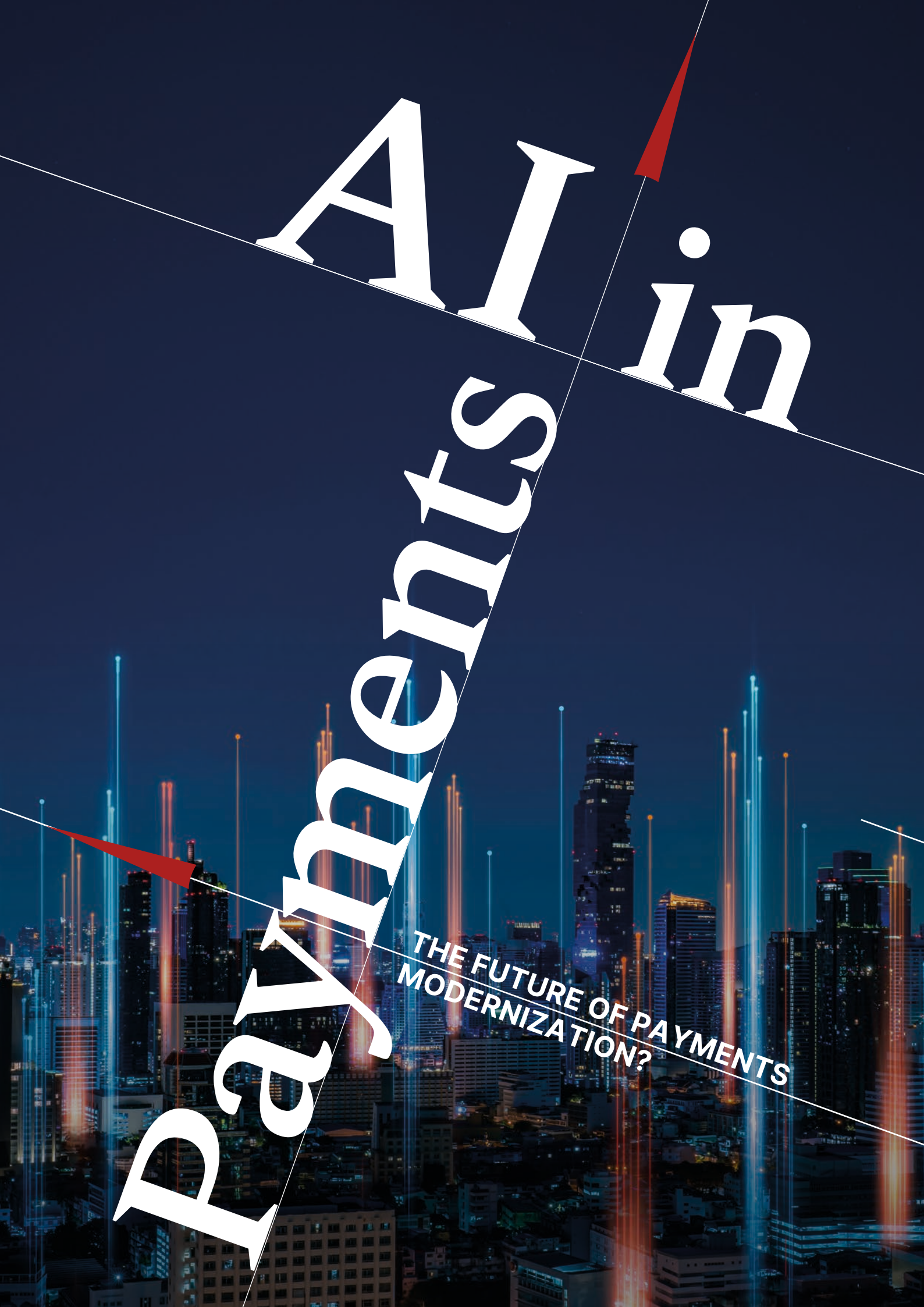
AI in Payments

THE FUTURE OF PAYMENTS MODERNIZATION?



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Foreword

Back in the 1970s, the world was told the silicon chip would revolutionize everyday life. Nothing changed in the beginning. And then everything changed.

At the height of the dot-com boom, every other billboard promoted a website promising instant delivery and endless possibilities.The market crashed. People doubted the internet's potential. Then it changed everything.

However big we think AI is now, whatever happens with market valuations for Big Tech in the short term, however long it takes to impact our lives, soon it will change everything.

AI will amplify expertise as the mundane is reduced, enabling us to do much more with much less. It used to take an entire village a day to harvest a crop; now it takes one person with a machine. AI will be no less radical. It will probably be more.

What does this mean for payments?

AI is not just about chatbots for customers or the reduction in false positives for fraud. AI means we can gather every piece of information we have about payments that has ever existed. Every industry report, every piece of regulation, every internal email, chat and conversation about a technical implementation. With AI, we can gather it, and we can apply it to solve our biggest payment problems.

Instant payments are going to change the world. The benefits are starting to trickle through. But why are tools that we know will reduce instant payment fraud taking so long to roll out? Why don't we see earned-wage access schemes in every organisation? Why are companies still holding onto their worker's pay for a month? Why can't we choose if we get paid into a bank account, pre-paid card or wallet?

Maybe it's due to the time it takes to implement new changes to payment rails, or the complexity of interoperability and a lack of regulatory pressure.

But really, it's because banks can't keep up with the rate of change. They're slow. They need a whole village to do the work of one or two people.

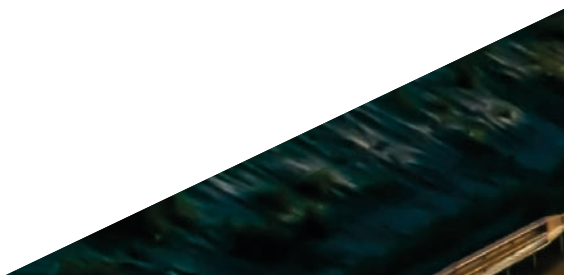
We ask our banks to innovate to make payments easier and faster, but we want our payments, checking accounts and online banking for free.

Pushed by regulators and clients, banks try to keep pace by offering the minimum. Some offer inbound payments without outbound payments; they comply with regulations without innovating; they move a village's worth of work abroad for cheaper labor but then struggle to maintain quality. It doesn't solve the problem.

All the while the biggest global banks accelerate away into the distance. They use their scale to develop new services at a cost even the largest US, European and Asian regional banks can't match. From a process, skill, and expertise point of view, innovation and power is being gathered by a few players who are widening an already significant gap.

