Stay-at-home moms, take heart. Mercedes De Luca stepped out of the workforce for a dozen years to raise her two sons, now 25 and 26. Then she went on to become vice president of global IT for Yahoo and now president of the online fashion retailer MyShape.com.

Her reinvention story began a decade ago, when she returned to school to get her MBA, changed her first name (Gladys) to an initial (G.), and used her middle name, Mercedes, as her first name. With her new degree and new name, the Columbia-educated electrical engineer moved on to Yahoo, where she led 400 employees as vice president of the global information technology group.

Three years ago, she was recruited to MyShape.com, where she oversees 100 employees, in a job that lets her combine what she calls her “passion for fashion and passion for technology.” Since the MyShape.com site launch, nearly a million women have signed up to be members. They fill in their measurements and style preferences, and the site’s software matches them with clothing that “fits and flatters,” says De Luca. Users also specify favorite brands, such as Tahari and Paige Premium Denim.

De Luca and her colleagues hold patents on their “shape matching” and “personal shop” applications. Their goal: to “surprise and delight” women and to help them “play to their strengths,” she says. Her engineering background comes in handy. “It’s being able to hear what the business problem is and come up with a software solution,” she says. “You drive your team to create a technology solution that’s the way a person thinks and does things.” Off-line, women like to shop with their friends. So online, as of last August, MyShape.com lets them leave comments for their friends about outfits they have chosen. “For most women, shopping with your friend is a very social activity,” says De Luca. “A lot of us want our friends’ advice. We offer that same experience in the online world.” This has led to additional success. MyShape.com’s “conversion rate” (the percent of visitors who actually buy) is now significantly higher than average for online apparel retailers.