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Doing Both

“Even in the remotest times, long preceding the Christian era, the ancients understood the value of dignifying their harbors with impressive works. The Colossus of Rhodes and the Pharaohs of Alexandria were counted among the seven wonders of the world...But the bridge across the Golden Gate would dwarf and overshadow them all.”¹

When James Wilkins wrote these words in an August 1916 editorial for the San Francisco *Call Bulletin*, he was an inspired journalist, an aspiring engineer and a frustrated commuter. The Marin County resident boarded a ferry each day, crossing the increasingly crowded waters of the San Francisco Bay to his office in the city. In an era of automobiles, slow-moving ferries were akin to the horse and buggy. Wilkins knew there had to be a better way.

In the early 1900s, San Francisco was the largest city in the world served primarily by ferries. While other population centers in the United States boomed, San Francisco found its economic growth stymied and its waters clogged with ferry traffic and weary travelers. Ferries simply couldn't keep up with demand or population growth in a city surrounded by water on three sides. Without a sustained link to neighboring communities, the region struggled to grow or connect with outlying communities.

Wilkins' 1916 editorial was a rallying cry. He challenged the beleaguered city, which had only recently rebounded from the brink of collapse after the 1906 earthquake, to build a bridge on the grandest

scale. Wilkins envisioned not only a road between San Francisco and Marin County, but a work of art that would rival the world's great achievements in architecture—a monument like no other.

But building a bridge would be a daunting challenge. It would need to span more than 6,700 feet across a strait almost constantly pounded by 60-mile-per-hour winds. A mere 12 miles from the San Andreas Fault, whose tremors nearly decimated San Francisco in 1906, the bridge would certainly need to withstand major seismic activity. It would have to be tall enough to accommodate ships passing underneath its deck. The city's notorious fog would likely slow construction. And the project would need to overcome these obstacles without disturbing the natural beauty of the San Francisco Bay.

Could it be done?

Many had their doubts—but not Chicago native Joseph Strauss, a veteran engineer with hundreds of bridges to his credit.

Strauss initially proposed a combination cantilever and suspension bridge in 1921. Purely utilitarian, his unsightly design was widely derided. “A hybrid monstrosity with little but functionality to recommend,” said one critic.²

While he spent eight years lobbying for support from governmental officials, local unions, fellow engineers, and eventually the voters who approved a \$35 million bond to finance construction, Strauss overhauled the plans.

But he was not alone. While he was the chief engineer and the project's most visible champion, Strauss surrounded himself with a team that had expertise in both structural engineering and aesthetic design.³

Engineer Leon Moisseiff joined Strauss after gaining a national reputation for his work on the Manhattan Bridge. Moisseiff was especially well known for his pioneering efforts in deflection theory, which stated that a bridge must flex and bend in the wind to withstand strong gusts. Moisseiff and fellow engineer Charles Alton Ellis applied this theory to the Golden Gate Bridge. Working by telegram

from their offices in New York and Chicago, respectively, the two men addressed the seemingly endless series of engineering challenges, eventually designing a bridge that was flexible enough to avoid damage during earthquakes or sustained winds by swinging 27 feet.

Meanwhile, architect Irving Morrow envisioned not just a bridge, but a sculpture that would complement—not undermine or overshadow—the natural beauty of the area. He was responsible for the art deco styling, including the wide towers and expansive lighting. But Morrow's most renowned contribution is the structure's famous red hue (officially known as International Orange). With this coloring, the bridge blends with the surrounding hillside, yet is still visible through San Francisco's legendary fog.

When Strauss combined Morrow's design with Ellis and Moisseiff's engineering, the result was a flexible, single-span, suspension bridge—one that was longer, narrower, lighter, and more graceful than anything the world had ever seen.

This feat of engineering, the Golden Gate Bridge, has now survived for more than 70 years. Upwards of 100,000 cars traverse it each day—more than 40 million per year. But the bridge is a monument renowned not only for transportation capabilities, but also for magnificence. The American Institute of Architects ranked it fifth on its America's Favorite Architectures list in 2007.⁴

The American Society of Civil Engineers named the Golden Gate Bridge one of the Wonders of the Modern World in 1994, stating “[It] combines engineering strength and beauty. It survived the 1989 Loma Prieta earthquake suffering no damage, and in 66 years the bridge has only been shut briefly (longest closure was 3 hours and 27 minutes) to traffic three times due to periods of high sustaining winds. Today, the Golden Gate Bridge remains one of the world's most revered and photographed bridges.”⁵

The confluence of two seemingly opposing ideals—beauty and strength—is at the heart of the bridge's iconic status. Could the city of

San Francisco have endangered lives with mediocre engineering? Of course not. Would Strauss's original, no-frills design have been sufficient in carrying cars to and from San Francisco? Perhaps. But would it today be a monument, a tourist attraction and one of the most photographed sites in the world? Unlikely.

When it opened to traffic, the Golden Gate Bridge was the longest single-span suspension bridge in the world, a position it retained for more than 25 years. Seven decades later, it still has the second-longest main span of any suspension bridge in the United States.

Impressive. But a nearby bridge is physically bigger, more heavily trafficked, and a greater marvel of engineering. That is the Bay Bridge. Just five miles east of the Golden Gate, it shuttles more than 270,000 cars each day between Oakland and San Francisco.

Opening just six months before the Golden Gate Bridge, the Bay Bridge is the longest high-level, steel bridge in the world. "Its construction required the greatest expenditure of funds ever used for a single structure in the history of man. Its foundations extend to the greatest depth below water of any bridge built by man; one pier was sunk at 242 feet below water, and another at 200 feet. The deeper pier is bigger than the largest of the Pyramids and required more concrete than the Empire State Building in New York," says University of San Francisco history professor John Bernard McGloin.⁶

Despite this feat of engineering, the prominence of the Bay Bridge is dwarfed by that of its famous neighbor. Just open the photo album of any family that has visited San Francisco. You'll likely find pictures of children smiling back at you from the deck of the Golden Gate Bridge, but not posed in the shadows of the Bay Bridge.