But AI can help close it. With AI, we can more than double output and maintain costs, or we can more than maintain output and half costs. It's our choice.

If you don't embrace AI in the payment transformation space, you will face bigger costs and slower change than those you are competing with.



But if you leverage the billions invested in AI, use the available tools and gather industry knowledge, you have a chance to keep up with the rate of change.

What's stopping most banks? The banks themselves. Internal governance, trust and a misunderstanding of risk. By being risk-averse in areas such as AI, banks are creating existential issues for themselves further down the line. The ones that can adjust to take advantage of this opportunity will be the ones that succeed.

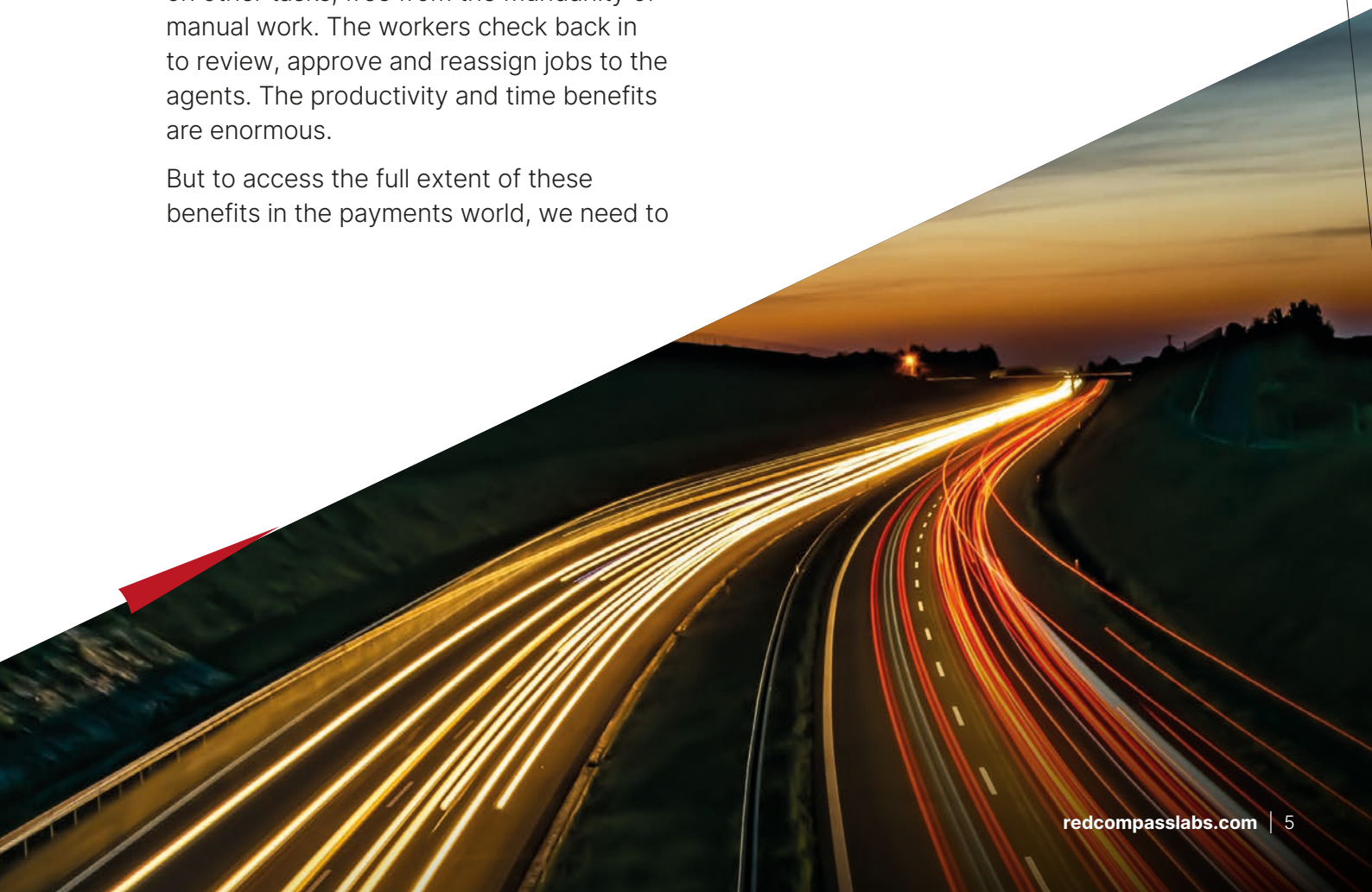
Large language models do not have to be tuned for speed; they can be tuned for accuracy. Documents can be checked, reviewed, and published by AI agents, and then signed off by people. Multi-agent AI models work 24/7 while the workers they are assigned to sleep and spend their time on other tasks, free from the mundanity of manual work. The workers check back in to review, approve and reassign jobs to the agents. The productivity and time benefits are enormous.

But to access the full extent of these benefits in the payments world, we need to apply AI to a very specific problem: Instant and cross-border payments. Innovation and projects are held up because banks can't get through their workload fast enough. AI can help.

Whatever your opinion of AI today, its impact may be far less than the hype in the short term, but it will be far more than you can imagine in the medium term. There is no going back.

The rate of change in payments has never been this fast and will never be this slow again. It's time to get up to speed.

Tom Hewson,
Partner and CEO
RedCompass Labs



Introduction

AI isn't a futurist concept. It's here and it's actively transforming banking today. AI is already democratising knowledge, creating new opportunities for innovation and revolutionising how we work, communicate and access information.

Most financial institutions are only beginning to explore the potential of this technology. Some are scratching the surface of use cases, focusing on chatbots and fraud detection and cost-cutting. The more forward-thinking have begun implementing this nascent technology for more ambitious projects. And for that, there is a lot that can be done.

Take instant payments as an example. Much of Asia, Brazil and India have already transitioned to instant payments. But soon, every bank in Europe must also have infrastructure sophisticated enough to send and receive payments in 10 seconds or less. To meet the SEPA Instant Payments Regulation, every EU bank's systems must be secure, scalable and available 24/7, and they must introduce a Verification of Payee service, screen against the EU sanctions lists daily, and enable instant payments across all channels. It is a huge challenge. Meeting the deadlines requires not only substantial technological upgrades but also the ability to handle vast amounts of data efficiently and securely.

