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RESEARCH BRIEF
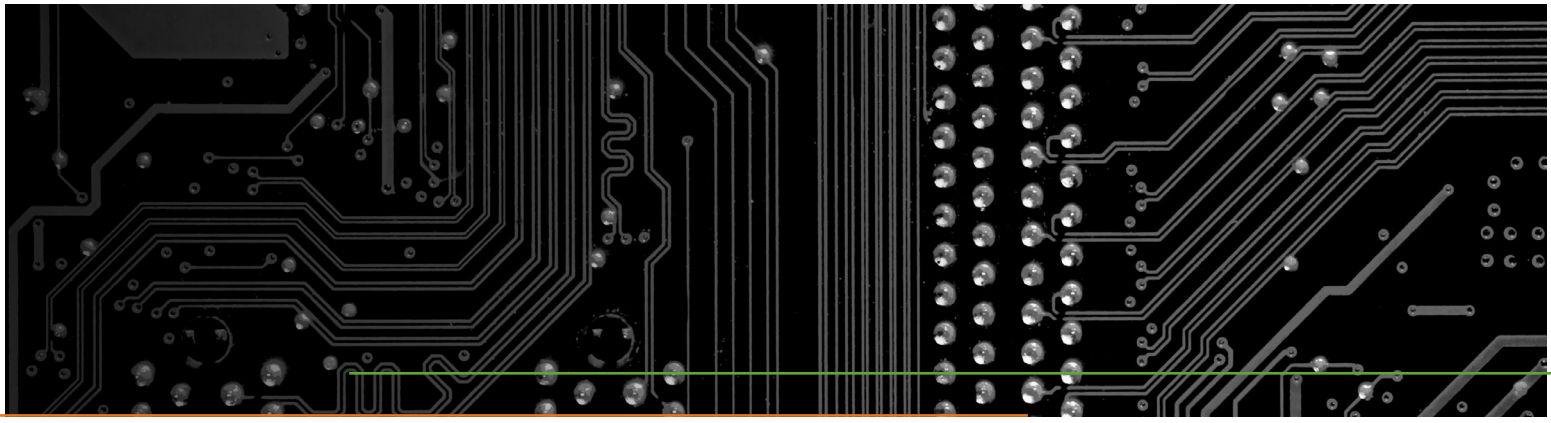
A mercurial eye, a transformative eye:

EXECUTIVE IMPLICATIONS OF CORPORATE MANAGEMENT WITH LLMs

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ARTIFICIAL INTELLIGENCE AND LARGE LANGUAGE MODELS

Since the launch of ChatGPT two years ago, AI in general and large language models (LLMs) in particular have been the subject of breathless praise and speculation.

Commentators have claimed that LLMs will deliver trillions of dollars of value, upskill employees, and eventually transform whole sectors of the economy. But, despite the focus on business transformation, advice for executives is often limited to near-term, tactical, implications. The adoption of LLMs as a tool of business management has far more fundamental and wide-ranging impacts, however, that simple representation in the existing language of business management (trillions of dollars and percentages of efficiencies) fails to capture. *The use of LLMs will reshape corporate management by changing what kinds of information are visible to executives and thus change operations by changing the incentives of employees.* This brief seeks to outline the philosophical underpinnings of this transformation, how it works in practice, and the impacts of this change. Note that for this brief, we only consider the impacts of AI use in corporate management — that is, information gathering and decision-making — not the use of AI directly in operations.

LLMs are a technology of seeing: They make vast amounts of information comprehensible by simplifying it, discarding it, and scaling it. In this respect, they are no different from a humble map, which acts on geographic information. First, simplifying assumptions are made: Maps focus on, at most, a few types of information (perhaps the location of subway lines), which are represented not with their full complexity but as simple straight lines. Nonessential information like the positions of buildings or roads is discarded, as they don't serve the map's purpose. And the lines, which are in real life many miles long, are scaled down to the size of a poster. In this way, the subway system can be grasped at a glance — information that would otherwise require extensive exploration to gather. LLMs perform a similar function: The underlying model that processes the information is far too complex for a human mind to grasp, so it represents its outputs in a much simpler form of prose. LLMs, though wonderfully versatile, necessarily discard some forms of information: both nontextual information like charts and more abstract and human elements like the emotions conjured by a piece of writing. And when LLMs present information, it is scaled down — shrunk in terms of length into a human-readable size compared to the trillions of data points used to train and support the model. When an executive asks an LLM for a summary of a sales meeting transcript, asks a question about the content in marketing materials, or requests a summary of candidates for a job opening, *the LLM produces a subway map of the information: a simplified schematic that allows the executive to navigate at a glance the complex information represented by the response.*

