Trane Technologies at Bank of America 2023 Global Industrials Conference

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COMPANY PARTICIPANTS

Dave S. Regnery - Trane Technologies, Chairman & CEO

Christopher J. Kuehn - Trane Technologies, CFO & Executive Vice President

OTHER PARTICIPANTS

Andrew Obin - Analyst

Andrew Obin

Good morning. I'm Andrew Obin with Bank of America. And this is the first session of the day for me. And with us, we have Trane Technologies, world leader in climate solutions. So, we've hosted event – I think I've been coming to London now for almost 20 years, and I think consistently, Ingersoll Rand and Trane has been one of the most faithful in terms of coming to this conference. So, I really want to thank them for being here yet again, and I really hope to see them again and again and again and again and again. So, thank you so much.

And with us, we have the company's Chairman and CEO, Dave Regnery; and Chris Kuehn, Executive Vice President and CFO. I think the format is going to be a fireside chat, definitely going to leave time for some Q&A. If folks want to interrupt in the middle, feel free to raise your hand. We're certainly happy to accommodate you.

And with that, I want to extend a very, very warm welcome and thank you for being here. It's a real treat, as I know, you're one of the most popular companies at the conference always and particularly this year given what's happening. And we can just dive into Q&A. Thank you for being here.

Dave S. Regnery

Sure. Well, thanks for having us, Andrew. Great to be here. I think this is my sixth or maybe it's the seventh year...

Andrew Obin

Yeah.

Dave S. Regnery

...that I've been here in London. And it seems like it never fails me, because I like to run in the morning and it rains every morning when it's about time to go for a run. So it's not disappointing me again this year, so...

Question – Andrew Obin: So, look, maybe we can start with you are the world leaders in energy transition, so maybe we can start talking about Trane product portfolio and energy transition. Can we just talk about your product strategy over the next several years? As we do think about energy transition, regulatory changes, how will your product lineup evolve over the next several years? And does it create gross margin opportunities? And then we will pivot into R&D and CapEx requirements to support this growth.

Answer – Dave S. Regnery: Okay. Sure. That's a lot on that one first question.

Question – Andrew Obin: Yeah.

Answer – Dave S. Regnery: So, look, if we think about our product strategy and you think about product development, look at it in two different buckets. The first is around sustainability and the second is around digital. And in sustainability, you would really break that down into can we use lower GWP refrigerants within our product portfolio and by using those lower GWP refrigerants, can you actually enhance performance of your products? We've been very successful with that in the past. We were the first in the market with next-generation refrigerants. And the myth of using a green refrigerant and having it degrade performance of your product, we proved to be incorrect. That we enhanced our product performance, so that'd be number one.

Second is, we're always going to be looking for efficiency gains in all of our products and all of our portfolio. And the third area I would highlight there is really electrification, and it would be electrification within our Thermo King portfolio, which is transport refrigeration, as well as the electrification of heating and elimination of fossil fuel. And today, we have solutions that exists right here in Europe where you no longer need fossil fuel for heating, no longer needed. And if you think about greenhouse gas, 15% of all greenhouse gases from heating and cooling buildings, majority of it is from heating because it uses fossil fuel. These systems, we call them thermal management systems, are very efficient and they eliminate the need for fossil fuel.

On the digital side, think of it as how do you make your products smarter, okay, so think about factory-mounted controls at the unit level. Think about being connected to your solutions at a product level, at a system level, and at a building level. And then as you

get the data from these different spectrums, how do you use that data to make your building performs better, your product performs better? And we're – today we have about 36,000 connected buildings today on a global basis. We have millions of assets that are connected. And it's really about harnessing that data now using some tools, AI tools, to interrogate the data to have your products and systems work even better. That's how I would talk about it on a broad area.

As far as, as you have these innovations, think of it as if you have an innovative portfolio of product, you're always going to sell value to the customer, always. That's what Trane Technologies is really built on, high energy-efficient, value to the customer, think of it as margin expansion.

Question – Andrew Obin: And maybe...

Answer – Dave S. Regnery: I forgot the other six points of your question?