In the US, FedNow and RTP are gathering pace, while Canada has announced ambitious timelines for the Real-Time Rail. Latin America is to emulate Brazil with PIX. And PIX and UPI are growing links across the world.

In tandem, we have the global migration to ISO 20022. The end of the SWIFT co-existence period is fast approaching. Banks that are not ready to send rich, structured payment messages by November 2025 will be at a costly competitive

disadvantage. Yet getting ready requires an end-to-end look at the bank's operations to understand what will be impacted, what needs upgrading, and how best to do it.

Modern payments infrastructure is integral to each of these projects. Yet upgrading legacy systems, finding a business case, and keeping pace with the market is hard.

Put simply, payments modernization projects are time-consuming and expensive. Banks are under immense pressure to keep pace with the rate of change while offering innovative products at low costs.

AI can help automate manual processes, freeing up time for knowledge workers to spend on other bigger jobs, so banks can get to where they need to be faster and for less.

From customer-facing chatbots and writing code to fraud prevention and research, banks have been vocal about how AI can reshape their operations. But are they focusing their efforts on the right areas? Given the rate of change in payments and the pressures of modernization, could banks be missing a key opportunity?

With this in mind, we surveyed 200 senior payments professionals at EU and US banks to get a better picture of their approach to AI in payments modernization. We began by asking each banker about their organisational level of AI expertise.

Here's what we learned.

Banks are bullish on AI

The banking sector is undergoing a profound transformation. On the one hand, we have the global push toward instant payments and ISO 20022, and on the other, the rise of generative AI. If banks are ready to seize the moment, they'll be poised to take advantage of both.

We, therefore, began by asking our respondents about their organizational readiness and attitude toward AI. We found the vast majority (80%) of banks possess an advanced understanding of AI technologies, with a quarter (25%) of our respondents reporting a "very high" level of AI expertise. Just over half (52%) describe their knowledge as "high" while less than one in five (19%) rate their AI knowledge as "average". Only a fraction (1%) have a low-level understanding.

Every bank surveyed is at least considering the adoption of AI, while over six in ten (62%) are actively or aggressively exploring this technology. Banks with the highest levels of AI knowledge are the most active in exploring and implementing AI. This suggests that a deeper understanding of AI's capabilities and applications inspires greater confidence and initiative in adoption.

The largest banks, defined as those with over 10,000 employees, are the most active in pursuing AI initiatives, reflecting their greater resources and capacity to invest in cutting-edge technologies, as well as their strategic imperative to maintain a competitive edge in the AI arms race.

Payments modernization is a strategic imperative for banks

To get a sense of the need for AI in big projects like SEPA Instant, ISO 20022 and the global shift to instant payments, we then examined how banks prioritize payments modernization.

These projects are a strategic imperative for banks, but they are resource-intensive. It takes a strong incentive like regulation or a proven business case to engage in such an initiative.

Nevertheless, we found a substantial nine in ten (91%) banks rank payments modernization as either "important" or "very important". Over half (52%) deem it very important.

This feeling is most pronounced among the largest banks, which are poised to make the biggest gains from using AI. Nearly every institution (97%) with over 10,000 employees recognize its critical role. Additionally, banks with high AI expertise show the greatest recognition. Nearly all (98%) consider it "important" and the majority (90%) "very important".

There is a slight but not insignificant regional disparity in the perceived importance of payments modernization. Nearly all (95%) European banks consider it important, compared to over eight in ten (86%) in the United States.

In the United States, one in ten (13%) banks regard payments modernization as not important, a higher percentage than in the European Union (5%).

This difference is likely influenced by regulatory frameworks such as the SEPA Instant Payments Regulation, which may contribute to a heightened urgency and perceived importance of modernization.

How important is payment modernization to your bank?

	Overall	EU	US
Important (Net)	90.69%	95.10%	86.27%
Very Important	51.96%	56.86%	47.06%
Important	38.73%	38.24%	39.22%
Not that important	8.82%	4.90%	12.75%
Not Important at All	0.49%	0.00%	0.98%

Draining time and budget

Payments modernization projects vary in size, scope and scale. Mid-cap banks can easily spend $100m on a multi-year project, while smaller and larger banks will spend much less or more.

A recent report by KPMG found the average bank and building society spends £27m. It depends on the impact of the change and the readiness of the organisation.

To help, banks often hire teams of analysts from multiple third-party consultancies to navigate the change. Small projects may have 2-5 business analysts working on them, while bigger projects can have 50 or more. Sourcing deep payments expertise, however, is hard to find and usually comes at a big cost.

AI has the potential to ease this burden. By amplifying the abilities of subject matter experts, banks can move faster for less on big transformational projects. Regulatory impact analysis, for example, used to take several weeks for an analyst to complete. With AI, it takes several hours. Banks can double their output and maintain costs or maintain their output and halve costs. Either way, there are huge gains to be made.

We wanted to understand how banks typically allocate time and budget to payments modernization projects today, to understand how much AI could help in upcoming projects.

We find that more than two-thirds (68%) of a bank's investment is directed toward project analysis, testing and business/system analysis: areas ripe for AI automation.

Automation could not only reduce the need for expensive human resources but also allow banks to redirect their focus and financial resources toward more strategic elements of payments modernization, spending more time on testing and going live and letting AI look after the initial steps. Are banks planning to use AI in this way?

Project phase	Budget allocation	Time allocation
Project Analysis	25%	26%
Business / System Analysis	25%	23%
Payment Platform Development	20%	22%
Testing	15%	16%
Go Live / Implementation	13%	14%

The benefits of AI in payments modernization projects

Outsourcing payments projects is a common practice among banks. However, this approach is not without its challenges. According to our research, the key problems they come up against are:

1. **Quality of work:** Ensuring that outsourced work meets high standards is a significant concern. The largest banks, in particular, are most worried about this issue, given their complex needs. **48%**

2. **Cost:** Managing the costs associated with outsourcing is a critical concern. Banks need to balance cost efficiency with the quality and reliability of services. **44%**

3. **Lack of long-term vision:** There is often a disconnect between short-term project goals and long-term strategic objectives, which can lead to inconsistent outcomes. **40%**

4. **Speed:** The pace at which outsourced providers can deliver projects is another area of concern, as delays can affect overall project timelines and business operations. **39%**

5. **Lack of expertise:** The specialised knowledge required for payments projects is not always available through outsourced vendors, which can lead to suboptimal solutions and increased risk. **37%**

However, banks are confident AI can help solve some of these issues.
Again, we find a disparity between those with "very high" AI expertise and the rest of the pack. Banks with "very high" AI expertise rank long-term vision (57%), payments expertise (47%) and speed (44%) as areas AI can most improve. Those with "high" AI expertise chose quality of work (56%), payments expertise (46%) and cost (38%).

