



# POWERING BETTER BUSINESS

Exploring the potential of  
advanced analytics



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## INTRODUCTION

It's impossible to ignore the hype around advanced analytics. We're constantly being told that artificial intelligence (AI) is the next best thing, it's the new electricity. But many haven't yet experienced the true extent of analytical power. While we see analytics having huge success on specific tasks and problem solving, the opportunities are far broader. Analytics has huge opportunity to power many areas of business needs, from fraud to marketing across to risk and operations.

Analytics gives you the power to connect data, to understand data in huge volumes, across systems, and deploy it in decision making through advanced automated technology. It means you can give more people access to the most suited products and services, you can better identify people in the virtual world and you can be better with data. Today businesses can access better data, technology and analytics to be able to transform lives.

Most importantly, advanced analytics are today not restrained to tech companies, but available to every business in many ways.

In the past data came from systems, today it is on wrists, online, in apps, in supermarket shopping. This volume of data is an opportunity to better understand people, their behaviours, attitudes and much more. When combined; data, including non-traditional data assets like bank account transactional data, or government data, can offer an opportunity for businesses to gain a holistic picture of an individual and tailor services to them.



Cutting edge analytical techniques are now as readily available as data and technology. We are in a perfect position as a UK economy to be able to maximise these and create much more value at lower-cost and with more accuracy and speed than ever, and deploy this enhanced insight in an instant.

Whether visually understanding data, which can be gained from analytical tools, or from analytics powering systems that are designed for tasks like decision automation, credit risk assessments, background checking prospective employees, or deciphering who to market to, about what and through what means; analytics can be significantly beneficial.

**In this paper, we explore where the power of opportunity lies.**



## THE OPPORTUNITY

### The power of data, analytics and technology

In many ways, analytics is not new. The credit industry pioneered the use of statistics and data to automate decisions decades ago, and the most effective solutions use one form of analytics or another to power them. What is new, however, are the techniques used and the advanced sophistication that's brought by new techniques. We've moved from the traditional techniques used in credit scoring to the ability to use machine learning based approaches on a greater scale.

Where some businesses have focussed to date is in managing the data. With so much information available, it's not uncommon for organisations to pour their resources into cleansing, connecting and collating, it as opposed to understanding it, which has meant the extent of opportunity is yet to be fully realised or operationalised. Both good data management and good insight are important. You need to work from the best quality base, to get the most effective insight.



Segmenting and  
connecting data



Enriching data  
– for example  
cross-checking against  
bureau data



Understanding data for  
the task at hand, by  
extracting insight.



#### Four benefits of analytics

It would be wrong to say analytics is new. But its potential is. Today analytics' can crunch huge amounts of data far faster and more intelligently than any human, which means businesses with access can deliver better outcomes for their customers. To give an example, our recent trials have shown that 56% of 'marginal declines' (applicants who were borderline on an accept or a decline during an automated decision process) would have been accepted if we could better understand them. This is an opportunity for businesses as the ability to understand everyone better, exists today.



## #1

#### Enhance every business process.

It can support automation, be quicker, more accurate and reduce the need for manually reviewing. In an affordability assessment, in processing tasks for example.

## #2

#### Understand a person as an individual.

Today analytics can hyper-personalise conversations and decisions based on knowledge of a person to a much more sophisticated level. For example, understand their actual behaviours, and the underlying motivations that are driving processes and behaviours.

## #3

#### Reduce friction and enhance the experience.

Analytics can power opportunities to understand data which means a journey can be tailored to the individual, reducing friction by removing a broad-based segmentation approach. Furthermore, it can remove paper as electronically uploaded documents can be analysed, as well as the data extracted. It can understand what a customer needs, before they may know it.

## #4

#### Enable innovation.

AI is everywhere today, and can be applied across every business process too. Today robotics are powering computing tasks and chatbots are developing to be even more relevant. For example, integrating pre-qualification within and understanding any individual interaction to a much higher, more sophisticated level than before.



### New and more in-depth data

The more data that you have about a person or business the better you can understand them. Technology has made data – including data that businesses have previously been unable to access or incorporate – much more readily available and accessible. Every interaction with an app, device or online form creates data that wasn't available a decade ago, which presents a huge opportunity for building value and enhancing decision making.

