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WM - Waste Management Inc Investor Day

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PRESENTATION

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Good morning, everyone. Before we get started, please make sure your cellphones are turned off, and welcome to Waste Management's first Investor Day in about a decade. I think I know most of you in the room, but for those of you who don't know me, I'm Ed Egl, Director of Investor Relations. I've been with Waste Management for about 24 years.

Before we get into the formal presentations, I want to do kind of a brief safety overview like we do at most meetings for Waste Management. You see we're pretty packed in here today, lots of tables, lots of tripping hazard, so please be careful as you get up and walk around the room. In the unlikely event of an emergency where we have to evacuate the building, we can go out either one of these doors. To the left-hand side here, there's a stairwell here marked with exit, we'll go down the stairs, meet across the street and wait for further instructions until it's safe to come back in the building.

If there's a medical emergency, we have 2 Waste Management employees, [Jason] and [Aaron], who are certified in CPR, will help us with that. And then James is volunteered to dial 911. So with that, let's get started with the most important slide here. And unfortunately, our Chief Legal Officer and our Corporate Secretary are in the room today. So I'm going to have to read this word for word. Just kidding. They've been nice enough to let me read a smaller version of this, so please bear with me while I read this.

Today, you'll hear us discuss certain non-GAAP measures, including our adjusted EBITDA, adjusted EPS and free cash flow, as well as Advanced Disposal's adjusted EBITDA. Please see the end of the presentation for reconciliations to the most comparable GAAP measures.

Also, you will hear forward-looking statements, which are based on current expectations, projections or opinions about future periods. Those statements are subject to risks and uncertainties that could cause actual results to differ materially. Please refer to the cautionary statement on Slide 2, which is up here and -- of today's deck and our filings with the SEC, including our most recent Form 10-K and 10-Q for further discussion about risks and uncertainties. We also assume no obligation to provide any updates on the forward-looking statements.

So here's our overview for today. We have a full day. We have -- you'll hear from every member of the senior leadership team, and we'll have Q&A breaks, 2 of them throughout the day. Please hold your questions until we get to those Q&A sessions and we'll have microphones passed along the room to ask your questions.

So there's 3 key themes that I'd like you to take away with this if we're having a successful day. First one is that we have a great senior leadership team that has driven strong results, created a great culture at Waste Management and they're going to provide us some glimpse into the great things that we're doing in the future. So I'd like you to get to meet them and talk to them today.

Second, we're focused on our people and we're focused on our customer. We want to be an employer of choice and we're providing differentiated services for our customers to help have a standout amongst our competitors.

And thirdly, we are a best-in-class company in the waste vector, but we don't want to be a best-in-class company anymore, we want to be a world-class company, not just in the waste space, but in a broader industrial complex.

It's been a -- the last few years have been a great time here at Waste Management. We've had done a lot of great things. Our leadership team is about to give you a glimpse of the future of the company, and I hope you join us on that journey of continued excellence.

And with that, I'm going to turn it over to our President and Chief Executive Officer, Jim fish.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Okay. Thanks, Ed. This floor is a little springy. I was going to try and -- I was going to do a backflip off of the front step here. I thought that might not work out so well, if I didn't make it.

Well, welcome to our 2019 Investor Day. It has been a decade almost since we had our last Investor Day. I can promise you it won't be a decade before the next one. I want to thank the New York Stock Exchange, [Chris] came in earlier, I don't know whether he's here now, but I want to thank Chris and the whole team here at the NYSE for hosting us. It's such a cool room that we're in today. I've been in this room one other time, but it's fun to be here in this room. So thank you to them for hosting us today. My hope today is that you -- when you leave, that you walk out of here with a better understanding of our business model, that you walk out of here with an in-depth understanding of the competitive advantages that really separate Waste Management from others, and that you really fully appreciate this senior leadership team that will take us on this journey, this strategic journey that we have planned over the next 5 to 10 years. This team is a team that we've assembled over -- really, over my tenure, my short tenure and you'll get to meet all of them today.

I want to tell you a little bit about myself, some of you -- I know a lot of you in the room, but I don't know all of you. And so I'll give you a little bit of insight into me. I have been CEO since 2016. So I took the job in November of 2016. Prior to that, I was CFO in 2012, so took that role in 2012. But what really shaped me for this job, and because I didn't start my career in the waste industry. What really shaped me for this was spending 7 years in the field. And my father-in-law gave me probably the best advice I've had in my career. And I told him, look, I'm going to -- he was a pipefitter from St. Louis, Missouri, passed away a few years back, but really a hardworking guy and a superb person. And he said, look, when you go out in the field, don't just sit in your office, actually spend time at the operations. And he suggested that I spend time on a truck every week and so I took his advice. And so every week, I would go out to one of our field locations around -- initially around Boston and then we moved to Pittsburgh and Philadelphia. But every week, I would go out 1 a.m., 2 a.m., 3 a.m. in the morning and spent time at those operations and then ride on a truck. And it helped me really develop an appreciation for the logistics of the business, the complexities that they run into and when things like weather hit, the safety hazards that we have to address each and every day. So that gives you a little bit of insight into what ultimately shaped me for this role and now I can fully appreciate what our field folks go through each and every day.

The key messages today, there is a couple here and really if you read from left to right, these key messages kind of add up to the end game at the end. They add up to that last box, which is much more of a financial box. But if you start out on the left side, a passionate, experienced management team that's leading a culture of people first, you're going to hear that term a lot from me, people first. And I'll give some more color around that later, but certainly, a passionate management team that focuses on people first, leveraging the best asset network on the planet. The best asset -- when you think about, for this business, the best asset network is clearly the one that we have. And then in the middle here, we have driving growth through a differentiated service offering. We've talked a lot about that recently and our focus on the customer and using technology and advanced data and analytics. You'll hear a lot about that from Nikolaj Sjoqvist, but I'll touch on it a bit as well, and then positioning our brand to be a recognized world-class brand. I mean, we have a huge head start certainly within our space. But I think our brand has progressed to a point where we can actually aspirationally think about it being world class. All of those ultimately, if you think about this as kind of an equation, add up to that last box, which is stable, robust cash flows, disciplined deployment of capital, strong returns to shareholders. And then I would tell you at the very bottom that maybe the most important line on the entire page here, which is organic growth.

Look, if you -- that's the foundation. If you don't have a good organic growth model, then it doesn't -- you can go do M&A all day long and M&A is important to us, strategic M&A is important. We'll talk a little bit about Advanced and that is a good acquisition for us. But if we don't have organic growth, if we don't have a good organic growth model, then it doesn't matter. We're kind of adding just for the sake of adding, and we don't really have a growth model that ultimately works.

Okay, here's a few financial stats. And the one I'll point out at the top is kind of interesting. We were founded in 1971. Well, look there, we're -- not only was Waste Management founded in 1971, there was a couple of other big companies founded in '71. '71 was a good year for founding long-term big companies. Nike was founded in 1971, Starbucks was founded in 1971, and Waste Management was founded in 1971 among many, I think, but a good year to found a company, I guess, was 1971.

If you look at these 2 pie charts here, which is where I'll focus your attention and look at that middle one, the revenue mix. Part of what makes us such a solid investment are the fact that we are 54% collection and 20% landfill. So when you think of that kind of the model that doesn't have a lot of volatility to it, that's such a solid straight down the middle of the fairway model, it's really comprised of almost 75% revenue mix are those low volatility lines of business collection and landfill, almost 75%. And then if I break that 54% down on the right into its components, you have commercial, industrial and residential, and you see that commercial is 41%. So for those of you that know the industry, you know that's a really good thing, commercial is our highest return on invested capital line of business. Of all of our lines of business, commercial is the highest. It's our second highest margin line of business behind landfill. So having 41% in that collection pie chart there is very important to us.

All right. Here's a further breakdown and a little bit more information on the collection lines of business, resi, commercial and industrial. You can see that the predominance of the customers, about 20 million customers in total, are in that residential line of business. And maybe part of the uniqueness of residential is that, in fact, 65% of it is -- of the pricing in that line of business is index driven. So it's tied to CPI or CPI-U or water, sewer, trash. It does -- that line of business does help us be somewhat recession-resistant, because that line of business is a great base for us, it's there regardless of what the economy does overall, and it does make up the lion's share of our customer count. And then in the middle commercial, which I just talked about, which is light industrial and small and medium businesses, retail, hospitality.

Industrial I'll point out because while it is the minority of our customer base, it's where we are most differentiated in terms of collection. And the reason we're most differentiated there, and I'll use an oil refinery as an example, we have some oil refineries that we've been in for decades in South Texas, in Southwest Louisiana. And those oil refineries that have been customers of ours for a long time, you don't just walk in the door of those oil refineries. I mean, those are relationships that we've built over a long period of time. They understand our safety record. And not only understand our safety -- I talked to a customer, didn't happen to be in South Texas, happened to be in Pennsylvania, who said -- and they brought us in, because they knew us from South Texas. And they brought us in, in the Marcellus. And they said, "Jim, there -- one thing that you have that nobody else has is we under -- fully understand your 1,000% commitment to safety." And without that, you don't get in -- you don't get on the property. So that is something, whether it's our safety record, whether it's our understanding of these industrial customers, there's a number of things that really help us differentiate ourselves in that industrial line of business.

I think it's helpful to provide little context here in terms of the past 4 years and I kind of say 4 to 6 years. I -- as I mentioned, I started really on this senior leadership team in 2012 as CFO. So kind of over the last 4 to 6 years, I would tell you that the day that I -- this number is kind of seared in my brain. The day that I took the CFO job in July of 2012, our stock was at $30.62. And I kind of felt like when I took it, well, I guess we're just a $30 stock. I mean, we've been $30, we'd have been in a trading range of about maybe $6 or $7 for 8 years. And I thought well, I guess, we're $30 stock, okay. And we're $30.62 today. And so a fairly short 7 years, not quite 7 years later, we're at $108 or whatever we are today. So that number is kind of seared in my brain. But as you look at these strategic initiatives and how we've kind of gotten from there to where we are today, it's really those things on the left and then -- here's the end result of those initiatives in terms of kind of financial metrics on the right. So as I look at those strategic initiatives, a new leadership team and really that's within the last 3 years, you'll meet everybody today and I'll talk a bit more about that here in a second, onboard units, technology that we've brought to bear to our network, onboard units as an example in 100% of our vehicles, including our support vehicles across our entire North American network, natural gas, CNG vehicles were a real commitment to sustainability, a commitment to -- and by the way, sustainability and cost -- so cost reduction, but CNG vehicles, 60% by the end of this year, that's a -- that is far and away the biggest percentage in the industry. And then I talked about the best positioned assets. And so that's 16 of 20 refers to our landfills.

When you look at the top 20 MSAs in North America, so you -- Chicago, Houston, New York, L.A., Toronto I mean, the top 20 MSAs in North America, and we have the best positioned landfill assets, or tied for the best, in 16 of the top 20. That says a lot. So when you think about South Florida, when you think about Philadelphia, when you think about Houston, Texas, I mean, those are areas where we have the best located landfills, we're tied for the best. And that's in 16 of the top 20 and that's meaningful. It's meaningful from a cost standpoint, it's meaningful from a customer experience standpoint.

And then lastly, derisking of the company. When I took the CFO job, I promoted Devina Rankin to Treasurer and probably the best decision I've made in my career. And I would tell you that Devina and I sat down and we said, "All right, we got to derisk this company." I mean, there is a bunch -- there is a kind of a bunch of cats and dogs out there that need to be purged from this organization. So not to say that Wheelabrator was a cat or dog, it was a big dog, but we did feel like Wheelabrator had a lot of volatility to it. There was not much opportunity to grow it, certainly in the United States and where you could grow it in the U.K., the returns weren't acceptable. So we set on a path to divest Wheelabrator, divest our oil and gas production assets. Some of you may not know that we had oil and gas production assets, which was a little surprising to me when I came into the CFO job, those are all gone. And then we also said, look, the balance sheet at the time -- I think when I took the job, an article came out, that said, Waste Management may not be able to cover its dividend this quarter. And so -- of course, that wasn't true, but we did take note of that and said, well, our leverage was about 3.5x at the time, it's now 2.3x. So it's given us the opportunity to do an acquisition like Advanced, where we could not possibly have done that when Devina and I first started working on this derisking strategy. And then here are the metrics over here on the right, the financial -- ultimately, the financial results of what we've put into place with these strategic initiatives. You can see that the very impressive basis point improvement, 470, 300, 1,020 basis point improvement over that 4-year period, 310. Pick any one of them, revenue or ROIC, free cash flow conversion, all of those really, really impressive end results of the strategy we put in place.

All right. Here is the team and let me say this about this team. I don't use the I pronoun very often. Because virtually, everything is we. I mean, it's a team effort. I don't use the I -- I think in Washington, D.C., they might be able to take a pointer on this one. I don't use the I pronoun, but I'm going to use the I pronoun here. 99.9% of time it's we, the 0.1% of the time it's I was, I put this team together intentionally. Every person on this list I had identified them as a -- as somebody that I wanted on my senior leadership team. I didn't know when I was going to become CEO. I kind of thought I might become CEO, didn't -- David never really told me when. And so when it did finally come along, I had spent time talking to every person on that list with one exception, that's Tamla Oates-Forney, and it's because I didn't know Tamla. And I'm so glad that I got to know her. She came in about 6 months ago, she was not planning on interviewing. She came in, she sat down with me and we spent an hour together before we even interviewed and we didn't even need the interview. I said, after I spent an hour with Tamla, I said, "Okay, we have to have Tamla. She's fantastic." And I think I speak for her, she felt the same way. Everybody else on this list, I intentionally spent time with them, coaching them, with Devina sitting down every quarter at a dinner where we talked only about her career going forward. We didn't talk about what's going on in treasury, we didn't talk about the most recent senior note offering, we talked about, "What do we need to do, Devina, to get you prepared for the CFO job?" Chuck Boettcher was not with the company in 2013. And I sat down with Chuck. I had met Chuck actually through our church and I sat down with Chuck, and, in 2013, and said, Chuck -- I mean, he was very well respected within the oil and gas pace. He was moving to private equity, and I said, "Chuck, come to Waste Management." So this whole team we put together over a -- I say, we, but I put this team together intentionally. And the little triangle up in the corner shows you how new this team is. We -- it doesn't mean we're not experienced. I mean, look at John Morris. He's been an executive on the operating side since 2004, but he's new to his role. Everybody on this list is new to their role. I am the most senior person in terms of time and position on the list here.

Okay. So I tend to refer to this as the golden goose. It's what -- it's what really is the generator of that kind of move from $30 -- $30.62 up to $108. That's -- this is the generator of that. And if you think about the strengths there on the left, the strong diverse leadership team, asset management and logistics expertise, a culture of continuous improvement and innovation, environmental solutions and regulatory expertise. All of that is that's proven business model in the center there of the doughnut.

I know they give me hard time yesterday of referring to this as doughnut. So I guess it's a bialy. Anyway, around the edges here are really the -- what I'm going to talk about here in more detail, best positioned network, first mover agility, sustainability, leadership and premier brand.

All right. So let's talk -- let's start off with premier brand. I had an interesting conversation several months back with a CEO of a company that has a one of the premier brands on -- in the entire world. And he said, "Look, I went down to your golf tournament, your Waste Management Phoenix Open Golf Tournament." He said, "Unbelievable." I mean, the crowds, the 16th hole. And he said, "But you know what's stood out to me the most? Was your brand." He said, "Your brand, you have a massive head start in your space. It's -- in fact, I don't know any other brands in your space because Waste Management picks me up at my house." But he said it, "You are very advantaged and you should take -- and you should really take full advantage of that." We had a third party come in and look at what the value of our brand is. And they valued it at about $2 billion. We -- that third party said, "Look, you have potential to be kind of 3 or 4x that." A world-class brand is worth somewhere in the neighborhood of 10% to 20% of that company's market cap. Ours is kind of 5% of our market cap. And as I think about, over there on the left, what does a premier brand do for me? What does the premier brand do for a great company? I mean, it makes us -- first and foremost, I'm going to point to employer of choice because people first is so critical to us. And in today's world, Millennials and Gen Zs, they want to come work for a company that has a social purpose. They want to work for a company that is a recognized brand. And I would tell you that in order to be an employer of choice, we have to leverage this brand recognition that we're blessed with. Increased sales. We think that it absolutely has an impact on the top line. Stronger advocacy. So I spent, gosh, 5 or 6 years in Pennsylvania, almost 6 in Pennsylvania. And probably 4 times a year I'm spending time in Department of Environmental Protection, DEP's offices in Harrisburg, Pennsylvania. And I would tell you that walking in their offices it's a tough crowd there for sure, but walking in their offices with the safety record that we have, with the record that we have with customers, walking in with a level of credibility that is ultimately associated with our brand meant a lot when you're talking to the Secretary of DEP in Pennsylvania. And they were, believe it or not, an advocate for us. When we went to DEP and talked about the fact that we were starting an energy services business and that we were going to bring drill cuttings into landfills, it was not something that they were accustomed to hearing, this Marcellus was relatively new in Pennsylvania. Having that discussion was immensely easier because of the brand recognition and what was associated with that than had we not had that.

Okay. This slide, if there's one slide in my deck that allows me to sleep at night, this is it. Aside from the jackhammers outside of my room the other night, this slide allows me to sleep at night. And what you see on the slide here, really the map is where I want you to focus your attention. The map here shows a lot of clusters around big metro areas. Our strength is in metro North America. We're not -- we have some rural locations for sure, but our strength is in these metro areas. And what I'm going to talk about here in a second is how we have intentionally invested in metro areas that are growing. There are parts of the U.S. that are growing faster than other parts. And we've intentionally invested in those areas to give ourselves an even stronger footprint, help me sleep even better. But this one really helps us, it makes a huge difference to us. It is -- you cannot and I will stress, you cannot replicate this organically. Nobody. I don't care who you are, you cannot replicate this network organically.

I guess, you could go -- I guess, somebody could maybe buy us and replicate it that way, but nobody can replicate this thing organically. It is an incredible network that we have assembled. And I would tell you that the next slide shows that we are adding to that network with the acquisition of Advanced, and you can see here the dots on the page for Advanced. We don't have an overlay here of ours and theirs, there are a lot of dots on the map in all cases. You can see here a cluster around Atlanta, a cluster up in kind of Southern Pennsylvania and then around kind of Chicago and Milwaukee.

Here's what I would say about that, there is no shortage of competition in those spots. I mean, yes, there is a cluster of dots there around Atlanta, and we have some -- a number of dots in Atlanta, but there's no shortage of competition there. So what we have to bring to the table is our differentiated service offering because there are plenty of competitors that compete against us even without Advanced in the marketplace.

Okay. So I mentioned a couple of -- I mentioned how we've intentionally invested in MSAs that are growth MSAs. So I grew up in Austin, Texas. Austin, Texas when I grew up was 250,000 people, it was basically 2 things. It was the state capital and the University of Texas, that's it. Austin, Texas is a lot more than the state capital and UT. Today, Austin is on every list -- every list you've ever seen of the top 5 cities to live in, Austin's on that list. They never say anything about how bad the traffic is there, but it is on the list, it's a beautiful place, and you can see here when you look at the stats over on the left. I mean, it makes a lot of sense for us to invest heavily in Austin. Look at the housing start, look at the population growth in Austin. I'm actually amaze it's only 2.4%. I mean, it's gone from 250,000 people when I grow up there to 1.5 million, it's in the top 15 biggest cities in the United States now, which is shocking to me. I thought I was growing up in small town and now it's become a big city. But Austin was a city that we decided probably a decade ago, that's a growing city in a growing state, let's invest heavily in that. We recently acquired -- from Republic, we acquired their collection assets. They were nonintegrated in Austin. They had a landfill they closed a couple of years ago, so they had become nonintegrated. It made sense for them and it made sense for us to buy their collection assets in Austin. So it improved our position further in that city, but it is a city that we have intentionally chosen to invest in as part of our strategy.

Here is the second city that we have intentionally invested heavily and that's Miami, Florida. And that entire South Florida region here is one that also is growing. I saw an interesting stat the other day that showed the growth in the states of Florida and Texas and the fact that it's almost identical -- inversely identical to the number of people leaving the states of California and New York -- I know I'm standing in New York here, but almost 1.5 million people leaving those 2 states and going to Texas and Florida. So it's not coincidence that I'm showing you an MSA in Texas and an MSA in Florida. Look, Miami here, you recall 3 years ago, we made an acquisition called Southern Waste Systems and they were largely a South Florida company.

So the crown jewel of that acquisition was really their C&D processing. Their expertise, their facilities, and guess what? When you look at that housing start growth of 7.2%, did it make sense to buy a company that had C&D processing? Absolutely, it made sense to buy a company that had expertise in C&D processing. 7.2% housing start growth, I don't know that there's another big city in the country that's even close to that, but we have an outstanding network of assets. And when you combine that with an outstanding team that manages Florida, both the former Vice President and the current Vice President are in the room with us today, they do an outstanding job of managing South Florida, but it is a hugely important asset for us, another reason why I sleep well at night.

Here's the -- let's talk about first mover agility and how it positions us to continue to expand the lead that we have. I've got some selected examples here and up on top, you see -- the kind of the pie chart here up on top with things like an agile innovation; the sustainability, which I'll talk a lot about; leverage industry leadership. And then when I think about first mover examples, there's a whole lot of first mover examples for Waste Management. Onboard computers, I mentioned that we have them on a 100% of our vehicles. That was something that Waste Management tackled first. We were the first company in our industry to really put onboard computers on all of our vehicles. Pick one of these. I mean, CNG trucks. I've talked a lot about that, but 60% of our fleet and that was a first mover for us, safety technology, putting cameras in the trucks. Interestingly, when I -- when we put cameras in the trucks, we had some pushback and some of the drivers said, "Well, it's going to be like big brother watching over me." And literally within months after putting cameras -- safety cameras, which are really a feedback mechanism for these folks, they came back and said, "You know what, no, no, no, it's not big brother, which is what I thought it was going to be, it actually helps, it exonerates me in some of these fender benders that we've had where somebody pulls out in front of me, it actually exonerates me." And they all to a person love the fact that we have safety technology in our trucks, a number of different examples here.