1. Quality of work

46%

AI can improve the quality of outsourced work by automating quality checks, ensuring consistency, and reducing the margin for human error. The largest banks and those with high AI expertise see this as a critical benefit.

2. Amplify payment expertise

44%

AI can bridge expertise gaps by amplifying the intelligence of subject matter experts. Well trained AI agents can provide complex information with the click of a button, enabling more informed decision-making and strategy formulation.

3. Long-term vision

40%

By speeding up projects, vendors can focus more on long-term strategy rather than working to get the job done by a certain deadline.

4. increase speed

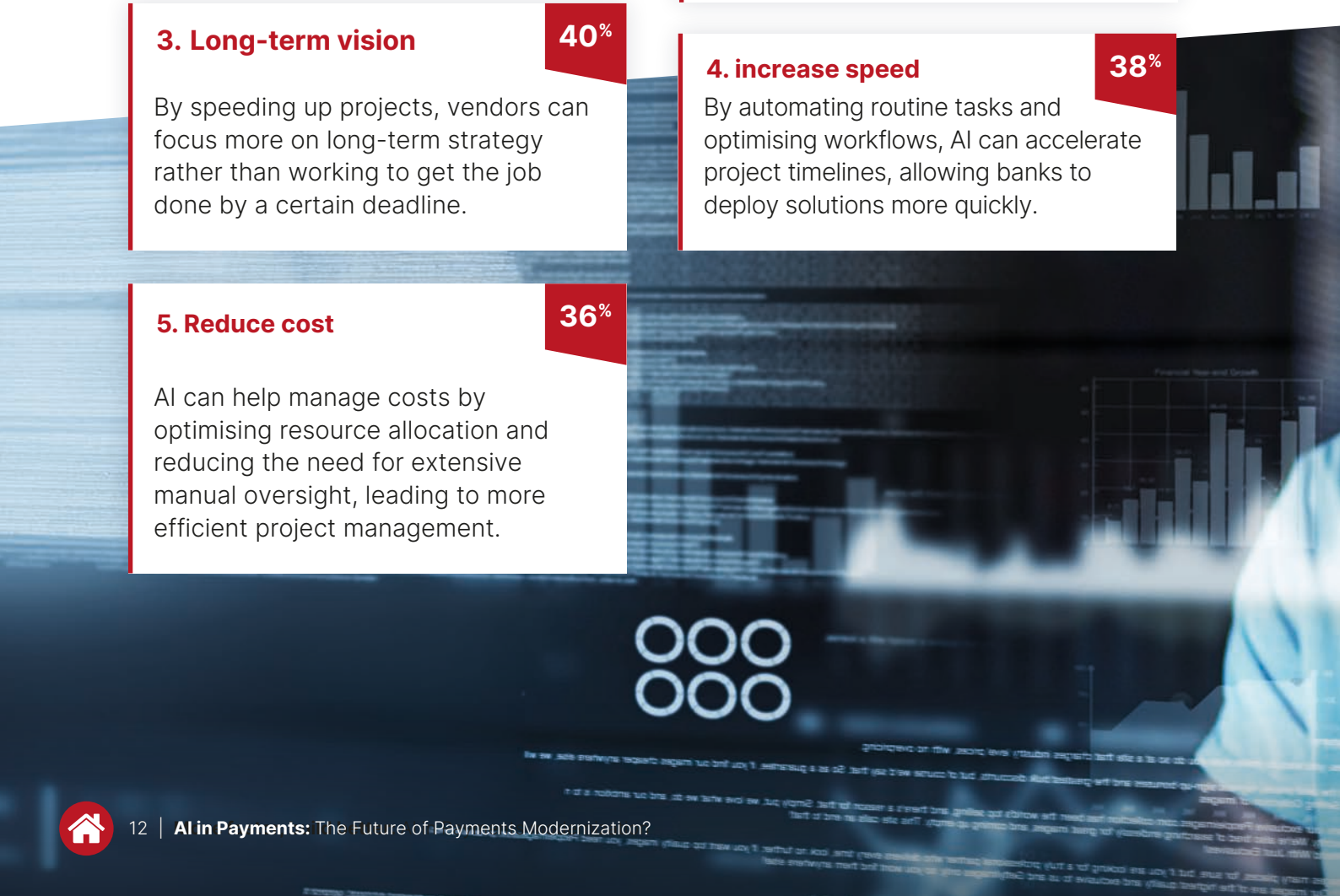
38%

By automating routine tasks and optimising workflows, AI can accelerate project timelines, allowing banks to deploy solutions more quickly.

5. Reduce cost

36%

AI can help manage costs by optimising resource allocation and reducing the need for extensive manual oversight, leading to more efficient project management.



Top 5 AI concerns

While banks appear bullish on AI, there are legitimate concerns about how to get the best out of it. Banks must be very careful about the AI they use and who they trust to use it. ChatGPT, for example, is known for its hallucinations – confidently answering questions with incorrect information. It takes someone with expertise to decipher when to trust the results and when not to.

We asked banks about their biggest concerns in using Generative AI tools for tasks traditionally managed by human employees. **The top 5 are:**

