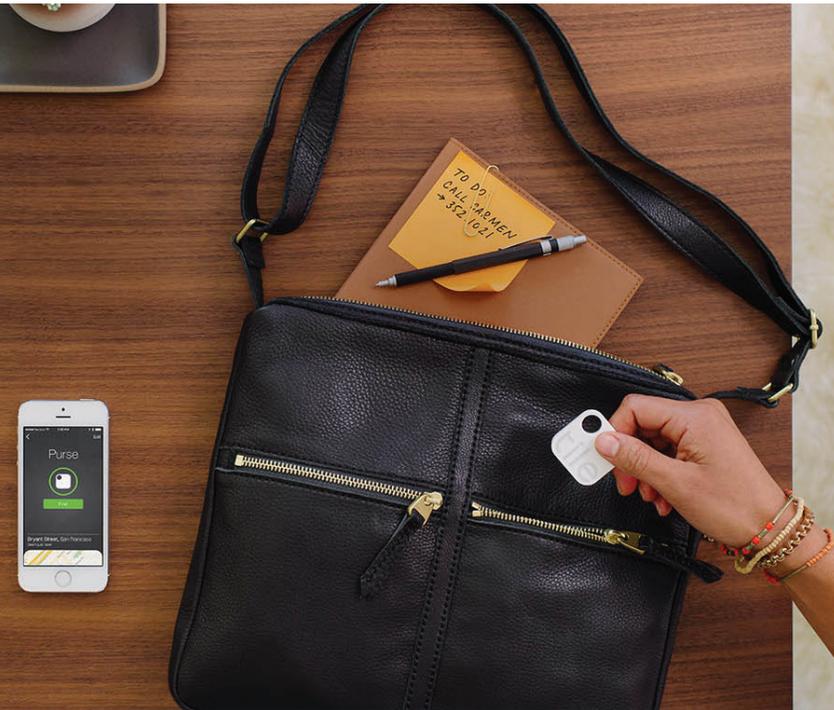


TILE COLLABORATES WITH JABIL ON DESIGN AND MANUFACTURING OF INGENUOUS LOST-ITEM TRACKER



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Mike Farley, Co-Founder & CEO, Tile

Case Study



Company	Tile, Inc.
Industry	Consumer Devices
Country	USA
Employees	50
Website	www.thetileapp.com

CHALLENGES:

- Overwhelming customer demand changes manufacturing requirement from 20,000 to 200,000 units - far outpacing the capabilities of the initial manufacturer
- Scaling prototype to mass production without suffering any lapse in overall quality

SOLUTIONS:

- Tile picked Jabil for its tier-one manufacturing capabilities, especially its superior design, engineering, supply chain and manufacturing strengths
- After years of working with the largest of companies, Jabil proved its expertise can be just as applicable when partnering with a three-person start-up

BENEFITS

- Jabil's ability to guide Tile from prototype to mass production saved time, reduced costs and ensured elevated product quality
- Jabil can help Tile drive future innovations, with process automation, materials improvements, end-to-end supply chain visibility and global manufacturing scaling

Big things do indeed come in small packages - Tile Inc. is living proof. The San Mateo, Calif.-based company's eponymous product is a tiny Bluetooth-enabled tracker that is helping people find more than 250,000 lost items each day.

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Sandor Kiss,
Head of
Manufacturing
Operations, Tile

The tracker, which can be attached to almost anything, works in concert with an easy-to-use smartphone app to locate lost, missing or stolen objects, including items like phones, wallets and keys.

The idea for the little white square came from Mike Farley and Nick Evans, co-founders of the company. They had kicked around the idea for a while, but when Apple released the iPhone4S, with its Bluetooth 4.0 Low Energy (BLE) technology, they knew the time was finally right. "The debut of BLE set the stage for a smart device that everyone could piggyback off," explains Farley, who is also Tile's CEO. "And with the increasing ubiquity of smartphones, we had the perfect remote control for our device."

The looming challenge was how to take their great idea and turn it into a prototype that could be readied for mass production. Farley and Evans decided to mount a crowdfunding campaign to raise some necessary cash – the initial goal was \$20,000 – to produce perhaps 10,000 to 20,000 units and leverage the \$200,000 already garnered from a Silicon Valley accelerator.

What happened next is the plot line of a high-tech fairy tale – the big, totally unexpected, record-setting kind. In 34 days, Tile raised an impressive \$2.68 million from 49,586 customers who backed their bucks with orders for approximately 250,000 units. "Upping the high end of our manufacturing contract by a factor of 10 was totally game-changing," recalls Farley. "We were facing a new reality when it came to ramping production while maintaining the highest levels of product quality."

Finding the Right Partner to Meet Unprecedented Product Demand

As Tile's crowdfunding campaign took off like a rocket, company executives realized their original choice for manufacturing – a small company in China – couldn't scale sufficiently to accommodate incoming orders. In addition to finding an alternative that could take on its newfound volume requirements, Tile was faced with the need to refine its prototype to ensure quality levels were maintained as orders climbed from tens of thousands to hundreds of thousands.

While Tile had strong ideas for the basic product design, the small team needed help in getting into a high-volume production environment. "From the very beginning, we knew the product had to be simple, clean and elegant," adds Farley. "Still, having a beautiful product is table stakes in consumer electronics. You also have to meet a very high bar with reliability and durability in order to succeed."

According to Sandor Kiss, head of manufacturing operations and Tile's employee No. 3, clearing both design and manufacturing hurdles would require assistance from a tier-one manufacturing partner. The challenge facing the Tile triumvirate was the reality that most tier-one manufacturers wouldn't have the mindset to work with a three-person company, much less a start-up.

