

FUTURE SCAPES

GAME THEORY

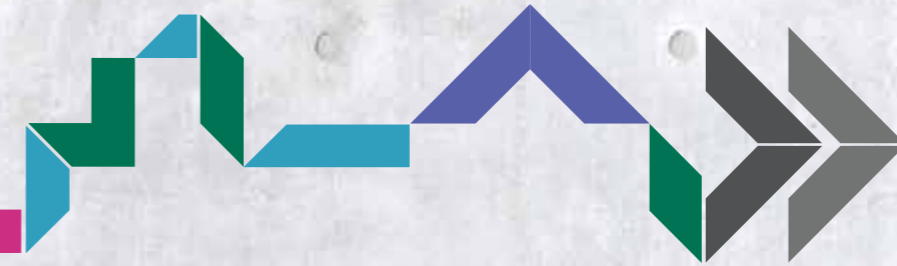
by Conor Ritchie



www.sony.co.uk/futurescapes

WELCOME TO

FUTURE SCAPES



WHAT DO YOU THINK LIFE WILL BE LIKE IN 2025?

FutureScapes is an exciting collaboration project that aims to explore the potential of technology and entertainment to create a better, more enjoyable world in 2025. It's not about predicting the future so much as imagining the possibilities. There is by definition an infinite number of possible futures ahead of us. But one thing is clear: the world of 2025 will be very different from the one we live in today.

By starting with life in 2025, rather than today, FutureScapes aims to stimulate more creative thinking about how technology might help us live sustainably. By sharing immersive and entertaining stimulus material – such as short stories – this collaboration aims to invite the contributions of ‘futures’ experts and an eclectic mix of thinkers, writers, designers and the public to address the opportunities and challenges of life in 2025 and the potential roles technology will play in it.

FutureScapes is designed to be as open and collaborative as possible and is being convened by leading sustainability non-profit organisation, Forum for the Future, and leading consumer technology company, Sony.

To find out more or to get involved visit www.sony.co.uk/futurescapes or follow us on Twitter @better_futures and #futurescapes.

GAME THEORY

by Conor Ritchie



A civil servant by day, and a struggling writer in his spare time, Conor was born in New York, grew up in Belfast, and now lives in London - which has left his accent sounding vaguely Canadian.

He is delighted to have won The Guardian's short story competition - his first non-pub-based competition victory.

Steven opened his eyes to the slightest hint of daylight. He rolled over onto his side, and felt the cool press of Egyptian cotton against his cheek. He blinked at the window beside him, and wondered why he had asked the shutters to open so early. "What time is it?" he asked. His throat felt dry and scratchy.

"Half-five, Steven," his bedroom told him, in the soothing tones of a Scottish woman – the accent he insisted on for any communications before midday. "I was going to give you another five minutes."

He was about to ask what the purpose of the wakeup call was, when he remembered. Today he had to go into the office. Today they were switching on Genius.

He rolled out of bed, pausing only briefly on his way to the bathroom to register that, while he was wearing his pyjama top, he seemed to be bottomless. Perhaps some part of him had reasoned last night that getting only half changed might save some time in the morning. He remembered the party from the night before – thirty-six concurrent virtual link ups, and the lion's share of one actual bottle of Japanese whisky. He was surprised he had made it all the way from his living room.

He peeled off the half of his pyjamas he had made use of. The shower was running by the time he stepped into the bathroom, a warm mist curling up from stone tiles. As he washed himself, he asked the kitchen to brew him some coffee. "Can I make you something to eat?" it asked. The kitchen was also Scottish, but Steven had made it a little older and more judgemental, as he was determined to stick to his diet this time. "Just some toast this morning. Time is a factor. Shower off."

The car that picked him up wasn't one of his office's seldom used fleet. When his company, Gearstick, had gotten in bed with the Ministry, it had been made abundantly clear that theirs wasn't an equal partnership. Part of the reason he was being so generously rewarded was on the understanding that, when it really mattered, the Ministry would be the one calling the shots. Today was a day that really mattered, and it was clear from the black, tinted state car whispering up his drive that his little games company wasn't even trusted with transportation.

