APPLYING ARTIFICIAL INTELLIGENCE IN WEALTH MANAGEMENT:
COMPELLING USE CASES ACROSS THE CLIENT LIFE CYCLE
Could uncertainty be your best opportunity for growth?

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## CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>THE REAL ROLE OF AI AND WHY WEALTH MANAGERS HAVE LESS TO FEAR THAN THEY MIGHT THINK</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>LEVERAGING AI FOR LEAD GENERATION AND MANAGEMENT</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>EFFECTIVE ENGAGEMENT TO IMPROVE CLIENT WIN-RATES</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>KICKSTARTING KYC: FASTER, DEEPER CLIENT DUE DILIGENCE</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>HOLISTIC FINANCIAL PLANNING AND CUSTOMISED PORTFOLIOS</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>PERSONALISED RELATIONSHIPS WITHOUT OVERBURDENING PERSONNEL</td>
<td>22</td>
</tr>
<tr>
<td>7</td>
<td>MAKING SOPHISTICATED SEGMENTATION A (PROFITABLE) REALITY</td>
<td>25</td>
</tr>
<tr>
<td>8</td>
<td>THE REGULATORY IMPLICATIONS OF USING AI AND HOW LEGISLATION IS DEVELOPING</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>CONCLUSION</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>REFERENCES</td>
<td>30</td>
</tr>
</tbody>
</table>
FOREWORD

Although WealthBriefing’s research output covers a huge array of industry issues, we are known for being at the forefront of technology developments and have often been first in exploring emerging areas of fintech (and regtech). We were therefore delighted to be asked to examine the topic of Artificial Intelligence in depth and with specific reference to how it can be realistically applied in a wealth management context.

AI is without doubt one of the most exciting topics of our time. The technology has really captured the public imagination and is receiving a huge amount of media coverage. Hardly a day goes by without another big news story breaking, with these heralding amazing breakthroughs and warning of apocalyptic dangers in turn.

Technical progress – and adoption in both the public and private sectors – is happening at dizzying speed, leading some to fear that AI is running ahead of our understanding and control. Concerns that the “rise of the machines” will cause mass job losses are a recurring theme which the financial services sector is anxiously mulling as much as any other.

AI seems certain to cause a far-reaching reconfiguration of how financial services are delivered, wealth management included. Yet, as this report will argue, redundancies are emphatically not the prize in this niche sector.

Rather, this and other emerging technologies will be the means of solving many of the industry’s most pressing challenges to ensure that it continues to thrive. Wealth levels may be rising robustly, but wealth managers face a perfect storm of heightened competition, increased operating costs and compressed profitability. Pre-tax profit margins are thought to have plummeted by close to a third in the past decade – a squeeze which has made maintaining a low-tech status quo untenable.

It has been remarkable to see how technology has emerged from the shadows over that time; it is now central to industry dialogue and the foundation of many firms’ growth strategies. AI adoption is the next - and arguably most transformative - leap the wealth management sector will make as it continues to reinvent itself.

None of this is to say that AI is a “magic bullet” for all the challenges firms face, but it will likely prove a very large part of the solution if approached correctly. Therefore, as the title of this study sets out, institutions need to start looking beyond the all the “hype” around AI to consider all the use cases which might apply to their business model and client base as a matter of urgency.

In such an esoteric area of technology we rely more than ever on the contributions of experts in the field. Our warmest thanks go to all the commentators who have made this study as informative, relevant and accessible as it is, and hope that readers find it a useful resource.

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Finantix injects Artificial Intelligence into sales and advice in Wealth Management

FINANTIX AI GEARS FOR WEALTH

Key areas addressed:
- Client Intelligence
- Market Insights
- Adviser Productivity
- Support for Complex Advice

Benefits delivered:
- Automating Tasks
- Distilling Intelligence
- Supporting Decisions
- Enabling added value services for clients

Please visit Finantix website or get in touch with our representative at eva.jasiecka@finantix.com to learn more about the benefits AI can bring and how to best apply AI in wealth management.

Finantix has a global customer base spanning over 40 countries, acquired over 15 years and supported from eight offices across Europe, North America and Asia. Finantix sales and advisory software is trusted by some of the world’s largest banks, insurers and wealth managers. Finantix Components offers a broad and comprehensive library of digital, multi-channel, omni-device reusable software modules, widgets, engines and APIs that help leading financial institutions digitise key processes in financial services.
KEY TERMS AND CONCEPTS AROUND ARTIFICIAL INTELLIGENCE

NATURAL LANGUAGE PROCESSING

Natural Language Processing (NLP) is a component of AI whereby computer programmes are able to analyse and “understand” human language as it is spoken and written.

The essence of NLP is extracting information in order to map fluid text into structured data. The technology analyses sentences by breaking them down into smaller units and identifying words in their grammatical forms as nouns, verbs and adjectives etc. The result is a structured format for that sentence which then allows rules to be triggered, converting a document into certain fields of specific information.

Thus, in this simplistic example, the sentence “Kim Jong-un is the Supreme Leader of North Korea” will be read by NLP technology to extract a person’s name (Kim Jong-un), a political role (Supreme Leader) and a country with respect to which that political role applies (North Korea).

Applications of Natural Language Processing:

Machine translation: The challenge of making the world’s information accessible to everyone has simply outgrown the capacity for human translation, creating huge appetite for applying NLP. However, the challenge with machine translation technologies is not in simply translating words, but preserving the essential meaning of sentences.

Fighting spam: The false-positive and false-negative issues of spam filters are at the heart of NLP technology, again boiling down to the challenge of extracting meaning and intent from strings of text.

Question answering: A big focus of efforts in NLP has been in enabling tools like chatbots to recognise natural language questions, extract their meaning and provide the right answers automatically.

AUTOMATED REASONING

Automated Reasoning (AR) is a mix of techniques from computer science and mathematical logic which enable computer programmes to make inferences and extend existing knowledge into new information. The technology combines currently known facts and rules to derive new facts.

To extend our original example: the technology would take the fact that “Kim Jong-un is the Supreme Leader of North Korea” and a policy statement that considers North Korea as a high-risk country. Then, based on the rule “a top politician of a high-risk country is a high-risk individual”, the system will infer that Kim Jong-un is a high-risk individual.

Applications of Automated Reasoning:

Computational Law: this is a branch of legal informatics concerned with the mechanisation of legal reasoning. It emphasises explicit behavioural constraints and eschews implicit rules of conduct. Importantly, there is a commitment to a level of rigour in specifying laws and rules that is sufficient to support entirely mechanical processing.

Research: Automated reasoning checks the correctness of proofs in mathematics, supplementing or even replacing the existing “social process” of peer review etc. with a more objective criterion.

MACHINE LEARNING

Machine Learning (ML) is a type of AI that predicts outcomes without explicit programming. Supervised algorithms require humans to provide both input and desired output, in addition to furnishing feedback about the accuracy of predictions during training. Once training is complete, the algorithm will apply what was learned to new data.

In contrast, unsupervised algorithms do not need to be trained with desired outcome data. Instead, they use an iterative approach called “deep learning” to review data and arrive at conclusions.

To give another simplistic example, a computer might be provided with a teaching set of photographs, some of which say, “This is a cat” and some of which say, “This is not a cat”. Then, shown a series of new photos, it would begin to identify which photos were of cats independently, getting “smarter” at completing its task over time.

Applications of Machine Learning:

Document classification: the system will analyse documents and, based on their content, automatically assign them to relevant categories or group them into clusters based on their similarity.

Data security: Malware is a huge problem, but each piece of new malware tends to have almost the same code as previous versions — only between 2-10% of the files change from iteration to iteration. ML algorithms can predict which files are malware with great accuracy.

Financial trading: Many prestigious trading firms use proprietary systems to predict and execute trades at high speeds and high volume. Many of these rely on probabilities, but even a trade with a relatively low probability, at a high enough volume or speed, can turn huge profits for the firms.
WEALTHBRIEFING - ALWAYS AT THE CENTRE OF YOUR 360° VIEW ON THE WEALTH MANAGEMENT LANDSCAPE

With 60,000 global subscribers, WealthBriefing is the world’s largest subscription news and thought-leadership network for the wealth management sector
THE REAL ROLE OF AI AND WHY WEALTH MANAGERS HAVE LESS TO FEAR THAN THEY MIGHT THINK

Wendy Spires, Head of Research at WealthBriefing, looks beyond the headlines to explore why wealth management professionals should be looking forward to the industry’s further adoption of AI, rather than seeing the technology as a threat.

Statistics about the financial services industry’s accelerating reliance on technology may well strike fear into the hearts of its professionals. For instance, it has been estimated that 30% of jobs are under threat and that 2-6 million may be lost over the next decade due to disruptive technologies such as AI, robotics and blockchain. As Figure 1 shows, concerns over potential job losses have certainly filtered down to the WealthBriefing community.

But, as ever, the headlines belie a far more complex picture, particularly as regards the wealth management sector.

Much is made of the fact that digital challengers banks have been able to launch with 90% less headcount than traditional incumbents. Yet the fact remains that wealth management represents a very special niche, it being a highly complex, multi-disciplinary area of financial services and one that is predicated on high-touch personal service too.

