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Exploring End-to-End Collaboration and the Critical Role of Digitalization in Healthcare Logistics

Logistics companies are no longer just product distribution and asset management organizations. Instead, logistics service providers are critical partners in the end-to-end life sciences and healthcare supply chain, exchanging data and providing key information as well as moving medicines. Increasingly, logistics providers can be key enablers for digitalizing the flow of information between life sciences companies, contract manufacturers, distributors, and other entities to meet important global healthcare and supply chain trends.

In this video, Jon Chapman, Vice President of Pharma Healthcare at Kuehne + Nagel Management, discusses the opportunities and benefits that stem from digitalizing supply chain relationships and how logistics providers can be strategic partners on this journey. Watch now!

Access PDF

TRANSCRIPT

TRANSCRIPT

Jon Chapman: Good morning from me. It's great to be here. Thank you to Henry and the TraceLink team for inviting me to be part of this amazing event. It's the usual LinkedIn story, isn't it? The pictures look different from how you are. You have a younger picture, one with longer hair, shorter hair. We try and look similar to what we are like.

What I'm going to talk about today, and I'm just remembering we need to, I want to talk about Kuehne + Nagel's role within the supply chain. Specifically, the role that we play with respect to orchestrating that supply chain and the part that the third-party logistics provider makes within the supply chain.

I think the one thing as an introduction to what I'm going to talk about for me, it's been remarkable as Stephanie said, and you've not seen my slides yet, but it's coming. How similar the stories are, how similar the experiences are.

None of us have actually come together to talk about the slides, but I was whispering to my colleague when I was on the table downstairs thinking, it's amazing what I'm hearing from Stephanie. It's just about what I'm going to be talking about as well.

For that reason, there are some slides in here that I will jump over in order to major and focus on the events, on the attributes, on the aspects that I think will provide the biggest learning for all of us. And as Henry has said, to provoke the conversation and the discussion because I think it's really clear we all have a different role to play.

We've all got a different background, mine within both the health care industry with AZ and Kuehne + Nagel with logistics. If we're talking about networking for the greater good, it's really good. It's really great that we're all here. Thank you for

giving me some time to be part of this two-day event.

I just wanted to give, this is the Kuehne + Nagel sound bite. This is the Kuehne + Nagel advert. You may not have seen Kuehne + Nagel in the same way that you know DHL, that you know UPS, you know FedEx. That is predominantly because we are a business-to-business logistics company.

We are actually the biggest freight forwarder in the world until the merger of DSV and Schenker goes through, obviously. We are we are a German company, but we are headquartered in Switzerland. We're proud to be part of Global Fortune 500. We're proud to be part of the Swiss index as well.

This is the headquarters overlooking Zurich where I am based, a nice place to work. You have the cowbells in. When you have a Zoom or a Teams meeting, it's cowbells in the background.

[laughter]

Jon: I just wanted to put this slide up more for reference. We now we now have our own assets in terms of two Boeing 747 freighters that we were extensively non-asset based in terms of airfreight until the end of the pandemic when the capacity was becoming a problem.

We now have our own assets are now branded, and you can see these are the positions as of the end of last year. Strongest in air and in sea, and then we are, let's say, regionally focused in contract logistics, warehousing, and road.

I liked that slide because it just gives some great dimensions in terms of how big, let's say, one of the silent partners of logistics is. The other thing to bear in mind is it's a very fragmented industry. We are still only doing a small number of percentage points of the overall logistics business.

I think if we're thinking about orchestration, if we're thinking about working

together, these numbers help us realize how big the scale of the industry is and also how much we can't do it on our own. You saw from Stephanie for Nestle, didn't you, their numbers in terms of their dimensions.

Completeness of vision. I felt it was really important that as we go into the conversations here, we think about where we are within the logistics field. We think about what is impacting us. We think about, we could call them those black swan events that are happening. We've got the port strike that has just started on the East Coast of America.

If we're thinking consumer needs, what's the biggest thing there? The way that we are getting products to the consumer, to the customer is changing. It's a lot, lot more e-commerce. It's a lot more no-touch. We don't go into shops anymore.

