CHANGE/AGENTS

FOUR TRENDS DISRUPTING THE WAY WE SPEND, SAVE AND INVEST

Written by GRAVITYTANK FOR THE SERVICE DESIGN NETWORK

Special Interest Group Trend Report Fall 2015

ABOUT SERVICE DESIGN NETWORK

Over the last ten years, the Service Design Network (SDN) has successfully promoted and established service design and has built and facilitated platforms to connect communities. SDN is also the creator of relevant content for the community. In this trend report, the financial market has been identified as one of the areas where in-depth service design and market knowledge are needed to transform the opportunities for change into successful service innovations. Thanks to our members for contributing to this small publication! SDN will continue to give insights into relevant markets, so stay tuned at www.service-design-network.org

Editor
Birgit Mager

CONTRIBUTORS

This report was shaped with the help of the Service Design Network. In August 2015, we sent a short survey out to the SDN community asking for their thoughts on the future of financial services. Throughout the report, members' responses are quoted.

ABOUT GRAVITYTANK

We serve clients globally from our offices in Chicago and San Francisco. Our consultants are diverse in background and aligned in purpose, combining strategy, design, and research to bring clarity to the challenges of innovation.

We define breakthrough products, services and experiences, identifying new opportunities, reinvigorating brands, and disrupting industries to help our clients create significant economic value and social impact. Our fields of expertise include technology, packaged goods, digital design, food, healthcare, social innovation and service design.

Our clients come to us again and again for our collaborative process and holistic deliverables. Working together, we develop actionable insights, move early ideas into tangible concepts and shape new solutions. collaborate@gravitytank.com

AUTHORS

Lauren Braun
Patrick Buggy
Defne Civelekoglu
Martha Cotton
Susie Kang
Paul Lou
Gina Reynolds
Justin Rheinfrank
Amy Seng
Dave Sonders
Clay Stelzer
Theresa Stewart
Stephanie Szabó

FUNDED IN PART BY FJORD

Fjord, design and innovation from Accenture Interactive, re-imagines people's relationships with the digital and physical world around them. With an emotional, human-centered approach combined with robust methodology, we use the power of design to create useful, effective and desirable digital experiences that people love. We work with some of the world's leading businesses to make complex systems simple and elegant with the power of design. Founded in 2001, Fjord employs a diverse group of more than 500 design experts in 15+ global creative hubs, including Atlanta, Berlin, Chicago, Helsinki, Istanbul, London, Los Angeles, Madrid, Milan, New York, Paris, San Francisco, São Paulo, Stockholm, and Sydney. For more information, visit www.fjordnet.com.

Editor
Shelley Evenson

In the last five years,

consumer financial services have experienced some of the greatest upheavals in history. First it began with changing regulations, then a boom of startups hell-bent on demystifying, simplifying or democratizing finance. With increased competition coming from unexpected places, traditional financial institutions like banks and brokerages have been forced to rethink their services and products. And now the industry is in a gold rush for change: by adopting new technologies, hiring to build new applications and offerings, or acquiring the very startups that are nipping at their heels.

And this is just the beginning.

New players are bringing technology from other industries or building new infrastructures from the ground up to change the way we interact with our money on a daily basis.

MASSIVE ONLINE COMMUNITIES revolutionized by Twitter, Facebook, and P2P services like Bittorrent, provide a connective tissue for people and computers to communicate about transactions, investments, and to learn and adapt to the markets' movements. This brings principles from social networking like online prestige and trust into financial services.

COMPLEX AND INTELLIGENT ALGORITHMS bring a new level of automation and sophistication to security and investing that required human intervention in the past. Emerging currencies like Bitcoin use complex algorithms to maintain and scale scarcity across the network. And robo-advisors use your goals and algorithms to determine the proper risk level and diversity of your investments.

CLOUD COMPUTING enables a host of new financial service providers that no longer require a physical presence, allowing teams to focus on a better customer experience and increase value.

UBIQUITY OF SENSORS and the technologies that power them have changed the way that we understand and move through spaces, most notably the "dance" that we play whenever we pay with cash or credit card. Instead of the swipe of the card, we can now pay with a wave of the wrist, card, or phone.

Of course, these underlying technologies are largely invisible to us on a day-to-day basis.

/

When was the last time you saw a someone get really excited about distributed authentication systems like the blockchain? However, we believe they are enabling four major trends in financial services that are beginning to affect people's daily lives, and that have huge potential to impact the design of services.

01 / FINANCIAL SERVICES FOR THE PEOPLE

Financial planning is finally becoming accessible to people of all incomes. From automated investing services, to education platforms that leverage social networks, to peer-to-peer lending, services typically reserved for the wealthy are becoming available to everyone.

02 / FRICTIONLESS PAYMENTS

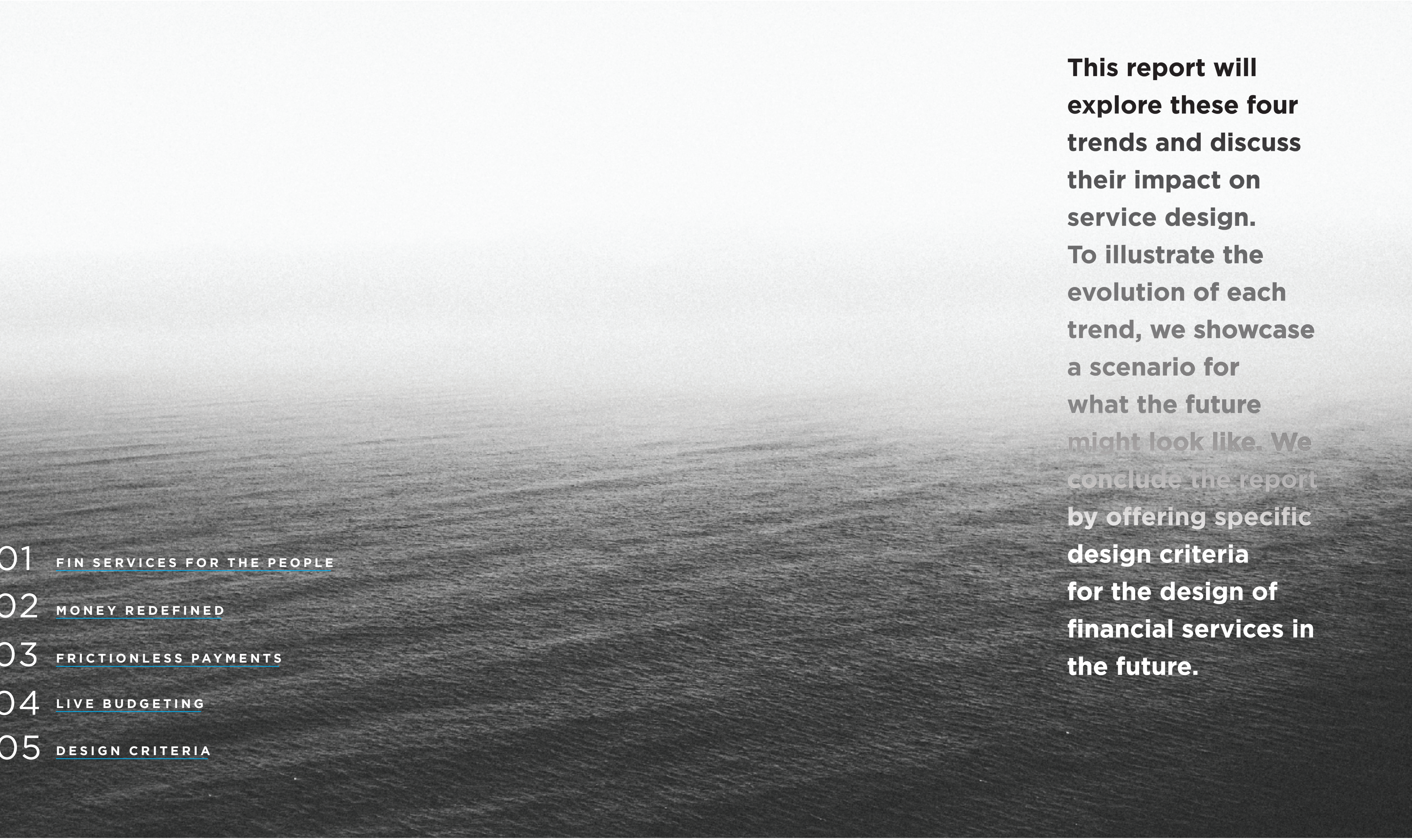
New technologies are enabling us to spend money without pulling out cash or a card. Contactless payments, money transfer via chat messages, and geo-fenced interactions are bringing us into a future where we can purchase things from a store or restaurant without ever going through the act of "paying".

03 / MONEY REDEFINED

Although Bitcoin is still in its infancy, cryptocurreny's potential for disrupting the status quo is enormous. Transaction fees will be set by the market rather than by large financial institutions, lowering costs dramatically and finally enabling micropayments. Blockchain, the technology behind Bitcoin, will enable ironclad security and proof of ownership for documents, media, and even physical goods.

04 / LIVE BUDGETING

Just as smartphones with GPS made it possible to know where you are at any given moment, eliminating the need for printed maps, technology is making it possible to instantly see the state of your finances and the implications of your financial decisions. Balancing a checkbook, overdrawing an account, budgeting out your spending for the month... these are activities the next generation will never know.



01 FIN SERVICES FOR THE PEOPLE

02 MONEY REDEFINED

03 FRICTIONLESS PAYMENTS

04 LIVE BUDGETING

05 DESIGN CRITERIA

This report will explore these four trends and discuss their impact on service design. To illustrate the evolution of each trend, we showcase a scenario for what the future might look like. We conclude the report by offering specific design criteria for the design of financial services in the future.

01

FINANCIAL SERVICES FOR THE PEOPLE

THE LEVELING OF THE PLAYING FIELD

To many of us, the words “financial services” do not necessarily precipitate a flood of positive emotions. It can often feel like an impenetrable black box filled with confusing numbers, covered in jargon and tied up with red tape. Most people lack the formal education to navigate the nuance of investing and feel confident about their decisions. They are at the mercy of large financial institutions to guide them through the process – a reality that has left people paying significant fees for services they don’t really understand. That is, until now.

NEW FINANCIAL STARTUPS PUT USERS FIRST

Innovative businesses are leveraging complex and intelligent algorithms, massive online communities, and cloud computing to offer more efficient and lower-cost digital versions of investment products and services traditionally provided by much larger and established institutions. As an example, Tip'd Off is disrupting the financial services orthodoxy that financial advice can only come from so-called "experts", instead creating social communities around investing.