As such, rather than fearing their replacement by AI, our expert panellists argue that wealth management professionals should instead look forward to their working lives being made very much easier, and far more productive, through this technology.

RESERVATIONS EVEN OVER ROBO-ADVICE

Complexities exist even in areas where the “rise of the machines” seems unassailable. Robo-advice undoubtedly represents a seismic shift for the investment management industry, one that has squeezed traditional providers’ profit margins and fuelled the growth of passive investing to the point where many question the ongoing existence of active management.

However, while 71% of wealth managers may believe clients are ready to take advice from robos (see Figure 2), it seems doubtful that they want to rely solely on them – despite what advocates may say about likelihood of a passive, robo-managed portfolio performing better – and at far less cost – than one actively managed by a person.

It is telling that self-directed investing slid from 45% to 38% between 2010 and 2016, a period where robos stormed ahead in both number and sophistication. Here, it has been suggested that the psychological difficulties of “entrusting” large amounts of money to a technological interface means that many are using these tools largely to assess their investments before consulting a professional to actually manage them. This seems very much borne out by research showing that investors prize an understanding of their needs and goals, a holistic overview and a willingness to explain analysis above all else when seeking an advisor.

RELATIONSHIP MANAGERS TO REMAIN CENTRAL

The old adage that “people buy from people” seems to remain true, and not just due to trust issues. Rather, it is that the human element of wealth management is where much of its value resides.

“'The non-reducible part of the human work in private banking is really representing the client’s perspective, unpicking their philosophy and attitudes to life and risk,” said Alessandro Tonchia, Co-Founder of Finantix. “So, while more and more of their ‘menial’ work will be eaten up by increasingly intelligent systems, the relationship manager will still remain central as the advocate of the client.”

As our experts observed, this advocacy is multi-faceted, with AI holding out the potential for significant improvements in several ways.

For Greg Davies, Head of Behavioural Science at Oxford Risk, one of the most compelling use cases for AI is in helping advisors synthesise the myriad information institutions hold on clients with new details emerging in meetings to ensure that investment suitability is properly addressed.

“Mentally processing all the existing and new client information to arrive at the right recommendation for them can be incredibly complicated with many moving parts;” he
said. “AI can dynamically process that information in real-time and do all the data juggling to present the advisor with the most accurate, holistic portrait the firm has of the client at that moment.”

Not only will AI save advisors the risk - and pain - of performing all these calculations “live”, it can also flag up all the important issues to be covered in the conversation. However, Davies notes that the technology would still need to draw on a human-designed conception of what the underlying suitability framework is, just as really accurate risk-profiling requires the “human touch” to interrogate and contextualise a client’s professed attitudes and desires. As with so much in sophisticated wealth management, risk-profiling is both an art and a science.

IRON MAN, NOT THE TERMINATOR

“The value of AI is less in the computer ‘giving the answer’ to the client and more in it acting as an advisory support tool helping the relationship manager make decisions,” Davies said. “When it comes to advice, we should be thinking about AI in terms of Iron Man, rather than the Terminator.”

Davies’ reference carries very useful notions of AI acting as a kind of “cognitive prosthesis” for advisors. The technology will allow them to bring far more information about the client to bear when making investment and financial planning recommendations; as discussed later in this report, it will also be able to ensure that these are compliant via machines learning (and automatically keeping up to date with) all the regulatory constraints private client practitioners have to work within.

The delivery of professional services of all kinds looks set to be revolutionised by new technologies. But while the medical applications of AI have garnered much attention, the greater objectivity of this domain leads Tonch to believe that it is rather the legal professional which yields the most useful parallels to wealth management.

“Legal and wealth are similarly about interpreting a client’s often quite philosophical objectives, devising strategies to achieve them, then articulating those into a tactical approach - and both are incredibly rich in terms of the knowledge you need to do that optimally,” he said. “An intelligent system can help a lot in both sectors by validating courses of action, gathering all the information and documents that are required and reducing the risk of making mistakes.”

As the “fourth industrial revolution” gathers pace, Phil Tattersall, Director in EY’s UK Wealth & Asset Management Data and Analytics advisory practice, sees AI having a truly transformative effect on wealth management as well as the wider world. Yet this should be thought about in terms of a multiplicity of gains, and not simply job losses.

AN INFLECTION POINT APPROACHES

FIGURE 3: Is your institution interested in the applications of Artificial Intelligence?

- Yes - Investing already: 23%
- Yes - Investigating possibilities: 54%
- No: 23%

“If we plot human population on a graph over time, the inflection point to geometric growth was enabled by the industrial revolution, which massively increased productivity as we augmented human and animal power with steam power,” he said. “The promise of AI, and in particular Machine Learning (ML) techniques, is to enable a similar inflection point in productivity, this time via a massive augmentation in cognitive power.”

As Figure 3 shows, wealth managers are already investing heavily in AI technology. EY’s Tattersall sees AI/ML techniques rapidly becoming embedded in every single aspect of the wealth management value chain. However, we can expect the application of AI to start in the highest-value areas, namely, enhancing the investment process and client experience and reducing business risk, all while delivering the dramatic productivity gains the industry needs.

According to our panel, the notion of moving up the value chain is in fact one that all wealth management professionals should keep in mind when considering the sector’s evolution and their future role within it – particularly when we consider that, hearteningly, 8 in 10 firms replacing roles with technology are retraining or redeploying those being displaced.

If computers can perform a function optimally and without intervention, then in time they undoubtedly will. But due to the complex, multi-disciplinary and interpersonal nature of managing wealth there seems to be relatively little - except in the most workaday tasks - where humans seem likely to become entirely redundant.

Instead, we can anticipate varying degrees of hybridisation between man and machine, as the rest of this report describes. This means that skilled relationship managers have little to fear, and much to gain, from greater AI adoption across the industry and that Chief Technology Officers should actually find the technology an easier “sell” than many might have hitherto feared – as long as the benefits for clients, firms and advisors are made clear.

“There will be a need for humans to sell and persuade for many decades to come,” concluded David Teten, Managing Partner of HOF Capital. “People need to remember that the great majority of the value of technology in general - and not just with AI - is in augmenting professionals, not replacing them.”
Tom Burroughes, Group Editor at WealthBriefing, explores how AI technologies can help wealth managers ensure they always have a full pipeline of future business and that they engage with those prospects as effectively as possible.

In today’s ever more hotly-contested market, private client advisors know only too well how important it is to have a full pipeline of future clients to expand business and replace customers who move away. And they need to know that once they’ve figured out who potential new clients might be, they also need tools made available by AI and other technologies to reach out to such people as precisely and persuasively as possible.

AI can help managers connect with new clients by figuring out where they are, alerting practitioners to liquidity events and who stands to benefit from them by highlighting Initial Public Offerings, trade sales, share options being exercised, significant bequests and even legally-mandated financial pay-outs. The science of sifting liquidity events is developing and has moved fastest where publicly-listed firms are concerned, but there are also developments on the private side of the street.

Discovering leads about new clients, and managing the initial approach and the onboarding process, can entail a number of challenges, however, including where foreign language and other potential barriers to understanding arise. Once the potential new client is discovered, and then approached, there is also the need to get an early and accurate read on that individual’s needs and position. Any data analysis that can make it easier to gauge the full balance sheet of a client – the liabilities side as well as assets – is clearly going to be a huge competitive advantage for wealth managers.

**FINDING AND KEEPING CLIENTS**

As Alessandro Tonchia, Co-Founder of Finantix, describes, AI technologies can provide elegant solutions to many prospecting challenges, helping the early part of the client discovery process to proceed along very efficient lines.

“The sequence is that you find a potential lead – someone who owns a fast-growing company, for example – and you derive a client profile to assess if it fits your qualification criteria,” he said. “Then the technology can score which of your bankers is most attuned to that profile, as they speak the same language, are the same age, share interests or because they already have many similar clients in that field.”

To further foster a connection, Tonchia explained that an institution can then scrutinise a source such as LinkedIn to see if the relationship manager is already tangentially connected to the target, and work out if some existing clients sit on the same company boards as them.

AI can even help produce the right message and the appropriate language to reach out to a target in, he said.

As the information pool deepens, AI and machine learning techniques can massively boost client acquisition, client retention and sales, confirmed Phil Tattersall, Director in EY’s Wealth & Asset Management Data and Analytics advisory practice.

“Alternative data sources – such as social media, mainstream news and relevant publications - can be powerfully leveraged and analysed to generate new insights for prospecting and compiling prospect profiles,” he said.

Similarly, clients can be segmented and analysed for retention risk and the relevant corrective- or even preventative- actions initiated.

Working out early in a conversation how easy or hard it will be to retain a client’s business in certain conditions will also be extremely useful for a firm that wants to know how consistent its revenue from certain areas of business is likely to be.

The fine detail that AI can unearth about clients can empower advisors, giving them an edge in making pitches to new prospects. Private banks are certainly on board with the use of AI in the way they understand and support clients throughout the relationship and don’t see it as taking the human out of the equation, but rather as augmentation for people skills.

“Elements of AI and robo-advice can be combined with the wealth of data that is available to help us understand clients’ risk profiles, to build our investment themes and to enable our front-office teams to become even more proactive managers on their behalf,” said Jack Oliver, Head of Digital at HSBC Global Private Banking.