So sustainability. These are some stats off of our 2018 sustainability report. By the way, we've been producing a sustainability report since -- it's -- today, everybody produces a sustainability report, right? And everybody has a sustainability initiative. We've been producing a sustainability report since 1993. I don't even think we called it a sustainability report because there was no such word in 1993. I think we call it an environmental report or something in 1993. But for over 25 years, we've been producing a report that ultimately is a sustainability report. And here are some stats from -- some facts from the most recent report. What I'll say about sustainability is, and I've said this many times, it's -- first of all, it is -- it's a space that is really unfilled today and it's a natural space for us to fill. But what I want to make sure that everybody understands is, and I've said this so many times and I'll say it again, sustainability has to be both environmentally and economically sustainable. Can't just be one or the other. It has to be both for it to be a really good business model for us. If it's just environmentally friendly and just environmentally sustainable and yet it loses money hand over fist, then who's going to do it? And if all it does is just produce good financial returns and there really isn't -- there really isn't a real environmental benefit, then that's not good either, it's got to be both. And we've said that many times over, and we will continue to say that as we invest in sustainability. Here are a couple of details around building on a sustainability leadership. Partnership is critically important. We service thousands of communities. And as we think about educating, partnering and then executing on our sustainability efforts, we've had over 4,000 community events that we've hosted or attended. Education is critically important. I would argue that there is nobody in the room, and I'm going to put myself in that bucket, that knows exactly what goes in your recycle bin. Anybody -- I mean, I audit my recycle bin at my house. I'm telling you there's crap in there that does not belong in a recycle bin and there's stuff that goes in the trash can that doesn't belong in the trash can. But -- and I'm the CEO of Waste Management, if anybody should know what goes in the recycle bin, it should be me and yet, our 14-year-old can't figure it out and our 46-year-old can't figure it out either. So that's my wife.

Second here is reducing our carbon footprint. Look, I mentioned that we've been producing a sustainability report since 1993. For those of you who are familiar with the Waste Management Phoenix Open golf tournament, associated with that golf tournament is a sustainability forum. We've been conducting that sustainability forum since we started as the title sponsor, 10 years ago. When we first started, the sustainability forum was held in a small conference room at Arizona State University, it's now held in a big setting at the Scottsdale Princess Hotel. And last year, I think we had 750 attendees, 10 years ago, we had 75. 750 attendees. I forget what the number of live streamers were, but it was a big number of live streamers. We've had -- 2 years ago, we had Bill Gates introduce the sustainability forum for us. We had Mayor Rahm Emmanuel come and speak. This past year, we had National Geographic come. And the theme of last year's sustainability forum or this year's was oceans plastics and National Geographic came and spoke about oceans plastics and the problem with oceans plastics. And we have weighed in on that through our venturing group and -- so -- but reducing our carbon footprint, we believe is very, very important. It's part of that message that I talked about that Millennials and Gen Zs expect of us. They expect us to be environmentally friendly. And so part of that social responsibility that we feel is really incumbent upon us is reducing our carbon footprint, investing in recycling. Tara Hemmer is going to talk about this in much more detail, but we have invested heavily in recycling. And by the way, we don't have any control over what China does with -- ultimately, China does with recycling prices, with commodity prices. Losing our single biggest customer over a period of 18 months obviously caused -- I mean, all of you have taken a micro class. I mean it caused the price to drop. And so we could have just sat there and say, "Well, darn, that's too bad." I guess we'll just wait for it to come back because it does ebb and flow. Instead, we've invested in recycling in a much more proactive way in both the short term and the medium term. In the short term, we were the ones -- back to first mover agility. We were the ones that really said, "All right, we're going to put a structure in place -- a fee structure in place to at least offset some of this, to mitigate some of this volatility in the short term." Medium term, we're investing. We're building a brand-new recycle plant of the future in Chicago, it will be up and running in third quarter or fourth quarter of this year. We're testing robotics. We have 3 different manufacturers of robotics. So Tara will spend more time on that.

And then on the right is organics processing. 40% of what comes into our landfills today is organic material. We are processing, at this point, greater than 4 million tons of organic material per year, that is still relatively small compared to that 40% number. But we've invested in core systems, we have 4 core systems, most of these -- I would say all of these are on the coasts and -- so on the East Coast and the West Coast. We've also invested in a brand-new state-of-the-art organics processing facility. We took our Board through it last year, in Oakland, California, that is very impressive and so all of that is included in this 4 million tons.

So this slide really is, I kind of call this our constituents. Most of you I'm sure are familiar with Herb Kelleher. He was the longtime CEO and Chairman of Southwest Airlines, founder of that company, passed away last year. And I always felt like Herb -- I cite Southwest Airlines a lot because I think from a number of different perspectives, Southwest is a company to be emulated, and I think Herb Kelleher was the CEO to be emulated. Herb, I thought, was ahead of his time. And Herb said, he wasn't so much talking about community and environment, but when he said, "Look, my constituents are in this order, people first, customers, shareholders." And he said, "That might sound a little bit counterintuitive, particularly, to shareholders, but if it's not in that order, it doesn't work." You put it in a different order, any other order other than that and it doesn't work because your people have to be happy, that's why they have to be energized with what they're doing. They have to feel like they're making a difference. They have to enjoy what they're doing. They have to enjoy who they're working for and working with. People have to be first on the list and then they, in turn, that resonates with customers. And when your customers are happy, ultimately, your shareholders are happy, and that's why I think he was ahead of his time.

In 1973 or whatever it was, people weren't thinking that way. And I'm not sure people are thinking that way today. I would tell you that certainly Waste Management is thinking that way. So this is our list of constituents. There are not necessarily in any order other than people first, but customers -- delighting our customers. Communities, I mentioned we talked to -- literally, we interact with thousands of communities each day and having those relationships that we built at the local level is critically important to us. I call the environment the voiceless constituent because it doesn't pick up the phone and call me. Believe me, every other one of these does. The environment talks, but it talks in decades, not in days. So when we mistreat the environment, it doesn't say anything tomorrow, but it says something 10 years, 20 years from now. Everybody else talks in days and we listen in days or in decades depending on which constituent we're talking to. And then, of course, shareholders at the end and delivering strong predictable, long-term financial performance that rewards investors is ultimately why we're standing here today.

So with that, I am going to turn this over to our outstanding operations team, led by John Morris and with Tara Hemmer, and Steve Batchelor as well. Thank you.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

Good morning, folks. As Jim mentioned, my name is John Morris. I assumed the role of COO after the retirement of Jim Trevathan just a few short months ago.

Before I jump in the slide deck, I thought maybe just a few facts about me, so you know how I got here today. I was born just across the river in Northern New Jersey, and I'm sure the first question that comes to everybody's mind is New York Yankees, New York Giants, New York Rangers and unfortunately, I'm fan a Knicks fan, too, which has been pretty painful. So in any event, I started in the industry actually as a teenager. I had a friend whose father owned a company in South Jersey, Ocean County, where I grew up. Self-made guy, built the business from 1 truck to 40 or 50 trucks from what I can recall that many years back. And Christmas break of my senior high school, we drove to work at 4:00 in the morning in his Porsche, which I was very impressed with, small backseat though. So anyway, we pulled in the front gate and he stopped and said, "Okay, you 2 out." His son and I are still very good friends to this day, and he gave us -- he gave me a pair of gloves and said, "I'm going to introduce you to the rear-end of a rear loader." And I spent about 12 hours riding through neighborhoods in the snow and rain and whatnot and that was my introduction to the business. And for the next couple of years even through college, I'm a graduate of Rutgers University, I spent time learning how to drive every truck, delivered cans front-load recycling, roll-off, et cetera. And then finally, I ended up the last 2 years at Rutgers working for John and Joe DiMarco over in Elizabeth. They call me their intern. I was driving a roll-off truck, that was their way of not making me join the team. So I don't -- I never had a union card.

In any event, I got out of school and I debated. I was talking to some folks from the FBI, thought about law school, and I ended up going to work for Waste Management. And my dear friend to this day whose father owned the garbage company is a lawyer in New Jersey. So no offense to any of those folks in the room, but I think I finished better off.

Anyway, I'm joined up year by 2 great folks, Steve Batchelor, Senior Vice President for the Northern Tier; and Tara Hemmer, who's the Senior Vice President of Operations for the Southern Tier. So I've got a handful of slides. I'm going to go through these quickly and try and really strip out some of the themes that I'd like everybody to take away from at least my few minutes up here on the stage.

So if you look, starting on the left side, I would start at the bottom. Jim mentioned it throughout his presentation. This is a people first organization, it's a people first culture, that's the way we're driving this business now. Because if we don't do that, as Jim mentioned, how do you take care of your customers' needs? We feel like if we take care of the 43,000 people who service our customers, they, in turn, are going to take great care of our customers.

Improving operating platforms. You're going to hear from both Steve and Tara what does that mean, what does improving and evolving our operating platforms look like. And I'm not going to steal any of their thunder, but they're going to give you some detail there.

Jim talked about the network, that's a theme throughout my presentation. We have terrific assets, but they are enabled by a network. It's not just an individual asset, it is a set of assets that's put together by a network. Transportation, obviously, is a big piece of why that network works as well as it does.

The next box over there in the center, you'll see 4 Ss up there. Steve is going to go into some more detail about what those 4 Ss are and how they're threaded through the organization. But I will tell you that you're going to see a theme throughout my presentation, Steve and Tara's, where we talk about technology and how technology is enabling what we're doing in the business. And Nikolaj is going to come up in a bit and add some color to that as well.

Post-collection assets, Jim talked about it. They are hard to replicate if you could replicate them at all. We've obviously -- you saw the map up there that was an illustration of where those dots are and how that network connects to those post-collection assets is key and provides a real competitive advantage, in our opinion.

And lastly, recycling. Tara is going to talk about that in some detail in her presentation, but needless to say, it's been -- it's certainly been a challenged model for the last handful of years. But I do think when you get -- when you hear what we're doing around recycling, it's going to fill in some blanks for you on how we think we're going to create a sustainable, economic model in our recycling business.

So let's talk for -- briefly about how this company is broken up. 17 areas. Hopefully, you can see them in the back of the room there, you have the books in front of you, 15 in the U.S. and 2 up in Canada. There's a couple of things. Obviously, you can see revenue ranges in each of these areas ranging from $600-plus million to almost $1.4 billion. What you need to know this obviously is a distribute organization. There are 17 really talented people who run these regions, some of them are in the room with us today. It is a distributed business model, but I would tell you starting when in, say, 2012, Jim and I came to Houston about the same time, we've gone through some structural changes. And what I would tell you is the structure we have in place now does a couple of things. One, our job is to support the field. Those are the folks who run the business, take care of our customers and we look at them as our customer internally. Secondly, because of the structure we have, I think we have better lines of communication, we're more agile than we've been and we get to decisions quicker because we don't have -- we honestly don't have a lot of red tape, if you will, compared to maybe the old structure.

I would tell you the folks who run these areas are responsible, full P&L responsibility. They are responsible for every number on the page. So we have selected them extremely carefully. And as evidenced by our results, they're performing exceptionally well.

Just take a little bit -- talk a minute about how the -- evolving our operations, starting up at the top. Safety is always first. It's been first for 20 years in this company. Mission is 0, it's a 20 -- almost a 20-year-old effort. Really, safety first and foremost is a moral imperative. It's hard to stand up here and say that there is any other way to approach the business than safe. I would tell you the way I look at it, safety is not something we do, it's the way we approach everything in the business we do. It's -- and by the way, it's an aspirational goal. We're never going to get there, but in the meantime, I would tell you that we've made tremendous progress and as Steve and Tara go through some of their notes, you're going to see some of the specifics about what we're doing. But I would tell you that instead of just measuring the metrics now, we're looking at ways to coach people to success. How do we take our employees who are really, really valuable? We say it's a people first culture and put them in a position where they can be successful in protecting themselves, our customers and obviously, the folks that we come in contact with.

Strategic pricing. We have certainly talked about pricing for many years, particularly on the collection side. When I talk about strategic pricing, I think it's evolving as we put up there from pricing excellence to really disciplined growth. How do we still achieve the right revenue improvements to overcome the cost headwinds that we're facing and also be able to grow volume. And I think as you hear about some of the metrics Devina will cover later, where we found the formula to do both effectively.

Operational excellence. Steve and Tara are both going to touch on this. I won't spend a lot of time there, but again, you'll see the threat of technology, right? We drive efficiency through continuous improvement process, but what you're going to see from collection, post-collection recycling is there is going to be a use of technology, this could be new and different than what we traditionally done. And Steve and Tara are going to outline some of that for you.

And lastly, sustainable solutions. Steve is going to cover it on the fleet side what we're doing with our fleet, what we're doing to make it a cleaner, more efficient fleet, more environmentally friendly and Tara is going to take us through what's happening in our post-collection assets with our landfills, with our recycling and our advanced recycling efforts.

This slide to me is probably the one I would focus on the most out of anything in the presentation. When you look at the left side, starting with collection, we measure. We have a lot of metrics. Trust me, plenty of metrics. But I think the difference is when you look, say, for instance, form collection left to right, what you see is we still measure how many accidents and injuries we have, but the difference now from where we were to where we are is coaching, and data analytics are a part of the process because, again, our people are our greatest asset. We're not trying to move people out of the organization, we're trying to coach people to be successful.

When you look at missed pickups, that was MPUs as we refer to, that was an internal metric, right? That was something we measured. Quality of service is the voice of the customer. Mike Watson is going to cover voice of the customer, but that's really the thread here is a more external customer-focused metric.

When you look at maintenance, efficiency, cost per hour, again, all individually important metrics to us, but now we're looking at new and improved metrics. We think that give us a better view of the overall performance of the business, kind of a total cost of operation as opposed to an individual metric.

Landfill and transfer station. When you look at some of the metrics on the left side of the page, all important, still measuring. But what we're trying to do on the right side of the page is evolve those metrics to where we may have a more holistic view of what's going on in the business. These are all -- by the way, collection landfill and transfer and recycling, all part of that connected network. So it's important that we have metrics that we're measuring that go across all these, so we can make better decisions from an enterprise standpoint.

Lastly, recycling. Everybody knows how challenging that line of business has been. And I think when you look at the right side of the page, though, what we're doing now, and Tara is going to speak specifically about what we're doing to change the model? How are we reimagining recycling? What are we doing to lower our cost? What are we doing to try and help create demand on the back end? And when you look at the right side of the page for recycling, those are some of the things that we think are key metrics for us to be measuring.

So vertically-integrated asset base. Couple of things I would pick out of this. Collection side, we have 14,500 trucks that are -- give or take, running around while we're sitting here today, servicing our customers. All the material that they pick up, it's not just waste, the material stream that they pickup is going to end up in part of our network and that transfer box is really, really important. We have over 300 transfer stations around the country. Everybody knows that the transportation network has been strained, generally speaking. We've had our own set of challenges around transportation, but those transfer stations are one of the key elements of improving -- of having that network operate efficiently. As Jim mentioned, we're positioned with top post-collection assets in 16 out of the 20 MSAs and those transfer stations are our key. Our biggest customer -- the company's biggest customer's right here, it's New York City, and we move about 8,000 tons a day out of New York City. It all goes through a transfer facility. If we didn't have the key transfer assets here in New York, that business wouldn't be ours.

On the landfill side, 247, to be exact, landfills. Certainly well positioned, Jim covered that well. I'm not going to spend too much time there.

And lastly, recycling. We're trying to find the right outlets. What's the next best high issues for those materials? Right now, obviously, we're in a challenged environment because, in particular, the fiber markets have become obviously low -- decade low, but I think what you'll find is that the model that we're employing, the investments we're making in Chicago, hopefully, are going to reduce cost to a level where we can make this a sustainable model.

I'm not going to spend much time here other than to say, if you look at the right side of the page, this is just an outline for those in the audience who may not be as familiar with the industry. You look at a commercial truck in the left box there, obviously, that's going to service small container, small and medium business, restaurants, retail stores, et cetera. On the industrial side, far right, construction is one that comes to mind, big box retail, et cetera. Residential, we are moving to a largely automated system as we state up there on the slide. Part of the reason we're doing that is because if you think about one of the challenges in the transportation industry, it's been obviously of getting drivers to operate our vehicles. So part of the strategy here in residential, which obviously, I mentioned, I have a view of what the back end of a rear loader feels like, at least some years ago, but the problem we're having is sourcing drivers to take those positions, right? It's been generally a really manual operation, and what we're doing is moving to automation. Why? Because if you put a person in the truck and say, instead of getting in and out of the truck 600 times a day, you're going to get out 6 times, beginning of the day, end of the day empty the truck and lunch. And by the way, you're going to service a

1,000 customers via joystick, that's a much different job opportunity and a much different client base that we can go after to do that. So that's one of the things, and Steve will go into some more detail about that in his section.

Revenue mix. Couple of things. You see the themes on the right side here. This is the revenue base of our collection business. What you see are obviously diversified customer base, as Jim mentioned. Over 2/3, maybe as much as 75% of this is reoccurring revenue. And I think when you look at that pie chart, and you think about what makes me sleep at night is we've got a really diverse revenue base here. And when you look at some of the areas on here, construction, for instance, is one. If you went back 6 or 7 years ago, construction was probably 2x what it is here. It's up here at about 5%. We probably think it was 10% or 12% some years ago. And obviously, when construction went out, we had a little bit more exposure. This is a diverse customer base and obviously provides some resistance against the recession.

So a couple of themes here. Left side, if you look from 1960, solid waste production has continued to go up year in and year out, in some years, obviously, more than others.

Recycling and composting. The diversion bucket has also gone up, but the -- I guess, the real measurement here is that even though that has gone up, it has not outstripped the production of MSW. On the right side of the page, what I would tell you is you can see that there is some bumps there. You look at where landfill capacity has kind of shot up from 1992. It flattens out maybe a little bit -- recedes a little bit around 2010. But the end of that chart there is showing that in the next handful of years, landfill capacity is going to start to decline, which is why Jim made the point a couple of times, I'm making it again, those network of landfills and transfer stations in the right markets are key for us, especially when you look at this chart.

What I would tell you is we have 40 years of landfill space. If you went back 15 years ago, we have 40 years of landfill capacity, excuse me. So even while that chart shows it going down because of the community partnerships, because our repetition as an operator, we've been able to expand that -- hold that volume for the last handful of years.

So I'm going to turn it over here to Steve in a minute. I think the left side is, listen, there are macro factor social trends and people's behaviors are changing. And that is going to change the way customers look at us and what they require from us as a service provider. So we have to pay attention to all of those. What I would tell you is uniquely positioned, it is really about our broad geographic footprint and a suite of services that we offer to our customers, which makes us, obviously, I think, uniquely positioned to capture more than our fair share.

What I would tell you before I turn it over to Steve, I think -- I've been with the company a long time. I've never been more excited than I am right now. It's provided me a great career up to this point. I am thrilled to be working with the team that I have up here on the stage and the rest that are out here part of the senior team, including our field leaders. And I would tell you we want you -- as Ed mentioned in his opening remarks, we feel like we're best-in-class in the industry. We want to be best-in-class. Period. Thanks. Mr. Batchelor?

Steven R. Batchelor - *Waste Management, Inc. - SVP of Field Operations*

Good morning. Thank you, John. As John said, I'm Senior Vice President of the Operations of the Northern Tier. I've been with Waste Management over 22 years. The majority of my career at Waste Management has been in the field as area Vice President. I was area Vice President in Chicago area as well as other parts of the upper Midwest.

I'm excited to be here today because I have the opportunity to talk about the collection operations. There's -- I've got some interesting facts, at least I find them interesting, you may not, but I do. And I'll tell you why here in a second. So we have 14,500 routes. We -- and that happens every day, Monday through Friday. We have 19,000 drivers, 3,300 technicians that support those routes. We service 5.5 million -- as Jim mentioned earlier, we have almost 20 million customers. We serve 5.5 million of them every day. And of those 5.5 million, we may touch them 2 times or 3 times doing our services, so we could be contacting our customers 15 million times on any given weekday.

We collect over 200,000 tons of material every day, and we drive 450-plus million miles a year. So why is that important? Well, it's important to us because we understand it's a complex network. And if we can optimize this network, we have an opportunity to save considerable amount of money, lower our cost to serve and add shareholder value. So let me give you an example. If I can lower or reduce 1 minute per route per day, that's the equivalent of saving $5 million. So the question is how do we save more minutes?

So because it's a big complex network, we're obviously -- we're continually trying to improve the network, we're integrating greater use in technology to improve our safety, our service, our savings and our sustainability, which is why we're investing in our people. As Jim mentioned earlier, people are first. We're investing -- or we have invested in 2 driver tech training schools, 1 in Arizona and 1 in Florida. We're also investing in our fleet to increase our technology there by adding more automated collection vehicles as well as more natural gas vehicles. And then we're also investing in analytics. Analytics are important because it can help us in our predictive maintenance program where we can go from more of a reactive maintenance program to a proactive maintenance program. I can tell you it's a lot better to fix the truck while it's in the garage versus out on the interstate somewhere, it's a lot less expensive. We're also using analytics to optimize the routes and improve our efficiencies.

So I wanted to add some context here. How we got to save -- safety service and (inaudible). I've been in this industry for 30 years, and I know what you're thinking. He probably started when he was 16. You're wrong, it was twice that. So anyway.

We -- as the industry, we struggled -- we've done well in safety. Safety has always been important to us. Our service has been important to us, but where we've struggled when we've come to how to become more efficient and optimize it. So why is that? I think historically our conversations have been about we need to be safe, but we need to be fast. And you can think -- you can understand how fast could be in conflict with safety. So we were never willing to compromise our values on safety, that make sense. We're never going to do that. Because of the moral imperative, we want to make sure our employees go home every day and enjoy time with their families and have a successful career here. So we had to -- it was really the question was probably wrong. It's not how can we become faster, it's how can we get better. So we've rolled out the things that we thought was how we could get better is let's have less accidents. Let's ask ourselves the question, if I have an accident, what does that do to our efficiency? Well, it destroys it. There is not a bigger efficiency [cutter] out there than having a truck that's down for a safety incident. So let's have fewer of them. If we have fewer of them, our efficiency is going to improve.