> More than likely, the future of financial planning being accessible to everyone is a given. It is the natural progression that we have seen happen in many other industries with the advent of social media and ubiquitous internet. The fact that research tools are so readily accessible, and information of any kind can be obtained in a split second means that we don't need to rely on the services of a professional financial planner, who no longer has access to information that we do not.
>
> RAHUL SETHURAM
> CO-FOUNDER OF TIP'D OFF

Through automated digital platforms, financial technology startups can lower capital costs and place an emphasis on user experience and responsive customer service, thus targeting traditional banks at their thorniest pain-points: poor relationships, high fees and margins, and outdated processes. In doing so, they are capable of extending access to a much larger population of customers. These competitive advantages are increasingly threatening the once-lofty profit pools of traditional financial institutions.

ROBO-ADVISORS

Leading the pack in this revolution are a group of startups called robo-advisors. Companies such as Betterment and Wealthfront have captured the attention of thousands of customers by offering the same annual returns with same level of portfolio management and diversification as the large institutions, all with a fraction of the fees. These app-based services offer user-friendly interfaces that guide users through a series of questions to ascertain investment preferences and risk tolerance.

Consulting firm A. T. Kearney believes that robo-advisory services will become mainstream in the next three to five years. They forecast that robo-advisors will manage about $2 trillion in the US by 2020, amounting to 5.6% of Americans' investment assets compared to the 0.5% they manage today.

SELF-DIRECTED INVESTMENT PLATFORMS

The lack of confidence people have in their ability to makesound financial decisions drives the consumption of personal investment services. Big banks offer the promise of diversification and security, but at the price of opacity and high margins. People are left with impenetrable statements and prospectuses, and the suspicion that they'll never know whether their investment strategy is optimal, or if the fees they're paying are fair.

With the growth of the internet, people now have access to almost any type of information they need, making them feel less dependent on large institutions. As this trend continues, we will see a shift from financial institutions doing everything for people to becoming 'advisors' in the truest sense of the word.

It's like doctors: nowadays people call their doctors to see which of the information they read online is trustworthy, not because they don't know the answer. With financial services, people will still gravitate towards an individual when they need help making a specific decision for themselves, but will they need the institutions for every decision? Probably not.

CELANDRA DEANE-BESS
CFP, VICE PRESIDENT / SENIOR WEALTH PLANNER, PNC WEALTH MANAGEMENT

TOM SOSNOFF

CO-CEO AND HOST
TASTYTRADE

Q

A

WHAT DO YOU THINK ABOUT THE DEMOCRATIZATION OF FINANCIAL PLANNING?

I'm an advocate of the customer. But financial services as it stands today is actually quite dangerous, because we're not empowering individual investors. We're sending an old message, which is "You're better off as a passive investor."

TELL US MORE ABOUT 'PASSIVE INVESTING': WHY IS IT SO DANGEROUS?

Passive investing means that you invest your money and let the market do the work for you. We are a society of passive investors. It's dangerous because you don't learn anything.

The current state of financial services sounds like this: "Give us your money because you're not smart enough to manage it and we'll take care of that for you, for a lot of fees, up to 50–60% of what you'll make in returns". At Tastytrade and Dough, we're all about empowering individual investors at any age, and at any time, to use today's technology and content to take everything into their own hands.

A ROBO-ADVISING PROPONENT MIGHT SAY, "REGULAR PEOPLE HAVE TOO MANY THINGS ON THEIR MINDS. THEY CAN'T ALSO BECOME A FINANCIAL EXPERT." HOW DO YOU FEEL ABOUT THAT?

That's the common excuse, but we think it's a lame excuse, because nobody cares about your money more than you do. People work too hard for their money to say that we have time for Fantasy Football but we don't have time for learning what to do with our money.

If it's not something you want to learn how to do, then don't do it. But don't be upset with the results or the system, because just pleading ignorance or laziness when it comes to finance is not the answer.

Now, anyone can be the bank

Not only do people have more access to traditional financial instruments (stocks, bonds, mutual funds, etc.), new services are emerging to enable them to invest as lenders.

Startups such as Lending Club and Prosper offer individual investors high rates of return to back loans for mortgages, startups, and other individual endeavors. So far, the five biggest peer-to-peer lending platforms have issued nearly $1 million loans and are generating more at the rate of well over $10 billion a year. Lending Club and Prosper currently offer investors returns in the range of a 5% to 9% return, depending on the level of risk they take on.

Thanks to digital technology and social networks, lenders anywhere in the world are able to anonymously connect with borrowers who fit their risk tolerance and credit profiles. Using complex algorithms to automate application, underwriting, and processing, these services are fast and efficient. Since borrowers are directly connected to lenders, these platforms can offer lower interest rates by bypassing costs incurred by traditional intermediaries, which rely on insured deposits and face additional costs. A bank spends roughly 7% of the value of a loan on administration, against Lending Club's figure of just 2.7%.

/ GOING DEEPER

New access to capital

When it comes to securing financing for a new home, car or business, often times people aren't able to meet the strict eligibility requirements of large banks, leaving them without options. Some of the same P2P companies that have begun offering individual investors opportunities outside of stocks and bonds are extending access to capital to these very people.

LENDING CLUB
Lending Club offers individual borrowers unsecured personal loans between $1,000 - $35,000 for home mortgages, debt consolidation and other endeavors. On the basis of your credit score, credit history, desired loan amount and debt-to-income ratio, Lending Club determines whether you are credit-worthy and assigns to its approved loans a credit grade that determines payable interest rate and fees. As of June 30, 2015, the platform has originated $11.1 billion in loans.

ANGELLIST
Founded in 2010, AngelList has become one of the largest platforms in equity crowdfunding. AngelList offers investment syndicates in which startups raise money from accredited investors investing alongside prominent angel investors, all free of charge.

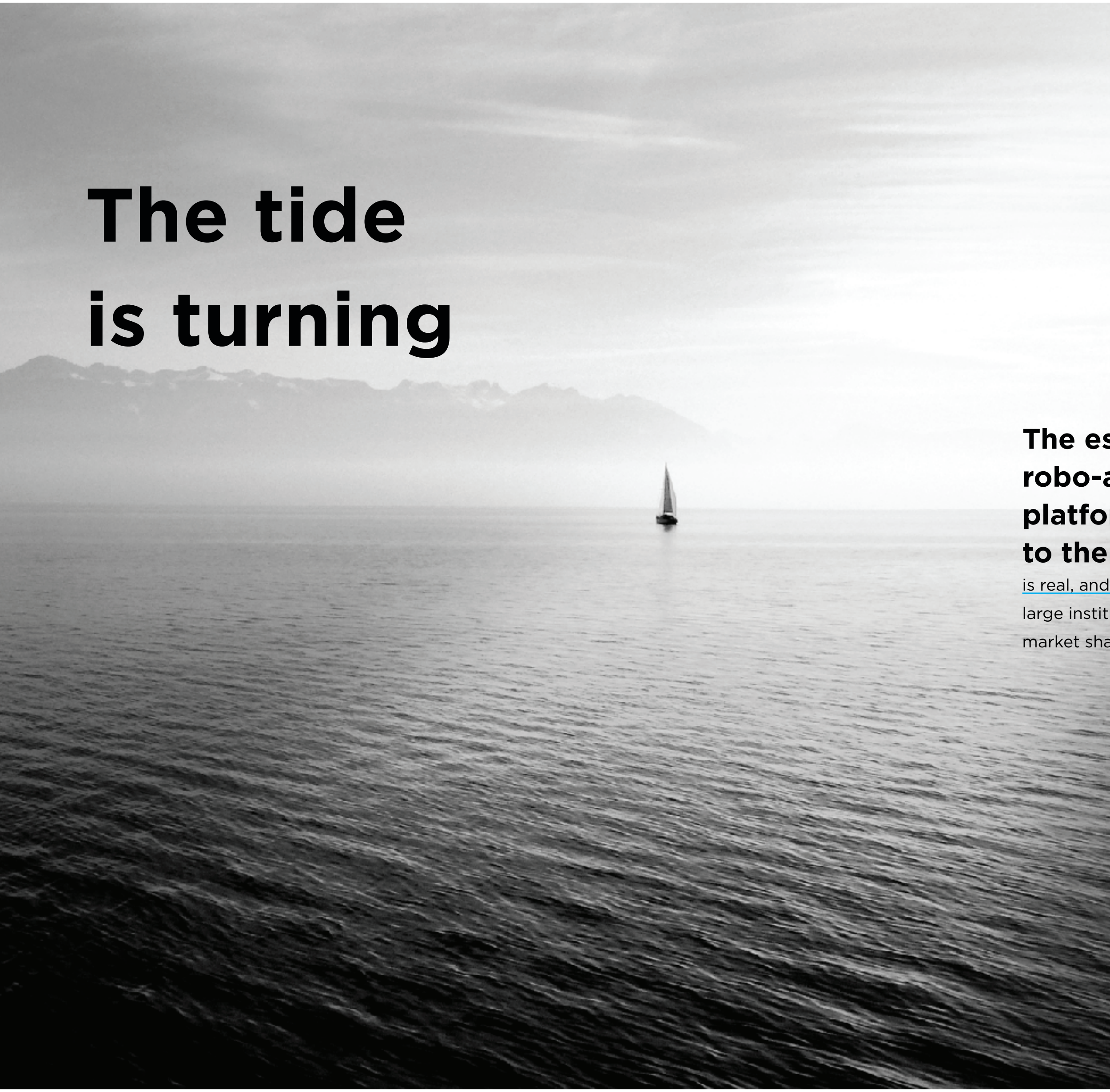
The company is also looking at equity crowdfunding with unaccredited investors after the passage of the US JOBS Act.

GOFUNDME
GoFundMe is a crowdfunding platform that allows you to raise money for events ranging from life events such as celebrations and graduations to challenging circumstances like accidents and illnesses. Hundreds of thousands of people have raised over $1 billion from 16 million donors for the things that matter to them most.

INVESTING IN VALUES, NOT JUST RETURNS

With Millennials coming into adulthood, their interests in social and environmental preservation may begin to shift the flow of investment dollars in financial markets. A study by the U.S. Trust found that 69% of adults age 18–32 stated that "Investment decisions are a way to express my social, political and environmental value." Only 36% of Baby Boomers aged 49-67 agreed. Millennials are also more accepting of high risk in support of impact investing. Seventy-two percent of adults age 18–32 stated that "I would be willing to accept a higher risk on investments in companies that have a greater positive impact on society or the environment." Only 35% of Baby Boomers ages 49-67 agreed.