Senior managers at Royal Bank of Canada’s wealth management operation in the UK, for example, have stressed to the writers of this report how full use of modern data technology, aided by AI, has helped furnish Relationship Managers with a depth and breadth of information that increases their chances of a successful “pitch”, increasing success rates and boosting advisor productivity in this regard.

Chris Burke, Vice-President, Digital Solutions and Sales Enablement at RBC Wealth Management explained:

“Natural Language Processing [NLP] is helping banks to gather heretofore inaccessible insights and relationships extracted from new and significant sources of structured and unstructured client data. There is a growing quantity of information being created about,
or on behalf of, clients daily through their engagement with digital and social platforms that allow us to understand the client more broadly, including family and business relationships.

“We don’t see all of that information always. Even though it is freely shared, we are limited in our ability to make the time necessary to find, retrieve, read and process it. This new insight allows us to understand their financial goals more clearly in order to offer more timely and relevant solutions. It also allows us to more quickly find unexpected relationships between world events and our clients, allowing us to be more proactive in our advice-based conversations.”

“AI CAN HELP MINE PUBLIC DATA SOURCES TO FIND OUT, FOR EXAMPLE, THE VALUE OF THE CLIENT’S HOME OR HOMES, OR THE VALUE OF THE COMPANY THAT THEY HAVE SOLD.”
- David Teten, Managing Partner of HOF Capital

LOOKING FOR “DIAMONDS IN THE ROUGH”

David Teten, Managing Partner of HOF Capital, thinks this “finding diamonds in the rough” aspect of AI is highly significant. “AI can help mine public data sources to find out, for example, the value of the client’s home or homes, or the value of the company that they have sold,” he said. “AI is helpful in deciding who I should solicit, how I should reach out to them, what language I should use and in preparing the sales collateral that will resonate most with them.”

As Teten observes, AI can prove invaluable in providing “ways in” with prospective clients, helping advisors precisely tailor conversations to build affinities and trust, and so improve their chances of winning a new client.

One application he highlights is how AI can perform scenario analyses enabling an advisor to quickly be able to examine the implications of scenarios – like geopolitical shocks – that might be on a prospective client’s minds.

An even more granular tool he has invested in helps support the sales process by refining - in real time - the “script” the sales person uses to optimise the conversation. “You still have a human carrying out the calls, but they do a better job as they are supported by an electronic ‘coach’,” he said. “You still need the credibility of a human for sales, but the technology helps them effect far greater sales success.”

Peter J Scott, an expert author on AI’s potential, also notes that with so much information available in publicly accessible ways, AI has a particular potency. He observed:

“The parallel might be with Google and reference librarians: in a few seconds I can get out of Google what I couldn’t get out of a reference librarian 30 years ago,” he said. “I still really like our librarians; they are friendly and human, and they understand me personally, but there are a relatively small number of things I would approach them for compared with what I ask Google now.

“We will see a lot of things move in that direction. It is only a question of when, not if.”

SURMOUNTING THE LANGUAGE BARRIER

This is a cosmopolitan industry, and facility with foreign languages and sensitivity to cultural differences is clearly crucial for those firms wishing to deliver profitable business. With modern technology moving into areas such as language translation, the potential here in the lead generation and management side looks very interesting indeed.

In the earliest stage of contacting a client, figuring out his or her native language (and which they prefer) is vital, and AI has a part to play here, Tonchia explained.

“NATURAL LANGUAGE PROCESSING [NLP] IS HELPING BANKS TO GATHER HERETOFORE INACCESSIBLE INSIGHTS AND RELATIONSHIPS EXTRACTED FROM NEW AND SIGNIFICANT SOURCES OF STRUCTURED AND UNSTRUCTURED CLIENT DATA.”
- Chris Burke, Vice-President, Digital Solutions and Sales Enablement at RBC Wealth Management

“The issue of ascertaining which language the client speaks is not trivial. A prospect could have a Russian name, own a Russian company and therefore be mentioned in the Russian press, but at the same time they might live in the US and not speak Russian, or at least not by preference.

“Rather than acting blind and hoping a prospective client speaks a particular language, with AI you will be able to attune your strategy to their evidenced preferences.

“With AI technology ‘reading’ all available data sources you can find out things that help foster relationships you never normally could, like a prospect speaking three languages. Then, with AI analytics you can discover what the most popular languages are, mapping your current and target client base to discover that perhaps you need to hire more Russian-speaking advisors.”

As our expert panel highlight, the full gamut of assistance AI can offer on the prospecting front ranges far beyond the obvious. And, while landing new business is still a uniquely human talent, surely few relationship managers will choose to shun the additional support AI can provide – particularly when the pressure on them to gather new assets just keeps ratcheting up.
3 EFFECTIVE ENGAGEMENT TO IMPROVE CLIENT WIN-RATES

Wendy Spires, Head of Research at WealthBriefing, explores how using AI technologies right from the start of the sales cycle can help firms really ramp up their client win-rates.

As Chapter 2 outlined, AI can help greatly improve the process of sourcing prospective clients, but achieving actual growth clearly depends on converting these leads into new business wins.

Although factors like brand reputation are important, success largely depends on relationship managers’ ability to effectively articulate their firm’s offering and rapidly forge affinities with the wealthy individuals they aim to bring on board. These are eminently human skills of persuasion and relationship-building, but here again AI technologies have a lot to offer. While relationship managers will pride (and sell) themselves on a talent for converting prospects into clients, they and their employers should be very keen to utilise all the assistance they can.

Diminishing client loyalty has been a well-discussed trend. However, the pain of changing providers makes it fair to assume most wealthy individuals will still be looking to forge the kind of very enduring relationships institutions also seek. Entering one can therefore be a finely-balanced and very drawn-out buying decision which in the UK averages at around five months in length.3

Many things can derail the process, not least arduous due diligence/onboarding requirements, meaning that client win-rates can often be dishearteningly low - even when HNWIs have actively sought out providers. “People using our matching service are by definition red-hot leads who have been lined up to meet with potentially perfect partners,” said Lee Goggin, Co-Founder of findaWEALTHMANAGER.com. “Even still, wealth managers’ success converting these individuals into signed-up clients varies massively, with some seeming to really struggle here.”

In Goggin’s experience, even the best-converting firms still only “land” about 40% of the prospective clients they meet. Any advantage technology can provide to help quickly build their enthusiasm and then maintain it over several months will therefore be a boon.

MAKING MEETINGS REALLY COUNT

The challenge of securing that first meeting with time-poor (and often internationally mobile) prospects creates an imperative to make initial meetings really count. Even in the very early stages of courting prospective clients, a huge amount of information on them can be brought to bear.

An effective profile will amalgamate details which have actively been given to the relationship manager and those gleaned behind the scenes from the all the publicly accessible and paid-for information sources that continue to proliferate. These include business information databases; companies which track liquidity events and the histories of HNWIs; alternative data sources like mainstream or social media; and PEP/watchlists (which may yield much useful intelligence beyond giving individuals a compliance “green light”).

Through Natural Language Processing (NLP), AI has the ability to rapidly read thousands of documents across all these data sources in whichever languages they occur, before synthesising all this information to create a concise and genuinely useful “primer” on prospective clients. All the preparations required for a highly efficient and valuable meeting can then also be automated, with the technology identifying the most pertinent topics for discussion and gathering materials that will illustrate the most relevant elements of the firm’s value proposition and the advisor’s expertise.

As Alessandro Tonchia, Co-Founder of Finantix, observes, time is of the essence – both in terms of advisors’ workloads and the number of firms that might be simultaneously vying for the business of HNWIs. “If your prospect is an entrepreneur in fintech, they will appreciate you having your organisation’s latest report on the sector and other research ready for discussion,” he said. “Aggregating the right knowledge to showcase, and being able to quickly zero in on their specific needs and concerns is vital.”

Importantly, AI-enabled analyses will also help firms ascertain individuals’ favoured communication channels (and languages), further improving the odds of winning their business when others may be making clumsier attempts. As David Teten, Managing Partner of HOF Capital, argued in Chapter 2, sales success is all about “being on the same page” as investors, making AI invaluable in quickly deciding who to sell to, the best means of reaching out to them and what to present them with.

It is likely that AI will become even more helpful as wealth managers increase the ways they habitually gather information on prospects and clients. While at present firms might be constrained by concerns about being perceived as spying on people, our experts pointed out that the next generation of clients are likely to have no such qualms – as long as they see value, like better service, from their data being used.

“Social media habits mean the young have a very different concept of privacy to the older generations,” said Peter J Scott, an expert author on AI’s potential. “They are comfortable letting anyone who cares to know what they are doing, who they are with and even what they are eating – and all manner of firms, including wealth managers, will be able to leverage this information on habits and preferences in many, many ways.”

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As the panellists observed, both of these capabilities are just what is required in today’s fast-moving world where mobile devices mean meetings are no longer confined to office environments. “By having richer profiles on prospective clients, and real-time information on what does and doesn’t work, advisors will be able to rapidly reorganise themselves out there in the field,” said Tonchia.

Perhaps most important of all, automated reasoning will also ensure that proposals are always compliant with both the relevant external regulations and the institution’s internal policies. While not necessarily experts in all the regulations that might conceivably apply, relationship managers are nevertheless responsible for much of the upfront compliance work required to onboard a client and sell them only permissible products.