What about our service? What about our savings? So how are we doing? So as I mentioned before, safety is the core part of our business. And we -- since 2001, we've implemented the mission to 0 program. 0 does not stand for 0 accidents, 0 stands for 0 unsafe behaviors. So we're focused on our people to avoid all unsafe behaviors. In 2014, we put onboard safety cameras on all of our trucks. And as Jim mentioned, we even have them on our supervisor and frontline managers' trucks. These onboard cameras give us visibility to our drivers' safety performance. If we observe unsafe behaviors, we have an opportunity to coach the driver for improvement. If we see safe behaviors, we have an opportunity to pat the driver on the back to reinforce those safe behaviors. So how does has it helped us? We've improved our safe behavior by 56% since 2013 and we reduced our auto claims by $33 million, lowering our cost to serve.

The second thing we knew we had to get right is our service. We have a saying, we do it right the first time or let's do it right the first time. That may sound like a cliché for a second, but let me explain. So as Jim mentioned, we also have onboard computers on all of our trucks. Years ago, when we used to track our service and our routes, it was all paper route sheets. We didn't really know for sure, absolutely for sure, if we were servicing our customers unless they called us. Well, that's not the best way to have customer service. Now with these onboard computers, we can tell when we've completed the service for our customer. We're happy to report that we delivered and that -- we -- since we -- when we put the computers on, we are probably around the 97% on time range. Since we've put them on, we're able to track it. Now we've improved to 99.3% of our schedule pickups are serviced on time. That's all good and fine, but now we're focused on the 0.7%. So why are we focused on the 0.7%? Well, the obvious is customer service, but that's where the inefficiency is, is that 0.7%. It costs us more to go back and service the customer the second time. I sense there is a lot of smart people in this room. And if I was to ask you what day is your scheduled service for your recycling and trash services, you could probably all answer it. But if I said, by the way, Memorial Day was Monday, so tell me your schedule now. Now everyone's little bit less confident in when their garbage is going to be picked up. You're in -- you're at your house and you're looking out your blinds and seeing if your neighbor is going to put out his trash because you don't want to be -- you don't want to get it wrong. Problem is your neighbor is out there looking out his blinds looking at you to see if you're going to do it. So we have a garbage stalemate. So we've recognized if we focus on the 0.7% and we eliminate those 2 times or 3 times we've got to service the same customer, we improve our efficiency.

So how have we done? We're glad to report that we've improved our efficiency since 2014 to 2017, 3.4%. We did it. We improved our safety, we improved our service, and we improved our efficiency. We -- the industry hasn't done it, we did it and we're proud of it. In 2014, we implemented a program that we called Service Delivery Optimization, or what we call SDO. And the primary foundation of SDO was strengthening and building the leadership skills of our frontline managers that enables them to coach better safety, better service and better savings. We also implemented some lean processes to change the way we do our morning routine with our drivers and our p.m. routine with our drivers. When we did that, we reduced our minutes by 20 minutes per route per day, saving $100 million. We took that same SDO principles and put it in our fleet organization, where we focused on fleet up times, the trucks are -- if we have a route, we're guaranteed we have a truck. If we have a truck, we're guaranteeing ourselves it's going to finish the route. And when we focused on those, the fleet up time or fleet availability, we've saved $10 million.

Now the new program. As I mentioned 2014, 2017, up -- efficiency is up 3.4%. In the last -- in 2018, we were little less than half about it -- little less than 1% improvement, still good, still making improvement, but we know there's more opportunity there.

As I said before, SDO, we had the opportunity to see, had good visibility on our routes with our drivers, their activity in the beginning of the day, at the end of the day. What we had poor visibility on was the middle of the day. So M100 is -- that's what we call it. We have to have an acronym for things, but it's manage 100% of the day or M100. Now we have clear visibility in the middle of the day. We have -- as I said before, we have analytic tools that help us engineer our routes. We want our drivers to follow a sequence and how we set up the routes because it's the more efficient way to run the route. Now we can tell if they're following that sequence. We can tell how much time they're taking at a customer. Some customers might take a little bit too much time to serve, and we have an option to go back and maybe address that problem. So this -- we think that this opportunity is probably about a 3% improvement in efficiency, which is $25 million for every 1% we improve and we think that's about $75 million opportunity. In addition to that, we have -- our routes are changing every day, extra stops, maybe a driver is -- route is not covered because there is an illness, and so we're constantly shuffling stops. And as I said before, we've routed our routes and put them in a certain sequence. And sometimes when we have to go on the fly, our sequences get a little messed up. So with dynamic routing, we're able to put the routes in sequence every time to optimize our routes all the time, and we think that's another opportunity of about $75 million.

Now the final S. We weren't thinking about it at first, but we realize if we do this right, we're actually adding to the sustainability and which is our fourth S. So first of all, we're committed to our environmental goals. By improving our efficiency, we drove less miles, we burned less fuel, we reduced our greenhouse gas by 16%. As we said earlier, we're focused on adding -- we are committed to the CNG strategy. At the end of this year, we'll be -- 60% of our fleet will be CNG and by 2023, we'll go up to 80%. So there's a couple of things about CNG. We know CNG costs less to run. We know it burns cleaner, so it helps us in our goals for reducing greenhouse gas. But some of the side benefits is it helps us in our retention program. The trucks are easier to operate. They're less frustrating. You don't have to stop on the side of the road and do diesel regeneration. As I said, they're lower cost to operate, they're quieter, they're better for the community. They're just better for all in all in our operations. So finally then really what it was it's our -- the bottom line here is it's not about doing things fast and it's about doing it right, and we're focused on doing it right. With that, I'll turn it over to Tara.

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Thank you so much, Steve. And I'm really looking forward in a moment to taking you on a journey related to our post-collection assets and what a competitive advantage they are to us, is something that both John and Jim have mentioned. But first, I want to a little -- tell you a little bit about myself. So I've been with Waste Management for 20 years. I started my career here in New York City in Brooklyn, happy to be back here. And started in a technical role in engineering, working on very large infrastructure projects related to building the transfer stations that ultimately have formed the platform for us to leverage our assets in the New York City solid waste management plan.

From there, I moved into operating roles into an area of recycling Operations Director role and executing on the company's recycling strategy. And then moved to an area Vice President role, 1 of those 17 areas that John mentioned, the greater Mid-Atlantic area, which is here in New York. About 2 years ago, I moved to corporate and worked on some of the operating strategy, and I'm really pleased to be back in a field role to connect the corporate strategy to execution in the field.

Sorry about that, I was on the wrong slide. So I want to talk a little bit about post-collections and really just highlight for a moment what do we mean when we say post-collection? So Steve talked a lot about the materials that we collect on our trucks at our customers' doors. But once he collects it, it has to end up somewhere and where it ends up is really based on customer preferences.

So we have a network of over 314 transfer stations, those transfer stations really act as remote gates to our landfills. Our landfills serve as final disposals. So we have 247 of those and roughly a little more than half, 130 of them, have active landfill gas-to-energy plants where we harness the landfill gas and convert that into renewable energy. If our customers are interested in recycling, we've a 103 recycling facilities and those include organics management, and we process over 15 million tons a year of recycling and organics material into composting.

We do all this with almost 5,000 post-collection employees and so you can see really the nexus of this complex network that we have and how we're evolving this network for sustainability and really an asset that's going to evolve based on customer preferences.

So when we think about that evolution, we really are thinking about 3 key macro trends that are going to drive the conversation and I want to highlight these. The first is demographics and Jim touched on this in his opening. He highlighted 2 key areas, Austin and Miami. And we're really thinking about the rise of cities. Urban environments are on the rise, that's driving population, population centers, population growth. We really need to think about how do we connect, where we collect that material and move it to its final destination. That's really about the transfer station and landfill and recycling network, but also connecting it via truck, via rail and even in barge in some locations.

The second is the regulatory environment. The regulatory environment, as you can imagine, is critically important to us. You can think about it we do -- we are regulated on the federal level, but most of the drivers are on the state or province level, and a lot of this is around environmental focus and driving that change. So you can think about this on the West Coast and the East Coast, there has been trends towards 0 waste initiatives, diversion goals and really thinking about organics management as a way to remove materials from final disposal and into composting.

And then finally, want to talk a little bit about technology because technology is really transforming how we think about our existing facilities and the facilities that we're going to need in the future. Some great examples of this are in our existing landfills, really reshaping how we run them. So we've highlighted in the past a pilot that we have ongoing at one of our landfills in Denver, where we're using remote line of sight equipment, which improves so many things and I'll to talk about that a little bit later. But also reimagining recycling and rethinking the recycling plant of the future.

So what differentiates Waste Management when we look at those macro factors and how we're going to connect them to the future? There's 5 on here. I'm going to touch on the first 2 really quickly. Both Jim and John talked about our hard-to-replicate infrastructure, and we're constantly looking at where we need to have these facilities. So we've actively cited new transfer stations in key markets. We've acquired landfills in key markets, including in Upstate New York and we've done greenfield developments of landfills in North Carolina most recently as an example. The second is our expansion track record. Doing landfill expansion's incredibly difficult, but we've demonstrated, if you look over the last 10 years, we have roughly 4 billion tons of air space and that's been roughly 40 years, that's been consistent over the last 10 years. Our team year after year works very hard to pursue these landfill expansions and they are successful.

Sustainability as a differentiator. I mentioned that we're a leader in the renewable energy space. We're clearly a leader in the recycling space, I'll talk about that in a bit. And we're thinking about how all of that has to evolve and how it must evolve for sustainability with our customers and also economic sustainability, which is critically important to our shareholders.

Our domain expertise. So Jim talked earlier about the strength of our brand and I know Mike Watson is going to spend some time talking about that this afternoon. Our employees in a lot of ways are our brand. And we have some key team members across the enterprise, who really understand what it means to build and develop our post-collection network. Some examples are folks like Greg Cekander, who's routinely called on through EPA and state agencies on the right way to develop and operate landfills. We have folks like Amy Bannister on the air side, who is an industry leader and is asked to weigh in on regulations. And then on the recycling side, 2 key folks, Susan Robinson, a public policy expert, asked to weigh in often globally on policy issues as they pertain to the recycling space. And then, of course, Brent Bell, and Brent Bell is here today, who's a global expert on recycling processing and also on recycling markets and is often asked and is interviewed on Yahoo! Finance, Wall Street Journal. This just speaks to the depth of experience of the team that we have in place to look at these macro factors and execute on them.

And then finally, community partnerships. Community partnerships are really important. Obviously, we're a national company, but we operate locally. Our employees and our people live and work where our facilities are located. And what we bring to bear is this national platform with partnerships that we've developed and cultivated like the Wildlife Habitat Council, where we provide and develop buffer properties for environmental education that our communities can then use and develop and grow.

Thank you. I was having trouble advancing the slide. So I talked through a lot of the different elements. When we talk about post-collection, I'm going to take you through some case studies on each of these, but really when we think about post-collection, 3 key areas, transfer and landfill network, and that's what I would say has traditionally been the core; longer-term, traditional recycling in the middle; and then advanced recycling. If you think about 30% of the waste stream is organics, we're seeing a lot of cities and states think about how can they recycle organics and we have a platform for that.

And then longer-term technologies of the future. And we really view this as us continuing our leadership position and keeping an eye on the future. Later today, Chuck Boettcher is going to talk about the corporate development and innovation group and how they're keeping an eye on technologies that could potentially transform the waste space. We want to have that first mover advantage, critically important to us moving forward.

So let me take you through some examples. Many of you who are here today are probably from the New York, New Jersey, Connecticut area. You probably had to fight traffic to get here today and you know how challenging it is moving goods and services in and out of the city. Well, if you think about moving waste around the city and out of the city to its final destination, we have those same challenges. And so one of the things that we did, and this is about partnerships with our customers. John mentioned one of the companies -- the company's largest customer is the City of New York. And we partnered with them to really think about how we could build a long-term robust platform to move material out of the city in a sustainable way and also reduce our costs to serve. And so while we have a critical landfill located 30 miles north of Philadelphia, that has -- it is the crown jewel, the -- one of the best assets that we have in our network and we can access it via truck, we recognized that long term when you think about 20 years down the road, having a more robust transportation platform was going to be the way to go. And so we now move, like John mentioned, over 6,000 tons a day for the City of New York out of the city, but we've had bit of a halo effect because we can use this transportation advantage for our commercial customers. And we're thinking about other ways to do this in other areas of the country. We have over 2,000 railcars in our network and it's something that we're doing also in the Pacific Northwest.

The second key piece if you're thinking about our core assets, landfill and transfer stations. There hasn't been a whole lot of technology advancements in this space and that's changing. This is an area where we can really use IoT and data analytics to help us reduce costs, improve and enhance our environmental platforms and then also really change the employing experience. And what this is about is taking all of our systems at our landfills, if you think about our landfill gas-to-energy plants, our leachate collection systems, our heavy equipment, putting it through one data center so that we can run analytics on it. And at the same time then use that information to lower our costs.

If you think about our landfills, the key to our landfills is airspace utilization, they're a fixed asset. And if we can improve how we use that space, we can improve our competitive advantage long term and lower our cost structure. We're doing this in 3 locations, 1 in Kentucky, 1 in New York, and 1 in Canada, and then the fourth that we have is the pilot at the DADS Landfill, which I know Chuck will talk a little bit more about later today.

Finally, on landfills. This is a great sustainability story for us. Over the last 20 years, we have been the leader in the landfill gas-to-energy space. So we have over 130 landfill gas-to-energy plants. We connect -- excuse me, collect landfill gas and then convert that to electricity. Well, we determined through some technology evolutions that we could collect that landfill gas, clean it up to pipeline quality, put it in the pipeline and generate a credit, which we can then sell that -- to give you some context that credit is about $20 per MMBtu compared to natural gas pricing just under $3. So huge economic benefit. And then we can close the loop and that RNG, renewable natural gas, can be used in our trucks. So this is a great example of closing the environmental loop at our landfills, closing the environmental loop in our transportation fleet and driving quick payback and high returns on asset development. Jim mentioned sustainability earlier and it's not just about the environment, it's about economic sustainability.

So speaking about economic sustainability, we're going to talk about recycling now, which we know has been a hot topic. First, I want to just level set on our place in the recycling chain. First and foremost, our customers want recycling as a service offering, and we are committed to offering it. But we have to achieve appropriate economic returns and that's something that we're really driving.

We are in the best position to do that. If you look at the map, you can see largest residential recycler in North America and we have a great platform of assets to help us do this.

We've strong relationships with public sector and municipalities, and the final point which I really want to emphasize, over the last 10 years we have developed and cultivated a global export group that is unparalleled. We have relationships with over 500 paper mills worldwide. We have people in China India, Mexico, Europe, North America. And this team is the team that has helped us navigate some of the most challenging times in the recycling industry and helped us provide unparalleled service to our customers.

But we recognize the current state cannot continue, and we need to be a part of the evolution of the recycling story. So how are we going to do that? Well, the first one is changing the business model, and this is something that I would say is more short- to mid-term and we're actively doing this today. We've been doing it for the last 12 months. And this is about changing the business model for a fee-for-service model. We have to get paid for the services that we're providing, and we're changing the conversation with our customers in this regard, making sure that they're educated on the changes in the recycling space and at the same time, that they understand what they can and can't do.

The second piece is the partnership with our customers and communities. So Jim mentioned it, we're all bad recyclers. If you look at -- go home today and look at what's in your recycling bin and there's probably a lot of things in there that shouldn't be in there, and don't feel bad because Brent Bell who runs our recycling organization, he audits his mother's bin and she fails every time. So we have to educate our customers. This is more of a longer term, or mid- to long-term story. We have really great programs that were developed, Recycle Often. Recycle Right. I encourage you to check out that website and make sure that folks understand the story.

The other thing we have to do is ensure that we're creating a demand for recycled content materials. It doesn't matter what comes through our plants if there's no market for them. And right now, over 65% of the material that comes in the door has 0 or negative value. So we're actively working with organizations like the Recycling Partnership. They work directly with consumer products organizations to really help drive the conversation around recycled content.

And then finally, and I'll go to the next slide in a moment, but it's really about using technology to differentiate waste management and also drive the lowest cost in our recycling plants. So how are we going to do that?

We've talked about the material recovery facility of the future, and this is really the marriage of a whole bunch of different technology types. We've been testing robotics at 4 of our MRFs in our network. We're putting together optical sorters. We're putting these things together in a way that's going to do 3 things. The first is reduce labor costs. Over 40% of our cost at our material recovery facilities are labor. The second is put us in a position to positively sort materials out of the stream. So I'm looking around, a lot of people had yogurt for breakfast and those yogurt containers historically have not had much value. But you can imagine a future where we have a robot on a conveyor belt and they positively pick that yogurt container out. We've cultivated a relationship with an organization that can convert that into a new product. We're doing that today with KW Plastics and we have a cleaner stream, that's a differentiator for us.

And then finally, these plants will allow us to have cleaner material.

Advanced recycling. Jim talked about this organics, East, West Coast, 30% of the waste stream. We're going to invest in organics processing, where our customers demand it. We have great platforms for this. The Oakland facility is one example.

And then finally, on technologies of the future. We firmly believe that in the long term there are going to be technologies that will transform the waste space, and we have our eye on that. How do we think about it though? It really -- they really need to meet 3 key criteria and it's one of the reasons why we think it's longer term. Our waste stream is very heterogeneous. It looks different every time, look in your own trash bin. We've had examples of companies that have come to us and said, "We can make this work in a lab." Well, look around New York City, waste doesn't get produced in a lab, mass amounts of material and this is a public policy, public health issue, you have to be able to process it each and every day.

And then finally, the economics of landfills and transfer stations and recyclings are very favorable. The economics of any future technology has to be at least as good as that. We do believe that this will happen in the future, and we have an eye clearly on that going forward.

So with that, I'm going to invite Jim back up for Q&A, but I hope you guys have had a good opportunity to really learn about our operating platforms and have some key takeaways.

QUESTIONS AND ANSWERS

Edward A. Egl - *Waste Management, Inc. - Director of IR*

(Operator Instructions)

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

If you can hear me, for the Q&A session, we're going to focus on the presentations that we've done today. I ask you to just ask one question and one follow-up. When you ask a question, please state your name and the company you're with. So we've got a couple of microphones around the room here.

Unidentified Company Representative

Should I sit on the box there, so I can use my laptop?

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Yes.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Right here. Hamzah?

Hamzah Mazari - *Macquarie Research - Senior Analyst*

Jim, it's Hamzah Mazari from Macquarie. So 10 years ago, we talked a lot about technology, conversion technology owning the waste stream. Then we rolled off $1 billion of investment in technology over that 10-year period. What's different this time in terms of technology? It sounds like a lot are the same. Maybe walk us through what's different? How are you thinking about this strategically different? And I know that wasn't on your watch, but it's a...

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Hamzah, we'll answer that in the afternoon session because we have a technology session that's when we got Chuck go through that.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Chuck's going to go through that with you.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Yes. So if we can hold off on that.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

He'll answer that question, not quite $1 billion though just...

Unidentified Company Representative

$750 million.

Unidentified Company Representative

About $0.5 billion.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

James, back there. I'll get you next, Michael.

Jeffrey Marc Silber - *BMO Capital Markets Equity Research - MD & Senior Equity Analyst*

It's Jeff Silber with BMO Capital Markets. John, I think you had mentioned that New York City was your largest customer and we had a little bit of information about how you're taking waste in terms of the collections and transfer. Can you talk about what's going on in New York City over the next few years? I know there's some potential changes and how that may impact your business?

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

So to be clear, Jeff, we -- what we do for New York City, the City of New York Department of Sanitation, as Tara mentioned, is move about 6,000 tons of their residential waste stream that they collect. And that is mandated to go out of a handful of facilities, a few that we own and/or operate, and that moves out by either barge or rail, but it's got to be done in an intermodal fashion. It was one of the mandates of the Solid Waste Management plan of 15 years ago or so, Tara, is that right?

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Hmm.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

The other conversation that's going on in New York City, we don't collect any of the commercial waste anymore. I spent time running this business -- Tara and I were here 20 years ago. And we were in the collection business in the New York area, Long Island, and we vacated that for a handful of reasons. But going forward, one of the conversations the city is having similar to places like Los Angeles, most recently, is there's a discussion going on about whether or not they're going to franchise the commercial collection in New York City. So there's been a lot of banter back and forth. We've had conversations internally because we've just had a successful endeavor with the City of Los Angeles where we had roughly 10,000 commercial customers, we went up to almost 20,000 in the franchise areas. But that's a discussion that's going on right now with New York City is do we franchise? Is it exclusive? What's that going to do from an environmental perspective? That's a big piece of why that franchises could be a benefit here in New York is reducing truck traffic, and obviously, there's other environmental benefits, efficiencies, that kind of thing.

Jeffrey Marc Silber - *BMO Capital Markets Equity Research - MD & Senior Equity Analyst*

(inaudible)

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

No, the city -- I mean the city has built out their solid waste management plan through some private transfer stations, which, we, obviously, are the beneficiary of some of those volumes -- and the city has also built 4 marine transfer stations, 2 in Brooklyn, 1 in Manhattan and 1 in Queens, but that's separate from a franchise.

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Yes, and just -- I mean, we have 20-year contracts on those long-term transfer contracts. So...

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Michael?

Unidentified Analyst

Couple of housekeeping just so I follow the numbers, the 1 minute equals $5 million, $5 million is annual, and that there were 2 $75 million numbers, so it's $150 million of cost savings kind of spread over 3 years. Is that correct?

Steven R. Batchelor - *Waste Management, Inc. - SVP of Field Operations*

That's correct. Yes, so 1 minute is $5 million annually. The M100 initiative is about $75 million, and we think the dynamic routing opportunity going forward is another $75 million.

