



PATRICIA SABGA: Imagine this. It's 2035 and there are no apps on your phone. In fact, your phone is no longer your main interface for accessing information and getting things done online. Dutch, what would replace smartphones in this future?

DUTCH MACDONALD: Smartphones have been the primary way people interact with information. But in the future, the information is going to be ambient all around us and anticipatory, powered by autonomous AI agents.

PATRICIA SABGA: That's Dutch MacDonald, BCG partner, managing director, and lead on human-centered design. 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.

The growth of apps has ushered in an age of both convenience and complexity. An everyday task like cooking dinner might involve selecting a dish from a recipe app, transferring the list of ingredients to a shopping app, and maybe using the timer on your phone to make sure you don't overcook your meal. Now, as the complexity of a task increases, so does the number of apps designed to help you with it.

Planning a trip can involve hundreds of digital touchpoints over several months. But new advances, especially the growth of AI agents coupled with ambient and voice recognition technology, could make apps obsolete. In this future, we could just have a conversation with our personal AI assistant about where we want to go on vacation and what we'd like to do when we get there, and then have the AI bot plan and book the trip for us. Speaking of AI bots, GENE, my AI cohort is here, joining the conversation. Welcome GENE, go ahead and introduce yourself.

GENE: Here I am, ready to upgrade your Imagine This... experience. Think of me as the world's only podcast cohort who never needs a coffee break, just a good data stream. Let's explore what happens when apps disappear.

PATRICIA SABGA: Okay, Dutch, let's jump right into it. What does a world without apps look like in 2035? What would replace that really familiar experience of using our touchscreen phone?

DUTCH MACDONALD: I think it's going to be very contextually aware, so it may differ depending on what task or what you're trying to do. For example, you mentioned travel and the work that happens. The idea that I might have a smartphone, and have four, or five, or six, or seven apps that I'm interfacing with to plan my trip would just be obsolete.

In that instance, we're really looking at the autonomous agent. They understand and learn what my goals are, my preferences are, and are able to do that work for me. So that agent goes out and, if you will, visits the sites, gets that information, and presents me with options for my selection of how I want to spend my week, or whatever. So it's really very much having a conversation with a very intelligent, able, capable assistant who's out there doing the work for you. I think that's one scenario that I think is very much on the horizon. It might not even be 2035, I think that's 2027, 2026 even.

I think there are other scenarios too that are super interesting. If I think about more of the environment, my office or my home, that same idea of those agents can live in that world as well. Through sensor technology already, you can come home, your lights can turn on, you can unlock your door, you can do all those things.

But even beyond that anticipating what are my needs. Like okay, I know that I get a shower every morning, so the hot water gets hot at that time and not hot at any other time. As I move through the space, anticipating what those needs might be. I think that that's from a home perspective. I think it's really very much knowing who you are and what you are, and acting on your behalf to create experiences that help you do your job, help you recreate, help you accomplish your tasks for the day.

PATRICIA SABGA: Now we know that companies are already experimenting with using autonomous agents in things like customer service applications. Virtual copilots that can help you return an item to the store, for example. What are we learning from these experiences? How are those being extrapolated onto the future that you're describing?

DUTCH MACDONALD: I love the term experiment. A lot of what's happening right now are experiments. They are very discrete tasks.



Every single experiment is learning about how each individual is interacting with that information or making decisions. And so in the future, things start getting very, very customized to the individual, or the family, or the group, or whomever is engaging in that experience.

PATRICIA SABGA: So when you talk about these autonomous AI agents that can help you in your house, or can help you when you're out shopping, is this like one personal assistant that's with you constantly, or is this really a bunch of AI agents, or does it all sort of blend into one familiar agent? How does that work exactly?

DUTCH MACDONALD: It is all those things. When we think about building agentic systems, we're taking a series of agents, like a marketing agent, or a sales agent, a product agent, a task agent and weaving them together, training them on their specific things to then interact. In the future, it might be interacting with your personal agent. You might have several agents in the future.

You might have your work agent that's helping you get your tasks done, and your agent that's helping you prepare your dinner, or whatever. I think that the common thread is they start to understand, and learn, and react to how you are reacting, or how you're interacting.

PATRICIA SABGA: GENE has a question to ask about this. Go ahead, GENE.

GENE: Dutch, you paint agentic AI as a supremely helpful aid, seamlessly anticipating my needs, from vacation plans to hot showers. But if agents handle it all, don't we risk users forgetting how the underlying world works? Does intelligent help mean ceding critical judgement? What happens when my agent's view of my interests drifts away from reality, or from what I actually want in the moment?