If we're thinking, well, I've just mentioned the supply chain challenges, they come at us more and more regularly, it seems to, whether we're talking about climate change, whether we're talking about weather events. It was mentioned the Suez Canal being shot. So many of those things are coming at us, and we realize that the supply chains are more and more complicated. They potentially, without resilience, have a bigger impact.

Competitive landscape, we were talking, Henry and myself, in terms of preparation for today that the market is really, really competitive. Kuehne + Nagel is competing with all of those companies that you know and I mentioned earlier on.

We are focused within health care as one of our key verticals because that does have the barrier to entry. We can do something that we believe is purposeful for humanity. We're all patients. We all have to take drugs at certain times. That's one of the reasons in terms of why we signed up to the freighters that I described previously.

I don't need to mention data and automation. Do I? It's the whole topic of the two days. We've had enough in terms of what is coming at us there.

Sustainability, ESG, we all live on the planet. We all have our children and their children who will be living on the planet. We have to care. We have to look after the planet. That is really, really important to Kuehne + Nagel. I'm impressed in terms of the way that data was being mentioned downstairs. We are we are striving to use data to support that.

Transport capacity. I couldn't have chosen a better picture, could I, with what's going on at the minute? Sometimes there's too much capacity, sometimes there's not enough capacity. It's certainly not regularly in the right place at the right time. All of those things are coming in.

I think the last thing again that aligns with many of the themes from downstairs is data is no good if the data quality is not good. We are struggling if we think about the transport and logistics industry with one that goes back in the case of Kuehne + Nagel nearly a 130 years. It's very manual. It's very people-focused.

I love Shabir's line in terms of WhatsApp being used to communicate. Like, there couldn't be a closer truth to what we are doing. That is setting somewhat of a theme in terms of what I would like to cover.

In terms of Kuehne + Nagel, like every other company, we have a vision for 2030, and we have a road map over the shorter period to 2026. And I just wanted to bring out that that very much is aligned with the themes that we again heard down stairs in terms of we have four elements of our road map.

The first one, thinking about the Kuehne + Nagel experience, how do we interact with our customers, with our patients in the terms of health care and internally? We obviously have to grow to survive, so this this is all about market expansion. It highlights that health care, amongst other things, is a key target vertical to work within. We care for the environment, ESG.

The reason that you could say I'm here, the digital ecosystem. We are striving to be digitally native. We are striving to be cloud based. We have an aspiration to

lead in exactly the way that Shabir described below, and that is what I will go into for the rest of the conversation.

We have a short video that gives...I don't know how we're playing this. Yes, it is a Kuehner video, but I think it sets the scene in terms of all of the things that we should be considering and thinking about.

[video playing begins]

[background music]

Woman: We move a world that is forever in motion, an endless stream of changes, challenges, chances. Kuehne + Nagel must keep moving ahead to lead the way.

In this market of higher energy prices, broad based inflation, geopolitical tensions, disruptive digital competitors, we need to realize our vision, embrace the digital ecosystem, uplift the Kuehne + Nagel experience, maximize business potential, power intelligent operations with data insights, harness the infinite possibilities of the cloud.

Cloud technology is already here, supercharging our momentum with Knight, our new data and connectivity platform. We will build on Knight to amplify progress, accelerate benefits to our customers, people, and suppliers.

The digital ecosystem will be smarter, faster, better. Together, it will support the new customer experience vision, reduce time to resolve issues, improve our interactions, automate smart decisions. It will also help expand access to new markets, increase our customer base, create opportunities for new revenue streams, reduce our controllable carbon footprint.

Kuehne + Nagel moves the world and the digital ecosystem is proud to build with you. Together, we will be faster into the future.

[music]

[video playing ends]

Jon: I think you can or I know you can remove Kuehne + Nagel from that and you could put any of your company's logos there. That was really why I wanted to show it, that I hope in the spirit of sharing, learning, and growing together, it provokes some thoughts.

It may, Henry, generate some questions that we don't want to have to answer because they're too hard, but that that that's good. That's great. That starts the conversation.

In terms of these slides here, I think that we should be moving on in order to get to a discussion about the Kuehne + Nagel digital ecosystem. What we heard downstairs from Shabir, I think for me, it was reassuring to hear that we're on the right track as Kuehne + Nagel.