Fortunately for Tile, Kiss had a strong background and expertise in manufacturing and supply chain management as well as a solid relationship with Jabil. In particular, his previous experience with Jabil during his tenure at Leapfrog Enterprises Inc. proved to be a major advantage for the consumer electronics up-and-comer.

After getting in touch with his former contact at Jabil, a meeting was set in August 2013 at one of Jabil's manufacturing facilities in China. While the reunion spurred renewed

enthusiasm to work together, the proverbial elephant in the room had to be addressed: Was a massive, tier-one manufacturer like Jabil willing to take on a three-person company with an in-progress prototype that was a quarter-inch thick and less than 1.5-inches square?

To test his mettle – and the product's viability – the Jabil team recommended that Kiss embark on a tour of various Jabil facilities to learn more about the company's capabilities and help to alleviate Jabil's concerns regarding Tile's size and stage of evolution. "Working with a three-person team was a first for Jabil," says Kiss. "Still, we made believers out of them once they heard our vision and saw that our app and prototype were ready for the next step."

An Unbeatable Formula: One Team from Prototype to Mass Production

Following the successful roadshow, Jabil and Tile collaborated on porting the prototype to mass production. "You have to design for manufacturing, and then manufacture to design," Kiss explains. "Starting with the prototype phase and having all the same engineers involved all through the process, you're aligned on the objectives from the beginning. Both sides worked together to meet the goal of delivering the best product possible."

For Tile, this meant soliciting Jabil's design expertise to help with product refinements and clear early hurdles with the aesthetics of the plastic. As the look of each Tile also serves as the company's logo, this was a priority. Additionally, Tile required a special process to enhance the design for the logo, and Jabil came to the rescue there. "Jabil helped us do a 'double shot' approach that merged two different materials in the front housing," explains Kiss. "It was not trivial; there were a lot of pitfalls we worked hard to overcome."

Other challenges emerged with how the top and bottom of each Tile were to be assembled. Jabil engineers responded quickly by helping implement an ultrasonic welding solution that met the aesthetic requirements while maintaining the integrity of the product design. The continuous teamwork also helped Tile ensure its product met industry standards for durability and reliability. "Jabil really shines in making sure products are fully 'battle tested' to the level we demand in order to scale," Kiss adds. "We ensured the product was waterproof and could neither chip nor crack – important because of its many potential use cases and our attention to brand excellence."

After a series of iterations, Tile was able to get the design validated much sooner with Jabil's engineering help. "We had over 200,000 pre-orders and working with Jabil enabled us to get to the manufacturing phase much faster," says Kiss. "It was important to clear hurdles early on, so we didn't have to stop production for quick fixes. We utilized Jabil's engineering as much as possible to save time, lower costs and ensure better product quality down the road."

Jabil Puts Tile's Manufacturing Process into Overdrive

As Tile intensified on ramping production, the Jabil team continually applied the right resources, supply chain prowess and manufacturing best practices to keep Tile's production lines running at maximum capacity. "We have a mutual trust and complete understanding of what we are trying to achieve and how to accomplish it," notes Kiss. "There is a common goal and strong alignment. I want to make sure we are both successful, so in order to be successful, you have to prepare for success. Jabil helps us do that."

As of Q2 2015, Tile had shipped more than 2 million units and is undergoing aggressive expansion. Tiles are now available at a growing number of retail outlets, including the

Apple Store, Best Buy, Lowe's and Target, with plans for more to be announced shortly. Tile also is poised for global expansion as the visionary company continues to grow both its products and global market leadership.

"As more Tile products are built, the stakes get higher," says Farley. "We're more and more dependent on a great supply chain. We have a ton of confidence Jabil will drive us to the next level." In supporting its continued growth, Tile takes advantage of Jabil's recently opened Blue Sky Innovation Center in San Jose to review the latest efficiencies from process automation, Internet of Things (IoT) technologies and materials science and supply chain advances.

Driving Future Innovations Together

While Tile still is a relatively small company, there are some pretty big plans for the future as the company works to fulfill its mission of enabling everything to communicate. By putting Tiles on keys, luggage, phones, etc., consumers are letting these things communicate and this gives them a voice they never had before. Right now, all the voice is saying is, "Hey, I'm here," but in the future, Tile wants to empower these items to say much, much more.

"Tile is really excited about what lies ahead," says Kiss. "We're engaging with Jabil now on our next-generation product. As we continue to innovate, we know that Jabil is ready to help us get to market faster."

Tile plans to build on its winning formula with Jabil, which is anchored by open communications and transparency. "I really love working with Jabil because we share a common culture," says Farley. "The personal touch we get from Jabil makes us feel like they're part of the Tile family. Our shared commitment to delivering a truly amazing customer experience will play a major role in driving future innovations."

Avid customers already have helped Tile create "the world's largest lost and found" with its breakthrough "community find" feature. This highly unique capability has been credited for reuniting one customer in Belgium with a stolen car found in Amsterdam. Tile also helps an elderly man suffering from Alzheimer's locate his much-needed and often misplaced cane. "Our tiny Tile is making a huge impact on people's lives, whether it's helping them through tough situations or giving them peace of mind," concludes Farley. "We are grateful for the position we're in and for Jabil's partnership in taking us to the next level and beyond."

About Jabil

Jabil is an electronic product solutions company providing comprehensive electronics design, production and product management services to global electronics and technology companies. Offering complete product supply chain management from facilities in 27 countries, Jabil provides comprehensive, individualized-focused solutions to customers in a broad range of industries. Jabil common stock is traded on the New York Stock Exchange under the symbol, "JBL". Further information is available on Jabil's website: jabil.com.