

## Dividing and Conquering the Trash

David Zax | Oct. 25, 2014



Nate Morris, chief of Rubicon Global, with recyclable raw materials on the grounds of Somerset Recycling in Kentucky. - Sharrett for The New York Times

Nate Morris pulled his rental Toyota Prius into a parking spot outside Bavarian Waste Services, a waste management company in rural Walton, Ky. Stepping out of the car, he inhaled the putrid odor wafting down from Bavarian's landfill.

"Smell that?" he said with a grin. "Smells like opportunity."

In a smart navy blazer, he was overdressed for a visit to the dump. But Mr. Morris, 33, moves between worlds. His company, Rubicon Global, acts as a hub connecting businesses with waste haulers and recyclers that handle their trash.

Mr. Morris might be visiting a landfill in the morning, but he might have an appointment with a Fortune 500 executive later in the day.

He might even have a meeting with a friend, Senator Rand Paul, the Kentucky Republican for whom Mr. Morris moonlights as a top fund-raiser.

Bavarian's owners greet Mr. Morris as if he were a visiting dignitary. In the years since Rubicon's founding in 2008, he has gained control of the waste management contracts of major corporations, including several in the Fortune 500. Big-box stores, grocery chains and hospitals use Rubicon. Under Armour, the apparel company, is a client, as is 7-Eleven. Through a combination of big data and online auctions for hauling contracts, Rubicon says it reduces clients' waste bills by 20 percent to 30 percent. And, Mr. Morris says, it helps the environment in the process.

To understand what Rubicon does, it helps to understand a bit about the garbage business. Across the country, millions of companies are creating trash, including food waste, cardboard, plastics and various other materials. These companies hire waste management firms to pick up their trash and truck it to a landfill. Two big national companies, Waste Management and Republic Services, dominate the market, owning fleets of trucks and hundreds of landfills. Thousands of smaller, regional trash haulers fill in the gaps.

Rubicon, based in Atlanta, isn't in the business of hauling waste. It doesn't own a single truck or landfill. Rather, companies hire it as a kind of waste consultant. It begins by holding an online bidding process for its clients' waste contracts, fostering competition among waste management businesses and bringing down their prices.

Rubicon also studies its clients' waste for novel recycling opportunities, connecting businesses with the recyclers who see hidden value in their junk. For a national pizza chain, Rubicon determined that much of its leftover dough could be



The company's logo, rendered in recycled bottle caps outside its offices in Atlanta.—Tami Chappell for The New York Times

processed into ethanol. For a regional supermarket, Rubicon discovered that 400,000 old company uniforms could be shredded and resold as a stuffing for pet beds. Insulated containers that carried seafood for one business were repurposed to transport bull semen for another.

So beyond saving money for its clients, Rubicon can nudge them toward environmental responsibility by diverting waste from landfills into recycled goods.

The moneymaking possibilities are huge, according to some estimates. A report from **As You Sow**, a group that promotes recycling, calculated that in 2010 alone, in the specific category of packaging materials, \$11.4 billion worth of valuable commodities was lost to landfills. According to a report issued by Waste Business Journal in 2012, the waste industry over all was worth \$55 billion. Figures like these explain how, where others hold their noses, Mr. Morris smells opportunity.

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Mr. Morris was raised by a single mother and his maternal grandparents in Louisville. His grandfather was a local leader for the United Automobile Workers. In high school, a fractured spine derailed Mr. Morris's promising football career, and he began to focus on other interests, like politics.



In companies' trash, Rubicon Global sees profit, and a chance to offer an environmental nudge. —Sharrett for The New York Times

At George Washington University, those politics began to shift to the right. He was an intern for Representative Anne Northup (who has since left Congress) and Senator Mitch McConnell, both Kentucky Republicans, and worked in what was then the White House's new Homeland Security Office. (He recently held a fundraiser for Mr. McConnell, who is running for re-election.) In 2004, Mr. Morris became one of George W. Bush's most successful young fund-raisers.

