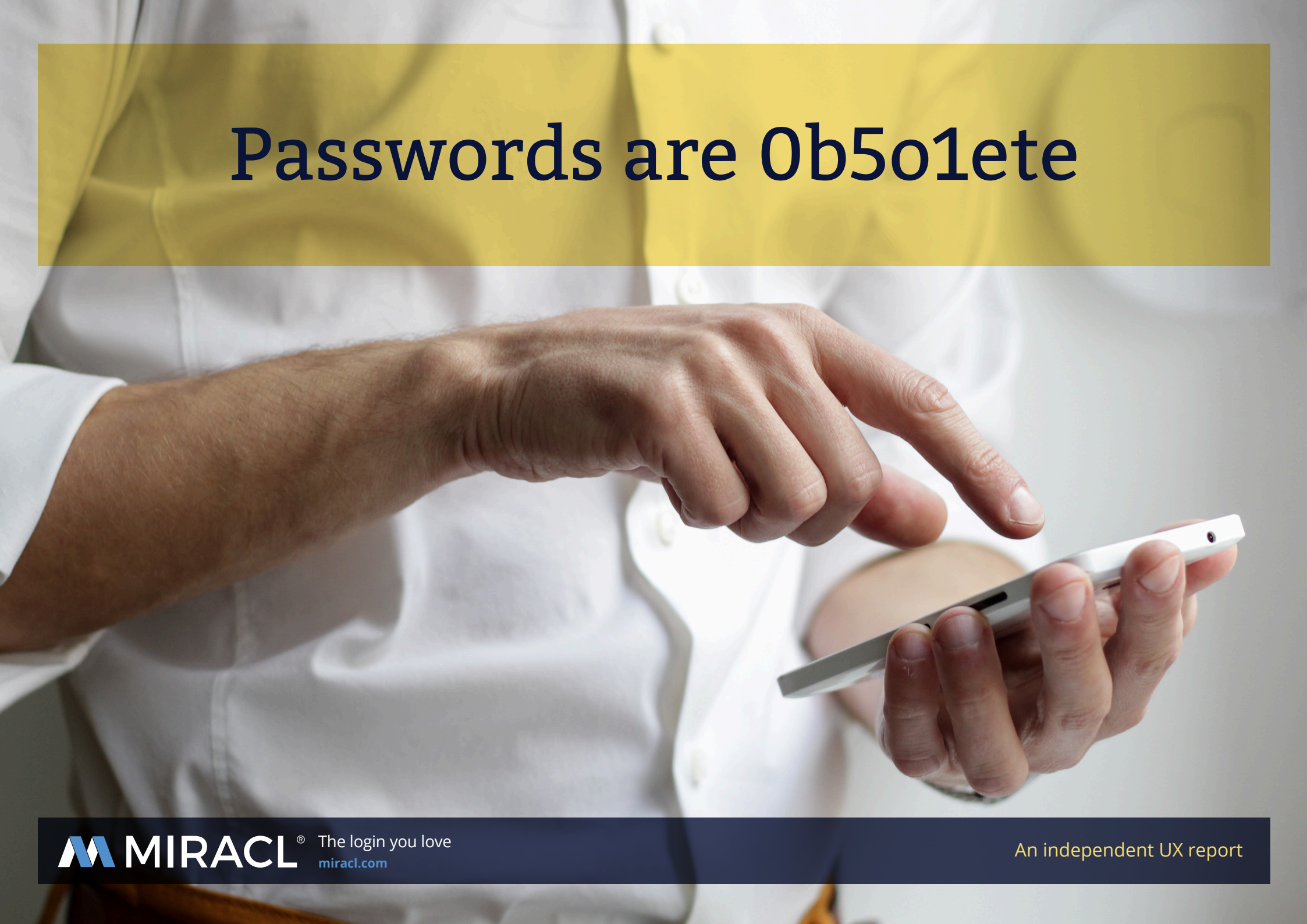
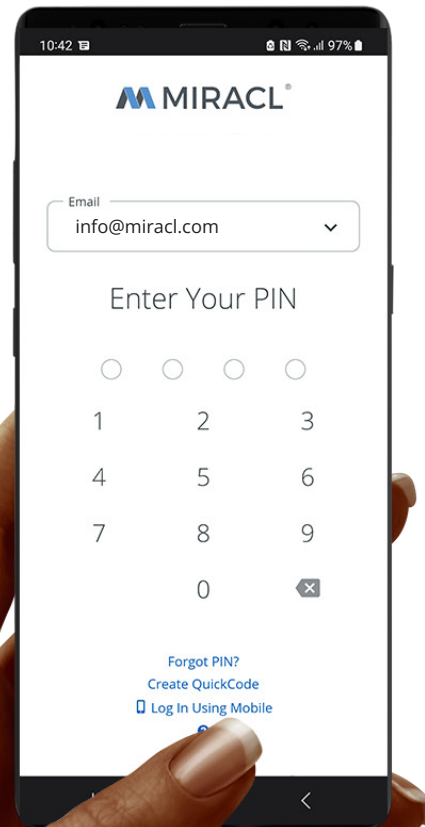


