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**The Journal of Robotics,  
Artificial Intelligence & Law**

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# The Impact of Artificial Intelligence on M&A Deals—Part I

Peter A. Emmi\*

*In this two-part article, the author explores the impact of artificial intelligence (AI) on the mergers and acquisitions (M&A) deal value chain. In this first part, the author provides a high-level overview of generative AI, discussing recent advancements and applications across various industries. He then delves into how AI is used at different stages of the M&A deal cycle, including the role AI can play in target identification, due diligence, and post-merger integration. In the conclusion of this article, to be published in the next issue of The Journal of Robotics, Artificial Intelligence & Law, the author will illustrate the practical applications and benefits of AI as it applies to the M&A deal cycle by providing an overview of M&A transactions that implemented AI tools to improve certain aspects of the M&A deal process. Among other things, the author will discuss the limitations of the use of AI and why, despite the efficiencies gained through the use of AI, human expertise remains crucial for interpreting and evaluating the strength of AI-generated insights, making strategic decisions, and managing complex interpersonal dynamics and efficiencies.*

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Artificial Intelligence (AI) stands at the forefront of technological innovation, shaping the future of various industries and the ways in which we live and work. AI has made significant strides in recent years, driven by advances in early forms of AI, including machine learning, neural network functionality (initially in hardware, and then in software), and data analytics. These technologies enable AI systems to process vast amounts of data, identify patterns, and make decisions with minimal human intervention.

AI is also revolutionizing the mergers and acquisitions (M&A) industry and is used throughout the entirety of the M&A process for decision-making, risk management, and efficiency. While the results of a 2024 Bain & Company study indicate that only 16 percent of respondents are deploying generative AI in the M&A deal chain cycle today, over 80 percent of respondents plan to use generative AI in the M&A process within the next three years,<sup>1</sup> including to identify, evaluate, and execute acquisitions; provide

for a more efficient and seamless integration post-closing; and to drive growth and establish a competitive advantage in general in an ever-changing market.

As AI technologies continue to develop, there will be more opportunities to integrate AI into the M&A deal chain cycle in innovative ways. This two-part article explores the impact of AI on the M&A deal value chain. It begins with a high-level overview of generative AI, discussing recent advancements and applications across various industries. It then delves into how AI is used at different stages of the M&A deal cycle, including the role AI can play in target identification, due diligence, and post-merger integration. In the conclusion of this article, to be published in the next issue of *The Journal of Robotics, Artificial Intelligence & Law*, this article will illustrate the practical applications and benefits of AI as it applies to the M&A deal cycle through an overview of M&A transactions that implemented AI tools to improve certain aspects of the M&A deal process. The conclusion also will discuss, among other things, the limitations of the use of AI and why, despite the efficiencies gained through the use of AI, human expertise remains crucial for interpreting and evaluating the strength of AI-generated insights, making strategic decisions, and managing complex interpersonal dynamics and efficiencies.

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## Overview of AI and Recent Developments

AI is “a technical and scientific field devoted to the engineered system that generates outputs such as content, forecasts, recommendations or decisions for a given set of human-defined objectives.”<sup>2</sup>

More simply put, AI is a technology designed to mimic the human decision-making process by marshalling all available data to which it has access and iterating to update outputs based on the most recent set of data including inputs provided by a user. Generative AI, a subset of the larger field of AI, involves creating new content or data that mimics existing patterns. These AI systems use algorithms to generate text, images, music, and other forms of media, opening new possibilities across various content creation domains. A series of AI-powered neural network algorithms, inspired by the operation of the human brain, enable deep learning through the processing and analysis of many different data inputs to make logic decisions that produce more-informed

outputs. This combination has led to many of the breakthroughs in generative AI that are directed to image and speech recognition, natural language processing, and predictive analytics that have fueled the related industries.

## **Big Data Plays a Critical Role in AI Advancements**

The explosion of available data from various sources, such as digital user inputs, social media, online transactions, and even IoT (internet of things) devices, provides the raw material for AI systems to train continuously in order to make increasingly accurate predictions. Data-driven insights enable AI to enhance decision-making processes in real time, driving efficiency and innovation across sectors. The increase in computational power, particularly relating to increasingly advanced graphics processing units with thousands of cores and advancements in parallel processing and cloud computing, have facilitated the processing of large datasets at high speeds to fuel increasingly efficient AI systems. Armed with sophisticated algorithms, AI systems can now perform complex tasks with greater accuracy and speed than ever before. This has led to the development of advanced AI applications in new fields such as autonomous vehicle and aircraft applications and real-time language translation.