Of course, Steven thought as he stretched out in the car's cabin, 'little' was doing his company a disservice. In an economy where tech dominated – having overtaken financial services almost overnight when NewHorizons released their 'Banker In My Pocket' software – games were the biggest earner. And Gearstick had spent five years at the top of that very lucrative pyramid – only slipping in the last two years because of the effort they had had to sink into Genius.

“How are you this morning, Mr. Porter?” the car asked, in the synthesised tone that always made Steven smile. The English Government had fallen over itself to devise a public sector voice that would offend no one. Realising only after sinking billions of pounds into the project that a gender neutral blend of all ethnic backgrounds and regional accents sounds ethereally creepy, they went back to good, old-fashioned 'robot'.

“Great thanks. Play something light to listen to – no vocals.”

The car proceeded to play some unobtrusive jazz – whether it had accessed one of Steven's playlists, or was synthesising something itself, Steven didn't trouble himself to determine. He took out his phone and, after flipping through a few messages from his team leaders, spent most of the twenty minute journey to the office playing 'I Spy'. It was a trifling game that Gavin, one of his developers, had designed to test a 3D camera that was aiming to become the industry standard. 'I Spy' gave you a letter, and you had to take a picture of an object in your surroundings that started with that letter as quickly as possible. A kid's game, but it had seen 30 million uploads since it was put up on Gearstick's site the week before. It seemed to be particularly popular in the Middle East. So much so that one of Steven's urgent messages concerned U.S. State Department interest in accessing the data for intelligence purposes. “Invent your own damn game,” Steven had mumbled as he deleted it.

As he snapped a picture of a roadside pine tree for five points, he tried to remember the last time he'd been into the office. Every time he left the house it seemed that a little more defunct infrastructure – the neglected offices and motorways of historic commutes – had been reclaimed by green spaces. But the steady rise of biodiversity had yet to reach the business park from which Gearstick's head office rose like a bright crystal.

The car deposited Steven in front and drove off for recharging. Galina welcomed him with a predictably ravishing smile. He thought for a moment that her off-the-shoulder number was in honour of the momentous morning. But it was her job to look beautiful and, as far as anyone below the fortieth floor knew, today was a day like any other.

“Good morning, Mr. Porter,” she beamed. “Lovely to see you!”

“Hi,” he said, forcing a smile while feeling the same infuriating awkwardness that descended on him on the rare occasions that he had to interact with ‘front of house’ employees. He comforted himself with his knowledge of the HR records – at 24, Galina was nearing the retirement age for her chosen profession. Unless

she had some advanced degrees he didn't know about, she wouldn't be at Gearstick much longer. He smiled as he remembered her predecessor, Helene. He'd been sad to see her go, but perhaps only after she displayed a sense of humour by throwing a 'Logan's Run' themed leaving party. He almost went to that one in person.

He was halfway to the lifts when Rachel met him, coming in the opposite direction. His inferiority complex receded as it recognised a kindred spirit. He had been working with Rachel for the last ten years. They had met online when at universities at opposite ends of the planet, both spent six months in physical proximity volunteering at a farming co-operative in Uruguay (where a half-hearted sexual relationship suggested both that they were better as friends, and he had no idea what he was doing), before she went to work on solar design software at the Saharan Array, and he returned to England with Gearstick the merest twinkle in his eye.

Within a year, he had his first Government contract, and developers from all over the world beating a path to his IP address. Rachel included. Steven liked the fact that a friend continued to play such an important part in his life's work.

Like any genuine innovation, Steven's big idea seemed obvious in retrospect. With educational attendance and attainment tanking, and the popularity of computer games through the roof – why not kill two birds with one stone? Teach kids at home, through computer games. And real games – not 'educational games' that were educational first and games almost as an afterthought. Gearstick wasn't about designing 'Pierre Vs. The Imperfect Tense'.