Politics is a big part of Mr. Morris's life, but he knew he wanted to earn his living in business. He especially relishes entrepreneurial stories like that of Colonel Harland Sanders, who built his KFC empire from a single, modest roadside restaurant. "I love the self-made story, because I hoped it would be my story," Mr. Morris said.

While studying at the Woodrow Wilson School of Public and International Affairs at Princeton, he reached out to an old friend, Marc Spiegel, to explore business ideas. It was just after the 2008 market plunge, and he feared that his job prospects would be limited. Mr. Spiegel, whose family had been hauling trash for generations, proceeded to give Mr. Morris an education in the waste business. Mr. Morris learned that the largest hauling companies, like Waste Management, also owned landfills; in fact, they gleaned much of their profits from the fees they charged to use these landfills.

"All the incentives," Mr. Morris said, "were centered around filling up landfills to create revenue." He realized that if he worked on businesses' behalf to find revenue by diverting waste from landfills, it would align profits with pro-environmental results. "We felt the market could lead on an environmental issue," he said.

Mr. Morris used his personal credit cards to pull together a website and to pay for basic legal work, then reached out to another friend from Kentucky: Hank Dudgeon, a successful real estate agent in Washington who is now Rubicon's director of business development. Mr. Dudgeon used his connections to get Mr. Morris in front of the chief executive of the major national pizza chain mentioned above (which Mr. Morris declined to name at the company's request).

“I said something like, ‘I want your garbage contract,’ ” Mr. Morris recalled, and the intrigued pizza executive replied, “No one’s ever asked me for that before.”

Mr. Morris pitched the executive on the various ways he thought Rubicon could shrink the pizza company’s trash bill — and walked out with the contract.

A crucial investment came from John Ashcroft, who was attorney general for President Bush. The investment opened doors to the business of a major big-box retailer, and that, in turn, attracted the attention of a man Mr. Morris calls “the Michael Jordan of garbage”: Perry Moss, who was working for a garbage broker called Oakleaf Waste Management.

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The waste industry has long had brokers who work to reduce hauling costs for clients. But when Oakleaf entered the scene in the mid-1990s, it modernized this segment of the industry, introducing an online billing system and guiding clients toward recycling. Oakleaf grew so explosively — attracting clients as large as Walmart — that it caught the attention of Waste Management, which bought it in 2011. But Mr. Moss, whose passion was recycling, felt that his values didn’t align with a company so heavily invested in landfills as Waste Management. So he joined Rubicon as president in May that year.

Mr. Moss’s hiring set Rubicon on the path of serving clients in all 50 states, as well as Canada and Puerto Rico. In addition to brand names like 7-Eleven, lesser known companies with huge footprints have hired the company.

One client is Martin-Brower, which delivers 520 million cases of goods to 18,000 restaurants annually and is a major distributor for McDonald’s. Steve Kinney, a vice president at Martin-Brower, said Rubicon’s expertise had helped it dispose of organic waste, cardboard and shrink-wrap more efficiently.

Rubicon isn’t the only company that has found a lucrative niche as a gatekeeper to Corporate America’s Dumpsters. Other companies aim to open up competition to reduce prices on hauling contracts. Still others, like IBM, have used technology to help find recycling opportunities for clients. Even Waste Management has a division that offers some services similar to Rubicon’s.

Still, “we have no head-to-head competitor,” Mr. Morris asserted. It is hard to gauge the company’s size, however, as it does not disclose its revenue, number of clients, the amount of garbage under its purview or the amount it diverts from landfills. It does say it works with a network of 5,000 subcontractors, mostly haulers and recyclers.

In proclaiming himself an environmentalist, Mr. Morris knows he is playing against type. Pew Research found last year that while 69 percent of Democrats called protecting the environment a top priority, only 32 percent of Republicans agreed.

Mr. Morris said of environmentalism, “I felt it was an issue that a lot of people within my own political persuasion have lost, which I feel should be our issue.” He added, “The main driver of environmental change should not be government or N.G.O.s — it should be the market.”