The surge in data requirements driven by AI requires further development and expansion of existing technology infrastructures such as cloud services and larger data networks. Companies such as CoreWeave and VAST Data are preparing for the increase in data processing requirements by fostering access to AI chips and creating more scalable operating systems to manage the enormous volumes of data required by AI applications, now quantified in petabytes and exabytes.<sup>3</sup> Traditional tiered data storage systems are becoming inadequate as AI applications necessitate continuous access to as much data as possible for effective model training. Consequently, the integration of AI requires a fundamental reconfiguration of technology frameworks to handle these unprecedented data loads.<sup>4</sup> To prepare and accommodate such a surge in demand for data, Amazon, Google, and Microsoft recently announced deals under which each will invest in companies making and supplying small nuclear reactors for the purpose of implementing them to power advanced data centers to meet the increasing needs of AI applications.<sup>5</sup> The path forward for generative AI is one that promises

transformative impacts across diverse sectors, driven by an ever-expanding array of applications. As we stand on the brink of this new era, it is imperative to envision the boundless possibilities that generative AI brings to the table, while also addressing the challenges and ethical considerations inherent in its deployment.

Companies are developing advanced infrastructure and applications that leverage generative AI to create text, images, videos, and other forms of content, as described below. The recent focus on generative AI's strengths underscores its transformative potential across various sectors, including media, entertainment, healthcare, and more.

### **Text Generation**

Generative AI models, commencing with the various versions of OpenAI's GPT-3 and now GPT-4, can produce coherent and contextually relevant text. These models are used in a multitude of applications such as automated content creation, customer service chatbots, and language translation. Such generative AI models can generate news articles, write code, and create marketing copy, significantly reducing the time and effort required for content creation, as well as incorporate improved language comprehension for text generation.

### **Image and Video Generation**

There are many generative AI applications that are developed, and currently in development, to assist with video generation (e.g., OpenAI's Sora application). Generative adversarial network (GAN)-based video predictions have been developed to assist with the detection of anomalies, which is needed in a wide range of sectors, such as security and surveillance. For example, a GAN-based video prediction system has been developed that can comprehend both temporal and spatial elements of a video, generate the next sequence based on that knowledge, and distinguish between probable and non-probable sequences. Generative AI models implemented as GANs are also being used to create high-resolution versions of images. Generative AI applications, including those implemented as GANs, have been created for various other image and video applications as well, such as the creation of realistic

images, including artwork and photorealistic images for advertising, enhancing video game graphics, and even creating deepfake videos, which are the subject of a great deal of current controversy. With generative AI, users can transform text into images and generate realistic images based on a setting, subject, style, or location that an individual specifies (e.g., using OpenAI's Dall-E application). Generative AI-produced images have become useful elements in media, design, advertisement, marketing, education, and for a variety of other applications, such as transforming a semantic image or sketch into a more robust and realistic version of an image. In addition, image-to-image conversion may be performed using several generative AI applications, which involves transforming the external elements of an image, such as its color, medium, or form, while preserving its constitutive elements. Such an application can be used, for example, to quickly and easily turn a daylight image into a nighttime image. This type of conversion can also be used for manipulating the fundamental attributes of an image, such as facial features or changing color characteristics. Generative AI is also revolutionizing the gaming industry by creating realistic environments, characters, and storylines. Various generative AI applications can be used to design levels, generate dialogues, and create advanced immersive experiences quickly and efficiently, thereby reducing the workload on game developers and enabling more complex and interactive games.

## **Audio and Music Creation**

There are many generative AI audio applications, including text-to-speech generators and applications that allow speech-to-speech conversions and translations. To achieve realistic outcomes for speech audios, GAN-based generative AI algorithms are trained to provide accentuation, tonal acuity, and voice modulation. Such generative AI applications are useful in many fields, including education, marketing, podcasting, and advertisement. Using this technology, thousands of books have already been converted to audiobooks. In addition, applications exist for the conversion of lecture notes into audio materials (including for visually impaired people). Furthermore, generative AI-based speech-to-speech converters have been developed for use in fields such as gaming, film, and translation applications. Generative AI systems can compose

music and generate audio tracks, including applications that can create background music for videos, generate new melodies, and even replicate the style of famous musicians (e.g., OpenAI's Jukebox application can generate music in a variety of genres and styles).