Passwords are 0b5o1ete



Surely, you've heard of MIRACL



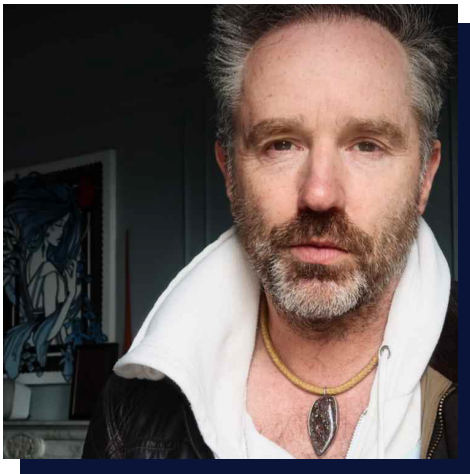
...but if you haven't,
it's the login you love.

MIRACL is the world's fastest MFA –
with a 99.7% login success rate.

Its single-step MFA matches your
personal device to a PIN only you
know or local biometric (where
available), for super secure login
in under two seconds.

Compliant with secure customer
authentication regulations, MIRACL
stores no user data and requires no
hardware.

An independent UX report on MIRACL



About the Author

Simon Richards is an independent UX expert with 20 years experience supplying digital strategy and UX with global brands as diverse as Bacardi to the BBC, HSBC to HMRC.

This is a great UX opportunity

Before I looked at MIRACL I was highly cynical. Could something so simple as a PIN replace the nightmare spaghetti of passwords and authentication apps we all navigate most days? Short answer – yes it can! Elegantly and securely.

As UX practitioners, you and I question and improve every detail of the user experience, from overall strategy to atomic design elements. Yet somehow, we’ve let the whole login experience slide. It’s just as bad now as it was 10 years ago. In fact, it’s worse.

But now, we can fix that. MIRACL is the gamechanger we need to tackle this area of experience. MIRACL isn’t an iterative little bump to conversion rates that might slightly raise an eyebrow somewhere. It’s a major play with benefits to the business as a whole:



Increase sales conversions



Reduce costs



Simplify processes and management



Increase customer satisfaction

User Research



As part of my digging around I researched the login process and attitudes to MIRACL with 300 people in the UK.

As we go along, you'll see insights from that survey included, like this:

Did you know passwords are not secure and can be hacked from anywhere in the world?

Yes, that's old news

76%

No!

24%

I put this one in first, as I was amazed – lots of people know passwords are inherently weak, but are stuck using them!

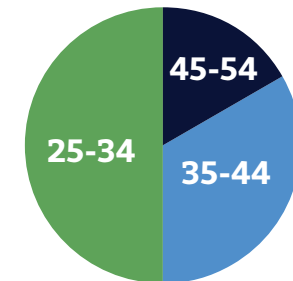


300

Sample size

50:50

Male:Female ratio



Sample ages

Interviews were carried out during the Summer of 2022.

Report contents



Heard about Tesla's flying car?



It can land in your garden and the wings fold back like Chitty Chitty Bang Bang. For security, rusty old steel padlocks hang on the doors, opened by fiddly keys. Or if you lose them – a paperclip will do.

Yes, I'm joking! But, as I found out after doing a UX review of MIRACL's disruptive new login technology, the real joke is on all of us. Each time we log in with a password, SMS or similar, we're getting an experience as hard to use and insecure as those daft padlocks.

