

Keeping 'digital storefronts' fresh

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From left: Locu's Rene Reinsberg MBA '11, Marek Olszewski and Marc Piette MBA '11

In 2010, a team of MIT graduate students designed an app that allowed people to rate entrees at local restaurants. This aimed to help restaurant patrons find the best local dishes.

Soon, however, the students became aware of an issue at some of the restaurants: Despite years of innovation on businesses' websites, it still takes many restaurants days, or even weeks, to update their online menus—which are now listed across a growing number of social media and review websites.

Inspired by this plight, they set out to rectify the issue, using data management.

Now, the former MIT students—Rene Reinsberg MBA '11, Marc Piette MBA '11 and Marek Olszewski—are running fast-growing [startup](#) Locu,

whose platform—through a unique mix of data-mining [technology](#) and crowdworkers—allows businesses to update all their information, across the Web, in real time. "Not having to wait for that data to propagate is really a breakthrough," says Reinsberg, now Locu's CEO.

This keeps a business's profiles fresh across all of its online profiles—a collective online presence known as a "digital storefront"—which, among other things, the co-founders say, helps people find that business online.

In just a couple of years, Locu's customer base has reached 40,000 businesses; in August, domain-hosting giant GoDaddy acquired the early-stage startup for a reported \$70 million. As a wholly owned subsidiary of GoDaddy, Locu—many of whose employees are MIT students and alumni—continues to develop its technology and grow the team.

Reinsberg attributes the company's early success to moving quickly toward "that next milestone"—such as the acquisition—building a strong team, developing novel technology, and receiving an early boost at MIT, among other things.

Externally, he says, the startup benefited from the rise of mobile devices, creating the potential for customers who might want to search for nearby food or services on the spot—and making Locu's services more desirable. "There's a discovery element to business that's been growing: Say you're in the mood for 'X,' so you search where you can get 'X' nearby," Reinsberg says. "We see a lot more people thinking about the real-time aspect to data. Having this 'digital storefront' up to date, across all Web platforms, has become crucial to businesses in the last couple of years."

Adding 'a human touch' to data mining

Locu's customers have primarily been restaurants. But a growing number of other businesses are using the startup's tools, including spas, salons, accountants and legal services, photographers, and home remodeling companies, among others.

On the surface, businesses plug their updates—such as menus, store hours, or pricing and service lists—just once into Locu's platform and those changes are posted instantaneously. Behind the scenes, Locu's engine is powered by a unique blend of advanced data-mining technology and data-entry crowdworkers.

Take the example of restaurants: First, web crawlers detect anything that resembles a restaurant website. Then, Locu's own suite of classifiers (machine-learning categorizing algorithms) analyzes and structures that information into menu settings.

Locu has made technological leaps and bounds in these innovative classifiers, says Olszewski, Locu's chief technology officer and a former PhD student in electrical engineering and computer science who led the development effort for the technology. They can determine some elements that other algorithms may miss—such as, say, uncommon (or completely unique) item names and prices on a menu or service list.

But perhaps the startup's most notable attribute, Olszewski says, is combining this technology with "a human touch." Thousands of crowdworkers from all over the world, trained in Locu's markup language, reference the original menus to catch and rectify errors—which, in turn, helps the classifiers learn better.

If a restaurant, in this example, decides to use Locu, all this information will be synched, instantaneously, across the restaurant's Web and mobile sites, as well as any profiles on Locu's partner sites, which now include Yelp, Foursquare, OpenTable, YP, TripAdvisor and Facebook.

Currently, the technology powers all OpenTable menus.

"Over time we've made this a very well-oiled machine," Olszewski says. "We have a great symbiosis between crowdworking and machine learning that allows us—at a reasonable cost and at scale—to do data structuring."

The company has filed several patents pertaining to this "hybrid approach" to data mining and management, Reinsberg says. Locu—which has offices in Cambridge and San Francisco—also provides an application programming interface, powered by its large corpus of real-time business-listings [data](#), to developers and publishers.

Locu's 'perfect breeding ground'

The Locu co-founders met in 2010 in an MIT course, 6.898 (Linked Data Ventures), taught by Tim Berners-Lee, the 3COM Founders Professor of Engineering. Initiated that year, the class teams electrical engineering and computer science students with MIT Sloan School of Management students to help them build working prototypes and viable business plans.

During the class they launched their first startup, Goodplates, an app that allowed people to upload photos of individual dishes they've eaten at local restaurants, complete with reviews.

To help scale up the company, the team leveraged many resources at the Martin Trust Center for MIT Entrepreneurship, including participation in MIT Startup Central (co-founded by Reinsberg), the predecessor to the Founders Skills Accelerator.

Among other things, the Trust Center is where the team worked out their startup's kinks, received mentorship from seasoned entrepreneurs, and

found the niche market for their product. One of Locu's key advisors was Sep Kamvar, now the LG Associate Professor of Media Arts and Sciences at the MIT Media Lab, who later served on Locu's board of directors.

"It was the perfect breeding ground for us," Reinsberg says. "It's really hard to imagine how this would have worked out without MIT."

Reinsberg was heavily involved in the entrepreneurial ecosystem at MIT, participating in various clubs and writing for the MIT Entrepreneurship Review, an online publication. In 2011, he earned MIT's Patrick J. McGovern '59 Entrepreneurship Award. He continues to be involved with MIT, coaching future startups as part of the Trust Center's entrepreneur-in-residence program.

For Piette, Locu's chief operating officer, MIT provided what he calls a "well-rounded [entrepreneurial] education" that included discovering product-market fit, customer value, basic accounting and financing, and how to structure fundraising rounds. "When we started the journey, there was never an area where we had absolutely no clue," he says. "We either knew what to do or knew who to ask."

Apart from learning startup strategies, the co-founders say they developed a more entrepreneurial mentality, where [business](#) lows are followed by highs—and vice versa—and persistence is rewarded. "To know that you have a bad day, there'll be a good day, but just don't give up—that's what you learn at MIT," Reinsberg says.

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