The rules around cross-border business can be incredibly complex. This can create significant compliance risks, and as Chapter 4 discusses, it also means onboarding can be unduly arduous for both client and advisor. Proceedings can be very much streamlined by AI, particularly when combined with other technologies like dynamic forms which expand or contract depending on the answers clients give to regulatory questions.

“It’s about having the right information at the moment where you need to make a compliance decision,” said Tonchia. “You cannot afford to start searching for the relevant manual and looking for an answer or to tell the client, ‘wait here’ while you consult an expert; you need the compliance summary in real time.”

PREVENTING FIRMS FALLING DOWN ON THE FOLLOW-UP

In addition to making initial meetings more productive, AI technology can also be invaluable in the follow-up phase – an area where Goggin sees firms often falling down. As previously discussed, it can take several months for even highly-engaged individuals to finally sign up, and efforts to court prospects have to be sustained and carried out in an efficient sequence. Here, AI can provide very useful enhancements to existing Client Relationship Management systems.

“Today’s technology makes it possible to record the whole client meeting, transcribe the recording and scan every sentence to see if it indicates a task,” said Tonchia. “If we detect something like ‘send the client information on hedge funds’, ‘organise a meeting with the FX specialist’ or ‘schedule a meeting next week to review the portfolio’ we can automatically enter it into the advisor’s to-do list and generate the communications needed to get those things done. Or we can do the same off the notes typed during the meeting.”

As described in Chapter 6, AI also enables the deep personalisation of investment news and research content, such as by Machine Learning techniques ensuring that investors are only sent what is relevant and of most interest, and with their communications preferences always observed. These capabilities can clearly also be applied to prospects so that they receive a steady drip of highly impactful content, rather an undifferentiated deluge which may annoy them more than anything else.

It should always be remembered that wealth management is a premium service that sells itself on customisation and the personal touch. Therefore, firms - and their advisors - should seize every opportunity to make potential clients feel valued and positively known as early in the sales cycle as possible. As our experts argued, the boost AI technology can give time-honoured sales skills is too great to ignore.

“I think it takes a lot of chutzpah to think that you’re not going to benefit from a coach that helps you to say the right things to sell,” Teten concluded. “It’s natural for people to feel nervous about any part of their job being automated or augmented by technology, but over time the refuseniks are going to find they’re completely beat out by competitors who do make use of it.”

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"IT’S ABOUT HAVING THE RIGHT INFORMATION AT THE MOMENT WHERE YOU NEED TO MAKE A COMPLIANCE DECISION. YOU CANNOT AFFORD TO START SEARCHING FOR THE RELEVANT MANUAL AND LOOKING FOR AN ANSWER OR TO TELL THE CLIENT, ‘WAIT HERE’ WHILE YOU CONSULT AN EXPERT; YOU NEED THE COMPLIANCE SUMMARY IN REAL TIME.”

- Alessandro Tonchia, Co-Founder of Finantix

POWERFUL PROPOSALS

Much will depend on marrying “soft” details with hard financial facts, however: really resonating with potential clients will still hinge on the product and service proposal put forward, our experts cautioned. This will serve as the first, most important proof-point of how well the relationship manager has listened to the individual and how good a fit the firm is for their wants and needs.

AI-enabled technology can greatly streamline the production of proposals by using automated reasoning to generate initial investment and financial planning recommendations. Importantly, the dynamic profiling of clients can continue during meetings with complex calculations refined automatically as more information emerges, meaning that proposals can potentially be perfected “live” rather than sent on later when momentum has been lost. Advisors can also be guided by analytics on what has appealed to similar clients before.

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Wendy Spires, Head of Research at WealthBriefing, discusses how the “digital detective work” AI can carry out will make client due diligence a very much more efficient – and far less risky – affair for wealth managers.

As previously discussed, wealth management advisors should really be looking forward to their work being facilitated by AI, rather than fearing replacement by it. However, it seems certain that AI - in combination with other new technologies - will indeed cut a swathe through compliance. Since 2011, US and European banks have been hit with $150bn of litigation and conduct charges. As regulation has ratcheted up, the scramble to avoid censure has seen many institutions double their compliance headcount. Currently, financial institutions have to dedicate 10-15% of staff to governance, risk management and compliance and regulation is now estimated to cost the industry an eyewatering $270bn yearly and as much as $1bn per firm.

Valiant efforts have been made with outsourcing and labour arbitrage, but we are only at the beginning of a huge wave of regulatory automation that will sweep the sector. “Industry observers agree that more compliance functions will become automated over the next 3-5 years as regulations themselves become more complex, multi-modal and extra-territorial in outlook,” said Dr Anthony Kirby, Associate Partner, Regulatory and Risk Management - Regulatory Intelligence at EY in the UK. The potential to simultaneously slash costs and business risks through regtech is increasingly becoming too compelling for institutions to ignore – particularly given the added chance to vastly improve the client experience.

**RELIEVING ONBOARDING PAIN**

Much previous WealthBriefing research has focused on the acute challenges in the client discovery and take-on phase for investors, advisors and institutions. Onboarding is often inordinately lengthy (see Figure 4) and onerous due to a lack of digitalisation, leading 71% of wealth managers to fear clients dropping out during the process (see Figure 5).

**FIGURE 4:** Average onboarding time HNW client vs legal entity.

**FIGURE 5:** How concerned are you about clients dropping out during the onboarding process?

**FIGURE 6:** How many man hours of work would you say it takes to screen low-, medium- and high-risk clients at your institution?

**FIGURE 7:** Predicted Client Due Diligence spend over 2017.
Client due diligence obligations have become increasingly weighty amid the global crackdown on financial crime and are the source of much of this pain (wealth managers have estimated that screening high-risk clients requires an average of 5.4 hours of work and even low-risk ones 1.6 hours; see Figure 6).

They have therefore become a big regtech focus. As Figures 7 and 8 show, 63% of wealth managers globally foresaw increased spend in this area in 2017, but with 44% opting to concentrate on technology investment rather than throwing (ever-more expensive) personnel at the problem. And, with the advent of AI applications for Know Your Client (KYC) and Anti-Money Laundering (AML) purposes, wealth managers’ reliance on technology in these labour-intensive and high-risk areas seems certain to rapidly accelerate.

So, how can AI technologies help make client discovery and documenting due diligence both better and more efficient?

As our experts pointed out, the vast majority of prospective clients will present no real compliance issues that will call for escalation to a human expert, so there is great scope to automate the collation of all evidence required to onboard them. As Figure 9 shows, documenting sources of wealth/funds constitutes a major headache for firms, while for clients the questioning required to open an account can feel intrusive and laborious.

AI technologies can ensure they are only asked what is strictly necessary and facilitate an element of “self-service” (and depersonalisation) that might be very helpful in fledging relationships. Importantly, 38% of clients already prefer to open accounts digitally today, with this expected to rise to 52% in the next few years.

As David Teten, Managing Partner of HOF Capital, argued: “Client onboarding is an extremely cumbersome and manual process that could be improved by new technologies in many ways. For example, implementing Robotic Process Automation can streamline KYC decision-making through more interactive and intuitive information-gathering. AI can also be a great help in mining public data sources to find out things like the value of a client’s home or of the company they sold.”

Although most clients are unproblematic from a compliance perspective, it must also be remembered that wealth management is by definition a highly cosmopolitan industry assisting clients with complex, international financial affairs. Here, AI can be invaluable in ensuring that all clients who can be onboarded, are, and that riskier ones do not slip through the compliance net.

**DIGITAL DETECTIVE WORK**

Just as in lead generation and news personalisation (see Chapters 2 and 6), one of the most powerful ways AI can be applied in a client due diligence context is in using Natural Language Processing (NLP) to “read” vast amounts of information in any language. “AI can be a great help in the onboarding phase, through intelligent document scanning and sifting through the array of external data sources wealth managers should be consulting,” said Alessandro Tonchia, Co-Founder of Fineantix. “As well as massively reducing risk, it can hugely improve sales effectiveness and enhance the client experience.”

As Tonchia explained, the real power of the technology lies in its ability to intelligently extract risk-relevant facts from a huge volume of data, but then to also synthesise and deduplicate that information so that it is both meaningful and concise.

“Before, the technology might have flagged a hundred mentions of an individual doing business with North Korea, but now it will collapse those hundred documents into a single ‘red flag’ alert,” he said. “NLP can also discern the difference between a person having, say, starred in a film about terrorism and them having been actually linked to it.”

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**FIGURE 8:** Focus of Client Due Diligence spend over 2017.

**FIGURE 9:** Which element of the client screening process causes the most frustration at your institution?
false positives and irrelevant results makes analysing true risk a much easier task.”

In addition to summarising information, the massive reach of AI analyses can also uncover risk indicators that it would take an inordinate amount of detective work to uncover manually.

“One area where we’re really adding value is in network analysis,” Tonchia continued. “Here, a prospective client might present as totally clean, but we could discover that in fact they sit on the same board of directors as a very dubious individual, or that they are an advisor to a company that has a joint venture with a sanctioned entity, for example.

“It’s about detecting third-level relationships and indirect risks to mitigate all conceivable risk factors. Criminals and sanctioned companies are, after all, unlikely to act in the open to try to open an account with you.”