Question – Andrew Obin: No, I mean, the question is maybe just R&D and CapEx requirements...

Answer – Dave S. Regnery: Right.

Question – Andrew Obin: ...to support this growth.

Answer – Christopher J. Kuehn: Yeah, sure. Look, it's usually – it's typically a capital-light business. Usually 1% to 2% is the range of what we spend on capital in a given year. For 2023, we've guided 1.5% to 2% to really ensure that we've got the decarbonization investment. Think about our factories around automation and where we're driving there and making sure we have the right capacity as we see the growth in the future, and then the investments around digital. So I still see it over the long term in the 1% to 2% range, but I would look at it as probably a little bit higher on the higher end this year.

Question – Andrew Obin: And just something that was discussed a lot over the past, well, day one, can we just talk specifically what products are becoming more important in Europe over the next several years? What's your offering...

Answer – Dave S. Regnery: In Europe?

Question – Andrew Obin: In Europe? Yeah.

Answer – Dave S. Regnery: Well, certainly, thermal management systems. If you could eliminate the need for fossil fuel for heating, that's an absolute win. And I was telling the group yesterday, I met with some investors, and we were talking about products

that were sold maybe, say, seven years ago versus products that are sold today. And you want to talk about transformation. I mean, I've never seen it like this in this industry before, a product that was sold seven years ago versus a product that is sold today, you could be up to 60% to 70% more efficient. And if you think of the total cost of ownership of a chiller, for example, the majority of the cost is on the operating side. If your operating is 60% to 70% more efficient than it was seven years ago, think of the benefit, think of the reason why customers are not only being say, I could eliminate fossil fuel, but the savings I'm going to get from operating these systems has as a nice bottom line impact for the customers. So thermal management systems absolutely continue to grow very nicely for us.

Question – Andrew Obin: And what is the thing – it once again goes back to the discussion we've had at the conference over the past year or so, how do you think about sort of vertical integration of capabilities, right? Because I think inverters, the inverter technology is becoming more important, right? I think heat exchangers are becoming more important. There seems to be particularly heat exchangers, there's capacity shortage in Europe my understanding is at least given the amount of growth. How do you guys think about sort of managing supply chain and managing your own vertical capabilities in these areas?

Answer – Dave S. Regnery: Yeah. We haven't had heat exchange problems, but we've had other problems, mostly on the electronics side from a supply chain standpoint. But at the end of the day, we're pretty flexible. If we need to become vertically integrated, we'll become vertically integrated. It's really having great channel partners on the supplier side. And we treat all of our suppliers as partners and that's really helped us not only innovate our products, because sometimes our suppliers have great innovations, but it's also allowed us to be their priority as well. And that played dividends as we went through the whole supply chain issues over the last 18 months. And just to be clear, supply chain issues are not over, okay. They're significantly better, and they will continue to get better in the future. But supply chain is not back to what I would call normal. And I think we have several quarters in front of us of kind of a bumpy ride, but our team's doing a great job of managing the supply base.

Question – Andrew Obin: Yeah. So maybe we can talk about North American HVAC, and I appreciate it's maybe the sort of mid- to high-teens of your revenue, but it's a very profitable business as I understand.

Answer – Dave S. Regnery: On the residential side?

Question – Andrew Obin: Yeah.

Answer – Dave S. Regnery: Yes.

Question – Andrew Obin: Yeah.

Answer – Dave S. Regnery: About 20% of our business.

Question – Andrew Obin: Yeah. So, how has demand held up so far in the first few months of 2023? Big debate, destocking, do you anticipate any destocking? And when do you think residential HVAC volumes, however you want to say it, shipments into the channel or sell-through, when do you think that bottoms?

Answer – Dave S. Regnery: Yeah. I mean, at a high level – I won't comment on what we've seen so far in the first quarter, but I will tell you that at a high level, we look at our residential business as a GDP-plus business over time. And we certainly have seen some slowing of order rates that started in the third quarter. They continued in the fourth quarter. So there is some normalization that is happening in the residential business. That's pretty obvious as interest rates increase, and they are – you're going to have a slowing impact on home sales. And we see the results, although last month was actually pretty strong. But for the most part, we're going to have a slowing. We've called our residential business from a unit basis down in the mid-single digits in 2023. On a dollar basis, we think we'll be plus or minus low-single digits. There's a lot of price out there, so some of that will carry into the market. You had a SEER change that will also add some pricing into the market.