Why the difference?

Rather than focusing on form or function, the Golden Gate Bridge does both. Strauss and his team did not settle for strength or beauty, but instead recognized that each could complement and enhance the other. They bestowed on the bridge both strength and beauty. They did both.

Of course, this concept doesn't just apply to bridges. It holds true in sports, in nature, and in business—in fact, in most aspects of life. Gymnasts need strength and flexibility. Sports teams win with offense and defense. Ecosystems depend on both prey and predators. Car makers focus on safety and performance. Parents give their children roots and wings.

And a successful business prioritizes growth and profitability. Innovation and operational excellence.

In 1984, nearly half a century after the Golden Gate Bridge opened to traffic, one such business opened its doors, mere miles from the famous structure. When its founders needed a name and logo for the fledgling enterprise, they thought of the bridge that represented their city: San Francisco. Shortening the city's name led the founders to their new moniker: Cisco. And the shape of the Golden Gate Bridge—formed by its towers and suspension cables—inspired the Cisco logo. It was certainly appropriate. Much as bridges connect people across a body of water, Cisco's technology connects people and information across a network.

But Cisco took more from the Golden Gate Bridge than a name, a logo, or even the goal of bringing people together. Cisco also transformed itself by leveraging the same principle that has made the Golden Gate Bridge an icon for more than seven decades: Doing Both.

By doing both, Cisco approaches every decision as an opportunity to seize, rather than a sacrifice to endure. This allows the company to avoid a basic trap that ensnarls a lot of companies: the belief that when confronted with two divergent options, an organization must make a difficult trade-off in order to pursue its objectives. The basic premise of this book is that such thinking leads to false choices more often than it produces breakthrough insights. Instead of desired outcomes, it inevitably leads to reduced expectations.

But you can aspire for more.

Instead of choosing one thing to the exclusion of the other, what if you could do both, each for the benefit of the other? Not a balanced

compromise between two objectives, but a mutually reinforcing multiplier in which each side makes the other better. Jim Collins and Jerry Porras explored this idea in their 1994 book, *Built to Last*. “A highly visionary company doesn’t want to blend yin and yang into a gray, indistinguishable circle that is neither highly yin nor highly yang; it aims to be distinctly yin and distinctly yang—both at the same time, all the time. Irrational? Perhaps. Rare? Yes. Difficult? Absolutely.”⁷

Cisco recognizes the wisdom of these words. And it has benefited handsomely as a result. Over the past seven years, the company has doubled its revenue, tripled its profits, and quadrupled its earnings per share. Cisco has more than \$40 billion cash on hand and generated more than \$10 billion of annual cash flow in 2009, global recession notwithstanding. It routinely ranks among the most admired companies and best places to work around the world. Cisco is one of the few in technology that caters to customers of all sizes, from individual consumers to the world’s largest institutions. Its brand is estimated to be worth \$22 billion—the fourteenth most valuable in the world, according to Interbrand.⁸ With each new day, Cisco’s influence grows. In 2009, the company became one of just 30 that comprise the Dow Jones Industrial Average.

The following chapters explore Cisco’s experiences with doing both. I examine how this has helped the company enter new markets, introduce breakthrough technologies, scale its operations, engage with more customers, and better harness the potential of its people.

Perhaps some of our challenges will sound familiar to you. Perhaps they are limiting your organization from reaching its full potential. Perhaps you are struggling to choose between two alternatives right now.

If so, you just might find a bridge to a whole new world of opportunity in the pages that follow. I invite you to think of that the next time you face a difficult choice or are vexed by an uncomfortable compromise. The best answer may surprise you.

Maybe, you just need to do both.

Endnotes

Chapter 1

- ¹ James Wilkins, Editorial, *San Francisco Call Bulletin* (August 1916); in Kevin Star, *Endangered Dreams: The Great Depression in California* (New York, NY: Oxford University Press, 1997), 329.
- ² Henry Petroski, “Art and Iron and Steel,” *American Scientist* (July/August 2002), <http://www.americanscientist.org/issues/feature/art-and-iron-and-steel/5> (accessed January 20, 2010).
- ³ “American Experience: Golden Gate Bridge,” *PBS Online (KQED)* (April 16, 2004), <http://www.pbs.org/wgbh/amex/goldengate/peopleevents/> (accessed November 13, 2009).
- ⁴ American Institute of Architects, “America’s Favorite Architecture,” *Favorite Architecture*, <http://favoritearchitecture.org/afal50.php> (accessed November 13, 2009).
- ⁵ “Seven Wonders of the Modern World,” *American Society of Civil Engineers* (1994), http://www.asce.org/history/seven_wonders.cfm#gggb (accessed November 13, 2009).
- ⁶ John B. McGloin, “Symphonies in Steel: Bay Bridge and the Golden Gate,” *Virtual Museum of the City of San Francisco*, <http://www.sfmuseum.net/hist9/mcgloin.html>.
- ⁷ Jim Collins and Jerry I. Porras, *Built to Last: Successful Habits of Visionary Companies*, 1994, 45: HarperCollins Publishers, New York, NY. Copyright © 1994 by Jim Collins and Jerry I. Porras. Reprinted with permission from Jim Collins.
- ⁸ “Interbrand Best Global Brands List 2009,” Interbrand Corporation, http://www.interbrand.com/best_global_brands.aspx (accessed November 12, 2009).