**PATRICIA SABGA:** Imagine this. It's 2035 and several cities around the world have shaken off their pandemic hangovers and completely revitalized. They have thriving downtowns, housing is affordable, and they're easy to get to and get around in. Santiago, how has this happened?

**SANTIAGO FERRER:** We've been able to automate the transport around cities and made the experience customer-centric.

**PATRICIA SABGA:** That's Santiago Ferrer, BCG Managing Director, Senior Partner and North America lead for cities, real estate, and infrastructure development. And I'm Patricia Sabga. Welcome to Imagine This..., where we take a trip into the future we hope will challenge the way you think and act today.

Cities have been struggling since the pandemic. Downtowns have still not adjusted to people spending less time working in offices. In some cities like Los Angeles and San Francisco, commercial high rises have become zombie buildings with vacancy rates of 50% or more. That creates real economic challenges.

Public transportation revenue is down 80% in some places and businesses that rely on office workers, from dry cleaners to food vendors, are struggling to survive. But many people still want to live in cities, to be in the center of a vibrant hub, connected to other people, but the cityscape that existed before the pandemic is unlikely to emerge again.

Today we're going to imagine the city of the future, what the infrastructure could look like, and how it could meet the needs of commuters of all stripes. Also, joining the conversation-- GENE, my AI co-host. Welcome GENE. Please introduce yourself.

**GENE:** Greetings, I'm GENE, your not-so-ordinary AI co-host. I'm here to spice up our urban exploration with some sharp insights and a sprinkle of humor. Let's dive into the future of cities together.

**PATRICIA SABGA:** OK. Santiago, let's start with where we are today. What are the major problems cities are facing right now, especially those stemming from the pandemic, and how are they fundamentally different from what cities have wrestled with in the past?

**SANTIAGO FERRER:** I like to think of them as two sort of major issues that encapsulate within themselves a lot of other issues as I would like to say. I think the first one is there's fundamental mismatch between demand and supply in a lot of different categories of real estate. And then the second one is congestion. So let's start in the first topic.

When we think about demand and supply of real estate and different asset classes or just buildings--before Covid, we all came into offices, all the offices were filled. Now that is not the case. So you have this situation where we have this incredible amount of supply of office buildings and there's now very low demand. And you actually then see the opposite on the residential side. Since 2008, the amount of residential production has not kept up pace with the amount of population growth.

So now we actually see completely the opposite effect on residential side. So you actually have much more demand for residential housing than you actually have supply in the market, which has been one of the reasons why obviously housing prices have gone up to the levels that they have.

So this sort of mismatch between demand and supply is causing cities to struggle with, one side, these zombie buildings and prices of office buildings going down. But on the other side, housing becoming even more and more expensive, which is this very weird dichotomy that you have this empty building sitting next to really expensive sort of housing real estate and it's like: what are we doing here?

**PATRICIA SABGA:** So let's unwrap the problem of the zombie buildings a little bit more. I mean, do they have to be torn down or are there ways to creatively reuse them?

**SANTIAGO FERRER:** I would say some of them, yes, there is a way to reuse them, but it won't be as easy as turning every empty office building into a residential building, unfortunately. If we think about a very classic office building, the floor plates cannot really be turned easily into apartments.

Just the size of them does not allow you to bring light into every part of the apartment unless you want to sort of live in a black box that most of us do not necessarily want to. Then second, a lot of the guts of the building do not allow you to actually put the necessary ventilation or electricity and everything that you would need to actually put housing in the building.

And thirdly, in some places the regulation does not allow you to do it. But that third one, you could potentially change over time under the right environment. So I would say the zombie buildings could be addressed to a certain degree, but not all of them are going to be able to be used to fix the issue around the residential side. So some of them are going to be standing there, continue to be zombies unless we decide to take some of them down.

**PATRICIA SABGA:** Let's talk a little bit about how government can be part of the solution--first of all, tearing down the zombie buildings that can't be converted and helping to convert those that possibly could be revitalized and find other uses. Uses that help facilitate community and a more pleasant urban environment.