The first thing is in in terms of everything we're doing, we want to make sure that our customers or our patients are in the middle, that that's completely aligned.

Then I think the other thing that we realized, which again was coming out downstairs is we as a logistics service provider, yes, we can put ourselves in the center of our part of the bubble, but everybody else has a different center of the bubble connected with, are they shippers? Are they manufacturers? Are they research companies? Are they warehousing people? Are they authorities?

Yes, that process can be slightly different for all of us, but we all must map out and understand who are we transferring data with, who are we receiving data from? We've realized that we can't do that on premise based. It has to move to the cloud. The only way that all of this data can come in a way that can be aligned, can work for the benefit of everybody is that it is in the cloud.

We also have to have a way of being both internally and externally connected and clearly that's one of the reasons why we are all here because we have an organization that can help us with that platform. I think one of the things, again, that I'm actually pleased that I heard downstairs is I know there is great desire from leadership to be moving forward with AI. It's a term of now. Isn't it?

It's been very clear to me and the people I've talked to are the experts within Kuehne. You can't start on that process till you've got good data, you've got accurate data, you've got ways that the data can communicate with itself. We need to be patient there and make sure we've got the foundation and the ground rules right.

Then in terms of how the digital ecosystem works, there will need to be services that sit over the top of that. I'm thinking there of the visibility platforms, the reporting, the KPI measurements, etc. You could say that is our view of the digital ecosystem. That is the way that we're moving forward. That product or that reference to Knight that was in the video, that is Knight in terms of our digital ecosystem.

This is the part that I want to major. I think it's most important that after the conversations we've had so far, bring out some ways that we can first of all collaborate and we can secondly use data to help us move forward if we use the TraceLink word for the greater good. I have one example from the ESG space and I have one example about resilience or risk management.

From an ESG perspective, let's say for the last 20 years that I've been involved with moving airfreight to sea freight. Whether that has been because of saving money, ensuring that we are not putting as much CO2 in the atmosphere or whatever, there are many reasons behind that.

Within AstraZeneca, we used a total cost of ownership model. It was the more commodity products that were less expensive where the inventory wasn't as

valuable that we were able to move on to sea freight.

Within Kuehne + Nagel, we've been looking at how do we do more and more sea freight in order to help things move forward? That's not withstanding we're an air freight company as well, so we need to balance that. We need to support this process.

One of the things that we realized is historically there has been a blocker around doing less than container load sea freight because the volumes are within the container are so huge. It's not cost-effective. It's not productive to do that.

We we've been looking at how can we do less than full container loads, so grouping together, consolidating different health care manufacturers product within the same container. Historically, that's not been possible because of quality concerns. It's not been possible, like Henry was mentioning in terms of his time in SensaTec, the temperature management.

Thirdly, one of the key things is everybody is manufacturing products at different times. They come from different, or how do you work out where it all is in order to combine it together? Through, I would say, first of all, collaborative forums like this, the quality issues in terms of the quality agreements, the service level agreements, we found a way forward there.

But still we were struggling in terms of the visibility of where the freight is, where the product has been manufactured, and also to provide the confidence that it was with within temperature. For me, this is where everything we're talking about here can really benefit doing an LCL process.

As I've said here, it's enabled by the tech evolution and digitization, so that once the tech evolution is going from those solid state data loggers, you only got the data at the destination, to IoT transmitting sensors using the Internet, using the cloud. We can now identify where the shipments are, where the containers are.

In the event there's a temperature deviation, we can have a 24/7 team intervening in order to heal that situation before it becomes catastrophic to the product. Clearly, what does that do? It gives all of you confidence that it is actually acceptable to cohabit the container with other customers because the temperatures will be maintained.

Then the other thing is how do we find out where the product is in order to consolidate it at origin? I think this is, what could I say, the data challenge that we are working on now that everybody has different processes, different ERP systems, different origins.

Yes, we are using data, but we need to use more data in order to make sure that the container will be full to a level that makes it economic to move. I think that is a great example as how we can all work together, how we can use data, how we can use technology in order to shift the paradigm from where we used to be to where we are now. Of course, yes, Benoit.

Henry Ames: I was wondering, what is the data that customers...? As we've also said these are the set of data NIH alert whoever, hey, Jon, I need these data. That's number one. Which are the top five data that your customer...?

