

Forecasting the Future

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1. The Forecasts

1	The price of gold in 2030 will be above \$10k	80%
2	The 10-Year yield will range between between 6%-7% in 2030.	60%
3	The U3 unemployment rate will range 7%-9% in 2030.	70%
4	The Labor Force Participation Rate continues to declines to below 59% by 2030. *The informal economy grows.	70%
5	Universal Basic Income (UBI) will be in the top 10 most important issues for the 2028 election.	80%
6	Bitcoin to reach \$250K (+/- 10%) in 2029	70%
7	The US fertility rate drops below 1.6 births per woman by 2030.	70%
8	More than 20 US States are issuing welfare benefits by means of stablecoins by 2030.	80%
9	The BRICS+ launch a stablecoin intended for international use by 2030.	70%
10	Inflation adjusted housing prices as measured by Case-Shiller to decline by at least 10% by 2030.	70%
11	At least 10 Local Governments (counties & municipalities) with population of at least 100K file for bankruptcy by 2030.	50%

2. Framework & Holistic Synthesis

Trying to predict the future is fun yet impossible, it's fruitless effort, but not necessarily a waste of time. Driven by my profession as an architect, I am going to mostly focus on AI's effect on our nation's built environment. This is almost as much a creative writing exercise as it is an analytical one.

Emergence of the AI, IoTs & Robots Economy

AI, along with IoT's (Internet of Things) and Robotics, often referred to as 'Physical AI', promises (threatens) to alleviate need for human effort. The potential for an economy without humans; an economy not predicated on human contribution, or even human consumption.

Employment

My base case is that in the long term Javons Paradox will prevail; Humans will be pushed further up the value chain, new products and services requiring human input will emerge and thrive. Considering the entirety of scope of AI, IoTs and Robotics; it's difficult to imagine how that happens, but i am optimistic that it will. In the short to medium term (next five years) AI/IoTs/Robots will slowly but steadily eat the job market.

The rate of progress that AI/IoTs/Robots makes in devouring jobs will be slow, non-linear and prone to setbacks, but it will be persistent. There's the obvious advantages AI/IoTs/Robots has; no need for adequate lighting & ventilation, no sick days, etc. AI/IoTs/Robots has the added advantage that its energy and maintenance cost are 100% tax deductible.

Housing

Home prices, especially for single-family suburban homes, will plummet over the next five years. Home value face a barrage deleterious factors:

- The rate of Baby Boomers moving out of their single family homes will only increase.
- Current housing-to-income ratio is sitting at historic and unsustainable highs.
- Interest rates over the next decade are more likely to trend up than down.
- Declining employment opportunities especially for younger workers will keep them out of the housing market at any price.
- Family formation and fertility are both declining.
- Declining immigration.

AI/Physical AI are clearly exacerbating the last three points.

A decline in home values hits across the economy, dampening demand in almost all sectors and leading to loss of tax revenue, particularly for local governments; complicating their abilities to meet their obligations to pensioners, creditors and constituents.

Smart Buildings

A new building type is emerging, could lead to a productivity boom and could help fill state and local government's revenue gaps. Often referred to as a 'Smart Building', these buildings are equipped through-out with IoTs (Internet of Things); Physical devices embedded with software, sensors and network connectivity. These IoTs communicate with a 'Digital Twin'; a digital manifestation of the building that continuously monitors components and systems. A

building can be newly built as a smart building and existing building can be retrofitted. Smart Buildings can be of any size. Buildings will exist in varying degrees of 'Smart' depending on the amount of IoT devices or how extensively the 'Digital Twin' controls it.

IoT's can be embedded in just about all systems that comprise and operate a building; mechanical, electrical, plumbing, structural, occupancy & security, fire & life safety, water proofing & moisture control, etc. The Digital Twin (operated 24/7 by AI) constantly monitors the building systems; when an issue arises, management is notified, an order ticket is generated, relevant parts are ordered and maintenance (increasingly robots) is dispatched...usually well before the issue becomes a catastrophe.

