

Ingersoll Rand

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Joe Ritchie: All right, looks like we're ready to go for the next presentation. I'm thrilled to have with me here today Ingersoll Rand's Chairman and CEO, Mike Lamach, as well as Dave Regnery, who recently got promoted to EVP of both climate and industrial. So, thank you both for being here today. Mike, I think you had some opening comments on the company, and so take it away and we'll get into Q&A.

Mike Lamach: Okay Joe, thanks, I'll try to be brief, just a couple of minutes, but thanks as always for making room for us on your agenda, Dave and I appreciate that. We're focused on closing out a strong 2017, and it's our effort right now is planning '18, finishing '17, and as '18 is shaping up in terms of end markets and expectations, I go back to what I said at the Investor Day conference, I probably couldn't be more excited about what's ahead over the next, say, three years even as compared to when I took the job eight years ago. I think Dave's been around the company a long time as well, and we worked together for about 14 years, but Dave's been in the job a few months and I think the same outlook is excitement going into '18.

The strategy for our business hasn't changed. It's still sustainability focus, around energy efficiency, around reliability of systems. It's really what the company does, what we're good at, driving energy efficiency and productivity through our brands, through our channels, putting large service tails on the back of our businesses is critical to us. We, I think, have no changes at all to what we see in terms of long-term guidance we laid out in February, and that's important for us to note here. We see top line growth of 4%-plus, we see earnings per share growth of 11% to 13%, we think we'll have high quality earnings generating more than 100% of free cash flow relative to net income, and our capital allocation priorities laid out much along the lines of what we said in the past, which is, we'll invest heavily into the businesses. We've had a track record of doing that, keeping our brands healthy and strong. We're 1 and 2 in all of the markets in which we participate. It's fundamental for us to continue to invest in our businesses.

Second, we make sure that we control any dilution, so we'll do share buyback where we're below intrinsic value. We've got a pretty strong point of view around M&A, what makes sense for us to go do, and we've been disciplined around managing between share buyback and M&A. And then of course, the dividend. We've been increasing the

dividend over a long period of time, and continue to see opportunity in the dividend, and grow dividend, faster than overall earnings growth of 11% to 13%. We think dividend growth will be stronger than that over time, as well.

So, without trying to anticipate too much of what you want to talk about, Joe, 2017, we're closing that out. Happy to answer questions there. I'm sure that there's interest in the, you know, long-term for us as well, so go ahead.

Joe Ritchie: Let's dig into a few topics that are pretty top-of-mind for investors right now.

Mike Lamach: Sure.

Joe Ritchie: I'd say the first one is probably China, right? So, there's a lot of discussion that we had when we were here a few weeks ago in Boston, but as well as like, during the earnings call regarding your real entry into Tier 3, Tier 4 cities, how you're approaching that market. I think providing some context and some history for how that is similar, but also different to how you approach the Tier 1-Tier 2 market would be helpful.

Mike Lamach: Sure, okay, and then Dave just got back from China. So, I'll start, and then turn it to Dave for a little bit of color on that.

Joe Ritchie: Perfect.

Mike Lamach: We've had a history, a long history, of strategic approach about moving into a market, providing excellent products and services, energy-efficient products and services into a market, doing that through a direct model, and then expanding that through services with digital investments that go across the whole profit pool. In China, specifically, we've been very successful in Tier 1 and Tier 2 cities, and a direct model. We've had an indirect model for some of the Tier 3-Tier 4 cities, and because of that, there hasn't been to the distribution model, a real long-term focus of some of the longer cycle verticals, airports and infrastructure would be great examples of that.

So, what we've done over the last couple of years, is invest heavily into that direct model in China. This past year, over the last -- just even year-to-date, we've added a little over 175 heads and I think Dave, it's probably going to be 200 heads by the end of the year there. And it's capitalizing on that same strategy that we've had over time.

What's interesting for us there is the margins are about what we would expect in terms of equipment margins. We need to build service businesses there, service tails there, over time, but it takes a reasonably short period of time to start that service tail. Our margin from China really are very accretive to the portfolio at large. In fact, we say that if we had the margins in China across the whole portfolio, we'd be extremely excited about that. We think we can double China over the next four years.

And Dave, maybe just some color on what you found?

