Albert™

ARTIFICIAL INTELLIGENCE MARKETING: HOW MARKETER AND MACHINE WILL LEARN TO WORK TOGETHER

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Artificial Intelligence will not take marketing jobs away, but enhance them, allowing marketers to refocus on understanding customers and crafting messages that appeal to their needs.

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Introduction

Cognitive technology, or artificial intelligence (AI), has always had a way of capturing the public's imagination. For tech enthusiasts, constantly imagining how new technology can improve the efficiency and quality of everyday life, debates surrounding the open-ended potential of autonomous computing has generated plenty of excitement and optimism. To the general public, however, the upside hasn't been as clear to see.

Mention artificial intelligence to the average person on the street, and that person is still likely to think of villains from dystopian sci-fi films like The Terminator or 2001: A Space Odyssey's HAL 9000. More grounded predictions of an AI-assisted future are still fraught with concerns of job displacement and the de-personalization of everyday work: a Tech Pro Research survey found that while 63% of respondents agreed that AI would be good for their businesses, 34% found the concept of AI to be frightening on a personal level.

But the truth is that cognitive technology is already an active part of the world around us, powering everything from our smartphones to our plumbing. More importantly, its advance into the workplace should be seen not as a foreign invasion, but as a boon to human workers still adapting to an increasingly digital marketplace. The rapid advancement of all technology has heightened the scale and pace of productivity across industries, but it has removed much of the "human" element of that work in the process. Much like the industrial revolution before it, the digital revolution has changed our work from creating things to overseeing machines that create things for us -

cognitive technology could free us to start doing the work we love doing once again.

Nowhere is this more true than in the world of marketing, where digital media has reduced much of what was an empathetic and creative profession to data entry and machine supervision. AI will not take marketing jobs away, but enhance them, allowing marketers to refocus on understanding customers and crafting messages that appeal to their needs. But before this can happen, marketers must learn to trust machines to handle a certain amount of the work they do today so that the two parties can effectively collaborate and add more value to organizations everywhere.
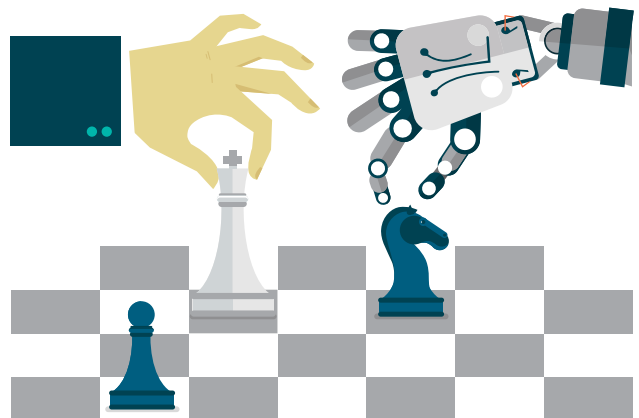
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Perfecting the Balance

Much of the groundwork that must be laid before cognitive technology can work effectively will involve carefully defining the roles that man and machine will play in day-to-day work. Machines are capable of many of the tasks that humans do today, but there are limits - the trick will be determining the optimal allocation of work between humans and their digital assistants. This mix will vary for each organization, department, and even employee.

For an example of just how important and individualized this balance can be, consider the transition in aeronautics from propeller-driven to jet aircraft. Planes developed after World War II were so fast that it was impossible for humans to fly them completely on their own, but many pilots refused to cede any control to automated systems and equipment. This resulted in more injuries and fatalities during training, as pilots simply couldn't keep pace with the technology that was supposed to be making their jobs easier.

Engineers have been able to solve this problem by allocating work between machine and man literally on a pilot-by-pilot basis. Each F-35 jet is programmed with input from the pilot so that the entire machine is configured according to her preferences and even her specific mission. The aircraft are so carefully tailored to these needs that pilots report having dreams in which their planes become a physical extension of themselves.

MACHINES TAKE OVER…	SO HUMANS CAN FOCUS ON…
▪ Translating entire documents line by line so that they're intelligible to native speakers	▪ Making documents not only intelligible, but well-written and precise from perspective of native speaker
▪ Find out the nature of the problem customers are experiencing when using your customer service line	▪ Providing specialized assistance to customers in need
▪ Record symptoms and outcomes of medical patients and apply findings to existing diagnostic frameworks.	▪ Giving more accurate diagnoses and improving health outcomes.