Startup online investment platforms such as Motif have began gaining traction with young people by aiding them in their efforts to invest in companies and funds that align with their interests. Rather than investing in individual companies or general funds, on Motif you invest in "baskets of stocks or ETFs" focused on specific themes like "World of Sports," "Biotech Breakthroughs," or "Bear US Sectors." Large institutions such as Morgan Stanley and UBS have also created funds and services to help their clients invest in these areas.



The tide is turning

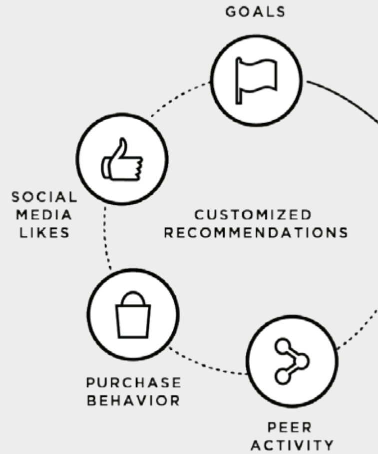
The escalation of online education resources, robo-advisors, P2P lenders, and impact investing platforms will bring greater transparency and control to the common investor. The demand for user centric-investment services is real, and the startup community has responded. To maintain its place in the market, the large institutions must shift their focus to meet this demand, or risk significant decline in market share.

> **It's exciting because it forces financial institutions to redefine their role in society. If more people, companies, and startups can do what they do, what is then the value that is uniquely theirs to unlock?**
>
> ERIK ROSCAM ABBING
> FOUNDER, ZILVER INNOVATION
> (SDN MEMBER)

But the implications of the democratization of financial services extend beyond the financial players themselves. If it's true that the market follows customer demand, publicly-traded companies will need to consider how their mission and operations align with the values of the up-and-coming.

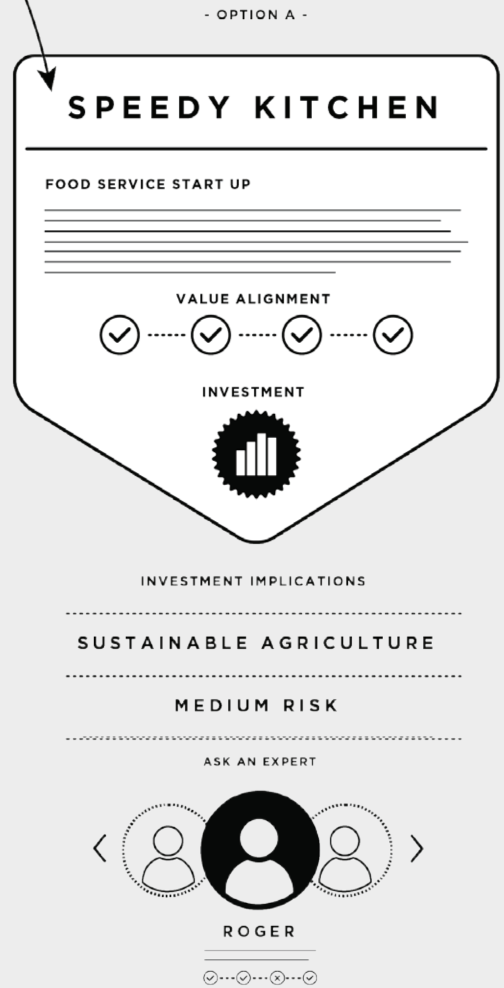
In the future, investing money will be more like reading a lunch menu than reading a prospectus.

People will have the confidence to make their own investment decisions and with this confidence, they will invest based on their values.



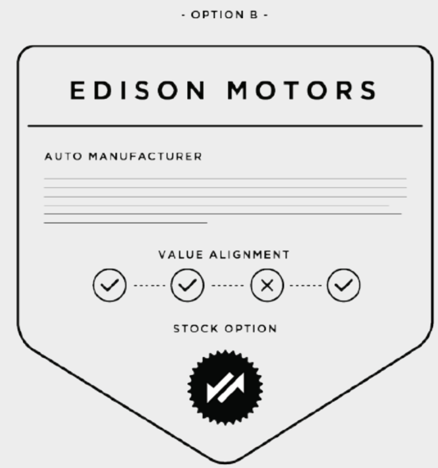
Integrated systems go beyond risk profiles to truly understand an individual's values and make relevant recommendations.

CRITERIA / look beyond the numbers.



Clear options with criteria for evaluation provide more control than complete automation.

CRITERIA / automate mundane tasks, but let me have the last say.



Advanced algorithms make tailored recommendations with the option to consult an expert if needed.

CRITERIA / let's talk, just not all the time.

02

MONEY REDEFINED

THE RISE OF CRYPTOCURRENCY

Have you seen one yet? The little sign on a store window or next to the register sheepishly announcing, “Bitcoin accepted here.” In San Francisco, where this report was written, those little signs seems to be popping up everywhere. (The yogurt shop clerk down the street confided that no one has tried to pay with it ... yet).

To most of us, “cryptocurrency” is synonymous with Bitcoin, the controversial, algorithm-driven currency invented in 2008. Bitcoin has not yet become mainstream, and may never do so, but it pushes us to rethink how we exchange value. What’s more, the technology behind it has the potential to revolutionize digital trust and enable micropayments on a global scale, which could fundamentally change the way services are designed and remunerated.

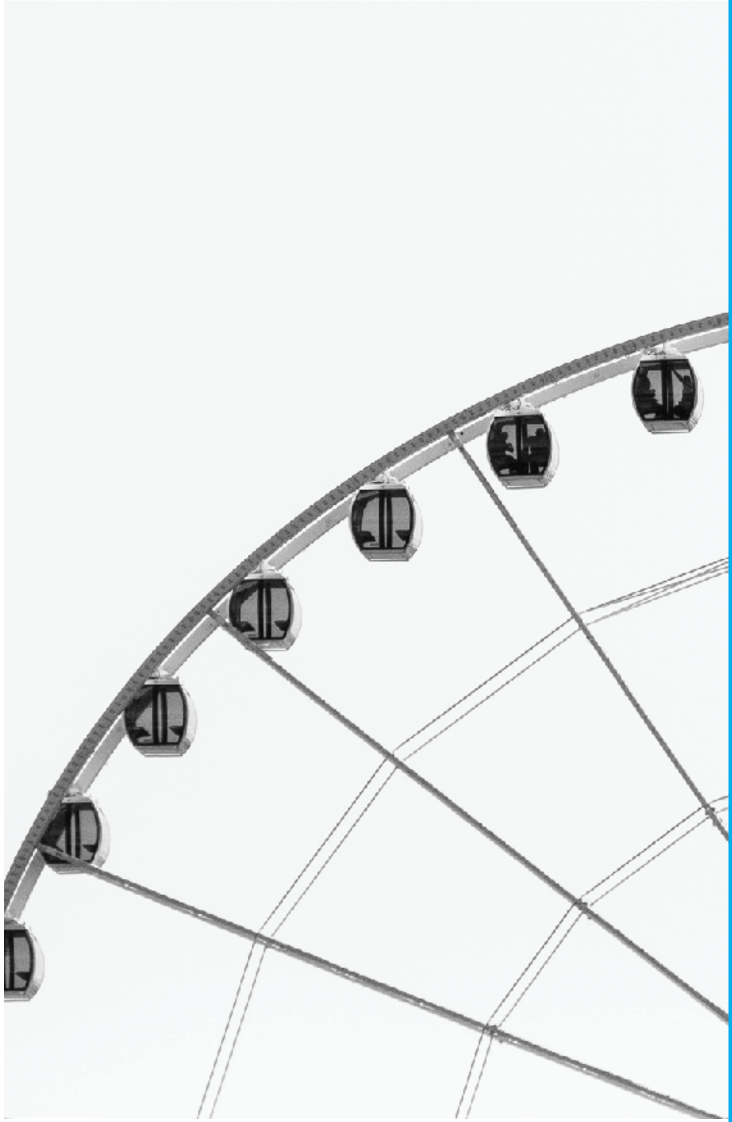
what is money?

MONEY IS JUST A COLLECTIVE AGREEMENT

In its most basic sense, money is an object that we collectively agree has some value. Before money, we used a bartering system: I'll trade you 20 loaves of bread for your goat. Maybe I would love to sell you my bread, but I have no need for a goat? Well, I'll trade my bread for your money and use my profit go buy that talisman I've been pining for!

Money is *usually* created and controlled by governments. You use dollars because you live in the U.S. or you use Euros because you live in Italy.

In the past few years, a new type of currency – cryptocurrency – has emerged to great excitement, but ruffled the feathers of major financial institutions and regulatory committees. Cryptocurrencies like Bitcoin replace government control with algorithms and distributed systems, making many uneasy with the idea of automating crucial checks and balances. The appeal of cryptocurrencies is that they disintermediate the system. You can securely send any amount – big or small – to anyone in the world without needing a middleman or paying transaction fees (like those you pay to Visa or a bank).



/ GOING DEEPER

Fiat currency vs. the gold standard

You've heard the expression "gold standard" before, right? Well, that was referring to a time when our money (the dollar) was directly tied to the price of gold, meaning that each dollar you had in your wallet translated into a small amount of gold that the U.S. government had in stockpiles. This system worked well for a long time, as gold was a highly coveted resource.

The problem we ran into was that anybody could discover a large amount of gold in a mountain or stream, flood the market with cheap gold and effectively plummet the value of all gold, including each dollar in your pocket.

In 1971, the U.S. ended its gold standard, revoking the ability to transfer dollars into gold, turning it into what we call a "fiat currency." Fiat, latin for "it shall be done," means that money has value simply because it is backed by large organizations or government. In the U.S., each dollar has value because our central bank, the FED, closely watches demand and controls supply (how much money is printed). It also controls other measures, like interest rates, to stabilize the dollar's value in ways that weren't possible on a gold standard.

There have been fascinating fiat currencies used throughout history, like:
// Bottles of Tide laundry detergent for drug deals
// Prepaid cell cards in Africa
// Cigarettes and stamps in U.S. prisons

Cryptocurrencies are a new type of fiat currency. Instead of an organization or government ensuring its value, it's a collective assumption among all who use it that it has value. This is one of the many reasons why many are afraid of investing in new cryptocurrencies.