Data on its own has no intrinsic value. It is the insight contained within it that counts and the quality of the data that will make it most effective. Today, there is an opportunity to not only understand existing data but connect disparate, complementing data, to be able to truly understand what it is telling you. You can therefore respond better by having a better understanding and knowledge of each individual.

Today, machines aren't solving problems they are asked, but identifying the problems that that needs to be solved. This is especially powerful and offers an effective approach in a big data climate.

**30**  
years



For over 30 years Experian has managed the UK's largest and most comprehensive source of consumer information.

**750**  
million



We add over 750 million records from over 600 of the largest and most up-to-date sources in the UK into our consumer credit bureau every month.

**5,000**  
clients



Our data, people and processes are trusted by over 5,000 clients and 1.5 million consumers. This is certified by our FCA registration as a company.



## NEXT GENERATION INSIGHT



### Cutting-edge analytics

With a range of analytics techniques at our disposal, it is important to always use the most appropriate one for each task. Sometimes that means using the latest machine learning algorithms, sometimes traditional analytics will suffice. Traditional does not mean inferior, with the right analytical architecture, traditional models equally have continued to develop as new techniques arise - keeping them maintained to a high level for the changing environment.



### Next-generation processing

Until recently there wasn't the processing power to carry out this level of analytics. Today, algorithms can be trained better than ever before. Analytics, and specifically advanced analytics can align to business rules, allowing you to maintain competitive differences that are important in a highly competitive market.

The move to data-driven insights is being forced by continued business reliance on technology and automation throughout the enterprise. Growth in digital technologies is driving the ability to analyse more data. This, in turn, is fuelling businesses appetite for better data, more advanced analytics skills and the implementation of best practices. Analytics is the primary enabler to derive truth and meaning from data that drives business growth. Technology can now deploy this through the processing to allow you to automate nearly every decision. Integrated analytics, for example AI, are therefore the most powerful solution for next generation decisions.

“

According to Moore's law, processing power will double roughly every 18 months. It is now possible to train deep neural networks over a thousand times faster than it was 10 years ago.

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# APPLIED ANALYTICS

## Affordability

### Creating useful and meaningful insight from bank account transactions

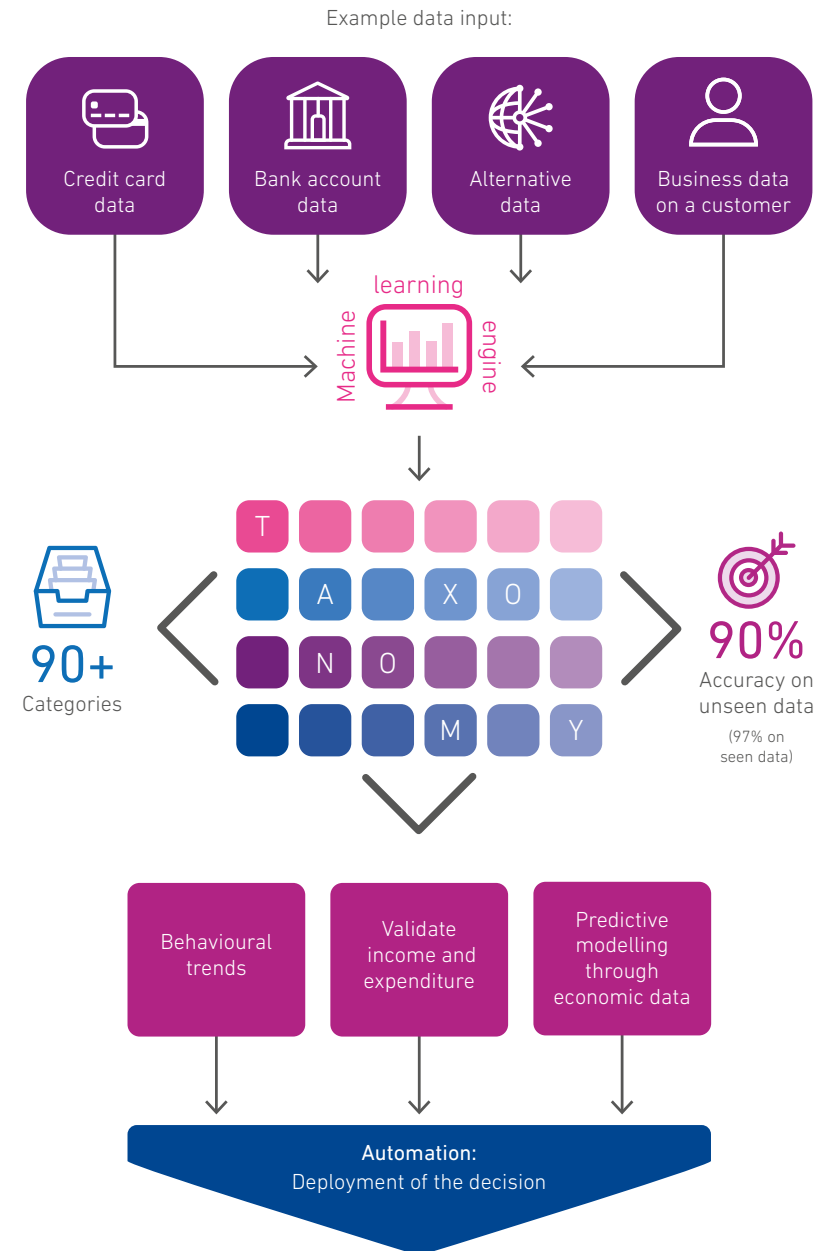
Without the ability to consume bank account information easily, or other value adding data sources, it could become another mass of information that becomes redundant in the decision process and problematic to store and manage. This would be a missed opportunity for both businesses and people.