It's unlikely that this level of personalization will be necessary in marketing, but the example speaks to how key it is that humans feel comfortable with the role their computerized assistants play in the work that they do. That's not to say that marketers will be able to make all the decisions about this balance - regardless of what they think, there are certain tasks that AI will simply be better and faster at. But marketers are more likely to feel comfortable with cognitive technology if they have some input in determining its exact role.

Another key consideration in determining AI's role is to remember the limitations of this cognitive technology. Translation services are coming to rely more and more on artificial intelligence, as machines are capable of translating a high volume of content that would not have otherwise been cost-effective to produce. But that doesn't mean translators are packing up their things and looking for new work - on the contrary, the industry is expected to grow by 29% in the next eight years. Human translators are actually in higher demand because AI isn't capable of tracking the small nuances of language and effectively mimicking human speech. The computers eliminate much of the basic translation work, leaving humans to work out the kinks.

This kind of cooperative, calculated balance is key to effective human-machine collaboration, but it's still quite rare in the world of marketing. Because the ad tech most companies rely on doesn't feature artificial intelligence fully, humans still spend far too much time monitoring and programming their digital tools just to ensure they do their jobs correctly. The modern marketing landscape has become so complicated that without more cognitive technology to back them up, marketers will become more bogged down than ever by menial tasks and less likely to reach their full potential.
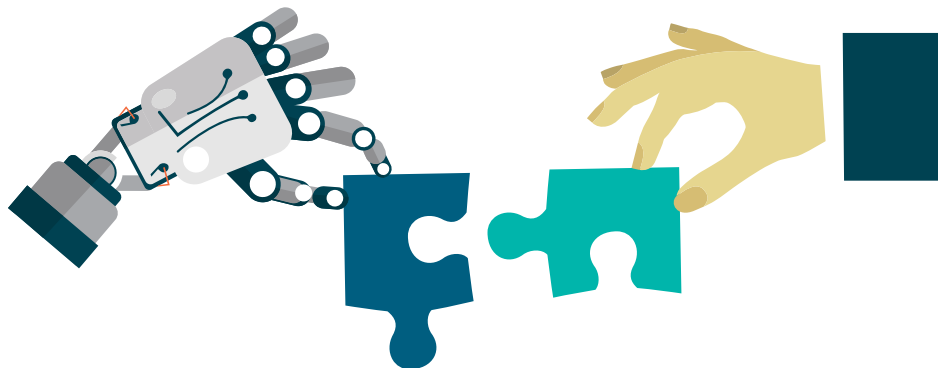
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Artificial Intelligence Marketing Technologies Makes Sense in our Big Data World

One huge factor contributing to the complexity marketers face today is big data - specifically, the difficulty of sifting through the large quantities of information that brands collect across various channels, is a problem that cognitive technologies will be crucial in solving.

Of course, marketers already realize that they can't effectively analyze and synthesize the deluge of data created by digital channels on their own. Every marketing team has a suite of software tools that help them comb through billions of data points to find the insights that will inform the planning, execution, and optimization of their campaigns.

The problem is that these tools tend to be channel-specific, and the data they collect gets trapped in silos. As consumers continue to make more purchases that are influenced by multiple channels (Forrester claims that cross-channel retail sales alone will reach $1.8 trillion by 2018), it becomes critically important that marketers are able to discover and react to customer journeys organically and on the fly. Understanding how user experiences across various channels converge into a purchase - A.K.A. attribution - is extremely difficult without the ability to seamlessly access data from all channels and combine them in a way that is coherent and consistent.

Additionally, marketers are tasked with testing and optimizing campaigns against thousands and thousands of variables to achieve the right allocation of messaging, frequency, channels, and spend. Even after user segments have been identified and targeted with particular campaigns, marketers must make adjustments for each channel, device, and format the campaign is running on. In a marketing landscape where conditions are changing every second, it isn't humanly possible to properly account for all these variables and make decisions that maximize a campaign's impact.

SILOED DATA, SILOED ORGANIZATION

Organizations typically react to these problems by dedicating personnel - sometimes, entire teams - to specific channels, effectively siloing their marketing departments and their marketing efforts. This makes accurate decisioning that is best for the end customer or consumer even more complex, and things such as organic, on-the-fly journey discovery, and attribution near impossible.

