy what everyone else seems to be doing. A great example of this change in behaviour can be seen around London where the adoption of contactless cards is clearly visible. The intermingled use of contactless travel cards and bank cards on London's public transport systems helped to educate customers and to make them feel comfortable with the new ceremony of wagging their hand near a card reader. A behavioural economist would argue that modifying this ceremony slightly by adding a mobile phone into the equation is an efficient way of nudging customers towards new experiences.

User Experience should drive payment design

Good payment design needs to look at the wider purchase experience, including registration, security and authentication. There is a famous case study in Retailer Web design known as "The \$300m button" where online shoppers were presented with two options after filling their basket – Login or Register.

Unsurprisingly not all first time shoppers were prepared to offer personal details via a registration process - there is a part of the brain that makes a bias for it to feel wrong to share. After the Register button was re-labelled as "Continue" (together with a gentle suggestion that it may help to register), basket abandonment was reduced and revenues went up by \$300m per year.

Not all web designers have learned these User Experience lessons so consumers today are still faced with clunky forms, unnecessary data entry, and payment windows popping up asking for a forgotten memorable code. As online fraud grows, the range of verification techniques is expanding to include biometric checks, tokens and codes sent via SMS so this area of authentication needs some serious design work. Perhaps the simple trick of allowing consumers to select their own preferred style of authentication could be the answer. Consumers are already used to logging into new services (for example my Strava cycling app) using credentials established on different platforms (for example using the "Sign in via Facebook" option) so suitably strong equivalents of this should not be hard to design.

The impact of apps and platforms (like Uber, Airbnb and Amazon) must also factor in new payment design. These platforms have become hugely successful because they went beyond traditional value propositions to deliver services more highly valued by their customers than previous suppliers. So Uber is not really a taxi company – it's value comes from bringing together a wide community of buyers and sellers, aided by geo-positioning tools to take away the uncertainty of where your driver is, social scoring to allow you to rate the service, and – last but not least – ease of payment, so you don't need to stop at a cash machine. The role of payments in Uber, and the seamless, almost invisible integration within the service should not be understated. The same is true in many similar two-sided platform companies – the darlings of economics academia like Jean Tirole, the 2014 Nobel Laureate.

Don't just regulate, innovate

Like existing platform companies, payment companies will need to publish easy to understand application programming interfaces (APIs), making it simple for developers to experiment and create new services. This creates a network of enthusiastic users of related applications, promoting the use of the primary platform and generating new revenue opportunities in an extended payments ecosystem.

Today, many bankers are still treating calls for open banking (including PSD2 and the UK Open Banking initiative) as a regulatory nuisance. However smarter Platform Bankers can already see beyond compliance, looking to use their IT platforms to "Uberise", and to become dominant Platform Economy players themselves.

What does an Open API Payments Platform look like?

Some design aspects are unchanged from the last era of payments – they use proven IT engines able to handle potentially enormous transaction volumes safely. They have many connections, gateways and software components that can handle diverse ways of initiating and authenticating payments in line with consumer taste. But the new designs also need to incorporate agile Development/Operations practices to handle far more frequent changes and additions to the overall service. The development toolkits support new organisational processes to handle continuous development and deployment. Finally the platforms also expose development tools (including modern APIs and test tools) to external developer communities.

Well-designed payment platforms need to handle diverging methods of payments. Conventional wisdom and market forces may have previously suggested fewer methods of payment. But as the Dutch Design brand logo states, "Functional Design is Beautiful" so the next era of payments can accommodate many different styles and techniques – even QR codes! - but only if they function well.

The emerging Platform Economy places higher demands on payment systems in terms of access and connectivity. Payments business managers will need to learn the lexicon of the developer community which shapes new platforms, often in a spirit of open collaboration. This new combined language of technical and business concepts will alienate many slow moving suppliers.

Although entering a new era, the fundamentals of consumer payments have not changed – system design still needs to be functional, intuitive, valuable to users, dependable and reliable.

In conclusion

This new era of diverse payments will require well architected systems able to switch flexibly between the curiously changing styles and preferences of users. Existing payments platforms will need to adapt for this new era, but that should not be a great surprise - it's worth recalling the famous Dutch saying inscribed on some old Amsterdam buildings: "De cost gaet voor de baet uyt" (the investment comes before the benefit). My favourite example of this incidentally can be seen on a Weigh House (an ancient taxation institution) which has recently been re-purposed as a "Coffee Shop" – proving that this building was well designed and architected with future flexibility in mind!

The new era of payments will deliver benefits to all Payment Services Users, and leading service providers will benefit from their investments in good payments design and architecture.

Resources

Slide Deck: [Payment Design for a Consumer API World](#) (2MB)

White Paper: [Openness is changing the future of payments](#)

Website: [ACI Universal Payments](#)

About the author

Lu Zurawski, Solutions Practice Lead, Consumer Payments EMEA

Lu joined ACI in September 2014 to develop large-scale and strategic payments business propositions, working in collaboration with key account executives in Europe, Middle East and Africa. Lu explores innovative approaches, mapping ACI assets and solutions to meet the complex, emerging demands of customers. Lu previously worked at Logica as a Global Account lead for a major fuel retailer, and has over 20 years' experience in the payments field.

With a strong innovation record - including work on one of the world's first mobile payment schemes - Lu's interests cover latest trends in consumer payments, and their impact on practical operations and business. Lu has a specific interest in Behavioural Economics - the application of psychological insights into human behaviour that impact the success or otherwise of new consumer services - and a viewpoint that leads to thought-provoking (and often unorthodox) articles.

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