

The 'AI Revolution' and the Rise of the CAIO

A report on the current AI landscape within the consumer industries.

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Clarity

September 2024

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Introduction

Artificial intelligence (AI) is starting to enter all aspects of our lives, not least in the business world. CEOs wax lyrical about it, though few businesses can genuinely claim to be utilising AI to its fullest extent. Within the consumer sector it seems that every day another company unveils its newest AI innovation. In reality, many are using third-party programmes which do not have much real impact on business performance; AI is used as a buzzword to attract investors as much as anything else.

In such a rapidly evolving landscape it is admittedly difficult to know how, when and where to implement AI effectively. The finance and medical industries have surpassed the consumer sector in terms of AI adoption through significant investment and rigorous efforts to be at the frontline of innovation. A few consumer businesses have embraced cutting-edge technology advancements – we will discuss these later – but barriers to entry and general illiteracy, as

well as an overarching lack of belief, have led to many consumer businesses struggling to figure out how best to go about implementing AI.

So how does an innovative CEO go about untangling the web of complexity that is AI? The answer, as so often, is people. The problem is that there are few candidates at any level who bring an elite technical understanding of AI paired with the commercial acumen required to implement it properly. Let alone trying to hire a team of them...

We have spent the last few months in conversation with various digital leaders, from big tech AI heads to retail and consumer CIOs, exploring their experience of AI implementation and uncovering insights into how other businesses can tackle the problem. In this report we delve into the people side in particular, exploring the ability and availability of talent from graduate to Exco level, as well as discussing the trending concept of the CAIO. We look into the compensation rates for top talent in this space and suggest workarounds for those who cannot afford the best in the business. We hope this paper provides value and insight to you and your organisation.

The 'AI Revolution'

It would not be hyperbole to suggest that an 'AI Revolution' may one day be talked about in the same vein as the Agricultural and Industrial Revolutions. Both were step-changes in global productivity that transformed day-to-day human life. We have already seen computers and smartphones have this effect, but many wager that AI will have an even greater impact.

Broadly speaking, there are two types of AI. Generative AI creates content such as text and imagery using large amounts of data to predict the most likely 'correct' response given the context of a prompt – ChatGPT is the most well-known example of this. The existing primary use cases for these models in consumer businesses are within the marketing and customer service functions. As improvements are made however, they could be used across every facet of a business to draft emails, documents, presentations and spreadsheets; anything a human

creates, GenAI may one day be able to do better.

Non-Generative AI is much broader; to oversimplify, these models interpret data and make predictions and assumptions based on this information. They are perhaps less 'sexy' than their generative siblings but have been more widely implemented in the business world. Investment managers, quant funds in particular, use these models at an advanced level to predict target company performance with remarkable accuracy. Consumer businesses use these models on a simpler level to forecast information such as demand, cost and inventory. As these models improve, their use will become the norm rather than a competitive advantage, making it imperative that businesses prepare themselves to adopt AI.

AI as it exists now can already replace the work of hundreds while being manned by a relatively small team. As it advances, efficiency and profitability could skyrocket while labour costs drop dramatically. Those companies which do not work to integrate AI into their business could soon be left behind.

Consumer Businesses: How Are They Doing?

Retailers, CPG brands and TLH providers are not the stragglers of AI adoption. According to a senior consultant at a tech-focussed strategy house, that title belongs to industries such as telecoms and energy. However, the consumer sector is still somewhat behind the curve compared to the finance and medical industries. Consumer businesses generally do not have the financial resources of those sectors but, according to a digital leader at a major UK grocer, are nonetheless not prioritising their investment into the right areas.

AI can be expensive, and it seems that many businesses have yet to be convinced that they will receive a positive return on their investment. This is made trickier where there is an ambiguous timeline for ROI. Our sources gave us concerningly varied answers – between thirty days and three years! Of course, time scale depends on the type of AI and the scale of implementation – a business installing a simple forecasting model to its finance

function is likely to see much lower costs and quicker return than one trying to build its own Large Language Model.

Of the consumer businesses with a more positive and progressive attitude to AI, almost all remain in the experimental phase, whereas companies in other industries with a well-established AI presence are now focused on continuous improvement rather than major transformation. The Chief Digital Officer at a large fashion retailer believes this is because consumer companies are not making AI a central component of strategy; rather, strategies are formed and tech leads then try to incorporate AI where they can. Gradual implementation is the right way forward, but it should be done as part of a wider strategy.