As far as the SEER change go, we're well-positioned. We did a great job in the fourth quarter working with our independent wholesale distributors to help them manage their inventory with phase-in, phase-out of the product. We believe we're in good shape there. When we look at our inventory levels in the independent wholesale distributors, they appear reasonable at the end of the fourth quarter. We didn't see anything that was alarming to us. And remember, our residential business, it's 20% of the total enterprise. About half of it is through independent wholesale distributors. And the other half, we act as the independent wholesale distributor.

Question – Andrew Obin: Got you. Thank you. And so, another question is, how do you look – and I know it's a bit of a controversial – it's not a controversial topic, but I think different folks have different views about it. How do you look at the replacement cycle? And has it shortened? And as I said, some people feel strongly about the replacement cycle framework, some people don't. Where do you come out?

Answer – Dave S. Regnery: Yeah. Well, I keep asking people which cycle they're referring to, right. Look, we could argue about the longevity of a product. We could

argue about how frequent the product is being used today versus how it was being used in the past, and there's arguments that could go either way. There's no doubt that the heat pump concentration has increased. Today, the heat pump market in the US represents about 30% of the market. We're north of that. Obviously, a heat pump runs more frequently than just an AC. It's heating and cooling, so it tends to run a good portion of the year. So, obviously, that has an impact on longevity.

We certainly have some conversations about work from home and people are using their systems to a greater extent, all true. At the end of the day, look at our residential business as a GDP-plus business, the cycles will continue, replacement will continue. The built environment continues to get greater. And the demand for heat pumps will continue to increase. I think that in 2023, we'll start to see an impact from IRA in the back half of the year, and that will really help be a tailwind to the heat pump market.

Question – Andrew Obin: Got you. And just finally on resi, I think the change in legislation and heat pumps, right, Asia is the biggest heat pump market and I couldn't help myself when we were at the AHR Show. You walk around and you just see a lot of Asian brands offering products that function at low temperatures. I think Greece booth was half staffed by Watsco people. So clearly they're trying to be more aggressive. Historically, US residential HVAC ecosystem was different because US has frame housing. So, just fundamentally different design, different building codes than what you have in Asia and Europe. Do you think the new set of regulations opens the door to more Asian competition? I know you guys have very strong partnership with Mitsubishi. Does it change the nature of the partnership, if you could expand on that?

Answer – Dave S. Regnery: Yeah. I think, specifically to IRA, I mean, it's possible. Okay. At the end of the day, channel matters, okay. If you don't have a channel, it's really hard to sell your products. And we have great channels within Trane Technologies residential business, the breadth of our portfolio really as we're working through IRA and we're understanding how each state is going to administer the rebate programs and what's going to be included and what's not going to be included, we're working with regulators to understand what their needs are and they like working with a company like Trane Technologies because of the breadth of our portfolio, right? Every solution that you could think of we have in our portfolio, whether it be a hybrid solution or a very high SEER solution. So we're agnostic as to the solution because we have it in our portfolio, and that will really allow us to really win in many of the situations that are being described right now, if not all. And really, it's going to be turned into how do you make it simple for the end customer to understand what their rebate will be and what their net price will be at the end of that.

Asia, they'll continue to try to put imports in, but channel, channel, channel. And if you don't have a strong channel, you're going to struggle. And one of the advantages we have at Trane Technologies is we have strong channels not only in residential, but obviously in our commercial business. And that's why we've been so successful with bolt-on acquisitions, taking technology and running them through a very strong channel.

Question – Andrew Obin: Great. Thank you. So maybe now we can go to commercial HVAC outlook. So how should we think about institutional spending next year? Because on one hand, you do have a lot of sort of I think federal funds coming to the channel. At the same time, if you look at muni bonds issuance, that's relatively flat. Tax receipts are relatively flat. How does that play out in 2023 and into 2024 in your view?