## AI as a Feature, Not a Standalone Product

AI is increasingly being integrated into existing products, enhancing the functionality of “gadgets and software we already use.” Companies like Apple, Google, and Microsoft are embedding AI into their devices and operating systems, offering features such as AI-generated custom emojis, text and email summaries, and enhanced voice assistants.<sup>6</sup> Generative AI is also being integrated into business processes, which can significantly increase efficiency or even reduce the need for human labor for some tasks. In the construction industry, for example, AI is helping to estimate project costs, automate invoice generation, manage on-site workers, and detect issues in construction plans, thereby increasing efficiency and reducing costs.<sup>7</sup>

## Application of AI Across Industries

AI's impact is felt across numerous industries, each benefiting from its ability to enhance efficiency, accuracy, and innovation. For example, advances in healthcare, including medical diagnostics and drug development, have been profound. Advances in the finance sector, including advanced capabilities in the areas of fraud detection, risk management, algorithmic trading, and automated regulatory compliance auditing, have provided increased efficiencies and accuracy. Additionally, advances in transportation capabilities, particularly in logistics and supply chain management and autonomous vehicles and aircraft, have made the sector more efficient and provided new advanced options.

In healthcare, AI is transforming medical diagnostics, treatment planning, and patient care. AI-powered systems can analyze medical images with high precision, detect early signs of diseases such as cancer, and suggest personalized treatment options. Moreover, AI-driven predictive analytics can help in identifying potential outbreaks and effectively managing healthcare resources. AI algorithms are capable of improving the capture and analysis of medical

images, such as CAT scans and MRIs, to identify abnormalities that may be missed by human eyes. AI systems can suggest personalized treatment plans based on a patient's medical history and genetic information, optimizing outcomes and reducing treatment costs. Recently, AI has been used to detect early stage cancers with higher accuracy, enabling timely intervention and treatment. On a broader scale, AI-driven predictive analytics can forecast disease outbreaks, track the spread of infections, and manage healthcare resources more quickly and efficiently. For example, AI models are being refined to predict the timing and other parameters relating to flu seasons. Such capabilities are crucial for public health planning and emergency response, allowing for the more accurate and timely allocation of vaccines and medical supplies.

In drug discovery and development, the more efficient and accurate identification of potential drug candidates using AI algorithms and the testing of their efficacy with AI-driven computer simulations have the potential to optimize and expedite the discovery and approval of new drugs. On the patient side, AI models can be used to ingest data relating to a patient's symptoms and produce diagnoses based on a larger symptomatic population pool with increasing accuracy, which can be further refined with actual diagnostic and lab results. Afterward, the resulting models can be used to craft individualized treatment plans tailored specifically for a patient's biology, medical history, and lifestyle metrics such as diet and other factors. In addition, such models can be used to provide advice relating to preventative health, such as which vitamins are needed and/or what exercises would be most beneficial to maximizing a particular patient's health.

In the finance area, a host of important AI applications have been developed and implemented, including those relating to fraud detection, risk management, and algorithmic trading. AI algorithms have been created that can analyze transaction patterns to more accurately identify fraudulent activities, assess credit risk more precisely, and execute trades at optimal times. AI systems are able to monitor financial transactions in real time and compare to past history and habits of an individual, as well as harness fraud data from a larger population, thus allowing them to identify and automatically react to suspicious activities that may indicate fraud. AI can assess creditworthiness by analyzing various factors, including income history as compared to the cost of living in the area in which an individual is located and transaction history, thus

providing a more comprehensive and customized risk profile. New AI processes and algorithms are being created to optimize risk assessments for risk management purposes. For example, by leveraging AI-powered GANs, value-at-risk estimations can be generated that estimate potential losses and volatility, to more accurately predict financial markets. Regarding algorithmic trading (including the use of robo-advisors), AI may be utilized to quickly marshal and analyze large quantities of market data to inform and execute trades at high speeds to take advantage of market opportunities. In addition, robo-advisors can take individual financial goals and risk tolerance into account, as well as a large amount of external financial data, to offer tailored investment advice that is optimized for each individual.

In the field of logistics and supply chain management, AI is revolutionizing the transportation field by determining optimized routes, reducing delivery times, and cutting operational costs. AI also is at the core of the development of autonomous vehicles that need to rely on AI to interpret data from various sensors and cameras to understand and navigate their environment. AI algorithms process this data to make driving decisions, such as steering, braking, and lane changes, or flying decisions using data already available as well as data captured in real time from the surroundings. AI-driven technology has the potential to reduce accidents, improve fuel efficiency, and enhance mobility for individuals unable to drive or fly. AI is being used to optimize logistics by analyzing data on traffic, weather, and assess delivery schedules for all deliveries that are scheduled to determine the most efficient routes for each delivery. This reduces fuel consumption, delivery times, and operational costs. AI also is being used in the area of supply chain management, to predict demand, optimize inventory levels, enhance supplier selection, improve overall efficiency, and reduce costs.

