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Artificial intelligence sequel: dynamic change in one short month - by Daniel Calano

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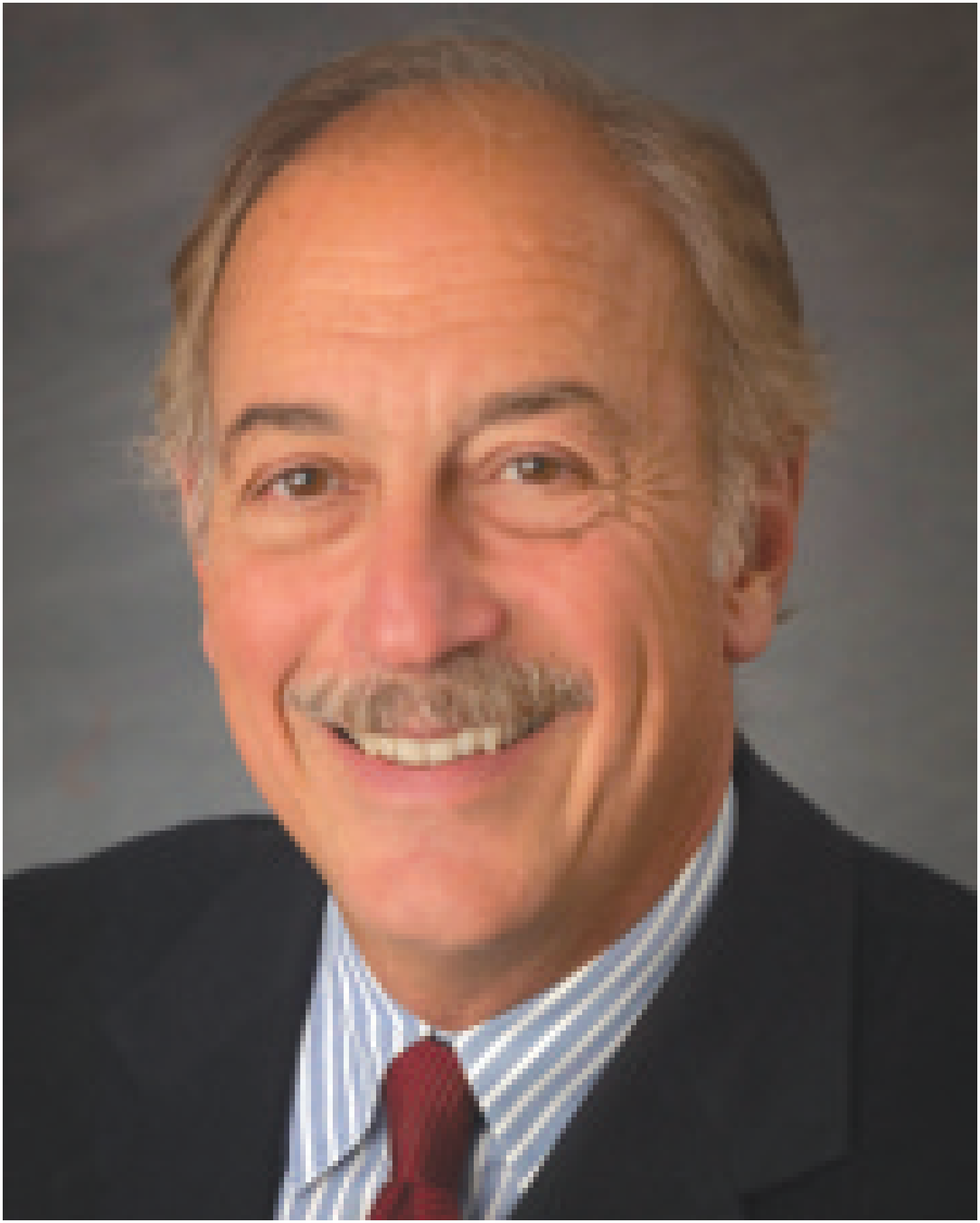

Daniel Calano

Yes, it's correct…I wrote a story on AI last month, summarizing its impacts on real estate. But, I could not resist writing again on the subject because of the enormous growth over the last month in the industry and the continued amazing examples since then. In this short time span, companies like Microsoft, Google and Amazon are all entering and competing in the fray, to get their programs out, and better operating.

You may have seen the interview with the CEO of Google recently on 60 Minutes. It is partially from this interview that the amazing speed of the roll out has become evident, in fact shocking. The leaders of these participating companies all agree that artificial intelligence will impact all industries, in shorter time span than before anticipated. My last story spoke generally about real estate impacts. This month has brought more color to the possibilities and pace of these impacts. Here are a few general examples below.

The most interesting example is in medicine, impacting hospitals, clinics, laboratories, and clearly all of their buildings. This biotech environment and hospital clusters (think Kendall Square, MIT, MGH etc.) focuses on research and control of today's chronic diseases. One of the first steps is biotech research and laboratory experimentation. Scientists agree that protein research is critical to the process. There are 200,000 known proteins involved in human life. According to the discussion, the analysis and understanding of one protein takes about five years of work by one PhD researcher. The math would suggest that it would take one million person-years to finish the work on all known proteins. But, according to Google, their AI platform should be able to shorten the process, for all proteins, to shorter than one year. Aside from the obvious health benefits, just consider the impact on laboratory buildings, hospital uses, clinical studies, educational institutes, etc. No clarity yet, but clearly substantial impacts.

The experts also posit that artificial intelligence can understand and solve questions 100,000 times faster than the human mind. As an example, they suggested that Ernest Hemingway would take about two years or more to write a novel. While obviously not substantiated, and not clear if an AI model would write as well, they hypothecated that artificial intelligence platforms would be able to write a million novels in the same time frame. In another example, Google "told" their AI platform to write a short story on the subject of a family losing a child in miscarriage. Within about five seconds it wrote a 15 page short story, a logical and surprisingly poignant story of the mother, father, family and the emotions they encountered. This borders on human-like understanding.

Think about the speed with which developers can request building designs by selecting a simple set of criteria. In working with AI, making use of human intellect to select aspects they like, AI will begin to understand the developer better, and quickly produce iterations for further review. With that accomplished , engineers will be able to use AI to review many possible structural solutions to best build the building. In the next phase, these concepts, already understood by the AI platform, will begin to determine the cost of construction, the way to reduce costs and time, and increase safety. Next, AI will help manage, monitor, and measure the construction process. On the financial side, banks will have instantaneous information on projects, costs and performance.

The dominant AI platforms are Chat GTB from Microsoft and Bard, from Google. There are differences between the two approaches. Chat GTB's response to questions searches the internet for specific information, and presents a summary within a few seconds. Bard is different in that it has been constantly searching for information on the internet and already holds within its data banks much of the world's information, then organizes to solve the question. Both have their benefits, and more importantly, they both take a very short time frame.

Clearly there will be a learning curve and creation process that will take time in the near future to ensure efficacy. The hope is that human insight and labor will not be replaced, but rather changed and improved. In many people's minds, this will happen much faster, almost geometrically, than previously anticipated. Be prepared for a very exciting future!

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Daniel Calano, CRE, is managing partner and principal of Prospectus, LLC, Cambridge, Mass.