Answer – Dave S. Regnery: Yeah. I think there's still a lot of tailwinds in the market on the institutional side, I mean, you think about the – it's a – five or six years ago in the commercial space, we used to talk about overregulation and all these controls that are in place, and Trane Technologies kind of took the approach, and said, no, we're going to get ahead of regulation and eventually regulation will be a tailwind for us. We're now seeing that tailwind, okay. So you have things like ESSER funding where it's for the education vertical, to make our schools safe for our children. Last year, our order rates for equipment in the education vertical were up 40%, 4-0. And it's a very big vertical for us. I think you'll see tailwinds from infrastructure spending. You'll see tailwinds from IRA. You'll see tailwinds from CHIPS and Science Act. So there's lots of tailwinds that are coming. IRA and CHIPS and Science are in front of us. So we've had a very strong 2022 in our commercial business. You see that with our order rates. You see that with our revenue. So we have an extremely strong backlog right now, predominantly in our commercial HVAC business. So we're very bullish right now.

Question – Andrew Obin: And are you seeing any impact from the CHIPS Act? Because my understanding is that the HVAC units that go into semi-fabs or some of the biggest units, I think the number we've heard was something like $250 million system. We've heard from the channel that there is concern among data center providers that they're going to be shut out of the market because the semi-fab units are even bigger and more important. A, are you seeing any orders come from what's happening in places like Arizona? And, B, do you need to have capacity to meet that demand at the large scale?

Answer – Dave S. Regnery: Yeah. We've always had a strong vertical for the high-tech industrials, so think of fab plants really on a global basis. So it's been a strength of us for a long time. These are complex systems that get installed. And when you have complex applied systems, that's where Trane Technology sits right in our sweet spot.

So I think the CHIPS and Science Act, to answer your question, we haven't seen a lot of demand yet from that, okay. Although, there's a debate whether projects that are going to be announced now will actually get funding and I'll let the chip manufacturers go down that road and understand how they're going to get funding. But it certainly will be a tailwind for our business. And you're right, these projects are quite large, and you still have lots of demand out there right now for data centers. I don't see that going away. That will be a strong vertical in the future. As far as capacity is concerned, we're not concerned necessarily about capacity.

Question – Andrew Obin: And do you see any sort of Trans-Pacific opportunities, right, because clearly I think our data shows industrial manufacturing, construction is up, I think 40%, if you look at tech specifically, I guess up 300% or something, still I like that. Is there a specific opportunity for clean rooms, right, because high-tech environment is very different. Coming back to the US, do you have the product to service this? Is it more of a strategic bolt-on opportunity? Does it open new avenue of growth for Trane?

Answer – Dave S. Regnery: Yeah. I mean, the air handling side of our business is a large portion of our Trane commercial business in North America. In Europe, we acquired a company called Al-Ko in October. It's focus is on the high-tech side of air handling. So think of clean rooms, think of hospitals that will augment our portfolio in Europe as well as in Asia. Portion of that business is in Asia. In North America, we're already well positioned to that.

Question – Andrew Obin: And what are you seeing on sort of on unitary light commercial and could you remind what percentage of the portfolio is that for you guys?

Answer – Dave S. Regnery: Yeah. I think if you think about our commercial HVAC business in North America, about 50% of that business is services, about 50% of that business is equipment. And if you take the equipment number, you could break it down to about 50% applied, 50% unitary.

Question – Andrew Obin: Okay.

Answer – Dave S. Regnery: That's the rough numbers.

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: We saw very strong demand last year in light unitary. So I think we had a – order growth was very strong. I think revenue in the fourth quarter was up 30% in light unitary. So very strong. I think one of the things that we did with our

light unitary, people aren't realizing this, but that was impacted by the SEER change, and we took the opportunity to really refresh our portfolio. And today, we have a hybrid solution available in all sizes in our light unitary portfolio. And a hybrid solution means that it has a heat pump, but you can also use fossil fuel if the ambient temperature outside reaches a certain set point. And you could determine that set point based on the geography you're in.

