

01-May-2024

# Johnson Controls International Plc (JCI)

Q2 2024 Earnings Call

## CORPORATE PARTICIPANTS

**Jim C. Lucas**

*Vice President-Investor Relations, Johnson Controls International Plc*

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

---

## OTHER PARTICIPANTS

**C. Stephen Tusa**

*Analyst, JPMorgan Securities LLC*

**Nigel Coe**

*Analyst, Wolfe Research LLC*

**Scott Reed Davis**

*Analyst, Melius Research LLC*

**Joseph O'Dea**

*Analyst, Wells Fargo Securities LLC*

**Julian Mitchell**

*Analyst, Barclays Capital, Inc.*

**Noah Kaye**

*Analyst, Oppenheimer & Co., Inc.*

**Andrew Kaplowitz**

*Analyst, Citigroup Global Markets, Inc.*

**Joe Ritchie**

*Analyst, Goldman Sachs & Co. LLC*

**Jeffrey Todd Sprague**

*Analyst, Vertical Research Partners LLC*

**Gautam Khanna**

*Analyst, TD Cowen*

**Deane Dray**

*Analyst, RBC Capital Markets LLC*

**Andrew Obin**

*Analyst, BofA Securities, Inc.*

**Stephen Volkmann**

*Analyst, Jefferies LLC*

## MANAGEMENT DISCUSSION SECTION

**Operator:** Good morning, and welcome to the Johnson Controls Second Quarter 2024 Earnings Conference Call. [Operator Instructions] Please also note, today's event is being recorded. I would now like to turn the conference over to Jim Lucas, Vice President, Investor Relations. Please go ahead.

---

### Jim C. Lucas

*Vice President-Investor Relations, Johnson Controls International Plc*

Good morning, and thank you for joining our conference call to discuss Johnson Controls second quarter fiscal 2024 results. The press release and related tables that were issued earlier this morning as well as the conference call slide presentation can be found on the Investor Relations portion of our website at [johnsoncontrols.com](https://johnsoncontrols.com).

Joining me on the call today are Johnson Controls Chairman and Chief Executive Officer, George Oliver and Chief Financial Officer, Marc Vandiepenbeeck.

Before we begin, let me remind you that during our presentation today, we will make forward-looking statements. Actual results may differ materially from those indicated by forward-looking statements due to a variety of risks and uncertainties. Please note that we assume no obligation to update these forward-looking statements, even if the actual results or future expectations change materially. Please refer to our SEC filings for detailed discussions of these risks and uncertainties, in addition to the inherent limitations of such forward-looking statements.

We will also reference certain non-GAAP measures. Reconciliations of these non-GAAP measures to the most directly comparable GAAP measures are contained in the schedules attached to our press release and in the appendix to this presentation, both of which can be found on the Investor Relations section of Johnson Controls' website.

I will now turn the call over to George.

---

### George R. Oliver

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Thanks, Jim, and good morning everyone. Thank you for joining us on the call today. Let's begin with slide 3. We were very pleased with our second quarter performance as our adjusted EPS came in at the high end of our guidance. Sales growth returned this quarter following the cyber disruption at the start of the fiscal year, and our team delivered strong margin expansion. This was driven by productivity in conversion of our higher margin backlog.

Orders noticeably rebounded in the quarter, up 12% year-over-year. This was driven by continued strength in data centers, which I will talk about in an upcoming slide. Our backlog remained at record levels, growing 10% to \$12.6 billion, and the quality of the backlog is strong, as I mentioned.

Customers continue to come to Johnson Controls because of our ability to deliver attractive outcomes. The fact is, our focus on delivering engineered solutions for commercial buildings continues to serve as a differentiator for Johnson Controls, allowing us to deliver unparalleled value.

With the business performing at a high level, free cash flow continues to improve and we are taking action to further strengthen our balance sheet. Most recently we reached a broad settlement with a nationwide class of public water systems related to our AFFF product. Additionally, we announced that we discontinued use of our receivable factoring programs.

Our efforts are turning into results and the value of our transformation is coming into focus. Going forward, we remain active in pursuing strategic alternatives of certain non-core product lines that do not align with our focus on being a comprehensive solutions provider for commercial buildings. While we do not have any updates to provide at this time, we continue to make good progress on the exploration of alternatives for some of these assets.

The results from the quarter and the performance of our team give us confidence that we will continue to build momentum into the second half and we will be able to meet our financial objectives for the year. Marc will discuss these in more detail later in the call.

Please turn to the next slide. I want to take an opportunity to discuss how we see the composition of our company going forward. The core of Johnson Controls is our engineered solutions offering. These solutions include commercial HVAC, controls, fire, security, and services. Our solutions center around our domain expertise, forming the smart building trifecta of energy efficient equipment, clean electrification, and digitalization.

We have created one end-to-end operating model that we now have deployed around the globe, which allows us to better serve our customers more efficiently with greater predictability. Our solutions include both systems and services that focus on maximizing the opportunities around the lifecycle of the equipment. These solutions are enhanced further by our digitally enabled offerings, which allow us to provide tailored outcomes for the customers which we serve.

Our Systems business begins at the engineering and design phase. It is managed through installation of the project. The Systems business is an important vehicle to capture a service event, and we have created a scalable service model that is driving more consistent growth, and that carries higher margins. The Service business will continue to be a positive contributor to our long-term margin expansion.

Our solutions operating model is enabled by connected equipment throughout the building, allowing us to collect data that drives a consistent and enjoyable occupant experience with repeatable outcomes. We create incredible value for our customers, which is clearly demonstrated by our results in the most recent quarter.

The transformation of our portfolio into a pure play provider of comprehensive solutions for commercial buildings is an opportunity. Once complete, we will be able to flow additional resources to the most attractive opportunities. Part of our commitment to disciplined capital allocation remains ensuring that we are deploying resources to the right opportunities.

Turning to the next slide, Johnson Controls plays an important role in serving the rapidly growing data center market. We provide cooling needs for the top hyperscale and co-location data center customers. The demand for data centers is accelerating globally, with the next generation of data centers projected to be designed for more than 1 gigawatt of power consumption.

We have intentionally positioned the company to benefit from this emerging trend due to our relentless innovation efforts and inherent strategic advantages. These include, one, creating leading technologies around a broad range of air-cooled and water-cooled chillers to support the exponential growth in cooling demand. Two, investing in R&D teams and world-class test laboratories to design, build, test and demonstrate performance of equipment

over the entire data center operating envelope. Speed is the key, so we are investing to accelerate the pace of innovation. And three, creating leading domain expertise to provide complete package solutions that drive outcomes, such as high-efficiency chiller plant, space cooling, critical environmental monitoring, security systems and fire safety and asset protection systems while providing service for the entire life cycle of the asset.