Unidentified Analyst

Okay. In 2007, you had about $11.5 billion of routed revenues. Today, you're just shy of $14 billion. What's the difference in the number of trucks that you use to service that? I'm believing you are far more optimized, and that's sort of a point of demonstration of that $11.5 billion versus $14 billion, how many trucks -- you're talking about 14,500 routes today on that $14 billion. I'm assuming there's a lot more routes in 27 (sic) [2007] at the peak of the last...

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

Yes, I don't remember the number, honestly, Michael, in 2007, but I think Steve spoke to it. What we've achieved in the last handful of years is we've clearly driven efficiency in addition to safety. So the routes that we're putting on the street are clearly more efficient. I think the other thing that's interesting when Steve talked about what the fleet looks like, the move to CNG, we're going to be over 60% here in the not too -- by the end of the year. That's part of what's helping drive our efficiency is the fact that these trucks are clearer, they are easier to maintain. We don't have the operating and maintenance issues. So part of what our fleet strategy about aside from being sustainable and cleaner burning fuel is also to helping drive some of that efficiency.

Unidentified Analyst

Right. Last question since you introduced that, you're at 3x the level of CNG versus the industry, broadly. This is not just about fuel, is that correct? There is a meaningful maintenance savings. Can you quantify that?

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

Yes. I mean when we look -- if you look at it kind of on a cost-per-hour basis and you take about a 5- to 6-year-old truck kind of in the middle of its life, we think it's about somewhere in a $3 to $4 an hour range on a per hour basis. And obviously that's -- on the maintenance side, Michael, the trucks are lighter. They are clearly more efficient. We can carry a heavier payload. Obviously, from a community partnership standpoint, they provide a lot of benefits. And as I mentioned, downtime on our CNG fleet because the diesel technology is getting more and more complicated in terms of the -- Steve mentioned the DPF systems. That's weight to the truck. It's maintenance costs. It's, obviously, other additives we have to put in. So we are still very, very happy with our CNG strategy. And as Steve mentioned, we see ourselves going up near 80% in the next handful of years.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Michael, one quick point to is that we've been asked why not electric versus CNG. First of all, we've looked at electric, it's -- the technology is not ready. The truck -- we looked at an electric truck recently, John and I did, it only has a 35-mile range, and it's got a lot of -- there's a lot of capacity loss because of the weight of the batteries in the truck. We think electrical will eventually get there for our type of vehicle, but our answer to that is, look, we have the flexibility to be able to switch pretty quickly. So why not take advantage of CNG when CNG presents all of these benefits, these environmental and economic benefits to us. And when electric becomes available and becomes viable, then we'll make the switch to electric.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Bogdan?

Bogdan Cosmaciuc

Jim, this is Bogdan Cosmaciuc with Senator Investment Group. I think you said, at a recent investor conference, one of your goal is to make Waste Management synonymous with recycling -- sorry with sustainability to make people kind of associate the Waste Management brand with sustainability. So 2 questions on that. One is, how dependent is that goal to your ability to solve this recycling conundrum to make it economically viable for you? And two is, if solving that problem requires Waste Management to be more capital-intensive over time in recycling, are you willing to make that tradeoff?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

I think the answer really in large part goes to Tara's presentation. So she talked about this recycle plant of the future and presumably that plant will produce the results, and we don't know for sure because it's not up and running yet. But if we assume that, that plant does produce the results that she talked about a 40% or so reduction in labor cost and significantly cleaner stream coming out of the back end of the plant, then I don't view it as being necessarily an incremental capital cost, but as these plants come up for renewal, so City of Philadelphia has a plant that was built 10-or-so years ago, may be a bit longer ago, that plant eventually -- that equipment is going to have to be replaced, and we have those all over our 44-or-so single stream plants.

If this plant works in Chicago, which we fully anticipate that it will, then what we would do is just as plants come up for renewal, like City of Philadelphia, renew it not with existing technology but with new state-of-the-art technology as we're putting in place in Chicago. And then to the first part of your question about filling this void, look, I think, 2 things: one is, I mentioned the social responsibility that is an expectation of us as we hire folks and an expectation of us as we do business with companies. They expect us to have -- to be socially responsible. And I talked about the fact that I believe 5 years from now, we will be synonymous with sustainability, but there really isn't a company today that is synonymous. There isn't a company that people -- when you think about energy production, there are couple of companies that come to mind. When you think about technology, there are number of companies that come to mind. When you think about sustainability, there really isn't a company that comes to mind. I think we can do it, but we'll do it in both an environmentally and an economically sustainable manner.

Derek Spronck - *RBC Capital Markets, LLC, Research Division - Analyst*

Derek Spronck at RBC Capital Markets. On Slide 23, it says evolving from a pricing excellence focused to disciplined gross, pursuing price and volume. Does that suggest -- why the shift in strategy? And does it suggest maybe a little bit more aggressive pricing in the pursuit of volumes going forward?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Here's what I would say about price and volume. Historically, there's been this view that -- it's either one or the other, which is very much kind of a commodity model for -- in microeconomics. If I'm going to get price, then volume, by definition, is going to go down. And if I'm going to add volume, then price, by definition, is going to go down. And I think what we're saying there is, we believe that through differentiation and you've seen some of this today, but we believe through differentiation that's how we ultimately drive this model. It's not by saying, "Well, it's only going to be price or volume. And oh, oh, the industry is going back to -- Waste Management is getting higher volume, therefore, you must be going back to a volume model." Look, we believe you can get them simultaneously. We think you can get price and volume simultaneously. Look at great companies that are truly differentiated, and they get both at the same time. So we don't subscribe to this theory that it's just one or the other and that microeconomics would dictate that. We think we can get them simultaneously, which we have recently and we think that continues.

Derek Spronck - *RBC Capital Markets, LLC, Research Division - Analyst*

That's great. And on the pricing front, do you still believe that you'll be able outprice the cost inflation going forward?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

What was the second part -- the whole price -- what did you say about inflation?

Derek Spronck - *RBC Capital Markets, LLC, Research Division - Analyst*

Will you be able to outprice cost inflation?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Oh, outprice cost inflation. Certainly a piece of our business, and I mentioned that 65% of our residential business that is directly tied to price indexes. So that is what it is. Now we have attempted to shift the residential business to water sewer trash, which we think is more representative of the cost of doing business in that line. So moving from CPI or CPI-U to water sewer trash, we think, is a benefit to us only because it's -- that index is, in our minds, a better representation of our cost structure. I do think that when you look at CPI specifically and setting aside residential, I don't believe that it's representative of our cost structure, I'll use landfill as an example. Our landfill pricing has been recently pretty good in the 3% range. Well, what I don't want to do is pat myself on the back over that, because when I look at our cost structure in landfill, it is expanding at a rate well above, certainly, well above CPI, but even well above that 3%. So I don't know that I've answered your question, but I do believe that we can do better in terms of recovering cost increases in places like our landfill line of business through additional pricing.

Patrick Tyler Brown - *Raymond James & Associates, Inc., Research Division - MD*

Tyler Brown, Raymond James. So Jim, I want to maybe talk a little bit about that, maybe this question's for Tara. Post-collection is clearly changing. In your own slides, you talked about landfill capacity coming down. It's pretty clear, transportation is getting tight. It's inflationary. Leachate odors, we hear about it all the time. We've seen a little bit of an uptick in landfill pricing but why would we not see a material acceleration there over the next few years?

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Well, I think Jim just touched on it. We are looking at that and looking at how our cost structure is changing. And where we have -- we're taking the approach that we took in our C&I business, where we were successful in pricing and driving price when it came to our cost structure and using that same disciplined approach on our landfills. You're going to hear Mike talk a little bit about that this afternoon or in the next session. The key component there is some of our landfill customers, they are larger, they have larger blocks of tons. The conversation is a little bit longer, but clearly this is something that the team is focused on all 17 area vice presidents and some of them are in the room. I mean, we have monthly, if not quarterly, discussions when we have our QBRs. I mean these are things that we're focused on and really looking at how we can move the needle in that regard.

Patrick Tyler Brown - *Raymond James & Associates, Inc., Research Division - MD*

Okay. And maybe a follow-up on collection. So from '14 to '17, it looks like you maybe saved $100 million, but '17 to '19, it was only $10 million. Can you talk about some of the challenges that you saw over the last couple of years? And what gives you the confidence that we get the acceleration over the next 5?

Steven R. Batchelor - *Waste Management, Inc. - SVP of Field Operations*

So as I said in the presentation, we had good visibility on both ends of the route. We didn't have visibility in the middle of the route, and you've figured the route is 10 hours a day. Again, we had a visibility of about 1.5 hours. So with the new technology now we have really good visibility in the middle. So -- and the middle is, again, how much time we spend at a customer and are we spending too much time, is it the driver or is it the conditions of the customer. And if it's a customer condition, it might be an opportunity to price it differently. In addition to that, as we run our routes from -- as the routing tool sequence the routes, we'll be able to tell when the driver is following the sequence. So that 10 minutes that we got at the beginning of the day and the end of the day, that was a onetime opportunity. You can't go get that time back, we got to keep it. The next big opportunity is, as I said, in the middle of the day, and we estimate that to be around $75 million.

Sean D. Eastman - *KeyBanc Capital Markets Inc., Research Division - Associate*

This is Sean Eastman with KeyBanc. So just in the spirit of the kind of economically viable investment opportunities that fit into this sustainability bucket. I think everybody's minds always go to sort of the traditional recycling business, but we're talking about 75% of the materials coming in with little to negative value. So I was hoping you guys could touch on maybe whether there's a bigger opportunity there or in some of these advanced recycling buckets or organics or these material conversions. I'm just curious sort of where you see the biggest runway on that kind of theme?

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

So one of them is one of the ones that I touched upon, which is really our investment in renewal natural gas facilities. And this is something that we've talked a little bit about on our earnings calls, but this is a great example of taking the -- an asset -- and it really is an asset that we have, the landfill gas that's generated at our landfills, and converting it to a transportation fuel and monetizing that. These are assets that will have really quick returns. And it's a great environmental story. It's a great economic story for us. So that's one example outside of the recycling space. Chuck is going to talk in a little bit about technologies of the future, so I'll leave that to him, and if you have further questions after that, you can certainly follow-up.

And then, on traditional recycling and organics. Organics, we do see opportunities there. We're investing where our customers really want the service and we're being intentional about it. Traditional recycling, we do see a future there. We think we can be differentiated in that space, and it's one of the reasons why we're making the investment -- the Chicago MRF of the future, it's going to be a test case. We're confident that it's going to drive the results that we're expecting, and we think that could be transformational.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

I would add to that, if you think about the City of Oakland, which Tara profiled up there, there you had a customer who's got a 60-plus percent diversion goal that you're going to have to get to. So we had a customer who was willing and able to set that bar and then it allowed us honestly to make that investment in that processing technology, which is more advanced than anything we're doing in other places because we had a willing customer who is -- had made a commitment to those sustainability goals.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

I'll say one thing about the corporate innovation team that Chuck heads up. First of all, the fact that we've assigned a senior officer to that demonstrates the importance of it to us and part of what his team is looking at are those types of technologies to determine the viability of them and then potentially incubate them. But it also demonstrates our unwillingness to accept that 65% of what comes through our plants is just simply not usable. I mean, that's crazy, right, I mean, 65% comes through and it's got 0 or negative value. So in our terms it's not usable and that's not acceptable to us, so that's a big part of -- Chuck will talk about it, but why we have a senior officer over a venturing team is to understand how do we use that 65% and add value to it.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

And so we're getting close on time and we'll have Noah answer a question and then Michael will wrap it up for us.

Noah Duke Kaye - *Oppenheimer & Co. Inc., Research Division - Executive Director and Senior Analyst*

Okay. Noah Kaye with Oppenheimer. Tara, I just want to follow up on your comments about the landfill gas investments because I think this is really interesting area for investment. Our understanding is historically those 130 landfill gas sites, vast majority has been for power generation. And when you're looking at $5 per MMBtu to clean the gas to get to pipeline quality, that makes sense. But if you can get $20 per MMBtu that's kind of a game changer in the economic. So can you talk about what your goals are? First of all, benchmark where we're at in the journey? And then what your goals are for -- how many sites you are expecting to convert over to the pipeline quality? And then if possible, any way to think about kind of the uplift on that from a financial perspective?

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Sure. So we have the 130 plants, and you are absolutely right, most of those were centered around electricity. We have 3 renewable natural gas plants. We opened one last year at Outer Loop in Kentucky. And I can tell you that these are operating at or above pro forma. So that's fantastic. We have another one that is being constructed today in Texas. And we have a pipeline -- we look at a pipeline of all of our facilities, and really we're thinking about anywhere from 3 to 5 over the next 3 years. And if we look at the network we have at least 10 to 20 that are potentially eligible. That moves around because we really have to look at access to the pipeline and some other elements, but really in the next 3 to 5 years what we've talked about is 3 to 5 plants. It could be more than that if we see this accelerating.

Unidentified Company Representative

And Tara, part of the enabler of that is that 60% of our fleet is natural gas.

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

Yes. Yes.

Unidentified Company Representative

Without that, you simply can't -- you don't have the...

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

You need a transplantation fleet to tie it back to, and it's a great overall investment story for us.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Last question.

Unidentified Analyst

Jim, do you see the mix of your collection for disposal that you showed with the chart. Do you see that changing in 2 to 3 years? And you give a great slide about your disposal assets are so well positioned in these cities. But from our understanding, also, these cities could be very competitive on the collection side. So I'm just curious how you see that mix with profitability and being in these different lines of business in the next 2, 3, 4 or 5 years going forward?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

I think if it does change, it's because of the differentiation efforts that we're putting in place. I mean, the more we separate ourselves, the more we have the ability to actually grow that piece of the pie, for example, it's 41% of the commercial piece that has very high margins or grow the industrial piece. I talked about the differentiation that we see in the industrial line of business and I'm talking about really permanent waste streams there and customers that have a very specific need that we can fill that others maybe can't. So it could change, Michael, but it would change in our benefits as we further differentiate ourselves.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

All right. With that, we're going to take a 10-minute break and start up at 9:35 a.m. or 10:35 a.m.

(Break)

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Hi, everybody, if you can come back in and get -- so we can start for the second half of our presentation. Everyone, come sit down for me. So thanks, everybody. We're going to get start with our second half of the session here, and we're going to get started with Tamla Forney here.

Tamla D. Oates-Forney - *Waste Management, Inc. - Senior VP & Chief HR Officer*

Good morning. My name is Tamla Oates-Forney, Senior Vice President and Chief Human Resources Officer. I'm thrilled to be here today to be able to share our people's story, and I'm excited about being a part of the Waste Management family and a member of our senior leadership team. I'm a newbie to the team in that I've only been with the company since December of 2018, so I just completed a little over 5 months in my role. Prior to Waste Management, I was with GE where I spent 20 years working throughout several different HR leadership roles and 9 different industries, 2 continents and 3 countries. I truly believe that those experiences have prepared me for this time.

I honestly think that I have landed my dream job. This job is so cool. I got to tell you I am living my dream. Waste Management is a company very much like me that's committed to people, very passionate about people, purpose-driven, and through our sustainability efforts, committed to leaving the world better.

Throughout my presentation, I would like to leave you with the following themes: number one, our commitment to people first is real. You've heard it already throughout the presentations and you will continue to hear a lot more about this as we speak. We are committed to making Waste Management an employer of choice and a great place to work and build a career. Secondly, we are transforming the HR organization to better support our company and our employees. Third, we're building a culture that is supportive of inclusivity and innovation. And with the last 2, given the demographic makeup of our workforce, we're thinking differently about how we hire, retain and develop talent as well as how we transfer knowledge across the enterprise.

Now when I first joined Waste Management, I had a clear 100-day plan. Obviously, the company was very successful prior to my arrival, so it was very important for me to, one, understand and have an appreciation for all the great things that the company had already been engaged in so that I would know where I could add the most value. So my approach was threefold. To listen and learn, see and assess and then develop and do. One of the first areas I assessed, obviously, was my own team. I wanted to make sure, as a function we had the right people, tools and resources required to support our declaration of people first. I looked at our roles and responsibilities, our service offerings to our customers -- internal customers that is and our approach to providing solutions, all with the vision in mind of building a world-class highly skilled and a solutions-focused human resources team.

In addition to assessing the team, we looked at our HR strategy. So I got together with my HR senior leadership team and we really looked at where is the business going and is our HR strategy aligned to support that effort. We immediately determined that we needed to fine tune our focus so that we were better able to partner with the business, thus, these 5 strategic pillars. Throughout the presentation, I'll take you through each one of these from our HR transformation to improving our employee experience.

So I came in December of 2018. And in February, I announced an HR transformation. Transforming the HR team into 2 distinct areas of focus. The first you'll see are 6 centers of excellence and they are: organization and talent development, learning and skills development, culture and engagement, systems and processes, total rewards or CNB, and Labor Relations. With these 6 distinct centers of excellence, we are building subject matter expertise that will be responsible for developing and driving HR enterprise standards throughout the entire company. These centers of excellence also free up our strategic HR business partners to be able to truly partner and focus on our people and drive our company's strategy throughout the organization.

We announced this change in February, but we're going to be very deliberate and nondisruptive as we make the change. The goal is to make sure that the HR team is structured in this way completely by the end of this year. In doing so, we feel that we would have a better alignment of skills and we will improve our service to our internal customers and employees.

With this new senior leadership team, we recently launched a revamp of our commitments and values. Our commitments include: putting our people first and success with integrity. Our values, several of which you heard a lot about today already and you will hear throughout our presentations, include diversity and inclusion, our customers, safety and our environment. We believe that these values will support our focus on innovation and inclusivity, and we also believe that having these values and commitments clearly defined for our employees what's expected of them being an employee of Waste Management. Now I'm going to take you through our current workforce, and from this chart, you will notice 2 things: one, our generation profile is changing; and then secondly, turnover is the key focus for us. In looking at our generation profile from 2010 to 2019, we've gone from 4 generations to 5 in our workforce and not only have we gone to 5 generations, the mix is changing. Millennials or Gen Y, they represent the bulk of our organization.

As such, it's going to be critically important for us to transfer knowledge. You heard several of my peers talking about the deep domain expertise that we have in our company, so it's incumbent upon us that as our tenured employees retire, that the employees coming in understand what those roles require. So we have to be very intentional about this transfer of knowledge. What we're doing to ensure we transfer knowledge and be nondisruptive are things such as building multi-generational teams. When we put teams together we look for multi-generations, we look for multi-ethnicity and multi-gender to make sure that our teams are very inclusive. We're also, and you're heard the team talk about this, developing enterprise standards and standard operating procedures so irrespective of where you are in the organization, you know what the processes are.

Technology has also been very important in this regard because through technology, we're automating a lot of our processes so that our processes will not be so people-dependent, but we have to continue that.

Switching to turnover, I recently went to my first WasteExpo. And there was not one conversation that I didn't have that did not talk about driver and technician turnover. Driver and technician turnover is not unique to Waste Management. It is a macro issue in the transportation industry. I was talking to some of my peers and reading some articles when I was out there that had some companies showing turnover rates as high as 90% to north of 100%. If you look at ours, we have been hovering around, for drivers and technicians, between 22% and 24%. And look at the trend, the trend is going down. Only because we've been laser focused on addressing this issue. We've engaged our employees to really understand what keeps you here and what would make you leave. And then secondly, we're using data analytics and insights to determine what's going on and what the trends are and developing programs and approaches to address those things.

Some of the things we heard, obviously, money was one of those, but honestly money was the easiest thing to fix. We heard other things such as leadership. We heard things such as hours of work, facilities, training, all of those things they told us needed to be improved. And while some of it was hard to hear, they were right, we understood those things. And we've been laser focused on putting some of those things in place.

Steve talked about the training to drive in trainer center, our second one that we've opened in Arizona. Now we have 2. We've also done a better job at equipping managers with the tools and resources that they need in order to lead better. We spent a lot of time improving our onboarding process and on-the-job training, and we are infusing mentoring into our programs. I am not really sure which one of those are driving the turnover decline. I think all of them working hand-in-hand and the fact that we're focusing on this, probably every week, we get monthly reports in terms of how we're doing, is really, really paying off.

If you look at the turnover rate by tenure, we are now focused on making sure that we focus on our new hires because the data shows that once an employee reaches the 12-month mark, the retention improves dramatically. So we really been focused in those areas, and some of the things I talked about before are the things that we're doing for new hires as well. But in addition to that we're also giving real job previews so that people know what to expect in advance of coming to join us.

As of April of this year, this number -- this is a 2018 number, the 51.2%, has now declined to 49.5% in the last 4 months. So again, the focus from the company is really paying off, and that's something that we're going to continue to do.

Another thing that we're doing that really supports our focus on diversity and inclusion is looking at our employment programs and the applicants that we are attracting. We are increasing our focus on women. Obviously this industry is not really heavy on women, but there are opportunities, especially given our technology advances. It's making the jobs more attractive and less labor-intensive. If you look at the progress that we've made, it's clear that we're focused on this as evident by the percentages and every one of those percentages are increases in the years before. Starting with the senior leadership team, we're setting the tone at the top.

We're continuing to hire veterans, we've hired over 4,000 veterans in the last 4 years, which represents approximately 9% of our U.S. hires. And this last program I'm really excited about is a new program, we're calling Innovative Employment Pathway programs or IEP, where we're focusing on casting a wider net for our applicants, employing the overlooked and the underserved. And in a lot of cases, giving them a second chance at a better quality of life. What we're doing, we're strategically partnering with partners who have credible job readiness programs that is geared toward these populations. They have great programs, but no jobs. We have great jobs, but not necessarily the right programs for this population. So together in partnership, we think it's going to be a win-win, both for the community as well as Waste Management. We will be piloting IEP in June with plans to expand it in the coming years.

Next, I want to briefly take you through our new integrated talent management approach. The way we manage our talent is one of the most important things that we can do as an HR organization. We're looking at it through 6 different pillars, and we're calling it the Right 6. With this process, we're building processes and programs and procedures to make sure that we have the right people in the right roles, with the right skills, with the right tools, provided with the right incentives at the right time. We feel that once we implement this talent management system, this is going to bring consistency in our approach, and it will help us not only in terms of developing talent but also promotions as well as succession planning and hiring, making sure we have the right people in the right roles at the right time.