So, for example, if it's minus or if it's 15 F, you may switch over to fossil fuel. The rest of the time you're going to be using a heat pump solution. So we believe this is going to be very, very attractive to customers. It really will help significantly with the fear factor of I need a fossil fuel for heating. This is a solution. We say, okay, you could have the fossil fuel. I could tell you you're not going to use it a lot, but you could build it into your system. But the majority of the time, 90-plus percent, depending on where you are living in the United States, you're going to be using your heat pump. And think about the carbon reduction you're going to get from that, it's significant.

Question – Andrew Obin: Got you. Thank you. Maybe we can shift to transport refrigeration which was back to IR and TK and always close and dear to my heart.

Answer – Dave S. Regnery: Well, it was close to my heart too. I ran it for several years.

Question – Andrew Obin: So what does recovery for the US and Europe transport market look like?

Answer – Dave S. Regnery: I mean, well, first of all, I would say that we'll start in the Americas. Our transport market has been strong for a number of years. If you think about the trailer market, which tends to be the bellwether within the Thermo King business, I think it's seven of the last nine years, it's been above – the market has been above 40,000 units.

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: Okay. And if you think about the years that it were not, it was a pandemic year, and there was – the year after where it was a little bit short of that. As far as what's being projected right now by ACT for the trailer market is think of it as a flattish year in 2023, down in 2024, and then right back up in 2025 and that growth rate continues into the future. The need to transport perishables isn't going away, and in fact, it's increasing. If you think about it, 30% of all food that's produced is wasted. Yet people go hungry every day, which is something that just doesn't make any sense. But 30% of all food that's produced is wasted. A lot of that is wasted because of the way it's being transported.

And if you think about what's happening in the pharma space, where you need precision temperature control to transport MRA-type vaccines, that's a demand that's increasing. Next year, if everything holds true, we will be getting an mRNA vaccine for your flu, for flu shots. So it'll not be just for COVID anymore. That's going to continue to expand. Again, precision temperature control, it's right up Thermo King's sweet spot.

Question – Andrew Obin: Got you. And what about Europe?

Answer – Dave S. Regnery: Europe is a little bit different story. We think it's going to be down in 2023. A lot of that has to do with us pulling out of the Russian market. But it's going to be a bit slower here. We see that slow in 2023. We'll see how the future. We don't have a lot of great forecasting. IHS is not as accurate as ACT in their...

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: ...forecasting. So they're calling it down this year, somewhat flattish into the future, but we'll see how that transitions.

Question – Andrew Obin: And China just around the world?

Answer – Dave S. Regnery: China is, it's a small portion of our Thermo King business. And it's one of those markets that you always think is going to have an exponential growth just because of all the demand there for transport of perishables. And it just really has never taken off. And – but we're still optimistic that one day people will figure out that if you transport perishables in the right conditions, they last longer. So, it's small right now. It's immaterial. But we'll keep the pressure on and keep inventing for that market and keep pushing it to our customers.

Question – Andrew Obin: And how does electrification play out on the transport market?

Answer – Dave S. Regnery: Yeah.

Question – Andrew Obin: What does it bring? Can you just describe it to us?

Answer – Dave S. Regnery: Well, I think electrification is, obviously, it's a how do you reduce the need for diesel engines at a high level? I think the transition is starting with small first and eventually it will go into the trailers which are used for a variety of different uses. If a unit goes home at night, so think about a food distribution, it's a good candidate to be electrified. If it's going to be a long haul or what's called a long haul, where it's going to be on the road for two to seven days, those tend to be – you're going to have to wait till the infrastructure gets build out for electrification.

What we're doing is we're building our products so it's power agnostic on the electric side. So we don't care where we get the power from. It will work with different forms. So if it's battery, yes, we can handle it. If it becomes a hydrogen cell, yes, we can handle it. And that's our kind of our strategy on how we develop the electrification there. We already have products today in the smaller end that are 100% electric. They work with electric vehicles. They can be tied into the vehicle or they could be on energy pack that we would provide to the customer, so it could run autonomously if the engine is turned off.