Case Studies

Klarna is a great example of GenAI being used effectively. Earlier this year, it introduced an AI customer service assistant powered by GPT-4. In its first month alone, the assistant handled 2.3 million conversations, two-thirds of Klarna's customer service chats and equivalent to the work of 700 full time employees. It also led to a 25% drop in repeat inquiries, reduced

resolution time from 11 to 2 minutes and matched human agents in customer satisfaction scores. In its first year alone, it is estimated to drive a \$40m profit improvement.

Estée Lauder recently created an AI innovation lab in partnership with Microsoft, intended to drive internal use of GenAI. A source at the business gave us some examples of AI use cases already in effect. A chatbot has been created to give advice on certain products, as well as a virtual try-on platform allowing experimentation before purchase. It has also introduced assisted services to better allow people with disabilities to interact with digital assets. Sephora has implemented a similar model, 'Colour IQ', which provides personalised recommendations, for example matching the right shade of foundation with a prospective user's skin tone. This programme increased sales by around 34%. Unlike Klarna, these services are more revenue-generative than cost-reductive, demonstrating the versatility of GenAI programmes in improving business performance.

Uber uses a NonGenAI model to determine the price offered to users and drivers. It learns common routes that a driver tends to accept (for example a

route into a city centre at the start of the day, or back to their local area at the end) and will offer lower fees for those routes. Equally, customers trying to get home late at night or into a commercial district in the morning will receive higher quotes. The model attempts to predict the lowest fee or highest fare that a driver or customer will accept for any specific journey, maximising profit per ride. AirBnB operates a very similar system, using Machine Learning to customise product offerings and provide dynamic pricing. This has resulted in listings becoming four times more likely to be booked and hosts receiving an average earnings increase of 13%.

Amazon seems like an unfair example to use given the wealth of technical resources at its disposal but is nonetheless a great case study of a combined GenAI/NonGenAI programme in practice. Its Amazon Fresh outlets use cameras in-store to tally customer baskets, removing the need for manned or self-service check outs and helping determine when stock needs to be replenished, improving customer experience. The system can also provide insight into the most popular products, reducing inventory and lead times. Lowes

uses a similar system; cameras manage inventory and automatically notify store staff when a product is out of stock.

Unilever has implemented an AI model which can predict demand, manage inventory and optimise logistics across a large global supply chain. Meanwhile, Zara has installed a relatively advanced demand forecasting system, which monitors internet search patterns and social media trends to influence NPD strategy and establish which products it should be promoting to consumers. This has led to a shortened NPD turnaround time of one week, well below the industry average of three to six months.

Marketing offers some of the greatest potential for AI. Today it is commonplace for agencies to use external GenAI tools such as Adobe Firefly and Dall·E to create brand content, while Coca-Cola has begun using NonGenAI to analyse customer data and gain insights into consumer preferences to better tailor its ad campaigns. Procter & Gamble uses AI to analyse consumer behaviour and store layout to determine the most effective product placement in stores (though few businesses have as much clout with retailers as P&G!).

At first glance, it may seem that there are plenty of consumer businesses who have had decent success with AI. However, aside from Amazon, none have truly made AI a core part of their strategy. Integrating AI in small doses and into one function at a time is absolutely the right approach, but it demonstrates where consumer businesses sit within the timeline of AI adoption, especially compared to other industries.

Advice from the Experts

Excluding the talent perspective, which we will discuss in the next section, our sources were able to give us three key pieces of advice for businesses beginning their AI journey.

Financial & Cultural Investment

“If you want to drive forward and keep up with the times, much more investment is needed”

Outside of this project, we have heard a lot of frustration from technology leaders about lack of buy-in and funding. The CTO at a large UK retailer said that “if you want to drive forward and keep up with the times, much more investment is needed”. This may

seem pretty obvious, but many companies seem unconvinced that reward outweighs the risk.

Of course, investment cannot just be a one-off; a digital leader at a major cosmetics brand pointed out that beyond the initial cost of building a model, companies will “need to continue investing in and updating the technology”. This source also commented on buy-in from a cultural perspective – to give AI a central position, companies “need to create the right culture; the entire SLT has to be on board”. This really comes down to belief and unfortunately, it seems that it isn't quite there yet, perhaps because so many leaders do not truly understand the product. We hosted an AI Breakfast for CEOs earlier this year, during which multiple attendees commented that they had begun attending AI training sessions, giving them a better perspective on its ability to step-change an organisation. This is great, but it cannot be confined to the CEO. Other functions will bring different ideas and perspectives, so it is important that the entire SLT engages in learning about AI.