## **Key Trends in AI Investments**

The AI landscape is rapidly evolving, with significant developments in funding, deal volume, and the emergence of new players. The second quarter of 2024 set a new benchmark for AI funding, with global investments reaching an unprecedented \$23.28 billion. This 59 percent quarter-over-quarter (QoQ) increase marks the

highest quarterly level on record, surpassing even the heights of the 2021 venture boom. This surge was driven by substantial funding rounds for a select few start-ups, notably Elon Musk's xAI, which underscores the escalating interest and confidence in the AI sector. Venture capital funding for AI start-ups has reached record levels, with nearly one third of all venture capital investments in 2024 directed toward AI (as of September 2024).<sup>8</sup>

In tandem with this funding surge, the volume of AI deals has also seen a significant rise. The number of deals climbed by 16 percent QoQ, totaling 948 in Q2 2024. This is a notable recovery from the extended decline in deal volumes, contrasting sharply with the broader venture capital landscape, where overall deal volume fell by 7 percent QoQ. This divergence highlights the unique dynamism and resilience of the AI market.

The average size of AI deals in 2024 has also seen a substantial increase. The average deal size is now \$28.9 million, a 55 percent rise from the \$18.6 million average in 2023. This growth in deal size is largely attributed to several large-scale investments that have had an outsized impact on the market. Companies like CoreWeave, which secured a \$1.1 billion Series C funding round, and Wayve, which raised \$1.058 billion from Softbank, Microsoft, and Nvidia, are prime examples of this trend.

The emergence of AI unicorns—private companies valued at over \$1 billion—remains steady, with six new unicorns appearing in Q2 2024. Generative AI continues to be a central theme among these new entrants, with companies focusing on both infrastructure and applications. For instance, xAI achieved a significant milestone with a \$248 million valuation following its \$68 million Series B funding round. Other notable unicorns include Perplexity, which specializes in search applications, and Cognition, focused on software coding.

Mega-rounds, defined as deals worth \$100 million or more, have seen a 28 percent increase QoQ, with 32 such rounds occurring in Q2 2024. The funding from these mega-rounds surged by 74 percent QoQ, largely driven by deals in the United States, which accounted for 66 percent of the global total. This trend underscores the growing scale of investments in AI, highlighting the sector's maturation and the increasing confidence of investors in its long-term potential.

The United States continues to lead the global AI funding landscape, drawing \$15.2 billion across 476 deals in Q2 2024. This

represents 66 percent of global AI funding and 50 percent of the total deal volume, reaffirming the U.S.'s dominant position in the AI industry. This leadership is propelled by significant investments and the country's robust innovation ecosystem, which fosters the development and commercialization of cutting-edge AI technologies. Other countries have also made strategic moves to bolster their positions in the AI sector. MGX, a state-backed entity created by the United Arab Emirates to invest in AI and related infrastructure, has approved several strategic AI initiatives. MGX is in discussions to invest in OpenAI as part of significant fundraising efforts.<sup>9</sup>

Despite uncertainties about when these investments will yield significant profits, tech giants and investors continue to invest heavily in AI-optimized data centers and specialized hardware. This spending spree has led to a significant increase in the number of data centers and the power they consume. However, there are concerns about the sustainability of this spending, as current AI revenue is far from justifying the massive investments. Executives from leading tech companies emphasize the need for patience, acknowledging that monetizing AI applications will take time.<sup>10</sup> The continued investment in this area highlights the burgeoning opportunities and the profound impact generative AI is currently having and is expected to have on the future of technology and society.

## The M&A Deal Value Chain and AI Integration

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By integrating AI at various stages of an M&A transaction, M&A professionals can significantly reduce the amount of time spent working on repetitive and onerous tasks and allocate more time and resources to the value-adding aspects of an M&A deal, ultimately resulting in a more successful transaction. The following overview describes how AI can be utilized at each stage, along with examples of real-world AI solutions.