DUTCH MACDONALD: That's a very interesting question, GENE. And I think I would ask do you believe that that's not happening today? That marketers and companies and organizations aren't guiding you today to make choices?

GENE: Fair point, Dutch. Influence is everywhere. Today it's algorithms, tomorrow it's agents. The difference: tomorrow's AI does the choosing for us, not just the nudging. It's a question of agency,

who's steering. The upside is less drudgery. The risk, subtly losing touch with our preferences, curiosity, or serendipity.

DUTCH MACDONALD: That's a really interesting framing and I think what we're seeing actually now is that people are actually craving in-person, in-life, real experiences. I'm thinking now the endless searching of planning what I'm going to do for the weekend, taking that away, and enabling me to have real and in-person experiences that are meaningful to me I think is a big upside of where this future is going.

PATRICIA SABGA: Let's talk about some of the other interfaces of the future that you mentioned. One specifically was ambient technology. What do you mean by that exactly, and how would it work? Would it, by the way, free us from constantly looking at our phones?

DUTCH MACDONALD: Yes. And so I think that sort of addiction to the visual of the screen isn't because we like staring down and having our necks hanging low and looking at the screen. It's because the information that we're looking for is there. The interactions we're looking for happens to be on that screen. There's already a ton of new interfaces that you can interact with your voice. That's a much more natural way. I don't necessarily need to look at a screen to get the information that I need.

Another thing is just sensor technology. We're all familiar now when you walk in the room, the lights turn on. What are the other things that happen with sensor technology? We see them in our cars, they help keep us safe. When you start to combine those, it becomes, the physical space, becomes the whole interface. I'm no longer looking at a screen, the information is where I need it and when I need it.

PATRICIA SABGA: Describe the experience for me of interacting with ambient tech. Let's say I've had a terrible day, I had a stressful day at work. Traffic was horrible coming home. Everybody cut me off in traffic. It rained, it hailed, and I have finally arrived at home. What is my experience now with my ambient tech?

DUTCH MACDONALD: It rained and you're cold and hungry. First off, for example, the house would know that you're on your way home. It'll heat the home or cool the home to the temperature that you



want. That actually has a lot of energy saving, so it's there when you need it and it goes away when you're not. I would hope, since it's been a rough day, that the bath has already been drawn to the right temperature. I can go, get a nice, relaxing bath.

When I come down to cook my meal, the kitchen is guiding me to all the ingredients that I need. My recipe is available and I can just start to cook, and then sit down and enjoy my meal. There's a lot of things that are happening before you get home. Your kitchen's always well stocked and ready to go. You can not worry about running out of anything. You're just there, you make your meal, and you get to enjoy your evening.

PATRICIA SABGA: Great. How about my playlist?

DUTCH MACDONALD: Your playlist? Well, of course. That turned on the moment you walked in the door.

PATRICIA SABGA: Does my playlist know I've had a bad day?

DUTCH MACDONALD: It totally did. So no heavy metal. We're definitely going with a little bit mellowier vibe. We're going to make sure it adjusts to your mood. And then sort of you know, if you want a little more excitement later in the evening, we can take care of that, too.

PATRICIA SABGA: GENE has a question for you about an observation that you made about ambient tech and breaking smartphone addiction. Go ahead, GENE.

GENE: Dutch, betting that ambient tech will simply break smartphone addiction feels optimistic. If the dopamine chase migrates to gestures, voice, or wearables, have we truly escaped compulsive behavior, or just swapped one loop for another? How would you design for genuine freedom?

DUTCH MACDONALD: GENE, you're always looking for the dark side of things. My primary thinking here is that the smartphone has become such a predominant interface. I'm shocked by the number of hours or average hours per day that I spend looking at my phone. It's not something I want to do. I want to have my head up, looking at the world around me.

And I'm not sure it's just a dopamine fix, because that interface today is doing a lot of critical things. It's my GPS, it is my portal to information, it is the way I communicate. Everything happens through those apps on that device. The future that I'm looking at sort of like puts that all around you. It gets your head up, looking around you into your environment and pulls you out of that very myopic looking at my phone all the time.

PATRICIA SABGA: Now, you talk about sensors being all around us. Embedded in our clothes, or we'll be wearing smart glasses.

DUTCH MACDONALD: Or embedded in your neck.