Underscoring these advantages is our core identity as a comprehensive solution provider for commercial buildings. This enables us to fulfill more than cooling needs for our customer, which makes us a preferred partner that can expand with our customers across all geographies.

In fiscal 2023, our sales to data centers were approximately \$2 billion. We continue to see solid demand for our solutions, which is evident in our orders. This is reinforced by the fact that our fiscal first half orders for data centers have already surpassed the orders we booked for all of fiscal 2023.

With orders growing, we have been investing in capacity to be able to execute on our accelerated data center backlog. Our strong presence in data center starts with our advanced chiller technology. Given the amount of heat generated at data centers, our customers are looking for solutions that maintain constant temperatures in even the most extreme environments.

In addition to chillers, we have extended our offerings with both air handling units and computer room air handlers. Our cooling solutions continue to advance, and we are working on next-generation technologies to keep up with the growing needs of data centers.

The case study on this slide was for a 0.5 gigawatt facility that is being expanded now to a full gigawatt. The project included the deployment of our chillers and air handlers, and just as important, we have secured planned service agreements for all of the chillers.

Our pipeline for data centers remains very healthy, and we are continuing to expand our capacity to meet this strong demand. We remain excited about the opportunities in this fast-growing vertical, and look forward to updating you on our progress in the future.

Before I turn the call over to Marc to go through the financial details, I wanted to say how proud I am of the Johnson Controls team. While we faced some challenges in the first fiscal quarter and will continue to navigate a dynamic environment, we delivered on our commitments to our customers to drive value for our shareholders.

Now with that, I'll turn it over to Marc.

---

## Marc Vandiepenbeeck

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

Thanks, George, and good morning, everyone. Let me start with summary on slide 6. Total revenue of \$6.7 billion was flat year-over-year, while organic sales grew 1%, as strong high single-digit Service growth more than offset continued weakness in China Systems business and declines in the global residential HVAC.

Segment margins expanded 70 basis points to 14.5% as we delivered strong productivity and converted higher-margin backlog. Adjusted EPS of \$0.78 was up 4% year-over-year and at the high end of our guidance range of \$0.74 to \$0.78.

Operations contributed \$0.06 of the growth in the quarter, benefiting from recover momentum following the cyber incident at the end of our last fiscal year, as well as improved productivity. Below the line, we saw headwinds from

net financing charges due to higher interest rates. Overall, we are pleased with the strong adjusted EPS performance in the quarter.

On the balance sheet, we ended the second quarter with approximately \$800 million of available cash, and net debt increased to 2.4 times, which is within our long-term target range of 2 to 2.5 times.

For the fiscal first half, excluding the impact of the receivable factoring unwind, adjusted free cash flow improved \$166 million year-over-year. As we end the use of factoring, we will continue to focus on further improvements on our core billings and collection capabilities, leading to continued improvement in our cash performance over time. We've also made tremendous progress in reducing our inventory levels and expect further improvement in the second half.

Let's now discuss our segment results in more details on slides 7 through 9. Beginning on slide 7, organic sales in our Global Products business declined 1% year-over-year, with volume declines offsetting price. We saw low single-digit growth in commercial HVAC highlighted by mid-teen growth in light commercial. Applied HVAC declined mid-single digits against a tough year-on-year comp.

Fire & Security declined low single-digit against tougher comps as decline in fire suppression more than offset growth in fire detection and security video surveillance. Industrial Refrigeration grew over 25% with another strong quarter in EMEA/LA.

Global Residential HVAC declined low single-digit, driven by low single-digit decline in global ductless residential, primarily in Europe. Our global ducted residential business declined mid-single digits with a mid-single-digit decline in North America, offsetting strength in Latin America. Dealer growth is up high double-digit with channel inventory normalizing and distributor sell-through continuing to increase. We see momentum building in our North America market.

Adjustment segment EBITA margins expanded 30 basis points to 18.9% as positive price/costs and improved productivity more than offset mix headwinds.

Moving now to slide 8 to discuss our Building Solutions performance. Orders regained momentum with strong 12% growth in the quarter. Overall, Service order grew 13% with broad-based growth across the regions. Systems orders grew 12% as North America offset declines in EMEA/LA and APAC.

Organic sales increased 2% in the quarter, led by Service growth of 8%. Systems revenue was down 2% as declines in APAC and EMEA/LA more than offset high single-digit growth in North America. Building Solutions backlog remains at a record level, growing 10% to \$12.6 billion. Service backlog grew 3% and Systems backlog grew 11% year-on-year.

Let's discuss the Building Solutions performance by region on slide 9. Orders in North America increased 19% in the quarter, driven by 26% growth in Systems. We continue to experience strong demand in data centers, which led to nearly 50% growth across our HVAC controls platform.

Fire & Security orders grew low single-digit. Sales in North America were up 8% organically with strong growth across our HVAC and controls platform, up mid-teens year-over-year. Overall, our System business grew 9%, while Service grew 6%.

Segment margins expanded 110 basis points year-over-year to 13.6%, driven by the continued execution of higher-margin backlog and strength in our higher-margin Service business. Total backlog ended the quarter \$8.9 billion, up 15% year-over-year.

In EMEA/LA, orders were up 8%, with strong double-digit growth in Service, offset by a decline in System to a strong year-over-year compare. Consistent with our strategy, there is an increased focus to drive higher margin into our backlog. Controls had a strong order intake with solid growth in Europe and Latin America.

Sales in EMEA/LA grew 4% organically with low teen Service growth offsetting a decline in our System business predominantly driven by Latin America and Middle East HVAC businesses. Our Service business benefited from strong double-digit growth from both our recurring and shorter-cycle transactional businesses. Industrial refrigeration, another solid quarter with low teen growth year-over-year.

Segment EBITDA margin expanded 170 basis points to 8.4%, driven by improved productivity, positive mix from the growth in Service and by the conversion of higher-margin Systems backlog. Backlog was up 10% year-over-year to \$2.4 billion.

In Asia Pacific, orders declined 9% as we remain selective of the jobs we book into the China System backlog. Overall, APAC service order grew high single digits, driven by high single-digit growth in our recurring contracts. Sales in Asia Pacific declined 23% as the System business was impacted primarily by the continued weakness in China.

Our Service business grew 7% in the quarter with strong growth in our shorter-cycle transactional business. Segment EBITDA margins declined 80 bps to 11% as weakness in China offset positive mix from our Service business. Backlog of \$1.3 billion declined 18% year-over-year.