And finally, we are committed to improving our employee experience by creating better work environments, having a focus on diversity and inclusion, infusing better tools both preemployment and during employment, and focusing on talent development. We believe that as an employee, if you love what you do, you like who you work with and the company you work for, you will tend to stay. How that will show up, it should show up in terms of our employee retention, our leadership diversity and our recognition, both internal and external.

In closing, I want to really, really underscore our focus on People First. I'm so excited to be leading this function for Waste Management, and again, we are committed to making Waste Management a great place to work and build a career.

And with that, I would like to turn it over to Mike Watson. Thank you.

Michael J. Watson - *Waste Management, Inc. - Senior VP & Chief Customer Officer*

Thanks, Tamla. Good morning. My name is Mike Watson. I'm the Senior Vice President and Chief Customer Officer. About 27 years ago, I started in a customer-facing role at an organization as a inside sales rep at one of our locations in Chicago, my hometown. Over the last, say, 15 or 20 years after that, I spent some time in sales leadership and revenue management. In 2013, I had an opportunity to run one of the markets in Midwest, again, in my hometown, in Chicago, the Illinois-Missouri Valley market area. The one common thread to that entire experience was my passion for the customer. And with the opportunity that I had to join the senior leadership team and the commitment the company has made on a Chief Customer Officer has really excited me. I'm really exciting to take you through our strategy and our key messages for a voice of the customer.

So specifically, we are building a comprehensive understanding of our customers. Why are we doing that? Differentiation and customer lifetime value. How we differentiate Waste Management from our competition. It comes from the voice of our customers. Secondly, we're using advanced analytics to employ our go-to-market strategy, the 5.6% volume growth organically balanced on price and volume didn't happen by accident. It was using analytics in market planning to drive that growth. We do have a very clear growth plan. We had some upside, and I'll take you through some segments that are really exciting for Waste Management, and we feel we have great differentiation in those segments to drive value in the future.

Lastly, Jim talked about it, is our brand. Our brand is strong. It's industry leader, but we have some upside. It's about 5% of our market cap. We feel that there is huge connectivity with sustainability, purpose and really driving growth and value for Waste Management moving forward.

So let me take you through a little bit more about this role. One of the values that Tamla took you through was the customer value, which is Waste Management puts customers at the center of what we do, and we're inspired to delight them every day. That's how we built this organization. Really around our customer experience, our sales and consultive services, revenue management, and brand and marketing all around the customer.

Our go-to-market strategy which achieved that 5.6% organic growth really comes in 6 segments. There are some subsegments there, but really 6 major factors: small and medium business; public sector; manufacturing industrial; our strategic accounts, which is really our national accounts group; and then 2 others which you might not be aware of, our sustainability solutions; and our energy and environmental services, and more specifically, in that subsegment is our coal-combustion group and electric utilities where we see some huge upside. So we feel this team is well put together to continue the organic growth that we've experienced in 2018 and before, but also setting us up for a great future growth platform.

How we built this team and our plan really comes with 3 fashions: the customer, disciplined growth and the brand. So thinking about our customer, really, our customer analytics is about differentiation and customer lifetime value. We want to make sure we enrich the voice of our customers. We're evolving the way we're getting information from our customers, and we're acting on that to spread the differentiation in our industry. We want to make sure we understand the entire customer journey versus -- the operations folks talked about, "Hey, quality is service." How are we doing on the street? Are we picking up on time? That's one part of the customer journey. There's many elements of the customer journey that we have opportunities to improve and differentiate ourselves through our customers. The other part of this thing, too, is technology, and where do we make the investments that are going to get us the best return, not what we think as an organization to drive process, but what's going to drive value for organization. And then lastly, we think about this is what is really going to be the customer channel of choice, how do our customers want to communicate with us? Is it via text? Is it via phone? Is it online? We need to make sure we have the appropriate intuitive channels to do that. Secondly, disciplined growth. This comes down to really using data and demonstrating discipline, and we've done that continually. We mentioned that we've had great success in our commercial industrial lines of business. We have definite upside in residential and disposal as we move forward to spread that gap. And to me this really comes down to understanding what's going on in the market, having a strategy that matches the operation in the environment we operate in and understanding where there's value in differentiation and have a disciplined growth platform.

The brand, this really comes down to much more analytics. We're looking at the brand as an asset. We haven't done that in the past. It's been a little bit loose. The brand is an intangible asset, but we're applying a lot of analytics, engaging with some third-party experts on where we need to go with our brand. We feel that there's massive upside for that to really generate some market cap for us at Waste Management. But there's also a need for us to differentiate ourselves from what we do in the environmental service arena and grow that in the sustainability platforms.

Let's go a little bit details around the voice of the customer. I mentioned the evolution of this. Really, what it comes down to is, we have kind of a macro view of our customers, more of a customer-satisfaction approach. We're looking at this as a much more journey-based engagement with our customers. And we've made a recent change at the beginning of 2019 to gather more information from our customers to drive differentiation value. We've seen a 50% increase in our response rates, which tells me that we're going to get great information from our customers and our old processes weren't delivering and getting us the information we needed to continue to differentiate Waste Management from our competitors. But what is this really all about? It's understanding where we need to invest, how we acquire, where we spend time with our customers and really spread the gap and say, "If we're going to do one thing, is it going to generate value for our customers?" Examples of this are who we target, who we don't, quite frankly. There are some customers that don't see the value that Waste Management generates, it might be little more price-sensitive. It's not that we don't want those customers. We have to take a different approach to those customers as we market to them. Additionally, think about channel effectiveness. Where do they want to engage with Waste Management? Is it a classic channel? Do I want to have a face-to-face rep? Is my business with Waste Management complex? Or is this a transactional sale? Just make it easy for me to do business with you. Also, using our customer lifetime value and voice of the customer is going to help us understand what value we create and how we can increase our pricing optimization, based on what values our customers have by segment. And really when you look at the customer lifetime values, what customers are more likely to defect and why. And getting that information quicker and being able to evaluate that's going to really help us improve our defects, which we've seen improve dramatically over the last couple of years.

One example is our open-market residential line of business. This is a subsegment of our public sector. It's about a $600 million segment for us. We did extensive qualitative and quantitative research in this segment. And we looked at this by journey. How do they search for us? How do they find us? How do they engage with us? How do they onboard with us? And how do we service them? We've learned a lot about that, and that's really going to help Waste Management continue differentiate our service from our competition, and we're doing this in all of our segments.

One of the things we realized in this segment, and Nikolaj will talk about this little later, is an opportunity for e-commerce, specifically in open-market residential, it's a quick sale. What our customers want? They want it to be easy, they want it to be quick, and they want it to be simple. And we've accomplished that, and Nikolaj will take you through that.

As we start to dig deeper into our customer segmentation, we are realizing that even in some of these segments, there's deeper segments of our customer profiles. And this is going to help us understand where the value is and where it isn't and how we appropriate and deliver customer service for those particular segments. And I think that will continue to differentiate Waste Management and make sure we have the sales and marketing resources to target the customers we want and maybe stay away from the ones we do not.

This is, I think, if anybody pays any attention to what I say today this is the game changer, in my opinion. This is Smart Truck. And what we see from Smart Truck is -- and the way I look at this, this is a rolling information center for our customers and how we service them. Historically, if we wanted to identify customer service opportunities or upgrades, we have a driver get out of the truck, take a picture, upload it in their sales rep and follow up on it, very inefficient process. This is cameras mounted on the truck. We have 2 cameras right now: one where we engage with the container and one at the hopper, where the garbage or recycling goes in. As you can imagine, this is a video of surveillance opportunity for both customer experience and revenue upgrades.

So if you imagine, you're a customer, "Hey, mister customer. I just saw a video of your service. You are drastically underserviced. We've been picking up extras for the last couple of weeks. We think you need to be rightsized and go from a 2 yarder to 4 yarder." That's what our customers want from us. They want a proactive partner. And we see that to be a huge opportunity for us and differentiate us in the SMB space. Right now, we have this on 340 vehicles, and we're generating significant returns on this investment. We have plans to employ this in 5,000 of our vehicles by the end of 2021. So you can imagine the opportunity we have for customer experience as well as revenue upgrades across our enterprise. And we feel over the next couple of years this will generate value in excess of $100 million, both on customer retention, rightsizing and revenue capture and potentially improving defection based on our proactivity and partnership with our customers.

We talked a lot about this disciplined growth. This is going to get, obviously, a lot of discussion about how Waste Management balances price and volume. I think it really comes down to sophistication of how we're evaluating our markets. Jim mentioned Austin, Texas and Miami being growth markets. There are certain markets, where I came from, the Illinois-Missouri Valley, where the growth is not there. We're identifying where we can grow and where we can't, areas where we can get a price and where we can't based on the economies, and we're appropriating our sales resources and activities to balance that. That really is a perfect strategy, understanding how you operate and where you operate. It's really how we're demonstrating our disciplined growth, using economic data as well as our internal metrics where we have cost advantages, or potentially just regular competitive advantages to drive that growth. I think what's important to understand here is that Waste Management is leveraged in certain markets, and in certain markets, we're not. And we now understand where we could drive volume and where we could drive price, but to me, as I look at the price-volume tradeoff, it really isn't a tradeoff. I think if we continue to focus on differentiation, we'll be able to get value pricing versus -- in addition to inflationary cost pass-throughs.

One thing I think to note on our disciplined growth approach, we have invested significantly in our commercial industrial lines of business. We have opportunities in residential and disposal, and we're rolling those out now consistently over the tail end of last year into this year, and you're seeing those rewards with higher yields in both residential and disposal, and we realized that those capital-intensive lines of business, specifically disposal and residential, with inflationary cost, we're going to need to make some decisions on where we grow and where we don't grow based on the return profiles.

The results here are what really, I think, I'm the most proud of. We've had great price, a 5.8 core price or 2.7% yield for Q1. We've had great volume growth. We've also had defection improvement of 8.1%. So it's not like we're going out and grabbing a bunch of share. This is about us doing a better job servicing our customers and bringing the defection down. And our net customer growth rate so far this year has been 1.7%, which is a great feat, but I think it just demonstrates our discipline how we grow through the marketplace.

Lastly is sales force allocation. We just started working on this over the last probably 6 to 7 months, trying to understand the optimization of our sales force, where do we get the best return on our marketing sales expense. Our sales expense has been flat. We've had increase of 11% in productivity from our sales organization. That tells me we've done a great job of pushing the right amount of resources to the right opportunities, both on digital channels as well as our off-line channels and getting the best out of our sales resources. Our overall sales and marketing expense is very lean for an organization of our size. And our ultimate goal is to keep SG&A down and maximize that return on that sales dollar, and I think we've done that and continue to have opportunities to optimize our sales resources.

I mentioned a couple of subsegments that I think are amazing for Waste Management, but one you might not know a lot about it's our sustainability solutions group. They've done an amazing job partnering with our customers, meeting their sustainability goals. And sustainability goals is financial or economic as well as environmental. And this group has done an amazing job of being experts in working with customers. About 75% of them are on-site, working with our customers, identifying ways they can improve their processes, their recycling, their logistics and their overall supply chain. So this is really a way Waste Management separates ourselves from the competition. This is $0.25 billion revenue business for us at Waste

Management, it's grown 25% in the last 3 years, which just demonstrates that we're well positioned as organizations start to work towards more sustainability. This is the real deal, and the real deal comes from cost savings from our customers, which we've seen here, about $12 million last year. And since we've employed this group, about 500 people, we've had $200 million of savings with the customers and it's grown. So it tells me we're delivering both on the financial and environmental aspects of that.

Lastly is coal combustion. This is insider environmental services group. This is really about coal-ash. Most of you've heard about some of the regulations that have impacted this segment. We are the best-positioned organization to manage this opportunity, not only from our asset network but we're the only company that can do all 3, which is beneficial reuse, on-site remediation and help landfill disposal and also off-site transportation to dispose of this coal-ash. We have the expertise and have put the package together to deliver that. We've managed 33 million tons in the last decade, and we feel this is a huge upside. This is a $50 billion addressable market and that's what would it be, but more importantly, I think what's interesting is that our current pipeline is in excess of $3.5 billion of opportunity, so this is real. And I think we are well positioned to capitalize on that in the future and the near future.

The brand, we talked a lot about our brand. We're really proud of our brand. Actually, we did the brand study. Jim and I talked about this, I thought our brand would be worth more than 5%, but we might be a little bit biased on our brand. However, I do think we have a awesome position. It's evidenced by what we hear from our customers, our awareness studies compared to our peers, but we have a huge opportunity to become a beacon brand. And a beacon brand for most of you -- I know this intangible asset brand think as some of the quant folks a little bit squirrely, but this is really about trying to really understand the best way we can about what our brand is worth as a potential market cap. Beacon brands are great brands they are anywhere between 10% to 20%; we're less than 5%. So we feel, if we're going to be a beacon brand and really drive value in the sustainability space, understand social norms and really position ourselves as a purpose-driven brand, which takes Waste Management's commitments and values, combines those with value propositions that resonate with our customers, specifically sustainability, capture that sustainability space, we feel there is tremendous upside in our brand value, but that's going to come with much more -- really targeted marketing and understand kind of what we do. The financial performance is there. We have be targeted on how we tell our story. We need to tell our story better and then stakeholders that are really going to understand that as a value. We think that's going to be a huge lift for Waste Management, and ultimately, we want to be revered as the premier brand, not just in the environmental services industry, which is clear, this is a beacon brand that really drives value and stands for something. The return on that marketing investment is important.

The last thing I'd like to talk about is the Waste Management Phoenix Open. Most of you've seen this on TV, some of you've been there. It is definitely more than a golf tournament in many ways than one. But we feel that this is an important flagship event for our brand. We've had this event for 10 years as a title sponsor. It's done tremendous amount for our brand; Jim had mentioned that. Just from a business relationship standpoint, we're developing a whole separate armor of organization around stadium and event sustainability, which we're excited about and that really has come from what this event has done for our brand. This is a sustainability event, it's not a golf tournament, and that's evidenced by the sustainability forum, which Jim had mentioned, it started out in a small classroom, a first-time event at ASU. Now it's a massive event. We also walk the talk on sustainability. We had 760 tons of volume is generated over the course of this event. It is 0 waste. It is carbon-neutral. We donated $12 million to local charities. We donated 12 tons last year to local food banks. This is really walking the talk socially and environmentally and really represents what our brand stands for, which is sustainability. And I think this is a tremendous upside. I think we -- again, getting back to the quant part of this thing, $100 million of earned media revenue and it's a double-digit ex return on our investment we make at that event. So we feel that this is really a well-positioned investment for our brand at Waste Management. We're excited to see where we can take it.

What I'd like to do now is turn it over to my colleague and good friend, Nikolaj Sjoqvist, who's going to take us through all the great things we're doing digitally.

Nikolaj H Sjoqvist - *Waste Management, Inc. - Senior VP & Chief Digital Officer*

Thank you, Michael. I call you Michael because I believe only brother or your mother calls you Michael when you're in trouble, so I thought I'd have some fun with him. He goes by Mike.

In case you're wondering about the weirdness of the name and the accent, it's actually quite straightforward. My first name is Russian. My last name is Swedish. I am Danish, I grew up in the U.K., I lived in Germany, and then moved to Texas as quickly as I could, which I've come to understand is a country in and of itself. So I am doing well.

Just by way of introduction, I joined Waste Management in February of 2012. So I've been here close to 7.5 years. I joined as VP of Pricing and was in that role for about 3 years when the position evolved into VP of Revenue Management. Revenue Management was really all about taking the data and the analytics that we've used on pricing to drive pricing excellence to infuse it into a disciplined growth strategy and to use data and analytics to basically target where we want to grow and drive the right kind of volume growth. Did that up until, I am going to say, late 2017, when Jim asked me to take on the position of Chief Digital Officer, and I'm here today to talk to you about the transformation that we're leading.

Before I joined Waste Management, I was with McKinsey & Company for about 5 years in the Marketing and Sales practice, with a lot of focus on go-to-market strategy, channel strategy, product development and I was also a leader in the North American pricing practice. And prior to McKinsey, I was with Compaq and Hewlett Packard for about 10 years in a variety of operations: finance operations, sales operations, technology-related roles, specifically responsible for an experience in rolling out technology across the organization such as upgrading their ERP environment.

So that's me in a nutshell, and what I'm here to talk to you about today is the digital transformation that we are undergoing, and it's super exciting to me because we're really fundamentally changing the way we do business by infusing technology into the business model. And we're doing that for 2 reasons: we're doing it to drive growth and to reduce cost. We've identified what we call 3 big levers that we believe are going to accelerate our progress towards this digital transformation. But it's not just what we're doing, we're also changing how we're doing things internally. And this is really just the beginning of what is going to be a multiyear transformation, potentially a perpetual transformation, because I don't think you ever stand still in the realm of technology. But in short, for the WM digital organization that I lead, this is a new day and a new way of doing business.

So digital is one of those words that means a lot of things to a lot of people in a lot of different places. So I thought I'll take a moment just to define what it means for Waste Management. At Waste Management, we view technology as an accelerator of the strategy, and the digital organization is an enabler of that acceleration. We do that in collaboration with our friends in the business. And you've heard many in the SLT -- everyone on the SLT talk about technology in one form of another, so this truly is a collaborative partnership, which is something that personally gets me very excited and I think the best technology projects that are the ones that are pulled or led or driven by the business as opposed to pushed by the technology organization, and we have a lot of that going on right now inside WM. The digital organization is made up of 6 pillars specifically. Top left, you'll see the digital innovation group. That's really tasked with growing the business. That's a carve out from an existing technology organization, it's one that's growing and it's focused on the customer experience, e-commerce, digital self-service. It's focused on supporting the business and the operational improvements that we're driving. You'll see an enterprise applications and infrastructure group, which is really -- you can think of it as a core technology organization, which is really responsible for powering the business and laying the foundation that will support an accelerated level of innovation moving forward. So they manage our infrastructure, they manage our ERPs, and the hundreds of applications wrapped around those day-to-day.

We've got an enterprise analytics and data management group and led by Ken Elliott, who is sitting over there in the gray suit. Hey, Ken. And that's really about infusing data and analytics into everything we do to make us smarter. So they manage the routing logistics and algorithms. They do network optimization. They manage and develop our pricing models. They do predictive defection modeling, so we can anticipate when customers leave and why and team them up with a salesperson before they walk out the door. They do lead scoring for our sales teams. They help Tamla with driver and tech turnover analysis to try to understand some of those root causes. So in short, that's an analytics team that is a shared service across the enterprise and really enabling everything we do from a tech perspective.

It follows that if you're undergoing a digital transformation and you're investing significantly in digital, cyber is going to become that much more important. So that's an organization that is also growing. There is a newly formed acquisition, integration team that has just been established. Obviously, we have quite a bit of experience in tuck-in and acquisition integration, but given the scale and complexity of Advanced, this is something I've carved out specifically now and made it direct report to me and also elevated the position.

And then finally, I've got a Digital Transformation and Impact Office, which is really a team, it's a small team that is there to keep us honest and to make sure that we're driving the type of return that we're signing up for, for the business. So they do impact sizing, impact tracking, governance and alignment around our investments inside the company working with the rest of the SLT.

I mentioned that it's not just a what, it's also the how that's changing, and this is really the how slide. The old organization, we'd refer to ourselves as IT and that was really an organization responsible for managing infrastructure, powering the business day-to-day. The new organization, Digital, is really about driving impact to the bottom line. And we're doing that by fundamentally changing our focus. We're refocusing from simply deploying hardware and software working in what I used to call bits and bytes land to really crafting value-added experiences, whether it's for our employees or whether it's for our customers. When I joined, so late 2017, we had about 42 major investments we were focused on, and countless smaller ones. We've whittled down that list quite dramatically into a much smaller subset, some of which I'll share with you today, and we have also changed the approach to developing and deploying technology, shifting away from what is very traditionally called long waterfall development cycles to a much more agile quick time to market approach, that allows you to course direct if a particular capability isn't resonating with other employees or customers.

We've also changed the way that we measure success. It's not just about achieving a milestone on time and on budget or under budget, it's really about impact realization. So what level of impact, what level of value are we unlocking together with our partners in the business, a lot for these investments.

And then finally, I'd say that the IT evolve was fairly siloed inside WM, a bit of a black box operation. We're now far more collaborative and, frankly, transparent with the business. The roadmaps are developed in conjunction with the business. The metrics are there for everyone to see, budget's published openly internally. So in short, we've had to change the way we work to enable this -- the type of impact that we're ultimately signing up for.

I mentioned also there were 3 big levers that we've aligned on to drive impact and here they are. Number one, risk mitigation and business enablement. That's really about strengthening our technology foundation to support a level of accelerated innovation that we believe is necessary to really get this thing going. Operational improvements is about leveraging technology to accelerate operational excellence and reduce cost and you've heard Tara, Steve, John talk a lot about some of those today. And then customer experience is really about leveraging technology to delight customers and to drive growth and that's something I'm working on very closely with not just the operations team, but obviously Mike Watson as well. Core and central to all of these is employee enablement in recognition of our people-first approach. And so you'll see a material investment in enabling our people in every one of these buckets. As you'd expect, we're leveraging all the technologies that you'd expect in a cutting-edge digital transformation at varying levels of maturity and evolution, a long list here on this page and I'll leave that with you for your reading enjoyment.

So the first lever is really about strengthening our technology foundation to enable innovation and we're doing that through this risk mitigation and business enablement lever. There are really 4 core buckets inside that particular lever and the first is infrastructure foundation. If you're trying to remodel, redesign, redevelop a house, it follows that the structure and the foundation really needs to be strong. So we've had to make some fairly material investments in things like upgrading our network to support some of these cloud-based capabilities that we're migrating towards. We're transitioning our data centers to the cloud. We're upgrading our application and infrastructure monitoring to make sure that we're supporting the business as we need to and minimizing the potential for business disruption. As I mentioned earlier, we're also investing heavily in cyber. We've upped our investment quite dramatically in cyber and we'll continue to do that over the next 3 to 4 years and possibly in perpetuity.

