Silicon Valley’s Green Edifice Complex

Planted roofs and hidden parking lots are de rigueur at new HQs for Apple, Google, and Facebook.

“From not so far away, it will appear like a wooded hillside rather than a building”

Despite all the creativity that flows from Silicon Valley, America’s tech capital hasn’t been famed for its iconic architecture. Startups are never sure enough of their future to sink millions into a structure that could outlast the company. Enterprises born in dorm rooms or garages typically graduate to nondescript office rentals in San Francisco or Palo Alto or take up residence in cookie-cutter, single- or two-story buildings in industrial parks around San Jose. As the late Steve Jobs remarked in 2011, “Buildings in office parks get boring pretty fast.”

It seems Apple’s design-obsessed co-founder may have another enduring legacy besides the trendsetting gadget his company produces. Since Jobs presented plans for new headquarters shaped like a giant spaceship to the Cupertino City Council two years ago, several other cash-flush tech companies, including Facebook, Google, Samsung Electronics, and Nvidia, have released blueprints for monumental new campuses. Although each appears to be its own unique architectural wonder—not surprising considering the high-wattage talent tapped for these projects—they all share an eco-consciousness that could become the most distinctive feature of this new West Coast aesthetic. “In the past, it was pretty easy for companies to throw some solar panels on the roof,” says Doug Woods, co-founder of DPR Construction, a company that’s working on the Apple and Google projects. He won’t divulge details of clients’ plans but says “some of the companies around here are looking to become a darker green.”

While none of the projects has broken ground, this green push is clear from documents filed with city authorities and interviews with people familiar with the plans. Apple wants to install enough solar panels and fuel cells to make its new Norman Foster-designed headquarters in
Cupertino entirely energy-independent. At Facebook, which commissioned Frank Gehry to create a Western extension to its existing Menlo Park campus, employees will be able to escape to a parklike roof complete with mature oak trees. Google, which is working with architects NBBJ, will restore 8 acres of wetlands at a 42-acre property in Mountain View and is considering installing an expensive system to recycle its own sewage, according to four people familiar with the plans who don’t want to be identified because the plans are private. The companies referred Bloomberg Businessweek to public documents.

Outdoor parking lots, which environmentalists deride as “heat islands,” have been largely banished from all three campuses. At Apple’s new headquarters, which will go up on a site that formerly housed Hewlett-Packard’s computer division, early birds will be able to grab one of 2,300 spots under the 2.8 million-square-foot building. An additional 5,800 spaces will be at a parking structure at the southern edge of the property, about a quarter of a mile away (no word yet on whether shuttle service will be offered). At Facebook’s new West Campus, previously occupied by Tyco Electronics, drivers will stow their cars on the ground floor of the 425,000-square-foot edifice. The company plans to build a tunnel under the Bayfront Expressway to shuttle employees from one wing to the other, according to documents filed with the planning commission.

Much of the existing asphalt will be replaced with greenery, with an emphasis on drought-resistant native species. Five of the nine buildings on Google’s campus along the shores of San Francisco Bay will have landscaped green roofs, which lower both heating and cooling costs. Facebook is eschewing the traditional mix of grasses and small shrubs in favor of full-grown trees, which will require laying as much as four feet of soil atop the quarter-mile building. A landscaped berm will conceal the warehouse-style structure from view. “From not so far away, it will appear like a wooded hillside rather than a building,” says Katie Ferrick, chairman of the Menlo Park Planning Commission.

Apple plans to plant 6,000 trees on its 176-acre property, from indigenous oaks and eucalyptus to apricots, pears, and—of course—apples. The green pièce de résistance will be a forested courtyard (bloggers have speculated the space is large enough to accommodate three football fields end-to-end). Rather than rely solely on scrappy, nursery-bred specimens, the company has said it will also plant 108 trees that stand out for their size, age, or uniqueness. Locating that many mature specimens will require scouring front yards, office parks, and other locales, says Peter Sortwell, chief executive officer of Hayward (Calif.)-based Arborwell. The expense of transplanting a single full-grown tree can run from $50,000 to $100,000, says Sortwell, who counts Apple as a client but would not reveal whether his company has been tapped to work on the project.