Now, let's discuss our third quarter and fiscal year 2024 guidance on slide 10. We enter our seasonal strong third quarter with good momentum, evident by our robust order and resilient service. Our margin-rich backlog remains at historical levels. And our global product book-to-bill business have stabilized. We are introducing third quarter sales guidance of approximately low single digit growth, which assumes one more quarter of top line pressure in our System business in China. We expect strong contribution from North America and EMEA/LA, especially from the regained momentum in our service business. Global product is expected to return to growth as our book-to-bill orders remain positive through the second quarter.

For the third quarter, we expect segment EBITDA margin to be approximately 17% and adjusted EPS to be in the range of \$1.05 to \$1.10. We are maintaining our full-year guide. We expect sales growth of approximately mid-single-digit, led by continued momentum in our service business, stabilization in our global products and a cautious second half outlook for China.

Segment margins are expected to expand approximately 50 to 75 basis points through productivity improvement, positive mix from the service business and conversion of a higher-margin backlog. Our adjusted EPS guidance range is unchanged and is expected to be approximately \$3.60 to \$3.75. The high end of the guide assumes accelerated recovery in China, normalized channel inventory levels in North America resi, and service acceleration.

Excluding the impact of unwinding the receivable factoring, we continue to expect adjusted free cash flow conversion of approximately 85% for the full year. Our working capital metrics continue to improve, supported by our first half performance.



In summary, we remain confident in our ability to deliver on our financial and operational commitments.

With that, operator, please open the lines for questions.

## QUESTION AND ANSWER SECTION

**Operator:** Thank you. We will now begin the question-and-answer session. [Operator Instructions] And today's first question comes from Steve Tusa with JPMorgan. Please go ahead.

**C. Stephen Tusa**

*Analyst, JPMorgan Securities LLC*

Hi. Good morning.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Good morning.

A

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

Good morning, Steve.

A

**C. Stephen Tusa**

*Analyst, JPMorgan Securities LLC*

Can you just maybe talk about was there anything that was pushed from 1Q into 2Q? And then, I guess looking at the guidance, fourth quarter definitely looks like a step up here even more so than before. What gives you the confidence even at the lower midpoint to see that kind of ramp from 2% to 3% to 4% at this stage?

A

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

Yes. So in terms of push from Q1 to Q2, we had some orders that did slip due to the cyber incident and the recovery in the momentum. I wouldn't say it's material in terms of what pushed from Q1 to Q2, but there was some smaller one. But the strength of our orders in Q2 is really coming from the fundamental positive trend we're seeing in our data center business and some other core businesses.

A

Now in terms of the guide for the balance of the year and maybe first address third quarter, if you look at the third quarter guidance we provided of a \$1.05 to \$1.10, we feel very strong about Q3. We regained momentum during the second quarter, and that gives us strong confidence, especially when we enter the third quarter. All of the short-cycle businesses we've been talking about have seen very strong order during the second quarter and we continue to see that momentum building as we enter the third quarter. And that gives us the confidence that our book-to-bill global product businesses, our resi business, and of course our Business Solutions service business will achieve the target we've set for them.

You know that China is still facing one more quarter of revenue pressure in Q3, but the orders momentum there remains very, very strong. And we are really expecting a very strong sequential performance in both EMEA/LA



and North America. And so if you think about the guidance about the balance of the year, we're still showing the same range as we did to the prior quarter, even though we created a pretty strong second quarter at the high end of the guide we have provided.

And if we look at the second half and the balance of the year, what you need to see and what we're expecting to see from a guidance standpoint is the China business will have to accelerate its momentum both on order and on revenue. We would also need to see the resi business with a sequential quarter-over-quarter growth to increase. And you know that business is facing some additional variability associated with the fact that we are switching refrigerants as part of a market change.

And finally, to achieve the very high end of that guidance, we would have to achieve improved service growth from where we closed the second quarter, and where we see the third quarter landing. So and, Steve, I would also remind you that looking comparatively into the second half, we have much easier comps than we did in the first half.

**C. Stephen Tusa**

*Analyst, JPMorgan Securities LLC*

Q

And then lastly, just any updates on deal timing?

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Yeah, so as I said in my prepared remarks, Steve, we are making good progress. As we've said, these businesses are outside the core and represent roughly about 25% of our sales. While they are non-core, they are good businesses that are adding value. So we're remaining focused on maximizing shareholder value. And like I said, pretty much across the board, making good progress and we'll keep you updated as we continue through with these businesses.

**Operator:** Thank you. And our next question today comes from Nigel Coe with Wolfe Research. Please go ahead.

**Nigel Coe**

*Analyst, Wolfe Research LLC*

Q

Thanks. Good morning, everyone.

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Good morning,

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Nigel.

**Nigel Coe**

*Analyst, Wolfe Research LLC*

Q

Yeah. Hey guys. Just, Marc, I think you just alluded to the warranty add back in core products. Maybe just, could you just maybe just flesh that out a little bit, why that wasn't considered operating, why that's a discrete item? And

then on the fourth quarter guides, I mean, I think the implication is like low double digit organic growth in the fourth quarter to get to that mid-single digits, even the low end of mid-single digits for the full year. So is that the intention? Do you actually see a pathway to low double digit organic growth? Even though it's easier comps is still quite a tough bar.

---

**Marc Vandiepenbeeck***Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

So let me start first with the global product quality issue, which is really not a warranty issue. It really is a quality issue. The reserve really relates to an anticipated remediation action we need to address in a very recently identified firmware issue within some of our legacy products that are sitting in the field. We are currently testing that firmware update within those device, and we are developing a remediation plan for this particular issue, and we'll announce when we are done with the full remediation.

There's been no reports of any injuries or damage related issue with that issue. These kind of problems are very unusual, fairly rare, particularly for field devices like this. Now, when it comes to the, your second part of your question, I'm sorry, I forgot what you asked.

---

**Nigel Coe***Analyst, Wolfe Research LLC*

Q

Yeah. The low double digit implied organic sales growth in the fourth quarter.

---

**Marc Vandiepenbeeck***Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

We see closer to higher single digit growth for the balance, to be honest with you. That's the input. Yes.

---

**Nigel Coe***Analyst, Wolfe Research LLC*

Q

Okay. And then my follow-up question is on the factoring change. Obviously, I think most of us agree that's good news to try and clean up the kind of cash generation. Just wondering what other measures you are considering to improve the quality of the free cash flow. And in particular, is there any change in the way that you're sort of approaching the market via JC Capital?