1. User expertise and understanding of AI

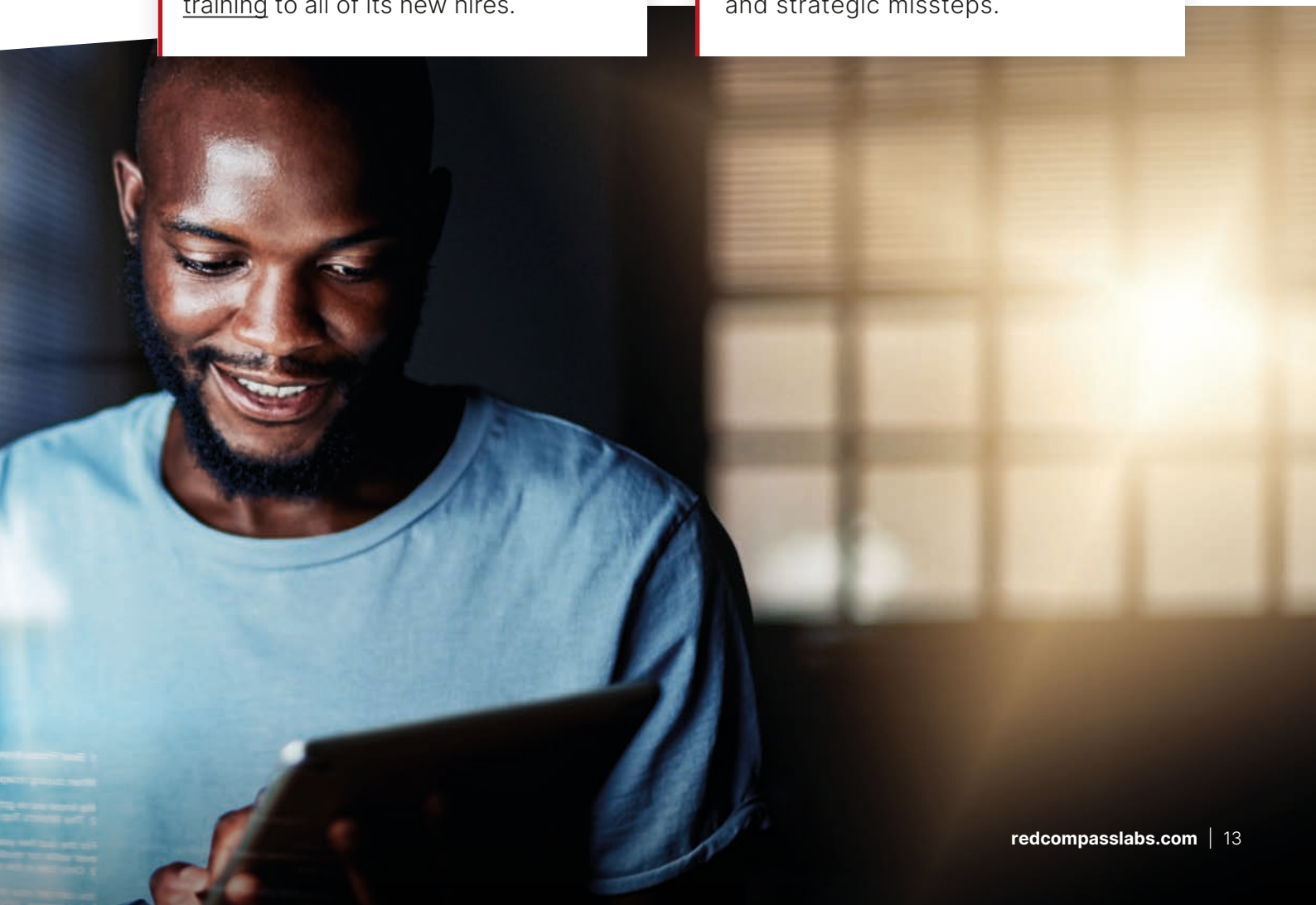
29%

Banks seem most concerned about the risk of insufficiently trained staff misusing these tools, leading to suboptimal decisions or outcomes. Education is key and some have taken action. For example, JPMorgan now provides prompt engineering training to all of its new hires.

2. Low-quality inputs/ outputs

27%

The principle of 'garbage in, garbage out' underscores the importance of high-quality data inputs. If the data is flawed or biased, the AI's outputs will be unreliable or misleading, potentially leading to poor business decisions and strategic missteps.



3. Security and data protection

25%

AI systems often handle sensitive and personal information. The risk of data breaches and misuse of information is a significant issue, especially with generative AI tools that may inadvertently expose confidential data. Banks with the highest AI knowledge cited this as their biggest concern.

4. Transparency of AI decision-making

25%

As AI systems become more complex, understanding how they arrive at specific decisions becomes increasingly difficult. This lack of transparency can lead to distrust among users and customers, as well as challenges in regulatory compliance.

5. AI accuracy

25%

Inaccuracies can lead to significant financial losses, reputational damage, and compliance issues. This concern is particularly pronounced in the United States, where a higher percentage of banks prioritise accuracy compared to those in Europe.

AI's impact on headcount

Multi-agent AI models will soon be able to handle complex tasks in the background, while the workers they're assigned to sleep or work on other jobs. The productivity gains will be enormous. How do banks feel about it?

Our research suggest many believe the potential of AI is already being realised. Others trust that it's just around the corner.

Four in ten (38%) respondents believe AI can already reduce the number of business analysts needed for these projects. An additional one in four (27%) anticipate this reduction will occur within the next 1-2 years, while slightly more (28%) foresee it happening within 3-4 years. A small minority (7%) expect this shift in 5-6 years.

Interestingly, only one respondent, representing less than 0.5% of the study, expressed the view that AI would not fully replace human analysts, indicating a strong consensus on the transformative potential of AI.

In the United States, four in ten (42%) respondents believe that AI can currently reduce headcount, compared to a third (34%) in the European Union. This may reflect a more aggressive adoption of AI technologies in the U.S. financial sector or differing regulatory and market conditions that influence the pace of AI integration.

Surprisingly, respondents with "average" AI expertise were the most optimistic about the potential for AI to reduce headcount. Just under half (48%) believe it is currently possible. This contrasts with only 30% of those with the highest AI expertise sharing the same view.

Given the anticipated reduction in traditional analyst roles, it is crucial for current business analysts to upskill in AI and related technologies. As the adage goes, AI won't take your job, but someone who knows how to use AI will.

Finding the balance: Human and AI collaboration

Despite the growing capabilities of AI, human oversight is essential to ensure key tasks are executed with the necessary nuance, judgment, and ethical considerations. This balance is crucial for achieving optimal outcomes.

With this in mind, we asked what the minimum level of human-to-AI collaboration, if any, that banks would need to trust using generative AI in a big payments project such as instant payments and ISO 20022.

Banks believe in a balanced approach that is slightly tipped towards AI, with the minimum level consisting of 49% human and 51% AI involvement.

Interestingly, banks with the highest AI expertise seem to trust it more, but only slightly, with a 54% AI and 46% human split. As banks' knowledge, expertise and experience with AI increases, so too does their trust in the technology.

We then asked what payments areas they think human involvement is most important and found:

1. Strategic tasks — 37%

Advising new payment strategies and planning for regulatory updates requires a deep understanding of the business landscape, regulatory nuances, and the ability to foresee long-term implications—areas where human judgment is indispensable. Notably, banks with the highest AI expertise prioritise human oversight in strategic tasks even more. Just over four in ten (42%) emphasise this need.