SO HOW DOES BITCOIN ACTUALLY WORK?

We'll try to make this as painless as possible: before we focus on Bitcoin, let's look at how money moves through our financial institutions. Whenever a transaction is sent through banks or credit card networks, their primary responsibility is to double-check all the amounts and make sure that all parties are aligned. They have to be honest, because the government closely monitors banks for any wrongdoing. In exchange for this service, banks and credit card networks take a small amount from the transaction, known as a transaction fee or an interchange fee.

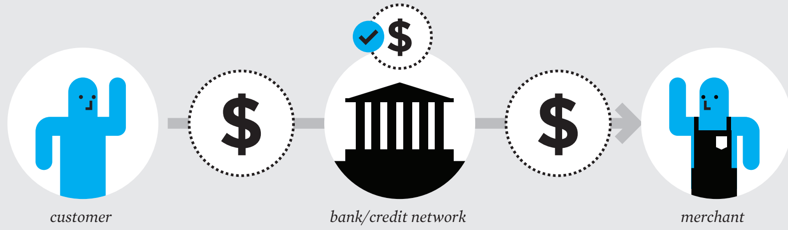
Here's how cryptocurrencies like Bitcoin are different: they don't have banks, credit card companies, or a central government to monitor transactions. Cryptocurrencies instead rely on computers all over the Internet, called 'miners', which watch every transaction and add it to their collective ledger. Each ledger is the same, and they trace all the way back to the first transaction made on the currency! This networked ledger is collectively known as 'the blockchain'.

If someone tries to send a fraudulent charge through, usually by changing a few miners' ledgers, the rest of the network notices the anomaly and rejects the transaction, making the cryptocurrency virtually unhackable. This system provides the security of banks without any transaction fees or government oversight.

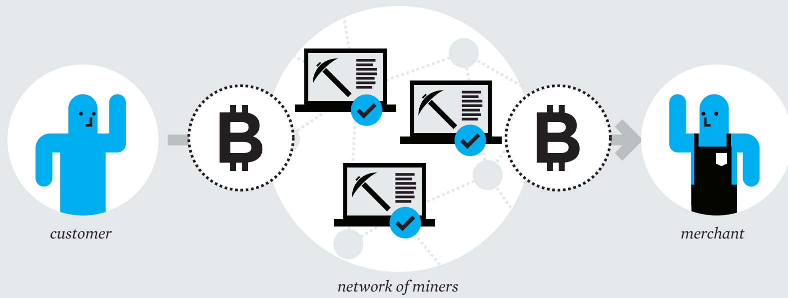
> **Cryptocurrency's cost reduction will enable new service offerings to be very compelling... it enables new peer-to-peer services to be developed without the legacy cost of traditional centralized banking.**
>
> TONY HILLSON
> CUSTOMER EXPERIENCE PROFESSIONAL
> SERVICE DESIGN NZ LTD (SDN MEMBER)

Instead of fees, miners make their commission off of newly minted Bitcoins. While they are processing the worlds' transactions, miners are also solving incredibly difficult math puzzles with the computational power of their computers, hence the name "cryptocurrency". Each time a miner solves a puzzle, they are awarded a newly minted Bitcoin. The difficulty of the puzzles scales with the number of miners on the network, effectively stabilizing supply and demand.

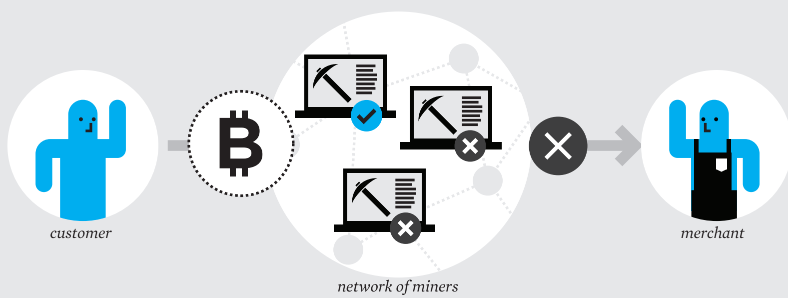
STANDARD CURRENCY TRANSACTION



CRYPTOCURRENCY TRANSACTION



FRAUDULENT CRYPTOCURRENCY TRANSACTION



MATTHEW KENAHAN

ASSOCIATE DIRECTOR, CHICAGO BITCOIN CENTER

Q

WHAT ARE THE BIGGEST HURDLES THAT BITCOIN FACES IN TERMS OF CONSUMER ADOPTION?

A

There are three big hurdles facing Bitcoin in terms of consumer adoption in my opinion: changing the narrative, making Bitcoin easier to use, and ensuring that regulation doesn't stifle innovation.

For a while, an everyday person would consider Bitcoin synonymous with Mt. Gox, Silk Road or a Ponzi scheme, which simply isn't a fair representation of the diverse, innovative community. As long as Bitcoin is associated with just these things, it is unlikely to gain widespread adoption... I think the narrative is already changing and positive stories are getting more [of the] attention that they deserve.

Secondly, Bitcoin is a relatively small, tech-savvy community and many people are deterred from investing or using Bitcoin because it is often too difficult to comprehend for the average person. The simpler it is to use, the more likely it is to gain widespread adoption.

I cite regulation as the last reason because a couple [of] states have taken a more aggressive approach to regulating Bitcoin. Not only does this limit innovation, but it also forces some Bitcoin companies to cease operations [there]... If harsh regulations are implemented on a large scale... [it's] likely that consumer adoption will slow.that consumer adoption will slow.

Q

WHAT'S MOST EXCITING ABOUT CRYPTOCURRENCY'S ROLE IN THE FUTURE OF FINANCIAL SERVICES?

A

The most exciting thing to me is cryptocurrency's potential to serve the underbanked and unbanked, nearly two-thirds of the world's population. Bitcoin allows users to become their own bank with only a mobile phone and internet connection. As we see mobile and internet exploding in the developing world, I believe we will also see those countries bypassing the legacy banking system and using more convenient options like Bitcoin.

Another exciting possibility is Bitcoin's potential to undercut existing remittance service providers such as Western Union. A handful of companies are working on building the infrastructure for Bitcoin remittances, which would significantly decrease the cost of sending money back home.

Cryptocurrency goes beyond money

Although Bitcoin and other cryptocurrencies hold promise for nations without a strong central bank, they won't replace stable currencies like the Euro and Dollar any time soon. But cryptocurrency could dramatically change the way we send money, move digital content, or even price goods and services.

TINY PAYMENTS ALL AROUND US

With transaction fees and middlemen virtually eliminated, cryptocurrency finally enables us to send very small transactions without penalty. Imagine you are reading a book and you are only charged for each page that you read, or each of the appliances in your home has an allotment of money that it uses to pay for electricity. All of these scenarios are opportunities for us to automate, provide transparency to, or to control transactions as they happen.

> **Micropayments are already very popular within the community and are used on a daily basis. The best example of this is ChangeTip, which integrates with various platforms including Twitter, Reddit, YouTube, SoundCloud, and more. Through this service I can literally tweet another user some Bitcoin, or tip an artist on SoundCloud.**
>
> MATTHEW KENAHAN
> ASSOCIATE DIRECTOR,
> CHICAGO BITCOIN CENTER

Another vision for micropayments could fundamentally change the internet. Computer philosopher Jaron Lanier suggests in his book *Who owns the future?* (2013), that if content used on the internet had a thread of attribution that ran through posting and re-posting, you would get a small micropayment each time someone views your photo or reads the blog post you created. Alternatively, micropayments could be used to charge for something that we traditionally see as free, like email, for example. Perhaps we pay a fraction of a penny for each email sent, adding up over time to a few dollars for us. But it would effectively put spammers, who collectively send over 100 billion emails per day, out of business tomorrow.

SECURITY THROUGH THE BLOCKCHAIN

One of the most exciting applications of Bitcoin doesn't have anything to do with money, but with security. When you send a mortgage document through the internet, it could be intercepted and copied a thousand times without you knowing it. If you tie your mortgage document to a specific Bitcoin (it can't open without this coin), then only the recipient can open the document. The blockchain could change digital rights management on movies and music files, the way we sign documents, or even the way the devices in our home are networked together.

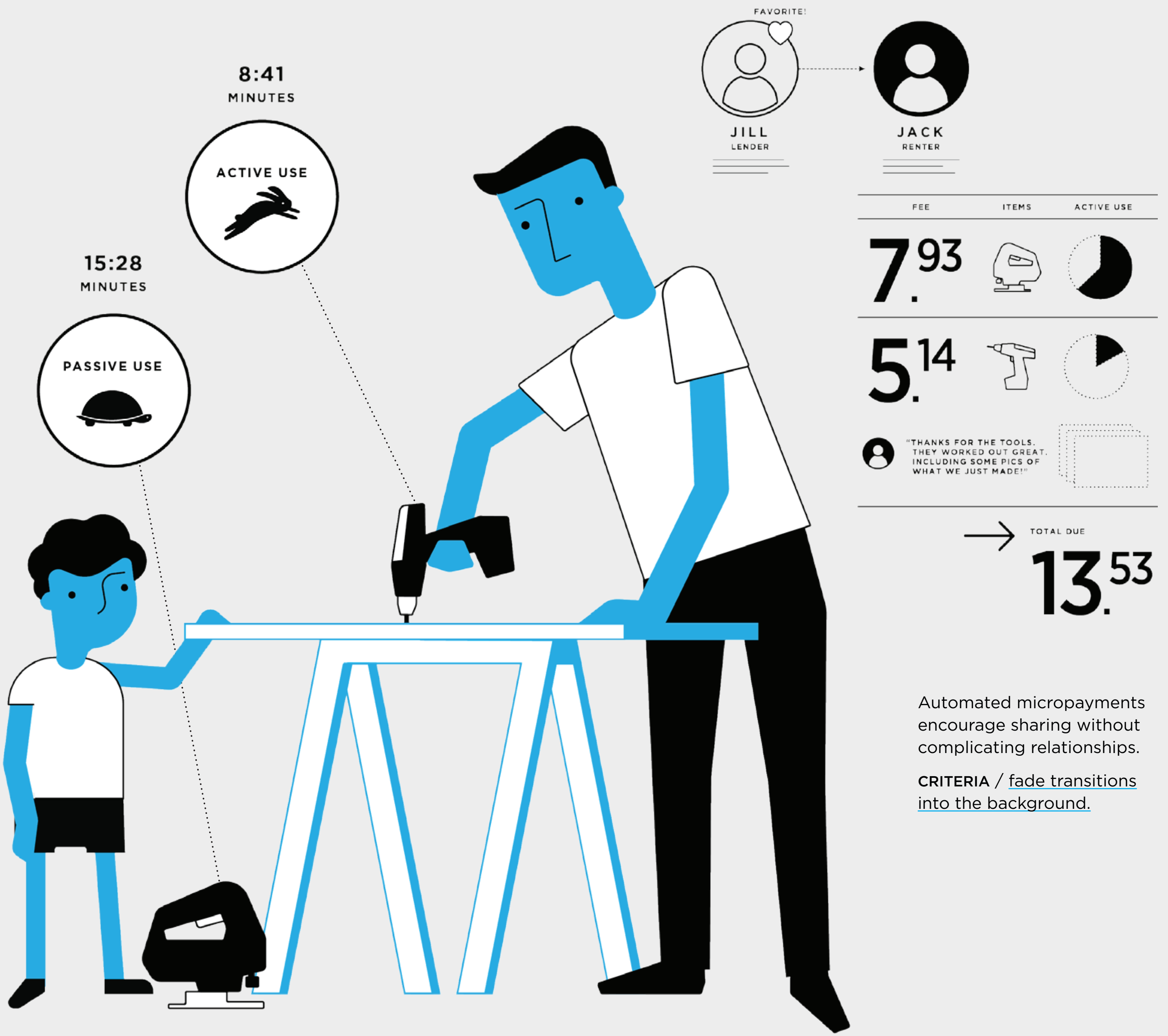
> **This innovation allows us to design services that are less constrained by existing institutions and expectations. The "trust" services that blockchain allows will significantly increase the range of possible solutions to customer problems. This will affect replacements to existing services as much as it will to as yet unimagined scenarios. The effect of this will run way beyond financial services into all aspects of people's lives.**
>
> JAMES DOWNES
> STRATEGY DIRECTOR AT PANCENTRIC
> (SDN MEMBER)