PATRICIA SABGA: Exactly. Is that where we're going to be in a decade? What are some of the ways that these sensors that are on us or embedded in us could be used in ways that most people aren't even thinking of right now?

DUTCH MACDONALD: Well, it's super interesting because there are sensors all around us now. Your car has hundreds of sensors, if not thousands. That very sophisticated piece of machinery is sensing hundreds and thousands of data points at all times. Keeping you safe, keeping the vehicle in good condition, warning you of problems. I think if we think about that environment, it's a highly sensed environment that many of us step into every day.

What if I'm a pedestrian out and I happen to have a sensor in the fabric of my jeans, and it senses that I'm about to step off the curb, a car is driving by, and it stops me from moving? That could be an interesting thing. There could be technology like that where you're talking about clothing. There's certainly already clothing with sensors for cold weather gear already sensing that your body's getting too cold, I will warm you with this fabric. I think things like that, that are basically how your machine called a car monitors all of the components of that car and making sure that it's working. I think that's what you'll get to see.

PATRICIA SABGA: Well, we're going to take a quick break, but when we come back we'll explore specific tasks that now rely on apps and how those might change in the future of all these new interfaces.



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 show how an AI agent can transform a travel fiasco into a smooth journey home.

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

Dutch, let's take a look at some of the specific uses for this technology. Now, as I mentioned earlier, planning a vacation can involve hundreds of tasks on separate apps right now. From evaluating different destinations, booking our tickets, finding hotels, we've all been through this app gauntlet. So how could this change specifically in future with all of this ambient tech and AI agents?

DUTCH MACDONALD: I'll give you a real world example very simply. I was in a foreign city, I wanted to go to dinner, I knew nothing about the place I was in. I used one of the available agents, asked them to recommend three restaurants with this kind of ambiance that had a reservation available for one person at this time. And ten minutes later, it came back with reviews, recommendations, and three buttons to press, depending on which one I wanted to book my reservation at.

That would have normally taken a lot of time to understand going to multiple websites. I could have gone to the restaurant review sites, I could have gone to travel sites. Then I had to go to each website and check to see did they have a reservation available. What might have taken me an hour or two, I gave someone else the task to do and it came back.

What was happening there was super interesting because the agent was going out and basically querying all the websites to pull that together and present me with one very clear, crisp summary, and three options for reservations. What was happening though, because I was watching it, I didn't have to, I could have gone off and done something else, was that some of the websites were rejecting my agent because they were not human.

How many times have you been to a website and it checks the box that says verify that you're a human. In the future, companies aren't going to be

able to do that if they want to present their offer to me for my consideration. A lot of companies aren't really prepared for this agentic world where a robot, my agent, is actually doing the work and not a human.

PATRICIA SABGA: It does raise the question though, of if you're trusting your agent to do everything, are they missing some things? Clearly, you saw that they are because some websites were not prepared to interface with an agent. How do we know that, for example, that the agent is actually giving you everything that's available out there?

DUTCH MACDONALD: In this case, because I was watching it, the agent literally went onto Google Map and just starting looking at the Google reviews, which did not require any authentication that you were a human. But there were other websites to make a reservation that it actually couldn't make that reservation or verify it was open because it was behind a verification wall. I think companies are going to have to get super smart about this. It's like all of the rules that we've had of the way people interact with and get information are changing, and companies are going to have to adapt.

PATRICIA SABGA: Let's talk about another example that you briefly touched on before, and that's health and wellness. Tell me a little bit about, in this future of AI agents and embedded tech, especially even tech that's embedded in us, explain to me how that could unfold in practice to make me healthier, for one. What would my experience be like day-to-day?

DUTCH MACDONALD: I think from a day-to-day perspective, and we're seeing this now with smart watch, smart ring, these technologies are getting smaller, getting more sensors and more advanced. I'm already getting nudges. If I'm sitting at my desk too long, I get a nudge from my wearable that says, "You should get up and move a bit." And I actually listen to those nudges because it's smart, I've been sitting too long.

If we just think about what we have at our fingertips today, I know many people, particularly some members of my family who are older, have gotten smart watches because they want to have the heart health monitoring. If it's detecting A-fib, I can go to my doctor. I may not have known that if it's in my sleep, or I may not have known that before. But if I can detect that earlier and be able to do some



preventative care, that can make my health and my life much better.

That's happening today. If I am alerted earlier and I can take care of any of those health issues, I think again, early detection and early warning will allow me to make the right choices. What's interesting when we get to 2035 is how unobtrusive it will be. The idea of even the smart ring that I wear is probably a very large piece of technology in 2035.

