

Dan Hoornweg, University of Ontario Institute of Technology The adage "Where there's muck, there's money" rings ever truer as global municipal solid waste management budgets approach about \$375 billion per year. Bringing PPP initiatives into the waste sector has the potential to introduce significant efficiency gains, but requires creative thinking to safeguard the desired outcomes. These examples show how mid-course corrections are critical to an iterative learning process.

he waste management sector usually provides one of the most obvious entry points for PPPs in any country. But easy answers are usually illusory. Cities tend to follow a hierarchy of sustainability (similar to the waste management hierarchy: reduce, reuse, recycle). Any city, or country, trying to increase its sustainability will need to first properly collect and dispose of its waste. The way the private sector is involved in this effort, with mutual

respect, efficiency, and hopefully a good measure of humility and honesty, is one of the most powerful indicators of a city's overall sustainability.

Bringing the private

sector and new efficiencies into the waste business can work if the players are prepared and combine innovation and iterative learning—because despite the potential efficiency gains and financial savings, the waste management

industry is one of the most challenging places for a PPP to operate. In the U.S., for example, the sector's origins land it in the earliest days of organized crime. These aren't just myths; a few years ago, sales of mozzarella cheese were curtailed in southern Italy when dioxins were found, apparently having made their way into the cheese from improperly disposed waste by the mafia. And cities in several developing countries are known to have "phantom employ-

ees" among their waste workers.

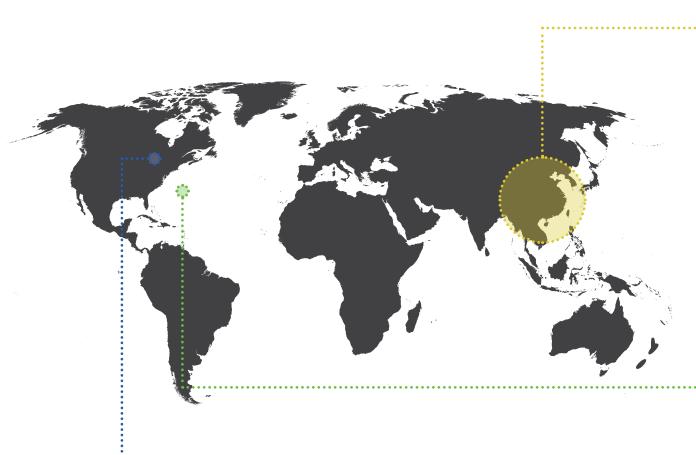
But when PPP players are committed to results, the past is not prologue. Here are some examples of situations in the

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waste industry that seemed ripe for failure—but which were ultimately saved by creative thinking. Applying this spirit of innovation to other PPP scenarios may inspire those whose projects are balancing tenuously on the tightrope.



GUELPH, CANADA

In 1987, the Canadian city of Guelph launched one of the first curbside recycling programs (the first one in North America started next door in Kitchener, Ontario). The program started off positively with new privately operated trucks and drivers for recycling. There was even a declared peace between the local union (public-sector garbage truck drivers) and the non-unionized recycling truck drivers. But the time it took to collect the recyclables was more than projected because recycling truck operators would spend precious minutes sorting through the trash to find beverage containers that listed a

deposit. These deposits in turn funded all the drinks and snacks at the local store during drivers' breaks. When a \$100,000 truck sits idle as a driver spends minutes to retrieve a bottle or two worth 10 cents, no one can deny a flaw in the process.

But there's always room for innovation, and in this case, a small increase in driver wages in exchange for promises to forgo the deposits solved the problem. This exemplifies a particularly creative approach to problem-solving. Knowing all of the dimensions of a scenario—in this case, the habits and backgrounds of the drivers—fed into the resolution.

BERMUDA

Another near-failure, this time in Bermuda's waste management system, threatened to tank a PPP in the early 1990s—and this one, too, rested on drivers' judgments. When new heuristic routing plans were developed to make waste collection more efficient, incentives were provided to the drivers and crews: for example, they could finish for the day when their route was complete.

It made sense in theory, yet there was incredible reluctance to the proposed changes, and efficiency stalled. The new and naïve waste manager was flummoxed, but a few weeks later one of the more helpful drivers took pity on the fresh expat and confided the truth. Turns out the crews hated the new and improved routing as the changes might interfere with potential Christmas tips from serviced residents.

Once the facts were known, working with drivers—developing existing relationships with an increased level of trust—resolved the issue. A "driver representative" was established, and tips were shared.

EAST ASIAN METROPOLIS

A World Bank Group solid waste project was designed for an important East Asian city in 1998. Learning from past mistakes, and recognizing the potential savings PPPs could bring, the project included the clever idea of leasing out collection vehicles. This would hopefully help develop local waste management companies; efficiency gains over city owned and operated trucks were virtually guaranteed. The city's Director of Waste Management, rumored to be corrupt, was eventually (finally) convinced to try the idea of leasing a few trucks as a pilot.

For a while, the project went well. All the trucks were leased and small new companies flourished. Turned out though, the relatively young companies were largely owned by friends and family of the Director of Waste Management. A subsequent revision to the program required previous waste experience for potential truck lessees. Local businesses and the Rotary Club were brought in to provide business advice and offer outside perspective on the review.

ADJUSTING THE ROUTE

Potentially disastrous developments that threaten to derail the course of a PPP are not limited to one sector or one region. Mistakes—and mistaken assumptions—plague partnerships everywhere. These potential problems can be reduced by paying attention to the impacts on all the employees (formal and non-formal), being aware of who shares in the efficiency gains, and ensuring that an iterative process is possible. Learning by doing guarantees the road will be bumpy. Learning successfully happens when you know how to adjust the route—and when players have the humility, and ability, to make the necessary changes.