“Companies need to create the right culture; the entire SLT has to be on board”

Danone has gone one step further, having recently launched a €100m training programme “to prepare its workforce for the coming revolution”; this project will attempt to upskill all 100,000 employees in AI. Long-term, this should result in plentiful innovation and a culture of commitment to digital advancement. If the belief is not there in your business, there are ways to change that outlook...

Data: Quality over Quantity

“Businesses without good, joined up data systems will have to spend the most money”

We all know that to build an AI model you need a lot of data. But this is only half the story. A Chief Digital Officer commented that “most organisations have a lot of data, but it isn't labelled and organised”. Therefore, any AI model trained on this data will not only be less effective but will be costlier and take more time to build. The Chief Executive at a large tech firm believes that “large unstructured data sets need to be addressed urgently” and that “businesses that have invested in making data accessible and interpretable will have a big advantage moving

forward". A senior strategy consultant pointed out the age-old adage that when it comes to data, "quality is just as important as quantity". There are huge benefits outside of AI to having a plethora of reliable data, so even if now is not the time to start using AI, it is worth ensuring that your business's data is of a high standard – this will save time and money in the long term.

Find a Problem to Solve

"Start with the core business processes"

Let's say you want to use AI, have buy-in across the business and the right data to create a really good model. Now what? Where do you implement AI first? This is where the experts' final piece of advice comes in. Do not try to incorporate it everywhere at once. AI is still risky and trying to do too much too soon could mean the business overextends itself, losing sight of how it can be truly effective. Our sources agreed that it is a better idea to first implement AI into a specific function, mitigating risk and allowing AI champions to focus on one specific area.

A senior consultant at a tech-focused strategy house suggested that businesses should start with a centralised function, allowing implementation to have a business-wide impact while keeping the risk at a minimum. This would also expose cross-functional employees to the potential benefit of AI, improving buy-in. Another expert recommended "starting with the core business processes", adding that companies should first "find a problem that needs solving". The speaker at our AI Breakfast, Alex Payne, gave a similar recommendation, suggesting that isolating a specific area and finding a way that AI can be leveraged to improve it is the best course of action. In short, find a problem first, not a solution.

The People Problem

We know now that a business looking to kickstart its AI journey should test the water first, dabbling its toes into a function or two before accelerating the process across the whole business. But even with the first round of AI implementation the question arises, do you use a third-party or go in-house? Outsourcing in AI refers to the procurement of either a product or a model. A product is a finished programme which can be very easily implemented into any business, often without the aid of any internal or external technical resources. These are not tailored to the company's requirements and would not use internal data to refine results. A model is an existing, pre-trained programme which can be fine-tuned to a business's requirements and data, making it more bespoke without the need for a large team. One CTO commented that any business can develop a bespoke AI programme using a pre-existing model, but when it comes to complex programmes like LLMs, only organisations with significant technology capab-

ilities will be able to develop them from scratch.

Clearly then, the more comfortable choice is to use a third-party product or model, and our sources agreed that this is probably the right option initially. The obvious benefit of looking externally is that you are (hopefully!) using an established, tested product and not committing to lots of expensive employment contracts. However, even businesses which only use third-party products can benefit by having the right internal talent in place; if no-one in the business has a good technical understanding of AI, how can the business ensure that the technology it procures is useful and cost-effective?

“As AI becomes more readily accepted, it will become commonplace for bespoke models to be built from scratch by internal teams”

The consumer lead at a Big Five tech firm commented that “as AI becomes more readily accepted, it will become commonplace for bespoke models to be built from scratch by internal teams”. We are already seeing this in the finance and medical industries, with the leaders in those sectors employing large internal AI teams.

In all cases then, a need for AI-focused talent arises. Importantly, this is not the same as the talent which falls within the IS team. AI is incredibly complex; a strong technical understanding requires specialist training, so consumer businesses should consider looking for more specialist talent than merely delegating AI to the existing technology team.

The problem is that there is a disparity between those with a strong technical understanding of AI and those with elite business acumen, especially within the consumer space. Any AI-focused position must be a business partnering role at its heart, collaborating cross-functionally to understand the needs of each part of the business. So where do you find this talent, how much do you pay and where do you position them within the business? Broadly speaking, we have three key suggestions: graduate talent, technology consultants and an Exco member (the Chief AI Officer).