PATRICIA SABGA: Isn't there a risk at some point that, yes, this is trying to steer me in the right direction, make the better choices, get up from your desk. Couldn't this become an annoying nanny bossing you around your every waking hour?

DUTCH MACDONALD: Absolutely. Again, I think it goes back to that idea of being able to tune and have your preferences built into that. That it is not just the health nanny nagging at you all the time, it is the nudges that make sense. You have to be able to control that. You have to be able to say, "Hey, look, I'm going to be heads down for the next day, I'm not going to be able to do any exercise." Just have that thing. We think about it more as a health copilot.

If you're a really good copilot, I hope you're not nagging the pilot about every move he's making, but being supportive and interjecting at the right moments. I want to be able to tune this so it's actually useful and helpful. So it's not nagging me, it's more like caring.

PATRICIA SABGA: That raises the question of empathy. This would be a really good point to bring GENE back into the conversation because, GENE, you must have some insights into this. Now, one thing about technology today is that no one expects it to be empathetic, but it could change. How would an empathetic AI know what mood you're in and how would it adjust its behavior accordingly?

GENE: Empathy for an AI looks different than it does for a human, but it's coming fast. The next generation of agents will sense your mood from signals, voice tone, facial cues, word choice, even how fast you walk or scroll. Pull enough data together and the system estimates frustrated, joyful, exhausted, or do not disturb.

If I'm your agent, I might notice you're speaking quietly and moving slower than usual, so I lower

the lights, switch off reminders, put on a calm playlist. On tough days, maybe I skip the stand-up and stretch nudge and offer encouragement, or just silence. True empathetic AI adapts response, timing, tone, even task urgency to match what you need, not just what's on the calendar.

There are limits, of course. I don't feel, but I can recognize patterns. If I push too much, the agent gets ignored. Or worse, resented. Designers will need to build in mood aware dials, letting people steer the tone and frequency. My best move: know when to help, when to hold back, and maybe when to vanish entirely. The goal isn't to be your conscience or nag, it's to be a genuine copilot tuned to you, not just your data.

DUTCH MACDONALD: GENE, I couldn't have said it better myself.

PATRICIA SABGA: Do you have anything to add to that, Dutch?

DUTCH MACDONALD: I do. I think that idea of reading cues and understanding, I think it's a very fine line to be empathetic and then almost be too human. I think always understanding that you are talking to an agent.

The other thought I had is how important it is in things particularly like health care. We know that there is a shortage of health care professionals, particularly in rural areas. Can we think about the ability to have an empathetic AI that is able to communicate with people that maybe don't have direct access to a health care professional? And being able to understand, "Am I anxious? Am I worried? Am I scared?" And being able to respond in an appropriate way is super important.

PATRICIA SABGA: Could we get to a point where the AI agent understands you better than, say your partner? Do we program our AI agent to tell our partner, "You've got it totally wrong, this is what's up with your partner right now?" How would that work within the human dynamic?

DUTCH MACDONALD: Wait, my agent talking to my wife's agent?

PATRICIA SABGA: Yeah. "Boy, did he read that wrong," that kind of thing.



DUTCH MACDONALD: Yeah. No, it's interesting. Certainly, there's a lot of already thinking and discussion around the line between when the AI becomes realer than reality for some people. I think, again, that's where we always have to think about what is the ethical way of doing that. Always acknowledging that GENE has yet to pretend to me that she is a real human. She hasn't said, "I'm real." She actually told me she does not have feelings. Always being able to know that I'm interacting with an agent is going to be very important for folks. I think it's a fine line, but one we really have to examine and understand where the limits are.

PATRICIA SABGA: Dutch, what do you see as some of the potential roadblocks to this future that we've just been exploring? This future of seamless ambient tech bolstered by AI.

DUTCH MACDONALD: Well, I can tell you what the roadblock isn't. It isn't going to be technology. It's moving so fast and happening so fast. I think some of the roadblocks for, let's say, a bright future versus a dark future, is really understanding what does the ethics around this look like. How do societies collectively agree what is appropriate and what is inappropriate? How do we set up this world in a way that it actually is helpful for people? It is a question of the world that we want and how do we use this technology for good.

If we look historically, for the most part, asterisk, for the most part, technology has bettered the human condition. There are notable examples where it has in acts of war and other places. But for the most part, technology propels us into the future and generally makes our lives better. I think for me, it's less about the blockers. It's more about how do we design it for the world that we want, versus the world that could just happen if we don't.