Answer – Christopher J. Kuehn: Andrew, one of the slides we have at our earnings release not only shows the diversification of Thermo King, but also shows the market performance versus our performance in EMEA and in the Americas.

Question – Andrew Obin: Yeah.

Answer – Dave S. Regnery: The innovation that Dave's really talked about, we can really see very clearly the outperformance versus the market. So, while markets may be flat to maybe down in Europe this year, we expect to outperform.

Answer – Dave S. Regnery: I was in Galway earlier this week on my trip over and we were with the engineering group there, and they were showing us some of the innovations they have with the electrification. This stuff, if you're an engineer, this stuff is really – it's really interesting as to how we're looking at it. If you think about a truck going down the road, and this is their vision, right. They're looking at that truck and they're saying, where is energy being wasted? It's not being recaptured. And really, you really find two areas or three areas. One is solar, obviously, and we've been putting solar panels on top of trailers for a long time, but the others are, think of braking and think of going downhill. And they've got some really, really creative innovations there where they can harness that energy that in most cases will just be wasted and recharge a system so you get longer – more longevity in the trip.

So it's actually really exciting. It was energizing to see, but they were showing me these models and how much energy they could actually capture. So, this is going to happen, okay. It's going to happen within you pick a time period here, on the long haul, it's probably going to take a while, so you could get it built out, but on the smaller side it's going to be electrified relatively quickly.

Question – Andrew Obin: Excellent. So, and that brings us to digital solutions. So, you just sort of highlight – so, what you can – my understanding, you are the leader in terms of sort of digital in the industry. I think that's a fair way to describe you guys, right. So, what is the opportunity to attach software solutions like Tracer or Symbio to Trane's

installed base. And out of – you sort of described your revenue portfolio, how should we think about the revenue impact? How do we quantify that?

Answer – Dave S. Regnery: Yeah. I think we're still in the early innings on this. We've been at it for a while, but it's increasing quickly, okay. Think about being connected to at the asset level, okay, at the system level, so think of a chiller plant and then think of it at a BMS level or at a building level. And we could be connected at all levels. And it's really not just being connected. It's what are you doing with the data. And we've gotten very sophisticated as to how we're mining this data so that a building can operate more efficiently.

In the past, we used to have a – we have a great service business, but the service business used to be like if something was not working properly, okay, it was broken and you'd basically be binary and say, it's not working, call the service technician, and have them come. In today's world, okay, we're sending technicians when a building is using too much energy. And that's the sophistication we have. It's 70 degrees F outside. You're using as much energy as if it was 90 degrees. Why is that system not performing the way it should? Why is it not using fresh air from the outside that doesn't need to be conditioned to the extent as the inside air does? And we're able to come up with those algorithms because of the sensors that we have built into the system to understand that.

So you want to be connected. You want to be connected. If you're a building, if you're running a building, you want to be connected. You want to be able to understand how are other buildings in my geography performing, why am I not performing at the peak levels, and what can be done about it.

Question – Andrew Obin: And so, when you talk about the number of connected assets, these are the assets where you can connect them or these are the assets where you're connected and there is a revenue stream attached to it? Is there a material difference between the assets that can be connected versus assets where you're actually working with the customer actively as part of your service model involves active sort of?

Answer – Dave S. Regnery: We'll try to connect as many assets as we...

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: Okay. So – and understand that our equipment comes out of the factory with factory-mounted controls, so it's connectable.

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: But think of it as you could have a service contract now that in the past it was a maintenance contract, now it's an energy contract. And you would have an energy contract with a building owner and say, here's the contract. That's what it looks like. And we're going to keep you in this band from an energy consumption profile. We'll know their profile. We'll know where their peak rates are. We'll know how to manage their peak rates. A lot of times in some areas, especially in the United States, your energy bill is derived by hitting a peak level and then you start from there. Why do you just keep reducing those peak levels?