Dave Regnery: Yeah, I mean, I just got back from China, as Mike said. The team's very confident, I'm very confident in their strategy. We like the direct model, we like building relationships with our customers, we like long service tails after we sell equipment. Incoming order rates, you saw in our third quarter, were up over 30%. They'll be well north of 20% for

the year, so this is becoming a very sizeable part of Asia. And we're going to continue the investment.

The service tail that we're looking for, we really need to look out probably around 18 months as that starts to mature, and we're starting a flywheel now. This isn't a new strategy for us. We've been at it now for several years. It's just the momentum that we're seeing in 2017, specifically the second and third quarter, has far surpassed what we had anticipated. And we're excited about continuing it. As Mike said, in the next four years, our plan is to double the size of China for our HVAC business.

Mike Lamach: Some of the one-on-ones we had earlier, too, Joe -- it's maybe a little bit misunderstood from an investor's perspective, concerns about the market in China. We completely see the opposite of that. We see this as a huge opportunity, at what will be accretive margins and accretive to overall EPS, even now, immediately. And this is an area of excitement and as Dave said, confidence in the team.

Last year, we were successful in China, but the market was down about 10%. We were about flat. It really wasn't showing up in our results as much as it is this year, where markets are up about 10%, and we're booking something north of 20%.

Dave Regnery: The only other comment I would add is, our strategy long ago of manufacturing in-region, for-region, is really paying off. So, the product that we're selling right now in China predominantly is -- I would say 90-plus, 95-plus percent, is manufactured in China. So, we're able to, with a lot of the work we've done in our business operating system with our lean deployment, we're really able to satisfy the needs with very short cycles.

Joe Ritchie: So, it's interesting that you made that point, Dave, because I think Mike, you'd also spoken about the investment that you made on feet on the street, earlier this year. I think you've added about 165 sales professionals. Talk about what level of investment is necessary from this point forward, given what you already have in the region to penetrate Tier 3-Tier 4, and then how should we be thinking about the margin trajectory in Tier 3-Tier 4 beyond 2017?

Mike Lamach: First of all, the strategy to attack Tier 3-Tier 4 cities emanates from a city cluster model that we've had in effect since 2008 or 2009, focusing on Tier 1-Tier 2 cities, and then from that city cluster model of five, expanding out very cost-effectively into Tier 3-Tier 4 cities by putting local feet in the street. So, toward the end of the year we'll be around 200, Dave?

Dave Regnery: Correct.

Mike Lamach: You know, we might go a little higher than that, depending on how quickly that ramps up and what the productivity per salesperson would be. As Dave said, the service annuity starts to compound fairly quickly, certainly within 18 months. We would have started to see growth there about a year ago, so I would say in 2018 we'll begin to see that service annuity kicking in, into those markets. And whether or not '18 would see China have margin expansion, we haven't finished the planning process yet, but certainly don't expect it to be much of a headwind for us in '18.

Joe Ritchie: And is it fair to say at this point, in Tier 3-Tier 4, that you are potentially over serving the

market with the content that you're providing with the expectation that somewhere down the road there'll be an opportunity to get a little bit better price? Clearly the service tail will happen a few years down the road, as well. How do you contextualize, see if you can contextualize that for us?

Mike Lamach: Yeah. I mean, the most important thing is that oftentimes, the basis of design that is specified in these projects might be a very generic basis of design, and when you think about the products and systems that go into these types of buildings, only about 10% of the total cost of ownership is the product price that you provide on bid day. The other 90% of it is going to be the energy efficiency differential, and the maintenance differential, are all in that total cost of ownership.

And so, I think that as we begin to specify more into these markets, build more end-user relationships and build a denser service footprint, it'll follow the track that it's followed in China and in other parts of the world where over a couple of year period, we would expect to see more trained bases of design, much more service density happening in these cities, in the '18, '19, '20 time frame we would certainly see margin expansion in China over the three-year window.

Dave Regnery: The only thing I would add to that, is that energy takes a bigger focus in China as we become basis of design and educate the Tier 3-Tier 4 cities as to what's possible from an efficiency standpoint. That's all part of the strategy.

Mike Lamach: China, China is also one of the most forward-thinking countries right now around the environment, and that's sometimes counter a popular notion that these are sort of dirty cities that intend to remain that way. That's not the case. It's one of the most progressive countries around greenhouse gas emissions, as we've talked about and I think I've described in the past. We're on the very forefront of enabling product and systems with low greenhouse gas emitting product, and for a place like China where 40% to 80% of the emissions that happen in the environment emanate from buildings, and where 40% of that greenhouse gas emissions in buildings comes from HVAC, the Chinese government really has a focus on utilizing HVAC systems to eliminate greenhouse gas emissions in buildings.