---

**Marc Vandiepenbeeck***Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Yes. So I don't think we're going to change our approach on JC Capital. This is really a tool we have to strengthen our ability to provide value and attach service and deepen our relationship with customers as we provide like the full suite with the system, the service and then the financing that wraps around that.

When it comes to our trade working capital, I mean, we had a very strong start of the year. We've improved pretty much every single fundamental there in terms of both receivable management, I would say, as well as our ability to manage our inventory. If you look at our cash collection cycle overall, and if you exclude the impact of the unwinding of factoring, we improved that cash collection cycle by about 5 days, which we are very happy with that outcome.

If you look at the guidance we've given for the year on free cash flow conversion, we are maintaining the 85% despite very strong performance in the first half and we see the continuous improvement in our working capital metrics. But you need to understand, we continue to invest in our most attractive organic growth opportunities,

particularly as we increase capacity to meet the very high demand we see in data center. We are going to be able to make those investments and maintain that 85% conversion, but we want to capitalize on that growth we see in the market.

**Operator:** Thank you. And our next question today comes from Scott Davis at Melius Research. Please go ahead.

**Scott Reed Davis**

*Analyst, Melius Research LLC*

Hey, good morning guys.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Hi, Scott.

A

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

Hi, Scott.

A

**Scott Reed Davis**

*Analyst, Melius Research LLC*

I'm looking at the APAC numbers and applied obviously down a fair amount. But Fire more flattish, Fire and Security more flattish. I'm just, to me it's, I would have expected those to be a little bit more correlated. So was there more project selectivity on the applied side. Was that what you we're saying, George? I kind of lost the train of thought there for a sec when you were talking about it.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

No. As we're looking at what we're deploying from a solutions standpoint, we're looking at each of the domains and then how we differentiate and how we go to market, being able to capture what we see to be the secular trends around data centers in some of these key end markets. And so it's really just based on the backlog that we've had, how it's converting. And then, as we're getting more integrated solutions, you'll see where we get more of a broad-based pickup in all of the domains.

A

The applied was specifically where in the construction market, as Marc said, we have a big base of business in China. We have the market-leading position. And we've probably seen more of a decline on the commercial side, commercial – more of the commercial resi side. And so as we have adjusted inventories and as we've been working to now make sure that our resources are allocated more broadly across some of the other verticals, we're starting to see a real strong pipeline develop. And we're converting that pipeline.

So, as Marc said, through the second half, we'll get back to positive orders, as well as positive revenue by the end of the year. So, we're confident that we're going to recover that. And then, Scott, in general, just making sure that we're – with the differentiated solutions that we are deploying, not only are we getting the share, but then from a Service standpoint, getting the attached service also.

**Scott Reed Davis***Analyst, Melius Research LLC*

Q

Okay. That's actually really helpful. And then switching over to data center side. I mean, where – understand your traditional capabilities and then Silent-Aire gave you, I think it was air handling capabilities at a higher level. Where are you as far as capabilities at chip-level cooling? And is there anything, any partnerships that you are forming to address liquid cooling?

**George R. Oliver***Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Yeah. So, let me frame up data centers because it has been, obviously, a key area for us as we've been deploying our resources, investing over the last few years because we saw this coming. I'd say that we are well positioned with the cooling technologies and solutions, and a lot of that is working directly with each of the key hyperscalers and colos. Now, we are partnering with them, understanding from a technology deployment, how does that cooling technology then get deployed at the chip and depending on how these are going to be configured.

So, we're making sure not only with our innovation and investment, it's complemented with what we're doing and how we go to market to serve their needs. So, we've got the right capacity to meet the increased demand. And like we said earlier, we're providing more than just chillers. So, as we go in with our customers, we've got strong capabilities across air handlers, as well as craws and now we're including the full solution, including controls, building controls, fire and security.

Now, as you look at how these data centers are being designed for the future, they're going to be over 1 gigawatt of power consumption. They're going to need a wide range of air cooled and water cooled to support the exponential growth to support, as well as then how it's deployed from a liquid cooling standpoint. So, not only are we innovating with hyperscalers and colos on making sure that we are partnering with the right application of our cooling technology that ultimately delivers the most amount of efficiency.

And I would say, Scott, that the investments we've made with R&D and with the world-class laboratories that – where we design, field test and demonstrate performance of the equipment over the entire data center operating envelope, we've engaged almost 100% of the data center operators and working very closely with them, not only with how we differentiate the solution, but as important, as Marc said, we've been investing in making sure we've got the right capacity with the right technology to ultimately be able to support the demand.

We're projecting right now – when I said our orders in the first half exceeded all of fiscal year 2023 orders for data centers, and we have a pipeline that continues to support that type of growth. So, we've been adding capacity to meet this demand. And I believe we are positioned. You see some of these forecasts that projects potentially 50-plus percent growth over the next few years, and we're positioning to be able to serve that. And so, I think that is what gives us confidence as we get through the year. We see continued strength in orders. And then as we set up for 2023, a good visibility into – I mean, 2025, good visibility in our ability to be able to continue that trend.

**Operator:** Thank you. And our next question today comes from Joe O'Dea with Wells Fargo. Please go ahead.

**Joseph O'Dea***Analyst, Wells Fargo Securities LLC*

Q

Hi. Good morning. Thanks for taking my questions. Marc, just a couple clarifications to start. First, in terms of the quality issue and confidence that there are not kind of additional reserves going forward, anything from a timeline

to remediate? And then secondly, just related to your answer to Nigel's question, when you're saying high single-digit implied growth, was that a back half of 2024 comment or was that a fourth quarter comment?

**Marc Vandiepenbeeck***Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

It was a fourth quarter comment, just to clarify. On the quality, we're early in the process. These, again, are very unusual. At this stage, we don't expect anything additional, but we are still reviewing how we are going to develop and deploy that firmware fix. And generally, we're able to resolve those issue fairly quickly within a couple quarters. So, it's not something that's going to drag along for years on, because it's critical for us to fix those pretty quickly.

**Joseph O'Dea***Analyst, Wells Fargo Securities LLC*

Q

Got it. And then, I wanted to ask on Global Products and the applied organic down mid-single digits, the light commercial up mid-teens, and when we look kind of year ago, both had pretty challenging comps. And so, just any additional color on the difference in those organic trends in the quarter, regional or otherwise?

**George R. Oliver***Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

What I would say across our applied, I mean, when you look at, I mean both, whether it be direct or indirect, and we have a much higher mix as we're differentiating our solutions, our commercial solutions business, when you look at the overall applied volume on a two-year stack, we're up over 20%. And the pipeline right now that we're building is extremely strong because of the secular trends that we're addressing, which is the data center expansion and a lot of the industrial expansion, as well as a focus on sustainability. So, we've been positioning our technologies globally regionally to be able to get more than our fair share. And I think we're positioned to continue to see that trend.