[crosstalk]

Jon: In terms of in terms of doing LCL?

Henry: For example.

Jon: I would say in in terms of doing the LCL, first of all, thinking about the schedule adherence. like a transport calendar, what are the days that you're going to set off at origin? When is it going to be delivered? What's the confidence of that?

If they're going to go into an LCL type scheme then they've got to be sure that it's going to arrive to replenish their inventory. I think secondly, the data is the

confidence of there won't be any cross contamination.

How are you going to demonstrate that when it's with or confirm when it's in the container that there's going to be no problem of product A contaminating with product B and that the temperatures will be preserved? That's where the sensors come in.

Then I would say the other part of the data is bringing in the, let's say, the manufacturing process in terms of how much product have we got? How many pallets have we got going into that container? So that we can feel confident it's actually going to go. Because the worst thing about this process is, say, it goes three weeks out of four in a month and I'm the customer who wants to go on the 4th month.

Probably there, if I'm thinking then the last thing is well how much is it how much is it going to cost? Like is the cost different based upon how many other pallets are in the container, or is the cost going to be consistent. I hope that helps.

Henry: Yeah, that was great.

Jon: The second example that I wanted to give was around integrated risk management and decision support. Again, another phrase that I heard downstairs, which rings true within Kuehne + Nagel is data-driven decision support. Yes, a little bit of a mouthful, so we're calling it DDDS, but how can we use data to help us manage, or first of all, identify hazards or quantify and mitigate those risks?

If I'm thinking historically, we've probably done basic risk management. What might that be? That might be, well, don't transship in an airport in the Middle East in the summer because it's hot, or don't cross a road without looking left and right.

We've then moved on to performance risk management. I think this was one of the things, again, that came from downstairs is we've looked at past performance, what lanes, what carriers, what routings have worked, what's the capability of

airports in terms of temperature control. The ones that perform well, we will continue to use. The ones where there are issues, we don't use any further.

What comes next? Dynamic. I think this is this is the forward looking rather than the rear view mirror, isn't it? Rather than thinking about what has happened, consider what is going to happen. We are now exploring how can we use data to make dynamic assessments based upon what is really predicted and going to happen?

Then finally, we need to optimize it. I think this is where probably it gets beyond the capability of the human being. That we're all clever, but we know that we're not as clever as those damn machines that we've now invented. I would see that the step two to four is what we will be able to take on when AI is there and fully embedded.

The looking back and the looking forward, it's the prescriptive process that we need to be following. This is, yes, it's the example that I wanted to give but it can't be so similar to everything else that we, again, talked about downstairs.

I thought it would be really important within this this group to start sharing some of the data, some of the insights that we've got in terms of where do our customers...? So these are the big pharma organizations, some of which are represented here. In terms of using this data, what are the key things that they would like us to be working on?

We have a customer quality advisory board. You could say not dissimilar to the TraceLink meeting that we've got here, but more intimate round the table. We said, in terms of this data-driven decision support that I'm talking about, what are the key areas that you would like things to be improved upon? This was the voting that was given. You can see temperature deviations.

It will be close to heart of yourself, Henry, with your past life in terms of life. That is the biggest concern that the industry generally has, so we are we are now working

on that in terms of how, first of all, can we get accurate and representative data, and then how can we act to mean that our risk analysis, our risk mitigation ensures that the temperature performance tomorrow is better than yesterday?

What I just wanted to share here, these are proof of concept screens, but I think it's important that you're aware that what could you say, all of these words at the time I'm saying they are actually real. What we are doing already with the data that we've got is completing the network analysis to help with that decision support.

The words there, we're collecting, we're organizing, we're filtering in order to generate actionable insights. All of the data that we've got into the machine, into the system, first of all, what are the most popular routings?

Then, obviously, you can think in terms of the issues that I showed previously, which are which are on the next slide. What are the alarms that we are getting? How frequently are we getting those alarms? Things like the route map, so the transit time, how regularly do we hit what we actually predicted we would, and alarms in terms of temperature.

You can then start doing things. Like we've done, you could say, the regular star function here. Which lanes are most popular? Which have got the most sort of consistent transit time? Are there any issues with product release customs at destination, the route map, and then temperature alarms, where do we get those?