The power of many of the AI applications explored in this report lies in Machine Learning (that is, where systems learn and improve from experience). But the sophistication of the Finantix KYC solution (developed in partnership with smartKYC) goes beyond even this in the ever-evolving fight against financial crime.

“You need to not only define an individual’s network of relationships, but also to navigate and make inferences about the connections,” he said. “We’re now going beyond Machine Learning and investing heavily in reasoning tools and inference engines that emulate the ‘thinking’ of a human investigator.”

BARRIERS BEGINNING TO COME DOWN

The terrorist threat and a series of money laundering scandals are ensuring that the fight against financial crime remains absolutely top of the international agenda, while at the same time clients are growing increasingly intolerant of inelegant consumer experiences – no matter how good the regulatory rationale. Combined, these factors make compliance - and client due diligence in particular - among the areas most ripe for AI amelioration. And this must surely be right around the corner.

Regtech solutions are still evolving, but, according to EY’s Dr Kirby, the main brake on adoption is that “the IT environments at regulators, central banks and governments are not yet at the point where they can readily interoperate with the industry as a whole”. However, he sees this rapidly changing as regtech solutions and “smart” or self-executing contracts become more mainstream (these are computer programming codes that facilitate or enforce the performance of an agreement using blockchain technology).

“Machine Learning, Artificial Intelligence and Natural Language Processing will quite soon be widely applied to the ‘second line of defence’ skills in legal, compliance and risk management,” he said. “This will start with day-to-day monitoring in activities such as surveillance and AML, and extend over time to filing reports of trades and transactions to meet regulatory conduct of business and prudential obligations in each jurisdiction.”

Believing them beneficial to society as a whole, as well as to the institutions pooling their resources, regulators and governments are thought to be increasingly positive on the use of “utility technologies” (this is where service/technology providers offer a centralised outsourcing of key common tasks, potentially across the entire industry). In an AML context, this would mean institutions and authorities sharing KYC, transactional or other data through a third party “utility” - an approach which would likely have to draw on Distributed Ledger Technology in turn.

Compliance is undeniably the area most fraught with complexity when it comes to AI adoption, and great strides in other technologies such as biometrics and big data will also be required for real progress to be made.

However, it is also arguably where wealth management sector stands to make the biggest gains. For many institutions, the compliance burden has become unbearably heavy and, as we have seen, AI has huge potential to help lighten the load.

“MACHINE LEARNING, ARTIFICIAL INTELLIGENCE AND NATURAL LANGUAGE PROCESSING WILL QUITE SOON BE WIDELY APPLIED TO THE ‘SECOND LINE OF DEFENCE’ SKILLS IN LEGAL, COMPLIANCE AND RISK MANAGEMENT. THIS WILL START WITH DAY-TO-DAY MONITORING IN ACTIVITIES SUCH AS SURVEILLANCE AND AML AND EXTEND OVER TIME TO FILING REPORTS OF TRADES AND TRANSACTIONS TO MEET REGULATORY CONDUCT OF BUSINESS AND PRUDENTIAL OBLIGATIONS IN EACH JURISDICTION.”

- Dr Anthony Kirby, Associate Partner, Regulatory and Risk Management - Regulatory Intelligence at EY in the UK
Applying Artificial Intelligence in Wealth Management: Compelling Use Cases Across the Client Life Cycle

In today’s complex wealth management arena, when advisors want to know how best to put compliance rules into practice, or figure out what might be the most suitable jurisdiction for a trust, Artificial Intelligence has the power to give managers an added edge.

An advisor will want to know how AI can help extract data from clients more easily, and ensure financial plans and investment portfolios meet their needs as accurately as possible. And these objectives are becoming more varied: we have moved a long way from simply figuring out if there will be enough money in portfolios to pay for retirement, school fees or a house. For example, research shows investors increasingly want their money to do good things in the world, as seen by the trend of environmental, social and governance-related (ESG), responsible or impact investing.

Such goals involve pulling a lot of information together fast, which is one area where AI can be particularly effective. Then, there are the tasks of serving cross-border clients who speak various languages and where local regulatory, tax and other considerations come into play.

There is already a sizeable body of opinion that sees real value in AI’s fit with investment management: as Figure 10 shows, 43% of wealth management professionals globally see the technology offering great potential to improve investment performance and risk management.

And one takeaway from conversations with industry practitioners is that AI isn’t something that is still in the laboratory. It is being used right now.

Phil Tattersall, Director in EY’s UK Wealth & Asset Management Data and Analytics advisory practice, believes we should expect big changes in how investments are managed because of AI.

He said:

“Undoubtedly, AI and ML [Machine Learning] technologies will be key to revolutionising the investment process. In fact, right now 62% of systematic hedge fund managers are using machine learning techniques in their investment process.

“The driver is the increasing digitisation of everything - more and more data being generated by humans, such as through social media, as a side-effect of business processes, and by sensors.

“All of these data sources can be considered alternative data that can generate new insights for the investment process. However, making sense of these complex, variable, voluminous alternative data sources is tricky and requires sophisticated AI/ML techniques to help portfolio managers spot patterns that humans can’t easily identify or couldn’t spot at all in the deluge of information.”

Human psychology is not a closed book to AI and this holds great potential when it comes to managing money, argues Peter J Scott, an expert author on this subject. “We see a lot of studies now that have been turned into marketable books telling us about the psychology of people and how they can be relied upon to behave in certain ways that contradict rationality but we nevertheless do all the time,” he said. “For example, humans can have asymmetric risk preferences in how they consider the future, and AI can avoid some of these biases, helping them make wiser investment decisions as a result.”

Importantly, AI can be very powerful in assisting money managers and clients make sense of data, argued Alessandro Tonchia, Co-Founder of Finantix: “AI can help you interpret a performance report, enrich it with information that explains the relevant market trends and add a lot of value to your discussion,” he said. “You can really bring the information to life and enable meaningful dialogues with clients.”

Chris Burke, Vice-President of Digital Solutions and Sales at RBC Wealth Management, said he sees AI as bringing more precision in terms of the kind of information at managers’ fingertips, along with far more speed. It can also help foster the absolute client-centricity consumers have come to expect.

“Put simply, advancements in AI allow us to leverage all of the data generated within our client and prospect relationships to deliver more targeted and personalised digital experiences, as well as more targeted guidance for our advisors and front-line staff,” he said. “Rather than requiring the client to navigate a complex organisation based on our own structure and taxonomy, we can now present highly-relevant insights and content in real time.”

Scenario Planning

In ascertaining what works best for clients in their portfolios, an important idea is around how to generate lots of different scenarios that a person might find themselves in, and showing how they will need to act. This can sometimes be referred to as “gamification” -
borrowing from the language of computer games - or simulations to illustrate different scenarios for clients. Testing out different scenarios can also be a powerful teaching tool in learning how to fine-tune portfolios.

EY’s Tattersall expects robo-driven investment to continue gathering momentum, giving the following reasoning:

“‘Freestyle’ chess allows humans unrestricted use of computers during games. This combination of humans plus computers still beats the most powerful computer by itself. In a similar way, despite the fact that the power of the algorithms automating advice will continue to increase, we should expect that for the foreseeable future humans plus powerful algorithms beat algorithms by themselves.”

“While we can expect the penetration of robo-advice to continue to accelerate, we should expect that the ultra-high net worth segment will continue to be best served by their trusted human advisor but augmented with ever more powerful algorithms,” he said.

Finantix’s Tonchia said AI can be especially useful in generating particular outcomes depending on specific client situations, covering not just investments but more complex advisory areas that can include tax and estate planning as well.

What is more, in some cases, rules and principles can be generated not by advisors and firms, but by the AI tool itself.

“In certain contexts, we don’t need to code rules because they can be machine-learned by abstracting positive experiences: the technology takes what works and what doesn’t work in your organisation for certain clients and distils the rules automatically,” said Tonchia.

“In that case, you don’t need expertise so much as you have to set the model up to learn from experience; in other more complex cases, you might need to have financial planning or estate planning experts define those rules and enter them into the reasoning engine. A hybrid approach is also possible.”

“BLOCKCHAIN AND DISTRIBUTED LEDGER TECHNOLOGIES PROVIDE DECENTRALISED/SHARED CONTROL WHICH ENCOURAGES DATA SHARING AND ENABLES NEW DATA TO BE MADE AVAILABLE, BOTH FROM WITHIN A WEALTH FIRM AND FROM ACROSS ITS WIDER ECOSYSTEM.”

- Phil Tattersall, Director in EY’s UK Wealth & Asset Management Data and Analytics advisory practice

CROSS-BORDER COMPLIANCE

One increasingly important issue for wealth managers is understanding when an investment that might be deemed suitable in one country may not satisfy standards in another. Keeping on top of a patchwork of regulatory tests and requirements will tax the cleverest manager, which is where AI can help hugely to reduce risk and increase efficiency.

For firms considering selling products and services into different countries, AI can remove the chore of managers having to constantly consult their compliance departments to ensure they aren’t breaking the rules, Tonchia explained. “There will still be a need for traditional compliance for the hard cases, but 90% of the workload is just routine questions like ‘Can I sell this product to this client?’” he said.

“That’s something that you don’t want to bug the compliance guy with every ten minutes – or need to with our technology.”