Tier 3-Tier 4 cities where you're putting in a lot of infrastructure, have a huge opportunity to just leapfrog straight to lower greenhouse gas-emitting product, and this is an advantage that we have and a clear advantage of the marketplace right now. And, it's been successful not only in China, but you're seeing that in Western Europe where our growth rates again have dramatically outpaced the market. I'd say Western Europe is certainly the most forward-thinking around the environment, sustainability, greenhouse gas emissions. China's probably second, followed by the rest of the world.

Joe Ritchie: Another hot topic for investors these days is price-cost. So, clearly this year, steel and copper have both been headwinds and copper going into next year I think is expected to be a headwind, just given where you're hedged today. Maybe talk a little bit about how you're thinking about the price-cost environment into 2018?

Mike Lamach: One of the sort of notions, because it depends on how people think about our company as they reflect on what other people are saying about their companies. And, as an example, if you're a residential HVAC-only type provider of equipment, copper's got a pretty

outsized impact on you. For us, copper is much easier to manage, because first of all, we see the shape of inflation changing from steel to copper. Copper is much more manageable in an HVAC business than steel would be, because there's hedging strategies that we can use from our suppliers, and we'll enter 2018 with 70% of our copper locked for the full year. Pricing that's typically done in the fourth quarter is utilizing those sort of forward rates to be able to price. And so, you're really thinking about copper largely in a residential business.

Now, in 2017 just to be clear, our residential businesses had price, which has exceeded material inflation, which I think is not the case for a lot of other residential providers of equipment. So, we've actually had a positive spread there. We believe we'll maintain that positive spread going into '18.

Steel, for us, we get a six-month view in advance of where steel prices will go, plus a little inventory that's left over, so we have a six- to nine-month view typically on steel. So, steel began to abate in the back half of the year, and as we've booked orders in '17, delivered largely in '18, there's a very good picture of where we think steel prices will be for the six-to-nine months beginning part of the year, and feel like from a pricing perspective we've got what we need to have in terms of pricing relative to steel.

So, we go into 2018 feeling good, feeling confident around where we think inflation will be, where we think pricing needs to be to accommodate that, and again, the nature of that being in copper, and to a lesser extent aluminum, both of which are very easy to manage relative to steel.

Joe Ritchie: So, as we're thinking about 2018 price-cost, there's an expectation, what I'm hearing from you is, there's an expectation that price-cost should be a positive number?

Mike Lamach: That's right.

Joe Ritchie: Don't know what the number is?

Mike Lamach: That's right.

Joe Ritchie: So, that --

Mike Lamach: That's exactly what our expectation would be.

Joe Ritchie: Okay, got it. Maybe switching gears a little bit, and I do want to open it up to folks as well in a few minutes, but switching gears a little bit just into commercial HVAC trends here in the US, look -- you guys were here a couple weeks ago, and we noted that US commercial HVAC could be extending because of potential labor constraints in the market today. I'm just curious, maybe you can provide a little bit more color for folks on what's happening from a project pipeline perspective, and how you view the market over the next two to three years?

Mike Lamach: Yeah, general contractors and specialty mechanical and electrical contractors would tell you that in 2008 and 2009, just a lot of tradespeople left the industry, and there hasn't been that vocational fill rate back of some of those roles. And so, there are constraints, I think around skilled tradespeople for much of what it takes to build buildings these days.

Now, I think it's not something that can't be managed, and certainly you're seeing buildings being constructed and scheduled, so being maintained.

I think that the worst it would have, would be just extending out the cycle a bit longer in terms of construction taking a bit longer for projects to be completed. For our business specifically in the types of skills that we're looking for, a couple things. One, we've invested so heavily in products and in services, and in training, and training's an area that we've doubled the amount of training that we do versus the average of technicians out in the field. We've been a bit more of a magnet to hire technicians into the company, and have always talked about the importance of engagement around employee retention and businesses, our businesses. We've historically averaged more than 90% retention of all of our people. Not unusual for us to see 96%, 97% retention of our people. So, we're able to attract, we're definitely able to retain, and we're using technology more to help deliver services and kind of breaking that linear trend between labor and revenue by using some technology to better enable that.

So, I don't see constraint in terms of what we need to be doing running our business, but we are seeing contractors that are out there, that are having a more difficult time finding and attracting skilled tradespeople.