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| A real world experiment: MIRACL vs Google | 06 |
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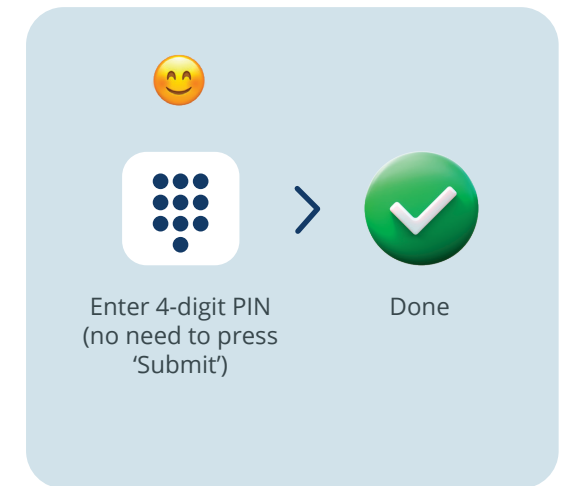
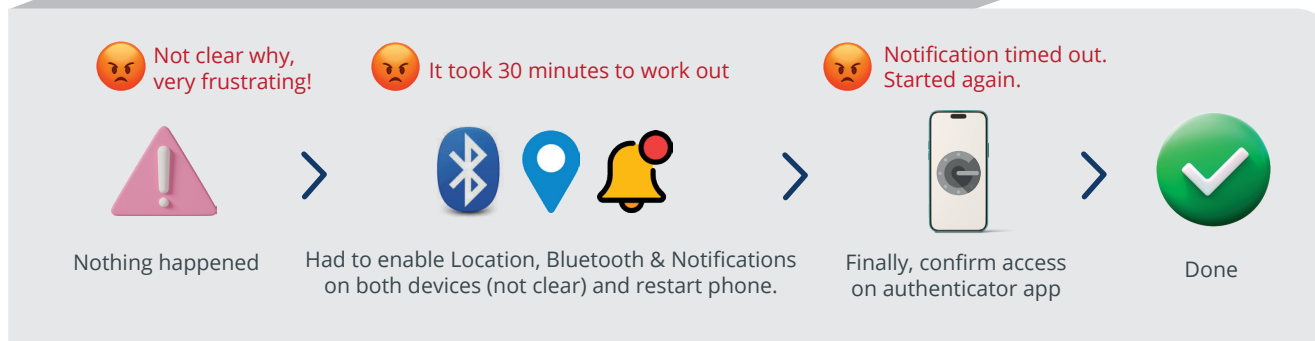
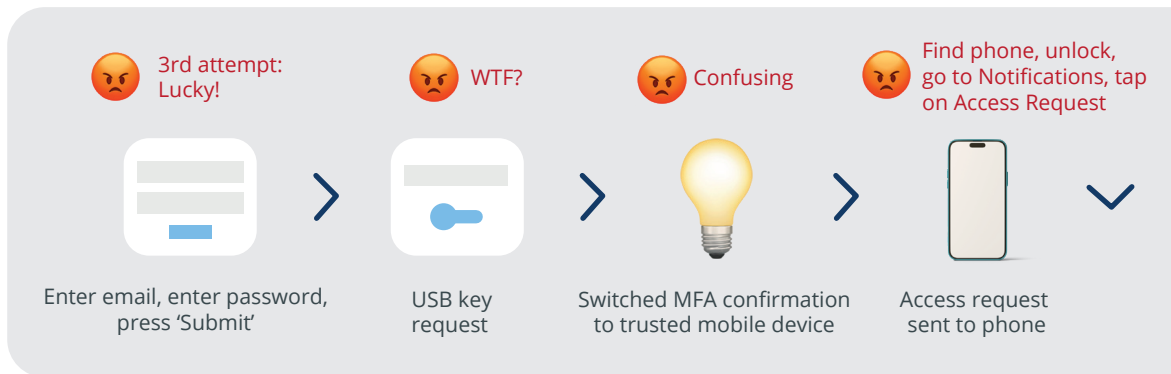
A real world experiment: MIRACL vs Google



Logging into Chrome to sync my Google account on a new device



Account authentication for a bank*



2 secs.

* Try it out! MIRACL has a free demo where you create an account with an online bank here:

<https://demo.miracl.cloud/bank/>

 = Pain points

30 mins (!)