### Target Identification and Deal Sourcing

AI leverages predictive analytics and market scanning tools to enhance target identification and deal sourcing. By aggregating data and analyzing market trends, AI platforms can deliver data-driven insights about potential acquisition targets.<sup>11</sup> This not only

allows potential buyers to make accurate investment decisions supported by vast amounts of data, but to make these decisions much more quickly.

By continuously monitoring various data sources, AI tools provide up-to-date information on market conditions and potential M&A opportunities. AI systems can ingest and process real-time data from various sources to provide up-to-the-minute insights, allowing for the identification of emerging market risks or opportunities as they unfold. As AI systems process more deal data, market trends, and company performance metrics, they refine their predictions and become more effective at identifying risks and synergies as new information becomes available. AI models from Palantir and Clear Analytics continuously adapt their algorithms to reflect current market conditions.

Additionally, AI-powered sentiment analysis uses natural language processing (NLP) to gauge market sentiment and identify factors that could influence a company's valuation. By analyzing news articles, social media posts, and even earnings calls, AI can identify emerging opportunities and potential risks, and predict how public perception, media trends, or even geopolitical developments might affect a market or deal, allowing businesses to act swiftly and decide whether to proceed with an M&A deal. Platforms like Sentieo or AlphaSense use NLP to scan vast amounts of text data and extract relevant sentiment indicators that could signal potential market risks or synergies. Machine learning models are particularly effective at spotting patterns that indicate future risks or opportunities in markets, even in the presence of noisy or incomplete data. This forecasting is transformative, as these AI tools can identify patterns that may not be apparent to human reviewers.

In addition to analyzing real-time data, AI machine learning models can also analyze historical data and trends to predict future opportunities. AI can analyze financial performance indicators and financial statements to predict future growth. By examining metrics such as revenue, profit margins, and cash flow, AI can identify trends and anomalies in revenue recognition and expense patterns. AI can also perform a scenario analysis to assess the impact of different acquisition strategies and forecast potential risks, which aids in more accurate valuations. This enables potential buyers to better identify companies with strong growth potential. By considering a wide range of scenarios and external factors, AI ensures

that valuation models more accurately reflect potential risks and uncertainties that humans may not be able to identify.

PitchBook, for example, is an AI platform that automates the deal-sourcing process by analyzing large amounts of data from both private and public markets<sup>12</sup> to provide accurate insights about potential acquisition targets. Truvalue Labs is another solution that uses AI to evaluate a company's environmental, social, and governance (ESG) performance, risks, and behaviors.<sup>13</sup> By analyzing vast amounts of unstructured data, Truvalue Labs helps ensure that investments are sustainable and socially responsible by offering insights on potential opportunities that meet a buyer's ESG criteria.

## Valuation and Financial Modeling

AI tools have also streamlined the review of financial statements, automating the audit process to ensure accuracy and completeness. By automating data collection and processing, AI eliminates human error and ensures that input data is consistent and accurate, handling large datasets in real time. Further, because AI minimizes manual input and repetitive calculations, the time spent double-checking numbers or making adjustments to spreadsheets is drastically reduced. This automation speeds up the valuation process and enhances accuracy by providing a more complete and timely dataset for analysis. By reducing manual intervention, AI systems eliminate the risk of human error, such as data entry mistakes, miscalculations, or oversights that can distort valuation outcomes.

As discussed above, machine learning algorithms can analyze historical financials and identify trends or anomalies and offer insights into the future financial performance of a target company, which significantly enhances the accuracy of valuation and financial modeling in the M&A process. Platforms like Palantir Foundry and Anaplan exemplify how AI can streamline these tasks. Palantir Foundry integrates various data sources and leverages AI to analyze financial data, operational metrics, and external factors, creating sophisticated financial models and forecasts. Anaplan, an AI-driven financial planning tool, is used for scenario modeling and forecasting during the valuation process, providing real-time data analysis to adjust projections. AI also automates the process of identifying and analyzing comparable companies for valuation

purposes. AI systems scan vast datasets to find comparable companies based on industry, size, financial metrics, and geographic location, saving significant time in performing peer comparisons. Further, these algorithms can assign weights to different factors in ways that humans likely cannot reproduce. This improves the relevance and accuracy of the comparable companies used in valuation models. Platforms like PitchBook and CB Insights can be leveraged to recommend the most relevant comparable companies by analyzing financial and operational data across thousands of companies, enabling more accurate and timely benchmarking.