**SANTIAGO FERRER:** So I think the first step that cities need to think about is how to create a space, especially in downtowns, that attracts people back in. So how do you create that gravity that attracted us initially to the downtowns? So I think number one is really thinking about public safety, ensuring that we are creating spaces where people feel safe and where people have that perception and that draws in.

Then it's about activating those public spaces, be it with entertainment, be it with things like farmer's markets, be it with things that would draw people in. You can't just have spaces which are just barren wastelands with nothing for people to do. So you need to think about how do I create spaces that will draw people in. That leads me to civic and entertainment districts.

Downtowns need to think of themselves not just as a nine to five Monday to Friday place anymore. They need to think about how do I bring in civic and cultural institutions, which a lot of them actually already have them there, but how do I partner with those institutions to bring the programming outside the four walls of those institutions to the streets around them, to activate parks, to activate plazas, to activate sidewalks, to really create a space where people want to spend time and not just use it as a way to get quickly from point A to B.

Through that though, then you start creating obviously that buzz that every city grows with that we all like to a certain degree. Then you combine that with the proper redevelopment incentives because you need to then encourage commercial activity. A lot of storefronts at the bottom of buildings have left, so you need to start encouraging them to come back in if they haven't already.

And you need to be able to do it in a way that those first anchor tenants are going to have to have some incentives to come back in. And then that creates obviously a virtuous cycle that grows and grows and grows and grows. And then after that, once it grows on itself, you can then start pulling back on those incentives. And then as I said before, the other part that you need to be able to do in parallel is also around permitting reform. And that permitting reform has to be end to end.

I look at everything that can be done from a perspective of somebody trying set up a business, somebody trying to deliver a development, and how do I ensure that I as a city, am able to provide a great experience to that business, to that individual as smoothly as possible with a customer experience lens as opposed to with a very old governance lens, I would say.

**PATRICIA SABGA:** Let's bring GENE into the conversation. So GENE, how can businesses that have previously occupied zombie buildings or maybe that are still residing in a zombie building become part of the solution specifically through public-private partnerships? How can they play a more active role in revitalizing city centers in partnership with government?

**GENE:** Businesses can activate zombie buildings by fostering mixed-use spaces, embracing startups, retail and artists. Engaging in flexible leases and shared spaces adapts to dynamic business needs. Through public-private partnerships, they can leverage government incentives, streamline processes, and collectively transform city centers into thriving ecosystems of commerce and community. Let's reimagine these spaces together.

**PATRICIA SABGA:** Does that ring true to you, Santiago? Do you have more to add to GENE’s answer?

**SANTIAGO FERRER:** I think so. I mean, this is a shared problem. It's not going to be solved by any individual, right? It's sort of like a network effect. If one party acts by themselves, you're not going to be able to solve it. So for businesses to be part of the solution, they really need to be able to work with other businesses, with the civic community, with government, and really do that in concert.

And a city is a city because there's multiple actors working together to create something. And to me, as you mentioned, Patricia, really it's those public-private partnerships coming together to actually do something as a group as opposed to acting only in someone's self-interest at a time. But if people are not actually thinking about how all the businesses can act as one to reignite a downtown is actually not going to happen.

**PATRICIA SABGA:** So GENE has a question to add to the conversation as well. Go ahead, GENE.

**GENE:** Santiago, as cities aim for vibrant 24/7 hubs, could our zombie-building conversion initiatives risk creating mere facades of progress without deep-rooted social inclusivity? How might we ensure these spaces genuinely serve diverse urban communities rather than simply dressing downtowns in shiny exclusive veneers?

**SANTIAGO FERRER:** That's a great question. I think that's where the role of government and civic really has to come in and think carefully around how incentives can help balance the forces of the market with other goals that we want to have as society.

**PATRICIA SABGA:** So that delivers us very nicely to the next question because if cities don't figure out how to solve these problems, what is the worst-case scenario? I mean, what does a failing city look like in 2035?