Your missing metric?



SR

As I started to get to know the people at MIRACL, I heard this phrase: *'the missing metric'*. It was an interesting concept. Was it marketing fluff, or something more?

I asked Michael Tanaka, MIRACL's Chief Commercial Officer at MIRACL to explain the idea more.

We're so used to the complexity of managing passwords and Multi-Factor Authentication, it's easy to assume it's something we're stuck with: a sunk cost and a compromised customer experience. Something painful for everyone concerned – except perhaps IT contractors!

Now, imagine if the login experience was a joy to use. You'd start to analyse login performance alongside your sales funnel, conversion rate, Net Promoter Score and more. We think ease of login should be taken as seriously as your conversion rate. It's probably the biggest single determining factor.

That's what we mean by MIRACL as your missing metric.



Michael Tanaka
Chief Commercial Officer



MIRACL's customers see up to a **15% increase** in successfully authenticated traffic.

What's the use case?

SR

Last week I bought a stupidly expensive MacBook. After a username and password, Apple demanded I produce an Apple device I sold in 2015 to type in an authentication code. Painful. It made me wonder – what is the use case for MIRACL?

To be used as a replacement for the email and password Apple wanted? Or a second level of authentication such as the code they asked for? Or a complete replacement for both of those and other MFA technology?

I got a pretty interesting response from Michael.



Reduce costs by 90%
MIRACL saves 70% of helpdesk time and is 10% of the cost of passwords to manage.

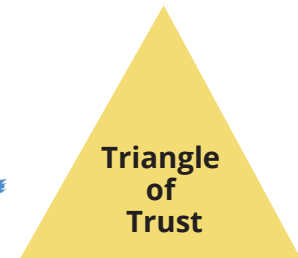
Our clients use it in all of those ways.

Some want a better, single solution. Others want MIRACL as a backup for passwords. Here's the thing: you don't need two separate steps to be secure. And you don't need passwords.

To authenticate people securely, you need three factors in place at the same time – something we call the **Triangle of Trust**.

MT

Something only the user has
e.g. a token in an app



Triangle of Trust

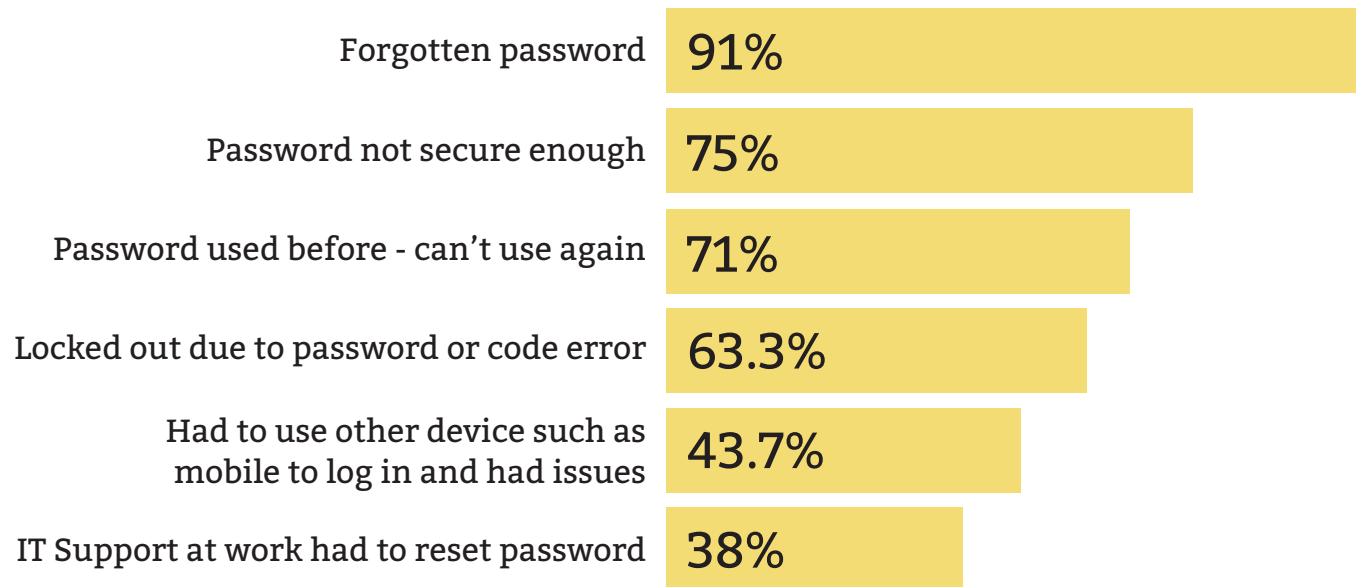
Somewhere the user is
e.g. a known time or place