Last spring, when Rubicon brought on two major clients that produce vast amounts of waste, the company retained Al Lakhani, a dapper consultant who is based in Munich and has expertise in analyzing large quantities of data.

When Mr. Lakhani arrived in Atlanta, he discovered that “data collection” meant something very different at Rubicon. Jackie Beason, Rubicon’s director of commodity sales, gave Mr. Lakhani an assignment: to climb into the Dumpster of a random nearby restaurant. “I said, ‘You don’t have to get your bow tie all dirty,’ ” Ms. Beason recalled with a laugh.

Though unscientific, Dumpster-diving remains the primary way that those in waste management analyze their custom-

ers' trash. "It's literally: Here's paper, here's a cup, here's books, here's e-waste," explained Ms. Beason, who has spent 25 years rummaging around Dumpsters in various waste management jobs.



Perry Moss, president of Rubicon, center, and Hank Dudgeon, director of business development. - Tami Chappell for The New York Times

Mr. Morris says he believes that the future of the trash business lies in data. And Rubicon collects all sorts of it: the value per ton and per cubic yard of various materials, in various regions; the volume of clients' waste; how often that waste is removed; which haulers are servicing which locations for which clients, and so on.

The data lives in Rubicon's proprietary software platform, called Caesar. (Mr. Morris, a fan of the classics, sees in Julius Caesar's irrevocable river crossing "a fantastic story of disruption.")

One of Rubicon's most basic data applications is simply to determine whether a client can have its garbage picked up less often. Because haulers traditionally charge per visit, they

have an incentive to empty Dumpsters even when they're only half full.

Rubicon sees emerging technologies as creating opportunities to reduce such inefficiencies. It is experimenting, for instance, with a sonar-equipped device that measures whether a Dumpster is full.

"Imagine a time when this technology will send a ping out," Mr. Moss said, and a truck can respond simply because it happens to be nearby. Visions like this are one reason he sometimes calls Rubicon an "Uber of waste." It's one of several grand analogies that the Rubicon team draws to hot start-ups.

Even more grandly, Mr. Morris has said he would like all of his clients to divert 100 percent of their waste from landfills by 2022. Reaching such a goal would seem a threat to companies like Waste Management that are heavily invested in landfills. Yet Waste Management doesn't appear to be worried about Rubicon, or to think a future without landfills is near.

Janette Micelli, a spokeswoman for Waste Management, said the waste and recycling business "is populated with hundreds of brokers, Rubicon Global being one," and she pointed to Waste Management's landfills as a major competitive advantage.

With Rubicon's vision of zero waste far from a reality, it and Waste Management actually do business with each other; Rubicon has awarded Waste Management some contracts. Even if the times are growing greener, not all businesses are eager to swear off the landfill. For every win-win recycling option like the pizza dough sold for ethanol, there are other sustainability choices that — for now, at least — are too costly. Rubicon's clients sometimes opt for the landfill, if it's cheaper.

"The frustration for me is not that the customer is unwilling to spend more" on a greener path, Mr. Moss said, but rather that American entrepreneurs haven't stepped up to create recycling technologies at compelling prices. He says he thinks free markets and better data flow will spur more such innovation.

But not everyone agrees that the free market alone will increase recycling significantly. "Many materials just don't have a market value yet, or may never have a market value," said Conrad MacKerron, senior vice president of **As You Sow**. He noted that recycling rates were highest where recycling laws and regulations were in place.

Nonetheless, he said Rubicon was exploring a "positive niche." And he and other experts said that a centralized data

hub, tracking large quantities of potential recyclables, could embolden entrepreneurs to invest in new recycling technologies.

That, at least, is what Mr. Morris is counting on as he tries to apply the sleek tools of Silicon Valley to the rotting trash heaps of rural Kentucky and beyond. It's an unlikely vision, and he still finds that it takes a while to explain. Driving from Bavarian Waste's landfill, he remembered his mother's reaction when he first told her about his nascent business.

" 'I didn't envision you being a garbage man,' " he recalled her sighing. " 'You could have done that out of high school.' "

That was years ago. "She's come around," he said.