2. Improving internal processes — 37%

For internal reporting and summarising complex documents, banks believe human intervention remains important. While AI can handle data processing efficiently, the interpretation and contextual understanding provided by human employees is invaluable.

Despite the rise of AI, human intelligence is more important than ever. As AI technologies automate and streamline various processes, the need for human insight, creativity, and ethical judgment has become even more pronounced.

Human intelligence plays a crucial role in areas requiring complex decision-making, strategic planning, and emotional intelligence – capabilities that AI, despite its advancements, cannot fully replicate.

Banks recognise that while AI can enhance efficiency and provide valuable data-driven insights, it is the human ability to interpret these insights, adapt to changing circumstances, and innovate that ultimately drives success.

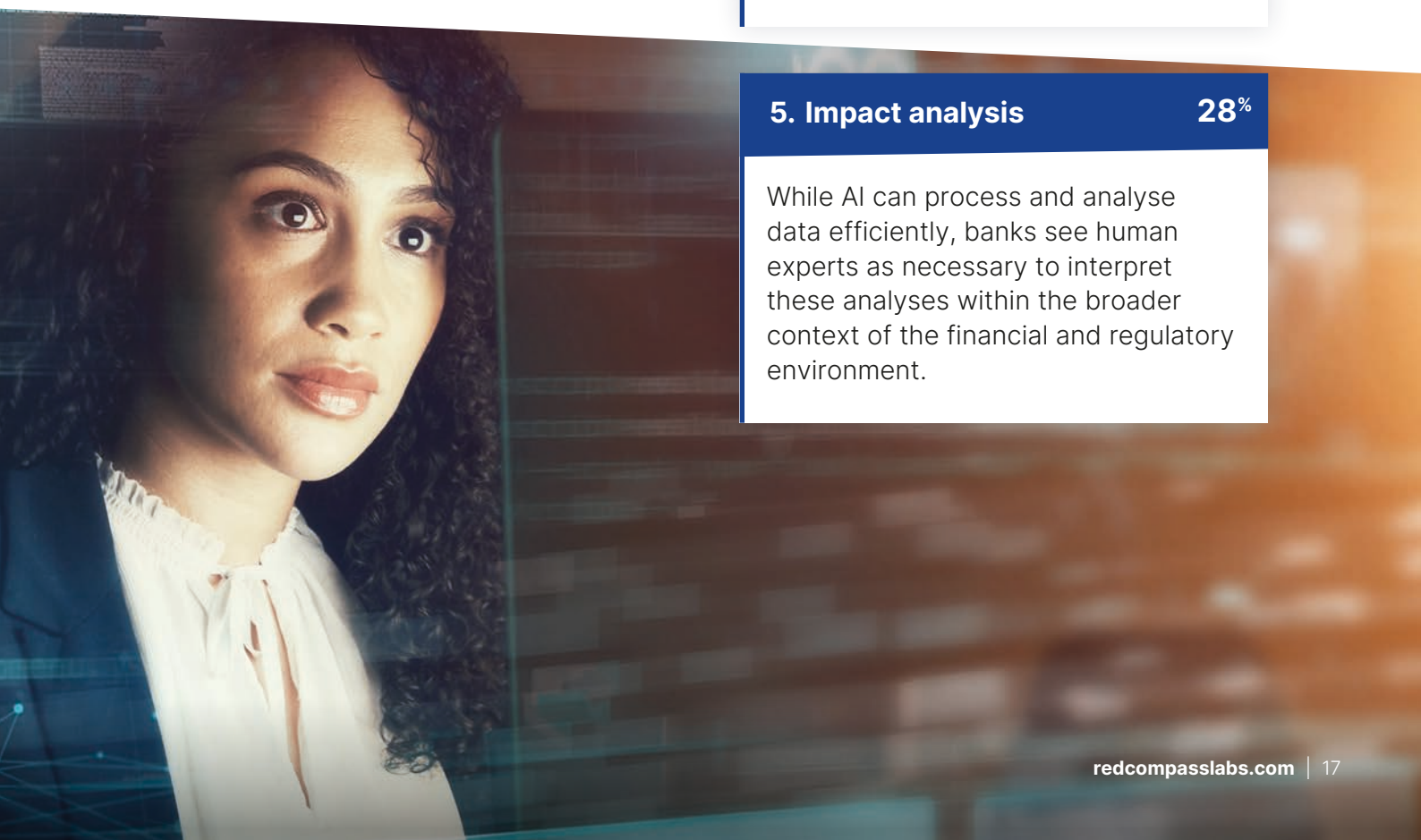
PSPs need to be absolutely certain their models are trained on high-quality information by knowledgeable professionals. They must ensure the right people prompt the generative AI tool and oversee the results. It takes an expert to know what to ask and when the answer is wrong. It takes decades of experience to have a long-term view and know what's missing.

3. Customer experience 28%

Although AI-driven chatbots and automated onboarding systems have improved customer service, human agents are still crucial for handling complex inquiries and ensuring a personalised customer experience. People like to know if they have a genuine issue, they can get past the bots and speak to a real, empathetic human.

4. Defining business requirements for payment modernization projects 28%

In defining business requirements for payment modernization, human expertise ensures that technical solutions align with business goals and regulatory requirements.



5. Impact analysis 28%

While AI can process and analyse data efficiently, banks see human experts as necessary to interpret these analyses within the broader context of the financial and regulatory environment.

Do banks plan to use AI for payments modernization projects?

Given the time and resources invested, and the recognised benefits of using generative AI in payments modernization projects, we wanted to know if banks plan to make use of these tools. The answer is unsurprisingly yes.

More than half (54%) of banks are planning to leverage generative AI specifically for payments modernization, while four in ten (42%) are actively considering the possibility. A minority, (4%) currently have no plans to incorporate generative AI, suggesting widespread recognition of its benefits.

Banks with the highest levels of AI expertise show the greatest enthusiasm for applying generative AI to payments modernization. Seven in ten (70%) plan to implement these technologies. This group likely has a deeper understanding of generative AI's capabilities and benefits, as well as the necessary infrastructure to support its integration. Their expertise positions them to lead the way in pioneering new applications and setting industry standards for AI-driven payments modernization.

> "**If you don't embrace AI in the payment transformation space,** you will face bigger costs and slower change than those you are competing with"

Where are banks prioritising their efforts?