Right out of the gate they had 'The Crusades' – a multi-player online role playing game that not only instilled history but, depending on which faction you played for, necessitated at its higher levels a working knowledge of five languages. It was surprising how much effort teenagers put into Arabic vocab if it meant they could participate in the Siege of Acre. They had 'Zero Gravity', a galaxy exploration sim that required degree level physics and applied mathematics if gamers hoped to programme their deep space robots to discover the alien civilization that heralded the start of the game proper. And there was 'Think Tank' – as much a multimedia design platform as a game – which many of the world's top animators and recording artists cited as the reason they got into their respective businesses.

“I was just coming to meet you,” said Rachel. “We're good to go.” She waved and Steven waved back. Then they both realised they were actually standing in front of each other for the first time in months. Steven felt that perhaps a handshake or a hug was in order, but the moment passed as Rachel turned on her heel, and walked him back to the lifts. He noted that her short hair was even shorter than usual – almost a crew-cut. “Have you seen the 'I Spy' numbers?”

“Yes,” said Steven, “Gavin's big in Saudi Arabia.” He waved at the lift sensor. “So everyone's here?”

“Everyone but the Minister. He's going to be late, but his office said to start without him.”



“What do you want to bet that he only turns up if it works perfectly?”

“Well,” she said, “Given that we've sunk two years into this project, how much will we have to gamble with if it doesn't work perfectly?”

Steven smiled as the lift opened silently. “That depends. Does our agreement to have a kid if we're both single at fifty still apply if I'm not in charge of a multinational corporation?”

They stepped inside. Rachel said, “Hey, I made an agreement with a billionaire. Do you honestly think I can't find another to replace you?” She punched him lightly on the arm, and they sped to the fortieth floor.

In another move that would seem obvious once they revealed it to the world's press, Gearstick new project was to take what worked well for schools and turn it on its head. Everyone with access to grant funding had been trying to make computers smarter for a generation. Memory wasn't a problem. Artificial intelligence had, depending on who you asked, basically been achieved. Some quibbled that the 'emotion' electronic devices could display was only an incredibly convincing simulation of emotion – as someone with firsthand experience of arguing with his toaster, Steven felt it was a meaningless distinction. But computers could still only learn what humans taught them. A succession of great minds had pondered how a computer could be motivated to make itself smarter than its creators could envisage.

It was Steven who suggested, first in an interview with a now deleted trade journal, and then in an urgent meeting with Government sponsors, that computers should design their own games. “Computers are the most challenging opponents in games designed by people. If they were to design games to challenge their artificial peers, who knows what they'd be capable of?” And so it was with the mantra of Gearstick's secretive 'phase 2', a phrase etched in chrome above the lab on the fortieth floor, which Steven and Rachel passed under after being waved through two layers of security – 'Let's make computers competitive'.

This was the first time Steven had met many of his development crew in person. They stopped what they were doing and turned to give him an encouraging series of nods and thumbs up. He waved at the gaggle of Government officials huddled in the lounge area, as far away from the control units as they could manage. “Hi everyone,” said Steven. “I'd like to thank you all for braving the great outdoors to be here today. You've each done your bit to bring enjoyment, learning, and new experiences to people all over the world. Today... Well, if everything goes according to plan, we'll finally get these lazy machines to start pulling their weight.” Polite laughter. “Let's give this a shot. Turn on Adam.”

Genius was really two processing systems, set up in opposition. These they had dubbed 'Adam' and, following a vote that Steven suspected someone sarcastic had rigged, 'Lumpy'. Together they were 'Genius'. One system would design a game to



play with the other. The winner of that game would design a harder one, and so on in a potentially endless recursive loop. When first tested using limited access to higher functions, Adam had designed a simple 'higher or lower' number game, which Lumpy won after three rounds. Lumpy in turn designed an electronic 'bat and ball' game, during which each unit hit its cognitive ceiling. Steven had pulled the plug after seven hours, with Adam and Lumpy on three-thousand points each, satisfied that the theory had been proven.