An effective solution, created from new-thinking analytical models, includes the use of a categorisation engine. Specifically one that encompasses machine learning but provides meaningful and consumable information on a person through understanding multiple inputs of data and returning it in a helpful format to then incorporate.

Categorisation of data can be extremely helpful for assessing affordability, especially for thin file applicants, or automating thick file applicants. With consent, there is also an opportunity to continually understand a person through their bank account behaviours – giving more opportunity to present the customer with value and personalise the entire experience as an ongoing benefit to all.

The benefits of this mean you can offer alternative products, enhanced products and much more, based on understanding a person better, their actual needs and wants. This can also be helpful for small business lending as it brings the opportunity to better understand and separate their income and outgoings and automate any referral process. Therefore you can be more accurate in your decision making; and be more inclusive in your lending.

## A machine learning categorisation engine:





## Fraud

### Genuinely, know your customers

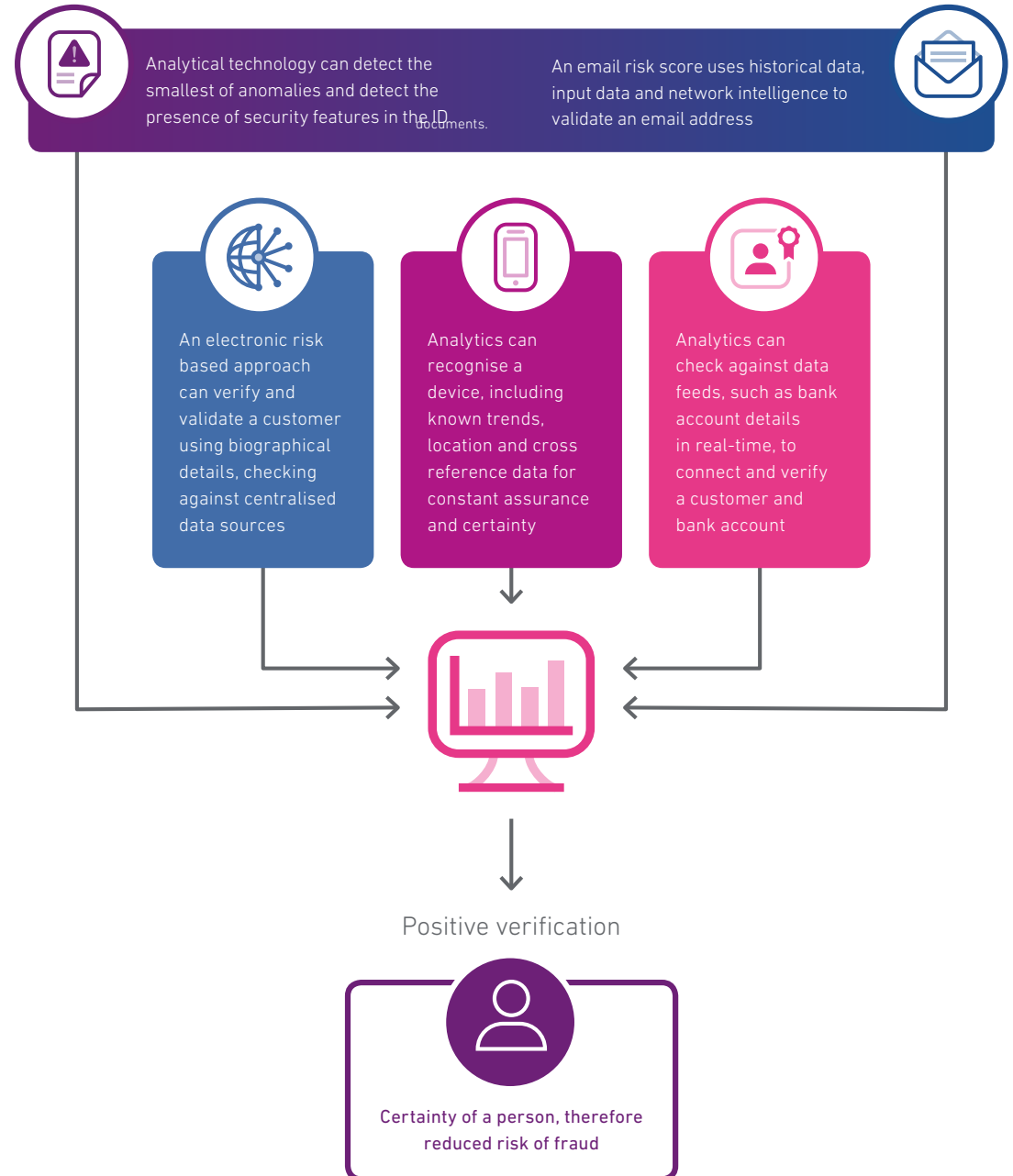
Being able to know your customers has long been a compliance requirement. But as the volume of business conducted online has exploded, and the value of personal data grown, the issue of know your customer (KYC) has become a mass of confusing regulatory demands and technologies.

Identity fraud is fast spreading across sectors. The increase of data breaches brought by the rise of digital usage makes an identity vulnerable, as well as cheap to purchase. In response, the Fourth Anti Money Laundering Directive (AML) and revised Payment Service Directive (PSD2) have imposed a higher level of sophistication in identity verification, authentication and fraud detection.

Again, advanced analytics can help. Not only is it effective in helping you know your customers better and reduce the risk of fraud, it can do so without adding undue friction to the customer journey.

AI is developing new ways to identify if a person applying for a service, or logging on to your account, is who they say they are. At the same time, machine learning based tools provide the ability to deliver risk-based results on data that risk analysts may not have sufficient expertise, experience or domain knowledge in.

## Machine learning approach for fraud





# ROADMAP OF ADOPTION

## 6 components in a road-map

Research shows that in the last year a large proportion of companies invested heavily in data scientists, data warehouses and data analytics software. But, in many instances, the investment hasn't had a huge level of impact.

This is mainly because many people believe that big data has the answer on its own. We see businesses creating highly sophisticated models to be able to better understand data – for example, being able to segment people into personas based on their behaviours and profiles, or analyse locations to know where to open branches or stores. But these are problems that have already been solved, by Experian and others.

Being able to gain a competitive advantage from insight extracted from data requires change on a much larger scale. Automation is effective and has been used for decades across industries. Augmentation is another great concept. But there's so much more potential. What's called for is new thinking that changes the playing field and begins to transform lives and societies through data.