We asked banks what the top areas they are currently prioritising AI in payments modernization are the most and the data reveals a narrow approach to its deployment:

1. Technical tasks — 36%

In joint top position is support with technical tasks, such as software testing and code development, aimed at boosting efficiency.

2. Impact analysis — 35%

Banks are also harnessing AI for impact analysis, including regulatory updates and payment system upgrades.

3. Strategic tasks — 31%

Just under a third of banks are prioritising AI for strategic tasks, including advising on new payment strategies and planning for regulatory compliance.

Surprisingly, defining business requirements for payment modernization projects is a priority for just over a quarter (27%) of banks.

Banks are primarily focusing on a limited set of use cases, which, while important, may not fully exploit the capabilities of AI to drive them forward.

That said, banks with the highest AI expertise are turning their attention to the areas where AI can make the biggest impact. They are looking beyond some of the more obvious use cases and mere cost-cutting, towards the more ambitious areas including strategic tasks and regulatory updates.

Banks believe they are taking full advantage of AI opportunities

The majority of banks (79%) believe they are doing enough to leverage AI, with three in ten (30%) reporting they are "very confident".

This sentiment is even more pronounced in Europe. Just under nine in ten (88%) EU banks agree they are making the most of Gen AI, compared to seven in ten (70%) in the United States.

The smallest banks are the most confident in their Gen AI adoption, followed closely by the largest institutions. Mid-sized banks exhibit the least confidence, potentially reflecting a middle ground where they might lack the resources of the big banks and the agility of the smaller ones.

Banks with the highest AI expertise demonstrate the greatest confidence. Just over eight in ten (81%) believe they are effectively utilizing Gen AI.

While banks are highly confident about AI, this confidence may be grounded in a limited exploration of its potential applications. To truly harness Gen AI's transformative potential, banks need to broaden their horizons and explore more innovative and strategic applications. This approach will not only enhance their competitive edge but also ensure they are not left behind."

Conclusion: the future of Gen AI and payments

Banking is a notoriously tricky balancing act. It looks elegant and straightforward when all is going well, but it often only takes a wobble or bump in the road to take someone out. So, banks are mostly cautious.

For every JP Morgan reaching for tomorrow ahead of the crowd to gather unclaimed territory and profit, 1,000 banks are waiting, watching, hoping not to miss out, but not ready to lead.

But we are at an inflection point. With the drive to instant payments and the move towards ISO 20022, banks can't afford to stand still. With the rate of change and innovation rapidly accelerating, standing still is falling behind.

The good news is that banks are pushing forward.

With any new technology, there will always be some scepticism, and our research suggests that one respondent in particular is not a fan of AI. One respondent said there would be no benefit of using AI in payments modernization projects, that AI will not be able to replace business analysts and that it will not have a major impact on the payments industry and that AI can't improve outsourcing.

The vast majority of banks are bullish on AI and recognise the benefits it brings. But whether they are being ambitious enough remains to be seen.

We believe that banks must leverage AI to multiply their greatest assets: people. AI, trained on the right data and used by the right people, can help banks modernise more quickly, for less money, and with better results than relying on hordes of junior business analysts often thrown at these projects.

Instead of relying on two to three payment subject matter experts to keep the bank's payment engine running, they can leverage AI to amplify the impact of these experts and extend their influence across multiple areas.

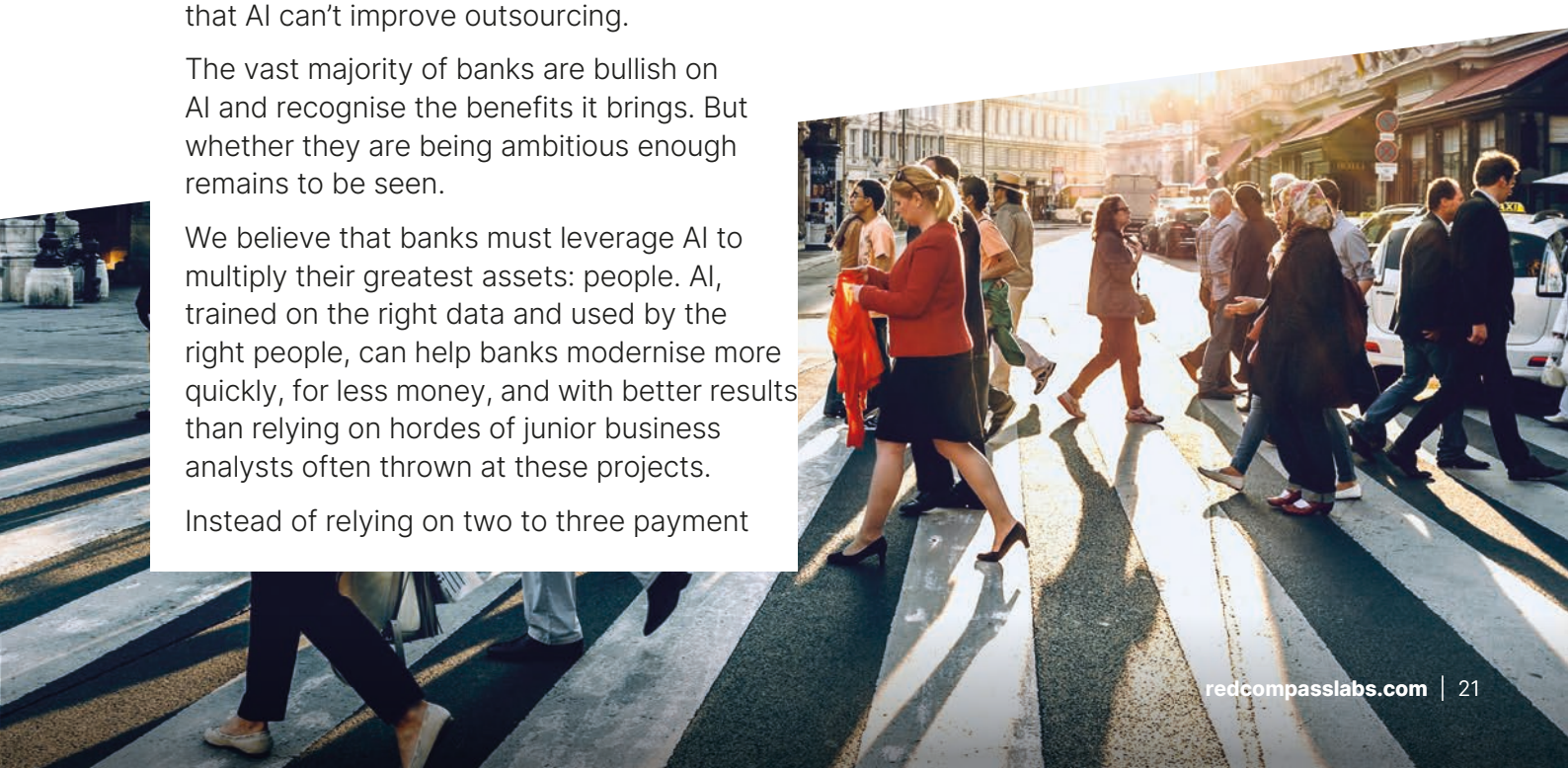
What bank wouldn't want to get ready at half the cost and twice the speed? The point of AI is to remove the mundane tasks and let people focus on what they are uniquely able to do.