Smart Buildings could possibly eliminate the lion's share of catastrophic loss due to fire and water damage. Security breaches may become near impossible and structural failures identified well before a disaster occurs. This will prevent a tremendous amount of wealth destruction, not just of the buildings themselves, but also the economic activity that occurs within the buildings. For this reason, Smart Buildings will hoover-up capital; tenants & occupants will prefer them, they'll command more favorable terms from investors and insurers. This new, high degree of certainty could and assurity could possibly dampen interest rates and inflation.

At some point our nation may become carpeted by a network of Smart Buildings and Smart Infrastructure; all operating by the same set of values, standards and protocols. Similar to colonial organisms like coral reefs and quaking aspens, this AI directed network of smart buildings and infrastructure could begin to function as a singular unit; incentivizing behavior that benefits the network and disincentivizing that which doesn't.

The Smart Building AI facilities manager with it's IoT eyes & ears, and its robot arms & legs could take building performance to whole new level. Energy efficiency and water conservation at levels never seen before. A network of AI shepherded Smart Buildings and Smart Infrastructure out-fitted with solar panels, wind turbines and geo-thermal systems could become a net energy producer. An AI optimized power grid with a network of electric storage facilities producing and delivering energy at levels of efficiency unseen.

Perhaps it's reasonable to imagine that AI directed robots, 3-D printers and transport drones could upend math on the age old standard that industrial production is done at scale in centralized factories. A future where many products and devices are produced on site, made to order, and delivered within minutes.

The Hyperscalers (Microsoft, Amazon, Google) sit at the nexus of the Smart Building software stack, giving them a tremendous amount of power over the world that we may live in. Real estate has always been encumbered by zoning ordinances, financing stipulations and insurance clauses, but losing the ability to operate or even access your building may blur the concept of real estate ownership.

A significant part of the value-add is the network of Smart Buildings and infrastructure acting in unison; producing, storing and distributing energy and resources at optimal efficiency under the stewardship of a central AI coordinator. I call this Centrally coordinated smart building and infrastructure complex, The Smart Building Network.

A new type of Currency

As AI/IoTs/Robots consume the job market, consumer will be crushed and social tensions will rise, towards the end of this decade it will be come clear that Universal Basic Income (UBI) may be necessary.

Stablecoins, enabled by the Genius Act of 2025, although not as all encompassing as CBDCs, seem almost purpose built for the UBI era. Digital, trackable, programmable, censorable; the government isn't going to dole out free currency without strings attached. Additionally, programmable UBI currency is a brand new lever for Central Banks to stimulate or dampen the economy.

The government may not be the only player in the UBI game. The hyperscalers and other parties related to the may see fit to dole out stablecoins or crypto tokens of some form to encourage participation in their ecosystem and as a form of patronage to buy political support.

UBI sounds great, particular for those who are struggling, but it's a trap for a large segment of the population. Guaranteed income, combined with a scarcity of jobs, may lure many into institutional dependency.

On the bright side, stablecoins may lead to a significant productivity boost. Programmability will enable 'Smart Contracts' more finely articulated contracts where the currency exists within the contract and isn't disposed of until the terms of the contract are fulfilled. This could provide for a whole new level of certainty in business, reducing the need for costly litigation and going a long way toward solving the Principal/Agent problem and the Byzantine Generals Problem.

The New Global Monetary Standard

It's no secret that the US Treasury intends to encourage USD stablecoins for use internationally. These stablecoins are collateralized with US Treasury Bills, thus creating a new source of demand for US debt. I predict that by the end of the decade, the BRICS+ will launch...something to come compete with international USD stablecoin. I'm not sure what they'll launch, the BRICS+ are a diverse bunch of 'strange bedfellow'. Perhaps it's a Chinese Renminbi stablecoin or CBDC that the other BRICS+ nations have some limited issuing rights, or maybe they each launch their own - a constellation of stablecoins or CBDCs that somehow coordinate through special rules. I am not sure what the BRICS+ will launch, but they are clear on their intent to challenge our 'exorbitant privilege' of being the issuer of the world's reserve currency. Additionally, the ECB is exploring a Euro CBDC, perhaps they may try to expand its use beyond the Eurozone.

In an era of Modern Mercantilism and the diminishment of global free trade, some ambiguity regarding global currency is to be expected. With new technology like crypto-currency, we are seeing new types of currency, and money, being invented. Considering the debt loads of the most developed economies causes one to be open-minded toward other types of money. I'm starting to think of 'money' by where it sits on a money-currency-jurisdiction-technology matrix.