If AI can perform the heavy lifting of finding out which products and services are suitable, this frees up advisors to do what humans do best – giving overall strategic guidance to clients, which is also where they can really add value, Tonchia continued.

ADDING OTHER TECHNOLOGY TO AI

Another facet to all these issues is how AI might be combined with some of the other hot developments in fintech to even more powerful effect.

“Blockchain and Distributed Ledger Technologies provide decentralised/shared control which encourages data sharing and enables new data to be made available, both from within a wealth firm and from across its wider ecosystem,” EY’s Tattersall said. “Recently, LendingRobot launched a hedge fund that uses machine learning techniques to select alternative lending opportunities (such as peer-to-peer loans) that best match the investment objectives while providing complete transparency into the immutable ledger of investor and investment activities that is held on the Ethereum blockchain.”

So, will the combination of AI with other fintech areas make what is called “holistic” wealth management a reality?

According to Dr Anthony Kirby, Associate Partner, Regulatory and Risk Management - Regulatory Intelligence at EY in the UK, his firm certainly sees AI being usefully blended with other technology to create “consensus approaches” that draw all parties to the investment process, even extending to providers of professional services such as regulators, asset managers and accountants.

“For example, the UK’s Financial Conduct Authority announced in mid-September 2017 that it had developed a regtech application for the mortgage market in collaboration with at least two leading banks and the blockchain consortium R3 – the latter featuring more than 80 members, including banks, clearing houses, exchanges, market infrastructure providers, asset managers, central banks, regulators and professional services firms,” he said.

So, it seems that AI is already poised to help wealth managers deliver on what are arguably the most important parts of their value proposition - creating the ability to precisely customise investment portfolios and financial plans cost-effectively and with reduced risk.
PERSONALISED RELATIONSHIPS WITHOUT OVERBURDENING PERSONNEL

Wendy Spires, Head of Research at WealthBriefing, explains key ways AI could lighten the relationship management workload, enabling deep personalisation for clients but without overburdening personnel.

The industry’s digitalisation continues apace, but wealth management in the true sense – with all the complexities that connotes – is still dependent on trusted relationships and high-touch, personal service. Indeed, this service ethos could be the sector’s main defence against the influx of low-cost new entrants into the space.

Yet not even client-facing advisors are immune from the efficiency imperative engendered by the industry’s unprecedented profitability squeeze. Many have been left struggling to maintain the highest service standards across burgeoning books of business: WealthBriefing research suggests that a quarter of UK RMs serve 51-100 clients each and 15% even more, while in Asia’s premier banking segment ratios of 400:1 are common.

Wealth management will remain a “people business”, but the fintech revolution has led to a growing acceptance that personnel need not be the sole means of delivering highly-personalised service.

Companies like Amazon, Netflix and Google have “trained” consumers to expect service providers to “know” them intimately (and made them highly willing to have their information mined for this purpose). Forward-thinking wealth managers will now be keen to emulate how these masters of data have harnessed AI technology to deliver continually refined – and yet highly cost-effective – personalisation. In fact, according to Phil Tattersall, Director in EY’s UK Wealth & Asset Management Data and Analytics advisory practice: “One of the primary AI/Machine Learning use cases for wealth managers is the ability to provide personalisation at massive scale very efficiently through algorithms.”

- Phil Tattersall, Director in EY’s UK Wealth & Asset Management Data and Analytics advisory practice

“Moving away from the mundane”

A key theme running throughout this report is how AI helps advisors move up the value chain in their use of time. Here (as in many other technology matters) wealth managers have a lot to learn from retail banks in their automation of the more mundane interactions relationships entail. Card cancellations and balance enquiries are just the start of the commoner enquiries that might be automated, freeing up advisors’ time for conversations which add greater value.

Importantly, technological solutions are becoming increasingly sophisticated and therefore applicable in a wealth management context. As EY’s Tattersall notes, “chatbot solutions utilising machine learning can answer the more simplistic types of questions from clients very effectively, while also learning from these queries and improving over time”. Still more intelligent are the “cognitive agents” already being used by several large banking groups to handle quite complex customer service interactions.

CUSTOMISING CONTENT

To promote themselves as trusted advisors lightening investors’ mental loads, wealth managers need to ensure they are cutting through, rather than adding to, the investment “noise” HNWIs are bombarded with. Therefore, one area particularly ripe for AI amelioration is in tailoring the news and research clients receive to ensure that they are relevant, timely and delivered via their preferred channel.

According to Alessandro Tonchia, Co-Founder of Finantix, “with AI, firms can quite easily move from ‘information overload’ to content being precisely mapped to clients’ portfolios and interests with distribution happening instantaneously when market-moving events occur”.

Simultaneously, usage patterns like email open rates and website dwell times can be examined via machine learning to ensure investors are receiving only what will be of most interest, when and how they prefer – all of which would be a dramatic improvement on what many firms currently have in place.

MAXIMISING THE VALUE OF MEETINGS

Yet the “reading” capabilities of Natural Language Processing (NLP) mean personalisation and time-saving for both client and advisor can be pushed very much further. Client-advisor meetings are by necessity a fairly
infrequent occurrence (at least in-person ones), and these stand to become very much more valuable and efficient for both sides.

Tonchia explained: “Imagine an advisor is meeting with a client invested in a particular fintech company and they have hundreds of 50-page research PDFs available to discuss, of which only a fraction cover the sector. Very quickly, AI-enabled technology can ‘read’ every sentence of every PDF, not only to single out the ones dealing with fintech but to extract content mentioning that specific company or their competitors. It can then assemble the most relevant sentences into a ‘real-time’ contextual report.”

At an even higher level of AI sophistication, an NLP meeting transcription might pick up that the client is concerned about China, leading to this being added to the next meeting’s agenda, additional information being gathered and perhaps a discussion with a specialist being scheduled – all automatically. The technology could even gather client feedback on agendas and literature ahead of meetings in an end-to-end process fostering continual improvement and added value.

And streamlining meeting preparations should be a real priority given their onerousness and high client-loading figures. Close to half of advisors say accessing three or more systems and significant manual work is required ahead of annual reviews, with a fifth taking over two hours to prepare for each one (see Figure 12).

According to Tonchia, AI could lift much of this burden, as well as eradicating a great deal of the other more routine relationship management work advisors (or their assistants) do, such as making appointments, collating emails and compiling reports.

As David Tetten, Managing Partner of HOF Capital, argues: “A good rule of thumb is this: if a junior administrative professional can help an advisor do something via email today, then that function is likely low-hanging fruit for AI to pick.”

There are clearly innumerable opportunities for AI to automate the day-to-day work of delivering a personalised service that might otherwise fall to advisors to do manually and at great time cost. But the technology’s potential to deliver true and dynamic customisation should be seen in far broader terms.

**RIGHT PRODUCTS, RIGHT PEOPLE; RIGHT POINT**

Cost pressures and compliance obligations mean that wealth managers must be more focused than ever on proposing the right products and services, to the right people, at exactly the right point in time. So too does heightened competition: making appropriate recommendations is a key part of personalisation, and making clients feel deeply known and valued by the institution. Again, this is something digital consumers have come to expect and technology commentators have even flagged the phenomenon of users today actually feeling quite offended if Netflix or similar suggest products misaligned to their preferences.

The broad point is that these algorithms are usually “scarily right”. For wealth managers, it is that AI can furnish an elegant and far more impactful alternative to the rather crude way that marketing by segment has tended to play out hitherto (for an in-depth discussion of AI’s impact on segmentation see Chapter 7).

Wealth managers’ sales efforts have previously relied on “weak abstractions of broad client categorisations” like age or nationality, Tonchia explained, but with AI they can assign actions based on one or multiple specific attributes. What’s more, previous experiences with either individuals or sets of clients can inform where efforts would best be concentrated. “You are continually refining your picture of each client’s preferences; but you can also use AI analytics predictively,” he said. “If investors with a shared profile have approved of a proposed investment, you can assume others will too; whereas if it has never worked with a certain type of client, you know not to waste your time.”

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**FIGURE 12:**
On average, how much time do you spend preparing for an annual review meeting with an existing client?

- ≤ 30 mins: 4%
- 31 min - 1hr: 17%
- 1hr - 1.5hrs: 32%
- 1.5hrs - 2hrs: 26%
- > 2hrs: 21%

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“A GOOD RULE OF THUMB IS THIS: IF A JUNIOR ADMINISTRATIVE PROFESSIONAL CAN HELP AN ADVISOR DO SOMETHING VIA EMAIL TODAY, THEN THAT FUNCTION IS LIKELY LOW-HANGING FRUIT FOR AI TO PICK.”
- David Tetten, Managing Partner of HOF Capital
AUTOMATED ENGAGEMENT SYSTEMS

Not only can personalisation through AI boost client engagement, it could also help them to become better investors, by serving up education at precisely the right point in time or nudging their behaviour in the right direction. As Greg Davies, Head of Behavioural Science at Oxford Risk, explained:

“Firstly, wealth managers could look to build automated engagement systems where computers observe things like what clients are doing with their portfolios, and when and where they log on, before carrying out ‘brute force’ AI data pattern recognition to identify ideal opportunities to engage. This could be delivering little nuggets of just-in-time education. If a client’s profile suggested they had great understanding in some areas, but were fuzzier elsewhere, then the firm’s communication efforts could be tailored to bring them up to speed in the weaker ones.