And we're also investing in modernizing our ERP environment. And there are really a couple of different components to that listed here as 2 separate components. Number one, you've got sort of the front-end that is order management, sales enabling operations, account receivable and billing. And then on the back-end, you've got HR and finance capabilities. We're making sizable investments in modernizing both of those environments, but doing it through a gradual and modular approach to make sure that we focus on the value-added capabilities upfront and de-risk the implementation. That's important, not just to support that level of innovation that we've talked about, but also to drive employee engagement and excitement. We want to make Waste Management a great place to work and build a career. And to do that, you've got to provide employees with the kind of modern experience that they expect to see when they come through the door. So in short, we're doing all of this to improve the employee experience, to ensure business continuity and also to future proof and secure Waste Management.

We're also accelerating operational excellence through a series of targeted investments and that's in that operational improvements bucket that I've talked about. Many of these were covered upfront, in fact, they've all been covered to one degree or another by what John and Tara and Steve and Mike talked about. So I'll just run through these very quickly.

Very top of the list you'll see M100 or managing 100% of the day and that's really about increasing collection efficiency through the use of technology that will optimize, amongst other things, route sequence compliance. And the number that I think Steve shared on one of the slides, too, was very 1% efficiency is worth $25 million and the number that we're signing up for here is $75 million as an enabling partner.

Smart Truck is something else that Mike talked about, which is, again, all about leveraging video technology to both right-size customer service, reduce contamination, but also really importantly, provide a platform for differentiation moving forward. There is a lot that we can do with Smart Truck beyond just the examples that we cited and beyond just the numbers that we shared, and so that's a key focus as well.

Future fleet was something that we touched on early on. There was a little bit of talk about maintenance. We spend about $700 million a year on maintenance and we have an opportunity to put a dent in that. And we're doing that through, amongst other things, things like predictive maintenance, which was also briefly discussed upfront.

We're also investing in post-collection automation. Tara talked a lot about the larger IoT efforts in the landfill space, but also about the MRF for the future. So in short, we're investing in operational improvements to maximize asset utilization to reduce cost and to enable differentiated service and growth moving forward.

And then finally, third of the 3 big levers, it's really about delighting customers in their channel of choice to increase differentiation, and I'd like to dwell for a second on the word delight. We chose that very specifically, because it's a silly word and it's hard to say the word delight without smiling as you say it. And that's essentially the emotion that we want to evoke in our customers. We've had a lot of conversations about the fact that we recognize that we're more of a need than a want. So you're not going to go and spend hours or weeks surfing the web for that next trash provider. You're not going to do that. You might do that for a pair of shoes or a watch or a handbag. You're probably not going to do it for trash collection and disposal services. But what we can do is we can delight you by creating a better, simpler, faster and more convenient experience than anyone else out there can create. We can make this an easy and a pleasurable experience, and that's exactly what we're doing with some of these levers on the right-hand side. e-commerce is an example. We believe in the collection space, that's about a $9 billion to $10 billion addressable market for us, for those smaller, simpler, easier transactions that can be enabled through technology. It's not just enough, though, to create a modern buying experience. You've got to carry it all the way through. And so you've got to back it up with a differentiated technology experience once you become a customer, and that's where digital self-service comes in. And we're going to be throwing an arsenal tools at our customers that meets them in their channel of choice, whether it's interfacing with us on wm.com, whether it's leveraging the application, whether it's connection with us via text. There are a multitude of different channels that we need to engage with our customers in with a view to improving retention and further reducing churn. We state on here that there is an opportunity to reduce -- or to impact, I'd say, about 12 million calls, at about $8 a call. Obviously, that won't be the total opportunity. We're not going to eliminate call volume from one day to the next. But there is a piece of the opportunity that's about reducing cost to serve. The bigger opportunity is about creating that stickier experience that gets customers to stay with us longer and ultimately, less likely to leave.

And then finally, as I mentioned across some of the other levers and on this one too, we're investing in our employees. We're going to provide our customers with cutting-edge digital experiences, whether it's buying or whether it's service, but we're also going to provide an upgrade to our internal customers, our service and our sales professionals to make sure they have the tools necessary to service their customers effectively and efficiently. In short, the customer experience lever is about fueling organic growth, it's about increasing customer lifetime value and it's about reducing cost to serve.

So I thought I'd share a very brief case study of some of the work that we're doing in the e-commerce space, specifically, to bring it to life. And Mike mentioned a little bit of around some of the work that was done early on to really understand the needs and wants of customers on the open market residential side. Again, as Mike mentioned, a relatively small segment for us about $600 million. We spent time in customers' homes. We validated findings through extensive surveys, but really what we wanted to understand was how they buy and how they think about the buying experience. And late last year, we built a -- really a prototype for an evolved buying experience for that segment of customers. We deployed it in about 3 months end-to-end through a series of very agile 2-week sprints. And those 2-week sprints were built in collaboration with customers. So every 2 weeks we're sharing new functionality, new technology and getting an input from customer to basically guide a redesign of the experience. The outcome of that work was that we saw a 50% reduction in buying time for customers, coming back to the point I made earlier about we can simplify the experience, we can make it more convenient than ever. We saw a 70% adoption rate for a new option that we rolled out, which sounds incredibly simple and frankly, is with hindsight -- was with hindsight. We rolled out a new monthly bill pay option. Historically, we said to ourselves, it's not convenient for us, but our customers were telling us, that's what we want. That would be convenient to us. So we rolled it out, saw a 70% adoption. And our customers rewarded us with an auto-pay, an automatic bill pay rate that went up to 96% from 20%, and that's important because auto-pay is a leading indicator of how long you'll stay with Waste Management as a customer. In short, we saw about 40% almost overnight jump in revenue and that channel is now -- e-commerce is a pretty material percentage of our new business sales in the open market residential side. And we're leveraging those learnings and that approach to apply to our commercial SMB space as wells as our temporary role off space. We launched a new capability in March of this year, and the early results are promising, very promising.

I also mentioned earlier that we're fundamentally changing how we measure success. It's not just about achieving milestones on time and on budget, it's about unlocking a level of impact. And you see here before you 2 disguised, but real dashboards that we use both to track impact on operational improvements as well as e-commerce. These are the ones that we sit down as a team and review on a monthly basis, not just within digital, but also with our partners, the SLT. And that's going to be important to drive impact moving forward. I mentioned transparency is key to this transformation and this would be one example of some of that transformation.

So in summary, I would say that this is really a multiyear transformation. We're just at the very beginning of what will be a multiyear transformation. But we're taking a fundamentally different approach and are very excited about what the future holds. So with that, I will pass it on to Chuck Boettcher, our Senior Vice President, Corporate Development and Chief Legal Officer.

Charles C. Boettcher - *Waste Management, Inc. - Senior VP & Chief Legal Officer*

Thank you, Nikolaj. Well, first of all, thank you to Nikolaj. That was truly delightful, and you're right, it does make me smile every time I say it.

So I'm a little boy from South Dakota at heart. I grew up in South Dakota, so first a little about me and how -- and my journey to Waste Management. One of my fondest memories growing up in South Dakota is riding on my grandpa's tractor as he tilled the field, and it was a big green John Deere tractor. And when I made my journey to Waste Management many years later, one of my first experiences at Waste Management was riding along in one of our big green trucks, and I truly felt like, okay, I'm home, I'm here. This is the company for me. That was 3 years ago, and the journey to get me to here, in the interim period I picked up a little legal experience, a little finance experience, some private equity experience. I picked up some other experience in the energy industry that Jim talked about, oilfield services, oil and gas industry, but all of that was just to prepare me for where I'm at now and I feel very lucky to be here. I think you'd all agree, it's a great time to be at Waste Management.

So the groups I lead, I'm currently leading from the time that I joined the company, legal, government affairs and other corporate functions. Last year, I took up leadership of our oilfield services group, and I'm proud to announce, and you've seen it publicly, that we did our recent acquisition in the Permian Basin of Petro Waste and the landfill-based business that was there, along with the business that came with it in the Eagle Ford. But recently, this year, I got the privilege of leading this Corporate Development and Innovation group, and I think largely it's because of the private equity background, some of the finance, the securities, the M&A experience I have and how we can bring that together with the other governance experience that I have as well. So without further ado, I'll get into the presentation for this great group in Corporate Development.

The key messages that I'd like you to take away from this presentation when I'm done here today are that we've evolved the approach to Corporate Development. It's a new management team, and there's greater discipline. And Hamza, thank you for that question. I think I'll get into it in more depth as the presentation goes, it was a good tee up for this conversation. We're identifying and we're cultivating innovative ideas, and we're looking for high return potential and a lot sooner than in the past. These efforts are focused on 3 distinct development tools, that being innovation, venturing and incubation, and I'll discuss those in depth in a moment. And last, and it is the most critical part, there is a rigorous governance system that we're attaching to all new investments, both around the existing services in our business lines, but also if we extend our businesses into adjacent, closely adjacent businesses.

So this slide really -- and again, thank you to Hamza, really this slide I think captures the answer to that question that we got during the last Q&A, why the prior structure is different from the new. But even before I discuss that in depth, I'd like to give you some -- a bit of an analogy from a professor from Harvard years ago said, [Daniela Noes], she talked about the creative tension that exists in any complex system. And for those on the webcast, apologies, but I'm holding my right hand over my left, and what you got to picture is between my 2 hands, there is a rubber band that connects them. That represents creative tension in any process where you're trying to be a visionary, which this group's trying to do. And if you at any moment you pull too hard on the upper hand, you risk untethering the rubber band from below, and the below hand is the current reality and the upper hand is your vision of where you want to be. If you do that, you become Pollyannaish, and you're offloading in the world not really based in the reality of what's ahead of you for the next 10 years. You're more in a future-based state. Conversely, if you pulled too hard in that creative tension on the reality, you may never be in the right space to have a vision of where you're going. So with that set up, I think when you look at the prior structure and the new structure, you can see that the changes that we're implementing and we're already implementing them, and they'll carry us from the current day-to-day through into the future, are to eliminate too much pulling either way and to get the right balance. So the investment scope today is in new venture funds that are a diverse group of funds outside that will look at ways to give us information, and we're making smaller, targeted, direct investments, in proven growth companies or ideas. Our investment goal is to connect it closely to the core and have clear investment objectives for what our end-state priorities are when we come out of the investment. The investment process is a rigorous governance-based ideation market scoping and structure that involves SLT approval and the full senior leadership team being involved. And our focus with this is not just research and investment like it was in the past with a scatter shoot of some investments across a diverse portfolio, but the focus is really about innovation, development and potentially licensing some of the things that this group does to other companies even or to use it internally in the group.

So the group is organized in this fashion. On the slide that's up now, you see 3 distinct development tools that the group will employ in order to develop different ideas and create opportunities for the company. And as we do this, again, with that creative tension, the group is looking to make our golden goose, our core business better. Maybe it's going to be platinum lined. Maybe we're going to find future little baby gooses that are diamond gooses that we can develop and get into.

So these development tools and the innovation, which is really creating, and venturing, which is scouting and getting information, or in the actual incubation, the startup of various companies, this is the focus that we're going to have. And I could take all 3 of these in any particular order with you today. I've got them stacked in an order in the next 3 slides, but they're distinct development tools that we'll employ at different times when the needs arise for that particular tool.

On the right-hand side, you'll see some of what I alluded to with the question we got during Q&A about the past. We do have 12 direct investments still sitting on our books, and those investments we have them at a certain carrying value, and Devina could get into that or I can get into that. I don't think that's important. The important part of those 12 investments is we're not going to defend everything about them, but we'll tell you that they represent today a spectrum from collection, recycling, gasification technology at the end of the recycling facility, manufacturing products technology and even landfill gas. And when we see it across that spectrum, it gives us a wide exposure to different companies and what they're doing.

Now the critique, as I said in the new to the old, is in the old structure those investments were done with minority investments, so we don't have much of a control inside of those companies. But in the future, we're going to look to take controlling positions and control our destiny a little more. I'll note that there's only 6 employees in this great group and they do a tremendous job, with very little resources, managing this. And then the other piece, which is the significant new thing for this group, is we've invested $15 million on a capital commitment, not fully invested yet, with 3 external venture funds that are largely to replace what could be a critique of this group in that we were getting very invested into minority positions before, that this group would be doing those minority investments for us at a stable capital commitment for what they are. The IRR threshold's pretty self-explanatory.

So I'll jump into innovation. Probably one of our most exciting areas, because the innovation -- this got spoken about today several times. We either do innovation ourselves or in partnership with others. Doing it ourselves will be in maker labs or innovation labs and you can see that point on the slide. That's sort of a future state goal for us. But the innovation that's occurring today is in partnerships, these ecosystem partnerships with groups like Caterpillar, and we're doing that innovation today on our DADS Landfill in Denver. And I think several people have talked about it and said there's more to come. I don't want to steal all the thunder because I think Jim is going to be even on a Squawk Box show or have Jim Cramer and the Head of Caterpillar on filming from this location. And today, we've got 2 dozers running, but we're also going to have 2 compactors in a closed loop on the working phase of the landfill. That's a really exciting project for us, it's a pilot that I think this group, that I have the privilege of working with, is running, and they're doing a bang up job on it.

So the next group -- the next bucket, if you will, of development tools is venturing. And this one, I can't say it enough. This isn't really about venturing, it's about scouting. So these investment funds you see on the right where we have a $5 million commitment to each one of them, what we're trying to do in those funds is gain information. We're trying to make sure that we don't get left behind, that they don't see some technology -- even today I heard people talking about, in some other questions, batteries and electric vehicles. These investments that we have give us exposure to battery technologies, electric vehicle technologies, solar, wind, things that at first blush may not have a huge application to us, but we can learn from it. They also give us exposure to the gasification technologies, making jet fuel out of waste. Technologies like that, that we think are a long ways off, but we need to have the exposure. We're getting it through these vehicles rather than exposing too much of our dollars to it. The internal insight we get is also pretty significant at a 100-plus companies we review every year, annually, with the 6 employees that I talked about.

So the final bucket for us to discuss is probably the most interesting of the 3 to me because it's one we really weren't doing before. In the past, we would look at new adjacent businesses close to our core or strategies to improve our core business, and we'd look for a company to buy potentially to do it or we'd look for an investment to make in a minority investment. In this space, we are truly going to begin to think and act on incubating startup companies, and we have a very rigorous, phased system and gate system that you can see on the right of that slide where we'll take it from an idea through initial filters, then we'll get it to a detailed market scoping. And by the time it comes out of that, we will have had all of my SLT peers and everybody in the company involved that needs to be to say, "This is a go decision." And at that point, we could determine to go buy a company that's an early entrant in that space, that's a good market for us, or start up a new team to truly incubate that idea. Several of the ideas that were discussed today around packaging, plastics, we didn't discuss yet wastewater or biosolids, but those are the categories we're looking at today where they filter through the new one and we're looking at potential investments in them in the long term.

The ones that I'm the most excited about currently have to do with the plastics industry. I had the privilege of going on a boat in Bermuda with a group called the Ocean Plastics Leadership Summit, and on there were some of the major retail brands and plastics companies along with NGOs. So those that ask questions about sustainability, this is a space where we will learn from our innovation and are going out and doing those things to try to develop it ourselves and going with potential products where we could develop manufactured products with the residue at the end of our MRFs.

So there's more excitement to come there. But I hope what I've given you here today in the brief moment I had to present, just a few slides to give you a glimpse of the Corporate Development group, is an idea of what we do and what the new group is like and how it's different from the old and how we can add incremental growth with very, very low risk for the company. Thank you for your time.

Oh, I need -- apologies. I need to introduce Devina Rankin, the woman who needs no introduction. Devina Rankin, our Senior Vice President and Chief Financial Officer.

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

Thank you, Chuck. So thank you all. I'm going to bring the stories that you've heard here today into a little more focus. I know all of us in the room tend to like things in numbers. So hopefully, we'll put some clear laser focus on this great rich narrative and how it translates into both what you've seen in results and what we expect to see going forward from the company.

I want to start by introducing myself. Some of you know me very well, but for those of you who don't, Devina Rankin, Chief Financial Officer. I've been in this role almost 2.5 years. I've been with the company almost 17. My introduction to Waste Management was actually as a young auditor at Arthur Andersen. For those of you who don't know, it was in September of 1999 and one of our darkest days, and what I loved most about this business is one of the things that I think will resonate with all of our shareholders. And that's that in the deepest, darkest day at Waste Management, when we were working through a really challenging acquisition integration, the customer still got served. We operated effectively, cash got collected and this business performed. And that resilience is one of the strengths that drew me to this company and made it the employer of choice for me for the last 17 years.

So as we look at the Waste Management story and from a finance perspective in particular, I want to start by telling the finance people first story, because I think it's a really exciting one. And in finance, we don't tend to get to talk about our people and the value that they're creating for the business, but it's a passion of mine and something that I think you'll enjoy hearing about because I think it's something that we're going to drive real value from.

In addition to that, I'm going to bring a little more life to the industry-leading organic revenue growth that we've produced. How we're converting more and more of each revenue dollar into EBITDA and free cash flow. How we are taking the balance sheet strength that Jim and I have created over the last 5 years and turning it into stronger and stronger return on invested capital by investing strategically. And of course, we'll talk a little bit about the advanced transaction, one of those strategic M&A opportunities that we saw to create shareholder value over the long term. And then we'll wrap things up by talking about both total shareholder returns, which really is a highlight for our company, and also talking about where we're going from here.

So people. I really am uniquely positioned to talk about and think about the value that can be unleashed from the finance organization. As I said, I've grown up here. And in the 17 years, I can tell you that finance, similar to the old IT organization, was a little bit of a black box, and we had an opportunity to move ourselves toward business partnership, and that's what we're focused on and executing upon every day as a team. I ask my team to think more creatively than we did before, to think about the art of possible, not just tried and true, but where we can go from here. And as a result, we're doing things to create value in SG&A discipline, capital discipline, working capital optimization, and I expect that there's much more that we can accomplish going forward.

So revenue. I really do think that this is an underappreciated story for Waste Management, and it's one that I really want to go back to the question that was asked a little bit ago and Jim helped us to answer. This is not an either/or story. For Waste Management and in this industry, we've often talked about either price or volume and not being able to get both. But you can see on this slide that for the past 3 years, we have successfully accomplished an environment where we can deliver kind of that magic math that we talked about for many, many years of 2% price, 2% volume, and we're not just delivering 2+2. You can see that in 2018, we exceeded 5% organic revenue growth in our collection and disposal business, with a healthy balance between very disciplined pricing and really strategic volume growth.

We're doing that by improving our customer service. Our churn rate has reduced from a high of about 12% to 8%. That's the lowest we've seen in 8 years, but it really is tied for the best churn rate that we've seen in our industry in a decade. So by focusing on the customer, which Mike told you all about, we are losing less customers. We're also differentiating our services, which we've talked a lot about today. And that means that people are coming to Waste Management as a preferred service provider, and therefore, they're going to be less price sensitive so that we'll expand our ability to focus on price and volume and healthy balance.

This incremental revenue is only worthwhile if we're taking more of it to the bottom line. And so what you're seeing here on this slide is that we're doing that in each and every measure that you can look at here. It starts with EBITDA. EBITDA has increased 300 basis points over the last 5 years from a margin perspective. Our cash from operations has improved 50% in that same period, and all of that is meaning that we're converting more and more to that magical thing that we all look at in this industry called free cash flow. Free cash flow conversion, as Jim mentioned, has improved over 1,000 basis points in the last 5 years. And that means that we're managing our capital. We're improving our cost of capital. We're improving our working capital management by paying in terms that are more appropriate for our size and our scale. We're doing all of that to increase the amount of revenue that we push to that bottom line of free cash flow.

From a finance perspective, when Jim came on as CFO in 2012, I know that he heard the same thing that I had heard from many years as a part of the finance organization and that's when will you ever get to that magical 10% of revenue. You talk about it as a goal, but we've never seen it and we're not quite sure that you believe -- that we believe that you'll get there. And I can tell you that in 2018, when we were faced with the toughest recycling environment that we've seen in a decade, we worked hard to reduce our discretionary spending in SG&A and didn't just accomplish that 10% goal, but broke through it. What I'm proud about when you think about the path forward and what we're thinking about with SG&A is that instead of thinking about it as just those back-office costs that you have to incur, we're really looking to the future and making investments that are deliberate. And so we're making those investments in people and technology and using our SG&A in a more powerful and productive way, and we think that this dollar will create as much a return, if not more of one, as a capital investment dollar or an operating expense labor dollar.

From a financial position perspective, I can tell you, Jim mentioned earlier, when he and I took our last roles, our leverage was north of 3x. And here, as we see [in here] today, I guess, I can't say this with the $4 billion we just borrowed, and I'll talk about that in a moment. But if we put that $4 billion aside, our leverage is 2.3x. We're going to talk about the $4 billion. What I think is really important here is that we have the best rating profile in our space, and we have a really solid financial position that gives us strategic flexibility to execute. I really do think that what we've seen is a fundamental difference in the way the rating agency dialogue has evolved for our business over the last several years. We have management credibility. We have a proven track record, and we are executing at the best possible levels. And so all of those things are translating into a financial position that we can leverage for growth going forward.

Then thinking about how we allocate that capital, one of the great things about this business is the free cash flow that it consistently generates. And you can see that in the last 3 years, we have deployed $10.6 billion of capital. The first priority for us will always be reinvesting in our business. And so you'll see that in the last 3 years, we've allocated an average of $1.5 billion annually to our capital expenditures. That is higher than our long-term average of about 9% to 10% of revenue, but we know that that's appropriate, given the volume growth that we are creating and enjoying. And so we now think that, that long-term range is more appropriately viewed at that 9.5% to 10.5% range.

If you think about the dividend, dividend policy at Waste Management is something that Jim and I have also spent a lot of time focused on. We target a dividend consistently at 40% to 50% of free cash flow. And we have had 16 years of consecutive increases, including the current year, which I'll touch on in a moment.

Strategic mergers and acquisitions. We'll talk about Advanced so I'll leave that one aside for now. But you can see that we've spent $1.3 billion in the last 3 years on over 85 acquisitions.