Now, we have lots of different tools to do that. Some of it just drives to create variable speed, so everything doesn't come on at once, so you have a big in-rush of current that consumes obviously a lot of electricity. Some of it is using thermal storage, ice storage, so that you'll never hit a peak level in 95-degree days. You're going to start burning ice versus actually running your compressor, which uses a lot of energy. So think of it – that it's about managing energy, and the more assets you're connected to, the better you're going to manage that energy profile within a building. And if you – in a building we've done thousands of energy audits, right? HVAC and lighting is the majority of your energy consumption. So if you start with those two, you're going to be in a good track.

Question – Andrew Obin: So, in 5 to 10 years, right, if we take your service revenue, what percent of the service revenue do you think is going to be directly tied to digital capabilities?

Answer – Dave S. Regnery: Yeah, it's a good question. I mean if you look at our service revenue today, it's about a third of the company and it's very resilient. By the way, our service business has grown at high-single digit rates compounded annually for the last six years. So it's a very resilient business. And by the way, that includes the pandemic year where we did not even have access to many buildings. The service business was flat. So it's very resilient. It's growing nicely. We have a whole business operating system around our service business, so there's a reason why it's growing that well. And I won't get into too much specifics on it, but it's a great business.

As far as the energy management side of that, look, decarbonization is going to continue. And if you think about the elements of decarbonization, it's certainly around the refrigerants you're using. It's certainly around the efficiency of the products. But it's also in how you're managing the buildings and the built environment. And most buildings that we go in and we do an audit of, they tend to be 30% to 40% underperforming, meaning that they're using too much energy.

So if you could be connected to that building and continuously commission that building, so it's always performing the way it was designed. Just again, think of the

opportunity to reduce the carbon footprint. And we'll see how big it gets. It's hard to quantify. I know there's – I think there's 400 billion square feet of commercial real estate globally. So there's a lot of opportunities out there. And I wouldn't even say we're in the – if I was using a baseball term, we're not even in the first inning. So we have a long way to go.

Question – Andrew Obin: So how much square footage do you have under the digital?

Answer – Dave S. Regnery: We don't look at it quite that way. We have about 36,000 connected buildings. I don't know what the square footage of each of those...

Question – Andrew Obin: Okay

Answer – Dave S. Regnery: ...buildings are, but it's minor compared to...

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: ...the size of the opportunity.

Question – Andrew Obin: Right. Got you. So maybe we can talk – again, one of the sort of topics that comes up sometimes is consolidation in the channel. I mean, you guys, I think everybody is trying to copy what you've done over the past decade in terms of your own channel consolidation, but you definitely see private equity come in and sort of consolidate the dealer. We've also heard that during COVID, because of product shortage, a lot of dealers sort of carry multi – they have more of a multi-brand focus than before. And you do have a very unique – you do have a moat. But if the world is changing, how do you – a, what are you seeing, and how do you adjust your own strategy to this changing world?

Answer – Dave S. Regnery: And just so I'm clear, you're talking dealers at the residential level?

Question – Andrew Obin: Yeah. That's right. Yeah.

Answer – Dave S. Regnery: So, there has been some consolidation at the dealer level within North America.

Question – Andrew Obin: And also you have applied distributors being taken out...

Answer – Dave S. Regnery: Yeah.

Question – Andrew Obin: ...by private equity that are not trained.

Answer – Dave S. Regnery: And think about it, okay, so the residential business, again, the OEM ourselves will sell to an independent wholesale distributor, who will then sell to a dealer, who will then sell to the end customer…

Question – Andrew Obin: Right.

Answer – Dave S. Regnery: ...right, or we'll operate as that independent wholesale distributor. There has been some consolidation that's happened at the independent wholesale distributor level. At the end of the day, what's important to an independent wholesale distributor? It's the brands that they carry, right. They're in geographic areas. There are so many premium brands out there. We're one of them. If they got consolidated, so if someone bought one that's predominantly a carrier IWD, that doesn't necessarily mean if it's – they're going to switch to Trane because someone else in that area already has Trane. So if they're underperforming, maybe, I mean, that's why we watch the performance of our independent wholesale distributors very closely to make sure that they're performing the way they should. If not, we can go in ourselves or we'll find another independent wholesale distributor, which rarely happens, but it can happen. So, the consolidation could occur there.