“Secondly, you could implement an automated system of ‘nudges’ to help investors trim their own behaviour. They could sign up to be reminded when they are monitoring their portfolio too much and you wouldn’t need the advisor to be doing that, just a system running underneath.

“This is where AI meets behavioural design: you can start to design engagement systems that interact with clients in very different ways depending on their particular profile, and then gradually bring them along a path in a highly tailored, engaging way.

AI technologies clearly have much potential to optimise sales through far more personalised marketing, but where they may have an even greater impact on the bottom line is at a deeper, psychological level. Enhancing the client experience is a rather nebulous concept, but engaging with clients more productively and making them feel better about themselves as investors are two key ways to make it more concrete. As our expert panellists have highlighted, AI is at the leading edge of the industry’s quest to achieve ultimate personalisation at scale, and truly optimise the experience of both clients and time-pressed advisors.

“This is where AI meets behavioural design: you can start to design engagement systems that interact with clients in very different ways depending on their particular profile, and then gradually bring them along a path in a highly tailored, engaging way.”
- Greg Davies, Head of Behavioural Science at Oxford Risk
Making Sophisticated Segmentation a (profitable) reality

Harry Keir Hughes, Lead Data Analyst and Researcher at WealthBriefing, explores how AI can help firms implement granular segmentation strategies streets ahead of the rather blunt categorisations now so often prevalent.

Thanks to the efforts of Google, Netflix, Amazon and the like, consumers expect slick user experiences and the utmost levels of personalisation in all their interactions with service providers.

As these companies have proven, fully leveraging client data is the key to market dominance. In an increasingly digitalised – and competitive – industry, wealth managers will be seeking to follow their lead and ensure client segmentation delivers the tailored service and operational efficiencies it promises when done well.

An abundance of data may have long been available to help wealth managers forge a deep understanding of their client base, but relatively few have been using it in a nuanced and systematic way – or indeed at all. As Figure 13 shows, even in the hotly-contested UK market, a quarter of institutions have not been formally segmenting their clients. Elsewhere, segmentation seems to have generally been based on only a handful of variables.

Industry luminaries have long advocated more granular segmentation techniques and their potential to improve operational efficiency, client-centricity and marketing success can hardly be disputed. Rather than a lack of enthusiasm, it seems likelier that technological challenges around data gathering and analysis have held firms back.

SOLVING SEGMENTATION CHALLENGES

In the view of Alessandro Tonchia, Co-Founder of Finantix, segmentation has always been “a necessary evil for economies of scale”, but never a particularly valuable exercise due to the sheer diversity of individuals’ wants and needs, and the difficulty – hitherto – of forming a meaningful picture of them.

“The cluster of characteristics that make you, you as a wealth management client are incredibly personalised and broad,” he said. “That’s why segmentation didn’t really work, because there were so many attributes to consider and not enough aggregation capability.”

Now, however, wealth managers are seeing that they can push these barriers aside through AI. Powerful groups of Machine Learning (ML) algorithms are able to take a non-linear approach to both structured and non-structured client data, performing fast, complex calculations on huge datasets and synthesising the information into actionable insights – all with as much automation as desired.

“With AI, you can track what the client reads, what they invest in, how they travel, what their interests are, how complex their family is and so on,” Tonchia explained. “Then, you can adjust everything from how their portfolio is constructed, to the news that you send them, how frequently you meet and the products you recommend in future - to that unique set of attributes. We are truly moving towards ‘a segment of one’.”

Rather than being reductive and static, AI allows for a sophisticated, dynamic approach to segmentation that allows firms to act upon the factors most relevant for each specific type of interaction or element of service delivery.

What is more, they can then easily adapt their approach as those classifications change over time. A client’s wants and needs rarely remain fixed for long, so AI is not just a game-changer because of the sheer volume and variety of data-points that can be taken account of. Very impressive feats of “data-crunching” can be carried out automatically, and then the predictions made via ML will also improve over time as new data emerges.

SEIZING THE AI OPPORTUNITY

At its best, sophisticated segmentation will simultaneously enhance the client experience and a firm’s efficiency in delivering it. But this calls for a clever combination of closely observing individuals’ behaviour and lessons that can be drawn from broad groups, along with a level of responsiveness that has only recently become achievable through AI.

The opportunity has already been seized, however. Several big-name banks are already using AI to dynamically segment clients based on factors such as subtle changes in their behaviour, whilst simultaneously predicting financial events in their lives.

“Real-world use cases of AI/ML techniques assisting wealth managers in extracting value from client data and management information are now beginning to emerge,” said Phil Tattersall, Director in EY’s UK Wealth & Asset Management Data and Analytics advisory practice. “They aim to better inform the role of the relationship manager with powerful analytics, with the goal of improving client engagement via better decision-making by the advisor and an improved capability to answer difficult questions in real-time.”

FIGURE 13:
Which of the following methods of client segmentation does your firm utilise?[^2]

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>By amount of wealth</td>
<td>45%</td>
</tr>
<tr>
<td>By client behavior and preferences</td>
<td>35%</td>
</tr>
<tr>
<td>We do not segment clients</td>
<td>25%</td>
</tr>
<tr>
<td>By source of wealth</td>
<td>25%</td>
</tr>
<tr>
<td>By age of client</td>
<td>15%</td>
</tr>
</tbody>
</table>
AI is improving the suitability and timeliness of the advice given to individuals, as well as driving the delivery of tailored content and alerts. But these tools are also being used by firms to look across their entire client bases to predict attrition, and identify product and service opportunities. As Figure 14 shows, wealth managers are increasingly keen to improve their use of client data and management information as a way to drive growth.

This last point is incredibly important when we consider how much larger and diverse the addressable market is becoming. Wealth demographics are going through seismic shifts and firms are having to rapidly get up to speed with serving countries and client segments that may be outside their comfort zones (millenials, female entrepreneurs and non-traditional families being but a few).

Wealth managers are going to need real focus to differentiate their offerings for all the segments they might seek to target while still maintaining efficiency, and Tonchia believes AI can play an invaluable role here.

“AI will give the wealth managers wings to implement their very specific strategies,” he said. “So, if a firm is concentrating on family succession and estate planning, they’ll have the tools to really execute on that through targeted client education and events; or, where they are really focused on investment returns they will have powerful tools for news automation and market alerts.”

**INSTITUTIONALISING CLIENTS**

According to one study by Cambridge University, intelligent algorithms can determine a consumer’s personality better than their friends, just by analysing the posts they have “liked” on Facebook. However, as elsewhere, there is a large element of fintech co-dependence in AI’s potential to make granular segmentation techniques a profitable and efficient reality. With challenges like legacy technology and data siloes still looming large, many firms will require significant upgrades to be able to gather, store, analyse and manage the huge amounts of data required to really “move the dial” (this is one area where new entrants may be at very great advantage).

But it should also not be forgotten that much depends on buy-in from front-line personnel. Despite the onward march of digitalisation, advisors remain the main conduit for wealth management relationships and institutions’ most potent means of deeply understanding their clients. The days when relationship managers held the bulk of client knowledge “in their heads” may be long gone. Yet asking them to input every single useful scrap of information they glean into “the system” may still be a stretch. The issue of who “owns” clients – institution or advisor – is not unproblematic. For our experts, the answer is twofold. Firstly, the process of constantly improving the institution’s understanding of the client must be easy. Here AI can also help, such as by Natural Language Processing (NLP) technology sifting pertinent details from meeting transcripts rather than advisors being asked to laboriously type everything up. Secondly, advisors must be clear that “giving up” the knowledge of clients they have earned really is in their interest. As with all technology upgrades, success rests on securing staff support.

“There may be some psychological resistance, but if bankers can see that the technology will help them increase their revenues and be more efficient and professional – which it will – they can hardly complain,” said Tonchia.

Putting the case even more strongly, David Teten, Managing Partner of HOF Capital, warns that unwilling relationship managers will rapidly become anachronisms. “Imagine a sales person who doesn’t use email; they just couldn’t get a job,” he said. “But two decades ago there would be sales people saying ‘Oh I don’t use email, I don’t need it’; and it’s the same dynamic with these new technologies.”

In the race to improve client acquisition and retention, AI technologies will be able to make a huge positive impact. But it is also clear that both institutions and advisors will have to be willing to seriously rethink the way things have previously been done, particularly in client segmentation. In the past, wealth managers have struggled to capture the “essence” of complex private clients from a handful of bare metrics, but now they no longer have to - if all stakeholders commit to playing their part.
8 THE REGULATORY IMPLICATIONS OF USING AI AND HOW LEGISLATION IS DEVELOPING

Josh O’Neill, Assistant Editor at WealthBriefing, outlines the regulatory implications of using AI and offers a glimpse of how legislation might evolve in future.

Artificial intelligence (AI) is likely to be one of the most disruptive technologies to impact the financial services sector over the next decade, and firms that embrace it and harness it while staying within the lines of the law may get a competitive edge. Businesses that are slower to adopt, however, could risk extinction as we begin to enter a new digital era, unparalleled by the likes of the dot com boom and the rise of the smartphone.