Joe Ritchie: And maybe Dave, you can comment on the institutional markets to where we saw bookings turn up low single digits, this past quarter. What are you seeing specifically in verticals across the institutional?

Dave Regnery: Sure, and just one other comment before I get to the verticals. I would also tell you that what we're doing on the service technicians and using technologies, is really leading-edge in how we're able to use Google Glass-type concepts with our connected strategy on equipment, and having technicians being so smart that when they get to a job site, if they need to go to a job site, how to make sure that the equipment is running at peak performance is just -- we've gone leaps and bounds there, we're seeing some great traction, and our customers really love that type of service.

As far as verticals are concerned, we believe that the institutional market will be up in the mid single digits as we said at investor day, next year. Within that, I think you have a couple components, education will be -- we're pretty bullish on what's going to happen there. We also designed a lot of our new products around that, so we're pretty bullish as what will happen there. We know we're going to be ready for our customers.

Healthcare will come back. I've been saying that for a while, if you've heard me talk before. I'm not sure exactly when, but healthcare will come back, and we think we'll start to see some of that happen in '18. Government, little bit of a wild card, but we think there'll be lots of work there. We're seeing nice work on the government side, and really around municipalities, is in our Esco business. So, where we're able to go in and provide, take the energy savings that we're able to harness, and then they can float a bond to pay for not only the upgrades to the building controls as well as the HVAC but also have infrastructure changes. So, we're seeing a lot of activity there, and they're quite sizeable jobs. They tend to be lumpy. They come in lumpy, meaning that our order rate would be lumpy, but they burn at a pretty linear fashion.

Mike Lamach: Yeah, and Esco (ph) is just again, an energy services company. So, it's really the

demand, and sometimes supply side management of doing large infrastructure work where the savings pay for the capital expenditure and then it comes with the service component to manage the savings over a long period of time. So, generally, we'll sell a deal like that and service tail contractually will be 10 to 25 years with that customer over that period of time, and that's been a very successful strategy for us. It's better than a \$1 billion business for us in total today.

Dave mentioned lumpy. When we say kind of mid-single-digit, institutional growth, I think there's a really strong probability in '18 that we'll book some very large infrastructure projects that are energy service related, that could be in the range of \$100 million, \$200 million type projects. It's going to look great on top of what we're booking, it's going to create an optics problem around '19 as we compare, like it did '17 and '16, but we're seeing more and more of those projects and we're seeing fewer and fewer competitors capable of managing the equipment, the controls, the service, and the digital connectivity and the guarantees that go along with that. And our success rate there has been fairly high.

We get to the point we are with some of these projects, we're fairly confident that the projects make sense, and then it's just really going through the final approval process which is a bit out of our control at times.

Joe Ritchie:

So, I said it was my last question before coming up but you said so much I have to follow up on that. So, if the nature of the projects are essentially getting bigger, and you're in a position where you have a comprehensive suite of equipment, controls, services that you can offer, digital that you can offer these projects. How are your competitors competing on these types of projects? Because it's unclear to me that any of them have the breadth of offering that you do.

Mike Lamach:

First of all, it's always been our model, and it's been that way for a long time. You can't change the model every couple-three years and expect to have any stickiness to that. Building really highly-energy-efficient, environmentally friendly products that fit into services that wrap controls, hardware-software and algorithms around that, is critical. You've really got to be in the HVAC and controls business in a combined way. From a service perspective, you have to deliver services, I think, yourself, the OEM delivering that. The products and systems become more complicated, it's not something that sort of the mom and pop, any more, really can handle in terms of these large applied systems. And it's a differentiator and it's margin-accretive, so why not be in that business as part of what you do? And the relationships you build over a long time are much stickier as it relates to being able to do more equipment, and more systems refreshes over time.

And then coming to the third component, that's the whole digital component, it's digital in the sense that it's everything from using the algorithms and artificial intelligence to make buildings and processes and systems smarter, all the way through to the way you dispatch and deploy and perform services in a more economical way. Again, to even break this labor shortage cycle, that's all components of this.

So, doing these things together, it has always been our model, always been our vision, will be our model, will be our vision, and I think over the long run you can see sort of share and margin winners and share and margin losers, in this over time, which I think feeds over the long run into -- I believe there should be more industry consolidation in

both the HVAC and the industrial air compressor space with companies that have a fuller model.