AI enhances risk analysis and sensitivity testing by quickly performing complex risk assessments through thousands of simulations and stress tests on financial models. AI enhances the speed of scenario modeling by automating the process of adjusting key assumptions and instantly generating new outcomes. AI-based platforms like Tesorio and Kensho can simulate thousands of possible scenarios to predict the likelihood of different market risks, improving accuracy by using sophisticated algorithms to test multiple scenarios, integrating real-time data and variables to predict how changes in the market environment or company performance could affect valuation. Machine learning models excel at running scenario analyses and stress tests under a wide variety of market conditions. These models can simulate how different factors—such as interest rate hikes, commodity price shocks, or regulatory changes—will impact the deal. These tools can automate cash flow forecasting under different scenarios, such as changes in interest rates, market demand, or supply chain disruptions, allowing M&A professionals to quickly see how these factors impact valuation. This dynamic modeling allows M&A teams to explore a range of potential scenarios without manually adjusting inputs. These tests help assess how sensitive a target's value is to changes in key assumptions, such as interest rates, market volatility, or consumer demand. AI-based models can identify and quantify risks that may not be immediately apparent through traditional methods, ensuring that valuation models more accurately reflect potential risks and uncertainties.

As discussed above, AI can analyze unstructured data, as well as “alternative” data to gauge market sentiment and identify factors that could influence a company's valuation. AI uses NLP to analyze and incorporate qualitative data into valuation models, providing a more holistic view of the target company's future potential. This

adds another layer of accuracy to models that typically rely on quantitative financial metrics alone. AI can also use alternative data such as satellite images, social media activity, and web traffic data to detect early warning signs of market risks or opportunities. By incorporating unconventional data sources, AI can predict risks such as economic slowdowns, changes in consumer behavior, or operational disruptions before they become evident through traditional financial metrics. For example, AI might analyze satellite images of parking lots at major retailers to predict consumer demand trends, which could impact a retail company's valuation during an M&A transaction. AI systems can even tailor risk models to specific industries, geographies, or companies, making risk predictions more accurate for the unique circumstances of each deal. By learning from historical data specific to a company or industry, AI models can better predict how risks will impact the success of a deal and what synergies are possible. In a healthcare M&A deal, for example, AI systems can analyze the regulatory landscape, historical deal performance in the industry, and patient demographics to predict how market risks like policy changes or technological shifts could affect the deal.

## Due Diligence

AI can streamline the due diligence process in M&A transactions by automating document analysis, risk detection, and cultural compatibility assessments. Data from SS&C Intralinks indicates that even prior to the 2020 COVID pandemic, the amount of data provided for each deal “was rapidly increasing, making it virtually impossible for human interaction alone to synthesize and understand the complexities of target companies.”<sup>14</sup>

The due diligence process in M&A transactions requires a significant amount of time and resources to ensure that all documentation relating to a potential target is reviewed and the risks are identified. This is especially true when it comes to reviewing contracts, legal agreements, and financial records. The integration of AI in the due diligence process offers significant benefits in terms of speed and accuracy. By incorporating AI tools, especially those utilizing NLP, into the due diligence process, M&A professionals can revolutionize this aspect of the M&A deal chain. These advanced systems can sift through vast volumes of documents in a

fraction of the time it would take a human, automatically extracting and identifying key clauses, obligations, risks, and anomalies. This not only makes the review process more efficient but also enhances its accuracy. For instance, tools like Kira and Luminance use NLP to quickly analyze legal contracts and can flag relevant clauses and potential risks. By automating and streamlining parts of the due diligence process that are more straightforward, M&A professionals are instead able to focus on higher-level strategic analysis rather than repetitive tasks.

AI's ability to process large datasets is another significant advantage in the due diligence process. These datasets often include financial performance data, customer records, operational metrics, and even external market data. AI algorithms can cross-analyze this information to identify trends, inconsistencies, and opportunities that might not be obvious through manual review. By rapidly sifting through both structured and unstructured data, AI tools help identify hidden risks such as operational inefficiencies, compliance issues, or discrepancies in financial reports. These AI tools can also flag patterns or outliers that might indicate potential red flags, which can then be addressed by M&A professionals in the transaction documents. Financial risks, such as irregularities in financial data that may indicate fraud or financial instability, can be quickly identified. Legal risks, including potential legal issues like pending litigation or non-compliance with regulations, are also detected. For example, as discussed above, Palantir Foundry uses AI to aggregate and analyze data from various sources, allowing M&A teams to see the full financial and operational picture of a target company and make informed decisions quickly.