Share buyback is also an important piece of the puzzle, but share repurchases for us are opportunistic. Waste Management is a buy, and we buy our stock judiciously and thoughtfully when we don't have something else to do with the cash.

So the dividend that I mentioned, this chart will just show you the strength of the increases that we've provided over time. You'll see that with the current year, we expect the per-share dividend to reach $2.05. I will caution that, that, of course, customarily is yet to be approved by the Board of Directors on a quarter-by-quarter basis. But we know that with the free cash flow strength of this business, we're going to reach that $2.05 for quarter, it's locked and loaded. That 10.2% increase that we provided in the dividend shows the strength of free cash flow growth for us. And we expect that in time, we're going to continue to provide nice, healthy growth in the dividend.

From a strategic perspective, M&A is important to us. We have to think about how to bolster the solid leadership position that Waste Management has created. And we talk about our $100 million to $200 million of tuck-in acquisitions that we do day-in and day-out. We apply the same filter that I've outlined here to those tuck-in acquisitions that we apply to our larger strategic acquisitions. What's important for us is that we're extending our asset network. We look for a good cultural fit. We want those companies to prioritize safety and the customer. We look for our highest return lines of business and very high quality revenue. And then importantly, we look for acquisitions where 1+1 will be greater than 2.

From a financial perspective, it really goes without saying, we look for businesses to acquire that will generate both positive EBITDA and positive free cash flow in their first year. We want a premium to our weighted average cost of capital of 200 to 500 basis points depending on the line of business and the risk profile that we think there is in achieving our targeted returns. And we expect that our post-synergy multiple for the acquisition will be below Waste Management's current trading value.

What this slide does for you is it demonstrates those transactions that are over $150 million that we've executed upon in the last several years. And you'll see that each of those criteria we have achieved. We are dedicated to spending our shareholder's capital in a disciplined way, and we execute each and every day on integrating these businesses to produce the expected returns.

So Advanced. I think what's most important with the Advanced Disposal transaction is those 3 million customers that are now going to be part of the Waste Management network. It's those 3 million customers served by those 6,000 employees, and it's us thinking about how we take the Waste Management way, the leverage we've created and how we serve our customers, our ability to know our customers better than anyone in the industry, to extend the lifetime value that Mike was talking about earlier for each and every one of those customers.

And so why now? I can tell you there are 2 reasons: I think that Waste Management is better positioned today to integrate this business and to leverage that revenue base of $1.6 billion because we have better processes, we are more execution-rich as an organization today than we have ever been, and so we're more prepared to leverage that business than we were 5 years ago. But what's also important is that Advanced has made significant strides in advancing their business as well. We've seen them delever, we've seen them focus more and more on safety and we've seen them drive their operations forward. And so we really see this as a transaction that brings together 2 companies and cultures that are fit very well for one another.

I did mention that $4 billion that we raised, I guess, a couple of weeks ago now. What I'll start by saying there, and I'll go into it more in a moment, is that what that transaction does is it de-risks this acquisition for Waste Management, because we're ready to close from a financial perspective as soon as we clear the other hurdles that are in front of us. From an integration planning perspective, our teams are underway. Nikolaj mentioned it earlier on the digital side. He's got someone in place for working in each of the disciplines across the organization. Tamla's team, my team, and then, of course, the operations team, to be sure that we're ready on day one to serve all of those customers.

From a regulatory perspective, we did make our HSR filing on May 9. We're working very closely and diligently with the Department of Justice. Our lead on that is John Sai. That's why he's not here with us today. He's busy at work back in Houston. In addition to that, we've seen nice progress by the Advance team. You should have seen their proxy filing on May 23. That gives a nice background to the transaction, and I would definitely encourage you to take a look. We do expect their shareholder vote to go well and that will be on June 28, 2019. So everything is on track for us to meet that expected close of the first quarter of 2020.

I won't spend much time here on the $4 billion. What I will say is that on a pro forma basis what's important to remember is that we talked about that our leverage will still be at 2.9x once the transaction closes. And within 1 year, we do expect that with the strong cash flow that the combined organization will generate, we'll be able to reduce our leverage even further and resume share repurchases. This transaction demonstrates the deep market reach that Waste Management has. We were 4x -- 4.7x oversubscribed. So we raised almost $19 billion. We achieved a weighted average cost on this transaction of 3.55%. So that tells you that on an after-tax basis, we really did do a great job of getting this capital at a cost that will give us a lot of headroom in order to create the returns that we expect.

Share repurchases. The headline here for us is that we are thoughtful, judicious. Like I said, Waste Management is a buy, and we do consider valuation, and we've been very thoughtful over time. You can see that in 2018, we repurchased over $1 billion of our stock. We currently have an authorization of $1.5 billion. We will in 2019 spend enough on share repurchases to offset all of our equity plan dilution. But other than that, given the transaction, we'll be bolstering our liquidity and therefore, not adding to the share buyback for the current year. We've achieved a 7% reduction in outstanding shares in the last 5 years. And I will tell you that that's a great addition to the shareholder value creation that we intend to achieve.

At Waste Management, each and every decision that we make, and I mentioned earlier we think about this even in terms of those SG&A dollars we spend, is about return on invested capital. How are we spending the company, the shareholders' dollar, to create the greatest returns. And what you see here is that we far outpaced anyone in our industry. What we're focused on is continual growth in that return and also not just outpacing our industry, but thinking about being best-in-class. What you'll see here in the diversified industrials Index comparison is that we're making -- we're doing a good job of making up some headroom. But I think is, important is that in that group there is really some blue-chip names. We've got the likes of 3M and Honeywell and United Technologies, and so Waste Management's done a great job of continuing to advance return on invested capital. For us, the comparison within the industry is really not what's appropriate anymore, it's about continuing to advance that and move us forward over the long term.

So total shareholder return, I think really is, I think it's the best slide in the entire deck. Because I have to tell you a 1-year total shareholder return of almost 35% is quite remarkable. And it doesn't matter if you compare us to our peer group or the S&P or the Dow broadly, we are far outpacing any comparison that you can make here.

The 5-year total shareholder return really is even that much more impressive at 178.7%. We are doing a fantastic job of allocating capital and growing our business, and it's showing up in shareholder value.

So where do we go from here? I'm going to start by talking about our 2019 guidance. I think what's important here for us to remember is that the last time we talked about our guidance for the year, we had not necessarily a rosy picture for the recycling line of business, but I would tell you it wasn't as bleak as it is today. So from the time that we talked last to where we were today, recycling has actually deteriorated further than what we would have expected. And in spite of that, the strength of the performance of our collection and disposal business and the growth that we are creating in that part of our business is far outpacing the negative impacts that you were seeing from recycling relative to what our plan was. And with that, we confirm our confidence in the guidance that we set forth for 2019.

That is, of course, with the caveat that, that doesn't include the impacts from the Advance transaction. So we have suspended our share buyback, we think it's about $0.06 per share impact, and we also will have the debt carry cost, and we think that's about $0.03 for the year.

So what do we expect over the long term? I think what's important here is thinking about what we accomplished in 2018, we just talked about how great the return profile has been over the last 5 years. And in 2018, we achieved about 5% EBITDA growth. And when we framed our 2019 guidance, we said that we expected to achieve about the same. And so what you can see by looking at our outlook for the next 3 years is that we are confident that we won't be able to just achieve that, but we actually expect to exceed those levels. I think the stories you've heard today about the investments we're making in technology, the customer and our people, all come together to explain how we're going to create that value.

Revenue growth, we expect to continue to be strong, and we will not be making any trade-offs, we will be committed to price and to volume. We will convert more and more of that revenue growth into operating EBITDA and then convert it to free cash flow. So I think it's a great story, if you haven't heard me say it yet, Waste Management's a buy, and with that I'm going to have Jim Fish come back up and he'll close this out.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Okay thank you, Devina. I think you can probably see why I am so excited about the senior team, everybody presented today, it is such an impressive team. I hope you saw that, I hope that's one of your major takeaways.

I'm just going to go through one last slide here. This is really the proven business model that will enable this step change, strategic execution. What you see here is that proven business model and on the interior of that pictorial, you see the core values, the imperatives that are really part of almost a part of what we believe as kind of the anti -to be a 21st century world-class organization safety, success with integrity, people first, inclusion and diversity, customers and environment. All of those we believe are imperatives. And then surrounded on the outside is that proven business model that we've talked about a lot today, and each of those have some bullets underneath them, but financial profile, we talked about recession, resilience and the importance of that as well as capital allocation that Devina just talked about. Specifically I'll mention, industry leading return on invested capital and how important that is to us and how we focus on that each and every day, our operational discipline, focused on talent and people, people first. Again, you've heard it many times today, and you'll continue to hear from us in the future. And then profitable growth, there is a number of things under there, but specifically technology-enabled solutions and our customer focus, 2 things that we believe, really complete this pictorial. And what gives me incredible optimism that the trajectory that we are on, by virtually every metric that you look at. The trajectory we are on, we are only at the beginning of that, not in the middle or at the end. So with that, I'd like to thank all of you for taking time out of your busy days. We know that this was a commitment on your part as well, thank you for that. And now, I'm going to call the entire leadership team up, and we will take, I think we have 40 minutes set aside for question and answer.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

As we gather for Q&A here, we are going to do a quick change here, some chairs out and get some chairs up here for you guys to sit down on. So you guys can come up. Same as before, we'd like to do one question and one follow-up for everyone, and give us just one second.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

We'll just wait for Jim to get here and then we'll get started.

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

Tyler looks like he is eager.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

I'll have some other people other than sell-side analysts ask questions. If anyone has got any question other than sell-side analysts, anybody, come on. No one. Right.

Patrick Tyler Brown - *Raymond James & Associates, Inc., Research Division - MD*

Tyler Brown, Raymond James. So first one for Devina. If I look at the longer term guidance 5% EBITDA or 5% to 7% EBITDA, 5% to 7% free cash flow, I may be wrong on the math, but it generally implies that your free cash flow conversion stays relatively static over the next few years. I thought that you had some cash tax headwinds that would be maybe working against you on cash. Could you talk about maybe what's going to overcome that? And maybe help me bridge that gap?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

Yes, Tyler, you're spot on. So those cash tax headwinds in the next few years we expect to be overcome with capital efficiency and then on top of that, working capital optimization efforts that we are putting in place. So while cash taxes will be one of those things that creeps up on us as a percentage of book in the next 2 years, we do think that, that normalizes over the long term. And then in addition to that, we will see better leverage over the long term in the capital efficiency pieces of the equation that you mentioned.

Patrick Tyler Brown - *Raymond James & Associates, Inc., Research Division - MD*

Okay. That's fantastic. This question is for Mike Watson. So quick question about the 8% defection rate number that you quote. First off, could you just explain what exactly that number is? Are we are looking at commercial and industrial and subscription resi or what exactly is that number?

Michael J. Watson - *Waste Management, Inc. - Senior VP & Chief Customer Officer*

That's primarily our commercial and industrial defection rate. So it's 8.1% of our customers defected in that revenue. Revenue's a little bit higher about 9.1%, but roughly 8.1% defection rate, which has come down quite a few basis points in the last year, and as Devina mentioned in her presentation about 400 basis points over the last several years. So I feel like our major growth has been -- the net customer growth has been under the defection side versus chasing share.

Patrick Tyler Brown - *Raymond James & Associates, Inc., Research Division - MD*

So to may be close the loop on this, so maybe one of the key themes today was all about stickiness, customer stickiness, power brand, et cetera, et cetera. What would 100 basis points in that defection rate decline do? I would think that the decline and defection rate would exponentially increase the customer value, just considering the last 6 months are probably the most valuable 6 months. So could you -- I don't know if you can put numbers around that, but maybe talk directionally about what that means to you?

Michael J. Watson - *Waste Management, Inc. - Senior VP & Chief Customer Officer*

I mean directionally, if you look at the commercial and industrial line of business being our most profitable, it's exceptionally going to add value over the long term, that's really shortening that defection or extending tenure of the customer, its maths, but I don't know the exact numbers, I can get that for you, but I think looking at the C&I defection rate is where the real need is. As we talked about differentiation and the customer lifetime value extension really is where we feel the growth would be versus -- and also differentiating the acquisition to customers, but getting the customer stickiness is where we think the real upside is.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Michael.

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

Michael Hoffman from Stifel. Devina, if I can just follow-up and make sure we closed the loop on this. So 5% to 7% EBITDA growth, 5% to 7% free cash flow, because you're not showing operating leverage there, is the cash tax issue that you've noted, but you get past 2021, all things being equal 4% to 6% top line, 5% to 7% EBITDA turns into 6% to 8% free cash is the way to think about it. I'm not asking for guidance, but that's the way to think about it?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

So yes, we're certainly not going to guide specifically longer term, because our looking glass doesn't go that far out, but what I would tell you is the way to think about it is the cash taxes over time will normalize. And we expect that normalization to happen in the next 2 to 3 years, and beyond that you should see the operating leverage from both disciplined capital expenditures and disciplined working capital efforts then translate into better leverage between operating EBITDA and free cash flow.

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

Okay. And then John and Tara, on the recycling business from bottom to the top, we're playing with about $150 million of potential profit leverage, which would be incremental to the $75 million that's coming from the routing and the $75 million from productivity and the potentially $50 million from call centers that Nikolaj is going to get us.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

Yes, I think Michael, we said peak to trough that's been a $200 million headwind if you go from the best time of performance in recycling to obviously, where it is today. So we clearly think there is a lot of opportunity to get the margins back up to the respectable level. We are not there yet, I think, what's -- what we talked about on the Q1 call, as even though revenues declined by almost 1/3 quarter-over-quarter, we still drove improvement in that business. So we are starting to see this new model that Steven, Tara and I have talked about, the rest of the teams talked about starting to take hold.

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

I think it is important to note, it's not one thing, it is all 3 things and all 3 things have to happen, and it is changing the business model, it is really partnering with our customers and stakeholders and then the more for the future, that is going to be a differentiator for us, and we are expecting to drive real value out of those investments, and we are excited to see where the Chicago MRF of the future is going to take us long term, we think it has great promise.

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

And lastly, Devina, I'd love to talk about baseline free cash flow, so are you resetting that number for us?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

Oh, I think, if you look at 2019 free cash flow guidance and the confidence that we just stated in our guidance for this year, we've reset that baseline where it has been.

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

It's about $2 billion starting number and then we add at these things that we talked about today?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

We are not necessarily talking about those additions, we're talking about 2019 as a good baseline, and creating that 5% to 7% increase year-on-year in the next 2 years.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Bogdan.

Bogdan Cosmaciuc

2 questions for Devina. One, in your long-term guidance, what do you assume about recycling or how much of recovery if at all? And then two, taking a step back obviously your business is extremely defensive. But if in the next 3 years in your planning period, happen to have a recession, are you still able to hit the low end of your ranges that you provided today?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

So, I'll take those 2 pieces. I think, Tara and John have both spoken to the range of variability in our earnings profile that exist in the recycling line of business, we certainly can't predict where commodity prices are going. But by moving to a fee-for-service model, it's about changing the way that we get paid for that service. And taking some of the volatility out of it. So it's not so much about the commodity price drivers or assumptions that we are making, it's about the assumptions that we're making and reducing our labor cost and improving the throughput of that manufacturing part of that business. And ensuring that we create a more profitable business over the long term that takes some of that noise and choppiness out of the equation. Your second question was...

Unidentified Company Representative

Downturn in the economy.

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

The downturn in the economy. Jim and I talk about this a lot. I think that thing to focus on is the discussion of discipline that we've had across the day. The organization is much better positioned to be responsive and adaptive to a changing economic environment and operating environment.

We talk about things like dynamic routing and fleet strategy. Those things really have positioned us well to adapt and change in any economic environment. We still see growth, where we really -- MSW, we talked about for the first quarter, being 5.8% up year-over-year, and for us that's a really good indicator of the bellwether and strength of the foundation of the business. And so we don't see any signs that tell us that there is a downturn ahead. I would tell you, like I said, the discipline allows us to be responsive, but that outlook was really based on a continued robust and healthy economic backdrop.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Mike Feniger.

Michael J. Feniger - *BofA Merrill Lynch, Research Division - VP*

Just a follow-up on that. Obviously there's been a lot of noise about the economy, the U.S. economy. Has there been anything you've seen in your line of businesses on the commercial and industrial side over the last month, 2 months, that makes you question that or make you change that 2 versus 2 kind of assumption and maybe in 2 years would that be maybe more -- pushing more on the price side rather than volume? How do you guys balance that?

Unidentified Company Representative

Well, a little bit of a kind of 2 questions there really, Michael, about the macroeconomy and then look at this point, the macroeconomy looks strong to us. I can't tell you what it's going to look like 2 years from now, and it is difficult to predict, there are a lot of opinions on where it's going to go. One thing I will say, is there will be a downturn at some point, I don't know when that is. But part of -- and by the way, I would also tell you that we think the next downturn will be different, not just in depth, but also in type from the last one, at least as it pertains to us. The last downturn really, we tend to typically lag when it comes to downturns in the economy. We really led in the last one because we had such a significant exposure to the housing market and because it was housing-driven downturn, we really kind of took it on the chin in 2008, 2009. We don't think the next downturn will be housing-driven, and while we do have a kind of exposure to almost all segments of the economy as you saw from some of these slides today, it's pretty well diversified, so we think it's going to be much more of a downturn that is more typical as opposed to atypical from the last one, where it will affect some section of the economy, but we will lag into it, and it won't be nearly as deep for us as it is for other companies. With all of that said, I think all of our efforts to differentiate ourselves. One statement that's been made many times that strong companies get stronger in downturns, and I think you see that from us. Part of what you saw today is us really working to separate ourselves and to differentiate ourselves and become stronger not just by the way versus competition, but really be considered a world-class organization. So when that downturn comes, I think we ultimately get strong.

Michael J. Feniger - *BofA Merrill Lynch, Research Division - VP*

And then just -- I'm just curious, you mentioned a lot about some of the pricing and even the optimization improvements you guys have made on the commercial and industrial side. And now you're looking at more, maybe more of the things that have a lot of higher fixed assets. You talked about the disposal in the residential side. How do you see that dynamic playing out in the next 2 years? I know you're doing a lot of pilot testing right now, maybe on disposal side? Where are you seeing the low-hanging fruit to really be able to make improvements on the cost side there?

Unidentified Company Representative

Let me take that. I think we have proven that we now have a balance price environment, actually really accentuate where we can drive price in the commercial industrial as we look at some of the same fundamentals that I mentioned in the presentation about what's going on economically, where our advantages are, and how we have leveraged those. Just put it that in perspective, going back to the C&I, most of our growth has come from the high-growth markets. We're not trying to grow where we can't grow. I think we are using those analytics and those philosophies and strategies backed up by the tools we employed in C&I, and putting those in residential and disposal to help us evaluate where we really can move price. And that comes to the assets we invest in, where we have an advantage, the transportation network, all the things that we talked about is really using the analytics to understand where the price and volume opportunities are.

Tara J. Hemmer - *Waste Management, Inc. - SVP of Operations*

I think it's understanding the value of our assets. And making sure that that's conveyed. All of the area Vice Presidents that run the areas that have these assets in them, they're really understanding what that looks like and employing the same discipline that we used on the C&I side to the disposal network.

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

From a cost opportunity perspective, because I think that was also a part of your question, we talked a lot about the pressures that the transportation part of the business is having, and that's certainly not something that we see abating with the disposal line of business and therefore, leading on price and thinking about how we price our service to cover those cost increases is hugely important. In the residential line of business which you referred to, I really do think it comes down to that people first culture and ensuring that we are tackling turnover the way that Tamla mentioned. Because the cost of turnover is in things like safety, efficiency and all of that adds together to increase the cost of that line of business. And the residential line of business is really where we see the highest turnover rates. So the opportunity there is about that people-first culture and driving all of the benefits associated with reduced downtime, reduced labor cost as we gain efficiency in that business. And then also, as we bring automation in that part of the fleet, which John mentioned earlier.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Hamzah.

Hamzah Mazari - *Macquarie Research - Senior Analyst*

It's Hamzah from Macquarie. This question is for everybody. So, could you maybe walk us through how you think about greater online transparency of pricing as a risk. So in other sectors, online transparency of pricing is really hard pricing, and so I don't really care who picks up my garbage, as long as it is gone. And so how do you think about the risk to this sector?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

I think Hamzah, the more commoditized you are, the greater that risk is. So I think about maybe an example being an airline seat. I mean an airline seat in my mind is still relatively commoditized, and so they have perfect pricing online. The more commoditized it is -- and maybe the one exception there would be these frequent flyer programs. I mean, I may choose to fly a certain airline because of a frequent flyer program. But ultimately, I think the differentiation they have is the networks. So I live in Houston and United Airlines has a hub in Houston, so I end up flying United Airlines, because of the number of destinations they have, and that's a differentiator for them. I think the more commoditized you are, the more of a risk that is, the more differentiated you are, the less of a risk that is.

Nikolaj H Sjoqvist - *Waste Management, Inc. - Senior VP & Chief Digital Officer*

And what I'd also say is that in this world, in this ever changing world where consumer behaviors and expectations are shifting, you have to meet customers in their channel of choice, and increasingly the consumer, whether it is residential or commercial, [an actual account] they expect to be able to transact business with you online. So, as you would imagine, we have many conversions internally over the years about price transparency and what that's going to drive. By the way, we have online capabilities for years, not to the level that we really evolved over the last year or so, but trying -- and we haven't seen a noticeable impact on transparency. In fact you will see our churn's come down, we talked about being able to drive volume growth. So if the question stems from a point of are you worried about eventual cannibalization of one line of business versus the other, or to the competition, I think we'd say you have to meet customers in their channel of choice, there is an increase in expectation that that's where you meet them. And by the way, if we don't do it, somebody else will, and we wanted to beat them to the punch. We are, though, driving a model where we are at this particular juncture creating a parity between our channels. So it's not like we are underpricing in online versus off-line, but it's an even keeled play because we believe, based on all the data that we've seen so far, that really the shoppers that come and want to transact business with us online are first and foremost convenient shoppers as opposed to price shoppers. That may change and evolve over time, but that's what the data are telling us today.