Joe Ritchie: I'm going to open it up to the audience. Are there any questions in the audience? Okay, I'll certainly keep going.

You mentioned \$100 million to \$200 million type projects. If you were to book those into backlogs next year, how should we be thinking about the potential lead time to actually seeing those projects float through your earnings?

Dave Regnery: They're pretty linear in their burn rate, and pretty --

Joe Ritchie: So (inaudible) where they started?

Dave Regnery: Yeah, they would start immediate, and they'd probably have, depending on the contract, 18 months, 12 to 18 months cycle. So, you'd see a pretty linear burn over that period of time.

Mike Lamach: Yeah, Joe, in some cases we may have invested \$5 million or \$10 million in the proposal process itself.

Joe Ritchie: Got it.

Mike Lamach: And then as soon as you unlock this stuff, we're ready to go, and because we're the general contractor on these, we're not waiting for things to be built. We're building these things. And so, to Dave's point, it's immediate, and then it's fairly linear. And there's something I think very nice about that, as it relates to elements of the cycle that we would see, this ability to put in the backlog large amounts of these sorts of projects that really are going to continue for a couple of years.

The ones that we've done to date have gone from 12 to 24 months, and it's really added some stability into the choppiness of order cycles and revenue burn rates along the way.

Joe Ritchie: Mike, you mentioned a few weeks ago, and you mentioned it again just now, this concept of consolidation across both climate and industrial. Just focus on climate for a second. There's -- if you look at the landscape, fairly concentrated market already but companies with partial models. How do you see this playing out over the next couple years?

Mike Lamach: I think the winning model is going to be comprehensive equipment and controls, comprehensive direct services, and investment in all of the areas of digital connected smarter buildings and smarter delivery of services. So, I think it's any combination that somebody with a short model, short line, really could affect to be able to pull that all together. So, generally in most markets we're in, although you could say there's maybe five global competitors, you tend to find say two or three that are strong in a market. Unlikely you're going to find all five strong in a particular market, but two or three in a market would be generally what we see.

You even find differences in the product technology. You've got some companies that have a short unitary line, it may be ducted or ductless, but it may not be complete. Some have an applied line, you've even got companies that have got applied presence but don't

really have a sort of unitary business. And you can look at this thing, and dissect it a number of ways for model completeness. But, it's hard for us to not imagine how this thing doesn't sort of become more consolidated around that broad model over time.

Joe Ritchie: As you look at your own portfolio and your own distribution model, your service model, what you've invested in digital today, did you see any gaps today where you need to continue to invest either organically or inorganically?

Mike Lamach: We always see exciting technologies that we're investing in. We did one at the end of October, we purchased a thermal storage company. If you were out at our site in Davidson and you looked at the building that you would've been in, you would've seen a thermal storage installation where we run our campus using a thermal storage strategy. And we think that that could play a bigger role as part of a solution. To help even the utilities offset some of what they're seeing as more renewables come online and the inefficiencies that they're seeing during peak hours of the sun or wind, the solar or wind. And so, thermal storage is a way of offsetting that. We think there's a solution there across the portfolio.

We invested in a ductless product line in Europe that has done really well for us to date, and we'll continue to see that. So, there's technology that we will tuck in, there's channels that we'll tuck in. So, in China, you see us moving to a direct model where we're not direct. In the US, we've acquired a number of our channel partners that were independent in the past, and we continue to do that, as well. So, a combination of channel and technology depending on specific channels where we want to bring them in-house, and then technology that we think are new and exciting that we can add to the portfolio.

Joe Ritchie: And as it relates to the industrial business, you're one of the larger players on the compressor side. Do you just see, just consolidation of a much more fragmented market? Is that the right way to think about it?

Mike Lamach: Yeah, probably 15 registerable compressor companies that are out there. Again, you'll see two, maybe three tops, in various countries and regions in the world competing. So, two or three strong. The difference between one and two is fairly wide, and then from two through 15 really drops off considerably as well. Both HVAC and the compressor business, again, you're in regulated businesses around efficiency and greenhouse gas emissions, and there is a barrier to entry around the technology investments required and around some of the synergies that you get with the scale across compressors. So, even HVAC in air compressors, the larger machines we make across both have a tremendous amount of technology synergies, both in how we design, how we model, what suppliers we use, what we do in-house, how we machine them. Again, that scale increasingly matters around those businesses.