In the future, people will only pay for what they use, even if it's just fractions of a cent.

Transacting will be so easy and cheap that anyone will be able to sell or rent their goods and services without a middleman.

Usage is tracked to the minute, mile, or other relevant unit and micro-charges tabulated automatically.

CRITERIA / automate mundane tasks, but let me have the last say.



Automated micropayments encourage sharing without complicating relationships.

CRITERIA / fade transitions into the background.

03

FRICTIONLESS PAYMENTS

THE DISAPPEARANCE OF THE BILL

Think about the last few times you purchased something in person. You probably entered a store, looked around, chose some things, brought them to the cashier, and paid. Whether that was exchanging cash, swiping a credit card, or now tapping a smartphone or watch, this last step was universal because a physical interaction was needed to complete the transaction.

While paying is a necessary step of any customer journey, there's no reason it has to be such a prominent one. Fumbling around in your wallet, entering your pin, or digging for a quarter – it all serves to remind you that the experience you just had (or are about to) comes at a price.

The negative emotional aspects of payment – guilt, hassle, and disruption – can have serious impacts on sales and revenue. For years, service providers have been trying to improve the experience of using prepaid cards, customer-facing terminals, and mobile cashiers. Now, with the ubiquity of both computing and sensors, designers have better tools to address the pains of paying.

INTRODUCING THE GUILT-FREE LATTE

Even spending small amounts can create feelings of guilt and buyer's remorse. Whether it's $4 for a latte instead of free coffee at the office, or splurging on an expensive night out, the act of pulling out cash or a credit card can trigger those feelings. As mobile payment technology becomes mainstream (projected to grow from about $50 billion in 2015 to $142 billion in 2019 in the US) retailers and service providers are using it to create new ways to minimize the guilt of spending.

The Starbucks app – which boasts more than 13 million users and was responsible for 90% of all mobile payments in 2013 – does just that. The app lets you preload money and link to a credit card for auto-reloading. When it comes time to pay, you just open the app and shake your phone. Customers don't have the experience of handing over cash or a card and, since it's prepaid, they don't see individual line items on their monthly statements. Each latte feels like it's already been paid for, and feels even better when you collect a star towards a "free" drink.

DISRUPTING THE DISRUPTION

Paying disrupts experiences. It often goes unnoticed, because paying is such a mundane activity, but eliminating this disruption is why all-inclusive experiences like Club Med and cruises are so popular. Travelers pay upfront and once they're at the resort or on the boat, they can fully immerse in the experience. It's like being rich and famous: you can go waterskiing, order cocktail after cocktail, and attend shows, all without paying for a thing. Compare this to other vacations where you pull out your wallet for every meal, cab ride, and admission. You don't regret spending the money but, like at the movies, it breaks the "suspension of disbelief".

Service providers are acutely aware of how paying affects consumers' emotions and are finding ways to subtly blend payments into the overall experience. Disney's board of directors signed off on the $1 billion MagicBand system to help their amusement park visitors focus on their memories instead of on the logistics. The colorful rubber wristbands allow visitors to access hotel rooms and rides and make any purchases within Disney World with just a tap. Visitors can experience the magic of Disney World without ever having to pay a tab or sign a receipt.

> **Any sufficiently advanced technology is indistinguishable from magic," [the Sci-fi author Arthur C. Clarke] says. "That's how we think of it. If we can get out of the way, our guests can create more memories.**
> THOMAS STAGGS
> WALT DISNEY COMPANY COO

New York-based startup Reserve improves the dining experience by pushing all the logistics out of the way. Customers use the app to secure a table at top restaurants and link a payment method to their reservations. After the meal, they're charged automatically including gratuity.

> **The most positive impact [of frictionless payments] will be the ability for companies to enhance the consumer experience. In Reserve's case, the experience is enhanced when the dining party is able to leave at their leisure after their meal. This means intimate conversations can be extended, business deals can be closed, uninterrupted, and crying babies can be whisked away from the table and home to their cribs, whenever the party is ready to leave.**
> LOGAN GRAHAM, RESERVE OPERATIONS COORDINATOR, CHICAGO

/ GOING DEEPER

The legal dine-and-dash

Imagine that purchasing goods in a store requires no more effort than finding an item, picking it up, and walking out of the store with it. Maybe you never have to take out your wallet to pay for your bus fare, or your dinner is already paid for by the time you're done eating. While not being applied to the payment space currently, a few promising technologies could enable this frictionless future.

NFC CHIPS

Near field communication (NFC) chips are becoming increasingly cheaper to manufacture and can be embedded in product packaging, allowing items to be tracked very accurately within a factory or store. This detailed tracking could enable a retailer to detect when items enter a basket or cart and tally up their prices into a bill.

GEOFENCING

Geofencing is using GPS in smart devices to create virtual "boundaries": your phone can know if you're in or near a specific location, like a restaurant, store, or airport. Imagine walking into a bar and a tab is opened for you automatically.

BTLE BEACONS

The newest technology in retail, Bluetooth Low Energy (BTLE) Beacons, enables customized experiences for users on an even more granular level. These small electronic transmitters broadcast signals that can be picked up by phones or tablets. They can be placed anywhere and enable devices to know precisely where you are. For example, while geofencing can tell when you roughly enter a store, BTLE enables your device to know which section of the store you're in. Walking through a checkout zone could automatically trigger a charge based on all the items in your basket.

MEET YOUR NEW WALLET… YOUR PHONE

Paying can sometimes be just plain tedious. This is probably the most obvious when paying for taxis: once at your destination you're frantically calculating tip and counting cash while the cab blocks traffic and cars whiz by. Service providers have been trying to minimize the hassle of payment for years. Amazon's 1-Click® buying is a great example. As technologies that enable secure contactless payment become more commonplace, making purchases will become faster and easier.

> **It removes a significant barrier in the purchasing process, especially for [fast-moving consumer goods] and low cost goods and services.**
> PRIMOZ MAHNE
> BRANDING & SERVICE DESIGN
> GIGODESIGN, DESIGN AGENCY
> (SDN MEMBER)

One of Uber's key innovations was to redesign the taxi payment process. The Uber app stores your credit card information and automatically pays the driver when your ride is complete. Once you've arrived, you just thank your driver and step out of the car. Uber asserts that drivers in the busiest cities can make $6 more per hour than taxi-drivers and discourages cash tipping. However, the feedback function of a tip is recaptured through a mandatory 1-to-5 star rating of your driver before beginning your next trip.

Apple Pay reduces hassle for customers and, potentially, throughput time for merchants by allowing you to pay by holding up your iPhone to the card reader. It then charges the credit card you've linked and selected, and stores a record of recent purchases in Apple's Passbook app.

Your mobile isn't only making it easier for you to pay for products and services, but it's also making it easier to lend and pay your friends and family. Services like Venmo and Square Cash make it dead simple to send money between people, just enter the amount you want to send, and the cash is pulled directly from your bank account. They also allow you to request payment, breaking the ice and avoiding the awkward conversation of asking your friend to settle up.

/ GOING DEEPER

It's not all fun and games

Simplifying payment to reduce negative emotions can have some unintended downsides for end-users, providers, and service designers, too.

IRRESPONSIBLE SPENDING

As payments become more fluid and seamless, it will be harder for people to stay aware of their spending. While some may see this as a boon (people will spend more if they're not aware of it), service designers have a responsibility to help people spend wisely.

FALSE POSITIVES

Besides collecting payment, receipts and bills are an opportunity to review charges and check for errors. Without a clear payment step, customers won't have a chance to check charges before they go through. There's also the chance that they will be automatically charged for something they didn't purchase and won't realize it until they see their statement at the end of the month. Service providers will need to be better about error checking and have systems in place to quickly resolve problems.

DEHUMANIZED EXPERIENCES

While people value speed and efficiency, part of an in-person experience is the relationship that customers develop with a service provider. Paying is often the only time that people interact with staff or owners and taking away this interaction may completely dehumanize bricks-and-mortar transactions.