Unidentified Analyst

So maybe first question for John and Nikolaj. You touched earlier on predictive maintenance. The company spent nearly $1.3 billion on maintenance and repairs last year, so I think it would be helpful to get a realistic sense of what predictive maintenance efforts and predictive analytics can actually mean going forward. I think a year and a half ago maybe you started this pilot around hydraulics. Can we sort of understand, where we are at today in the journey towards implementing predictive maintenance? Do you have OEMs partnering with you to help integrate systems? Are you seeing any noticeable difference so far in terms of the results in the savings from these pilots?

Unidentified Company Representative

You do want to take the first one?

Steven R. Batchelor - *Waste Management, Inc. - SVP of Field Operations*

Yes I can take a crack at that. So I can tell you, just a little bit of history, as I said in my presentation, we ran parts to failure and if a part broke down at an inconvenient time, like on an interstate, it was very costly. In the past, we didn't have the data to tell us exactly what part broke, we can tell you a hydraulic hose broke, but we couldn't tell you of the hundred that are on the truck, which one broke. Now with data, we were able to determine -- better determine which one possibly can break. We can't tell you exactly when it is going to break, but now we can do a meantime failure on, let's say 50 parts on a truck and with that meantime information on 50 parts, we can schedule it to be replaced before it fails. So I can tell you that the maintenance costs are a struggle in many respects. A lot of it is because of the diesel engines, and that's why we're converting to CNG. But the big part of it is because -- the counter to that is because if we were able to be proactive in our maintenance versus reactive we can counter those increased costs on the diesel side.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

I think the other thing that I would add to that, Steve, is that if we you look at some of the metrics, we went by them quickly today, but if we look at fleet availability, uptime of our fleet, those metrics are improving. So in some cases, the benefit of that is showing up on other places like efficiency. The other thing I would add to it is, we talked about the financial benefit we see of converting to CNG. There is also elements of our fleet strategy that might push back against this. I talked a little bit about some of the challenges in the traditional, kind of residential rear-load service. If all we want to do is get our maintenance costs lower, we'd continue with that model, but because of factors outside the way we measure maintenance, when you talk about staffing and automation, future of work for that line of business, we're making investments in a fleet that day 1 could be more expensive to run an automated vertical versus a residential vehicle, but clearly, as Steve pointed out, we have opportunity in maintenance but you have to really pull it apart a little further to understand where the puts and takes are.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Look this data and analytics are perfectly geared to this cost line, if you will. And to Steve's point, I mean, we started to aggregate enough data that we can make decisions, we will do it on low cost parts initially. So a hydraulic hose might cost $25 and if you run it to failure, as Steve points out, you have a significant amount of cost. You could have a spill into a storm drain, I mean, worst case, a spill of hydraulic fluid into a storm drain that requires a $10,000 cleanup. But even if it's best case, you still have overtime for the driver, you have towing charges, you have lost productivity, you have lost -- you have a customer impact, so there's a bunch of impacts there that -- and being right when we go through a predictive statistical process, being right on a $25 hose, you can be pretty far off the mean and still cover your cost. Now replacing a transmission, predictably that may be a different issue. So we will focus on low cost parts initially. Ultimately the panacea is telematics and telematics is kind of the end game. By the way, we have so much of this on our cars today, why is it that we don't have it on our trucks. Whether it is telematics, whether it is safety equipment, and so we're talking to our OEMs and saying look, we are going to require this and if you don't provide it one of your competitors will and we'll go to your competitor.

Unidentified Analyst

Great. Maybe just a different question for Jim and Devina. You're talking about the growth outlook on the top line, it seems like so much of today has been focused around your differentiation and your ability to perhaps outgrow the market. I mean, we look at the organic growth for the past several years that you highlighted, Devina, that's outgrowth. So how do we think about, let's say, through the cycle or over the next several years, whatever the macro drive is, because I think there's a lot of concerns around the macro, how do you think about, how do you internally benchmark and how should investors think about your ability to organically outgrow the market.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

You numerically, is that kind of what you're asking? I mean, we've said 2 in 2 volume and price for a long time so it's kind of nonscientific, but Jim Trevathan said 3 in 3 one time on a conference call and our stock dropped $3. So I'm not going to say 3 in 3. But look, I think that while it's hard to put a number on the value of that -- Devina talked about the fact that - and you are right, a lot of our conversation today has been about differentiation. But Devina talked about the fact that we don't view them as mutually exclusive, but we view us as being able to grow both price and volume through a number of the mechanisms that you've heard today through technology and through a real fanatical approach to the customer and focusing on customer needs. Honestly, through what Tamla talked about, which is having a -- it kind of goes to the Herb Kelleher example I gave, which is if we really have a people first strategy, then our people in turn take care of our customers. And that's part of the reason that we -- there's many reasons why we want to be people first, but having that people first strategy ultimately results in a better customer relationship. What's that worth, it's hard for me to put a pencil and paper on it, but we do think that it is realistic for us to expect that we can simultaneously grow price and volume for the long term at nice strong levels.

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

I would add that one of the reasons we've outpaced is that well placed asset network we've been talking about. So when you look at GDP or housing starts as indicators of how we should expect our revenue to grow over time, those are averages across the entire North American landscape. And as Jim said in his prepared remarks, if you look at where Waste Management has focused, we focused on those MSAs that outpacing those national averages. So I think that's what translates so well into why we've been able to outpace the macroeconomic backdrop, it's that well-placed asset network, combined with focused differentiation that really allows us to leverage our knowledge of the customer to extend the service offering.

Unidentified Analyst

Early in the presentation you talked about kind of three secular macro backdrops, one of which was regulation. I know it was presented as a tailwind to the business, but in other sectors, it's been a headwind. Could you maybe lay out if there is a fair case to where regulation could be a headwind and why I'm wrong to think it might be or how you are mitigating potential regulatory risk?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

You want to take a shot?

Charles C. Boettcher - *Waste Management, Inc. - Senior VP & Chief Legal Officer*

Yes, I can take a shot on that. I think in general the starting point for us with regulation is we thrive in a heavily regulated environment. The mom and pops and the smaller players tend to fall out because they are not as good at complying with regulations. So we don't, we don't sort of shy away from regulation, we are not living in fear of the regulatory environment, and of course, the picture you paint where it could get too far the other way, that could be damaging to any industry if it goes all the way to heavily regulated environment or too regulated environment. But I don't think we see that. I think, we could give some examples of PFAS, the Per-and Polyfluoroalkyl Substances that they are finding in drinking water and groundwater, and our leachate that comes out of our landfills, we're looking at what level it has of PFAS. And a PFAS is simply the substance that makes stuff nonstick your hamburger you pick up for fast food, it slips off of that package because it has PFAS is on. So PFAS are everywhere. They are going to regulate, they are regulating. But we think that's fine, we think we will comply with those regulations and we will rise to the top. So it's just one example, but as far as other regulations, I just don't see a lot.

Michael J. Watson - *Waste Management, Inc. - Senior VP & Chief Customer Officer*

I'd say one other regulation (inaudible) that I mentioned in my presentation is the coal combustion. The regulations of that subsegment, really generate an opportunity for us to capture whether it's on-site remediation, the beneficial reuse, and our off-site disposal of that coal combustion residue. So those regulations have been really an opportunity for us that is quite substantial. And I think that's kind of a trade-off in regulations, that is a positive. And most of the time, as Chuck mentioned, I think where we operate in compliance, I think that's for the most part a positive for us. Obviously, if we operated in different environments there might be different regulations, in California versus New York versus Chicago. I think we have a better understanding of where we are positioned for those. We just need to capitalize on what our strengths are and competitive advantages to navigate through those.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Derek.

Derek Spronck - *RBC Capital Markets, LLC, Research Division - Analyst*

Okay, great. Derek Spronck at RBC. Arguably a lot of the investments you are making, your competitors are making as well. Are there any investments that you are making that you may be ahead of the game or that your competitors are not investing in that offer the most promise and potential sustained competitor advantage?

Unidentified Company Representative

I mentioned one in my presentation, but I could talk about the Smart Truck I think that's going be a huge competitive advantage for us. I know putting a camera on a track isn't that innovative generally, but how we are going to use that to generate customer experience, manage upgrades in service, rightsizing our customers, but also identifying and educating customers around contamination, which ultimately benefit the impacts we have in the recycling lines of the business. That is just one, I think it's definitely a competitive advantage that we have. It can be replicated, but I think how we use it, and our agility and first mover advantage, I think will really help us grow the revenues I mentioned in my presentation.

Tamla D. Oates-Forney - *Waste Management, Inc. - Senior VP & Chief HR Officer*

I think of our investments in renewable natural gas and compressed natural gas vehicles, that is something that no one else in the industry is doing. We are closing the loop, in a way that our competition is not replicating. And our transition to 80% natural gas vehicles, a clear differentiator on many different fronts, and I think what we are doing in Chuck's group in the Corporate Development and Innovation Group, we are not making a whole lot of direct investments, but keeping our eye on the future on what could transform the waste space, we are doing that in a way that far outpaces anyone else.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

I think, Derek, what Chuck talked about in Denver at our landfill is nobody else is doing that, and we are spending time with Caterpillar and what it really, I think Chuck and Tamla and I have talked about is, it really is the intersection of technology and people. We will have over the near term and certainly over the long term, a need to be able to hire operators at these landfills. And in many cases, those operators are having to drive distances to get to those sites. So you can imagine a day that pilot is sitting a mile from the working place, at Denver landfill, what you can imagine a day where this is ultimately a tool for us to attract people to Waste Management, and it's also a tool for us to mitigate the effects of turnover. So I think it really is a perfect intersection of people first and technology, 2 topics that we've really discussed at length today, and to your question, nobody else is doing that right now. Nobody else is doing that.

Unidentified Company Representative

And maybe just write a little on to that, when we first started the pilot we would have thought that it will be a long time off. We've been incredibly impressed with how early we are getting the kinds of returns and the outcomes and goals and the successes achieved that we expected to get but at a later date. It's really incredible how fast our drivers have been able to pick up operating that machinery in such a fashion with the video monitors and the joystick. Because we left when, I think it was Tamla, Jim, John and I, right, that was the 4 of us that went there and drove it on that trip, we tried to drive it and we were like, well, this might take us a little while, right, driving a joystick. We all said I wish my 14- and 16 -year-old were there, they could have driven that thing almost instantly with the joystick. So I think it is a generational thing and the folks that were on the joystick when we were there and did it well, they were amazing at it and they are quite a bit younger.

Tamla D. Oates-Forney - *Waste Management, Inc. - Senior VP & Chief HR Officer*

But I think it would also increase our applicant pool. I think more people that have probably not thought about having a career with Waste Management would think differently about joining because our jobs are more automated and less strenuous.

Charles C. Boettcher - *Waste Management, Inc. - Senior VP & Chief Legal Officer*

To give you an example of one of the things you don't realize either. We said well, what do you not like about driving this, and they said well, if you want me to say, I don't get to see the sunrise every day when I'm out on the site on top of the waste, and we said oh, that's right, we've got you where there's no windows and we are fixing that. We're putting a window where they can see the sunrise. But the simple things, right, that reminds me again of the tractor growing up, he wanted to see the land and there are some things that our drivers really, really like about their jobs, so we have to be sensitive.

Derek Spronck - *RBC Capital Markets, LLC, Research Division - Analyst*

Do Fortnight players see the sunrise or do they sit in a dark room?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

No.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Jeff.

Jeffrey Marc Silber - *BMO Capital Markets Equity Research - MD & Senior Equity Analyst*

It's Jeff Silber with BMO Capital Markets. Tamla, this is actually for you. You may have just alluded to this, but you talked about in your presentation of how you have the highest turnover with new hires that first 12 months, and how you're also kind of expanding the pool generationally going after more Generation Z employees. Obviously, that will probably be the biggest component of your new hires over the next few years. How are you thinking about that differently in terms of recruiting and retaining that generation?

Tamla D. Oates-Forney - *Waste Management, Inc. - Senior VP & Chief HR Officer*

So first, I think we have to change the narrative by which again people view working at Waste Management, and I think our focus on sustainability in creating a better world is going to be a huge competitive advantage for us, and so, I think we have to be more intentional about marketing, the roles, and the career opportunities that we have available, and showcasing those things through the voices and faces and experiences of our employees.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

When you talk about hiring from Gen Z, we talked to a company recently that has 3x the number of employees that we have and their health care costs is one sixth of our health care cost. We spend $300 million a year on health care, and theirs was $50 million for 3x, and the reason, our average employee is 45 years old, their average employee is 31 years old.

Jeffrey Marc Silber - *BMO Capital Markets Equity Research - MD & Senior Equity Analyst*

This is in the same industry or different industry?

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Different industry. Because nobody has 3x our employee base (inaudible). Different industry, but still, the point is that as Tamla said, as we change the narrative and as we become a much more attractive employer, and we attract Gen Z and Millennial, it's not that we are trying to push out, hopefully were not trying to push out 50-60 year olds, but what it does do is causes us to lower that average age and that average age has a real financial impact on our health care cost.

Tamla D. Oates-Forney - *Waste Management, Inc. - Senior VP & Chief HR Officer*

One of the things we're looking at doing, though, is being more proactive about going early into the school system to really have more career talks about having a career at Waste Management, because I think there is a perception that you can only do 2 or 3 things in this company, but we have data scientists, we have marketing specialists, we have sales, we have finance, we have engineers. There are so many different opportunities that you can have available in this company that people probably don't know about. So I think we have to be more intentional and proactive about marketing the opportunities that we have in this company and also selling the value of the technology that we are infusing.

Unidentified Company Representative

And I would add to that, if you talk -- we do have drivers out there that are 50-60 year olds and we don't want lose them. We have drivers out there that are working 50 to 55 maybe 60 hours a week, and they like to do it, they've been doing it for 20 years, and they don't want us to take that away from them, that is their income. Then we have the new generation of drivers that may want to work 30 hours a week. So that's what we have to figure out, and we are figuring it out that. We might have 4 10s, 3-day work weeks, 4-day work weeks, and at the same time accommodate those drivers that want to work 50 to 60 hours a week.

Tamla D. Oates-Forney - *Waste Management, Inc. - Senior VP & Chief HR Officer*

That's right.

Unidentified Company Representative

We just need to understand what the generations are telling us and then respond appropriately.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

I would tell you one quick 15 second funny story. We showed that generational profile graph to our Board of Directors that Tamla showed, but we broke it down by age as opposed to by generation, and so the traditionalist, I didn't even know what that was, but that's -- so we had in the traditionalist category, and we showed it to them by driver, and so we had -- I think traditionalist is like 75- to 90-year-olds, and so we had like 6 guys in there, and I said "Holy crap, are we going to show this to the Board", because the Board members are going to say, tell me where the 85-year-old driver is. I don't want to drive where that guy lives. So we took that out. We took that category out. We won't show 12 people.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Sean.

Sean D. Eastman - *KeyBanc Capital Markets Inc., Research Division - Associate*

This is Sean Eastman from KeyBanc. So I am looking on the slide here at sort of the upside scenarios, 7% to 9% EBITDA growth. I was just hoping maybe you guys could paint a picture for us on what gets you there, what's really -- I'm trying to understand what really the golden goose is within that 2021 time frame, and you guys went through a lot of detailed stuff, but just within that kind of 2.5 years, where is the juice and maybe does Advanced Disposal closing on time play into that whole case outlook?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

So the 7% to 9% is exclusive of Advanced Disposal. It's not incorporated into that outlook there. But when we talk about the bend the curve scenario, that is effectively what we call it internally, it is about everything that you heard today, it's really a mosaic of different levers, to use to Nikolaj's word, that will drive us forward. So whether it is a $75 million from efficiency or the incremental value from reduction in churn or leveraging price more effectively, particularly in the landfill line of business. There are many different pieces of that equation, the 5% to 7% is us continuing to execute on those things that we are seeing proven today and then 7% to 9% shows you our ability to leverage those things further.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Any other questions? I know Michael Hoffman has got more, so before we go back to him, anyone else got any questions?

Unidentified Analyst

One of the things that I didn't hear you address today, I am just kind of curious given your scale and scope and size, is procurement savings, things you are doing from sourcing standpoint to drive costs lower?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

So, you know the supply chain team is part of my organization, and they really have taken -- we talk about data and the analytics for the organization more broadly, but this team has really taken a practice that used to be more about just buying, and moving us towards more intentional partnerships. And so, while there are saving opportunities, I think for us, the focus from of our procurement and supply chain organization is about leveraging our buying power to be more influential in the way that we work with our OEMs, as an example, in how we procure our fleet, and how those fleet assets will be used to leverage our business in other ways. I don't know if that answers your question.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Also, Devina, what I would add and then John, you can jump in, too, we did talk a little bit about using our procurement team to really influence the way our OEMs put equipment on our trucks. So as opposed to just kind of squeezing dollars out of them, because we think we are getting the best price for trucks, for example, today. But what we can use that procurement team to do is take a more strategic approach to these OEMs, and say look, we need to have safety equipment on all of these trucks, it's ridiculous that we don't have it, and therefore, if you, Mr. or Mrs. OEM are going to provide it, then we will go with your truck versus someone else. Similarly telematics, and we talked about that a little bit. So all of that kind of technology equipment, while what we are asking is, you provide that technology to us on the vehicle and then we will have a conversation about whether we continue to buy more and more trucks from you. So I think we're using procurement, but in many places, they squeezed a lot of dollars out in the traditional way, and now we are using them in a more strategic fashion.

Nikolaj H Sjoqvist - *Waste Management, Inc. - Senior VP & Chief Digital Officer*

I did not provide the specific example, but I could have. If you look at the risk mitigation and business enablement Devina and I talked about on the digital side, one of the big investments we're making this year is operating our network. We are not doing it to save money, we are doing it to enable the business, and trying to speed things up, but with that network upgrade and working with procurement we are going to say, we are going to cut cost about 65% for what it cost to support our network. We are transitioning our data center to cloud. We're not doing that for cost reasons, we are doing that, again, to enable the business move to cloud-based solutions, speed up, time to impact for new solutions, but with that comes cost savings. So there's a tremendous amount of focus on rightsizing. Just, as an example, our technology investments and the goal, of course, is to then -- the more I save, the more I can spend on innovation with a view to driving value and fueling growth. So there is tremendous focus on driving down cost with a view to refocusing on innovation that drives value.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

Yes, Michael any more questions?

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

Michael Hoffman at Stifel. Your page 111, you have cost inflation at 3% to 4%, but you are talking about price at 2%. Help us understand how you're overcoming that inflation. You generally tend to think about businesses trying to at least price at their internal cost of inflation.

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

So what I would remind you first is that core price versus yield is the difference there and core prices certainly exceeded that 3% to 4% cost inflation. So that's the differential that we should think about, and we've talked about core price being 4% or greater and converting that into about 2% to 2.5% yield. So that explains that disconnect and then I would also say that with 3% to 4% cost inflation, you've got puts and takes there, you've got outpaced inflation and things like transportation that we are seeing, offset by those things that we are seeing create efficiency in the business, which Steve talked about earlier this morning. And so, we are offsetting cost inflation both in the way that we price the business and thinking about core price not just yield, but then also driving out cost by operating more efficiently in order to translate more of those revenue dollars down to the bottom line.

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

And then I talk to way too many private companies, I don't believe you are buying volume. So you're talking about a 2 in 2. Therefore, how you measure volume may be reflected in how this comes through. So am I, when I think about things like to 2.4% volume growth in commercial and small container that's because it's the service interval. If I go from a 6-yarder to an 8-yarder that's counted as volume, it's not counted as revenue -- or price, and that's really what's driving this? Technology is helping you to get better at, don't leave that opportunity on the table what we need to get the upgrade.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Yes, that's a good point. I think if you look at our volume growth it comes really in 3 fashions. It's, as I mentioned, the productivity of our sales force has improved, that is part of it. We are not trading price for volume, that is evident. Seems like that was confirmed. We are capitalizing on service upgrades, identifying those opportunities. We've been doing that in the past. We have seen marked improvement year-over-year in how we capturing those service upgrade opportunities. Identifying overage containers, communicating proactively with our customers and getting rightsized, which helps on safety, efficiency and overall customer experience. In addition to that, we've had some modest growth in our national accounts organization as well, which I think we've put a very stable network together that has moved price up nicely compared to traditionally what that national accounts group has been. The business around national accounts is usually low price, but we've really moved up that core price contribution in that line of business as well, so it's a 3-pronged approach. I think there's a lot going on with sales productivity, maximizing service. Also differentiation in what we're doing with our customer survey I think is helping as well in the defection coming down.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

You have heard it, Michael, our defection rate's lower and obviously not only is that -- obviously that is a good thing but there is less friction cost there, too, right? Retaining a customer, selling a customer, no friction cost retaining a customer, whereas, in the past, when that number has been higher, we obviously been experiencing more operating expense to go out and take care of those customers in that transaction in and out.

Michael Edward Hoffman - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD & Group Head of Diversified Industrials Research*

Right. And the last one from me. Devina, if you check your net receivables number, which we can't calculate, you can, and compare it to your payables, how does that relationship look today and where would you like it to be?

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

It's definitely not where we would like it to be or where we think it should be. We definitely see that there is value creation opportunity on the cash flow line, and that's built into that 5% to 7% outlook that we provided everyone. I can tell you that right now, I think there is between a 4- and a 6-day gap between optimal and where we are today.

Unidentified Analyst

(inaudible)

Devina A. Rankin - *Waste Management, Inc. - Senior VP & CFO*

That's right.

Edward A. Egl - *Waste Management, Inc. - Director of IR*

With that, I think we are out of time for questions. I want to thank everyone for participating today. I believe everyone here knows how to get ahold of me if you have any questions that haven't been answered. I'd like you to join us for lunch over here and the management team will be amongst you answering any questions -- other questions that you might have. Thank you very much.

James C. Fish - *Waste Management, Inc. - President, CEO & Director*

Thank you.

John J. Morris - *Waste Management, Inc. - Executive VP & COO*

Thank you.