As a technology of seeing, LLMs make complex systems legible to outsiders. Just as a subway map isn't useful for a rider who knows the system by heart, an LLM management tool will do little for the employee on the periphery of the corporate structure. The employee knows their work intimately and has little to no need for the information map provided by LLMs. Rather, it's the executive at the core of the organizational structure who benefits from this map, as it makes the complex work of the employees legible to them. *LLMs are not unique in this way: There are many corporate technologies of seeing, including spreadsheets, software platforms, dashboards, memos, financial information, and reports.* All these technologies of seeing perform the same simplification, discarding, and scaling of information as the subway map, but each serves a different purpose — the information represented by a quarterly financial report is quite different from an internal memo on best practices. It's crucial to recognize that these are all limited in their own way, as exemplified by financial fraud hiding behind seemingly innocuous financial results, or employees using a "work to rule" strike to disrupt company operations.

HOW LLMs ARE DIFFERENT

LLMs are fundamentally different from these other technologies of seeing, however, which creates the novel implications of their use in a corporate setting.

Technologies of seeing are utilitarian, aggregated, standardized, and static. These approaches typically only consider a relatively narrow slice of facts relevant to their purpose, such as financial results or information about sales, and aggregate them into larger standardized categories for the purpose of simplification. LLMs do this but are not nearly as myopic as other corporate technologies of seeing: They can take in a huge array of different facts, in a wide range of formats and standards, and present both aggregated views and specific, individualized facts. Perhaps, most importantly, LLMs are not static. When a Salesforce report is run, or a process memo is read, it is the same every time, barring new data in the system. Not so for LLMs: Asking the same question, with the same data, will produce somewhat different results every time due to the probabilistic nature of the underlying model. LLMs are mercurial — while the themes of a request may be constant, there's no way of saying that any one result or narrative from an LLM is truly definitive. The other key difference is the kind of facts at play, which can be either narrative or numerical. Large-scale data tools for corporate management are, so far, only numerical — as computation of huge volumes of numerical data is relatively straightforward. Getting an oral report from every employee to the CEO of a large company is, by comparison, impossible: Even if the CEO spent every hour of every working day listening to employees, they could not get a report from every person in a year (or even many years). LLMs make such a feat possible by extremely large-scale mapping of narrative, rather than numerical, information. *This combination of factors — that LLMs are a large-scale, nonstatic, and narrative technology of seeing — is what makes LLMs unique among corporate management tools and what makes the implications of their deployment so profound.*
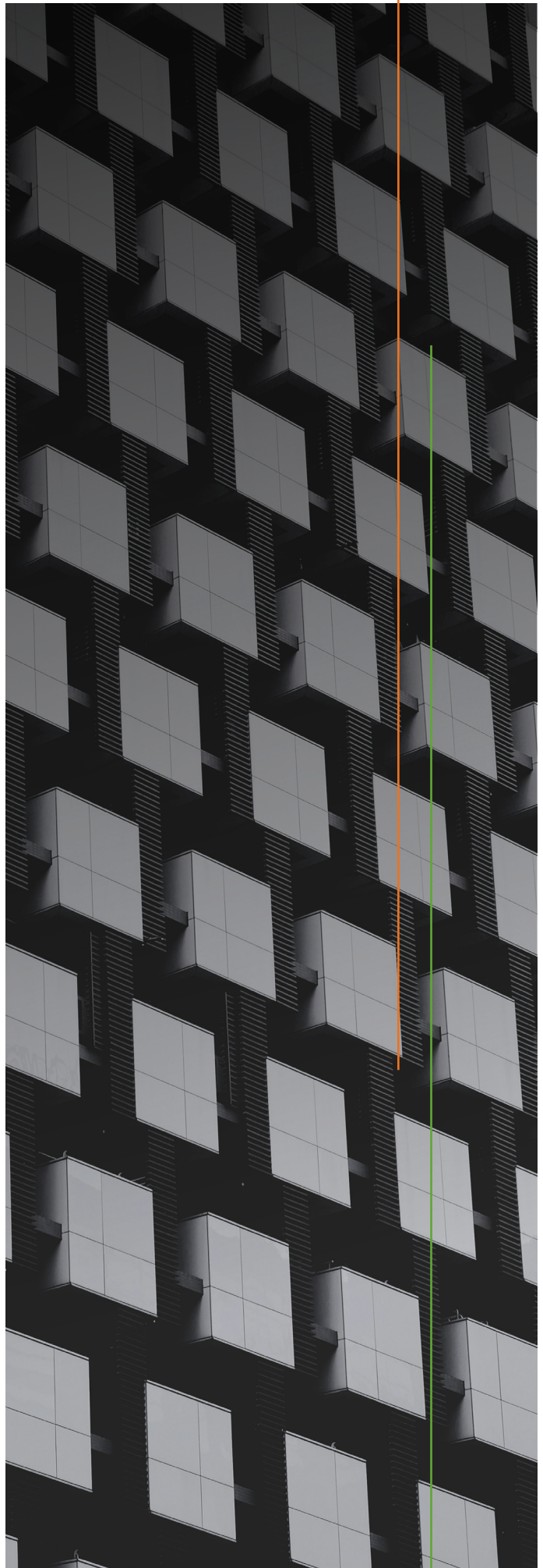
THE IMPACTS OF LLMs