Graduates

Much of the novel research into AI comes from post-graduate students at the world's top tech universities; Imperial, MIT, Caltech and Oxbridge. A digital leader at

a major cosmetics brand commented that graduates bring fresh ideas and have the most up-to-date training in the AI technology space. According to the product lead at an AI-focused recruitment technology firm, a team of a few best-in-class graduates can build simple models quickly and efficiently, even within the space of a couple of weeks.

"Retail is at the lower end of the pay scale"

As promising as this sounds, graduates are not necessarily affordable when they have specialised in the hottest topic in the market. We have made comments about how advanced non-consumer industries are on their AI journeys and how they have got there through investment – this cascades down to salaries. The hedge fund, Citadel, famously pays graduates close to half a million dollars in their first year, while Jane Street pays base salaries of \$200,000 plus a \$225,000 bonus. Most consumer businesses cannot get anywhere near these rates and, according to the consumer lead at a Big Five tech firm, "retail sits at the lower end of the pay scale". It is

certainly a tough ask to convince a board to pay a graduate as much as an SLT member, and our sources do not recommend this as a strategy, instead suggesting other ways to attract specialist graduate talent.

Fortunately, graduate AI engineers yearn to be at the forefront of innovation and many are more interested in working on projects that will put them at the helm of AI NPD than taking home a mid-six-figure salary. The Chief Executive at a pureplay retailer recently built up his own specialist AI team, including six graduate engineers. He enticed them by giving them the opportunity to build a bespoke model on which they could leave their mark. He realised that “the opportunity to build something from scratch, especially something consumer facing, is a big attraction for techy people”. A Big Tech source agreed: “you need to show top talent that they are working on exciting, innovative, well-resourced projects that will create tangible results”.

“You need to show top talent that they are working on exciting, innovative, well-resourced projects”

Even if a pitch is compelling enough to attract the best, there remains another issue with this cohort. They are unlikely to have any real-world business experience, will not know the levers of growth and profitability and will lack the experience of collaborating with and influencing cross-functional stakeholders. Such a team would need a leader with the right business acumen to ground them and steer them towards commercial success.

Consultants

“[Consultants bring great awareness of] plug-and-play tools which can be used effectively and for lower cost”

Consultants and systems integrators bring a wealth of hands-on experience implementing AI. They typically do not have the technical nous of trained engineers but will bring a better understanding of business needs and are often great leaders. These consultants could be used externally through an established firm or brought in-house to spearhead a project with graduate engineers sitting beneath them.

Strategy houses and systems integration firms will have the market knowledge to source the right technology depending on business needs. One commented that consultancies bring great awareness of a variety of “plug-and-play tools which can be used effectively and for lower cost”, which can help kick-start an AI journey. This seems like a really wise entry point and relationships like these can be developed to create more advanced systems, tailored to company data and more specific use cases. For example, last year Bain partnered with OpenAI to help businesses integrate the technology behind ChatGPT (GPT-4). However, third-party firms will likely be more expensive than an internal team, albeit lower risk.

Hiring a former consultant to lead a technology team is likely to become increasingly commonplace, according to an AI product lead. His business recently brought in a long-time consultant to lead just two graduate machine learning engineers. This small team builds new AI programmes with a turnaround time of as little as two weeks (when using pre-trained models) at a significantly lower cost than using a third-party. There are training and develop-

ment advantages to this method as well. Having an individual with a broad business background and good leadership skills allows engineers to develop their broader commerciality and become more well-rounded employees. Our source mentioned that graduate engineers are encouraged to pitch their own ideas and feedback at product meetings and are developing quicker than they might have done by reporting to another technical expert.

Using consultants is probably not the long-term solution; as dedicated AI teams become more commonplace, the issue of technical experts not having broader business skills will become less relevant. For now though, consultants offer a very clean way of ensuring you have a strong mix of talent within an AI team.

The CAIO

A consultant/engineer mix can be cheap(er) and effective, but businesses which want to make AI a central component of strategy will need someone with the credibility and gravitas to business partner cross-functionally and influence the board – this is particularly relevant with larger, less agile organisations. Naturally,

we asked our sources for their views and when it came to the appointment of a CAIO there were quite disparate opinions. The common argument against is that AI naturally falls under the technology function and the creation of a CAIO would simply cause friction with the CIO/CTO.