Such a channel-centric approach stands in direct contrast to the channel-agnostic attitude that has been adopted by consumers in recent years. Marketers cannot continue to dedicate the bulk of their time to surfacing insights from various channels and then forcing those insights into a coherent

cross-channel strategy. Organizations need a more accurate and efficient way of analyzing data, determining attribution, organically discovering journeys at the individual level, and allocating budget so that marketers can spend more time understanding their audience's needs and crafting messages that address them.

HOW COGNITIVE TECHNOLOGY CAN HELP
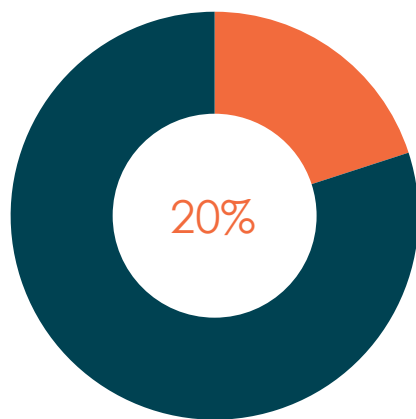
20% of executives who haven't yet adopted AI cite lack of clarity regarding its value proposition
Source: Forbes

Cognitive technology offers an obvious solution to this problem. Provided that the software can access data from across various channels, an artificial intelligence platform is capable of handling most of the work that keeps marketers hovering over spreadsheets and dashboards instead of telling compelling stories.

Not only that, but cognitive technology will be able to do this work with more accuracy, vigilance, and efficiency than the humans who had done it previously.

For instance, unlike human marketers, machines can optimize customer offers in real time, 24/7, incorporating learning from behavior that occurred mere hours ago so that the ad any one consumer sees at 12pm may be different from the one she sees at 1pm. This kind of attention to the smallest details and ability to adjust and optimize campaigns on the level of the individual consumer is something that cannot be expected of marketers or even data analysts.

And because artificial intelligence can learn from its choices without the need for human supervision, it's also able to both notice and apply insights that human observers wouldn't catch in the first place. Cognitive technology could enable programmatic platforms to notice and automatically outsmart ad fraudsters, rather than wait for human assistance to create new rules that dictate its behavior each time a new way around the system is created. It could also perform a kind of extreme multi-variant test that pilots hundreds of campaigns variants at once, informing marketers of what it's learned from these tests and scaling or stopping campaigns accordingly. It could even identify a need for additional creative materials, indirectly generating additional ads behind the scenes, then automatically putting them to work.

But for any of these benefits to actually be realized, your marketers first need to trust the AI platform to do their former job correctly. Ceding control over important tasks is always difficult, but if the kind of balance between machine and man mentioned earlier is to be achieved, it must be approached with confidence and in good faith. It's crucial, therefore, that whatever AI platform is implemented has a degree of transparency: in other words, it needs to be a glassbox tool, not a blackbox one.

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Blackbox Marketing vs. Glassbox Marketing

All artificial intelligence depends on machine learning, the ability of a computer to learn from past actions and observations and apply those learnings to future decisions. However, just because a computer can operate independently of human supervisors doesn't mean that it should - at least, not for everything.

There are some decisions that a computer simply can't be relied upon to make in the best interests of the company. Say, for instance, that your AI platform notices that there's a potentially valuable audience for your products in Canada and decides to start targeting users who live there. This isn't a decision that should be made without your approval: the computer doesn't know whether shipping to Canada would be cost-efficient or even possible, or how the exchange rate would affect profit margins. Allowing a computer to make such decisions without human approval could have disastrous consequences, and the mere possibility of such a scenario is enough to turn some marketers off from AI altogether.

A tool that makes such decisions and only gives you the output, rather than all the calculations that led to that decision, is a blackbox tool: it offers you no transparency into its inner workings. By contrast, a good artificial intelligence platform offers you plenty of additional information that went into informing

each of its decisions. Depending on the outcome of these decisions, that information can be analyzed for relevant business insights. These transparent tools offer what's called glassbox marketing.

An artificial intelligence marketing platform may see, for example, that an available display space is showing particularly good results, and therefore see it as an excellent placement for your most recent campaign. But unlike a blackbox tool, which would simply purchase the space and hope for good results, a glassbox tool would let the advertiser know exactly which placement it's purchasing and who the publisher is. A great tool would even give her a recommended CPM in case she's interested in doing a direct media deal with that publisher (if the option is available).