> **Changing people's behaviors will be the most difficult, particularly when it comes to feeling secure. People often need to feel a sense of completion, and without the 'cha-ching' of a cash register, we'll need to think carefully about how to give them that confidence.**
> KELSEY S.
> ENGAGEMENT DIRECTOR, THICK, (SDN MEMBER)

NICOLE CARROLL

GLOBAL HEAD OF EMERGING PAYMENTS AND INNOVATION, DISCOVER FINANCIAL SERVICES

Q	A
WHAT IS HAPPENING IN THE WORLD OF PAYMENTS?	Payments are vanishing. While they're integral to the purchase, they're becoming more invisible to the consumer. When you remove this friction, payments become more fun and people spend more. I call it the Uberization of payments. I installed Uber on my son's phone and now, instead of driving 20 minutes to pick him up, I just say, "take an Uber home". I would not be handing him $20 every day to take a cab home, but, with Uber, spending is so easy that I don't even think about the payment.
HOW CAN COMPANIES WIN IN THE PAYMENT SPACE?	My theory is that, to win in the payments space, you need to innovate around the customer experience while ensuring you are protecting your customer's privacy. You need products that create trust.
THINGS WILL GO WRONG. WHAT HAPPENS WHEN THAT TRUST IS BROKEN?	The companies that are going to prevail are the ones that provide excellent customer service. If you're ever on Uber and there's an accidental payment, they'll respond to you in a minute – even if it's 11:30 at night – and they'll solve for it promptly. So there's an expectation from consumers: to have permission to facilitate this ease of payment, you need to provide tools for self-reporting errors and provide fantastic customer service.
ANY LAST THOUGHTS?	One thing to remember is that, even with this new technology, cash and cards will not go away. No payment formats have ever really gone away. I mean, we still have pennies!

With frictionless payment comes great responsibility

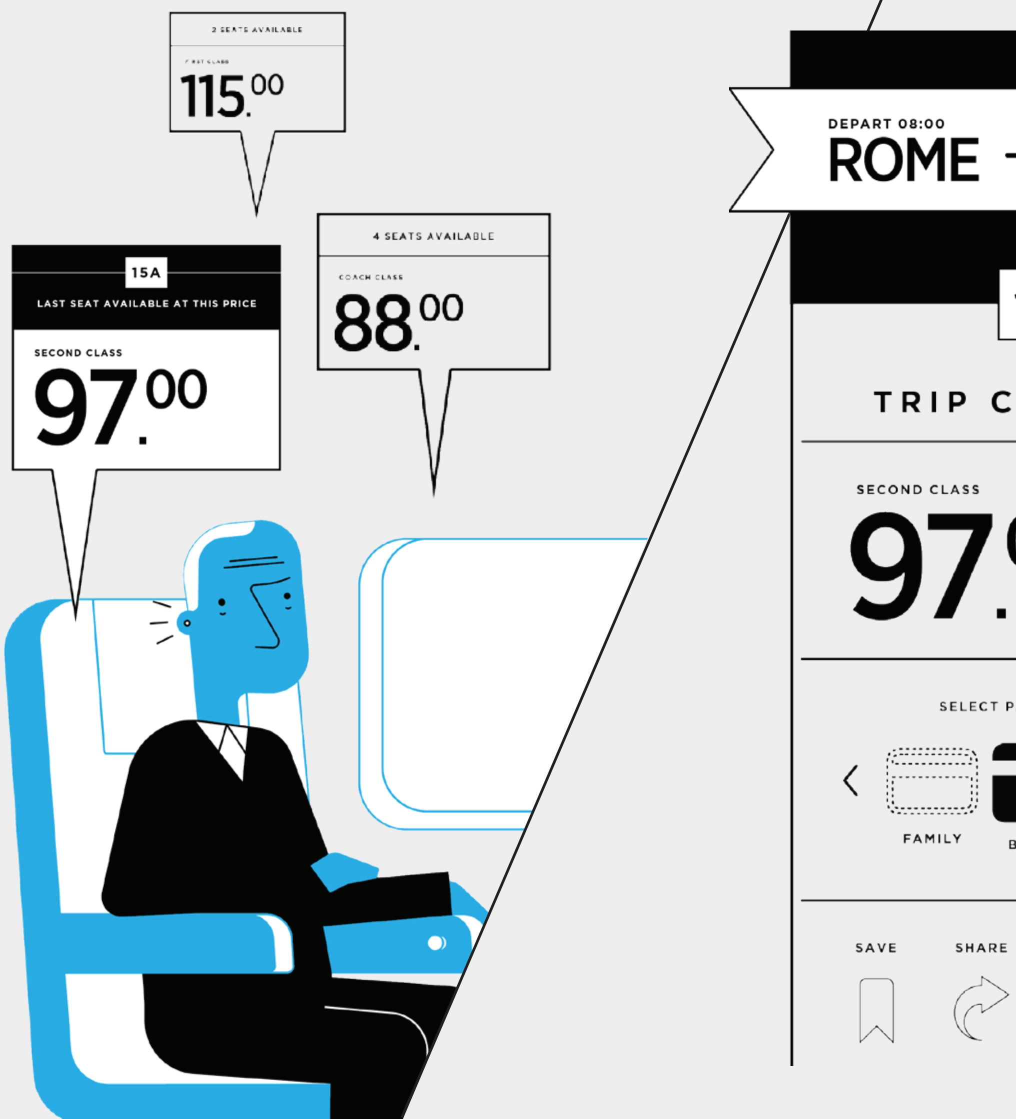
As physical exchanges diminish and transactions move into the background, payment will provide new opportunities for other kinds of interactions and human touch-points. Designers will need to share the responsibility with clients and businesses for protecting people from wanton, self-destructive spending. New services will need to strike a balance between letting consumers enjoy their experience and forget about money, while ensuring they can make informed decisions and take control at key moments.

> **This provides us with a brand new service possibility. The touch-points will be transformed and the progression of the user journey will be changed dramatically.**
> CECILIE KOBBELGAARD
> DESIGN CONSULTANT
> UCN ACT2LEARN
> TECHNOLOGY
> (SDN MEMBER)

> **"Giving payment" will be reframed to "gaining access" and will become seamless.**
> JONATHAN KALINOWSKI
> SERVICE DESIGNER, FJORD
> (SDN MEMBER)

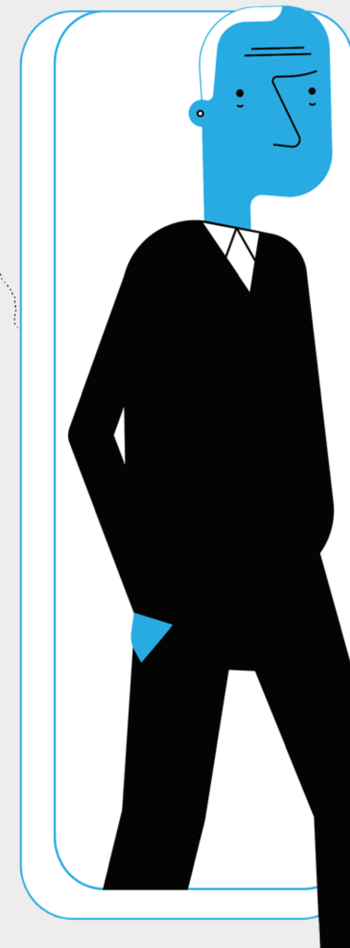
In the future, “paying” will shift from being a discrete activity to one that happens in the background

Transactional processes like buying tickets or paying for products or services will happen automatically and service providers will be able to focus on delivering great experiences.



Train tickets can be purchased by sitting down. Subtle notifications confirm each transaction.

CRITERIA / don’t show me everything unless I ask.



Background transactions are balanced with the ability to learn more and make adjustments if desired.

CRITERIA / automate mundane tasks, but let me have the last say.

04

LIVE BUDGETING

THE AUTOMATION OF YOUR CHECKBOOK

Is the money in your savings account or IRA enough to get you through a rainy day? How about a rainy month? How about hurricane season? Financial stability is something most of us aspire to, and yet the rate of regular saving is quite dismal. According to Pew research, over half of American households have less than one month of income available in readily accessible savings.

For many people, the problem stems from true economic pressures: underemployment, medical expenses, accumulated debt, or the rising cost of living. But others simply lack the know-how, tools, or discipline to manage their finances and save for the future.

Traditionally, making a personal budget is a time-intensive and tedious task that few enjoy. Those who do invest the time to make a budget often lose steam due to the challenges of day-to-day accounting. Outside of archaic things like checkbook ledgers and spreadsheets, few tools have been available to help consumers with the daunting task of monitoring daily spending. One alternative has been to hire a money manager, but for most of us the expense is prohibitive.

OUTSOURCING THE WORK OF BUDGETING

A number of new and old financial technology companies have emerged to offer consumers greater ease in establishing budgets and tracking expenses. They use complex algorithms and advanced data analytics to instantly track spending and saving, eliminating the need for consumers to collect receipts and manually enter expenses. Simple and aesthetically pleasing visualization tools reduce the burden of information and create instant transparency.

Mint is the leading player in smart budgeting platforms. It's a free service that syncs seamlessly with users' bank accounts and credit cards, aggregating, tracking and categorizing every transaction in real-time. This deep integration enables the platform to create personalized budgets for users, versus requiring users to create their own. In 2009, before the current boom of financial startups, software giant Intuit saw the promise of Mint and acquired it for $170 million. Mint recently underwent a significant redesign to make the interface more elegant and user-friendly.

Level Money is another free integrated platform that syncs with users' bank accounts and credit cards to help set and manage financial goals. While Mint provides a detailed and comprehensive analysis of spending habits, Level Money takes the opposite approach: the core focus is keeping spending thresholds front and center for users. The home screen of the app has three data points, remaining spending budget for this month, this week and today.

> **"The dematerialization of money will lead to many positive innovations in transactions and security, but the lack of tangibility could make it harder to know how much money you have, or have to spend. Credit cards provide convenience and acceptability but have also led to a lack of understanding of the value of money. Level, Sweep and other similar companies are now providing a new way to interact with money.**
>
> ROBERT SUAREZ
> MANAGING DIRECTOR
> INNOVATION AND DESIGN
> SINGULARITY UNIVERSITY
> (FORMERLY ON THE FOUNDING TEAM OF LEVEL MONEY)

Other platforms acknowledge that money management is often a shared responsibility. The Home Budget app, for example, has a feature called Family Sync that allows multiple individuals to create and manage a group budget. Aggregating income, bills, and individual purchases, Home Budget compiles all of the data from each family member into a single account and syncs everyone's devices in the cloud, keeping the group aligned to a set of budgeting goals.

While they're still making their way to the mainstream, these platforms herald the rise of a new paradigm in personal finance, one that no longer requires manual entry or hired experts.

SAVING ON YOUR BEHALF

Technology is also enabling a new breed of free or inexpensive saving services that eliminate the cognitive burden on users by automating decisions. These services benefit from the fairly high levels of trust that Millennials place in digital technology. Having grown up with smartphones and social media, this generation is accustomed to trading a certain degree of privacy for ease and convenience, and personal finance is no exception.