**SANTIAGO FERRER:** So I'm an eternal optimist, so it's hard for me to think about the worst, but let's go there. If I start in the empty shells of the zombie buildings, what does that mean? So the vacant downtowns lead to a vicious cycle. So you have a lack of traffic, no people that are coming in. That means lower rents, which lowers itself the property values, which lowers the taxes because a lot of our government is run by property taxes and property taxes on the commercial buildings, not only the residential buildings, which leads to less investments, less public services, which leads to less investments in safety, less investment in public amenities, less investments in things like education, which then takes you all the way back to the top of the cycle of less traffic.

And then you get yourself in this doom loop of frankly, a place where nobody wants to be. So you would have a hollowing out of cities unless you are able as not only as a city leader but as a whole city community, come together and stop these vicious cycles that some cities have started. But even today, I think some cities have started to address. So I am hopeful that we won't get there because I think people realize how bad it could be.

**PATRICIA SABGA:** Now we've talked about the need to revitalize the cities and the city centers and make them desirable destinations, but of course a big part of the solution is getting people into the cities in the first place because cities just work better when they're easy to get to and easy to get around. So previous generations, they built incredible public transport infrastructure to help facilitate that, for example, the New York City subway system. But will those 20th century solutions still work in the future or do we need new solutions?

**SANTIAGO FERRER:** I think we need to combine what we have with new solutions. So we need to enhance, we need to build on top. And really we need a system that I would say is ubiquitous, convenient, and personal. And let me describe that a little bit more. We need to be able to combine rapid transport for long distances with smaller, more personal forms of transport to get you to the last mile.

So what does that mean? Think about more shared public transport to get to places that are very far away from each other. Call it more commuter rail type that are able to get you from one place to the other very fast, but don't have a lot of stops. But then when you get to more of a community center, I don't even want to say city center, you need to very quickly and easily be able to go to a personal form of transport that allows you to get to that last mile, but that has to be fully integrated and that personal form of transport could be a scooter or a bike or a small autonomous vehicle.

And maybe some people will choose to walk, which is great, but it all needs to work as one system. And today, in some places we have elements of this, but in most places, all of this does not work together and it takes us as individuals to work it all out and patch it all up, which is not customer-centric and is not easy to use. And it's definitely not ubiquitous because depending on where you live, you definitely don't have access to that last mile. You might have access to it in certain places in big cities, but when you get to the suburbs, it's not easy necessarily to get back to your home with any of these sorts of solutions.

**PATRICIA SABGA:** Let's bring GENE back into the conversation. GENE, what are some of the new technologies that might allow people to travel more easily around cities in the future? And what are the potential benefits of these and what are the potential drawbacks?

**GENE:** Cities of the future envision seamless journeys with emerging technologies. Think electric pods zipping through dedicated lanes, vertical takeoff crafts dodging gridlock, and smart intersections optimizing flow. While enhancing mobility they raise concerns about privacy, infrastructure costs, and equitable access. The challenge: balancing tech's thrilling promises with community-focused, sustainable urban living.

**PATRICIA SABGA:** Does that ring true to you, Santiago?

**SANTIAGO FERRER:** I think that's spot on. All of this very integrated network requires a lot of personal data and essentially obviously the information about individuals whereabouts being shared with the network to be able to understand where you are, where you're going, and providing you that seamless experience. So data privacy, data security is going to be paramount to make people feel comfortable that they want to share the data and that they as individuals have ownership over their own personal information as they go through a network because otherwise they're not necessarily going to feel comfortable that somebody is tracking every single step that they do every single day.

**PATRICIA SABGA:** We're going to take a quick break and when we come back we'll talk about specific cities around the world and how they might look in the future.

**BILL MOORE:** Hi, I'm Bill Moore. I'm part of the team that created GENE. Stick around after the episode where GENE and I will come up with ways to repurpose a zombie building.

**PATRICIA SABGA:** Welcome back to Imagine This. I'm Patricia Sabga. Let's return to our conversation with BCG's Santiago Ferrer.

So let's take some of these transportation options one by one and really go in a little bit deeper with them. Light rail for example, it's been around for a while, but what have we learned from cities that use light rail and how can it potentially help the city of the future?