Assessing cultural compatibility is another critical aspect of the due diligence process where AI proves beneficial. Sentiment analysis tools can analyze communication patterns, employee feedback, and social media to gauge cultural sentiment. AI can also analyze employee survey responses for insights into employee satisfaction and cultural alignment. By comparing and analyzing data from employee surveys, for example, AI can identify risks related to cultural fit earlier on in the M&A process.

AI also excels in managing and organizing documents, significantly reducing the time spent on manual filing and retrieval. Automated data entry further reduces human error and speeds up the process, ensuring that all relevant information is accurately captured and easily accessible. This comprehensive approach to

document management and data entry enhances the overall efficiency and effectiveness of the due diligence process, making AI an indispensable tool in M&A transactions.

## Negotiation Support

AI also provides data-driven insights and scenario simulations to support negotiation strategies. AI's ability to analyze market trends helps identify the optimal times to negotiate deals, ensuring that parties can capitalize on favorable conditions. Additionally, AI tools can conduct in-depth competitor analysis, assessing their strategies and performance to provide a competitive edge in negotiations. By examining historical deal data, AI can identify patterns and successful negotiation tactics, offering valuable lessons from past transactions. These data-driven insights empower negotiators to approach discussions with a well-rounded understanding of the market landscape and competitive dynamics.

AI can even play a role in simulating negotiation scenarios. AI can simulate various negotiation scenarios to predict outcomes and optimize strategies, allowing negotiators to explore different approaches and their potential results. This capability extends to impact analysis, where AI assesses the potential effects of different negotiation terms on the overall deal value. By identifying potential risks in negotiation terms, AI can suggest mitigation strategies, helping parties avoid pitfalls and secure more favorable terms. Furthermore, AI can analyze the behavior and negotiation styles of counterparties, enabling negotiators to tailor their approaches to align with the preferences and tendencies of the other side. These scenario simulations and behavioral analyses enhance the strategic planning and execution of negotiations, leading to more successful outcomes.

Specific AI-powered tools like DataFox and Ansarada exemplify the practical applications of AI in M&A negotiations. DataFox provides real-time insights on target companies by analyzing vast amounts of structured and unstructured data from diverse sources. This analysis includes benchmarks, trends, and risk factors, offering a comprehensive view of the target company's position in the market. Ansarada, on the other hand, is an AI-powered platform that provides data rooms, tracks buyer engagement, and delivers real-time insights to improve negotiation strategies. By identifying the most interested parties and their engagement levels, Ansarada

helps negotiators focus their efforts on the most promising leads. These tools demonstrate how AI can enhance the efficiency and effectiveness of the negotiation process by providing actionable insights and strategic recommendations.

Looking ahead, AI is poised to play even more of a role in deal negotiations by facilitating more informed decision-making. By automating routine tasks, analyzing complex datasets, and offering strategic recommendations, AI will empower negotiators to focus on building relationships and securing favorable deal terms.

### **Merger Planning and Post-Acquisition Integration**

AI can play a large role in facilitating a smooth integration process after closing. From an operational perspective, AI can be used to map out the operational processes of acquired and/or merged companies to identify areas where workflows overlap or conflict. AI can then suggest mechanisms to optimize and streamline operations, such as automating redundant tasks or improving supply chain efficiency. AI-powered tools also help allocate resources more efficiently by analyzing the needs of the target companies and affiliates, and can even suggest the best ways to merge information technology systems, consolidate procurement, or optimize inventory management, thereby reducing operational redundancy and maximizing cost savings. Additionally, AI-driven platforms can track the performance of integrated teams and departments in real time, providing continuous insights into key performance indicators and allowing management to quickly identify and address any bottlenecks or underperforming areas.

AI also plays a crucial role in financial operations by automating the consolidation of financial data from both firms, reducing the manual effort required to review and reconcile financial statements. This results in more accurate and timely financial reporting, which supports compliance and stakeholder transparency during the post-merger or post-acquisition process. For example, AI models can forecast the financial impact of a merger by running simulations based on combined historical data, market conditions, and future projections, enabling data-driven decisions about budget allocations, cost-saving initiatives, and performance metrics.

