

designing human-like figures, they create beings like Wall-E, the lonely, sad-eyed trash compactor created by Pixar in 2008, that look nothing like humans but behave in emotionally recognisable ways.

Anki hired animators from Pixar and DreamWorks to design Vector. Working with the same software they used for films, they created more than 1,000 individual physical expressions, from the way he jumps back in fear when he gets too close to the edge of a table, to the way he bangs his mechanical arms up and down when angry, like an enraged toddler. His eyes are especially subtle. Nothing more than round-edged squares on an OLED screen, their compressions, contractions and enlargements are perfectly calibrated to suggest mischief, fury and wide-eyed wonderment. Such is their eloquence that when you look at them you can infer the presence of eyebrows,

cheeks and a mouth that you can't actually see.

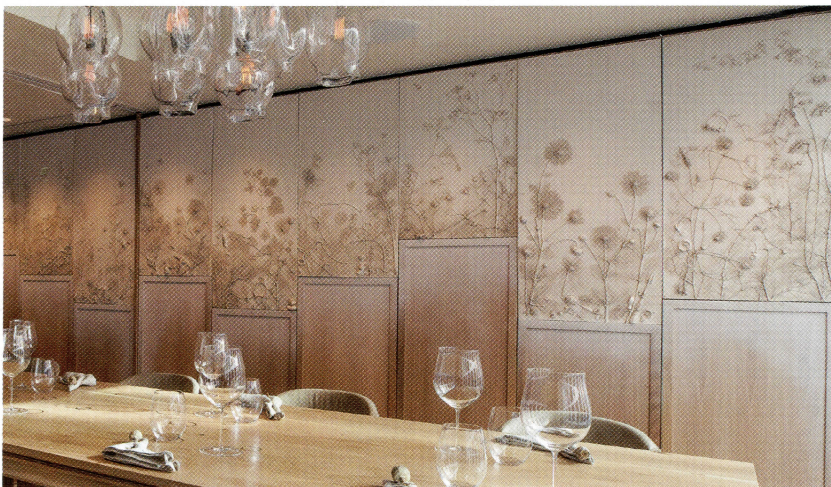
The appeal of Vector as a roving bundle of emotion is just as well, because as a practical device he is a pale imitation of Siri and Alexa, the virtual assistants from Apple and Amazon. As I was eating dinner, I began asking him food-related questions, like how many calories there are in a portion of pasta. He looked at me, gazed searchingly to the side, and then said, "I didn't get that." I turned to Siri instead, who responded immediately: "The answer is 205 dietary calories." Anki has plans to improve this: Amazon has recently agreed to embed Alexa into Vector, which should enable it to control your heating, order your groceries or hail an Uber. Once that happens it will be useful as well as adorable. ■

Simon Willis is associate editor of *1843*

Material values **Foliage**

Decorative, expressive and sustainable, plants are sprouting in unexpected places.

Jill Krasny talks to the designers who are going green



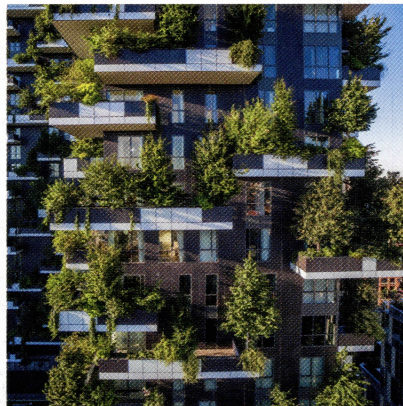
"I have always been attracted to trees," says Stefano Boeri, an Italian architect who completed what he calls the world's first vertical forest in central Milan in 2014. The two residential towers are planted with 800 trees, 4,500 shrubs and 15,000 plants spilling over ceramic terraces, a ravishing billboard of urban forestry. These buildings, along with other projects such as a passenger lounge in Shanghai's Pudong Airport that was inspired by a dense jungle canopy, are part of his mission to soften up our cities (and do his bit in the fight against climate change). "It changes every day, changes every season," he says of the vertical forest, "creating an explosion of colour."

Boeri's desire to drench cities in green is echoed in the designs of Studio Ro Co, a firm

A new leaf

ABOVE Rachel Dein's plaster reliefs in Hide.

BELOW Stefano Boeri's vertical forest in Milan



founded with the intent of literally livening up industrial office spaces in London with plants. It is led by designers Rose Ray and Caro Langton, who are intent on "helping the green take over". At startups such as Byte London and Fjord, and at Google's London campus, Devil's Ivy and Heartleaf Philodendron peek through spidery cracks in the ceiling. Or, as in Fjord's open-plan office, giant *Howea forsteriana* palms in rolling carts serve as movable walls to make spaces for close conversation.

Elsewhere in London, designers are using foliage as a storytelling tool. The interior of Hide, a new restaurant on Piccadilly, evokes a fairy-tale house in the forest. It features botanical reliefs cast in plaster by Rachel Dein, their monochromatic surfaces alive with masses of prickly weeds, grasses, dandelions and brambles foraged near her studio in north London. "The challenge is getting all the details," says Dein, who carefully presses the plants in rolled clay to leave impressions like fossils. Elsewhere in the restaurant there are moss-covered walls riddled with giant, saucer-shaped mushrooms. They are the work of Jeanette Ramirez, an artist from Manchester. She painstakingly glued pieces of bleached and inky-black lichen to wood panels and then blanketed them with golden fungi. "I'm always observing nature and trying to do something similar," she says. "I'm trying to create textures you can really feel." ■

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