The impacts are continuing to emerge as corporations adopt LLMs — a process likely to be measured in decades if the adoption of modern computational methods is anything to go by. Still, this description of LLMs as large-scale, nonstatic, and narrative points in the direction of certain outcomes:

USE OF LLMs IN MANAGEMENT WILL CAUSE EMPLOYEES TO CATER TO LLMs:

When the first rail lines were built from Paris, they followed perfectly straight radial lines outward, ignoring established communities in favor of geometric perfection drawn on the initial maps. In time, communities grew around the rail lines, which offered many benefits — over time, the map transformed the territory. So too with LLMs. If LLMs are used in performance reviews, for example, employees will learn which types of information are commonly cited by LLMs in positive reviews with time. This type of information will be prioritized, and the inverse will be consciously eliminated by employees. Activities that are invisible to LLMs — be they real-world actions that don't create the right records or unusable data types — will be depreciated, consciously or unconsciously, over time. This can result in unexpected consequences as employees respond to new incentives and feedback loops.

DIFFERENT PRIORITIES & BIASES WILL EMERGE IN DECISION-MAKING:

Current forms of corporate seeing focus on numerical facts, and justifying any innovation or corporate action requires numerical data. ROI, financial factors like earnings before interest, taxes, depreciation and amortization (aka EBIDTA), or numerical measures of performance like uptime, sales data, or numbers of closed tickets dominate decision-making. Consequently, some projects and corporate actions are favored — anything that can very simply and cleanly demonstrate financial return or improve performance metrics is easy to justify. The more LLMs are used in decision-making, the more narrative facts could be prioritized: Actions that create positive user testimonials, lead to more positive interactions on sales calls, or improve happiness in corporate communications can now be measured and acted upon. More broadly, any decision with a strong narrative justification will present more strongly to executives that lean on LLMs to inform decisions.

THE ROLE OF AN EXECUTIVE INVERTS:

Put simply, a modern executive must consider maps of huge amounts of numerical data and synthesize a narrative that describes in real terms how a company should act. LLMs can invert this, challenging executives to derive from narrative descriptions an understanding of how the numerical facts of a company's performance will change in response to their decision. The mercurial nature of LLMs will challenge executives — every time they look at the map of their company, it will change slightly. Divining the stable facts from this changing map will be a critical skill. Unpacking the biases of LLMs, for example, their proclivity for positivity, will also be hugely important to arriving at an accurate understanding of the corporate territory. This could benefit customer-centric companies, from CPG brands to service-oriented specialty chemicals corporations.