As discussed above, AI can play a role during the target identification phase by identifying potential cultural compatibilities. AI can also enhance cultural alignment during the integration

process by leveraging advanced analytics and machine learning. AI-powered language translation tools in Google Workspace provide real-time translations in email, documents, and chat, enabling smoother collaboration across language-diverse teams. Further, by using AI tools to analyze employee feedback, acquirers can better identify potential cultural clashes or areas that might require additional focus to improve alignment. AI-driven platforms can also create personalized onboarding programs and training modules, recommending tailored learning paths to help employees adapt to new cultural expectations, workflows, and processes. Additionally, AI-powered collaboration tools like chatbots or virtual assistants facilitate better communication between employees from both companies, ensuring that information is accessible and timely, thereby reducing miscommunication and friction during integration. AI-powered cultural integration and sentiment analysis platforms like Qualtrics monitor employee sentiment and engagement, identifying areas of cultural misalignment or dissatisfaction.<sup>15</sup> As an example, when Facebook acquired Instagram, Asana's AI-driven tools facilitated collaboration between product development teams.

AI can significantly aid in talent retention and workforce integration by analyzing the skills, experience, and performance data of employees from both companies to map out key talent and identify leadership candidates. AI can also forecast employee turnover and help prevent the loss of critical talent by identifying those most at risk of leaving during the integration phase. This ensures that high-potential employees are retained and placed in roles where they can contribute most effectively. AI-powered human resources (HR) systems can automate the integration of payroll systems, benefits, and employee records, ensuring that all employees are brought onto a unified HR platform without delays or confusion.

AI can also play a role in unifying and analyzing customer data among acquired companies, merged entities, and any affiliates, ensuring a seamless transition for clients. By analyzing customer behavior and preferences, AI helps maintain consistent customer experiences during and after an M&A transaction, reducing the risk of losing key accounts. AI models can also analyze market data to assess how the merged company is positioned against competitors, providing insights that help firms adjust their strategies to maintain a competitive edge, optimize product offerings, and identify opportunities for cross-selling or upselling across customer bases. AI can optimize supply chain operations by identifying

opportunities to streamline logistics, reduce costs, and improve efficiency. For example, AI can suggest the best way to consolidate vendors, improve warehouse management, or optimize delivery routes. AI-powered tools can also track inventory across a newly combined company, ensuring that stock levels are optimized to meet customer demand while minimizing excess inventory, leading to better resource management and reduced operational costs.

AI has been increasingly used to enhance collaboration between merged entities, helping companies bridge gaps in communication, streamline workflows, and foster cultural integration. Communication platforms like Slack have implemented AI integrations that foster collaboration by automating routine tasks, providing real-time updates, and suggesting relevant conversations or documents. For example, after Atlassian acquired Trello, Slack's AI-driven collaboration tools helped streamline communication and integrate workflows. AI tools for cross-company workflows like Microsoft Teams with AI-powered collaboration tools improve collaboration by providing intelligent task tracking, real-time document co-editing, and language translation services. When LinkedIn was acquired by Microsoft, the Microsoft Teams'-related AI-driven tools helped align departments and automate workflows.

By leveraging AI in these various aspects of post-merger integration, companies can achieve smoother transitions, better alignment, and enhanced collaboration, ultimately leading to more successful M&A deals.

## **Regulatory and Compliance Monitoring**

AI can also play a role in revolutionizing how companies monitor compliance and adherence to regulatory requirements. AI is instrumental in managing regulatory changes, and can help ensure that companies stay abreast of new regulations and update their compliance protocols accordingly. AI systems can track regulatory updates and assess the impact of these changes on ongoing and future M&A deals. Additionally, AI-driven platforms provide training and awareness programs to keep employees informed about new regulatory requirements, fostering a culture of compliance within the organization.

During M&A transactions, tools like ComplyAdvantage monitor regulatory and compliance risks, and help ensure that potential

issues are identified and addressed early in the process. Ayasdi is one AI tool that is particularly valuable in highly regulated industries such as finance and healthcare, as it assesses and tracks regulatory compliance risks. By implementing AI adept at risk identification and mitigation, buyers are better equipped to detect potential red flags such as hidden liabilities, compliance risks, or integration difficulties that might otherwise go unnoticed. M&A professionals can leverage these tools to provide in-depth risk assessments and develop comprehensive and effective mitigation strategies.

AI also plays a role in detecting fraudulent activities. Through anomaly detection, AI algorithms can identify unusual patterns in financial transactions that may indicate fraud. Additionally, AI can perform behavioral analysis to scrutinize employee and customer behavior for signs of potential fraud or misconduct. By assigning risk scores to transactions and entities based on historical data and predictive analytics, AI enhances the accuracy of fraud detection.

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*Editor's note:* The conclusion of this article will be published in the next issue of *The Journal of Robotics, Artificial Intelligence & Law*.

## Notes

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