**Operator:** Thank you. And our next question comes from Julian Mitchell with Barclays. Please go ahead.

**Julian Mitchell***Analyst, Barclays Capital, Inc.*

Q

Hi, good morning. Sorry to be a bore, but just to sort of try and circle back to the second half assumptions for a second. So, I think the segment margin is guided around sort of 17.5% in Q4 and you just did 14.5%. So, maybe help us understand that 300 bps uplift. Is there anything by segment that stands out or they're all up a healthy amount?

And just there's a bunch of questions on China and APAC. So, just to understand for the year as a whole, what's the APAC Building Solutions revenue expected to be down? I think it was down 22% in the first half. So, what's the full year assumption for that APAC BS revenue change, please?

**Marc Vandiepenbeeck***Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Yes. So, first on the second half, and you're directionally correct on Q4 segments. Again, our expectation there and where that margin comes from is really driven by three things. The improvement in our mix associated with the growth in our Service business. As you know, the Service business is much, much more profitable than our System business. The volume increase we are seeing both in our residential business, as well as our book-bill

business, where orders have been progressing well throughout the second quarter and as we enter the third quarter.

That volume provides a benefit in terms of absorption and productivity within our manufacturing and provides good leverage and allows us to get there. And then we've addressed our base costs earlier in the year, and we set ourselves up for the ability to leverage the P&L a little bit better than we've been able historically, and that's why we are comfortable at where we are.

Now for the full year on Asia Pac, I would say if you look at where we've guided, we're assuming a mid-teen negative growth for the full year and the sequential growth that you can see will therefore be positive in the fourth quarter in order to obtain that weighted average performance for the full fiscal year 2024.

---

**Julian Mitchell**

*Analyst, Barclays Capital, Inc.*

Q

That's a very clear answer. Thank you for that. And then just my second question, just to understand that data center exposure a little bit better. I think, George, you gave a very clear explanation of the products and the focus points for JCI. But in terms of sort of revenue, the \$2 billion of sales you mentioned, George, I think that's a 2023 number, is it? And just to understand, maybe any sense of how those sales split across kind of HVAC, BMS and Fire and Security?

---

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

So I mean, when we look at the \$2 billion, that was for 2023, as you said. And then we're obviously seeing a significant pickup on that this year. So as we said, for the first half, we're already at the level that we were all of last year. Now a significant amount of that is being driven by the cooling technologies across not only our air cool, water cool but also the application of Silent-Aire. So we've got good pickup there. What we're doing is making sure that as we're working with the hyperscalers and colos that we're now going to market in more of an integrated solution that ultimately creates a lot more value in how that solution is put into service.

So you can imagine with all of the technology integration that we've been having with these providers, it is really differentiating what we're actually doing. And we've already seen a big pickup in air handling and crawls and now we're seeing the pickup in building controls and then more recently now fire. So you're going to start to see a more broad portfolio that ultimately is going to be delivered through those solutions. And then what's important is that we're getting all of that connected and ultimately put into service. So the ability to be able to then provide service through the life cycle. So we're making really good progress there, Julian.

---

**Operator:** Thank you. And our next question today comes from Noah Kaye with Oppenheimer. Please go ahead.

---

**Noah Kaye**

*Analyst, Oppenheimer & Co., Inc.*

Q

Thanks. You mentioned need to see services growth acceleration in the back half as part of the key to getting to high end of guidance. I mean, it was up 13%, right, in terms of orders in 2Q. What kind of acceleration do we need to see? And what's your visibility to that?

---

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A



Well, what we need to see is where we were. I mean we were pacing high single digits pretty consistently in the last couple years. When the cyber incident hit in the first quarter, that really set us back, set the momentum back because it hit a number of our systems that ultimately execute not only from orders, but ultimately how we fulfill service. So we are regaining the momentum as we said. Across the globe, I would say we're executing well on that strategy, recovering from that lost momentum.

Obviously, the focus that we have in becoming a commercial solution, building solutions provider is now being able to leverage our entire installed base, being able to differentiate the outcomes that we can deliver maximizing the value over the life cycle for our customers. And then, where we were the most impacted was North America, and that's our largest geography. We did make progress in Q2. That's continuing, and we're going to see that continue to accelerate Q3 and Q4.

And then we get back to really strong sustained high single digit, double digit service growth on a go-forward basis. Marc talked about this on EMEA/LA and APAC, we've already recovered. We're already back seeing double digit orders and growth in EMEA/LA, and we see accelerating orders in Asia Pac. So it's a matter of just the time line and our ability to be able to get that same momentum back in North America.

**Noah Kaye**

*Analyst, Oppenheimer & Co., Inc.*

Q

Thanks, George. I think you mentioned in the remarks that applied and controls orders in North America were up 50%, nearly 50%. So please confirm that. How concentrated was that in data center given the focus, or whether it's more broad based?

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Yes. So that 50% was around HVAC applied as well as control for North America. North America orders this quarter. So a very, very strong momentum. A lot of it came from that data center, some of the key colos and key hyperscaler are accelerating their orders. But what's also incredible to see is the pipeline continued to grow even after a lot of orders are coming in. So we think that momentum is going to continue building, and we are very comfortable about achieving those targets.

**Operator:** Thank you. And our next question today comes from Andy Kaplowitz at Citigroup. Please go ahead.

**Andrew Kaplowitz**

*Analyst, Citigroup Global Markets, Inc.*

Q

Good morning, everyone.

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Good morning.

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Good morning, Andy.



**Andrew Kaplowitz***Analyst, Citigroup Global Markets, Inc.*

Q

George or Marc, can you update us on your progress in terms of improving your margin in EMEA/LA? I know you've talked about all the changes you made in terms of project selection. Would you say your progress in line with what you expected? And what's your confidence level that margins should reach double digits by the end of the year?

**Marc Vandiepenbeeck***Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

No. Good question, Andy. So first, I want to start by saying we are pleased with the performance in EMEA/LA in the second quarter. While it's not yet at par with the regional peers, the rapid progress we made both on backlog growth and margin in such a short period of time is a testament to the transformation and the application of that one and to an operating model George was talking about. I'm very proud of what the regional and functional teams have been able to achieve by leveraging further that integrated global business solutions operating model.