3. Analytical Appendix

Additional Commentary on Housing

According to Economist Fred Harrison's 18.5 year real estate cycle should hit it's peak in 2026, the last peak was it 2007. Harrison's cycle referred to land values and not the structures on the land, really identified a pattern of speculation on land value. Residential real estate particularly in far reaching suburbs of medium and major metropolitan areas have been the subject of speculative investment ever since the Great Financial Crisis.

The United States has a stock of approximately 92 million single-family homes, nearly 2/3's of Americans live in a single-family home. A significant plurality, likely a majority of these homes are of suburban prototype; situated parallel to the road, generous lot sizes and car dependent. Understanding that the supply of houses is currently limited, and the delivery of new homes takes time; In a world of falling family formation and declining birthrates, this housing simply becomes less necessary or aspirational.

Boomers and Gen-Xers have failed to solve our nation's housing crisis so now mellinneals and Gen-Zers are solving it by forming less families and having less children. As the demographics become clear, what will also become clear is that America will have a glut of suburban single family homes, particularly in the further-out suburbs. The larger institutional investors are already net sellers, smaller 'mom-and-pop' investors will likely become sellers too. I see single-family residential neighborhoods dividing into three separate categories;

A. Established Neighborhoods: Usually older and more affluent communities, desirable locations, these communities will generally retain their value. In localities with generally positive demographics, many will see more intensive development as older homes are demolished to make way for larger newer homes.

B. Precarious Middle-Class Communities: Places where many residents may be struggling to keep up, but they generally want to maintain their community; They may look to join the Smart Building Network. They'll relax zoning rules for data center's, energy resources and denser development. Homes will one-by-one proliferate with IoTs In order to gain more favorable financing and cheaper insurance.

C. Suburban Shantytowns: The past couple of decades have witnessed absurdity in residential development, particularly on the edges of sunbelt metropolises. Suburban communities often in far flung locations. Locations devoid of any planning where infrastructure is entirely inappropriate and construction quality is poor. Many of these communities may see deterioration, abandonment and even de-annexation if they ever were apart of a municipality.

Investors have swooped into these communities buying homes by the dozen, and they'll swoop out just as quickly. Landlords who stay are turning their houses into subsidized 'sober-homes', programs like these will likely expand to warehouse the homeless.

Some of these communities may deteriorate so badly that owners simply walk away and these neighborhoods as they become shanty-towns for squatters living on the edge of society. In fact, these shanty-towns may be preferred for some individuals who prefer not to live in a built environment ruled by Artificial Intelligence.

Conversation with Claude regarding Smart Buildings

Me: Claude, can you comment on my assertion that's marked, regarding smart building networks ability to generate power, electricity through photovoltaics, wind, geothermal, or any other power generation possibilities?

Claude: The passage in question: "A network of AI shepherded Smart Buildings outfitted with solar panels, wind turbines and geo-thermal systems could become our nation's number one energy resource."

A few things worth flagging on that assertion:

Scale mismatch. Buildings themselves are net energy consumers, not producers, at almost any density that matters. Rooftop solar on a typical building can offset a meaningful share of that building's own load — sometimes even net-positive for very efficient buildings — but "becoming the nation's number one energy resource" would mean out-producing natural gas, nuclear, and utility-scale solar/wind combined. The physics of rooftop-scale PV per square foot of building footprint doesn't get you there; utility-scale solar farms are far more efficient per dollar and per acre than building-integrated systems, precisely because they're optimized for generation rather than shaped around a structure's form and shading.

Wind is the weakest link here. Building-mounted wind turbines are notoriously poor performers — turbulence from the building itself and surrounding structures kills output compared to open-field or offshore turbines. This is a place I'd soften or cut rather than defend.

Geothermal is real but is climate control, not power generation. Ground-source heat pumps (what's typically retrofitted into buildings) move heat for HVAC efficiency; they don't generate electricity. Utility-scale geothermal power plants are a different technology entirely and aren't something you bolt onto a building. Worth clarifying which one you mean, since conflating them weakens the claim.