An analytical road map should consist of:

- 1 A good data quality strategy** – any analytics will only be as good as the data it is learning from
- 2 A good data management strategy** – the ongoing management of data should be a core part of any analytical strategy. Updating, enhancing and maintaining data to its best quality will ensure you are always accessing the best possible insight
- 3 The right technology** – for example, choosing analytics based technologies that can compute and manage the growing data landscape. In addition, have the ability to connect, integrate and extract insight from that data – including your own and external data
- 4 The right skills** – investing in new skills will help you manage the ongoing opportunity. In addition, upskilling existing people and giving them access to the best tools that contain advanced analytics, but without having to understand the detail, will be beneficial
- 5 An understanding of what your outcomes should be** – for example, being able to understand what answers you need, to address change. Or being able to access trends and insight that can qualify your proposed outcomes, and inform them
- 6 The right partnerships** – analytics are continually growing, as is data, as is computing power. As such for many (nine out of ten according to our research), being able to build partnerships with providers who can help you maintain pace and quickly respond to new opportunities will provide an effective framework



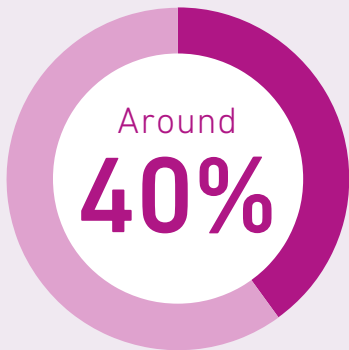
Fewer than

**1/3**

of companies said they could use data-driven analytics to inform decision making



**Seven in ten** businesses are planning to enhance analytical capabilities with increased budget to support this



of decisions are still being made subjectively

Most plan to work with third-party partners who have the **expertise, tools and knowledge** to make their data and analytics strategy a success



## Becoming an insight led business

Today customer insight remains top of the agenda for organisations. 77% will be significantly increasing investments in advanced analytics and big data technology – this is a marked increase from 2016 findings.

Today advanced analytics can provide the opportunity for businesses to transform into insight-led businesses. Insight gleaned from data will be the key to unlocking new potential, new growth from new markets and give a much better knowledge of risks and opportunities across your entire business and customer base; including prospects.

But, before any of this can happen you need to get back to basics. The underlying quality of the data you use to power advanced analytical initiatives is absolutely fundamental and has the ability to make or break just how valuable the insight will be. Our Global Data Management Research shows that business believe that an average of 30% of their current customer or prospect data is inaccurate in some way. Would you be prepared to rely on data that you don't fully trust to deliver insight that will steer the strategic direction of your business? It's like building a house on poor foundations – the best advanced analytics tools in the world won't deliver value in the long run if what's supporting it isn't up to scratch – the cracks will soon appear further down the line.

It's not just the quality you need to consider but also how you manage your data in the long-term. Whilst you want to ensure it stays as accurate as possible, you need to build that into a wider data governance strategy which ensures you that you are able to bring data together into one accessible universal view that is always up-to-date, unique and available to feed directly into your analytics. Whether you're using just customer data or also using product, financial, asset, transactional or other forms of metadata, you need to package your analytical aims and data quality processes into your wider data governance strategy to ensure support from data stewards, compliance colleagues, IT and the wider business. It's not only important to be able to trust the results of analytics, it's also critical to be able to trust that those results will be used by the right people for pre-agreed purposes that meet regulatory requirements.





## Accessing analytics

### Improving access to analytics

Most decision making occurs in divisions of companies, as opposed to across companies. Fraud, marketing and risk teams all have their own agendas, probably because it's less daunting to solve small problems than to consider a large-scale one. Solving lots of small problems, fast, can be as powerful as solving a single big problem - but if done so in parallel and as a collective strategy.

In this competitive world, a nimble and agile approach is imperative. Businesses need to be able to test new ideas, new hypotheses, new data and new technologies to be able to redesign propositions and journeys, therefore futures. Businesses can now benefit from the opportunity to access fast and convenient problem solving with the added benefit of direct access to big-data analytics, yet, without the need for company specific investment or internal expertise in data science.

Any sandbox or testing environment that's going to make the difference here needs the ability to consume different data sources, such as your own company data, and enrich and validate it with external data too; such as bureau data. The capability to understand trends in data - of multiple forms - which means you can better understand the past and predict the future, of which can be advantageous when rethinking opportunities.

“ In the US, where the sandbox was first launched across Experian, we saw a 30% increase in the time it takes to test a scenario to then take to the live business environment. ”

There are many solutions available today, for varying tasks. The most appropriate however are those that contain a level of analytics that can power the output, but can also consume and access large, disparate data sources, including bureau data. Furthermore, effective solutions that can offer the ability to test scenarios, such as how a new market would perform, or a new product. Equally being able to see where you benchmark against the industry and the strength of your portfolio performance.