One of these services, Digit, uses sophisticated algorithms to analyze your spending and then slowly trickles small amounts of cash into a special savings account. Every two or three days, Digit transfers between $5 and $50 from your checking account to your Digit savings account based on what it predicts you can afford. To bolster confidence, Digit offers a no-overdraft guarantee. The entire process is completely automated, helping people save regularly without having to change their habits.

Another service, Acorns, lets you put money into one of five investment portfolios – from conservative to aggressive – that are optimized using algorithms based on modern portfolio theory. You can invest a lump sum, set up recurring payments, or let Acorn round up the purchases you make on your credit or debit card and invest the "change". Unlike Digit, the money is invested in one of five portfolios that offer better returns than a savings account. Acorns charges $1 per month for balances less than $5,000 and 0.25% annually for account balances greater than $5,000.

/ GOING DEEPER

Millennials' (lack of) trust

It's no secret: millennials are the least trusting generation in recent history, and the financial services industry is no exception. Only 19% of them agree that "generally speaking, most people can be trusted" and even fewer, 14%, say they would consult with an advisor when making a financial decision. What's more, a recent survey by Scratch found that half of millennials don't believe their bank offers anything different from competitors.

As digital natives, millennials are increasingly bypassing the human element of financial services altogether and seeking user-friendly, technology-enabled platforms. This openness to digital experiences has opened up enormous growth opportunities for services like Digit and Level that offer low-cost, transparent solutions utilizing big data.

> **I'm almost certain there's a large number of people who just wouldn't be comfortable with what Digit does today. This is a product built for our generation, between ages 22 and 35. I built a product for myself.**
>
> ETHAN BLOCH
> FOUNDER OF DIGIT

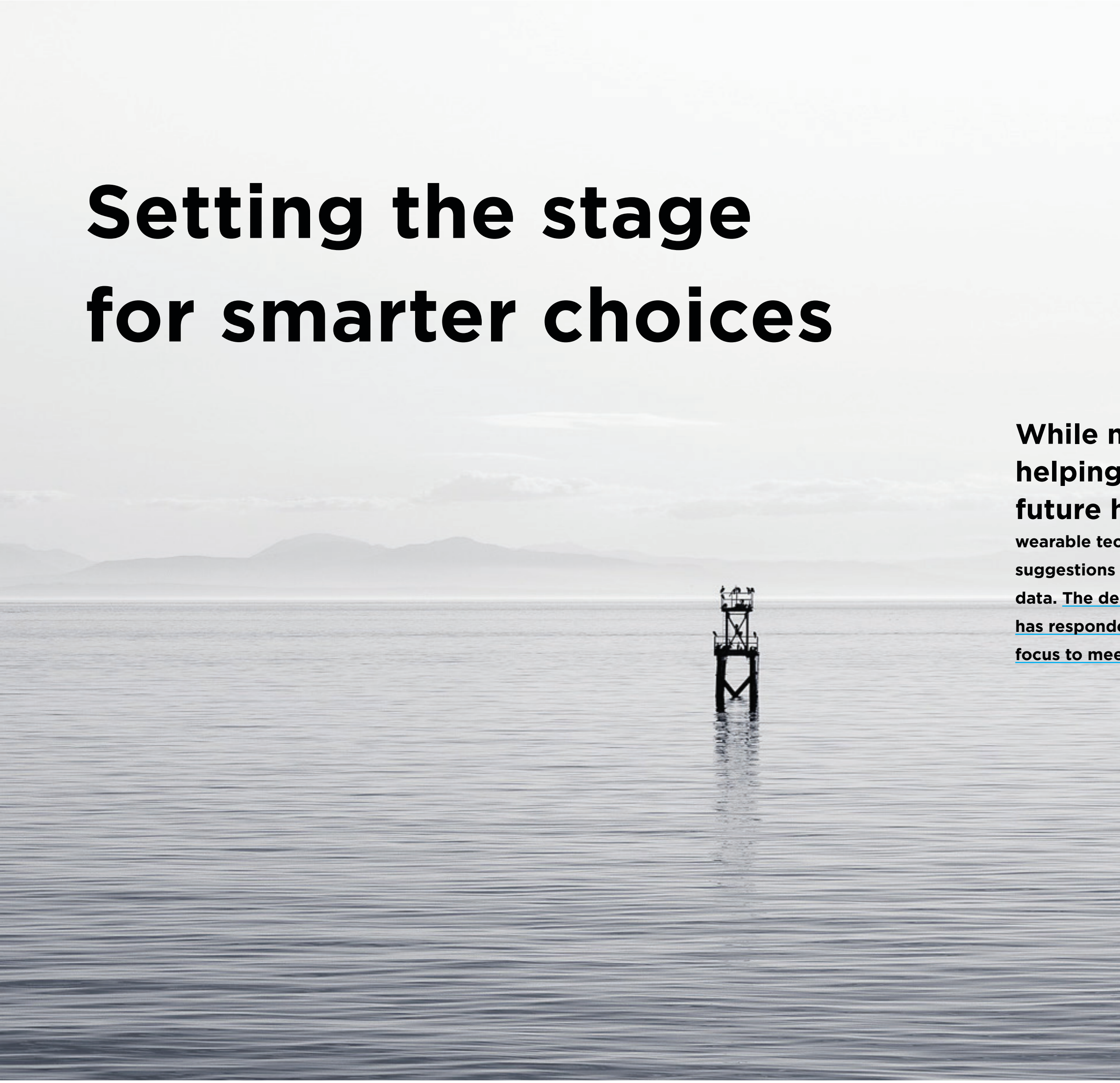
It's imperative for any financial service provider, not just big banks, to embrace and adapt to this shift in where we place our trust. For millennials, trust comes from digitization and automation, for other generations, it may come from credentials, certifications, or human interaction. NerdWallet, a startup whose vision is to be "your source of truth for all of life's financial decisions," engenders trust by providing access to information.

> **In the near term, giving consumers broader access to information and opening new channels of communication will help people feel more comfortable discussing finances and sharing their own experiences. We've found that people want to have these conversations, but they've been intimidated. Longer term, we envision a future where people don't have anxiety around their finances. They have trusted sources where they can have their questions answered and get great advice. Ultimately, they have a a level of assurance that what they're doing is going to set them up for financial success.**
>
> VICKIE CHIANG
> DIRECTOR OF USER EXPERIENCE
> NERDWALLET

LUKASZ STROZEK

CO-FOUNDER & HEAD OF PRODUCT AND TECHNOLOGY, EXPEDITE

Q	A
WHAT ARE THE CHALLENGES OF DIGITIZING A MANPOWER-DRIVEN INDUSTRY?	In financial services there is an inherent lack of trust towards the institutions and people that are ostensibly supposed to support consumers because their incentives aren't really aligned. That's a hard barrier to break online because consumers think they're good at assessing other people, but have a harder time doing it with technology. Furthermore, investment and financial planning is inherently a long-term objective. With startups and new companies, consumers ask themselves "is this company still going to be around in years?" [or] "Do I trust them with my time and money?"
WHAT ARE FINANCIAL STARTUPS DOING TO BUILD TRUST?	Trust is eroded when features are perceived as dishonest, like when a consumer hits a wall where they have to provide personal information so that they can be sold to. Avoiding these traps, even if it means you may lose business early on, goes a long way towards building trust. Services like Mint and Wealthfront have also started to validate the market more broadly. Before Mint, it was unheard of to give all of your financial data and passwords to one company. But sentiments are starting to change.
IS THERE STILL A ROLE FOR PEOPLE?	You're not going to be able to automate 100% of everything. The goal is not to completely cut out human beings, but to make them ten times more efficient than they could be otherwise. Give them the best tools so that they can focus on things only a human can do: building a relationship, giving advice on a complicated topic. Let technology do all the dirty work, so that customer service interactions can feel like a personalized, concierge experience.



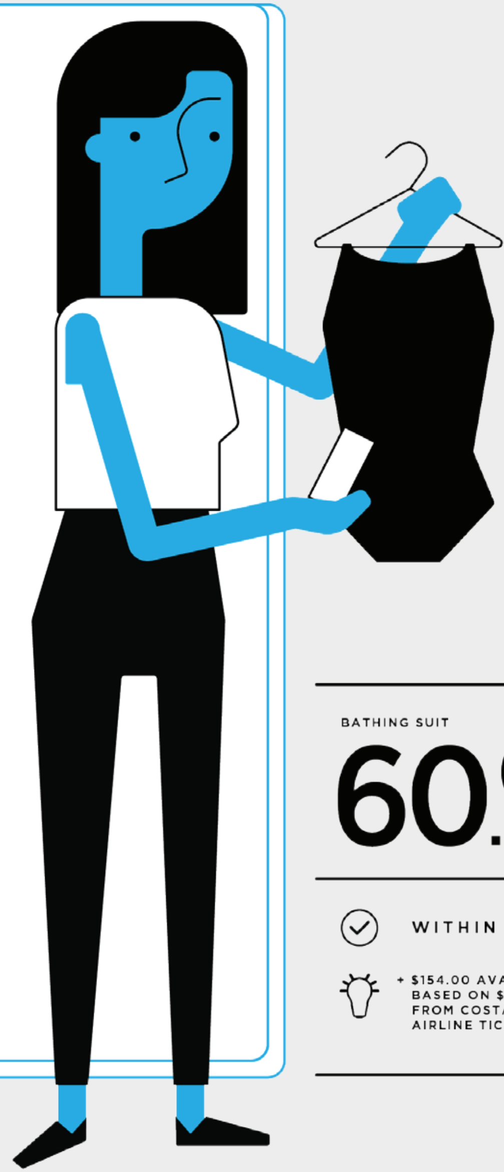
Setting the stage for smarter choices

While new digital tools have shown to be effective at helping people stay on track with their finances, the future holds even greater promise. In recent years, mobile and wearable technologies have emerged to automate mundane daily tasks and make relevant suggestions for new behaviors through the capture, aggregation and interpretation of data. The demand for user centric-investment services is real, and the startup community has responded. To maintain its place in the market, the large institutions must shift their focus to meet this demand, or risk significant decline in market share.

For example, the Android Wear platform combines geographic location, time of day, social media history, and user preferences to proactively suggest certain behaviors given a user's context. For example, when a user is near a shoe store that she has previously tagged on Pinterest, Wear can automatically remind her that she was interested in the store.