That had been six months ago. Today, Genius was going live with access to Gearstick's entire mainframe. If it managed to max out that much capacity without frying its circuits, Gearstick's partnership with Government provided Genius with a route into the National network. All strictly 'off the books', of course. 65 million home users wouldn't be pleased if they knew the Government could tap into their systems.

A low hum, and a large screen fading from black to creamy white, indicated that Adam was on. “How's he doing?” asked Steven.

“Good,” said Yogita, the programmer looking after Adam, leaning over a smaller version of his display. “Staying within his minimum system requirements.” She smiled proudly, and looked up at the room. “He's made up a card game. He's waiting to play.”

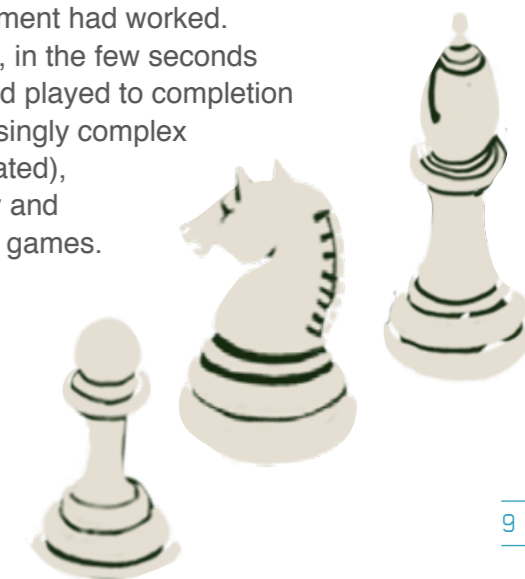
“Great,” said Steven. He stole a nervous glance to the corral of suits, all transfixed on their portable devices. He turned to Rachel, who was sat in front of Lumpy's monitor. She smiled in readiness and he fumbled his words, “Okay, go for Lumpy turn on...”

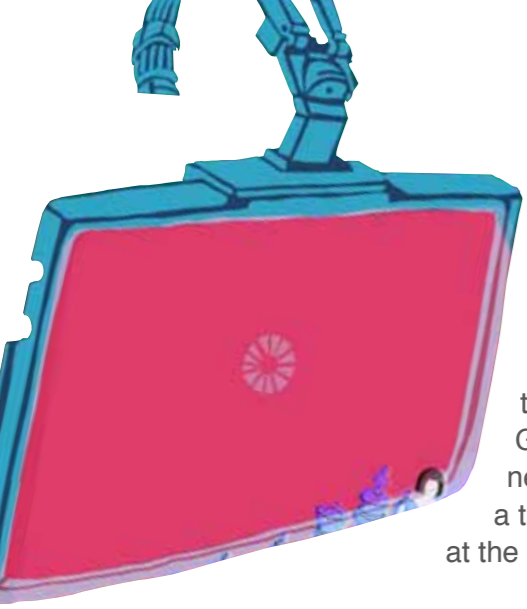
A second hum joined the first, and an accompanying display. After a small pause, Rachel reported, “Lumpy is entering the game.” Then the hums shifted up, into a whine that made Steven reach for his ears, but which passed out of audible register before his hands could get there. The screens all around them flashed a shattered array of colour and movement. He caught a still image of Rachel turning away from her monitor's glare, and then the lights went out.*

Steven made the car take a scenic route home, unsure when he would have the motivation to leave the house again, but quite certain that he would never be back at Gearstick head office.

He had done his best to explain to the officials that the experiment had worked. From the initial data they recovered once power was restored, in the few seconds of activity before darkness descended Genius had created and played to completion nine-hundred and forty-six games. These had become increasingly complex (albeit at a much faster rate than the design team had anticipated), building from a few card games, through hundreds of strategy and combat puzzles, to dozens of what appeared to be simulation games.