The key with glassbox marketing is to strike a good balance between transparency and autonomy: you want to be able to remain in control of business-related actions, like budget or geographies you're marketing in, but be confident that the algorithm is making good marketing decisions. A good cognitive marketing platform will offer up plenty of information relevant to business leaders while working within defined limits of marketing, taking over many of the campaign planning and execution actions from you without depriving you of the insights you'd normally get from those processes.
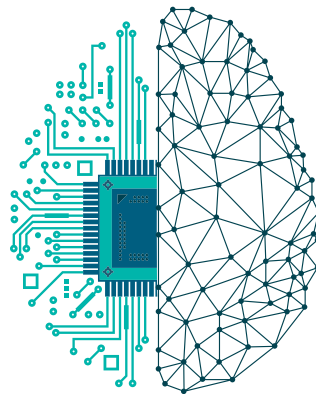
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Artificial Intelligence Technologies Free Up Human Brain Power and Intellect

The ultimate goal of artificial intelligence is to allow us to focus all our attention and effort on the high-level thinking of which only human intelligence is capable.

One excellent example of a company putting this philosophy into practice is LinkedIn: the professional networking site relies on algorithms to determine which content will be most appealing to its users, but its robust Influencers program ensures that the algorithm has high-quality content to choose from. A computer does the dull work of sifting through content and surfacing it for specific users; talented humans do the more interesting work of creating new ideas and stories that users will find appealing.

In much the same way, marketers must come to rely on computers to identify and display relevant messaging to users - on the channels they prefer - so they can invest more time in high-quality creative and strategic work. At its core, marketing has always been about understanding people, creating a message that will appeal to them, and positioning that message directly within their line of vision. Digital technology has led marketing professionals astray from that fundamental mission - artificial intelligence is the breakthrough that will bring them back.

This doesn't mean that modern marketing will

look much the same way it did before the digital revolution - plenty of time and effort will still have to be dedicated to overseeing and refining the work of machines and marrying marketing data with other offline and customer data points. The crucial difference is that this work will be much more challenging and rewarding: low-level data entry work will be eliminated and replaced with high-level machine supervision, data analysis, and content curation.

Even the high-level expertise of human professionals can be learned by cognitive technology and applied through a kind of human-computer feedback loop. A recent Forrester report lays out an excellent example of how this kind of advanced machine learning can be applied to data synthesis:

"Goldman Sachs, in partnership with machine learning platform Kensho, has implemented event-based performance reporting...The machine scrapes data from the National Bureau Of Labor Statistics website and then compiles an impact summary, with 13 exhibits predicting stock performance based on past responses to similar employment changes. A human used to do a good job at any individual instance of this - but the robot completes each analysis a mere nine minutes after the data arrives and can repeat it for thousands of numbers from dozens of databases."

While the process of shifting from machine supervision to collaboration will require retraining, these new jobs are likely to produce greater employee satisfaction and engagement. Research shows that, when propped up with powerful tools, employees tasked with challenging, high-level work are both more productive and happier at their jobs. In order to support that work, however, marketing organizations must undergo structural changes that empower employees to work both smarter and harder.

Certain roles within the organization will have to evolve in response to the obstacles that cognitive technology will help marketers clear. Especially within large companies, a recent trend has been to create multiple channel-specific roles for individuals and teams in order to deal with the challenge of planning, executing, and optimizing campaigns across channels, a task that will likely be made significantly easier with the implementation of AI software.