And as you look at the balance of the year, we have two strong tailwinds in EMEA/LA. The first one is, we see a continued strong mix that is provided by the robust growth in service you saw in Q2. And the second one in we continue to improve the order margin rates that are coming in our backlog. And that's really coming from an improved go-to-market strategy we talked about as well as better commercial discipline. These two factor combined the fact that we've right-sized our base cost structure, provide us with great visibility to achieve double digit segment margin and maintain it there towards the end of the year.

**Andrew Kaplowitz***Analyst, Citigroup Global Markets, Inc.*

Q

Thanks for that Marc. And then George, I just wanted to follow up on your commentary regarding your pipeline of opportunities in China. It seems like maybe you're undergoing more of a transformation from, call it, traditional commercial markets there to nontraditional markets. I don't know if that's a fair characterization, but maybe you could comment on that. But you also sound confident regarding an order or sales recovery by the end of the year. So maybe you could elaborate on the risks that the recovery could slip.

**George R. Oliver***Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Yeah. So a year ago, as we were rebuilding up to the second wave of cyber, there was a hole, and we were rebuilding our volume there and rebuilding inventory. And if you look at year-on-year in Q1 and Q2, there was a ramp last year, and obviously, we have a tough compare to that. What I would tell you is we are broad-based. So we're not just in the commercial resi, but it's we're in broad-based all of the end markets. What I would tell you, market back, we know where the opportunities are, how we're positioning, how we're deploying each of our technologies and differentiating the solutions we go to market.

We're back really building, so building not only a very strong pipeline, but we're converting at historical rates as far as how we're converting to orders. And so that is what gives us confidence that with the backlog we're building, it's going to, as it converts here third and fourth quarter and then the revenue that really we get back to on a positive basis by the end of the year. We're very bullish on the business. We've got a great product. We got a great facility there. And it's just making sure that as we reset with the inventory build that we had last year that we're now reset to where the market is going to be and ultimately how we capitalize on more than our share.

**Operator:** Thank you. And our next question today comes from Joe Ritchie with Goldman Sachs. Please go ahead.

**Joe Ritchie**

*Analyst, Goldman Sachs & Co. LLC*

Hey, good morning guys.

Q

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

Good morning.

A

**Joe Ritchie**

*Analyst, Goldman Sachs & Co. LLC*

So I have a couple of quick clarifying questions. Just the \$33 million product liability charge that you took this quarter, or product quality charge you took this quarter, like what portion of your product portfolio is that actually touching? And I, just again, just want to get some comfort around ring-fencing that number. And then also on the factoring program, how should we be thinking about the impact from factoring through the remainder of the year?

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

On the product, Joe, that's in our fire detection business. It's a sensor that ultimately, as Marc said, firmware in a sensor that's a legacy product. As far as when we look at all the product that's being produced today, it's totally compliant. So it's making sure based on what we've seen with a couple of failures, making sure that we're addressing that in the legacy product. And as Marc talked about, that's how we kind of estimated what that potential could be. And we're going to be disciplined in how we actually go about remediating that.

A

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

On the factoring and the finance charges, yeah, the unwind of the factoring will provide some benefit in the balance of the year. What's offsetting part of that is the PFAS settlement. As you know, we are going to settle \$750 million, as well as slightly higher interest rate environment than we had originally anticipated. But I think the factoring and the cost benefit that it provides gives us confidence that our guidance is at the right level.

A

**Joe Ritchie**

*Analyst, Goldman Sachs & Co. LLC*

Got it. Okay. That's both helpful clarifications. Thank you. Then my other question was really just around the what's happening with Global Products mix going forward, because it seems like the guidance is baking in a pretty good improvement in Global Products margins. And I'm just curious, like is Global Products expected to turn mix positive in the second half? I know it was a headwind this quarter. Just any color around that would be helpful.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

When you look at Global Products historically, when you're in a more stable environment year-on-year, I mean last year, we had a tough year because as we were really working down backlog that had built up with all of the supply chain disruption. And then when lead times went back to normal, obviously we were a shortfall of orders and orders coming in through the year. As Marc said, we're back to normal flow of orders to fulfillment. We've got

A

our lead times down back to where they were. And so we're seeing good flow, right, from market demand, orders, building backlog and then converting.

On the margin side, you can imagine when we were disrupted, there was significant cost with that disruption. And so we have been significantly improving the productivity as we've recovered. Now with normal flow and stability, we're getting significant conversion cost productivity.

And then with the continued volume increase on the conversion in the second half, that will lever really nicely in the second half from a margin standpoint. And then what we've done across the company as we went through this cycle, we've taken out significant G&A. And so as we've addressed that across the board and gone to one operating system, we're going to start to see much better leverage on our G&A structure.

---

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

And then I would add on mix. What you saw in the quarter, that negative mix of \$80 million global product really came from the volume challenge we saw in APAC that really led to an under absorption global product. Outside of that, the general mix of the product is neutral to the margin global product. What you get is really the lift George just talked about.

---

**Operator:** Thank you. And our next question today comes from Jeff Sprague at Vertical Research. Please go ahead.

---

**Jeffrey Todd Sprague**

*Analyst, Vertical Research Partners LLC*

Q

Hey, thank you. Good morning everyone.

---

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Good morning.

---

**Jeffrey Todd Sprague**

*Analyst, Vertical Research Partners LLC*

Q

Hey, just couple questions obviously on the Q4 guide. And I know there's kind of some squiggles around the growth rates and everything. But it does seem to me that if Q3 is at low single digit organic growth and Q4 is high single digit, 8% or 9%, and the year is closer to 3%. So maybe just address that. Is that kind of what you're thinking? You're kind of progressing towards the very low bound of what we might call mid-single digit for the year?

---

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

I mean, I would think of Q4 in the teens, 10% of the growth. And I think, you're right, there's a step function change between Q3 and Q4 from a growth standpoint. But I don't think it's that challenge if you see the momentum we see in orders.

---

**Jeffrey Todd Sprague**

*Analyst, Vertical Research Partners LLC*

Q

Okay. So, just to clarify that, though. So somebody asked you if it was low double digits, and then you said high single digits, but now you're saying low double digits.

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

High single-digit to attain the midpoint of where we are guiding. To get to the high end, you would need that 10% growth rate in Q4.

**Jeffrey Todd Sprague**

*Analyst, Vertical Research Partners LLC*

Q

I see. Okay. And what was the nature of the goodwill charge in the quarter?

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

That goodwill relates to an impairment charge we took on our subscriber business. That subscriber business sits within our EMEA/LA segment. And it came really from a combination of small actual result delta versus an internal forecast we had, but it was mostly associated over time the effect that the Argentinian peso had in the mix of result of that particular business. And I remind you that impairment is non-cash in terms of what the charge relate to and it has absolutely no impact on our ability to deliver free cash flow for the balance of the year.