Something only the user knows
e.g. a PIN code or biometric

Research highlights

100% of respondents agreed that when they log into accounts for online services, they have had problems:

What problems have you had logging in?



What's the use case?

SR

So, if we look at the Triangle of Trust as the model, you're saying there's nothing really stopping you having a single, speedy login experience that covers all the bases at once?

Yes, and that's exactly what MIRACL does with a simple PIN.

MT

SR

So if we could wean ourselves off passwords ... and use MIRACL instead...

you'd immediately make authenticator apps, one time passcodes, SMS codes, security calls and apps like OKTA redundant. They are only here to prop up passwords.

MT



73% of survey respondents said they would rather log into their online banking app with a 4-digit PIN than any other login method.

MIRACL®

Email
info@miracl.com

Enter Your PIN

| | | | |
|---|---|---|---|
| ○ | ○ | ○ | ○ |
| 1 | 2 | 3 | |
| 4 | 5 | 6 | |
| 7 | 8 | 9 | |
| | 0 | ⓧ | |

What's the use case?

SR

Sure, I know a 4-digit pin is easy to remember. A complex password is not. That's why I rely on my browser remembering it! But I still feel in the back of my mind a PIN is too easy.

I'm afraid to say that is part of our survival instinct. Your subconscious often wants to keep going with something familiar even if your conscious mind knows there are better options. **We're weird creatures** – even if something isn't working for us, the subconscious wants to stick with it because so far, we've survived.

MT

SR

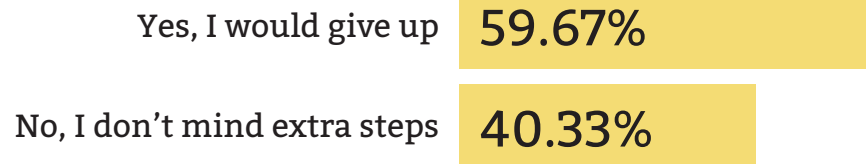
I'm not sure I have survived some password fails intact! So here's another question. Everything the UX community works on is designed to make things simpler. But logging in just gets more complicated. A few years ago, you didn't have to even validate your email address. Now, at one of my clients, I have to fire up a VPN, log in with a complex password, use an authenticator app on my phone just to get to their intranet. And believe me, it's not worth the effort!



Improve customer satisfaction
You want to deliver sticky content and a more personalised experience. Reducing login friction will help.

Research highlights

Imagine you're shopping online and the store asked for extra security steps before you could pay, such as an SMS code, would you ever give up and shop somewhere else?



“ After logging in with my username and password, the site then proceeds to require an SMS code. However, the phone number linked to my account was a landline phone so an sms code was in fact impossible. ”

What's the use case?

SR

If you look at other complex areas, like payment systems and currencies, there are any number of revolutionary technologies out there. But with passwords and login processes, all you typically get offered is a password manager! Why is there so little challenge in this area of UX?

MIRACL is that challenger brand! We are committed to disrupting this space, with higher security standards and a better experience.

Passwords still play a part in over 95% of logins across the world, yet since the early days of the internet, people have known passwords can't secure a world with near infinite interconnections. We've all seen the data breaches that prove the point! It's our mission to change that.

MT



"People are surprised by how straightforward MIRACL is. It cuts through the fears people have about changing access to a system, such as getting locked out accidentally. Onboarding customers is simple. The feedback has been really positive, all the way up to board level."

– John Ferguson, CRO, Cashfac

Wait, you say it can't be hacked?



SR

Every day I get messages from someone trying to sell me technological mutton dressed up as lamb, usually wrapped up in a dressing of indecipherable corporate gobbledygook. Today, it was a usability platform that was basically Zoom calls plus a bit of note taking. Big whoop.