Google, whose plans are under environmental review by the town of Mountain View, is considering installing a so-called blackwater recycling system that would run all water, including sewage, through a series of treatment tanks so it would be clean enough to be sprinkled on lawns or piped into San Francisco Bay. Blackwater recycling is too expensive now to make economic sense, says Ian MacClaren, director of business development at Southland Industries, a mechanical engineering company in Union City, Calif. “It’s a good citizenship story, more than anything,” he says.

All three projects will use some prefabricated construction, with parts of buildings—possibly entire bathrooms or banks of fully furnished offices complete with carpets and curtains—assembled at factories and trucked to the site, say sources familiar with the companies’ plans. This approach, which is only starting to be used in the U.S., “can shave 20 percent off the entire construction schedule, and means money,” says Bill Flemming, president of Skanska USA Building, a subsidiary of the Swedish construction giant that’s one of two general contractors on the Apple headquarters.

Of course, all of these plans are just
that—plans. Many clients start out with ambitious goals, but scale back as costs become clear. "You have to be careful about differentiating between the public relations aspects of this and the actual economics," says Flemming. He notes that none of the companies has promised to make the heavy investments required to attain the highest platinum-level LEED certification, a widely accepted code set by the Green Building Council. In Apple's proposal to the Cupertino City Council, the company says it's aiming for gold-level certification and that the project will exceed all state and local efficiency requirements.

There's little doubt the green building industry will have its hands full as these projects take shape. Google and Facebook say they want to wrap up work on their new facilities by 2015, while Apple CEO Tim Cook pushed back the move-in date to 2016. "Finding the manpower is going to be a key issue," says Southland's MacClaren, noting that contractors in the area are already busy with some large commercial projects, including a new stadium for the San Francisco 49ers and a 1.1 million-square-foot research center for Samsung. "Booms happen around here every four or five years, and this one feels like the biggest one since 2000—and that was the biggest ever."

—Peter Burrows

The bottom line In America's tech capital, nondescript office parks are giving way to distinctive—and green—corporate headquarters.

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Cars

**Lured From Retirement To Save Fiat**

- **Ramacioti returned to design across brands and markets**

- **He's "one of the few designers who doesn't have a huge ego"**

When Lorenzo Ramaciotti retired as head of famed Italian design studio Pininfarina in 2005, the designer of some of the most iconic Ferraris was looking forward to spending time writing books about cars instead of drawing them. Two years later Fiat Chief Executive Officer Sergio Marchionne called, asking him to run the carmaker's design center and inject more style into the tired hodgepodge of model lineups sold under the Fiat, Lancia, Alfa Romeo, and Maserati brands. Ramaciotti didn't hesitate. "I was born a few hundred meters from Maserati's headquarters in Modena, and I've always wanted to be part of that world," he says. Ramaciotti originally planned to stay for less than two years. He's still there after six.

In 2009, after Fiat took control of Chrysler, Marchionne asked the designer to bring greater flair to brawny American vehicles such as the Dodge Durango and Jeep Wrangler. "We must create a stylish co-habitation of the cultures of the U.S. and Italy," says Ramaciotti, 65, speaking from the former machine shop in Fiat's sprawling Mirafiori factory in Turin where he oversees about 300 designers. A lifelong auto buff, Ramaciotti visits Chrysler's headquarters near Detroit for about a week each month to work with the American automaker's design team.

Marchionne, CEO of both Fiat and Chrysler, expects Ramaciotti's creations to help boost sales. The company's factories in Italy are running at just half capacity; losses in Europe reached about €700 million ($910 million) last year. By the end of 2016, Fiat is planning to roll out 16 cars built in Italy, including a small Jeep, a half-dozen Maseratis, and eight Alfa Romeos.

Ramacioti has been handed an "opportunity to recreate an Italian style," says Marchionne. "He's unique, one of the few designers who doesn't have a huge ego."

Under Ramaciotti, Fiat designed a roomier version of the subcompact 500, called the 500L. The four-door, to be introduced in the U.S. this year, has the rounded snub nose and wide-eyed headlights of the 500 but more than double the cargo space. For Alfa Romeo, he developed the Giulietta hatchback and a rear-wheel-drive...