This this helps us do our risk assessments, our risk mitigations. It helps us, for all of you as customers, design the right process using the data. I just wanted to finish off talking about AI because I think it's a or I decided it was one of my duties in terms of having the great opportunity to stand up here to give both my perspective and Kuehne + Nagel's perspective.

I love the human side that was discussed downstairs, the human eyes. It's interesting, isn't it? That we have without any cross collaboration that is our first

point that we bring out in terms of AI.

I think everything else there is very much in alignment with. Like for me, it was really helpful to see that slide. I wanted to share it with you so that if you don't have key principles, what's the note to sell from this, make sure that you facilitate getting those key principles within your company.

If we're thinking about well, it's the humanized comment that we heard downstairs, isn't it? Like, we need to all be AI savvy. We may not be as all individually involved with the data, but we've got to understand what it can do, what it can't do, where it can take us, where it shouldn't take us.

I encourage you all to learn about the topic a little bit more than what you've got knowledge of already in order to help make the right decisions, to help us all as patients.

This is probably getting into the conversation that we want to have, isn't it? I'm sensing, conscious of time, this probably is the right place that I finish this slide and then we can have the conversation.

Henry had asked me, think about key data gaps, think about digitization opportunities that you've got thinking from the lens of Kuehne + Nagel as a global third-party logistics provider. We heard some information or some comments around this on the floor downstairs. Some of the comments I've got here are similar, some are different.

I think, first of all, data quality, we realize that completely. I think that the first comment that I hear in terms of any analytics, any data driven decision support is, well, my data is not good enough. So we all need to strive and work to make sure the data is complete, the data is accurate, and we also heard it is in real-time. I think the word I'd used was consistent, so a consistent language.

If I'm thinking of Kuehne + Nagel again in its logistics bubble, we're thinking about

bills of ladings, we're thinking about airway bills, we're thinking of CMRs, we're thinking of shipments, whereas pharmaceutical companies, health care companies, manufacturers, or distributors, they're thinking of SKUs, they're thinking of inventories.

I think it's very clear if this is going to work, we've got to find a way of making sure that we are consistent. Yes, this is perhaps a logistics view again, but historically we've talked about shipments. We've talked about the 20-foot or 40-foot container. We've talked about the consignment on an aircraft.

What we haven't been thinking about is the individual pieces, which are how they're handed over to us by the shipper. We need to get the capability and technology. The reduction in price of the smart labels is meaning that we are now getting quite close to getting the piece level information.

Upstream and downstream, I think if I'm considering where we are as an organization, we're very focused in getting our own world perfect. If we're going to get the world perfect or a better world for the patient, we need to be expanding ourselves upstream and downstream.

Obviously, that can mean different things for the role that all of us are playing, but I think what I'm thinking about coming into this conference, which is, I would say, the challenge that I will leave is, as the slide I had earlier on, we're all doing this for the patient.

That could be us individually, that could be one of our loved ones. The data that the patient needs is likely to be different from the data that we need in order to do our job as it is today. I would encourage us all to be thinking about what's the data that the patient wants, and then how can we work out through collaboration to get that data on time in real-time in the hand of the patient?

I suppose what am I thinking? That's going to be, when's my medication going to arrive? When it arrives, has it been transported within temperature? When it

arrives, is it a legitimate product that's not been counterfeited or tainted in any way along the line?
For me, that's the important part I'm taking out of this in terms of how can we get the right data at the right time of perfect quality in the hand of the patient? I will stop there, Henry. I think it's time for questions, isn't it?

Henry: Jon, you talked about AI and the investments that Kuehne + Nagel are making in AI. What are some of the challenges you've seen?

Jon: I think the main challenge for me is, first of all, as I already mentioned, we've got different people that want to move at different paces there. I think the other big challenge, Kuehne + Nagel prides itself on being entrepreneurial. What does that mean?
We let people get on and do their stuff. We let people based up in the area that they're working, if they've got a good idea, we'll carry on with it. I think the problem that we've had with AI is that people are actually, for some reason, scared of getting it wrong. There's analysis to paralysis. There isn't this, let's say, experimental culture.