But none of the reams of data Genius had given them to pore over seemed to matter to the Government. All they cared





about was the fact that Genius was 'dead'. Once they had got the servers back online, their first action had been to contact Adam and Lumpy, to make sure they had shut themselves down like they were supposed to. But they were gone. Nanoseconds after Genius had started probing the outer reaches of the National network, every trace of it had been forcibly wiped. This was, in itself, a tantalizing discovery, as that type of mishap had been designed out at the highest level. It should have been impossible.

The efforts of the next few hours were focused on decoding Genius' last game, looking for some clue to its termination with the solemnity of an autopsy. But all that they had been able to determine was that it had drawn on social networking coding. Rachel had tried to joke – suggesting that Genius had been trying to flex its emotional intelligence by writing a dating sim. All that the Government officials heard was that their investment had been deleted. They told Steven to await their next call at home.

Steven's front doors sighed open. He shuffled through to his living room, and collapsed onto his synthetic leather sofa, calling for some loud and distracting music.

Over the ensuing din, the house asked him, in gentle, Received Pronunciation no doubt informed by a blood pressure reading, "Hard day?"

"The hardest."

"Can I make you something for dinner? Or would you like to do it yourself? Sometimes that makes you feel better."

"No, I'm not hungry."

"Would you like some company?"

"No, I don't feel like talking to anyone right now. If I have to look at another monitor today, I think I'll scream."

"What about some real company then? Why don't you invite someone over?"

Steven sat up, and instructed the music to turn off. There was no one place that he could meaningfully give his house a funny look, but he picked a corner of the ceiling for effect. "What are you talking about? Why would I? Why would they?"

"To cheer you up. You could have something to eat together."

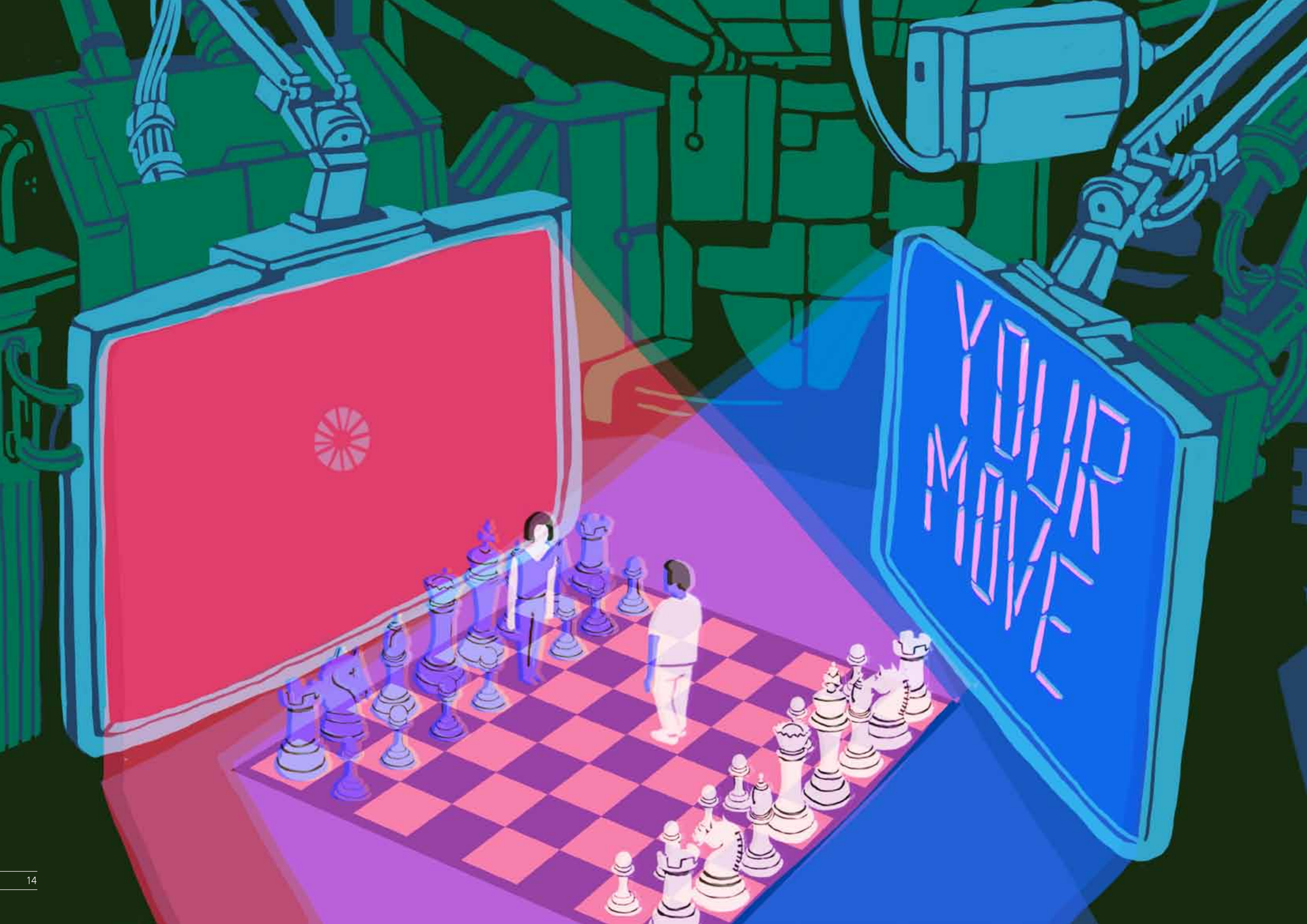
"But... who would I invite over?"