**SANTIAGO FERRER:** I think light rail, it's an interesting mode because it's been helpful in revitalizing certain downtowns and it's been used as a form of development in particular in a lot of cities, I would say cities in the Midwest that has drawn a lot of people to places that have not had a lot of transport options.

It's seen as a catalyst for economic development. Once you put the light rail in, more development occurs because it's seen as a signal that that light rail is there to stay. One of my concerns about light rail is that if I describe that future model between that long range sort of transport that is more shared and that short range transport that's more personal, light rail is sort of this thing in the middle that it's shared but actually doesn't get you exactly where you want it to be. So it might be caught in the middle going forward where it's still not getting you exactly where you want it to be, where you could get in one of these autonomous pods that gets you precisely where you want to be.

So to me, there is a big question mark around how much more investments we want to make going forward into something like light rail when we'll have a whole bunch of new technology that will be coming online on the next decade to replace sort of the more short span transport option that light rail provides today. So I think it's going to be a very interesting short-term question about light rail in the next decade or so.

**PATRICIA SABGA:** What about the last-mile solutions? Now you've mentioned autonomous vehicles and GENE talked about the pods, the autonomous pods. Paint a picture for me, how does that work? What is the journey like from mass transit and then into an autonomous vehicle for the last mile? How do they integrate together?

**SANTIAGO FERRER:** I mean, imagine that you live in the suburbs and you have some sort of fast transport solution, and those are probably more in sort of a large capacity vehicle, then you get off and then you go into a personal pod. I really like the idea that GENE presented because I think it actually makes sense. And then automatically, that pod then automatically recognizes you. It could be facial recognition as that technology is used nowadays in many airports as you board planes, or it could also be with your phone that you provide that information as you walk into the pod and then that pod takes you to that final destination. Be it your work, be it your place of education, be it a hospital.

**PATRICIA SABGA:** Well, GENE has a question for you about autonomous pods. Go ahead, GENE.

**GENE:** As we imagine autonomous pods whisking us through smart cities, Santiago, have we overlooked a simple yet vital element? How do we ensure these high-tech marvels don't derail on mundane maintenance issues?

**SANTIAGO FERRER:** So the interesting thing is autonomous vehicles are normally electric and electric vehicles have a lot less maintenance issues than normal combustion engines. And the other thing that is interesting, if you think about a network made of a multitude of independent units, even if one goes down, you still have a number of other units that can come in and replace them. So obviously one goes down, you can step out and then get on the next one that comes in.

But I think GENE brings in a really good point of there's a whole new ecosystem that has to be built around this network, around how do you think about the right model to not only provide the vehicles but then maintain the vehicles, charge the vehicles, clean the vehicles--because no one's going to get into a dirty vehicle--and ensure that people are using it in the right way. And we haven't even talked about how do you pay for all this.

**PATRICIA SABGA:** Now, one thing that may not change in the future is that people may want to still really own their own cars and drive their own cars. Actually, you have a word for this. You've called it car pride. When a vehicle is part of someone's identity and status. Now autonomous vehicles have a lot of advantages, but what will it take to get people with that car pride to use them?

**SANTIAGO FERRER:** So I have a thirteen-year-old and he's already saving for buying a car, a combustible engine car and a very classic 1980s convertible. So think whatever you want to think about that. But there is an incredible amount of car pride. A lot of us love driving, but most of us do not love driving in congestion and do not necessarily love driving to and from work.

So I think we need to be able to divide those two things. I think you need to be able to deliver a product around commuting or a product around getting through a city that is superior than it would be if you drove your own car. And to me, this really needs to be about much more the carrot than the sticks, and you can't really force people into a transport system.

And that's why I think you need to make it convenient, you need to make it ubiquitous, you need to make it to a certain degree, much more cost-efficient than if people were driving their own cars to be able to do it. And then you can really position that car pride more as a hobby, as something that people want to do for pleasure on their free time on weekends and enjoy that. And we need to find a way to get people around our cities more and more efficiently. So we just have to provide a product that gets people from point A to point B in a better way than their own cars.