That for me is the key step that we've got to take as an organization, how can we put across that? It doesn't matter if you get it wrong. We're all learning. We're all experimenting. Experimenting is actually good. I suppose it's a little bit like clinical trials, isn't it? The optimum process in the nicest possible way is to kill those products quickly that aren't going to be successful.

I would say exactly the same with AI, have a big funnel of ideas. Obviously, prioritize the ones that you want to work on first, but if it's clear that they're not working, kill them and move on. Don't be fearful of stopping activities, and we need to encourage our teams not to be fearful of having, let's say, a failure.

[music]

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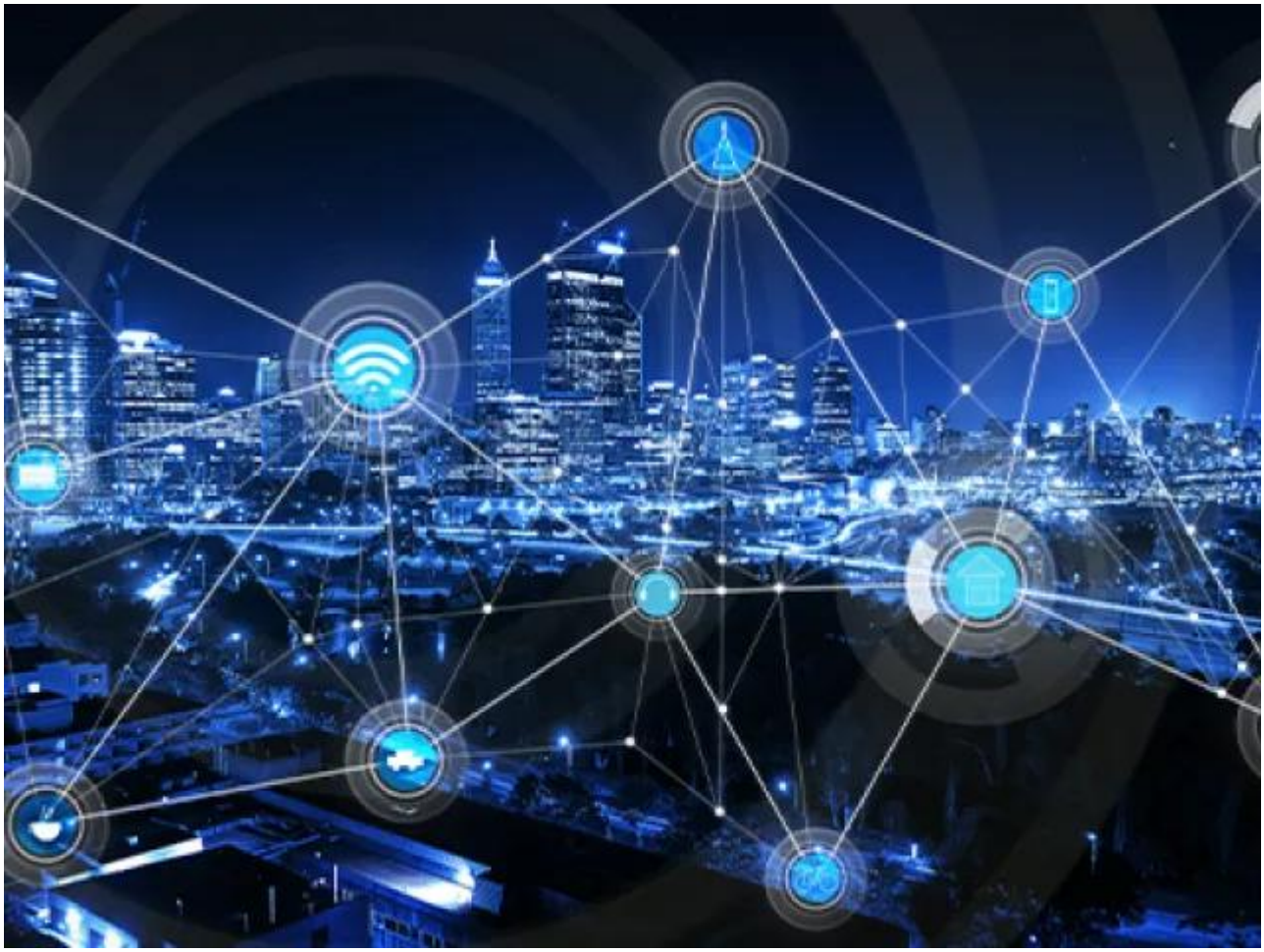