Employees who fill such roles as Paid Search Managers, Social Media Managers, and even Data Analytics teams should shift their focus from the media and tools they use to reach consumers to the consumers themselves. Along with these individual roles, the organizational hierarchies that support them must be adjusted in order to fully advance the capabilities and performance of the organization in general, finally moving away from a channel-centric marketing approach to a consumer-centric one.
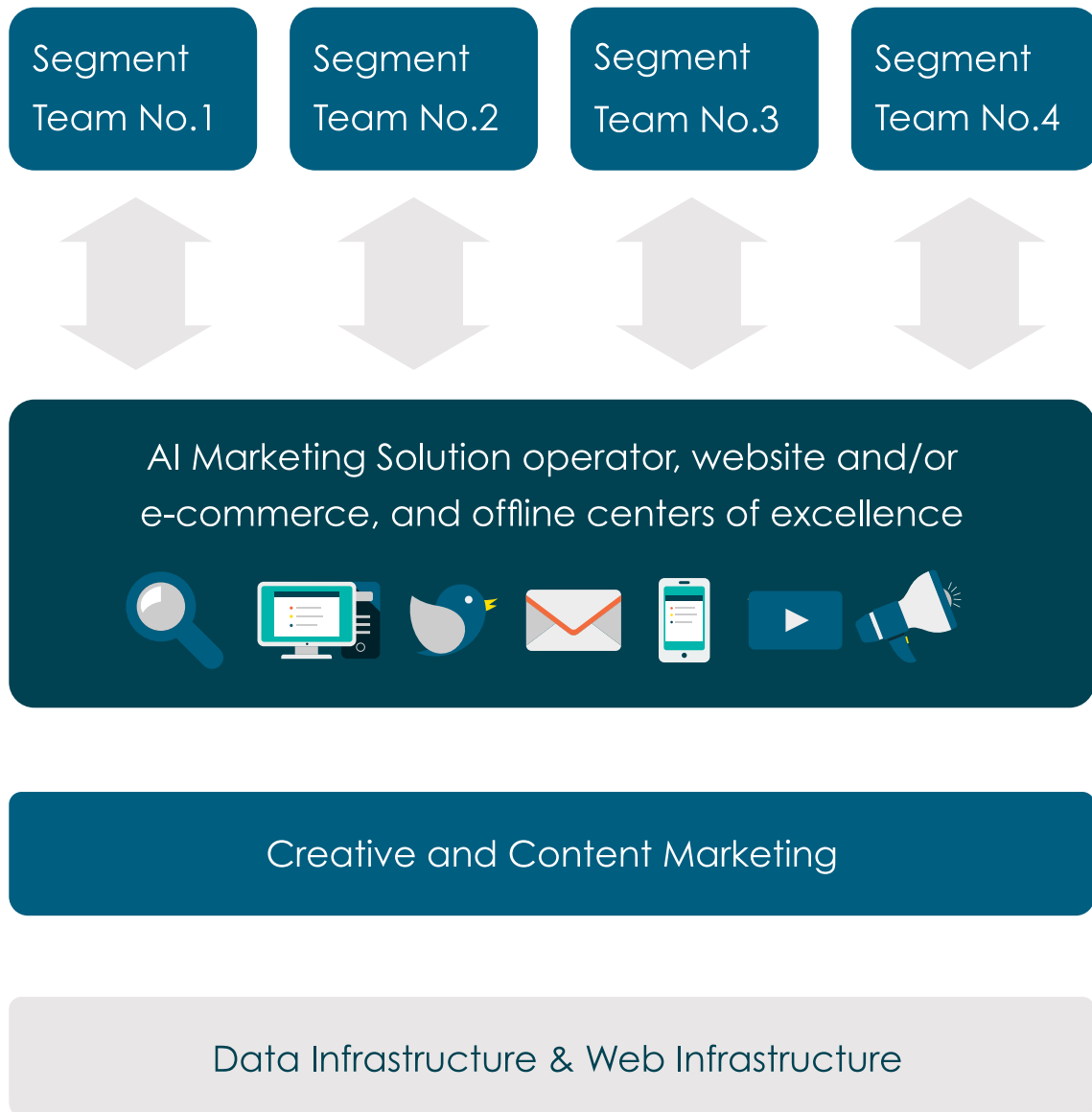
That doesn't necessarily mean that the expertise of these formerly channel-based marketers will go to waste: different channels reach different audiences, and it takes someone with a strong understanding of that specific audience to craft effective campaigns on those channels. Marketers will accordingly begin to focus on particular audience segments rather than particular channels, collaborating to ensure that campaigns are both as wide-reaching and highly targeted as possible.

Teams will evolve to focus on strategic capabilities, interpreting the insights fed to them by their AI platform and converting them into engaging, original, effective messaging. A continual feedback loop should develop between these teams and the AI: as marketers roll out campaigns, the computer will give them a sense of what's working and what isn't for which customers, and teams will collaborate to create new approaches and strategies to more effectively capture their respective audience segments.

This is just one way that an organization - particularly a large one - can adjust its structure to accommodate AI. For smaller companies with less resources and more marketing "generalists", the AI companion is a perfect addition to fill the deep-channel "expertise" gap. Companies can choose any number of routes to accomplish this goal, however, depending on their specific industry, size, or philosophy. Regardless, business leaders and CMOs should see restructuring as an opportunity to create value, cut costs, and boost morale, rather than as a burdensome task. The more sincere your efforts to transform your marketing organization for the better, the more likely those efforts will translate into real results.