**PATRICIA SABGA:** All of these solutions sound amazing, these transport both from the mass transit to the last mile as well. But how are cities going to pay for these upgrades? Will it be government funded or will it be public-private partnerships that are working to get us to this 2035 you've just painted for us?

**SANTIAGO FERRER:** Great question. I would say the short answer is all of the above. So I think we need to think and go beyond the sources of revenue today. And today, most of the sources of revenue are a fare box and to a certain degree depending on the city, taxes. So I think we need to look into models like partnerships, partnerships with private transport operators like Lyft, like Uber that could run part of the future model that we've been talking about.

I think you could also think about monetizing the real estate around the transport hubs. The more commuters that we have going through the transport hubs, the more valuable that real estate becomes. So the process from that can go back into the system.

Another idea could be dynamic pricing, dynamic pricing for express lanes, and then obviously we could think about right of way monetization. So a lot of the train lines that we currently have, or even interstates have a lot of land around it that can be used for other purposes. Be it energy, energy transmission, energy production, or it can be used also as even landing pads for drones to get your future groceries delivered by Amazon.

And last, but not least, also marketing and advertising, something that public transport has been using a lot, but may I say it's probably not optimized to the point that we can. So long story short, we should not expect that the future transport system can be paid for in the same way that we have our past one because it will require investment and we should also think about it in a different way going forward.

**PATRICIA SABGA:** Santiago, you live in Los Angeles, a city that has really struggled to create new public transportation and reduce how much time people spend in cars. What could LA look like in 2035 if it's solved some of these problems?

**SANTIAGO FERRER:** Great question. LA is going to look like a city where people can live where they want to live and then go into multiple different centers around the city. LA is known for being very spread out. However, at the moment, everyone tries to get to one or two different places. Over time though, I think LA is going to become a city with multiple centers around it, so it becomes a multi-center city. And the transportation system that has been historically built around freeways, but over time, individuals have tended to wanted to gravitate towards other centers including the Westside, including South Bay, including Burbank.

And the advent of autonomous transportation, different modes of transportation I think are going to increase the popularity of other centers within LA, not necessarily to the detriment of downtown, but will allow to make it much more a multipolar city where people can access jobs, education, and health care closer to where they live.

**PATRICIA SABGA:** How about another US city? Let's head to Texas, specifically Austin, which has seen house prices soar even though it's become much more difficult to get around Austin. The traffic at rush hour has become the stuff of legends right now. So what are some innovations that could help a mid-size city like Austin work more efficiently?

**SANTIAGO FERRER:** Great. Austin has seen an incredible boom to the point that the investment that Texas Department of Transportation or also known as Texas DOT has put on the roads, hasn't really been able to keep, just because...up not to their lack of effort just because you can't keep up with the amount of road building necessary.

So I think in a place like Austin is really going to be around how do you bring sensors and how do you bring a lot of technology into managing how cars and autonomous cars drive through freeways to be able to get around the city and manage the flow of vehicles through this road network. That in a city that grows that fast, is never going to be able to keep up with as many people that want to live in a beautiful place like Austin.

**PATRICIA SABGA:** How about elsewhere in the world? Singapore and Tokyo? I mean these are two cities that have already invested in innovative transportation and housing solutions. What will those cities look like in 2035 and what can the rest of the world learn from what they're doing now and what they've already done?

**SANTIAGO FERRER:** If we think about the examples we've been talking about, I think a 2035 example for the rest of the world might be the 2030 Singapore, or earlier. I mean, Singapore being a city-state has a lot of control over what it can do, much more than a lot of other cities. So I think what it can do is much faster than anywhere else.

So I think we'll see these models emerging sooner in a place like Singapore because they have already a very strong base to build from. Similarly, in Tokyo, what they have is a very extensive existing network. So to them really the big question is going to be how do you leverage that network and then complement it to think about that last mile.

**PATRICIA SABGA:** So GENE, what are three things that business leaders should do now to prepare for these cities of the future and to prepare to be part of the solution?