Again, it's about the brands that you carry. And if you have a great brand, remember there's two or three other premium brands, someone else in that area has one of the other brands. At a dealer level, it's a little bit different. The dealers, there's roughly 150,000 dealers in the United States, 150,000 dealers. So, you do the math. Some of these dealers are pretty, pretty small. And a big dealer could be $5 million, $10 million. So, consolidating dealers, it's a tough part. I mean, it's – you got to remember that most dealers, the principal is the rainmaker in the dealership. They tend to make everything happen. They tend to be the owner. They also tend to be the one with their name on the trucks that are going around servicing. Buying up some of those, it's a strategy. But I tell you, blending lots of cultures together and having the principal probably want to exit the dealership because that's why they're selling it, that could be a – that's a strategy and we'll see how it plays out.

Question – Andrew Obin: Let's see if there are any questions from the audience. Please.

Question – Unidentified speaker: Thank you. Just coming back on the heat pump, I know we've discussed it a little bit. But can you just give me an indication of the size of the business today and your strategy in terms of expanding organically, inorganically? And also thirdly on that, where do you want to enter the European residential market?

Answer – Dave S. Regnery: Yeah. Great. Well, so I'll start with applied, okay, then I'll talk about residential. In the applied space, we have solutions that exist today called our Thermal Management System where you no longer need fossil fuel for heating, you no longer need it. And if you think about the efficiency gains, yesterday, you used to have a chiller plant, okay, for cooling and you had a boiler plant for heating. We combine the two into one system, right. So we went from simultaneous heating and cooling. We took that technology. We now created different elements of the system. We have very sophisticated controls, which is kind of the key to this, so that we know how to operate the system in an efficient way. It's – I won't size it, but I would tell you it's sizable in our portfolio in Europe from an equipment standpoint. And Europe, again, think of that as 50% services, 50% equipment. So it's growing very fast and we're having a lot of success with it.

That technology is being scaled on a global basis, slower adoption in the US and in Asia, but it will get scaled. And if you could eliminate the majority of the fossil fuel that you're using in your building for heating, why would you not do it, right. And I often get asked that question. We have great technology. Why is it not being deployed faster? And I keep going back to, I need to make sure everyone's aware of what's possible, right? It's not like this isn't a technology like carbon capture where, yeah, it works. It's not economical and maybe someday we'll be able to scale it. We should all be scaling this technology today.

15% of all greenhouse gas is from heating and cooling. The majority is from heating. You could eliminate fossil fuels for heating. Think about the advantage that you would gain from doing that, from a carbon footprint reduction. And it used to be thought that there was no payback for these projects. These systems are 60%, 70% more efficient than what you're replacing it with. So, I mean, it's – the paybacks are very, very attractive.

One of the problems is if your boiler breaks and you're running the building, do you call Trane Technologies? Probably not, right. You don't say, hey, my boiler is broken. I'm going to call Trane Technologies and see if they could replace it. It doesn't happen that way. So we need to get this knowledge out there as to what's possible. And this will scale on a global basis. There's no doubt in my mind it will scale on a global basis. We've already started to scale it in North America.

On the residential side, it's a little bit different, okay. I think there – we are a leader in the heat pump technology, the market's a third heat pumps, we're north of that. And I think you're going to see with IRA another – a nice tailwind for the heat pump solutions. I think you'll end up with a hybrid solution, very similar to what I described with the LCU market where you'll leave the furnace in place, but you'll rarely ever use it, and based on the ambient temperature, you'll use fossil fuel, which is still a great

solution, right. Think about fossil fuel creates greenhouse gas, right? If you can eliminate it, you're going to eliminate a lot of greenhouse gas.

So, I'm super excited about the solutions we've been able to develop, and we have lots of examples where we could, if someone wanted to see an example where it's really working, we have lots of them to prove. But this is a solution that we just need to scale on a global basis. And it's one of those things where I'm so passionate about bending the curve on global warming. And here's a solution that could have a dramatic impact on that. We just need all to use it.

We're out of time, but that's I think...

But thank you for the questions.

We've finished on the high note. Thank you, Dave.