Joe Ritchie: Since we're talking about the compressor business right now, it's really nice to see the growth that you're putting up in that business, and specifically on the order side, on the large compressor side. Maybe just talk a little bit about where you're seeing the growth, whether it's specific end markets, or regional aid, and what the outlook looks like as we head into 2018?

Mike Lamach: First of all, we're ahead of where we thought we would be when we gave guidance in

February around this. The recovery, both in large machines and in our own internal ability to generate levels of productivity that are independent of volume, if you will, have exceeded expectations. So, we feel really good about not only what's been booked going into '18 and '19 even, but around the cost position that we've taken across that particular portfolio has made us more confident around what's happening there.

We're seeing good growth in areas of large compressors, where the end markets are around things like net nitrogen and air separation, or around fuel boosting in those sorts of areas. We've even had more interest in some of, I would say the petrochemical, kind of mid and smaller size projects, resurfacing as well. Although you know, you could take a bet on where you think that'll go over time, there's been an increased activity in that pipeline as well. So, the large compressors are definitely kicking in, and the synergy between the Cameron product portfolio and the upper end of the Ingersoll Rand legacy portfolio, is really working well together. And we've finished that portfolio consolidation and those technology choices about what products we're offering into the market. That's gone well.

Bringing the Cameron legacy service business up to the Ingersoll Rand take rates around service, or the mix rate around service, that's gone extremely well in addition to that. So, feel really good about what's shaping up that we booked in '17, and the deliveries we'll see in '18 and the margin expansion going into '18.

So, there's a lot to be optimistic about. The visibility that we're seeing there, the strong institutional markets that we're seeing, the fact that the nature of inflation is changing from steel to copper and copper being just infinitely more manageable for us than steel. It feels like there's confidence going into '18 that we're excited about.

Joe Ritchie: Yeah, it sounds like it, and just -- and also for everybody's edification if they forgot, last year you did have a gap in the large compressor order numbers.

Mike Lamach: We did.

Joe Ritchie: So, that's part of the reason we haven't really seen much growth in 2017, but it sounds like with large compressors, up 20% year to date, you've got really good visibility at this point of '18. Is that a fair characterization?

Mike Lamach: That's very fair, that's right.

Joe Ritchie: I want to go back to the audience to see if there's any questions. I'm happy to keep going, but if there are any other questions in the audience? I'll keep going. We haven't talked about thermo. Outlook for thermo as we head into 2018?

Mike Lamach: Well, we keep thinking about the north American trailer market being a little bit weaker. I think we're down, thinking it's probably down 10-ish percent, maybe a little less, a little bit more over this year, but we haven't really zeroed in on that. That's at least the ACT data coming out. The APU, the auxiliary power unit strategy that we had, is working. This is where we're trying to attach auxiliary power units to non-refrigerated trailers and get those fleets to use auxiliary power units. The penetration rate there was very low. If you think about it, we were penetrating 80% refrigerated tractors, and about 15% non-refrigerated tractors, and we've boosted that up in the 20% range which was -- if we had

it where we thought it would be very important that every 2.3 auxiliary power units we sell equals one North American trailer revenue margin. So, the more we can work this mix, the better we can really offset that.

As well as continue to drive class 3 through 7 truck units up, take the electrification of Thermo King units that we purchased through the FRIGOBLOCK acquisition into the marketplace, and continue to work on bus, on rail, on our air, refrigeration business, our aftermarket business, and be opportunistic in the marine market where we'll again look to take orders opportunistically to grow there, as well.

Dave Regnery: The only thing I would add to the Thermo King story is I ran Thermo King in my past, a long time ago, and as I now have taken on my new role and get to look back at Thermo King, this is a much more diversified business than it was ten years ago when I ran it. And that team there has just done an incredible job building this APU business, building the electrification of the truck platform. And I think you're going to see a business that was once very cyclical, a lot less cyclical than it was in the past.

Mike Lamach: You remember margins were down -- I'm sorry, revenue was down in '16 and margins were up. Revenue's going to be down flattish in '17, margins are going to be flat. All of it's done with a lot of volatility in what's happening between Western Europe, Eastern Europe, and North America in the trailer market. So, we keep repeating, Trane is a more resilient business. Yet, the investors look at '16 and '17, as an indicator, and Dave's comments from when he ran it to where it is now -- it's a much more resilient business. High margin, resilient business, that's been built.