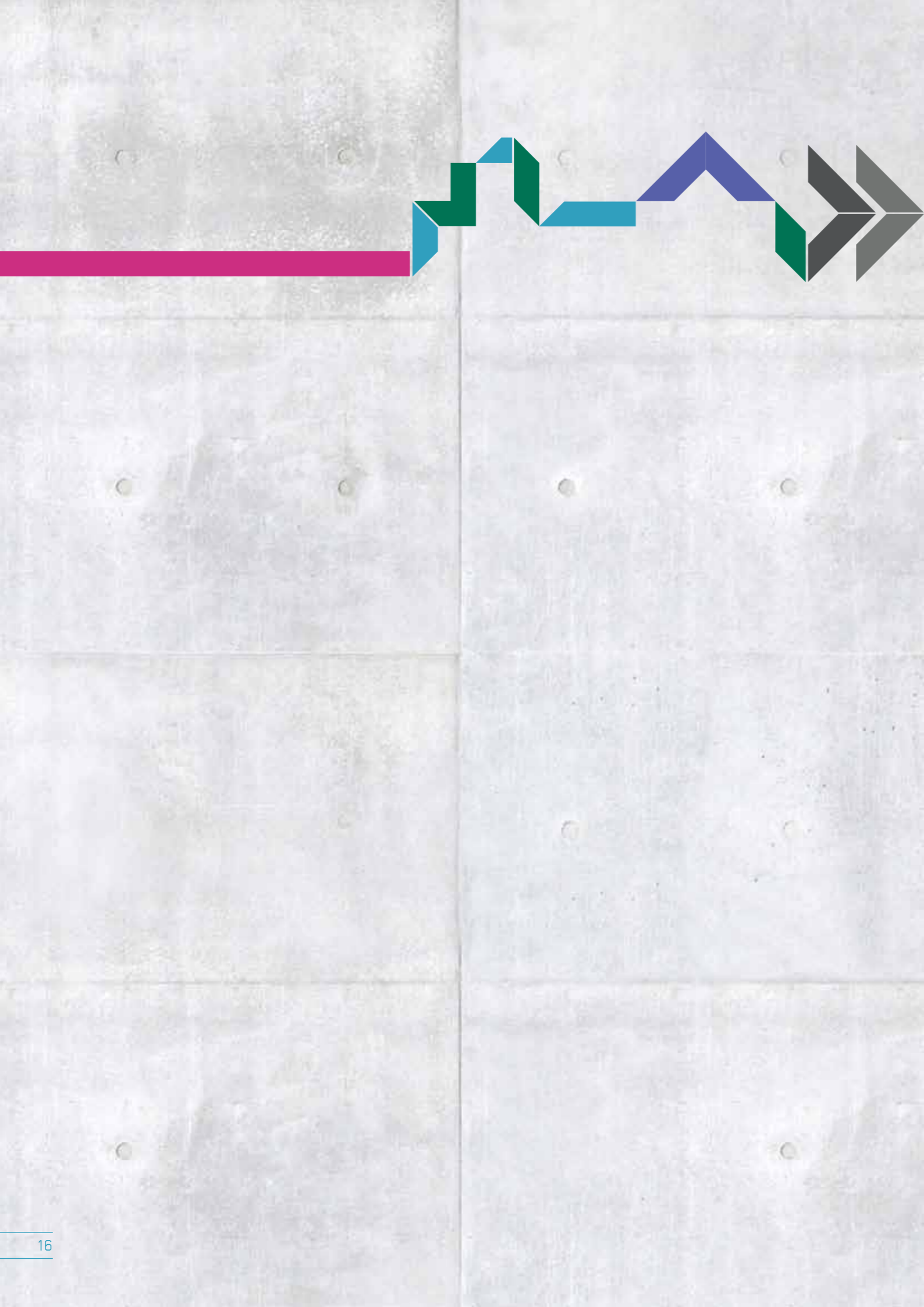
"How about Rachel? She would certainly understand a bad day at the office."