**Jeffrey Todd Sprague**

*Analyst, Vertical Research Partners LLC*

Q

And then just a really quick follow-up just on cash. So, the PFAS settlement you're expecting to go out the door here before the end of the year. And are you expecting any insurance recoveries against that in 2024? Or that's more of a kind of protracted negotiation with your insurers?

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Yeah. The PFAS settlement will be in two tranche. There's a first tranche coming shortly, and the second tranche later in the year. I do not want to speculate on the timing of the recovery of the cash from the insurance. I would tell you, we have significant insurance with about 20 insurers. We are doing everything we can to recover as much as we can. We have a line of sight of recovering a very material portion of the settlement. But at this stage, I'm not being able to pin down an exact timeline on that recovery.

**Operator:** Thank you. And our next question today comes from Gautam Khanna with TD Cowen. Please go ahead.

**Gautam Khanna**

*Analyst, TD Cowen*

Q

Yeah, thanks. Good morning, guys.

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Good morning.

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Good morning. How are you?

A

**Gautam Khanna**

*Analyst, TD Cowen*

Doing well. Thanks. Hey, I had a couple questions on the divestments. First, I was curious if you could characterize the level of interest from potential suitors. If you could talk about maybe the aggregate tax basis. And if you could also speak to any potential dis-synergies and if you have any quantification of that, that would be helpful. Thank you.

Q

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

I mean, I don't want to over-speculate on exactly where we stand. What I'll tell you is that there's different combination of divestiture structure that we're looking at, and we're simply trying to optimize shareholder value and our ability to return a very large portion of that – the proceeds associated with the divestiture back to shareholders. The divestiture will require, like any material divestiture, for us to take action around our base cost and our central cost of operating. We have good line of sight to action that. We've already started planning around it.

A

**Gautam Khanna**

*Analyst, TD Cowen*

Can you speak to the timing or the tax basis of the assets, so we could have a [indiscernible] (57:01)?

Q

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

At this stage, it'd be very hard for me to pin myself down on the timing. We are doing everything to accelerate the process. Depending on how we structure the divestiture, the tax effect will be very different. So at this stage, giving you a very wide range of the different options that are being considered from a divestiture structure, I don't think, would be helpful. But again, we're doing everything to maximize shareholder value here.

A

**Operator:** Thank you. And our next question today comes from Deane Dray at RBC Capital. Please go ahead.

**Deane Dray**

*Analyst, RBC Capital Markets LLC*

Thank you. Good morning everyone.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Good morning, Deane.

A

**Deane Dray**

*Analyst, RBC Capital Markets LLC*

Hey, just want to take another pass at this, the page 5 data center exhibit, which is terrific. And especially the pie chart at the bottom, that does show all the different products and services that JCI offers. And it goes back to

Q

Julian's question, it would be really helpful if we could just really rough size some of these categories. So, if I said cooling and I group chiller, space, cooling and monitoring as one bucket, and then fire and security is the other two, would rough numbers be 60% cooling and then 20% each for fire and security? Would that be the right neighborhood?

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Yeah. I would say it's in the range where about two-thirds would be chillers. Then the others would be air handling, would be craws, would be fire security, all of the other systems that ultimately support the deployment of the cooling technologies.

**Deane Dray**

*Analyst, RBC Capital Markets LLC*

Q

Great. That's really helpful. And just I think a lot of people think of the security side, just the three levels of access that most of these data centers have. But if you look at just about every row of these data center rooms, there are cameras and fire suppression on every row. So, this is part of your offering, correct?

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

It's absolutely part of the offering. And those very complex solutions, we are really set up with our engineering, our product offering to really leverage that market. And that's where we see the pipeline continuously growing as the complexity and the structure of those data center continue to increase.

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

And, Deane, I think it's important to note also from a service standpoint, when you go to one of these sites and you see the installations and all of the equipment, both across the domains, what is really strong is our footprint providing the service. And so how our teams then are positioned to support all of these large facilities that are being put up. And so that's where we see significant opportunity to be able to deploy our system so that then from a life cycle standpoint, we have the domain and expertise deployed to be able to support these large operations.

**Deane Dray**

*Analyst, RBC Capital Markets LLC*

Q

Terrific. And just one last quick one for Marc. I know it's still early, but when would be the earliest we might hear some reset working capital metric targets?

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

I think we're still early in stage, as you mentioned. We are looking at next year and where we're going to deploy our resources from a growth standpoint. I think as we close Q4, we'll probably be able to give you a strong view on where we are going to land for next year, as well as our long-term algo. But I don't think we'll shy away from the comment I made last time that 85% to 90% free cash flow conversion plus, although the long term is really where we should be thinking.

**Operator:** Thank you. And our next question today comes from Andrew Obin with Bank of America. Please go ahead.

**Andrew Obin**

*Analyst, BofA Securities, Inc.*

Hey, guys. Good morning. Thanks for fitting me in.

Q

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

Morning, Andrew.

A

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Good morning, Andrew.

A

**Andrew Obin**

*Analyst, BofA Securities, Inc.*

Just a question, we're looking at macro data and it seems that labor inflation is picking up back again. How are you guys thinking about your contract structure, particularly on the installation side? In the face of inflation, are you sort of giving any thought – you've clearly cleaned out the balance sheet with factoring. This is great. Are you guys giving any thought about sort of resetting the contract structure to maybe adjust for the fact that we in a higher inflation, labor inflation environment for longer? I know it's a big, long question, but would love to hear your thoughts. Thank you.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

No. What I would say is when we went through that high inflationary period, obviously, that exposed a lot of our weakness because we were in a low inflationary period for so long. We've built very robust pricing and costing pricing. And then from a selling standpoint, focusing on value. And so as we plan long term now, we're factoring in, from a costing standpoint, anticipating higher than level, higher than the kind of the market forecasts on inflation. So we've been factoring that in and then making sure we have contracts that ultimately gives us the opportunity to be able to recover longer term on some of the longer-term contracts.

A

So, and that's been deployed across the globe. What I would say, we have very robust pricing, costing as we do deal reviews and making sure that we're going to be positioned to be able to achieve the margin rate that we're booking. So we're now in a situation where we're booking much higher margins, and then we're executing at or above those margins on a go-forward basis. And that's a big deal. And that's a big part of our, in our solutions business, our ability to be able to deliver stronger margins ongoing forward.