So when I read MIRACL couldn't be hacked, I had to ask Dr. Mike Scott, MIRACL's Chief Cryptographer about it.

Claiming MIRACL can't be hacked isn't some idle boast or piece of clickbait. **There are no known practical or theoretical attacks against our cryptography and protocols.** This is not hype, it is mathematically provable. We use the same technology as many of the world's largest and most security conscious organisations like the U.S. Military and Intel.

Our cryptography has international patents and has been referenced in academia over 8,000 times.



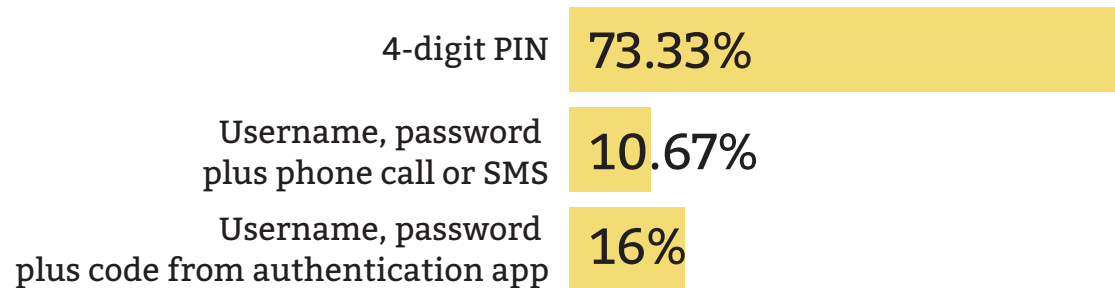
"If you want to secure access to your services, MIRACL makes it easy."
– Florin Dimitru, IT Director, Crédit Agricole, Romania



Mike Scott
Chief Cryptographer

Research highlights

Imagine you're accessing your bank account online. Assuming all technologies are equally secure what would you rather log in with?



“ *My attempts to log into my bank failed too many times and they rang me to see if it was really me. I then failed the security over the phone as well because I was panicked.* ”

Wait, you say it can't be hacked?

SR

Cryptography makes me think about **Alan Turing** cracking the supposedly uncrackable Enigma code in WWII. What's so different with your technology? Why can't a modern day Turing crack it?

OK, this will sound odd, but it works because it's broken. Many modern competing systems have conceptual similarities to the Enigma machine. But the big difference with us, is that our cryptography destroys the key each time it's used. This is an important concept we call Zero Knowledge.

When you put your PIN code in or use a biometric, it's not even shared with us at MIRACL.

MS

In August 2022, MIRACL's client, Cashfac, hit a **99.996%** login success rate, with only **2 failures** in 50,407 authentications by over 1,200 agents.



"MIRACL's zero password authentication solution, eliminates authentication database breaches and improves the user experience for end users, delivering immediate security benefits."

– Rich Boyer, Chief Architect, NTT i3

Is it practical, or just a promise? 🙌



SR

Many of us in the UX community have spent time in large scale organisations – we know all about the high standards they set with security and governance. **Most of us have had that challenging moment where we're told an idea won't work because of technical limitations.** Can MIRACL work in environments like that, where it's about a lot more than just a good idea?

Yes, this isn't just interesting tech. It's practical. MIRACL is software-based and API-enabled to work from any device or browser. Integration is seamless. MIRACL is cloud-based and compliant with the major systems large companies use, including MFA technologies like OKTA that we can work alongside, or even replace!