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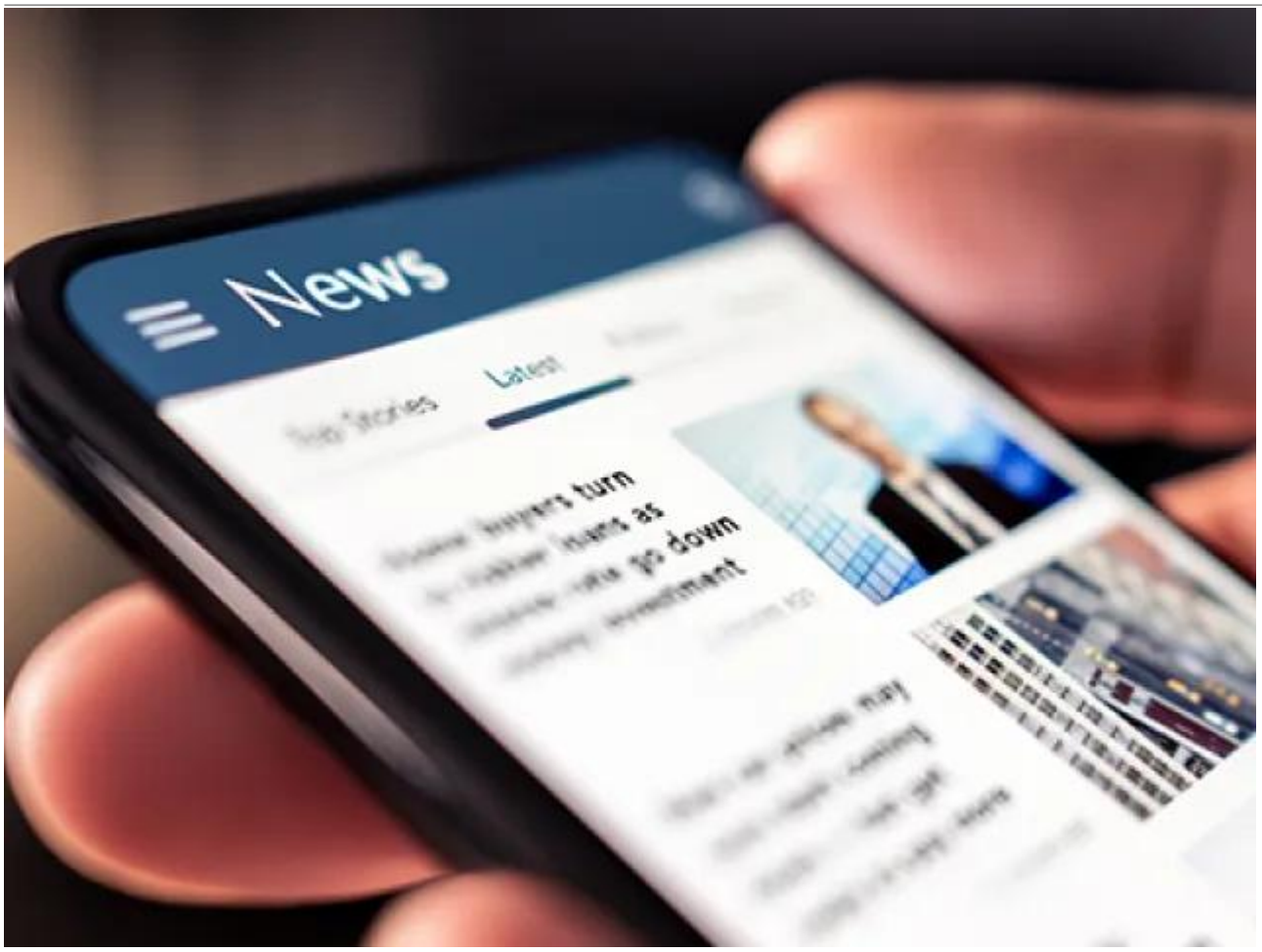

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