“Everyone should have accountability for [AI], but someone has to own it”

A workaround has been adopted by Adobe which, in addition to its normal technology function, has created an AI board. This approach may mitigate friction with the CIO/CTO (who may even have a place on this board) while allowing AI to retain a high profile within the business. Clear powers and responsibilities would have to be implemented to ensure that the board is able to have a real impact but in the short term, this idea could be a good alternative for larger businesses looking to incorporate AI. It has certainly been effective for Adobe, which has released some truly remarkable GenAI products in the last year or two.

However, the general direction we have seen, especially in recent weeks and months, trends

heavily in favour of the rise of the CAIO. Several businesses in the consumer-related world have already hired CAIOs (eg. Dell, ITV, eBay, LVMH, Orange Group, Verizon), whilst in the US, new legislation requires all federal agencies to appoint one. The Chief Digital Officer at a large fashion retailer commented that “everyone should have accountability for it, but someone has to own it”, while an MD at a Big Five tech firm commented that “you need the right skills at the executive level” and that AI “needs a seat at the top table”. Having a dedicated AI expert sitting on the Exco is a pretty surefire way of ensuring that AI is part of the conversation at all times. This person would contribute heavily to wider strategy discussions, inputting where they see a clear way to improve efficiency or attract customers. It may seem like overkill for a business with no existing capabilities, but will almost certainly become more prevalent as more consumer businesses jump on the AI bandwagon.

“If you get someone who is really knowledgeable in the technology but doesn't understand the day-to-day of the organisation, that will become a problem”

So what sort of backgrounds might one seek in a CAIO? One Chief Digital Officer commented that “if you get someone who is really knowledgeable in the technology but doesn't understand the day-to-day of the organisation, that will become a problem” – this is the same issue that arises when hiring graduates. It is helpful to look at the backgrounds of those who have already secured the job. The CAIO at eBay began his career in AI roles in the medical industry before moving into the finance world, only starting his consumer career in 2019. Considering how advanced the medical and finance industries are in terms of AI, this option makes a lot of sense. Profiles like this will bring that mix of technical knowledge and business acumen that is so hard to find in the consumer world. The CAIO of Orange Group spent most of his career in the tech world building software and hardware products for a range of companies before moving into more commercial roles within the industry; a different profile, but another one that brings both technical and business experience to the table. Most of the CAIOs currently working in the consumer sector have very little sector experience, instead coming from consulting or more

AI-advanced industries. For now, this is inevitable, but it is advisable for larger companies to start developing their own internal talent in order to build a strong pipeline for the future.

It is also imperative to work out where a CAIO should sit in a business, especially in relation to an existing CIO/CTO. Is the CAIO just an evolution of the CIO? Does it report in - or vice versa? Or does it sit alongside the CIO and report into the CEO/CFO/COO?

The role of the CIO is broader than that of the CAIO, managing non-AI systems across the business, so it feels wrong to suggest that the CAIO would be an evolution of the CIO. Equally, as AI advances, it seems unlikely that a CIO would be able to handle the full scope of a future business's entire AI portfolio alongside the day-to-day IT/IS job. This creates a clear need for two separate positions. It would not make much sense for the CIO to report into the CAIO because the former's remit is broader than the latter's. The CAIO could report into the CIO, but as AI advances and becomes an integral component of strategy, it is possible that the CAIO will simply become too important to play a C-1 role. That leaves the possibility of having a CIO and CAIO sitting at the same

level. The CIO would continue to focus on streamlining back-office systems and underlying technology, but the CAIO would be more strategic, attempting to find areas for improvement that AI can drive. Both roles would be business partners with the SLT, but only the creation of a dedicated AI champion on the Exco will properly encourage the adoption of AI.

Final Remarks

AI is advancing at lightning speed. Businesses which do not make some effort to incorporate it will find themselves struggling. If only Blockbuster had had Netflix's attitude towards the internet era...

Talent will be integral to successfully embracing AI. It will become increasingly important to have people who combine strong knowledge of the technology along with the strategic and commercial nous to implement it in the right way. There are way too few of them at the moment, and they may be too expensive... But there are ways to attract the best talent without paying them more than the CEO. These people can provide enormous value; in addition to the free viral marketing you get from unveiling a ground-breaking product, AI has the potential to cut costs by many multiples and solve problems humans can only dream of. This is the future of business.

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