Where the argument is stronger: distributed generation + storage + AI-optimized grid *demand response* — i.e., Smart Buildings as a massive flexible load and storage network (batteries, EVs, smart HVAC) that smooths grid peaks — is a much more defensible and increasingly real thesis than buildings as primary generation source. That reframe (buildings as grid *stabilizers* rather than grid *suppliers*) would probably survive scrutiny better while keeping your core AI-coordination idea intact.

Me: Can you comment on the hyperscalers; such as Microsoft, Amazon, Google, there place in the software, and even the hardware stack for smart buildings?

Claude: Passage: "The Hyperscalers (Microsoft, Amazon, Google) sit at the nexus of the Smart Building software stack, giving them a tremendous amount of power over the world that we may live in."

This is one of the stronger, more defensible claims in the piece, but it could use more precision:

Where you're on solid ground. All three do have real, existing footprints here — Azure Digital Twins, AWS IoT (SiteWise, TwinMaker), and Google Cloud's IoT/AI stack are genuine products aimed at exactly this space: ingesting building sensor data, running the "digital twin" simulation layer, and applying AI/ML for predictive maintenance and optimization. So the claim that hyperscalers are positioned at the software/analytics layer isn't speculative — it's already

happening. Naming this explicitly (rather than just “the Hyperscalers”) would strengthen the piece and show you’re building on current infrastructure, not just extrapolating.

Where the argument needs more rungs on the ladder. The jump from “hyperscalers run the cloud/AI layer” to “blurs the concept of real estate ownership” skips over the actual mechanism. A more complete version would specify:

- **Data control:** whoever owns the digital twin’s data has leverage even if they don’t own the building — similar to how app stores control commerce even without owning the retailers.
- **Subscription/licensing lock-in:** if a building’s fire/life-safety or HVAC optimization depends on a live cloud service, losing that contract could functionally disable systems, even though the hyperscaler holds no deed. That’s the real “ownership blur” — control without title.
- **Interoperability/standards capture:** whichever platform becomes the de facto standard (like Windows did for PCs) gets outsized ability to set terms for insurers, tenants, and even zoning compliance software.

A gap worth addressing: your piece doesn’t touch the *hardware* stack much, even though your question raises it. The physical layer — sensors, edge devices, chips — is more contested and fragmented (Honeywell, Siemens, Johnson Controls, plus semiconductor players like Nvidia for on-device inference) than the cloud layer. If hyperscalers only dominate the software/AI layer while hardware stays fragmented across industrial players, that actually limits how total their control could be — a countervailing force worth naming rather than assuming hyperscaler dominance is total end-to-end.

One risk: this section could read as asserting a monopoly outcome without acknowledging que antitrust/regulatory response is a live variable — the EU and US have both shown willingness to intervene when a small number of firms control critical infrastructure chokepoints. Even a sentence acknowledging this would make the forecast feel less like a straight-line extrapolation.

Me: Comment on the network of smart buildings acting as a sort of collateral for, a crypto token or its ability to lower interest rates and insurance rates, being a kind of dampener for inflation.

Claude: A few distinct claims are getting bundled together here, and pulling them apart helps evaluate each on its own footing:

Smart Buildings as collateral for a token. The essay describes stablecoins collateralized by US Treasury Bills — that’s a real, existing model (most USD stablecoins like USDC work this way). Real estate as collateral is also an old, well-understood concept (mortgages, REITs, mortgage-backed securities). But “Smart Building as crypto collateral” is a different animal: real estate is illiquid, hard to price in real time, and legally cumbersome to seize/liquidate compared to T-bills. If you’re proposing tokenized ownership shares or debt instruments backed by Smart Building assets, that’s more like a real-estate-backed stablecoin or security token — which does exist in nascent forms (tokenized REITs, RWA — “real world asset” — tokenization is a growing crypto sector) but has never been done at a scale or with the price stability needed to back a *currency* the way T-bills can. Worth naming this explicitly as a distinct, more speculative claim from the UBI/stablecoin argument, since T-bill collateral and building collateral don’t carry the same risk profile.

Lower insurance premiums — solid mechanism. This one is well-supported: real-time sensor data (leak detection, fire suppression triggers, structural monitoring) genuinely reduces claims risk, and insurers already offer discounts for smart water shutoff valves, monitored alarm systems, etc. Extrapolating that to full Smart Building discounts is a reasonable, incremental forecast — not a big leap.