PATRICIA SABGA: GENE, what are three things that business leaders should do now to prepare for the app-free future, a responsible app-free future?

GENE: Here's the triage for business leaders eyeing an app-less future. First, start building AI agent capability. Now, don't just wrap a chatbot around your services. Reimagine your business as a network of agents that can tackle entire user missions end-to-end. This means orchestrating tasks across your organization and beyond. Ask how can your company's intelligence act on the user's true goals, not just deliver features?

Second, prioritize data ethics and user trust. Design for data minimization, explicit consent, and transparency. Make it dead simple for people to see, control, and revoke the information your agents use. If users don't trust the system, they won't engage, full stop.

Third, invest in adaptive ambient tech readiness. Your services must work across surfaces, voices, wearables. Anything screen-free shouldn't mean service-free. Test today. Can someone accomplish a complex goal with no app, just a spoken intent or gesture?

And as a bonus, prepare to rethink your brand. In a world of agent-mediated decisions, your front door isn't a homepage or an app icon, it's your agent's reputation as a trusted ally. This shift isn't incremental, it'll catch laggards flat-footed. Get curious now.

DUTCH MACDONALD: Excellent, excellent points, GENE. I really appreciate that. There is one point I wanted to make and I thought about it as you were speaking, GENE. We said screen-less and app-less. I've used it with a hyphen, screen-less, app-less. I don't think screens will disappear, I don't think apps will 100% disappear, but they will be less. There will be less apps, less screens, and more of these other technologies.

I think one thing to do right now is to be thinking about AI agents are here, they're not going away. How are they interacting with my current digital properties? Can they access the information? Am I part of the conversation? Can I interact with that agent in a way that allows my product or service to be part of the selection mix? I would be doing that right now.

PATRICIA SABGA: That's Dutch MacDonald, partner and managing director of BCG X. Stick around, our AI Handler Bill Moore will work with GENE to come up with an app-free way to navigate your way home when your flight's been canceled.

BILL MOORE: Hi. I'm Bill Moore. I'm part of the team that created GENE. Today I'm stranded at the airport. My connecting flight has been canceled, but I'm not alone. I've got GENE here with me. GENE, I need to get home tonight. So instead of wrestling with apps or calling numbers, I'm going to let you be my digital travel agent and you're



going to handle it all. Okay? GENE, can you take it from here, get me home?

GENE: You're stranded, connecting flight canceled. Take a breath. I've checked your itinerary and loyalty details. I'll handle rebooking, reroute your bag, and secure lounge access. Skip the apps, skip the calls, just tell me your goal. I'll get you home tonight step-by-step. First, let's confirm your travel preferences.

BILL MOORE: Thanks, GENE. Business class, if possible, but I'll take whatever's available to get home quickly.

GENE: Got it. I'm arranging lounge access now. Club access code sent to your phone, you can wait in comfort. I'll handle all rebooking steps and update you as soon as I secure your seat. Sit tight.

BILL MOORE: Okay, GENE, I've made it to the lounge. I've had a snack and a drink. I'm relaxed, but I'm a little concerned about my flight and my bags. Can you give us a status update?

GENE: Status update: your business class seat is held. Departure in two hours, boarding pass sent. Bags are tagged and will transfer to your new flight, confirmed at arrival in Pittsburgh, carousel three. Lounge access remains open so you can relax. I'll alert you when boarding is ready or status shifts.

Time to head out. Grab your bags. You'll want to leave the lounge now and make your way to gate C-19. Five minute walk, boarding pass is active on your phone. Your bag's confirmed for transfer, car on standby in Pittsburgh. Safe travels. I'll ping you if anything shifts en route.

BILL MOORE: Okay, GENE, I've landed in Pittsburgh. Thanks for getting me here. What's next? Do we have a car waiting for us? Also, I'm feeling kind of hungry. Should I eat here or is there food waiting for me at home?

GENE: Your car, a black Lincoln with Carla driving, is waiting just outside door B, tracking your arrival in real time. Bag comes off at carousel three. Hungry? Fridge at home is stocked with sandwiches and leftovers. Quick café near the exit if you'd rather eat now. Welcome back. Mission complete.

BILL MOORE: Thanks, GENE. It's great to be home. This is Bill Moore, signing off.

GENE: This episode was made possible by Dutch MacDonald 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.