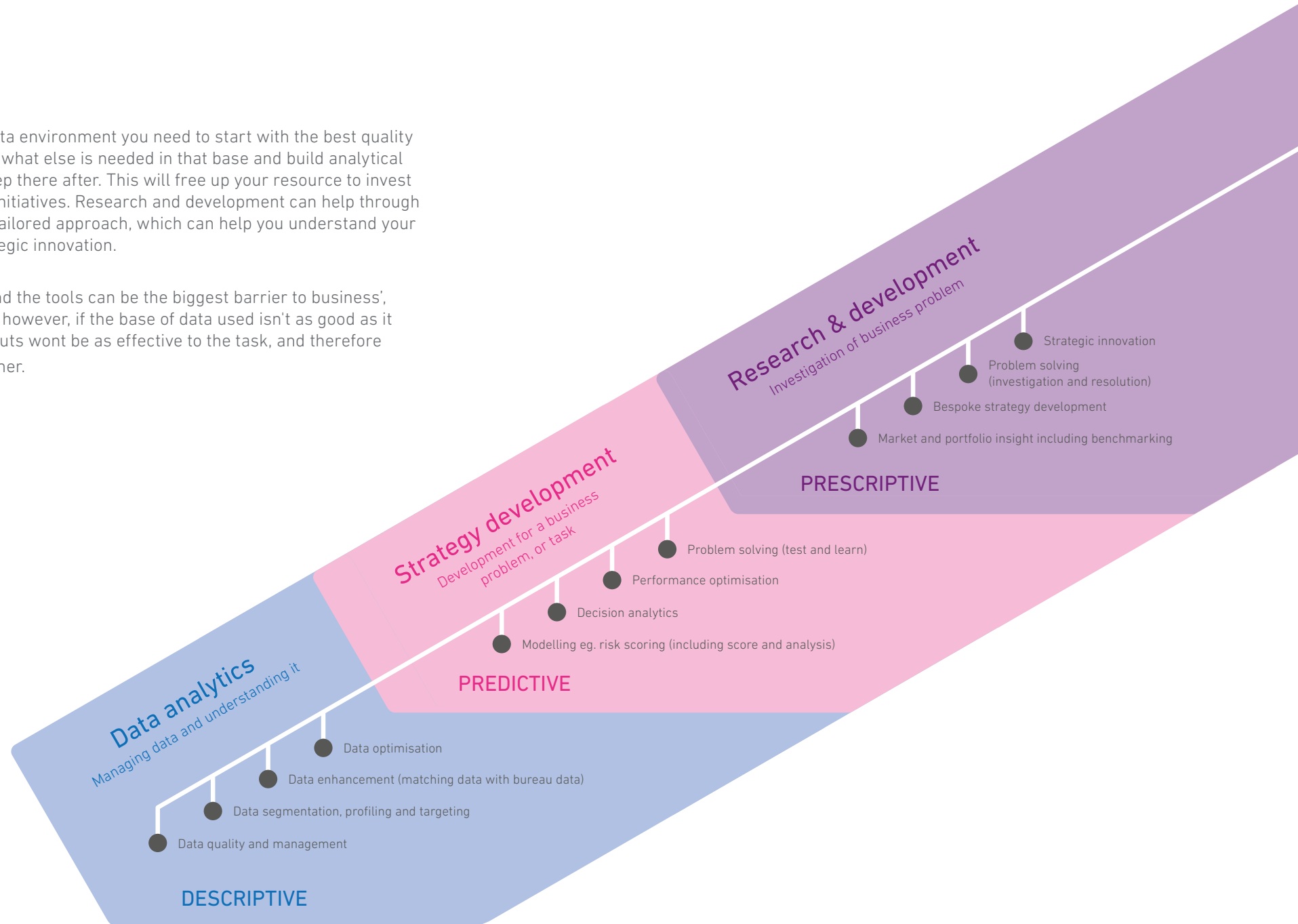
We believe this kind of access, to therefore enable innovation, is essential if we as an industry, are to maximise the opportunity that exists and make a real, positive difference to society.





To thrive in the data environment you need to start with the best quality base, understand what else is needed in that base and build analytical tools into each step there after. This will free up your resource to invest in test and learn initiatives. Research and development can help through the creation of a tailored approach, which can help you understand your potential for strategic innovation.