Integrating these technologies with tools like Mint opens up opportunities for budgets to not only manage themselves, but to influence users' daily decisions. In the not so distant future, it is plausible that your smartwatch may recommend you walk an extra block to have lunch at a restaurant that is more in line with your budget.

> **Live budgeting will require the most amount of data and processing power. Making this information intelligible will be a key challenge for designers moving forward.**
> JONATHAN KALINOWSKI, SERVICE DESIGNER, FJORD (SDN MEMBER)



In the future, budgeting will shift from "tracking expenses" to "guiding spending"

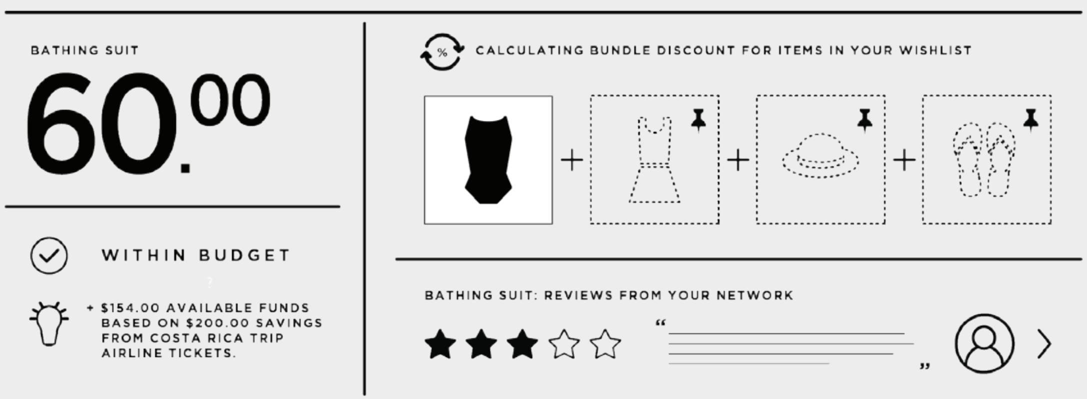
Contextual guidance and rich content will allow people to make more informed decisions as they shop. Businesses will also be able to hyper-tailor their offerings to individual customers.

Integration with online accounts adds a personal dimension to recommendations.

CRITERIA / look beyond the numbers.

Digital Smart Tags help shoppers budget by providing context and surfacing spending choices.

CRITERIA / help me learn as I go.



05

DESIGN CRITERIA

THE FOUR TRENDS OUTLINED IN THIS REPORT OFFER A GLIMPSE INTO THE FUTURE OF FINANCIAL SERVICES.

As designers look ahead and begin developing new services to meet the needs of people in this changing environment, we suggest the following design criteria.

AUTOMATE MUNDANE TASKS, BUT LET ME HAVE THE LAST SAY

Being bogged down with time-consuming tasks is something most people like to avoid. Automate transactions, tracking and calculations, but enable users to override the system and make the final call as they see fit.

LET'S TALK BUT NOT ALL THE TIME

When making financial decisions, people find value in a balance of personal guidance and automated independence. Offer efficient solutions that provide human guidance as needed, but only when needed.

DON'T SHOW ME EVERYTHING UNLESS I ASK

When it comes to personal finances, it's critical to be in the know when an opportunity arises or if something goes awry. Find ways to surface only the most critical information for people, but give them the option to go deep when necessary.

HELP ME LEARN AS I GO

People vary in their level of financial savviness, but feeling informed is a desire that most everyone holds. Integrate education within the service features themselves in a manner that's contextually relevant.

FADE TRANSITIONS INTO THE BACKGROUND

Money is the lifeblood of most of our day-to-day activities (shopping, socializing, commuting, etc.). Find ways to further integrate finances into these experiences so people and businesses can focus their time and attention on enriching human interactions and the activity at hand.

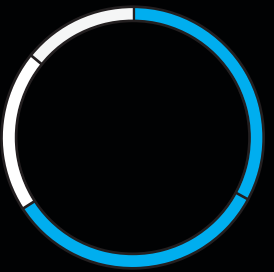
LOOK BEYOND THE NUMBERS

People save and spend money for different reasons. Look beyond the standard metrics for finacial profiles and to the wealth of social networking, purchase, and behavioral data to understand where people want to go.

WHAT DO DESIGNERS THINK?

In late August 2015, we sent a short survey out to the SDN community and received responses from 63 members across the globe. Among the community we noticed tensions between what was most exciting for design and what would have the most impact. Additionally, the most impactful trend was also the most challenging to tackle.

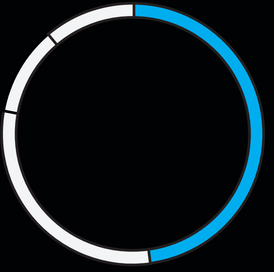
AS A SERVICE DESIGNER, WHICH OF THE FOUR TRENDS IS THE MOST EXCITING TO YOU?



33% FINANCIAL SERVICES FOR THE PEOPLE

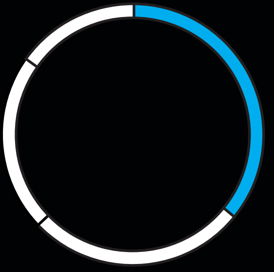
33% FRICTIONLESS PAYMENTS

WHICH OF THE FOUR TRENDS WILL BE THE MOST CHALLENGING FOR DESIGN?



48% MONEY REDEFINED

WHICH OF THE FOUR TRENDS WILL BE THE MOST IMPACTFUL?



36% MONEY REDEFINED

you shape the world

Many of the trends point to the end of financial institutions as we know them.

Startups and tech firms are starting to compete with the entrenched big guys like Visa, Chase and Merrill Lynch, providing a better quality product for lower fees.

It's caused a huge amount of disruption in the past few years, accelerating the adoption of new technologies and acquisition of smaller firms, in the hopes that the big guys can capture the magic and bring it in-house.

> **There are serious implications for financial institutions' ability to collaborate and deliver services. The major wake-up call will come as new entrants start to chip away long-held services, and when they do so quickly. Banks have had the luxury of limited competition. New service offerings are giving people options and requiring them to raise their game. We are already seeing financial-services clients looking for ways to better understand and and deliver customer experiences. The challenge is, can they do it fast enough and be disruptive enough to keep up?**
>
> CHRIS FERGUSON
> CEO, BRIDGEABLE
> (SDN MEMBER)

It's a tumultuous but exciting time for financial services: technological innovations like cryptocurrency, algorithms and mobile payments are changing the way we spend, save and invest. At the same time, consumers are more discerning and thoughtful, and have higher expectations for the user experience than anytime in history.

Service designers, we need you more than ever! It's up to you to shape the world and ensure that consumers are the center of our new financial services.

SOURCES

01 / FINANCIAL SERVICES FOR THE PEOPLE

The Millennial Generation and the Future of Finance: A Different Kind of Trust

Daniel McAuley, CFA and Steve Weiner, Wharton FinTech, June 2015

http://innotribe.com/wp-content/uploads/2015/06/Millennials-and-Future-of-Finance_white-paper_Final.pdf

Robo advisors: The next big thing in investing

Matt Egan, CNNMoney (New York), June 18, 2015

http://money.cnn.com/2015/06/18/investing/robo-advisor-millennials-wealthfront/

Peer-to-peer lending: From the people, for the people

The Economist, May 9th 2015

http://www.economist.com/news/special-report/21650289-will-financial-democracy-work-downturn-people-people

Peer to Peer Lending Sites: An Exhaustive Review

Simon Cunningham, Lending Memo, May 8, 2015

http://www.lendingmemo.com/p2p-lending-sites/

Why Are Millennials Increasing Demand For Impact Investing

Motif Investing, Investing Insights, March 31, 2015

https://www.motifinvesting.com/blog/millennials-increasing-demand-impact-investing

02 / MONEY REDEFINED

Almost 100 Billion Spam E-mails Sent Daily in Q1 2013

Jeff Goldman, eSecurity Planet, May 03, 2013

http://www.esecurityplanet.com/network-security/almost-100-billion-spam-e-mails-sent-daily-in-q1-2013.html

03 / FRICTIONLESS PAYMENTS

Starbucks' (SBUX) CEO Howard Schultz on Q4 2014 Results - Earnings Call Transcript

Seeking Alpha, Oct. 31, 2014

http://seekingalpha.com/article/2621935-starbucks-sbux-ceo-howard-schultz-on-q4-2014-results-earnings-call-transcript

Forget Apple Pay. The Master of Mobile Payments Is Starbucks

Marcus Wohlsen, Wired, November, 2014

http://www.wired.com/2014/11/forget-apple-pay-master-mobile-payments-starbucks/

Disney's $1 Billion Bet on a Magical Wristband

Cliff Kuang, Wired, March, 2015

http://www.wired.com/2015/03/disney-magicband/

You're Allowed To Tip Your Uber Driver (And Maybe You Should)

Alexis Kleinman, Huffington Post, March 5, 2015

http://www.huffingtonpost.com/2015/03/05/tip-uber-driver_n_6810296.html

04 / LIVE BUDGETING

The Dangerous State of Americans' Savings

Ann Carrns, The New York Times, January 30, 2015

http://www.nytimes.com/2015/01/31/your-money/the-dangerous-state-of-americans-savings.html?_r=0

Mint.com, Wikipedia Entry

https://en.wikipedia.org/wiki/Mint.com

Intuit To Acquire (Former TechCrunch50 Winner) Mint For $170 Million

Michael Arrington, TechCrunch, Sep 13, 2009

http://techcrunch.com/2009/09/13/intuit-to-acquire-former-techcrunch50-winner-mint-for-170-million/

The Millennial Generation and the Future of Finance: A Different Kind of Trust

Daniel McAuley, CFA and Steve Weiner, Wharton FinTech, June 2015

http://innotribe.com/wp-content/uploads/2015/06/Millennials-and-Future-of-Finance_white-paper_Final.pdf

Think you know the Next Gen investor? Think Again.

UBS Investor Watch, Q1 2014

https://www.ubs.com/content/dam/static/epaper/index.html?id=05e861a2#/05e861a2/1

PHOTO CREDITS

pg 10-11 Photo by Taylor Leopold

pg 21 Photo by Sophia Baloolal

pg 24, 64 Photo by Hugo Kerr

pg 15 Photo by Matthew Wiebe

pg 33 Photo by Siyan Ren

pg 38 Photo on Unsplash

pg 45 Photo by Adam Przewoski

pg 47 Photo by Andrew Revitt

pg 49 Photo by Chelsea Francis

pg 52 Photo by Namphuong Van