## Science fiction and institutional real estate

Change is coming soon to the industry

by Roy Schneiderman

Tever before has developing an institutional real estate investment strategy felt more like something from a science fiction novel than it does today.

In his December 2015 editorial for this publication, "The Future of Work," Geoffrey Dohrmann discussed whether there will be a need for people to work in the future. Citing robotics and artificial intelligence guru Martin Ford, Dohrmann's essay put forth the hypothesis that "in the future, almost no job will exist that cannot be done more accurately, faster and, therefore, better" by machines rather than by humans. In the same vein, in 2014 a very popular short video, "Humans Need Not Apply," made its way around the Internet. It is entertaining and thought-provoking. Time will tell how accurate it is.

But the conventional wisdom for the past few millennia has been real estate follows jobs. So if people will not be working, whither goes real estate? Are data centers a harbinger of future developments that will be suitable primarily for robots and artificial intelligence machines — and is it even appropriate to call them machines? Will industrial buildings with 10 percent office fit-out be replaced within 20 years by data centers that have 10 percent human fit-out?

Several big-picture issues that may be impactful are already on the radar screens of investors and starting to influence long-term real investment strategies. Many investors use a 10-year pro forma to analyze a property, and the exit implied at the end of that 10 years tends to presuppose another investor with a 10-year horizon, so I will focus on factors that realistically could be expected to impact real estate over the next 20 years. But even with only a "two pro forma" time frame, the analysis sounds at least as much like science fiction as it does traditional real estate thinking.

In sorting through the sea changes that might occur during the next 20 years, and their

potential impact on the major property sectors, the key question is: Will they increase or reduce the demand for real estate?

Starting with industrial properties, any number of developments will influence the sector during the next 20 years. These include the expanded Panama Canal, better rail linkage with Mexico, increasing automation and utilization of robots, America's shifting geography, rising and falling waves of protectionism, and the list goes on. Each of these will influence the nature, location and characteristics of industrial space.

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But what about a sea change such as 3-D printing, or "additive manufacturing," as it is sometimes called? Three-D printing could have a profound effect on the very need for both manufacturing and warehouse/logistics space. With 3-D printing, manufacturing can happen in a store or a garage. After all, people will need to find something to do with all that space where the family car used to be (but more on that later). And items manufactured elsewhere might be delivered by drone or driverless truck.

Perhaps I simply lack imagination, but it seems to me 3-D printing and, to a lesser extent, more-efficient distribution systems, only could reduce the demand for industrial space — and certainly

reduce the need for traditional, 20th-century industrial space. It is not at all hard to see these factors significantly affecting real estate investments within the "two 10-year pro forma" timeframe.

Turning to retail, both Amazon.com Inc. and eBay Inc. began operations in 1995, more or less "two 10-year pro forma" ago. Clearly, these two companies and their e-commerce brethren already have shaken up retailing dramatically. Brick-and-mortar retail stores have not disappeared, but the amount of viable retail space has decreased, and the nature of retailing has changed significantly. In fact, of the three major commercial segments, retail may be the one with the least dramatic change in its future, simply because the changes in this sector started earlier and have created considerable change already.

## Some of these factors will turn out to be structural changes in society. Others will be cyclical changes that will ebb and flow over time.

The office sector also began to see dramatic changes late in the last century. "Hoteling" began in the 1990s at about the same time information started to become digitized on a significant scale. Improvements in technology and communications have allowed more people to consider working from home, at least part of the time. These changes have both fundamentally reduced the demand for office space and changed the nature of the space needed.

But still yet to come will be the rise in artificial intelligence. Even if artificial intelligence falls short (at least in the next 20 years) of hastening "the end of economic humankind," as Dohrmann referenced in his essay, it is not at all hard to imagine a vast reduction in jobs in fields such as accounting, tax, architecture and engineering. Some elements of research, consulting and the law also could be in peril. The rise of artificial intelligence is not only going to change the nature of office jobs and office space; it is going to fundamentally dampen demand as jobs are lost. Will there be some corresponding increase in office space demand that also arises from artificial intelligence? Maybe, but it is not clear what it will be.

If our preliminary conclusion is that existing or imminent trends are likely to reduce the demand for the three major types of traditional commercial space, will the future also be bleak for residential?

Many factors in play today are likely to influence where people are going to want to live and what type of housing they might prefer. Among them are delayed or foregone family formation, trends in urbanization, changes in household size, immigration, multigenerational housing, and

changing propensities to rent rather than own. On the technology side of the equation, the advent and adoption of driverless cars is likely to have a profound impact on where people live because commute times will be both more productive for the occupant and shorter, as driverless cars presumably will achieve faster average speeds.

Some of these factors will turn out to be structural changes in society. Others will be cyclical changes that will ebb and flow over time. All will influence the nature and location of housing demand, but only changes in household size will affect the amount of residential demand — and a decrease in household size actually increases demand for residential units. Indeed, as long as the number of households in America is growing, there will be growing demand for residential units. And, given the potential physical obsolescence of residential units and the functional obsolescence of many homes and attached units built before the 1990s, there is likely to be demand for residential space even without population or household growth.

The time has long passed when institutional investors shied away from investing in rental apartments. But institutional investors generally have been slow to explore other options for placing capital in the residential sector beyond traditional apartments. On the rental side, this would include single-family homes for rent (including the somewhat-pioneering purpose-built single-family homes for rent, which are gaining some traction in the Southeast), student housing, and for-rent senior housing products.

It is also possible for institutions to invest in for-sale residential. This can take the form of long-term land development projects and short-term homebuilder finance and lot-banking programs. The California Public Employees' Retirement System pioneered investment in for-sale residential in the 1990s with a program that was quite successful until the residential market crashed. More recently, institutions have accessed this sector through private equity funds, although pension funds such as the California State Teachers' Retirement System, the Arizona State Retirement System and the Regents of the University of California have invested directly in for-sale residential.

Going forward, given the demand side of the equation probably is more stable for the residential sector vis-à-vis the commercial sectors — and there is at least as much supply constraint with respect to residential as compared with commercial — real estate portfolio risk might well be reduced by marginally overweighting residential property and underweighting commercial. At least until we all see exactly what the future brings. �

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