Expertise, time and the tools can be the biggest barrier to business', even within these however, if the base of data used isn't as good as it could be, the outputs wont be as effective to the task, and therefore impact the customer.





### Overcoming barriers to adoption

As it stands today, 40% of risk managers are making decisions subjectively and half are struggling to access insight from data, whether new or existing. Investment tends to be focused on solving data problems rather than applying analytics to enhance opportunities. The desire for enhancing enterprise wide areas is being outstripped by broader business demands such as digitising, or meeting compliance tasks.

We see from our research that many businesses are intent on implementing advanced analytics strategies to better equip and support their business – with 98% intending to outsourcing this opportunity. We see most analytical initiatives aligned to specific business objectives, such as enhancing user experience or acquiring more customers through better targeting. Since fraud tends to not have such a high profile benefit, therefore we typically see a lack of investment in this area compared to other more known and understood needs. So, a business may well get more people in, but that won't solve the problem of fraud-related loss.

Analytics has become so hyped that many businesses and people are struggling with the concept and we believe from the research results we have seen; we will continue to miss the opportunity for significant return if a focused enterprise strategy is not developed. An effective analytics strategy must be able to power opportunities beyond a single task. For example, it can perform necessary checks and process these fast – which is effective for the user experience, as well as meeting compliance and reducing risk by better knowing a person's creditworthiness, as well as their fraud and identity risk. From here, as you have a solid understanding, you can continue to benefit from data analytics to personalise the experience and opportunities for those worthy, and genuine.

There's a fear of lack of control, and a confusion about whether we can put as much trust in a machine as a human. Any analytical model needs to feature the appropriate level of transparency and contain the appropriate levels of control for the task they are being applied to. At the same time, fair, accurate and customer-centric, with the right analytical framework this can all be integrated as a standard practice in every task.





## CONCLUSION

The use of data and analytics will drive a lot of opportunity in the future and help create a positive environment with huge opportunities for all. We have the potential to use the power of analytics to better understand people, their patterns and behaviours which can help them better manage, spend, save, borrow, share and protect their money and their lives.

The ability to hyper-personalise interactions between businesses and society is something that's long been the vision of many and today is well within reach through technology, software and bespoke analytics services. By accessing this you can help people with a need, before they know it is a need. You can better engage and better direct the conversation all by having a better understanding.

Technology has developed to such an extent that services can be customised through analysis of data and transactions. You can be equipped with knowledge from across a wide variety of trends in data, connect it and initiate a single decision flow that's automated, giving you the wisdom to benefit each decision you make.

Businesses of the future are going to have to be adaptive. Strategic analytics should become a business wide discipline and part of every task. If this is achieved you will see the rewards in every KPI. It will accelerate growth, enhance productivity, improve risk control and make more positive choices available to everyone.

“

Today we can have conversations that are built by data, informed by analytics – yet akin to that of a human conversation.

”





# ABOUT THE RESEARCH AND INSIGHT CONTAINED WITHIN THIS REPORT

## Research insights

Research contained within this paper, unless sourced otherwise, is an extraction from Experian research commissioned through 2018 and 2019. This includes research with third-parties including Forrester Consulting, as well as consumer research conducted on Experian's behalf through C Space. Additional data insights are derived from data sources such as National Hunter.

- Read from our research commission to Forrester Consulting [here](#)
- To read insight from our Global Data Management trends, [click here](#)
- For a full view of the UK Fraud trends, please read our **annual fraud report** – also see our Global Fraud and Identity report [here](#).

For more information on any specific quotation, **please contact us**.



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## About Experian

Experian unlocks the power of data to create opportunities for consumers, businesses and society.

At life's big moments – from buying a home or car, to sending a child to college, to growing a business exponentially by connecting it with new customers – we empower consumers and our clients to manage their data with confidence so they can maximise every opportunity.

We gather, analyse and process data in ways others can't. We help individuals take financial control and access financial services, businesses make smarter decision and thrive, lenders lend more responsibly, and organisations prevent identity fraud and crime.

For more than 125 years, we've helped consumers and clients prosper, and economies and communities flourish – and we're not done. Our 17,200 people in 44 countries believe the possibilities for you, and our world, are growing. We're investing in new technologies, talented people and innovation so we can help create a better tomorrow.

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