NEW ORGANIZATIONAL STRUCTURE FOR LARGE COMPANIES:

Segment Team No.1	Segment Team No.2	Segment Team No.3	Segment Team No.4

AI Marketing Solution operator, website and/or e-commerce, and offline centers of excellence

Creative and Content Marketing

Data Infrastructure & Web Infrastructure

The above is a modified version of a proposed customer-centric Forrester organizational structure.

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Best Practices for Implementation

While cognitive technology has immense potential for any and all marketing organizations, how best to implement it will vary for each organization. Based on what we've covered so far, however, there are a few consistent principles that all organizations should keep in mind when preparing for the AI revolution:

EMPHASIZE TRAINING AND ENCOURAGE FEEDBACK:
It's impossible to create a collaborative environment between marketers and cognitive machines without trust. Crucial to building that trust is an effective and patient training process, one that truly recognizes how vital the input of trainees is to the effectiveness of the software that will be working under them.
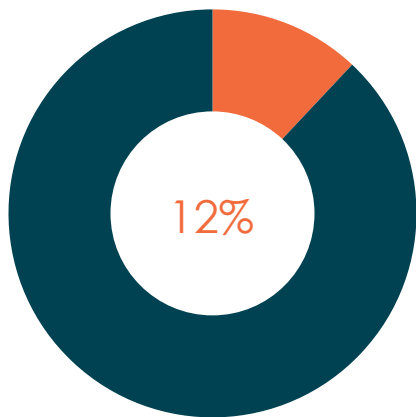
Only **12%** of organizations feel they're prepared for the organizational changes that will come with cognitive technology
Source: Forrester

OBSERVE EACH INDIVIDUAL EMPLOYEES INTERACTIONS WITH AND USE OF COGNITIVE TECHNOLOGIES:
Along the same lines, cater the implementation process to the level of the individual. Everyone uses technology differently, and you want to encourage innovative use while also preventing human misuse or error. The training process should involve as much learning on your part as it does for individual members of your marketing team.

SELECT THE RIGHT MACHINE LEARNING TOOLS THAT MAXIMIZE HUMAN PRODUCTIVITY:
Not all artificial intelligence is created equal - do in-depth research before selecting a cognitive technology platform that's powerful, transparent, and intuitive enough to support the needs of your organization.

WORK WITH VENDORS TO SET UP CONTROLS AND PREVENT MALFUNCTIONS:
Again, transparency is incredibly important to building trust with marketers and preventing mistakes. Both vendors and the technology itself should support your efforts to develop controls over what kind of decisions the AI platform makes so that marketers aren't forced to oversee the computer's decisions constantly. Cognitive technology that is too independent of its creators can make mistakes that damage revenue and even brand reputation - you don't want to confirm people's sci-fi-inspired skepticism by publicly failing to get control over your AI platform.

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Conclusion

Cognitive technology promises to solve many of the problems that plague modern marketing today, but only if companies are honest with themselves about what problems are relevant and what causes them. Carelessly inserting cognitive technology into your employees' work processes will only cause confusion and resentment, and likely have the opposite of the desired effect on productivity. Proper implementation requires communication, flexibility, and perhaps most importantly of all, plenty of patience.

Cognitive technology is easy to implement and even easier to use - the hard part for marketers will be letting go of the control they have over menial aspects of their work and to start considering the opportunities that AI marketing will create. That goes not only for individual marketers, but for entire organizations, which must reshape themselves to maximize their value. The more faith marketers put into the possibilities this new future could bring about, the more productive the eventual solution will be.

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About Albert™

Albert is the first-ever artificial intelligence marketing platform, driving fully autonomous digital marketing campaigns for some of the world's leading brands. Created by Adgorithms in 2010, Albert's mission is to liberate businesses from the complexities of digital marketing—not just by replicating their existing efforts, but by executing them at a pace and scale not previously possible. He serves as a highly intelligent and sophisticated member of brands' marketing teams, wading through mass amounts of data, converting this data into insights, and autonomously acting on these insights, across channels, devices and formats, in real time. This eliminates the manual and time-consuming tasks that currently limit the effectiveness and results of modern digital advertising and marketing. Brands such as Harley Davidson, EVISU, Planet Blue, and Made.com credit Albert with significantly increased sales, an accelerated path to revenue, the ability to make more informed investment decisions, and reduced operational costs.

To learn more about Albert, Request a Demo, today.

Albert™