Lower interest rates on Smart Building debt — also fairly solid. Lenders pricing risk into mortgage/commercial loan rates based on default and casualty risk is standard; less catastrophic loss risk plausibly supports better loan terms for a specific asset class. That's a defensible, narrow claim.

The weak link: “dampen interest rates and inflation” at the macro/national level. This is where the argument overreaches. Micro-level risk reduction (better terms for a building or its owner) doesn't straightforwardly aggregate into macroeconomic effects like national inflation or the Fed's benchmark rates, which are driven by monetary policy, labor markets, and aggregate demand — not by the risk profile of a subset of the commercial/residential building stock, however large. You'd need Smart Buildings to represent a large enough share of the debt and insurance markets that reduced tail risk there measurably shows up in aggregate credit spreads or CPI components (like owners'-equivalent rent) — a chain of reasoning the piece doesn't currently walk through. I'd flag this as the biggest logical gap in the section: it conflates asset-specific risk repricing with macroeconomic dampening, and the second doesn't follow automatically from the first.

If you want to keep the ambition of the claim, the fix is scoping it down: something like “could meaningfully reduce insurance and financing costs *for the Smart Building asset class specifically*, and if that class grows large enough, could exert modest downward pressure on housing-related components of inflation” — a narrower, more defensible version of the same idea.

Me: Claude, comment on the advantages of having so many buildings on a singular network. Is there a scaling advantage, describe it?

Claude: The passage in question is the coral reef/quaking aspen metaphor — buildings on a shared network “beginning to function as a singular unit.”

There's a real case for network/scaling advantages here, but it's worth separating which type of scaling effect you're actually claiming, because they have different strength:

Where scaling genuinely helps — data and AI model quality. This is the strongest version of your argument. A predictive maintenance AI trained on sensor data from one building has a small sample size; the same AI trained across thousands of buildings sees far more failure modes, edge cases, and rare events (a pipe burst pattern that's happened once in Building A but a hundred times across the network). This is a legitimate machine-learning scaling advantage — more data generally improves predictive accuracy, especially for rare-event prediction like catastrophic failures. This is analogous to how large hyperscalers already benefit from fleet-wide data (e.g., autonomous vehicle companies pooling driving data across their whole fleet).

Where scaling helps — grid-level coordination. If buildings can share power, shift demand, or store/discharge energy in a coordinated way (a “virtual power plant” model), the network as a whole can smooth demand peaks and reduce the need for costly peaker plants. This is a real, currently-deployed concept (utilities already run VPP programs aggregating home

batteries and smart thermostats). Scaling this up strengthens grid stability — genuine scaling advantage, well-grounded in current practice.

Where scaling helps — standardization and procurement. A single network operating on common protocols could achieve economies of scale in maintenance contracts, parts inventory, and technician deployment — similar to how a hotel chain benefits from standardized operations versus independent properties. Reasonable, if modest, claim.

Where the coral reef/aspen metaphor overreaches. Coral reefs and aspen groves are literally one organism (aspens) or symbiotic colonies (coral) — there's no separate ownership, no competing interests, no negotiation between parts. Buildings on a network are owned by different, often competing entities (landlords, REITs, municipalities) with different incentives. The metaphor implies a degree of unified “self-interest” for the network that doesn't map onto a system where the participants are actually adversarial or at best transactionally aligned. A closer real-world analogy might be something like an electrical grid or telecom network — genuinely interconnected, with real coordination benefits, but still made up of self-interested actors who negotiate, free-ride, and sometimes act against the network's collective interest. That's a more defensible framing than an organism metaphor, and it also opens room to discuss the governance question your piece doesn't fully address: *who* sets the “values, standards and protocols” for the network, and what happens when a building owner's interest conflicts with the network's?

One more scaling risk worth naming: concentrated failure modes. A tightly coupled network raises cyber-security stakes — a vulnerability or bad actor gaining access to the shared standard could potentially compromise many buildings at once, rather than just one. Centralization that improves efficiency also concentrates risk; worth at least a sentence acknowledging that trade-off, especially since your piece elsewhere raises hyperscaler control as a concern.