Joe Ritchie: A couple final questions for me. I know that what's happening on the tax reform side is still in the (inaudible), but because of the either Irish domiciled status or inverted status, companies that have a -- they're Irish domiciled have been penalized by the market for having a lower tax rate and what tax reform could mean to them on a relative basis. How do you guys think about the plans that are currently in place to potentially change the tax system, and how that would impact you guys?

Mike Lamach: Well, investors should remember that two-thirds of our revenue, roughly, is North American-based. You can figure that two-thirds of our tax obligations are US-based. So, when the tax rate drops say 15%, we're paying 15% less tax on our North American earnings. So, we benefit as much or more than any other company domiciled in the US, just by virtue of our US profitability and our position in the US. And so, that's important for everyone to remember.

Of course, as you look at the details around what else will be in tax reform, that's going to have to get modeled as we see what is eventually agreed to. But, from what we've seen to date, we're looking at a low 20%, 20%, 21% tax rate, based on what we would see or estimate into the future, a lower US rate. Some limit on the deductibility of inter-company loans, etc. We would still be in a 20%, 21% rate at this point. So, I would say it's neutral to good, with the headline being, a lower US rate means a lower US rate for our US earnings, like any other foreign company that's profitable in the US.

Joe Ritchie: Mike, you've done a lot since -- over the last seven, eight years, in terms of investing in the business, driving a more profitable business. We've talked about the product growth team. Not a lot of folks at this point are talking about what a downturn would look like

and what your business model would look like in that type of environment. I'm just curious, like any thoughts you could share on how cyclical or acyclical your business would be, if we were to experience a downturn?

Mike Lamach:

A lot of things, and I'll mention a few, and then Dave, any I forget you can kind of make sure I cover. But, first things first, right? We lay out a 2020 view of the world that's got 4%-plus type growth, 11% to 13% EPS growth, heavy conversion to cash, 100-plus conversion to cash. I think we could deliver that on what we're seeing, but we're always thinking about well, what if things are worse? What would we do? And one of the things that we're really aggressively going after right now, is the readiness that we have around the G&A in the company, and the readiness we have to go attack the logistics and warehousing components of the business. If you think about the progression of our operating system over time, we took very low efficiency plants and made them very highly-efficient, integrated plants. We've centralized sourcing, and we've driven a lot of material and engineering productivity from that, invested heavily in ERP systems, to make sure that we've got real, state-of-the-art, real-time information. All that's led now to our ability now to think about the way we warehouse and distribute, and move products around the company, which could be 6% of the revenue of the company is just in logistics, moving -- or the warehousing could actually add to that number, in terms of the fixed costs.

We think there's a substantial opportunity for us to go attack these areas, between '18 and '20. The goal posts around this are between \$110 million and \$190 million today, as we size the projects around that, that we can take out of the cost structure, that we feel like we're ready to go, go attack. That's one way of looking at a downturn. Downturn doesn't come, it's going to be added in to what we're doing.

Another piece of it is just a heavy investment in the services business. We would like to see all of our services businesses have the gross margins of the service business be larger than the SG&A of the whole company, or the whole business, and give us tremendous resiliency and break-even reduction, or break-even costs on the equipment that we're putting into the marketplace. That's a big effort for us.

Dave Regnery:

Yeah, the only thing I would add is if you go back to when the last downturn was, we were one of the few that were investing heavily in our product portfolios, and that's obviously allowed us to capture a lot of share as we came out of that. I would tell you that our pipeline of products throughout the company right now, new products, is very, very robust. So, we're going to continue to make sure that we invest in new products, continue to look at energy efficiency, continue to look at next generation refrigerants, continue to look at things like thermal storage and how that integrates to the grid, and how we become a solution for utilities. Those are all things that we're going to continue to do.

As Mike said, we believe that because of some of the investments we've made around our IT infrastructure, that we now have opportunities in G&A so we need to go back and look at those processes, to make sure that they are optimal and they are reflective in our business operating system as we make them more optimal.

Mike Lamach:

We've always been really big on the say-do relationship being really high. When we give a commitment, really making the commitment. So, when we think about a commitment

of 11%, 13% EPS growth, regardless of what the top line does, we want to make sure that we've got all of the levers across the operating system, managing the income statement, the balance sheet, in a way that we can deliver on the commitment.

Joe Ritchie: Great. We're bumping up on time, as always Mike, Dave, great to see you guys. Thanks for coming in.

Mike Lamach: Thanks for inviting us, Joe. Thank you.