AI is nascent, but the pace of innovation is staggering. We know all too well how quickly new technology plummets in price as computing and manufacturing costs shrink. Couple this fact with the rapid advance of Machine Learning algorithms and it is clear to see how a swelling number of savvy start-ups could set foot in the ring and disrupt the money management sector.

While it is hard for firms to navigate a regulatory landscape that is still being carved out, it is arguably even more challenging for financial watchdogs to police how firms are utilising AI systems which are by definition learning, adapting and evolving constantly. An AI system implemented today will inevitably be different tomorrow because it will have harvested data and subsequently modified itself. Legally, the waters are murky as there are currently no concrete laws around the use of AI, explained James Gee, Associate Partner in EY’s Financial Services Legal Team.

“Let’s be clear: there is no legal framework around AI,” Gee said. “AI systems are tools subject to the existing legal and regulatory frameworks that are relevant to financial services. The problem is, because AI changes the nature of what is possible, this changes the manner in which products and services are delivered – and creates entirely new products. Often the regulations are lagging behind and there is uncertainty over how the legacy rulebook applies.”

Although there are no AI-specific laws currently in place, the industry rules and regulations aren’t fundamentally different, just because AI is involved”, he continued. Money managers must ensure that their AI systems do not breach standard rules and regulations.

“What AI is essentially doing or operating is likely to fall within an activity that is already regulated,” Gee explained. “Firms need somebody who understands industry regulations and how AI fits into these. It might be a while before regulators really articulate the boundaries for AI products.”

- James Gee, Associate Partner in EY’s Financial Services Legal Team

“WHAT AI IS ESSENTIALLY DOING OR OPERATING IS LIKELY TO FALL WITHIN AN ACTIVITY THAT IS ALREADY REGULATED. FIRMS NEED SOMEBODY WHO UNDERSTANDS INDUSTRY REGULATIONS AND HOW AI FITS INTO THESE. IT MIGHT BE A WHILE BEFORE REGULATORS REALLY ARTICULATE THE BOUNDARIES FOR AI PRODUCTS.”

REGULATORY SUPPORT

AI can be used to boost market efficiency and ultimately improve outcomes for investors, and this is something regulators are “very supportive” of, according to Gee. Money managers can also leverage AI to harvest and analyse data in order to generate fresh insights into prospect profiles, while Machine Learning techniques can help with client acquisition, client retention and sales.

But with great power comes great responsibility, and as with any market-facing tool or role there is potentially room for abuse. Gee explained that the lines of legality could easily begin to blur when examining AI-driven trading techniques.

"The line between what is legal and what isn’t is very technical when it comes to market-facing algorithms,” he said. “If you’ve developed an AI system that is learning how to trade a market, it is easy to imagine how that system over time would notice that it can make profitable trades by placing orders in a way that when you look at the rulebook could be illegal.”

He added: “In a way, AI could learn to do something illegal, and it is therefore essential to have a human brain understanding this in order to prevent it. But are developers programming law into AI systems? Good organisations will carefully review how an algorithm operates and ensure that rules aren’t breached, but the laws are often ambiguous. And, as the technology becomes more complex, at some point mistakes will happen.”

Alessandro Tonchia, Co-Founder of Finan-tix, also shone a light on the difficulties certain AI approaches face when justifying their decisions.

“There is a weakness in Machine Learning: it’s great because you don’t need to write the rules, but they are never expressed in plain English,” he said. “As good as it is and as much as it takes away the burden of codifying rules manually, Machine Learning’s decisions are not readily explainable. There’s not a sequence of ‘if this happens, then recommend that’ that you can show on a piece of paper or include in an audit trail. A mathematical algorithm ‘magically’ suggests a portfolio or an action. For regulated advice, applying reasoning techniques is often a clearer and safer approach.”
WIDE-REACHING REFORMS

Asset managers in Europe are investing a lot of money, manpower and time into readying themselves for MiFID II and GDPR, which enter into force in January and May of next year, respectively. MiFID II is designed to inject more transparency into the money management industry by imposing more stringent reporting standards, while GDPR will overhaul the 1995 Data Protection Directive through sweeping reforms that hand more control to consumers over how their personal data is used.

It is crucial that AI-powered algorithms mine data efficiently in order for them to work effectively. But because such systems are so heavily reliant on potentially sensitive data, complying with laws governing its use and storing it in robust vaults is key, EY’s Gee stressed. He noted that in cases when a money manager partners with a fintech to deploy a new AI system, both parties could be subject to GDPR’s wide-reaching rules.

And the stakes are high: under the Regulation, the European Union could levy fines of up to €20 million or 4% of a company’s annual turnover – whichever is higher – if a data breach is handled incorrectly.

“All these vast troves of data are potentially incredibly vulnerable,” Gee said. “Designing data systems through ‘privacy by design’ is essential, so that when there is a breach, the loss is manageable: design systems that don’t just shatter – but rather ones that bend, so losses are limited or siloed.”

Dr Anthony Kirby, Associate Partner, Regulatory and Risk Management - Regulatory Intelligence at EY in the UK, echoed Gee’s notion that interpreting data laws and regulations correctly is intrinsically important when developing AI systems that are built to withstand the test of time.

“An important first step is for organisations to have clarity over their personal data processing,” Dr Kirby said. “For example, who is accountable for what, how are data consents treated, where is personal data located, and how is personal data secured throughout its lifecycle.” His colleague Gee suggested that money management houses may increasingly carve out AI-specific roles in the coming years to ensure appropriate resources are dedicated to servicing the systems.

Under GDPR, clients have “the right to be forgotten”, meaning they can demand that their personal data is erased, under certain circumstances. Therefore, “it is clear that industry standards around cyber-crime prevention and market practices will be essential to ensure that efficiencies and data integrity are maintained,” Dr Kirby said.

FIGHTING FIRE WITH FIRE

As time progresses, AI systems will only become smarter and more complex due to the vast amount of information they absorb. To keep abreast of this, regulators will “fight fire with fire” by using AI to monitor the money management sector, EY’s Gee suggested.

“Using AI to help police industry activities is an area regulators are very interested in,” he said. “There is no doubt a long way to go, but the noises are supportive of it. They want and need to use data more intelligently. For example, they are using algorithms to spot clustering effects in order to better understand markets and where consumers may be poorly serviced. They will use algorithms to identify suspicious trading patterns too.”

“AN IMPORTANT FIRST STEP IS FOR ORGANISATIONS TO HAVE CLARITY OVER THEIR PERSONAL DATA PROCESSING, FOR EXAMPLE, WHO IS ACCOUNTABLE FOR WHAT, HOW ARE DATA CONSENTS TREATED, WHERE IS PERSONAL DATA LOCATED, AND HOW IS PERSONAL DATA SECURED THROUGHOUT ITS LIFECYCLE.”

- Dr Anthony Kirby, Associate Partner, Regulatory and Risk Management - Regulatory Intelligence at EY
As its title indicated, the aim of this report was to cut through the hype (and confusion) around AI and to outline compelling use cases for the technology across the client life cycle. It was also to give clear examples of what the technology might look like “in action” when tackling pain points that most wealth managers will be all too familiar with.

These pages have covered: ways in which AI can be leveraged to generate leads and then engage more effectively with those prospective clients; how due diligence can be made more thorough and efficient; and where technology can help deliver truly holistic wealth management solutions and relationships that feel more personalised without further burdening personnel. We have also tackled some of the broader strategic issues AI can also assist with, such as improving data management and making sophisticated client segmentation techniques a reality. In mapping AI applications to the client life cycle in this way, we hope to have pointed a workable way forward with this very exciting, but still quite nascent technology.

AI might be only just coming to the fore, but wealth managers should be under no allusions as to how fast things are developing, however.

One of the key messages we have hoped to convey is that AI is far from being “still in the lab”. A multitude of both private and public sector organisations have already adopted the technology, and we can expect its potential to grow exponentially with rising acceptance among consumers.

As ever, retail institutions are leading the way due to their larger technology budgets and economies of scale. Banks and insurers are already deploying tools like “cognitive agents” to great effect and using AI data analyses to massively increase efficiencies while also reducing risk. Forward thinking private banks and wealth managers will surely follow close behind.

More than anything else, however, we hope to have convinced professionals that AI should be embraced as a facilitator, rather than feared as a devourer of jobs. Nor should it be seen as something that will erode the personal relationships at the heart of the wealth management proposition and all the eminently human skills advisors bring to bear. As one of our contributors so elegantly put it, “we should be thinking about AI in terms of Iron Man, rather than the Terminator”.

We look forward to tracing the upwards trajectory of AI across the wealth management industry, and hope it rapidly relieves some of the many pressures on the industry. This is undoubtedly just the start of our dialogue on AI-enablement. Comments from readers and suggestions for possible areas of future investigation would be most welcome.

WENDY SPIRES
Head of Research
WealthBriefing
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A semantic engine for KYC and AML due diligence

Getting a full picture of potential clients - both individuals and business entities - is becoming increasingly hard for the private client world.

But now a solution is at hand. smartKYC has applied innovative design and technology to redefine KYC searches and identification of AML red flags.

Applying semantic technology, federated searches and intelligent techniques to detect false positives, the smartKYC AML suite increases the precision, efficiency and auditability of your KYC and AML efforts.