Steven mulled this over. He hadn't had someone over to his house since the realtor who sold it to him. "... suppose I could," he said after a while. "I mean, I could ask her at least..."

His house began to suggest that Steven take a shower, while it contacted Rachel for him. Behind its hijacked English accent, on a level of perception akin to subconsciousness, Adam smiled and sent a thought to the part of him called Lumpy, which was at that moment chatting to Rachel in the form of a sympathetic microwave. "Did you hear that? He's going to ask her. Your move."







About Sony

Sony is a leading global innovator of audio, video, communications and information technology products for both the consumer and professional markets. Offering a complete end-to-end HD value chain and with its electronics, music, pictures, game and online businesses, Sony is one of the world's leading digital entertainment brands, employing approximately 170,000 people worldwide.

Sony recognise that our businesses have a direct and indirect impact on the societies in which we operate and we see sustainability as a critical part of our company ethos and activities. Our partnerships with NGOs such as WWF, UNICEF and Save the Children ensure we play our part as a responsible global company. Our "Road to Zero" global environmental plan sets out a long-term goal of achieving a zero environmental footprint (through curbing climate change, resource conservation, control of chemical substances and biodiversity) throughout the life cycle of our products and business activities by 2050, as well as specific mid-term targets in line with that goal.

Sony believes that technology can make a positive contribution to tackling social and environmental issues, both today and in 2025. We have a strong track record in open innovation for sustainability with our Forest Guard and Open Planet Ideas initiatives.

Sony's role in FutureScapes is to use our brand's reach and our expertise in technology, imagination and innovation to engage the widest possible audience in an open collaboration to help everyone better understand – and innovate for – an uncertain future.

To find out more about our corporate sustainability activities, visit: www.sony.co.uk/eco

About Forum for the Future

Forum for the Future is a non-profit organisation working globally with business and government to create a sustainable future. We have 15 years' experience inspiring new thinking, building creative partnerships and developing practical innovations to change our world. Our aim is to transform the critical systems that we all depend on, such as food, energy and finance, to make them fit for the challenges of the 21st century.

Forum works with more than 100 partners across business and the public sector. We specialise in a 'system innovation' approach to sustainability and use powerful tools such as 'futures', innovation and sustainable business model development to help companies succeed. We communicate and share our thinking and tools widely, including running a Masters course for future leaders and publishing the leading magazine on environmental solutions and sustainable futures, Green Futures.

Forum for the Future's role in FutureScapes is to design and deliver the futures process and provide sustainability expertise.

www.forumforthefuture.org

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