**Andrew Obin**

*Analyst, BofA Securities, Inc.*

Great. And then just a follow-up question. If we look at the bookings on data center, clearly got a lot of attention, growing 50% plus, what's happening? You guys have kindly provided a very nice pie chart of your end market breakouts. Can you just highlight what else is doing well? And if there are any headwinds within your key end market verticals on applied? Thank you.

Q

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A



Yeah. I mean, what I would say it's broad based. When you look at our applied business, right from, and we have the full portfolio of technology, whether it be water cooled, chillers, air cooled chillers which obviously is focused on data centers, the Silent-Aire packaged cooling solutions that we deploy. So when you look at what we see, it's not only data centers but it's the industrial expansion that we see pretty much globally. It's education. It's been some government. And more important, there's a broad-based demand addressing some of the challenges that our customers are having achieving their sustainability goals.

And so we can go in and ultimately package a solution. And then with that, be able to get significant savings that actually then get, in some cases, get a decent payback. And so it's broad-based in our applied business across end markets. Certainly data centers is a key driver.

---

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

Commercially in Europe, I made a comment in the opening remarks around industrial refrigeration growing and growing really fast. There's multiple pockets of the market that are growing, probably not as fast as what we're seeing in data center, which is really unprecedented and continue to see that pipeline growing, but we see pipeline growth across the board.

---

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Across the board. And then what we've learned is technology wins. And so we've been investing multiyear in our technology differentiation. And as we're applying that into the key verticals, that's what ultimately is delivering the value.

---

**Marc Vandiepenbeeck**

*Chief Financial Officer & Executive Vice President, Johnson Controls International Plc*

A

That's right.

---

**Operator:** Thank you. And our next question today comes from Steve Volkmann with Jefferies. Please go ahead.

---

**Stephen Volkmann**

*Analyst, Jefferies LLC*

Q

Great. Thank you guys for fitting me in. Just a couple of the real big picture questions from me. First one, you talked about some investments in, I guess, product development, et cetera, but also some capacity. Is there any reason to think there'd be a step change in that as we go to next year? In other words, are there some projects that kind of get done? Or is that a good run rate?

---

**George R. Oliver**

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

A

Well, when you look at our reinvestment, and we've been talking about this for multiyears, applied, when we look at our applied cooling, we're a significant leader in that space across the globe, and we've been investing in multigenerational technologies. And if you were to go to our technology center in New York, Pennsylvania, our JADEC Center, you would see that. So we've been significantly elevated reinvestment over the last number of years, which has ultimately positioned us with the competitive advantage we have today in data centers.

So that's going to continue. And then on the capacity side, certainly, we've from an investment standpoint, we've got great factories across the globe and then now we've been scaling those factories to be able to now support this data, what's being driven by data centers, but the data center demand. And so we saw it coming. We saw it coming two years ago and we started that expansion. But obviously, that has accelerated over the last 12 months.

And we're strategically engaged with each one of the hyperscalers and colos and understanding exactly what is going to be built here, multiyears, and we're positioning to make sure we have the right, as I said earlier, the right technologies with the right capacity to then be able to support their buildout. And so all of that has been factored in our current run rate of reinvestment.

---

**Operator:** Thank you. And ladies and gentlemen, this concludes our question-and-answer session. I'd like to turn the conference back over to George Oliver for closing remarks.

---

### George R. Oliver

*Chairman & Chief Executive Officer, Johnson Controls International Plc*

Yeah, let me wrap up. I want to thank everyone for joining us today, and I'd like to end the call by highlighting the strong foundation of operational excellence at Johnson Controls and our value-creation framework I think we demonstrated with the disruption in Q1. And then as we've now come back and created momentum in Q2, gives us a lot of confidence that we're beginning to see not only the results, but now more important, the opportunity to be able to accelerate here as we go forward.

Our results demonstrate that we're both capturing the secular trends around sustainability and healthy buildings and that we do have the right strategy and operating system in place that ultimately not only meets our customers' needs as a preferred partner, but certainly elevates the ability to be able to create returns for our shareholders. So we are very excited about what is to come and what we see now playing out. We believe that we are poised to continue creating value for our shareholders, and we all look forward to continuing engaging with all of you here over the next days and weeks as we continue to execute.

So with that, operator, that concludes our call.

---

**Operator:** Thank you, sir. You may now disconnect your lines, and have a wonderful evening. Thank you.

Disclaimer

The information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete or error-free statement or summary of the available data. As such, we do not warrant, endorse or guarantee the completeness, accuracy, integrity, or timeliness of the information. You must evaluate, and bear all risks associated with, the use of any information provided hereunder, including any reliance on the accuracy, completeness, safety or usefulness of such information. This information is not intended to be used as the primary basis of investment decisions. It should not be construed as advice designed to meet the particular investment needs of any investor. This report is published solely for information purposes, and is not to be construed as financial or other advice or as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Any information expressed herein on this date is subject to change without notice. Any opinions or assertions contained in this information do not represent the opinions or beliefs of FactSet CallStreet, LLC. FactSet CallStreet, LLC, or one or more of its employees, including the writer of this report, may have a position in any of the securities discussed herein.

THE INFORMATION PROVIDED TO YOU HEREUNDER IS PROVIDED "AS IS," AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, FactSet CallStreet, LLC AND ITS LICENSORS, BUSINESS ASSOCIATES AND SUPPLIERS DISCLAIM ALL WARRANTIES WITH RESPECT TO THE SAME, EXPRESS, IMPLIED AND STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, COMPLETENESS, AND NON-INFRINGEMENT. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER FACTSET CALLSTREET, LLC NOR ITS OFFICERS, MEMBERS, DIRECTORS, PARTNERS, AFFILIATES, BUSINESS ASSOCIATES, LICENSORS OR SUPPLIERS WILL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING WITHOUT LIMITATION DAMAGES FOR LOST PROFITS OR REVENUES, GOODWILL, WORK STOPPAGE, SECURITY BREACHES, VIRUSES, COMPUTER FAILURE OR MALFUNCTION, USE, DATA OR OTHER INTANGIBLE LOSSES OR COMMERCIAL DAMAGES, EVEN IF ANY OF SUCH PARTIES IS ADVISED OF THE POSSIBILITY OF SUCH LOSSES, ARISING UNDER OR IN CONNECTION WITH THE INFORMATION PROVIDED HEREIN OR ANY OTHER SUBJECT MATTER HEREOF.

The contents and appearance of this report are Copyrighted FactSet CallStreet, LLC 2024 CallStreet and FactSet CallStreet, LLC are trademarks and service marks of FactSet CallStreet, LLC. All other trademarks mentioned are trademarks of their respective companies. All rights reserved.