The rate of change in payments has never been this fast and will never be this slow again. The rate of change in society and financial services is no different. Banks can be ready for the onslaught or cede the ground to those who are.

So, what can banks do?

Well, they can invest in tomorrow today or rue the delay tomorrow.

Speak to RedCompass Labs



I don't know where to start with payments modernization, what can I do?

At RedCompass Labs, we will work with you to understand your requirements. We can deliver a solution that meets your specific needs.

We are experts in ISO20022 based payments, instant payments, cross-border payments, and payments interoperability. We use our deep payment knowledge, AI payment analyst tools, and pre-built micro-service components to deliver payment transformation projects using our Payments Modernization Toolkit. Our business and technical solutions can help you accelerate your payments modernization program and reduce costs and regulatory risk. About RedCompass Labs

We believe that there are only two types of payments – good and bad. We enable good ones; We help stop the bad.

We exist to help open the doors of finance to all, and to protect those who enter.

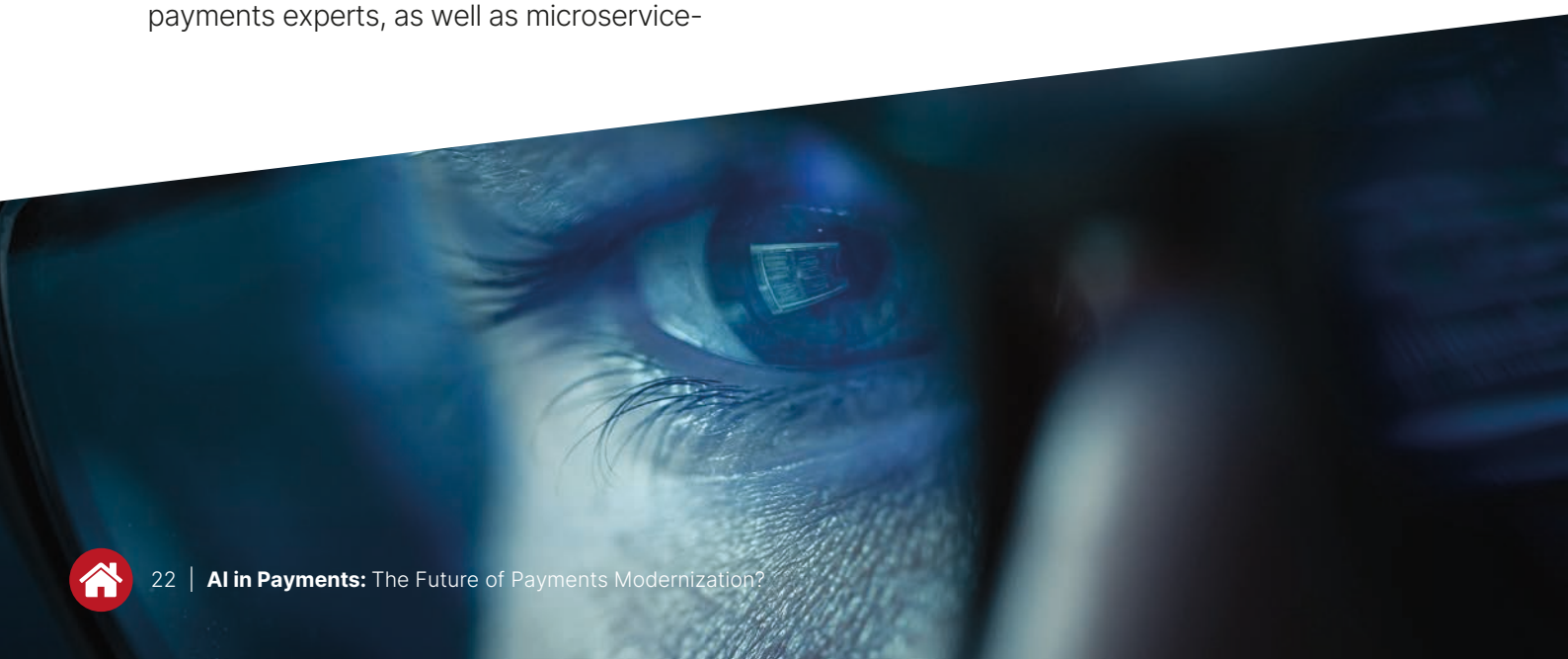
We are experts in instant payments, faster payments and frictionless payments. Whether domestic or cross border, we have been working with ISO 20022 for 15 years, and as payments move faster, we have been on the leading edge of implementing these schemes all around the world.

RedCompass Labs is a source for world-class payments experts, as well as microservice-based toolkits that accelerate payment platform builds, updates, and scheme adherence. Our technology reduces the need for complex payment platform customizations, increases platform functionality, and decreases project risk.

As payments accelerate, their use for causing harm multiplies. The RedCompass Labs RedFlag Accelerator is the gold standard of red flags for providers of payment services. We use these flags and a persona-oriented approach to provide investigation tools and algorithms that identify human crimes such as labor and sex trafficking, child sexual exploitation, elderly abuse, and fraud, occurring in payment providers' data. We provide AML (Anti Money Laundering), Sanction and Fraud system integration, upgrades and tuning, using data analytics tools we have developed.

We support our clients from offices in the UK (London), Poland (Warsaw), North America (Miami, Toronto), Belgium (Antwerp), Japan (Tokyo) and Singapore.

We do payments. We accelerate the good - instant, faster, frictionless, real time, and cross-border payments. We help stop the bad - human crimes, labor and sex trafficking, sanction lists, and fraud. That is who we are.



AI IN PAYMENTS: THE FUTURE OF PAYMENTS MODERNISATION

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