LUX TAKE

The transformation of corporate management with LLMs will not be an easy process. Historically, new technologies of seeing imposed from those at the core have been fiercely resisted by those at the periphery. These technologies often do very little for employees' day-to-day work but herald the frightening potential of increased surveillance and disruption to established goals and best practices. These technologies serve management, not employees; just as the process of assigning last names for tax purposes sparked peasant revolts in medieval Europe, so too will ***the implementation of LLM management tools by careless executives provoke employee resentment, resistance, and subversion.*** LLM management tools must be paired with operational deployments of LLMs that improve worker conditions to avoid these issues and implemented by leaders with strong internal credibility. Executives must also carefully consider the biases and incentives they are introducing with LLMs, lest their deployment of LLMs come back to haunt them. The reward for braving these challenges is not just a new way of managing but a new way of seeing, which will enable companies to make much better use of the entire braintrust of their staff, making companies more agile while maintaining executive command and control.
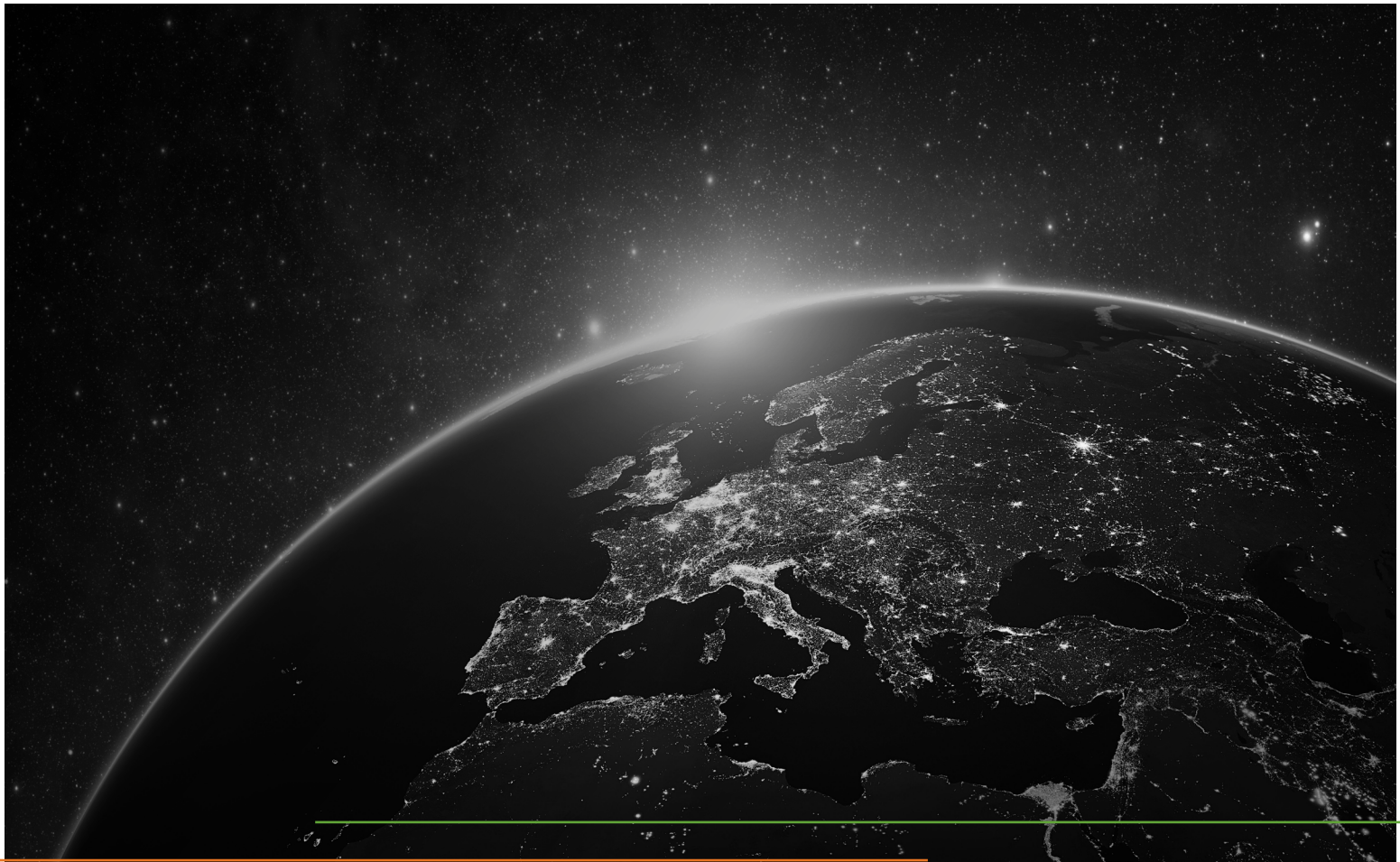
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