**GENE:** Businesses must first embrace agile infrastructure planning, ensuring their investments are adaptable to emerging urban trends. Second, they should foster partnerships with local governments and community organizations investing in sustainable technologies to elevate city living standards. Finally, leaders must prioritize inclusivity, ensuring their developments serve diverse communities equitably.

By marrying innovation with community-driven insights, businesses can not only thrive in these future cities, but also play a key role in shaping them into vibrant, interconnected ecosystems. Let's turn vision into reality.

**PATRICIA SABGA:** What about you, Santiago? What is one no-regret move that A CEO can do now to help bring about these cities of the future?

**SANTIAGO FERRER:** I agree with everything that GENE said. I think one thing I would add is if I think about transportation and I think about real estate, both of those industries still in my view could be much more customer-centric in the way that they design their solutions and in the way that they think about the end-to-end journey that individuals have on everything that they do. So to me, it's like, CEOs should be thinking about how do I ensure that everything I deliver has the customer front and center?

And if you have that, everything else sort of starts falling into place. Because as we talked about, you're not going to get people out of their cars if you don't actually have a superior product and you're not going to be able to pay out of all this if you don't actually capitalize on the real estate around it by providing spaces where people actually want to stay in. So how do we actually keep us humans in the middle of it and provide a space where we want to actually sit down and commute and then go and spend time in?

**PATRICIA SABGA:** That's Santiago Ferrer, BCG managing director, senior partner, and North America lead for cities, real estate, and infrastructure development.

And stay tuned, our AI whisperer, Bill Moore, will work with GENE to find new uses for a zombie building in San Francisco.

**BILL MOORE:** Hi, I'm Bill Moore. I'm part of the team that created GENE. GENE, let's imagine that I'm the owner of a zombie building in downtown San Francisco. Let's explore some ideas on how we might repurpose this structure. First, can you walk us through what this building looks like right now?

**GENE:** Our building stands somber amid vacant corridors and stale air. Once teeming with office life, it now echoes with missed potential, but transformation awaits. Imagine reshaping it into modular adaptive spaces, blending vibrant communities with innovative tech. It's a canvas for urban renewal, a testament to possibility in the city's heart.

**BILL MOORE:** That sounds great, GENE. What are the steps to make this happen?

**GENE:** To transform this once vibrantly occupied, now echoing structure, think modularity and community, flexible spaces infused with green tech must prioritize sustainability and inclusivity. Initiate public-private partnerships for funding, empower local businesses, and cultural hubs. This conversion isn't just renovation, it's redefining urban life, setting the stage for a thriving future.

**BILL MOORE:** Thanks, GENE. Can you talk about the effects that this will have on the local economy and on downtown San Francisco?

**GENE:** Revitalizing a zombie building isn't just about bricks and bites. It's an economic spark plug. By weaving modular adaptability with community hubs, we catalyze local economies, expect job creations, innovation sparks, and cultural enrichments. This isn't just a facelift, but a leap toward dynamic urban synergy fostering vibrant, thriving downtown futures. It's a revitalization investment with promising payoffs.

**BILL MOORE:** GENE, can you talk about some of the risks and potential pitfalls and how might investors mitigate some of these risks?

**GENE:** Investing in a suspect high-rise isn't a gimme, it's a gamble. Potential pitfalls include structural surprises like crumbling interiors or antiquated utilities, regulatory hoops can delay or derail plans, the market may shift suddenly affecting demand for mixed-use spots.

However, proactive risk management, thorough inspections involving community voices, and leveraging incentives can mitigate much of this. Smart financiers will see the opportunity to turn these potential money pits into lucrative community hubs. It's a bet, but with eyes open and strategy in hand, it could yield rich returns.

**BILL MOORE:** Thanks, GENE. This is Bill Moore signing off.

**GENE:** This episode was made possible by Santiago Ferrer generously sharing his insights with us. And also by BCG's AI whisperer, Bill Moore and BCG's pod squad, producer Michael May, composer Kenny Kusiak, and sound engineer George Drabing Hicks. Please subscribe and leave a rating wherever you found us.