MS

SR

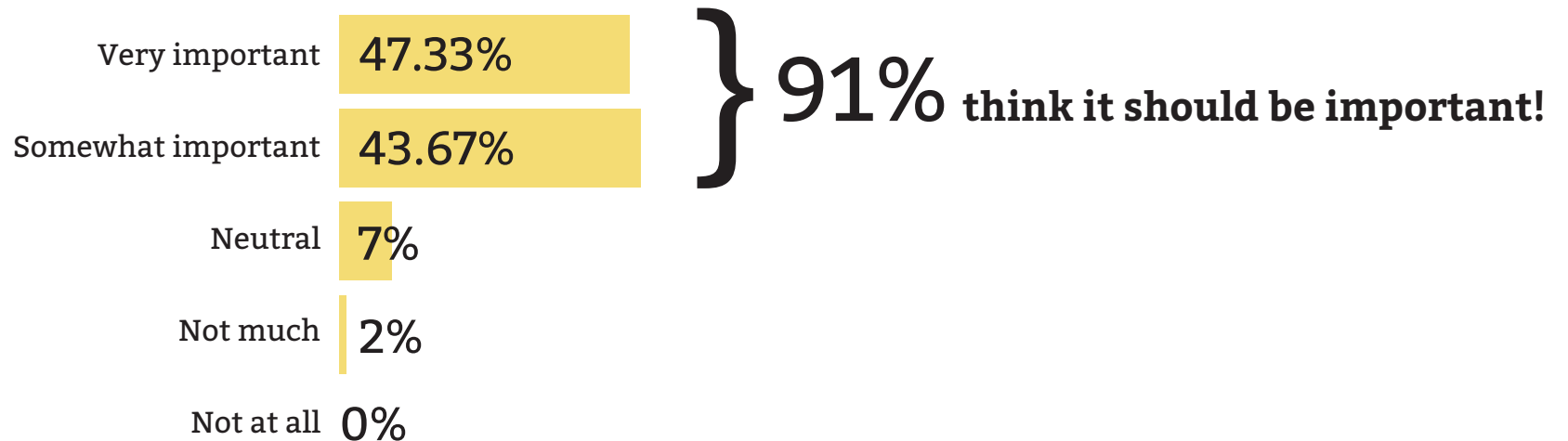
My final question: every data breach story we see is all about stolen information. **Data privacy** is a huge topic and critical to many people's choices for what software they use. It influences user experience design in a myriad of ways, and of course service design too. What's your view?

I don't want anyone getting my data either! **MIRACL does not hold personal data, passwords or PINs, ever.** So we're fully resistant to all remote attacks – and have zero security vulnerabilities.

MS

Research highlights

How important is it to make the login process quick and easy?



“ Attempting to use the Government gateway childcare account, I got locked out of my account and then got a previous address wrong, so I had to provide notarised identity documents before they would provide me with a code to reset my password. ”

In conclusion; key takeaways

Legacy login experiences are broken.

MIRACL is the answer; capable of boosting organisational performance
– from sales to UX, from support to security.

Customers value a simple and successful login experience.

MIRACL enables your customers to rethink the login.

Login complexity is disastrous to user experience and security.

MIRACL holds no data, passwords or PINs – making it unhackable.

MIRACL protects and builds brand trust.

Next steps



Try a demo

Thanks for your time. So if like me, you think MIRACL is worth your time, why not try their demo today?

<https://demo.miracl.cloud/bank/>



Put it to the test

Ready to deliver the highest level of security for users logging into your services? Our documentation gives you everything you need:

<https://miracl.com/resources/docs/guides/overview/>



See User Flows and A/B test your login

MIRACL can be implemented in any bespoke user flow that is 100% tailorable to your environment. Here are some to begin with:

<https://miracl.com/user-flows/>



Got questions? Schedule a call

Talk to our team for any question related to trying MIRACL out or finding out more about how it all works:

<https://calendly.com/MIRACL>

Comments from the research



What would you like to use a PIN code to log in for?

There were lots of obvious answers, but these ones I picked out showed a bit of humour too!

- “I’ve had many accounts blocked due to wrong information when logging in. I usually give up on those sites.”
 - “Anytime when buying online... you enter your password it says it’s wrong you have to go through the forgotten password change your password, and then it says can’t be the same as the old password!!”
 - “It would definitely make things easier at work. I work in a hospital and now have to do MFA to log in, but I don't always have my phone on me, as I'm often moving between my office or clinic room etc.”
 - “When I do work for clients and I log into their systems remotely, but with their logins, if it asks for an SMS I then have to call the client (and hope they answer the phone) to give me the code.”
 - “Nearly everything I use for work requires a password and then an authenticator app on my phone. Not helpful when you forget to charge your phone!”
 - “I have several accounts that require multiple authentication steps with passwords, codes and memorable information – one of which is my online banking. I understand this is for security, however, I can never remember these passwords, so I have to write them down – I feel that this defeats the purpose of the extra security.”
-

The testimonials on this report are shown verbatim, except for some corrections of grammatical errors and/or shortened for the sake of brevity.